Table of Contents

About this Manual

AMIS Description 1-1
Site Mission 1-1
AMIS Overview 1-2
Principles of Operation 1-2
AMIS Client-Server Functionality Overview . . 1-4
N-TFS Server-Side Process Overview 1-4
Database and Table Management. 1-5
Severe Weather Algorithm Software Overview 1-6
FTP Fetch and Ingest 1-6
PPC Software Overview 1-6
PPC Transmit Data Flow 1-8
External Destination Output Queue Purging Criteria. 1-12
N-TFS Server Receive Data Flow 1-13

Basic Operations

AMIS Login from N-TFS Client 2-1
Profiles/authorizations 2-1
Hub Definition 2-2
Editing Hub Entries 2-4
Deleting a Hub 2-4
Connecting to a Hub 2-4
Login 2-5
Selecting a Different Site 2-7
Unit Converter 2-9
Weather Calculator. 2-10
Alerts Application 2-13
Changing your Password 2-15
AMIS Exit/Logoff 2-16

Alphanumeric Product Operations

Common Features in Weather A/N Forms. 3-1
Keyboard/Mouse 3-1
Action Menubar Options 3-1
Transmit 3-2
Print View. 3-5
Save 3-5
Restore 3-6
Clear 3-7
Weather A/N Forms 3-7
Weather Observation 3-7
Launch Form 3-8
Product Creation 3-8
Use of Asterisk (*) for Clearing Fields 3-13
Alert Weather Observation 3-13
Terminal Aerodrome Forecast. 3-15
Form Data Entry 3-21
Flight Weather Briefing 3-24
Mission/Takeoff Segment 3-27
Enroute Data Segment 3-28
Terminal Forecasts Segment. 3-31
Comments/Remarks Segment 3-33
Briefing Report Segment 3-34
Weather Advisory/Message 3-35
Weather Warning/Watch. 3-42
Radar Report (RAREP) 3-51
Unformatted Message 3-55
Forecast Bulletin 3-59
Pilot Report (PIREP) 3-62
Aircraft Report (AIREP) 3-66
Pilot Balloon (PIBAL) Report 3-69
Rawindsonde Observation (RAOB). 3-72
ARQ 3-81
View-by-ICAO 3-83
Synoptic Data 3-86
Monthly Summary Data. 3-91
Aircraft Accident Investigation 3-94
Weather A/N View 3-96
Local Weather Data Set 3-96
View-by-Criteria 3-100
24-Hour Observation List 3-105
Radar Report (RAREP) List 3-108
Solar/Lunar Data 3-111

Graphics Product Operations

Weather Graphics 4-1
Menubar Functions 4-4
File Menu 4-4
Edit Menu 4-7
View Menu. 4-8
Search Menu 4-10
Composite Menu. 4-11
Update Menu 4-12
Animation Menu. 4-13
Help Menu 4-14
Top Toolbar Functions 4-15
Searches Toolbar 4-17
Composites Toolbar 4-18
Animation Toolbar 4-19
Editor Toolbar (Left Toolbar) Functions 4-19

Top Toolbar Additions for Lines 4-22
Top Toolbar Additions for Figures 4-26
Top Toolbar Additions for Met Symbols . . .4-27
Top Toolbar Additions for Wind Barbs. . . .4-28
Top Toolbar Additions for Text. 4-28
Primary Dialog Panels 4-29
Area of Interest Dialog (AOIDialog) 4-29
Color Dialogs 4-31
VGS Color Options Dialog 4-31
Image Color Options Dialog 4-32
Grid Color Options Dialog 4-35
Composite List Dialog (CpsListDialog) . . .4-38
Edit Save Dialog (DialogEditSave) 4-40
Layer List Dialog 4-42
Product List Dialog (ProdListDialog) 4-45
Search Criteria Dialog 4-47
Time Options Dialog 4-48
Transmit Files Dialog. 4-50
User List Dialog (UserListDialog) 4-52
Basic Operations 4-53
Displaying a Product 4-53
Deleting Display Contents 4-55
Displaying the Layer List Dialog. 4-55
Layer List Popup 4-55
Rotate Image 4-56
Reduce Image. 4-56
Magnify Image 4-57
Restore Image to its Original Size 4-57
Magnify Selected Area 4-57
Displaying Alphanumeric Plot Products 4-57
Displaying Multiple PI Sets 4-62
Composite Products 4-64
Creating/Saving Individual Composites . . .4-64
Creating/Saving Group Composites 4-68
Using Toolbar Composite Buttons 4-74
Editing/Enhancing Products/Composites 4-75
Color Selections Editing Popup 4-75
Edit Color Graph 4-76
Edit Color Table 4-77
Transmitting Color Tables 4-77
Update List 4-78
Deleting a Current Edit 4-79
Deleting Color Tables. 4-79
Histogram Popup 4-80
Opening the Color Table 4-81
Editing Color Tables 4-82
Editing Grids 4-83
Editing Vector Graphic Plots 4-85
Adding Color Curve Change Point 4-86
Adding Grayscale Curve Change Point . . . 4-87
Color/Grayscale Conversion. 4-88
Ramp/Step Conversion 4-88
Delete Change Point 4-89
Editing Color Curve or Alpha Value 4-89
Editing Grayscale Curve or Alpha Value . . 4-90
Displaying Color Dialog. 4-90
Animating Products and Composites 4-91
Creating Slide Shows 4-91
Creating Animations. 4-93
Toolbar Single Step Buttons 4-94
Toolbar Animation Sequences. 4-95
Local Area WorkCharts (LAWCs) 4-95
Creating Single New Product 4-95
Create Wind Barb 4-98
Create Text. 4-98
Create Straight Line 4-99
Create Rectangle. 4-100
Create Polyline. 4-101
Create Polygon. 4-102
Create Meteorological Symbols 4-104
Create Diamond/Ellipse 4-105
Setting Color Saturation 4-106
Setting Fill Pattern. 4-107
Add Points to Lines or Figures 4-109
Copy Object 4-109
Delete Object 4-110
Delete Points on Lines or Figures 4-110
Editing Attributes for Figures 4-111
Editing Attributes for Lines 4-112
Editing Reverse Points. 4-113
Move Object 4-113
Move Points for Lines or Figures 4-114
Front/Back Placement for Objects. 4-114
Transmitting Products 4-115
Transmitting a Product. 4-115
Transmitting Color Tables 4-116

MET Generation

Horizontal MET Products 5-2
FBD Plots 5-5
Met Generation Function Plot FBD 5-5
Plot Model Editing. 5-12
Grid Plots 5-15
Plotting Gridded Data 5-15
Plot Model Editing. 5-16
LGG 5-19
Streamline 5-23
Isopleths 5-25
Parameter Isopleths 5-25

Searching for Grids 5-28
Barnes Options 5-30
View/Edit Surface and/or Upper-Air FBD 5-34
Misc. Options 5-38
Vertical MET Products. 5-39
Skew-T/Log-P Diagram 5-42
Modifying the Skew-T/Log-P Diagram . . .5-45
Severe Weather Parameter Indices 5-47
Climb Wind Parameters Panel 5-48
Distance vs. Log-P from FBD 5-49
Distance vs. Log-P from UGDF 5-51
Time vs. Log-P from FBD 5-54
View/Edit Surface and/or Upper-Air FBD 5-56
Misc. Options 5-60
Command Sequences 5-61

System Administration Operations

System Manager Activities 6-1
Administration 6-3
Database Usage 6-3
Disk Usage 6-5
Station Statistics 6-6
System Check. 6-8
System Lines Condition 6-11
System Log 6-12
Time Conversions 6-14
Alerts 6-16
Advisory/Message 6-16
Product Arrival 6-18
System Error 6-20
Warning/Watch 6-22
CD Operations 6-24
AAI 6-25
Checkpoint 6-27
Export/Import. 6-32
Forms 6-37
RMSM 6-39
Configure. 6-41
Chat IP Addresses 6-42
Destinations. 6-44
E-mail Addresses 6-69
Longline Parameters 6-71
System Groups 6-76
Transmit Destinations 6-78
Warning/Advisory Criteria 6-81
Directory Maintenance 6-85
AAI Queue 6-85
Command Sequences 6-87
Composites/Loops 6-90
Flawed-In 6-92
Flawed-Out 6-95
Group Composites 6-96
Image Backgrounds 6-97
Image Miscellaneous 6-99
Primary Backgrounds 6-101
Secondary Backgrounds 6-103
EIF Retention/Routing 6-105
FTP 6-109
Ingest Authorizations 6-109
Other Product Sources 6-111
VSAT Source 6-115
WPMDS Source 6-117
Graphics 6-118
Download Composites. 6-119
Download Macros 6-120
Isopleth Defaults. 6-122
Skew-T Parameters 6-125
Local ICAO Administration. 6-127
Pressure Reduction 6-129
Site Data Information 6-131
Warning/Advisory Contacts 6-141
Product 6-145
Bulletin MANOP 6-146
Database Purge 6-147
E-mail Stage 6-150
Gif Stage 6-154
Metwatch 6-157
Print Stage 6-167
Retention. 6-169
Stage 6-171
Unformatted Messages 6-175
Regional ICAO Administration 6-179
Site Data Information 6-181
Warning/Advisory Contacts 6-186
Scheduler 6-190
WMO 6-198
Priority Report 6-198
Table Maintenance. 6-200
CSSO Activities 6-209
Active Remote Users 6-212
Server Access Control. 6-213
Users. 6-215
Web Server Audit 6-218
N-TFS Server Configuration and Monitoring . . 6-221
N-TFS Server Normal Startup 6-222
N-TFS Server Abnormal Boot 6-222
N-TFS Server Recovery. 6-222
AMIS Main Workspace Menu 6-223
Remote System Manager 6-224

System Status 6-224
Network Status 6-225
Restart 6-231
Unit Converter 6-235
Wx Calculator 6-236
Severe Wx 6-238
TAF Verification 6-239
Web HTML Admin 6-239
Product Traces 6-239
External Product Receipt Trace 6-240
PPC Xmit Queue Trace 6-241
Passive FTP Xmit Queue Trace 6-242
Programs 6-243
Display Clock 6-244
Set System Time 6-244
Set Time Zone 6-245
Set Network Parameters 6-246
Calculator 6-249
SW Version 6-250
Utilities 6-251
Refresh 6-252
Reset Input 6-252
Window Controls 6-252
Lock Screen 6-252
Console 6-253
Shutdown Server 6-253
System Status 6-253
Shutdown Server 6-253
Exit 6-254
Legacy Operations 6-254
C/DM 6-254
C/DM Normal Startup 6-255
Abnormal Boot 6-260
C/DM Shutdown 6-260
FCF/ATC 6-261
Startup 6-261
Recovery 6-262
Shutdown 6-262
FCF/FO 6-262
Startup 6-263
Recovery 6-263
Shutdown 6-263

Operational Concepts

Functional Descriptions 7-1
AMIS Weather Operations Activities 7-1
Alerts 7-2
Types of Alarms 7-2
Types of Alerts 7-2
Communications Alerts 7-2
Local Product Alerts 7-2
METWATCH Alerts 7-2
Product Alerts 7-3
Product Database Storage 7-3
Alphanumeric Product Processing 7-3
Data and Product Types 7-4
METAR Surface Observation 7-4
Alert Weather Observation 7-4
Terminal Aerodrome Forecast (TAF) 7-5
Flight Weather Briefing 7-5
Weather Advisories/Message 7-5
Weather Watches/Warning 7-5
Radar Report (RAREP) 7-5
Pilot Report (PIREP) 7-6
Aircraft Report (AIREP) 7-6
Pilot Balloon (PIBAL) Observation 7-6
Rawindsonde Observation (RAOB) 7-6
Station Statistics 7-6
Synoptic Data 7-6
Monthly Summary 7-7
Aircraft Accident Investigation (AAI) 7-7
Product Retrieval and Display 7-7
Automatic Response to Query (ARQ) 7-8
Product Selection by Criteria 7-8
Product Selection by Station 7-9
Product Selection by LWDS 7-9
Product Communications 7-10
Printing a Product 7-10
Graphics Products Processing 7-11
Data and Product Types 7-11
Vector Graphics 7-11
Raster Scan Imagery 7-12
Formatted Binary Data (FBD) 7-12
Gridded Data Fields 7-12
Mercator Projections 7-13
PI Set Map Backgrounds 7-13
Polar Stereographic Projections 7-13
Product retrieval and display 7-13
Base Time 7-14
Forecast Hours 7-14
Current Time 7-15
Time Ranges 7-15
Product Generation 7-15
Horizontal Products 7-15
Plot Products 7-15
Isopleths 7-19
Streamlines 7-20
Continuity Work Charts 7-20
Differential Products 7-20

Advection Products 7-20
Gradient 7-20
Vertical Analysis Products 7-20
Skew-T/Log-P. 7-21
Distance vs. Log-P Cross Sections 7-22
Time vs. Log-P Cross Sections 7-22
Compositing 7-23
Creating a Composite. 7-23
Editing Composite Components 7-23
Sequencing and Looping Features 7-24
Zoom and Roam 7-24
Zoom Levels (Levels of Magnification) . . . 7-24
Zoom Levels on Plots. 7-25
Graphics Product Editing Function 7-25
Editing a Component 7-26
Editing Raw Data 7-26
Printing a Graphics Display 7-27

List of Figures

2.1 AMIS System Entry Screen 2-2
2.2 New/Edit Hub Screen 2-3
2.3 Defined Hubs Screen 2-4
2.4 AMIS User Login Screen 2-5
2.5 AMIS LaunchPad Screen 2-6
2.6 AMIS LaunchPad 2-7
2.7 Selection of a Different Site. 2-8
2.8 Selection of Unit Converter 2-9
2.9 Unit Conversion Dialog 2-10
2.10 Selection of Weather Calculator 2-11
2.11 Weather Calculator Dialog. 2-12
2.12 Selection of Alert Application from LaunchPad 2-13
2.13 AMIS LaunchPad with System Alerts Screen. 2-14
2.14 Alerts Action Menu Pop-up 2-14
2.15 Password Change Selection 2-15
2.16 Password Change Dialog 2-16
2.17 Selection of Exit - Logoff 2-17

3.1 Action Menubar - Weather Observation Form 3-1
3.2 Suspect Time Pop-Up 3-2
3.3 Surface Observation Form Transmission Screen 3-3
3.4 Routing Destinations Screen 3-4
3.5 Standard Print Dialog 3-5
3.6 Save Pop-Up 3-6
3.7 Saved Products List 3-7
3.8 Selection of Weather Observation Form 3-8
3.9 Weather Observation Form 3-9
3.10 Launch of Alert Weather Observation Form 3-14
3.11 Alert Weather Observation Form 3-15
3.12 Launch of TAF Form 3-16
3.13 TAF Form 3-17
3.14 TAF Modify Existing Dialog 3-18
3.15 TAF Issue Dialog 3-19
3.16 TAF Selected Stations List. 3-20
3.17 TAF Restore Dialog 3-21
3.18 Launch of Flight Weather Briefing (FWB) Form 3-25
3.19 FWB Mission/Takeoff Segment 3-26
3.20 Selection Menu for FWB Form Segment . . .3-26
3.21 FWB Enroute Data Segment. 3-29
3.22 FWB Terminal Forecasts Segment 3-32
3.23 FWB Comments/Remarks Segment 3-33
3.24 FWB Briefing Report Segment 3-34
3.25 Launch of Weather Advisory/Message Form. 3-36
3.26 Weather Advisory/Message Form 3-37
3.27 Valid-Time Dialog 3-40
3.28 Advisory/Message Form, Page 2 3-41
3.29 Launch of Weather Warning/Watch Form . . 3-43
3.30 Weather Warning/Watch Form 3-44
3.31 Warning/Watch Criteria Selection 3-47
3.32 Weather Warning/Watch Page 2 3-48
3.33 Weather Warning/Watch Form, Page 3 3-50
3.34 Launch of RAREP Form 3-52
3.35 RAREP Form 3-53
3.36 Launch of Unformatted Message Form. . . . 3-56
3.37 Unformatted Message Form 3-57
3.38 Launch of Forecast Bulletin 3-60
3.39 Forecast Bulletin Form 3-61
3.40 Launch of PIREP Form 3-63
3.41 PIREP Form 3-64
3.42 AIREP Launch 3-67
3.43 AIREP Form 3-68
3.44 Launch of PIBAL Form 3-70
3.45 PIBAL Form 3-71
3.46 RAOB Launch 3-73
3.47 RAOB Form, Part A 3-74
3.48 ROAB Form, Part B 3-77
3.49 RAOB Form, Part C 3-78
3.50 RAOB Form, Part D 3-80
3.51 Launch of Weather ARQ Form 3-81
3.52 Weather ARQ Form. 3-82
3.53 Launch of View-by-ICAO 3-84
3.54 View-by-ICAO Form 3-85
3.55 Launch of Synoptic and Summary Data Form 3-87
3.56 Synoptic and Summary Data, Page One . . . 3-88
3.57 Synoptic and Summary Data Form, Page Two 3-89
3.58 Synoptic Data and Summary Data, Page Three 3-90
3.59 Launch of Monthly Summary Form 3-92
3.60 Monthly Summary Form 3-93
3.61 Aircraft Accident Investigation Form Launch 3-95
3.62 Aircraft Accident Investigation Form 3-96

3.63 Launch of Local Weather Data Set 3-97
3.64 Local Weather Data Set 3-98
3.65 Launch of View-by-Criteria 3-101
3.66 View-by-Criteria Display 3-102
3.67 View-by-Criteria Viewer. 3-103
3.68 View-by-Criteria List 3-104
3.69 Launch of 24-Hour Observation List 3-106
3.70 24-Hour Observations List. 3-107
3.71 Launch of RAREP List 3-109
3.72 RAREP List 3-110
3.73 Launch of Solar/Lunar Data 3-112
3.74 Solar/Lunar Data Report, Page One 3-113
3.75 Solar/Lunar Data Report, Page Two 3-114

4.1 Launch of Weather Graphics 4-2
4.2 Weather Graphics Panel. 4-3
4.3 Weather Graphics Informational Panel 4-15
4.4 Weather Graphics Top Toolbar 4-15
4.5 Top Toolbar with Searches Toolbar 4-17
4.6 Top Toolbar with Composites Toolbar 4-18
4.7 Top Toolbar with Animation Toolbar 4-19
4.8 Left Toolbar 4-20
4.9 Top Toolbar Additions for Create Straight Line 4-22
4.10 Top Toolbar Additions for Create Polyline . .4-22
4.11 Symbolics Panel for Lines “Most Used” Category 4-23
4.12 Symbolics Panel for Lines “Fronts” Category. 4-24
4.13 Symbolics Panel for Lines “Special” Category 4-25
4.14 Symbolics Panel for Lines “Arrows” Category 4-26
4.15 Top Toolbar for Create Rectangle 4-26
4.16 Top Toolbar for Create Diamond/Ellipse and Polygon 4-27
4.17 Top Toolbar for Create Met Symbol. 4-27
4.18 Top Toolbar for Create Wind Barb 4-28
4.19 Top Toolbar for Create Text 4-28
4.20 CpsListDialog 4-39
4.21 DialogEditSave 4-41
4.22 Layer List Dialog 4-43
4.23 Layer List View Menu 4-43
4.24 Severe Weather Parameters Panel 4-44
4.25 Climb Wind Parameters Panel. 4-44
4.26 Layer List Options Menu 4-45
4.27 Layer List All Menu 4-45
4.28 Product List Dialog (ProdListDialog) 4-46
4.29 Transmit/Delete Popup 4-46
4.30 Search Criteria Dialog 4-47
4.31 Time Options Dialog 4-49
4.32 Transmit Files Dialog. 4-50
4.33 Layer List Popup 4-56
4.34 Search Criteria Dialog 4-65
4.35 ProdListDialog 4-65
4.36 Save Composite Dialog. 4-67
4.37 DialogEditStart Panel. 4-96

5.1 MET Generation Selection. 5-2
5.2 Launch of Met Generation—Horizontal 5-3
5.3 Horizontal Met Generation Screen. 5-4
5.4 Met Generation Plot FBD Panel 5-5
5.5 Plot FBD—Stations Exhibiting Change in Specified Parameter 5-6
5.6 FBD—Stations Meeting Specified Threshold Values 5-7
5.7 Plot FBD—Stations Exhibiting Specified Weather Phenomena 5-8
5.8 Plot FBD—Stations Exhibiting Change in Specified Parameter 5-9
5.9 Plot FBD—Stations Meeting Specified Threshold Values. 5-10
5.10 FBD Plot—Stations Exhibiting Specified Weather Phenomena 5-11
5.11 Plot Model Editor 5-13
5.12 Plot Gridded Data Panel 5-15
5.13 Plot Model Editor 5-17
5.14 LGG Derive a Field. 5-19
5.15 LGG Combine Grids 5-20
5.16 LGG Resize 5-22
5.17 Streamlines Panel 5-23
5.18 Isopleth Panel 5-25
5.19 Search for UGDF Grids/GRIB Data 5-28
5.20 Search for UGDF Grids (UGDF Filter) . . . 5-28
5.21 Search for UGDF Grids (DPD Filter) 5-29
5.22 Barnes Options 5-30
5.23 Barnes Options 5-31
5.24 Barnes Options 5-32
5.25 Barnes Options 5-33
5.26 Selection of Surface and/or Upper-Air FBD 5-34
5.27 Viewing/Editing Surface FBD 5-36
5.28 Viewing/Editing Upper-Air FBD 5-37
5.29 Misc. Options Panel 5-38
5.30 Launch of Met Generation—Vertical. 5-40
5.31 Met Generation—Vertical 5-41
5.32 Skew-T/Log-P Panel 5-42
5.33 Skew-T/Log-P Panel 5-44

5.34 Skew-T/Log-P Mod panel 5-46
5.35 Severe Weather Parameters Panel 5-47
5.36 Climb Wind Parameters Panel 5-48
5.37 Distance vs. Log-P from FBD 5-49
5.38 Distance vs. Log-P Parameter 5-50
5.39 Distance vs. Log-P from UGDF 5-51
5.40 Distance vs. Log-P UGDF Parameter 5-53
5.41 Time vs. Log-P from FBD 5-54
5.42 Time vs. Log-P Parameter 5-55
5.43 Selection of Surface and/or Upper-Air FBD 5-56
5.44 Viewing/Editing Surface FBD 5-58
5.45 Viewing/Editing Upper-Air FBD 5-59
5.46 Misc. Options Panel 5-60
5.47 Command Sequences Begin Recording 5-61
5.48 Command Sequences End Recording 5-62
5.49 Command Sequences Name 5-62
5.50 Command Sequences Edit 5-63
5.51 Command Sequences Route a Recording 5-64
5.52 Route Command Sequences Dialog 5-64

6.1 Launch of RSM Application from N-TFS Client 6-2
6.2 Initial Remote System Manager Screen. 6-3
6.3 Database Usage Table. 6-4
6.4 Disk Usage Table 6-6
6.5 Station Statistics Table 6-7
6.6 System Check Table. 6-9
6.7 System Lines Condition Table 6-11
6.8 System Log Table 6-13
6.9 Time Conversions Table 6-15
6.10 Time Conversion. 6-16
6.11 Alerts Advisory/Message Table 6-17
6.12 Alerts Product Arrival Table. 6-18
6.13 Alerts Product Arrival Table Recipients Panel 6-19
6.14 Alerts System Error Table 6-21
6.15 Alerts Warning/Watch Table. 6-23
6.16 CD Operations Sub-folders 6-24
6.17 Write AAI CD Screen 6-26
6.18 Read Checkpoint CD Screen 6-29
6.19 Write Checkpoint CD Screen 6-31
6.20 Read ExportImport CD Screen 6-34
6.21 Write ExportImport CD Screen 6-36
6.22 Write Forms CD Screen 6-38
6.23 Write RMSM CD Screen 6-40
6.24 Chat IP Addresses Table 6-43
6.25 Initial Destinations Screen 6-47
6.26 Product Routing to AMIS Site Identification Tab 6-48
6.27 Product Routing to AMIS Site Network Tab 6-49
6.28 Product Routing to AMIS Site Purge Tab . . 6-50
6.29 Product Routing to C^2 Site Identification Tab 6-52
6.30 Product Routing to C^2 Site Network Tab . . . 6-53
6.31 Product Routing for C^2 Site Purge Tab 6-54
6.32 Product Routing to Passive FTP Site Identification Tab 6-56
6.33 Product Routing to Passive FTP Site Network Tab. 6-57
6.34 Product Routing to Passive FTP Site Purge Tab 6-58
6.35 Product Routing to Active FTP Site Identification Tab 6-60
6.36 Product Routing to Active FTP Site Network Tab 6-61
6.37 Product Routing to Active FTP Site Purge Tab. 6-63
6.38 Product Routing to Local Workstation Identification Tab 6-64
6.39 Product Routing to Local Workstation Hardware Tab 6-66
6.40 Product Routing to Local Workstation AltIcao Tab 6-67
6.41 Product Routing to VSAT Site Identification Tab 6-68
6.42 E-mail Addresses Screen 6-70
6.43 Longline Parameters Screen 6-72
6.44 Longline Parameters Hardware Configuration Information 6-73
6.45 Longline Parameters Hardware Timeouts . . 6-75
6.46 System Groups Table 6-76
6.47 Add Users to Groups Panel 6-77
6.48 Transmit Destinations Table 6-80
6.49 Warning/Advisory Criteria Table 6-82
6.50 AAI Queue 6-86
6.51 Command Sequences 6-87
6.52 Command Sequences View. 6-89
6.53 Composites/Loops 6-91
6.54 Flawed-In 6-93
6.55 Flawed-In View 6-94
6.56 Flawed-Out 6-95
6.57 Group Composites 6-97
6.58 Image Backgrounds. 6-98
6.59 Image Miscellaneous 6-100
6.60 Primary Backgrounds. 6-102

6.61 Secondary Backgrounds 6-104
6.62 EIF Product Retention/Routing Table 6-106
6.63 EIF Retention/Routing Add Recipients Panel 6-107
6.64 FTP Ingest Authorizations Table 6-110
6.65 FTP Other Product Sources Table 6-112
6.66 Adding FTP Ingest Source Information Panel. 6-113
6.67 FTP VSAT Source Table. 6-115
6.68 FTP WPMDS Source Screen 6-117
6.69 Download Composites Table 6-119
6.70 Download Macros Table. 6-121
6.71 Isopleth Defaults Table 6-123
6.72 Skew-T Parameters Table 6-125
6.73 Skew-T Parameter Colors and Thresholds Screen 6-126
6.74 Local ICAO Station Data Table 6-128
6.75 Pressure Reduction Table 6-130
6.76 Local ICAO Site Data Table Identification Tab 6-133
6.77 Local ICAO Site Data Table Location Tab 6-134
6.78 Local ICAO Site Data Table Defaults Tab 6-135
6.79 Local ICAO Site Data Table Units Tab . . . 6-137
6.80 Local ICAO Site Data Table Misc. Tab . . . 6-139
6.81 Local ICAO Site Data Table AN Options Tab. 6-140
6.82 Local ICAO Warrning/Advisory Contacts Table 6-142
6.83 Local ICAO Warning/Advisory Contacts Table Advisory Tab 6-144
6.84 Prefill Data Notify Panel. 6-145
6.85 Bulletin MANOP Table 6-146
6.86 Database Purge Table 6-149
6.87 E-mail Stage Table. 6-151
6.88 E-mail Stage—To Add Recipients Panel . . 6-152
6.89 Gif Stage Table 6-154
6.90 Gif Stage Table Add Recipients Panel. . . . 6-155
6.91 Metwatch Criteria Table 6-160
6.92 Specify Metwatch Criteria Panel 6-161
6.93 Present Weather Information Panel 6-162
6.94 Parameter Value Alerting Criteria Panel. . . 6-163
6.95 Wind Alert Criteria Panel 6-164
6.96 Altimeter Change Criteria Panel. 6-165
6.97 Metwatch Criteria Add Specified Recipients 6-166
6.98 Print Stage Table. 6-168
6.99 Product Retention Table 6-170
6.100 Product Stage Table 6-172
6.101 Product Stage Add Recipients Panel . . . 6-173
6.102 Unformatted Message Route-by-Name Table. 6-175
6.103 Unformatted Messages Add Recipients Panel 6-177
6.104 Regional ICAO Station Data Table 6-180
6.105 Regional ICAO Site Data Table Identification Tab 6-182
6.106 Regional ICAO Site Data Table Location Tab 6-183
6.107 Regional ICAO Site Data Table Units Tab 6-184
6.108 Regional ICAO Site Data Table Network Tab 6-185
6.109 Regional ICAO Warning/Advisory Contacts Table 6-187
6.110 Regional ICAO Warning/Advisory Contacts Table Advisory Tab. 6-189
6.111 Prefill Data Notify Panel 6-190
6.112 Scheduler Table 6-192
6.113 METWatch Scheduler 6-193
6.114 Timer Scheduler 6-195
6.115 Product Arrival Scheduler. 6-197
6.116 WMO Priority Report Table. 6-199
6.117 WMO Table Maintenance Display 6-202
6.118 WMO Table Maintenance Location Tab Display 6-205
6.119 WMO Table Maintenance Units Tab Display 6-208
6.120 AMIS Main Workspace Menu. 6-210
6.121 N-TFS Server Remote System Manager Screen 6-211
6.122 Active Remote Users Screen 6-212
6.123 Server Access Control Screen. 6-213
6.124 Authorized System Users Screen 6-215
6.125 Web Server Audit Screen 6-220
6.126 AMIS Main Workspace Menu 6-224
6.127 AMIS Process Status Screen 6-225
6.128 Network Information Screen 6-226
6.129 Network Status Interface Configuration Information 6-227
6.130 Network Status Trace Route Information 6-228
6.131 Network Status Information 6-229
6.132 Network Status DNS Lookup 6-230
6.133 Network Status Printer/Mail Information 6-231
6.134 AMIS Restart Menu 6-232

6.135 Unit Conversion Dialog 6-236
6.136 Weather Calculator Dialog 6-237
6.137 Create Algorithm Screen 6-238
6.138 TAF Verification Screen 6-239
6.139 Web HTML Manager Screen. 6-239
6.140 Product Traces Menu 6-240
6.141 External Product Receipt Trace Screen . . . . .
. 6-241
6.142 PPC Xmit Queue Trace. 6-242
6.143 Passive FTP Xmit Queue Trace 6-243
6.144 Programs Menu. 6-244
6.145 System Clock 6-244
6.146 Set System UTC Time Screen 6-245
6.147 Set Time Zone Screen 6-246
6.148 Configure Network Settings Display. . . . 6-247
6.149 Calculator Screen. 6-250
6.150 AMIS Software Version Screen 6-251
6.151 Utilities Menu 6-251
6.152 UtilitiesWindow Controls Menu 6-252
6.153 System Console Window. 6-253
6.154 Shutdown Server Menu 6-253
6.155 C/DM Monitor, Model VT320 6-255
6.156 C/DM Monitor, Model VT420 6-256
6.157 UPS, 110 Volt (one per system) 6-257
6.158 UPS, 220 Volt (three per system which includes
one for the N-TFS Server). 6-258
6.159 C/DM Computer Status Panel 6-259

List of Tables

1.1 PPC Transmission Methods 1-8
1.2 N-TFS Server Receive Modes 1-14

6.1 Destination Types for Product Routing. 6-45
6.2 Data Formats 6-45
6.3 Local Default ICAO Site Data Information. . . . .
. 6-131
6.4 Local Non-Default ICAO Site Data Information . .
. 6-132
6.5 Purge Category Identification. 6-147
6.6 Metwatch Alert Types. 6-158
6.7 Regional ICAO Site Data Information 6-181
6.8 WMO Table Maintenance Parameters 6-201
6.9 Zoom Levels 6-206
6.10 Synoptic Reporting Units 6-209
6.11 Hourly Reporting Units 6-209
6.12 Audit Log Function Codes. 6-219
6.13 Audit Log Action Codes. 6-219
6.14 Audit Log Result Codes 6-220

7.1 METAR Surface Observation Types 7-4
7.2 Products for Station Statistics. 7-6
7.3 AAI Record Products 7-7
7.4 Product Selection Criteria. 7-8
7.5 Products Selectable by ICAO or WMO Number . .
. 7-9
7.6 Automatic ARQ Product Time Expirations. . . 7-9
7.7 Local Weather Data Set 7-9
7.8 Communication Formats of Locally Produced
Products 7-10
7.9 Types of Vector Graphics Products 7-11
7.10 Graphics Data Product Types 7-14
7.11 Station Plot Parameters 7-16
7.12 Station Plot Threshold Parameters. 7-17
7.13 Station Plot Change Parameters 7-18
7.14 Default Isopleth Base Values and Increments . . .
. 7-19
7.15 Skew-T/Log-P Indexes and Parameters 7-21
7.16 Cross Section Types 7-22
7.17 Product Edit Functions. 7-25

CHAPTER

1

About this Manual

AMIS Description

The Advanced Meteorological Information System (AMIS) is a weather analysis and forecasting system consisting of AMIS 3.1 software, legacy Automated Weather Distribution System (AWDS) 3.4.0 hardware and software, N-TFS hardware, Government-off-the-shelf (GOTS) software, and commercial-off-the-shelf (COTS) software.

The AMIS 3.1 software consists of N-TFS Server software that is an enhanced AWDS 3.4.0 server providing improved network security and web-based alphanumeric and graphic product creation and editing functions. Additionally, AMIS 3.1 software includes N-TFS Client software for the generation of alphanumeric products and for the interactive viewing of graphics products with animation, and the editing of those products.

The legacy AWDS 3.4.0 software consists of AWDS Communications/Data Management (C/DM) and Flight Control Facility (FCF) functionality.

Site Mission

Air Force Weather (AFW) users and customers and Army posts in the continental United States and overseas provide daily weather support to AFW. In turn, AFW is responsible for providing daily staff and operational weather support to unified/specified commands, Air Force, Army, and Air National Guard/Air Force Reserve/Army Reserve components. The type of weather support provided by N-TFS facilities vary as a function of the mission of the respective Air Force or Army unit.

The N-TFS provides functionality in support of this mission, as follows:

- Receives alphanumeric and graphic meteorological products from various external sources.
- Automates processing and dissemination of products.
- Automates analysis of meteorological parameters.
- Provides storage and retrieval of data and products.
- Provides generation/modification and display of products.

The N-TFS obtains externally generated meteorological data, products, and operational messages by interfacing to the Air Force Weather Agency (AFWA), Automated Weather Network (AWN), Interim Tactical Weather Radar (ITWR), Small Tactical Terminal (STT), Very Small Aperture Terminal (VSAT) Communications Handler (VCH), C^2 Systems, and other local and/or remote systems via the Base Network Control Center (BNCC). The N-TFS uses the externally generated products as building blocks for many of its locally generated products. The N-TFS is also the source for hourly weather observations, weather forecasts, and other weather messages that are sent from a site with an N-TFS Server to the AWN.

AMIS Overview

Principles of Operation

The N-TFS server encompasses several major functions including: meteorological generations, the web server, the Severe Weather Algorithm Tool function, the PPC function, the product scheduling and routing function, and the database management function. At sites that are not configured with a C/DM, the N-TFS server also serves as the single communications pipe into and out of the system. In addition, the N-TFS server provides a central system configuration function for system items, accessible from its main workspace. The N-TFS server provides the processes and functions that validate user logins, resolve queries for products, and generate meteorological processes for manipulation of weather products at client workstations. The N-TFS server function also includes system/network configuration and monitoring items, as well as HTML administrative functions for the Product Viewer feature. There are also utilities to create severe weather Skew-T algorithms, manage the AMIS central database, and establish the AMIS-to-external system communications through the RSM interface. The System Manager may

create and test site specific severe weather algorithms, whose results are displayed in the AMIS graphics application with the Skew-T diagrams. The System Manager may also configure any of the database or the system tables at the N-TFS server. The system tables allow the AMIS to send products automatically to external customers or enable the operator to route products manually to the external customers. Once the algorithms and tables are set up, all product management functions are performed automatically as the result of operator actions at the AMIS clients. Except for the severe weather algorithm development, the activities on the N-TFS server are transparent to the AMIS user. The N-TFS server performs the following functions:

Stores and retrieves externally generated and locally produced graphics and alphanumeric products.

Examines incoming external products and locally generated observations against ID, time, or event criteria for alerting purposes and for initiating some action.

- Provides Remote System Manager function access.
- Provides System Time configuration access.
- Provides System Restart function access.
- Provides Network configuration functions.
- Provides WEB HTML administrative functions for the Product Viewer function.
- Provides Unit Converter and Weather Calculator functions.
- Provides a TAF Verification interface.
- Provides System/Network monitoring, and product queue tracing.
- Produces meteorological generation and manipulation of gridded and FBD data fields based on products received from external data sources and locally produced gridded data fields.
- Receives externally generated products from AFWA, the AWN, Small Tactical Terminal (STT), Interim Tactical Weather Radar (ITWR), and VSAT Communication Handler (VCH), and routes them to the designated external system(s) unmodified. These products include RAW, raster image, vector graphic, FBD, UGDF, and alphanumeric.
- Transmits locally produced alphanumeric products to the AWN, WPMDS, and via E-mail.

- Receives and encodes selected locally produced graphic and alphanumeric products meeting ID, time, or event criteria, and automatically routes these products to designated external system(s).
- Receives and encodes selected locally produced graphic and alphanumeric products through manual operator action at client workstations, and routes the selected product(s) to the designated external system(s).
- Receives externally generated high-resolution METSAT, NEXRAD, GRIB, and RAW data products, via FTP, from the VCH.
- Provides the utilities and test environment for the development of algorithms for local severe weather Skew-T parameters.
- Provides Web server functionality for remote client workstations.
- Provides the physical connection to the external system(s).

AMIS Client-Server Functionality Overview

The AMIS system uses a client-server architecture to process user queries and functions on the back-end (Server), and display the output of these actions on the front-end client. The Server side of the system performs the actual operations of met generation, product transmission, or database storage of the various products manipulated or created by the user at the client. This process occurs only after the user establishes an authenticated HTTP session between the client and server. The user establishes this session by logging into the N-TFS server, through the server-side HTTP process, from the client AMIS Launchpad. After the initial connection is established between the client and the AMIS Web Server, the entered username and password entries are verified by the Web Server against a table configured by the system administrator through the CSSO User function. If the username and password are entered correctly, the Web Server validates the session, and server-side data and processes can be accessed and manipulated. The various client Alphanumeric and Graphic applications perform functions through this established session with the server. If the session is interrupted due to communications failures, or server/client software or hardware problems, the various AMIS applications will cease to function properly, and a new session must be established.

N-TFS Server-Side Process Overview

The functions performed by the server include database storage, scheduling and purging of products though the PSR/PSC processes. PSR is the process

that handles all database functions. PSC handles the scheduling and alerting of all product actions. These processes must be functioning for database access, product manipulation, and product alerting to occur properly. The PPC process handles transmission of products to external systems (see PPC discussion below). This process needs to be functioning for product routing to external systems to occur. The N-TFS server performs the algorithmic processing of formatted binary data (FBD), uniform gridded data fields (UGDF), and GRIB data to produce local graphics products for display at the client Weather Graphics function. The meteorological algorithms at the N-TFS server are automatically executed whenever you request meteorological processing. The N-TFS server also provides server-side printing functions for a network printer. The Printer must be online and configured properly for printing actions to occur.

The AMIS C/DM (Communications/Data Manager) provides the longhaul communications process ADCIO. This process handles incoming products from the AWN and AFWA. The ADCIO process must be running for inbound products to be processed from the AWN or AFWA, and outbound products to be transmitted to the AWN. The CTL/MEX processes provide asynchronous communications with the FCF/ATC and FCF/FO terminals. These processes need to be running in order for local A/N products to be displayed at the FCF/ATC and FCF/FO terminals. To troubleshoot and restart server-side and C/DM process problems, see the Recovery section.

Database and Table Management

The AMIS central database resides, and is managed by software running on the N-TFS server as described above. This software provides for the storage and retrieval of all products accessible to the AMIS clients and FCF terminals. It accepts, stores, and processes all externally and locally generated data passed either through the C/DM to the N-TFS server, through the PPC, or through internally generated data passed directly from the AMIS clients. It examines the data for alerting or scheduling criteria to determine if alarms are required or if any action should be initiated. If an alarm condition is detected, it generates the alert which, in turn, the AMIS clients will retrieve and display. All system tables associated with the management of database and site system activities also reside on the N-TFS server and are accessible by the System Manager at the N-TFS server terminal, or through the client RSM interface.

Severe Weather Algorithm Software Overview

Severe Weather Algorithms are user programmable, site specific indices that are added into the Severe Weather version of the Skew-T. The five programmable indices appear as ALT1 through ALT5 on the Skew-T severe panel. This function allows a user to create threat indices that are more representative of severe weather potential at the local site. This is especially useful at “non-traditional” locations, such as high elevations and overseas sites.

The algorithms are written in an interpreted language called Tool Command Language (tcl). The algorithms are stored as tcl scripts that are run whenever the operator creates a Skew-T. As a user becomes more proficient in tcl, he/she can edit the scripts directly in the Tcl Algorithm Editor window and have access to full tcl capabilities.

For execution, the tcl interpreter is linked with the Severe meteorological software. The tcl interpreter executes the algorithms scripts, reads the Upper Air FBD data the Skew-T process has retrieved from the database, and performs the mathematical functions of the algorithm. The output are the “Alternative Indices” (ALT1 through ALT5) displayed on the Severe version of the Skew-T. There can be only one algorithm per alternative index. The alternative algorithms are stored at the N-TFS server and are accessed by the AMIS client upon severe Skew-T development.

FTP Fetch and Ingest

The N-TFS server can receive products via “ftp fetch” from the VCH, or any other external system. Once the FTP Source tables are configured and the fetch has been enabled, the N-TFS server will use this information to periodically establish an FTP connection with the external system, or VCH, for the purpose of fetching data that has been placed in a specific directory. The external system must be configured to allow the N-TFS server access as well. The data must be in an acceptable format for the AMIS system to process it as described in the PPC Software overview below. The N-TFS server will also allow an FTP session to be established by configuring the Ingest Authorizations table. The external system or user can then login using FTP for the purposes of transferring data on the N-TFS server. See the FTP procedure section to configure these items.

PPC Software Overview

The PPC function provides for the capability of two methods of data transmission: active and passive. In the active transmission mode, AMIS

establishes a connection with an external site, transmits the products to the site receiving process, and then disconnects the link when the data transfer is finished. In the passive transmission mode, AMIS stages the data to a special output queue, waits for any external systems to establish a connection with the AMIS, then removes the data after a System Manager specified time period.

The PPC function also allows for the option of transmitting or receiving products in Appendix 30, NITF (transmit only), RAW, or AMIS internal formats. AMIS internal formatted data (or just AMIS format) can only be exchanged between AMIS sites at the same software release version. NITF is a standard imagery data format, and RAW is considered an unknown format to the system but can include GIF, JPG, MPG, and BMP formats.

Specifically, the PPC function will transmit Appendix 30, AMIS, RAW and NITF data to the following:

- A command-and-control system (C^2) through a C^2 provided Ethernet Local Area Network (LAN) connection (excluding RAW and AMIS data).
- An external system through a File Transfer Protocol (FTP) anonymous log-in, via the Defense Data Network (DDN) (excluding RAW and AMIS data).
- An external system through an active FTP connection.
- An AMIS or Non-AMIS system through the DDN. (excluding RAW and NITF data).
- The VCH through the AMIS or base LAN.

In addition, the PPC function will receive Appendix 30, AMIS, RAW, and GRIB data (GRIB is a standard grid field data format) from the following:

- From an external system using FTP fetch (for ingest of RAW, Appendix 30, and GRIB data formats).
- From an AMIS or Non-AMIS system through the DDN. (excluding GRIB and RAW data).
- From the VCH through the AMIS or base LAN.

The PPC software provides the data management, product encoding, and communication functions of the AMIS-to-external systems interface. The System Manager maintains the tables that format the data, make the connections to the external systems, and transmit the products.

PPC Transmit Data Flow

The PPC function provides three methods of transmitting products from the AMIS to the external system:

- Store and forward of external products from AFWA, AWN, NITF, and RAW data sources.
- Automatic routing of AMIS database products (Appendix 30, AMIS format, NITF format) based on specified criteria using the AMIS Scheduler or product staging tables.
- Manual routing of AMIS database products (Appendix 30, AMIS format, NITF, and RAW data) through operator interaction at the weather graphics and alphanumeric AMIS client functions.

Table 1.1 summarizes all three methods of PPC data transmissions.

Table 1.1 PPC Transmission Methods

Method	Data Format	Connection Type	Mode
Store and Forward	Appendix 30	C^2	Active
	Appendix 30	FTP	Active
	Appendix 30	FTP	Passive
	Appendix 30	DDN	Active
	Appendix 30	VCH	Active
	AMIS	FTP	Active
	AMIS	DDN	Active
	NITF	FTP	Active
	NITF	FTP	Passive
	NITF	VCH	Active
	RAW	FTP	Active
Automatic	Appendix 30	C^2	Active
	Appendix 30	FTP	Passive
	Appendix 30	FTP	Active
	Appendix 30	DDN	Active
	Appendix 30	VCH	Active
	AMIS	DDN	Active
	AMIS	FTP	Active
	NITF	FTP	Passive
	NITF	FTP	Active
	NITF	VCH	Active
	NITF	C^2	Active
Manual	Appendix 30	C^2	Active
	Appendix 30	FTP	Passive

Table 1.1 PPC Transmission Methods

Method	Data Format	Connection Type	Mode
Manual	Appendix 30	FTP	Active
	Appendix 30	DDN	Active
	Appendix 30	VCH	Active
	AMIS	DDN	Active
	AMIS	VCH	Active
	AMIS	FTP	Active
	NITF	C^2	Active
	NITF	FTP	Active
	NITF	FTP	Passive
	NITF	VCH	Active
	RAW	VCH	Active
	RAW	FTP	Active

For AMIS sites transmitting data over the DDN, the AMIS System Manager has the option of specifying the primary address, and an alternate address. AMIS will automatically attempt the alternate address if the primary is inactive. AMIS will attempt five times to connect to either the primary (if no alternate is listed) or alternate address before terminating the connection. For multiple sites, AMIS will attempt a connection with each site, for one minute, in a "round-robin" format, meaning that if the first site fails, AMIS will attempt a connection to another site, and so on until the first site is again attempted. Each retry interval (the time between retries) is equal to one minute times the retry attempt.

Store and Forward Routing. The store and forward routing transmits products automatically using the AMIS external communications function on the N-TFS server to another external system. No encoding is necessary with C^2 Appendix 30 or GIF "store and forward" since the products are retained in their original "Appendix 30, or "RAW" format when transferred to the external system.

Appendix 30 alphanumeric and graphic products arriving at the N-TFS server are passed directly to the product receiving and routing software (PSR). The PSR compares all products to the EIF Product Retention/Routing Table. Products in the EIF Product Retention/Routing Table are passed to the N-TFS server "Appendix 30" product database. The "Appendix 30" product database is identical in structure to the central database. The difference is that the products stored in the N-TFS server "Appendix 30" product database are still in their original "Appendix 30" format with additional data information appended to the beginning of each product.

This additional information is removed upon routing to an external site. From here, the product scheduler (PSC) examines the EIF Product Routing Table to determine which products are to be routed to each of the possible external systems, then notifies the Product Preparation Capability software (PPC) of the product. PPC places it in the appropriate PPC destination queue, and transmits the product. There is a separate queue for each external destination. PPC opens a connection to the external system, transfers the products to the external system, and then closes the connection. For passive FTP sites, PPC transfers the products to a site specific holding queue. The FTP site logs-in to the AMIS system via "anonymous" FTP, and the FTP processing module, FTPD, validates the login address, and directs the addressee to their specific holding queue for product retrieval. In the case of active FTP transfers, the N-TFS server logs-in to the external system using a "login" and "password" supplied in the setup tables (see Configuration procedure section for Destinations table setup). After validation by the external site, the N-TFS server transfers the products to the specified directory configured in the destination table.

For "store and forward" to pass a product through to a C^2 system, the System Manager must set up the following tables:

- AMIS Destinations Configuration Table (To access this table, from the RSM list of folders select **Configure > Destinations**. See "Destinations" on page 6-44). This table identifies the external system to the AMIS operator as a valid destination.
- EIF Retention/Routing Table (To access this table, from the RSM list of folders select **EIF Retention/Routing**. See "EIF Retention/Routing" on page 6-105). This table identifies which Appendix 30 products to accept.

For "store and forward" to route a product to another AMIS system, to the VCH, to an FTP queue, or an active FTP destination, the same method is followed as above, except that PSR first compares all products to the AMIS Product Retention Table. PSC then examines the AMIS Product Staging Tables (STAGE, and GIF STAGE) to determine which products are to be routed to each of the possible destinations, then notifies PPC, which will encode the product into the designated format, if required, and transmits the product. The System Manager must set up the following tables:

- AMIS Destination Configuration Table. This table identifies the AMIS system, or FTP destination to the AMIS operator as a valid destination.
- AMIS Product Retention Table. This table identifies which external products to accept.

- WMO Table. This table identifies which surface and upper-air FBD to accept.
- AMIS Product Staging Table. This table identifies which non-RAW products to route to another AMIS system, the VCH, FTP queue, or another FTP destination.
- AMIS GIF Stage Table. This table identifies which RAW products to route to another FTP destination.

  NOTE: *If an external system will be shut down for more than a few hours, products routed to the system either via the store and forward method or via the AMIS Scheduler, should be removed from the appropriate system manager table(s), in order to reduce PPC purging activities and N-TFS server CPU loading.*

N-TFS Server Automatic Routing. The N-TFS server automatic routing function transmits products to the external systems according to criteria established by the System Manager. The System Manager uses the Scheduler to establish the criteria and destinations. The Scheduler is part of the PSC software. There are three methods to schedule products to the external system(s):

- Product ID.
- Meteorological event.
- System time.

When “Product Arrival”, “METWatch”, or “Expired Time” meet a scheduler criterion, PSC issues a command to PPC to retrieve (and encode if required) the product from the central database. PPC then places the product in the appropriate PPC destination queue, and transmits the product as in the store and forward methods mentioned above. For the scheduler to transmit a product through to an external site, the System Manager must set up the following tables:

- AMIS Destination Configuration Table. This table identifies the external system to the AMIS operator as a valid destination.
- Appropriate AMIS Retention tables.
- AMIS Scheduler Table. This table identifies the events used to send the products.

  NOTE: *If an external system will be shut down for more than a few hours, products routed to the system either via the store and forward method or via the AMIS Scheduler, should be removed from the appropriate system manager table(s), in order to reduce PPC purging activities and N-TFS server CPU loading.*

By Product Arrival. When a specified product arrives or is created, the product is sent to the designated external system automatically.

By METWatch. The System Manager establishes METWATCH criteria for up to 200 station ICAOs. When the criteria is met using locally generated surface observations or external surface formatted binary data, the specified products are sent to the designated external system.

By Expired Time. When the specified time is reached, the Scheduler sends the current version of the identified product. In addition, “Expired Time” can repeat the same action at specified time intervals.

Manual Routing. The forecaster or observer can also transmit products to the external systems manually. When the operator sends an alphanumeric product, the external systems appear on the Transmit Panel list of available destinations under “EXTERNAL” or “AMIS” columns. The operator simply selects the desired destination and completes the transmit action as usual. For graphics products, the operator right-clicks over the required product in the product List Dialog panel of the Weather Graphics application, and selects “Transmit Selected Item”. When the operator selects a product to route, a list of destinations appears. The operator clicks on the desired “EXTERNAL”, “AMIS”, “GIF/JPG”, or “NITF” product type, selects the destination(s) and completes the transaction.

When the operator transmits, PSC notifies PPC. PPC retrieves the product from the central database and then encodes it into the required format, if required, and transfers the product to the PPC destination queues, and transmits the product as described in the “store and forward” section. For manual routing to an external system, the System Manager must set up the following table:

- AMIS Destination Configuration Table. This table identifies the external system to the AMIS operator as a valid destination.

External Destination Output Queue Purging Criteria.

The N-TFS server will perform normal data purges on the PPC external destination queues. Normal purges are performed by the criteria set by the System Manager in the Destination Configuration table “Purgeable after time in Q” and “Maximum Products in Queue” entries. Normal purges based on the “Maximum Products in Queue,” are performed when the number of products exceed the table entry. The N-TFS server will purge the oldest 20 percent of the products to bring the number of products below the table entry. Normal purges based on the “Purgeable after time in Q”, are performed when the products time in the queue has expired. The N-TFS

server will purge all the products with expired times when the next product is placed in the queue for transmission. Purges will also occur when the queues exceed the allotted memory size that is configured in the Destination table “Maximum Queue Size” entry. The System Manager can manually purge products using the “PPC Queue Purge” feature at the AMIS Main Workspace Restart menu (see Recovery section).

N-TFS Server Receive Data Flow

The N-TFS server allows for the option of receiving products in Appendix 30, RAW, BMP, GRIB, or AMIS internal format from other external sites (AMIS or non-AMIS) as determined by the transmitting site. Alphanumeric and graphic products received from another AMIS are passed through the PPC module directly to the AMIS product receiving and routing software (PSR). Alphanumeric and graphic products received via FTP are passed directly to the AMIS product receiving and routing software (PSR). PSR then determines, before any further processing is accomplished, the following:

- If the product is in Appendix 30, AMIS internal, RAW, BMP, or GRIB format.
- If the product was created locally at another AMIS site, or originally from AFWA or the AWN.
- If the product is graphic or alphanumeric.

If the received product is a graphics product in Appendix 30 or AMIS internal format, which has been merely passed-through from AFWA (manually or automatically), or a locally created graphics product in Appendix 30 format, AMIS treats the product the same way as if the product came directly from AFWA, to include alerting, routing, and staging. If the received product is a locally created graphics product in AMIS internal format, AMIS treats the product the same way as if the product came directly from AFWA, to include alerting, routing, and staging, with one exception, AMIS will accept the product whether or not the products’ PID is in the AMIS Retention Table.

If the received product is an alphanumeric product in Appendix 30 or AMIS internal format which has been merely passed-through from the AWN (manually or automatically), AMIS treats the product the same way as if the product came directly from the AWN, to include alerting, routing, and staging. If the received product is a locally created alphanumeric product in Appendix 30 or AMIS internal format, AMIS will alert, route, and stage the product, but does not process the product for inclusion into the FCF Data Set (except for WW/WA and TAFs). In addition, for AMIS internal formatted

locally created alphanumeric products, AMIS will accept the product whether or not the products' PID is in the AMIS Retention Table.

Table 1.2 summarizes all methods of N-TFS server data receipt.

Table 1.2 N-TFS Server Receive Modes

Method	Data Format	Connection Type	Mode
Automatic	Appendix 30	DDN	Active
	Appendix 30	VCH	Active
	Appendix 30	FTP	Passive
	AMIS	DDN	Active
	AMIS	VCH	Active
	AMIS	FTP	Passive
	RAW	VCH	Active
	RAW	FTP	Passive
	GRIB	VCH	Active
	GRIB	FTP	Passive
	BMP	FTP	Passive

CHAPTER

2

Basic Operations

AMIS Login from N-TFS Client

Profiles/authorizations

Each individual N-TFS user has a unique user account with an associated user profile(s). The N-TFS user accounts are created and maintained by the CSSO/System Administrator. The AMIS user interface restricts a user's functionality to functionality consistent with the user profile(s) associated with his user account.

The profiles are named as follows:

- AIRAD Form Access.
- AN (Alphanumeric) Forms Access.
- AOS (Automated Observation System) Sensor Access.
- CSSO Access.
- System Manager Access.
- UNIX Access.
- Weather Graphics Write Access.

Upon N-TFS user account creation/modification, the CSSO/System Administrator selects zero or multiple profiles, as appropriate, for each user. BY default, all N-TFS users have access to the Product Viewer; Alphanumeric View applications; view-only (or *read-only*) mode of the Weather Graphics application; Alert application; and Unit Converter, Weather Calculator, and password change utilities.

Selection of *CSSO Access* automatically selects all other profiles for the administrative user (note that profiles may be de-selected on an individual basis).

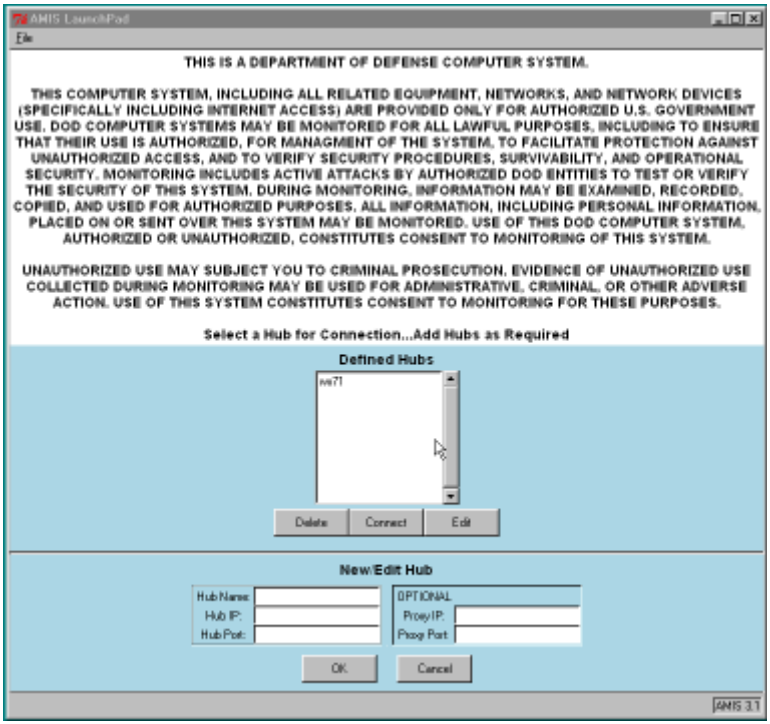
Hub Definition

The hubs (N-TFS Servers) commonly used by your site will be configured for you at AMIS installation time. However you may want to update the hub list to add a new hub, or perhaps to recover a hub inadvertently deleted.

1 Start the AMIS application by using your mouse to select **AMIS** from the Windows **Start** menu or by double clicking the AMIS short-cut icon (if configured).

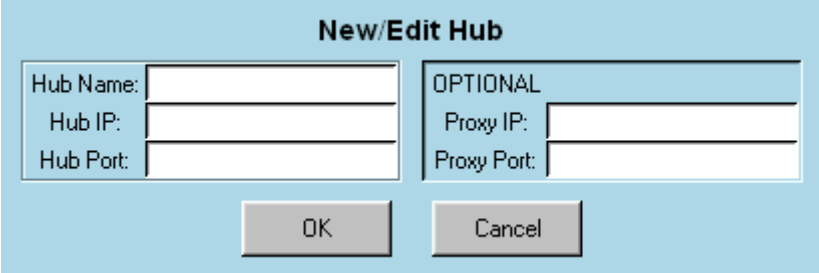
The AMIS System Entry screen appears (see Figure 2.1).

Figure 2.1 AMIS System Entry Screen



2 In the New/Edit Hub entry fields (see Figure 2.2), enter hub information as follows:

Figure 2.2 New/Edit Hub Screen



- At **Hub Name**, enter a plain text name of the hub site.
- At **Hub IP**, enter the IP address of the respective N-TFS Server at the hub site.
- At **Hub Port**, enter the number of the N-TFS Server connection port (for example, 80).

3 Optionally, if your site is configured to use a proxy server, enter information as follows:

- At **Proxy IP**, enter the IP address of the proxy server.
- At **Proxy Port**, enter the number of the proxy server connection port.

  See your CSSO/System Administrator or System Manager to determine if use of a proxy server has been configured for your site. Many N-TFS sites do not use this option.

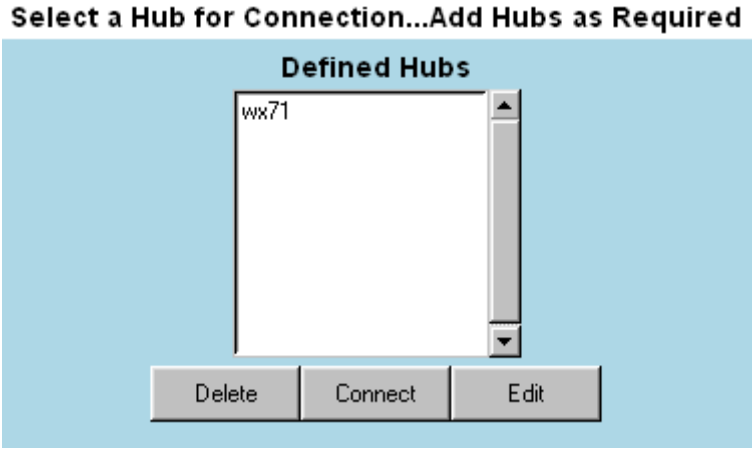
4 Do one of the following:

- Select **OK** to save the hub entry as defined.

  *The hub name appears in the **Defined Hubs** (see Figure 2.3) list.*

- Select **Cancel** to clear the entry fields.

Figure 2.3 Defined Hubs Screen



Editing Hub Entries

1 To change settings for an existing hub, select the hub in the **Defined Hubs** list and select **Edit**.

The New/Edit Hub (see Figure 2.2) fields are populated with the settings previously made for that hub.

2 Modify the hub data as appropriate.

3 Do one of the following:

- Select **OK** to save your changes.
- Select **Cancel** to clear the entry fields.

Deleting a Hub

1 To delete a hub, select the hub from the **Defined Hubs** list and choose **Delete**.

*The hub name disappears from the **Defined Hubs** list.*

Connecting to a Hub

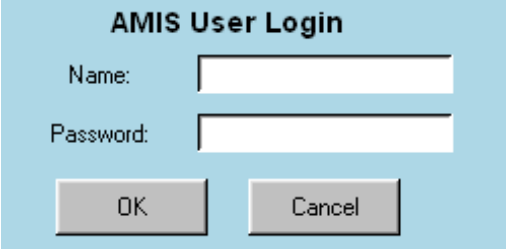
1 Select the hub from the **Defined Hubs** list, and choose **Connect**.

The AMIS User Login screen (see Figure 2.4) appears in place of the New/Edit Hub screen.

NOTE: If the hub connection cannot be made, an error message will display. First, ensure that your hub settings are correct. If your settings

are correct and the problem persists, refer to the restart procedures at the end of this section, or see your System Manager.

Figure 2.4 AMIS User Login Screen



Login

A weather application user ordinarily logs into AMIS from an N-TFS Client workstation.

1 Start the AMIS application by using your mouse to select **AMIS** from the Windows **Start** menu or by double clicking the AMIS short-cut icon (if configured).

The AMIS System Entry screen, Figure 2.1, appears.

2 Select desired hub from the **Defined Hubs** list, and choose **Connect**.

*The AMIS User Login screen, Figure 2.4, appears in place of the **New/Edit Hub** screen.*

3 At **Name**, enter your CSSO/System Administrator assigned user name.

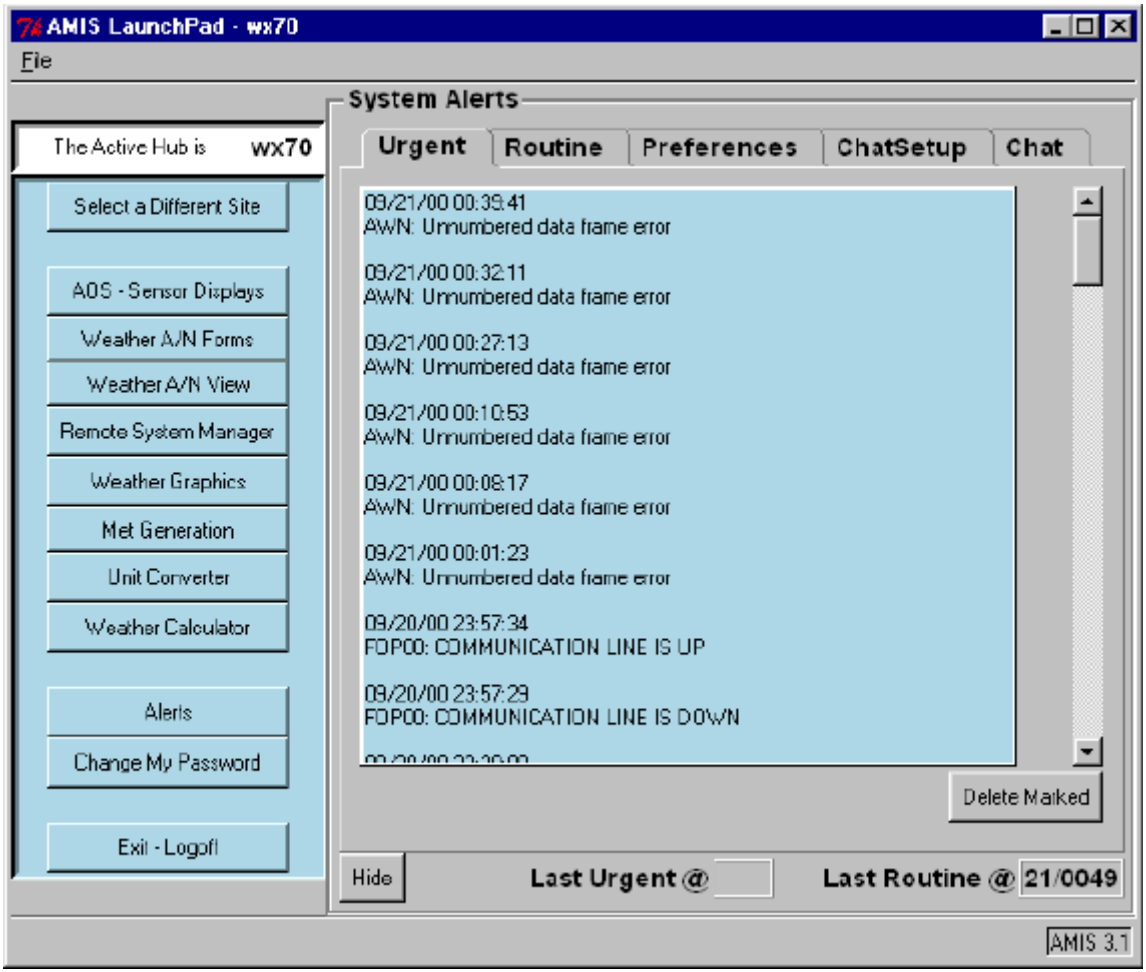
4 Press the **Tab** key on your keyboard to position the cursor at **Password** and enter your password.

5 Do one of the following:

- Select **OK** to login.

The AMIS LaunchPad screen is displayed (see Figure 2.5).

Figure 2.5 AMIS LaunchPad Screen

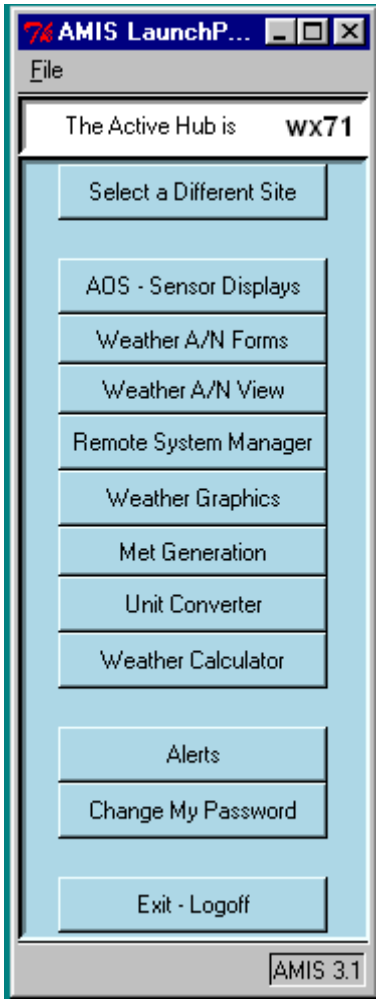


- Chose **Cancel** to exit the login process and return to the New/Edit Hub screen, Figure 2.2.

6 To hide the System Alerts window of the AMIS LaunchPad Screen (Figure 2.5), select **Hide**.

The AMIS LaunchPad without the alerts window displays (see Figure 2.6).

Figure 2.6 AMIS LaunchPad



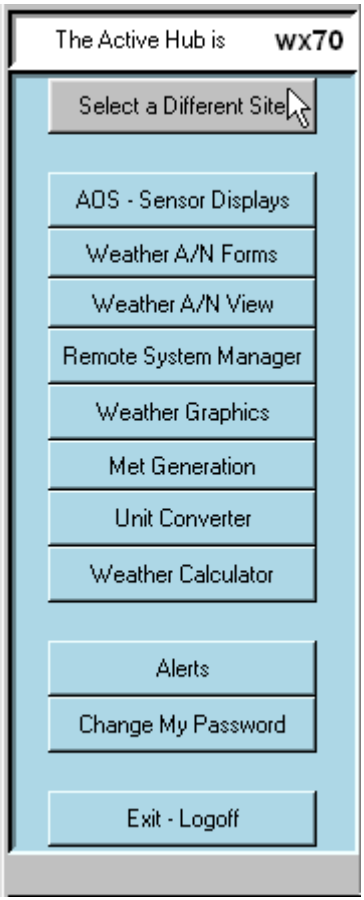
Selecting a Different Site

The Select a Different Site selection of the AMIS LaunchPad enables you to login to another site while remaining logged in to the current site.

To select a different site, do the following:

1 From the AMIS LaunchPad, select **Select a Different Site**(see Figure 2.7).

Figure 2.7 Selection of a Different Site



The AMIS System Entry dialog appears (see Figure 2.1).

2 Select the site (Hub name) you wish to login in to.

3 Select **Connect**.

The AMIS User Login Screen appears (see Figure 2.4).

4 At **Name**, enter your CSSO/System Administrator assigned user name.

5 Press the **Tab** key on your keyboard to position the cursor at **Password** and enter your password.

6 Do one of the following:

7 To login, select **OK**.

The AMIS LaunchPad is displayed (see Figure 2.5).

*Note: **The Active Hub is** at the top of the launch pad identifies the hub associated with this LaunchPad.*

- To exit the login process and cancel the login, select **Cancel**.

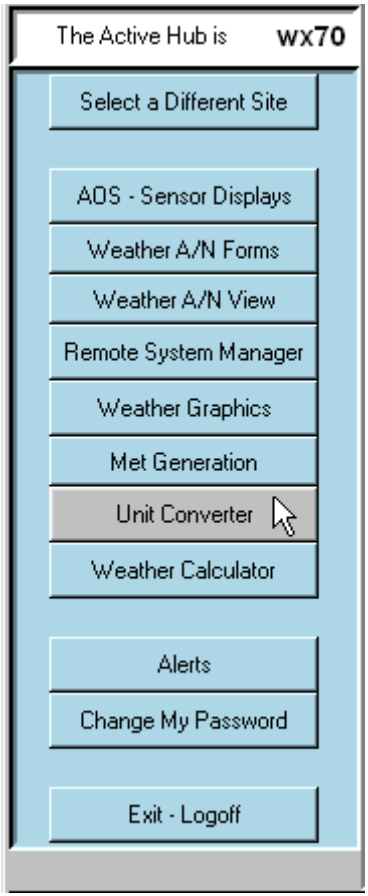
Unit Converter

The Unit Converter is an utility that computes conversion between various units of temperature, pressure, velocity, time/angle, length, weight, and volume.

To start the Unit Converter:

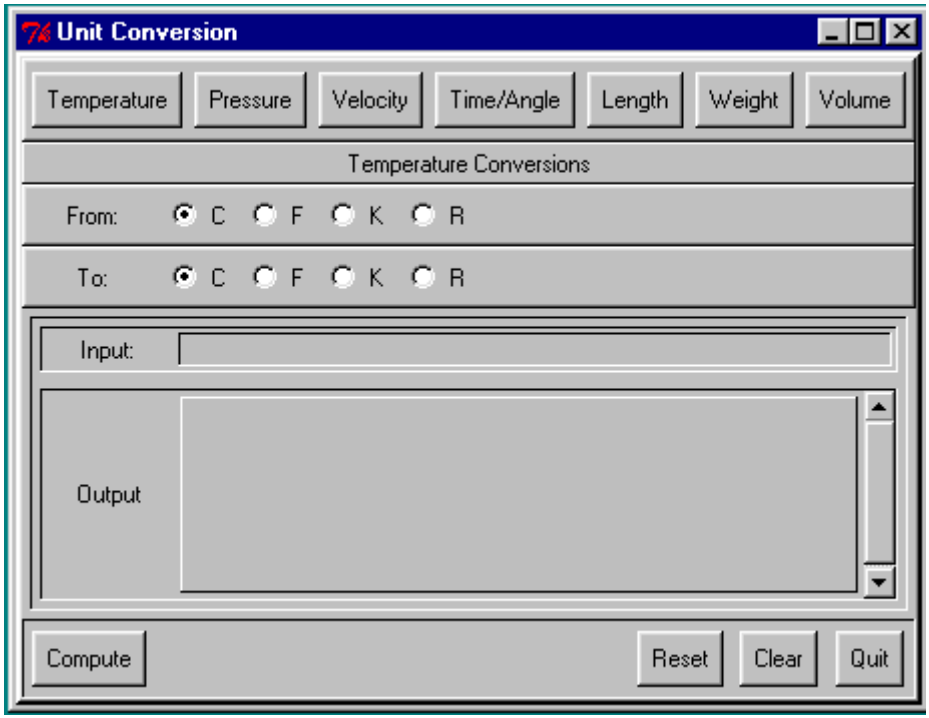
1 From the AMIS LaunchPad, select **Unit Converter**.

Figure 2.8 Selection of Unit Converter



The Unit Conversion dialog appears (see Figure 2.9).

Figure 2.9 Unit Conversion Dialog



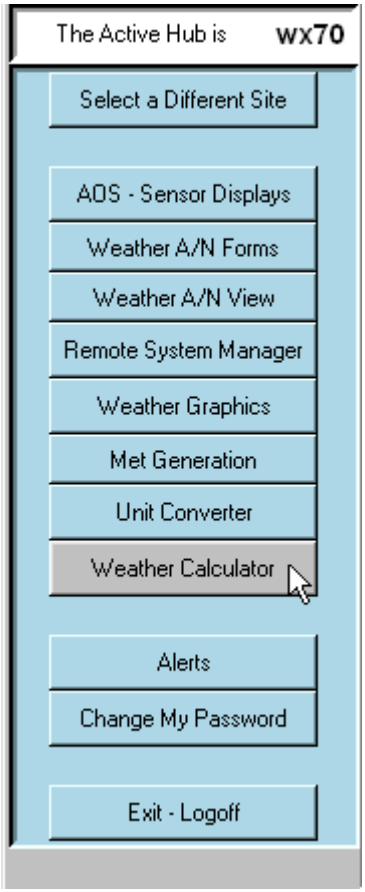
Weather Calculator

The Weather Calculator is an utility that computes various weather parameters (for example, wind chill, latent heat, relative humidity, and pressure altitude) based on your input.

To start the Weather Calculator:

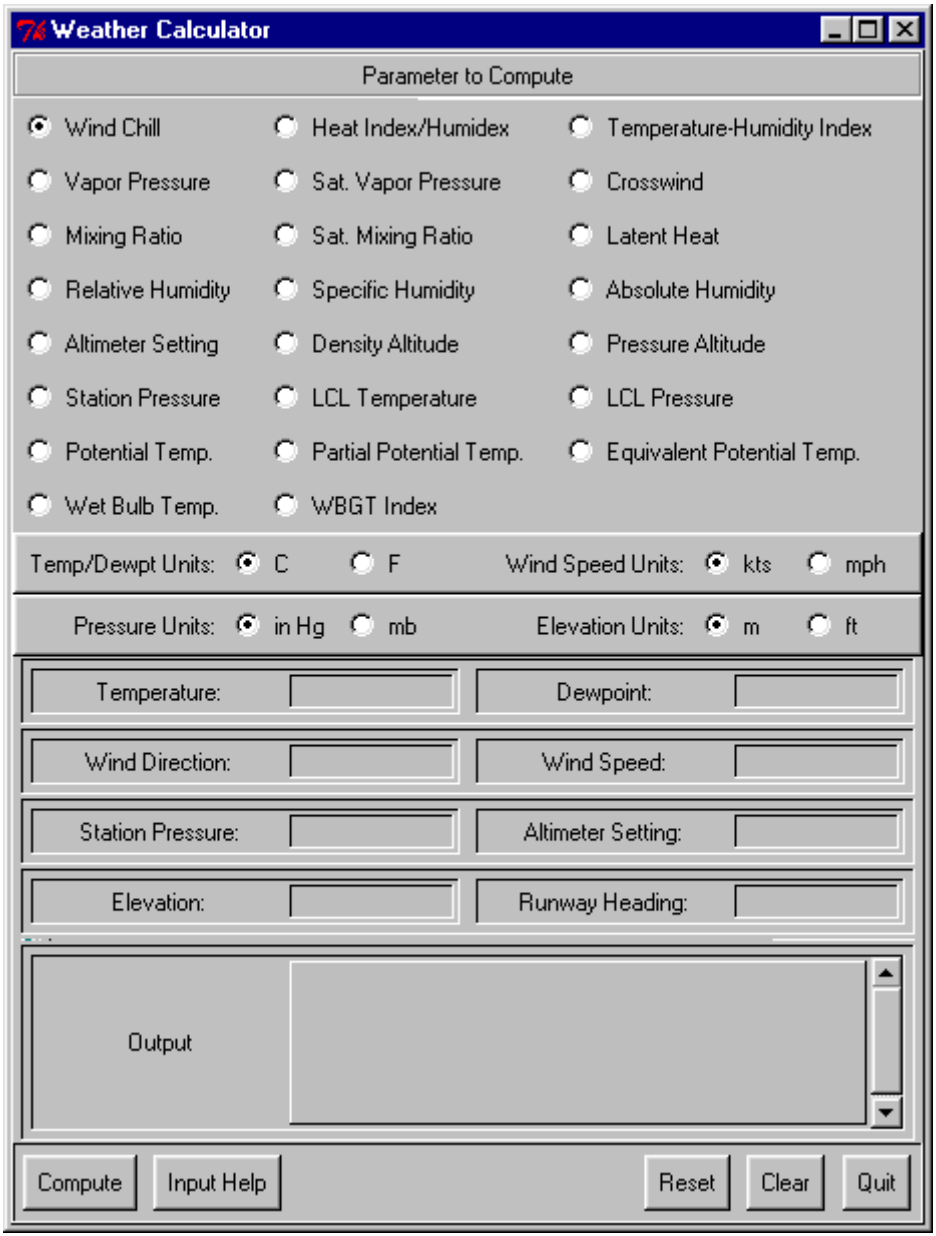
1 From the AMIS LaunchPad, select **Weather Calculator** (see Figure 2.10).

Figure 2.10 Selection of Weather Calculator



The Weather Calculator dialog appears (see Figure 2.11).

Figure 2.11 Weather Calculator Dialog



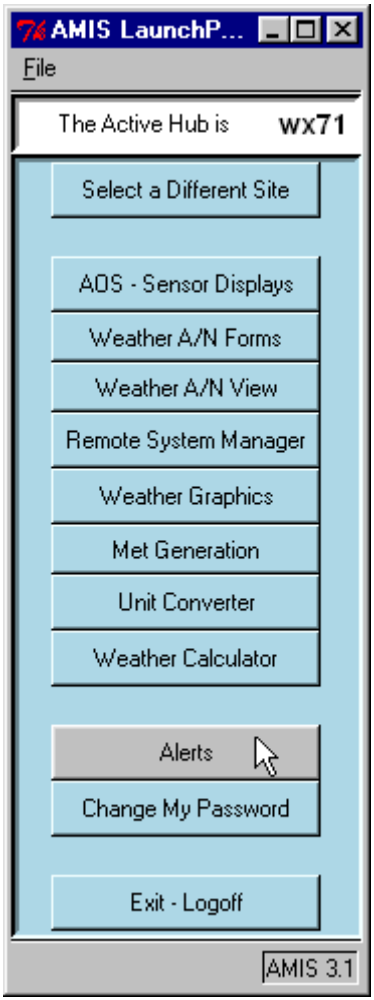
Alerts Application

The alerts application lists your alerts and enables you to acknowledge and/or delete these alerts.

To bring up the alert application display:

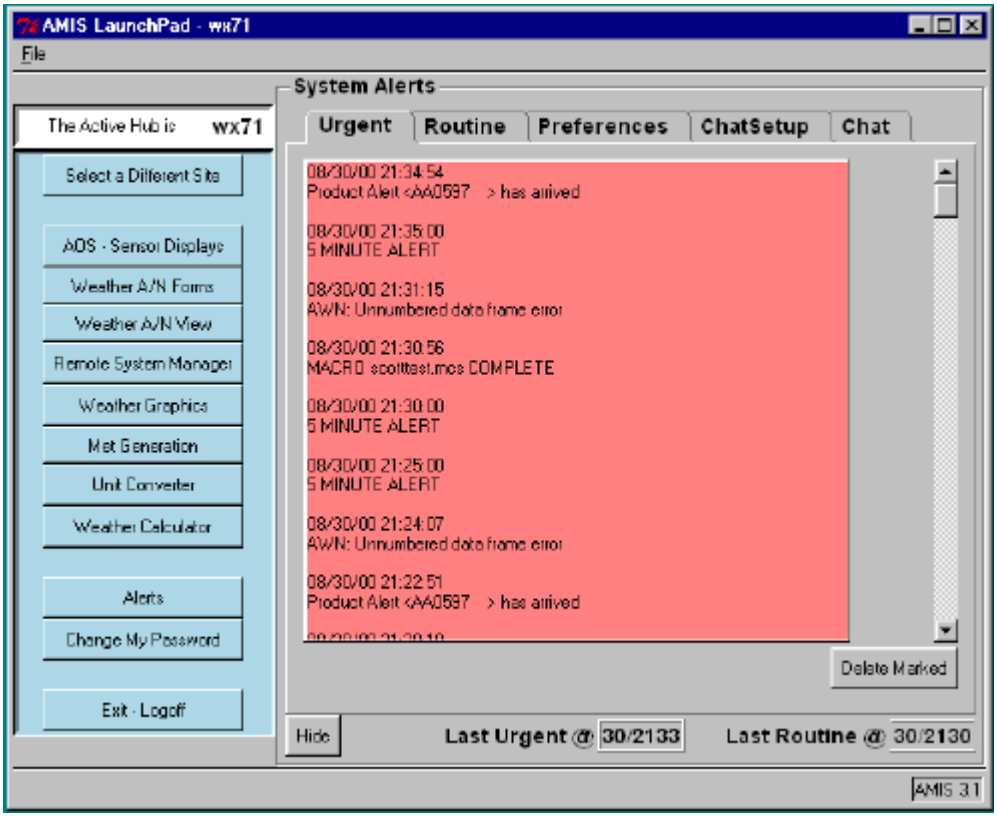
1 From the AMIS LaunchPad, select **Alerts**.

Figure 2.12 Selection of Alert Application from LaunchPad



The AMIS LaunchPad with System Alerts Displays (see Figure 2.13).

Figure 2.13 AMIS LaunchPad with System Alerts Screen



To view, print or delete alerts listed in the view window:

1 Select the alert(s) to view, print, or delete.

2 In the System Alerts window, right click.

An action menu pop-up displays (see Figure 2.14).

Figure 2.14 Alerts Action Menu Pop-up

3 Do one of the following:

- Select one of the listed actions (**Print**, **View**, **Mark**, **Mark All**, **UnMark**).

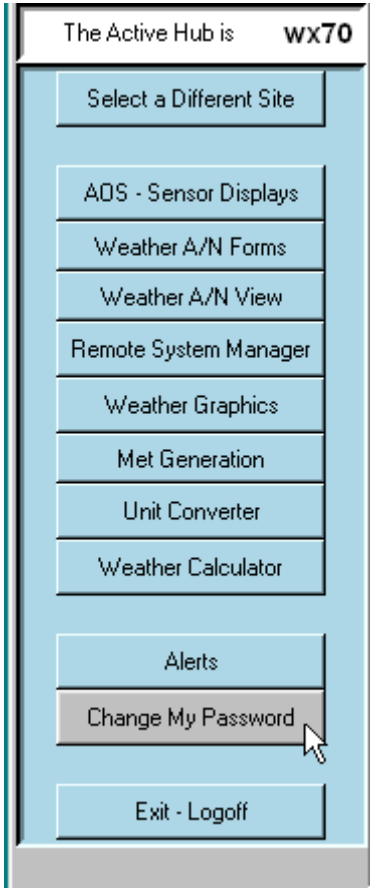
- To delete the selected alerts, select **Delete Marked** at the bottom right of the System Alerts window.
- To close the System Alerts window, select **Hide**.

Changing your Password

1 Follow the login procedure at “Login” on page 2-5.

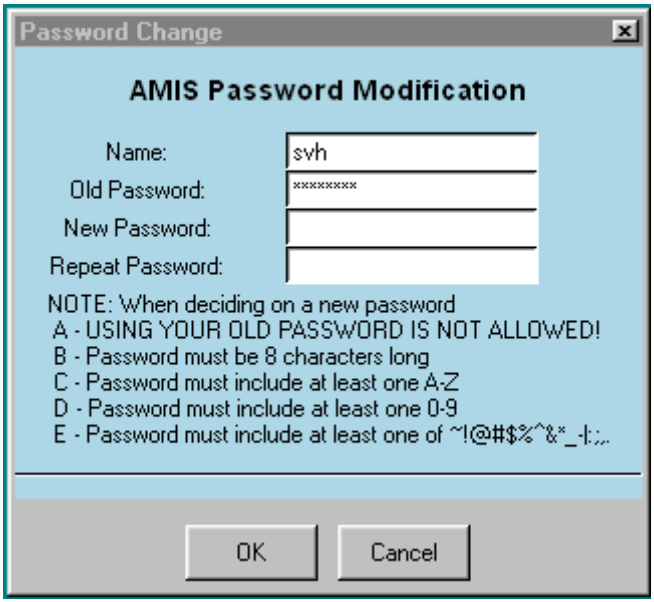
2 From the AMIS LaunchPad, select **Change my Password**.

Figure 2.15 Password Change Selection



The Password Change dialog appears (see Figure 2.16).

Figure 2.16 Password Change Dialog



*The **Name** and **Old Password** text entry fields are populated with your username and current password.*

3 At **New Password**, enter your new password.

4 At **Repeat Password**, enter the identical password you entered in step 3.

NOTE: For security reasons, your password must conform to certain naming conventions. These conventions are listed on the Password Change dialog screen.

5 Choose **OK** to change your password and exit or choose **Cancel** to exit without changing your password.

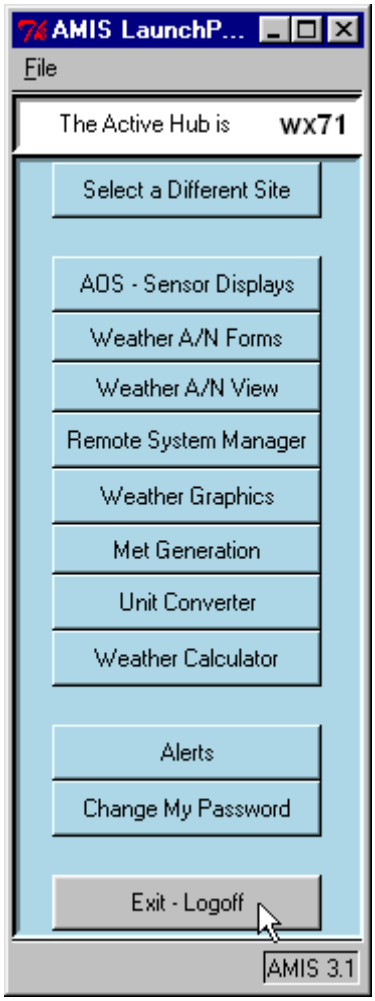
AMIS Exit/Logoff

To exit and logoff from an active AMIS LaunchPad, do the following:

1 Close any active AMIS windows.

2 From the AMIS LaunchPad, select **Exit - Logoff** (see Figure 2.17).

Figure 2.17 Selection of Exit - Logoff



CHAPTER

3

Alphanumeric Product Operations

Common Features in Weather A/N Forms

Keyboard/Mouse

For all Weather A/N forms, the **Tab** key positions the cursor forward from field to field. The **Shift-Tab** key positions the cursor backward from field to field. Clicking the **left mouse button** on an item selects the item. Clicking the **right mouse button** in the **Remarks** field of a form results in a pop-up menu that allows you to perform the standard **Cut**, **Copy**, and **Paste** functions.

Action Menubar Options

Certain alphanumeric form actions (for example, **Transmit**, **Save**, and **Clear**) are common to multiple alphanumeric forms. These form actions are generally grouped together as buttons in what may be called an Action Menubar. This menubar characteristically is found extending horizontally across and near the top of the respective alphanumeric form. For example, the Action Menubar from the Weather Observation form is shown in Figure 3.1.

Figure 3.1 Action Menubar - Weather Observation Form

Common form actions will be described generally in the following subparagraphs in terms of the Weather Observation form. This general information will not be duplicated for every alphanumeric form. Any

difference for a particular form will be addressed in the respective section for that form.

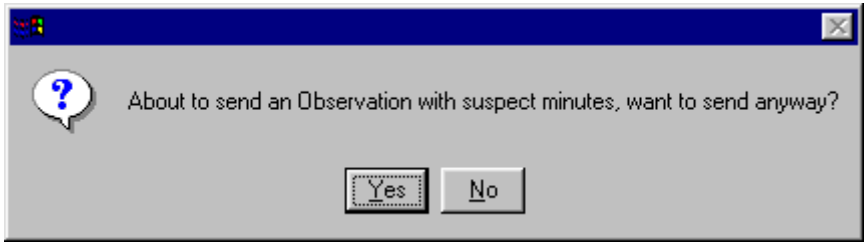
Transmit

To transmit the Weather Observation product that you have created, do the following:

1 Select **Transmit** from the Action Menubar.

*When **Transmit** is selected, AMIS will check the time entered in the product. If the time is not within +/- ten minutes of the current system time, a pop-up will be displayed indicating that the time is suspect. In this case do one of the following:*

Figure 3.2 Suspect Time Pop-Up



- *If you want to send the Observation as is, select **Yes**.*
- *If you do not want to send the Observation as is, select **No**.*

*The transmission screen (see Figure 3.3) is displayed. Note that all other action buttons are grayed out indicating that you must complete or cancel the **Transmit** action before selecting another action.*

2 To accept the default transmit, select **Action|Send**.

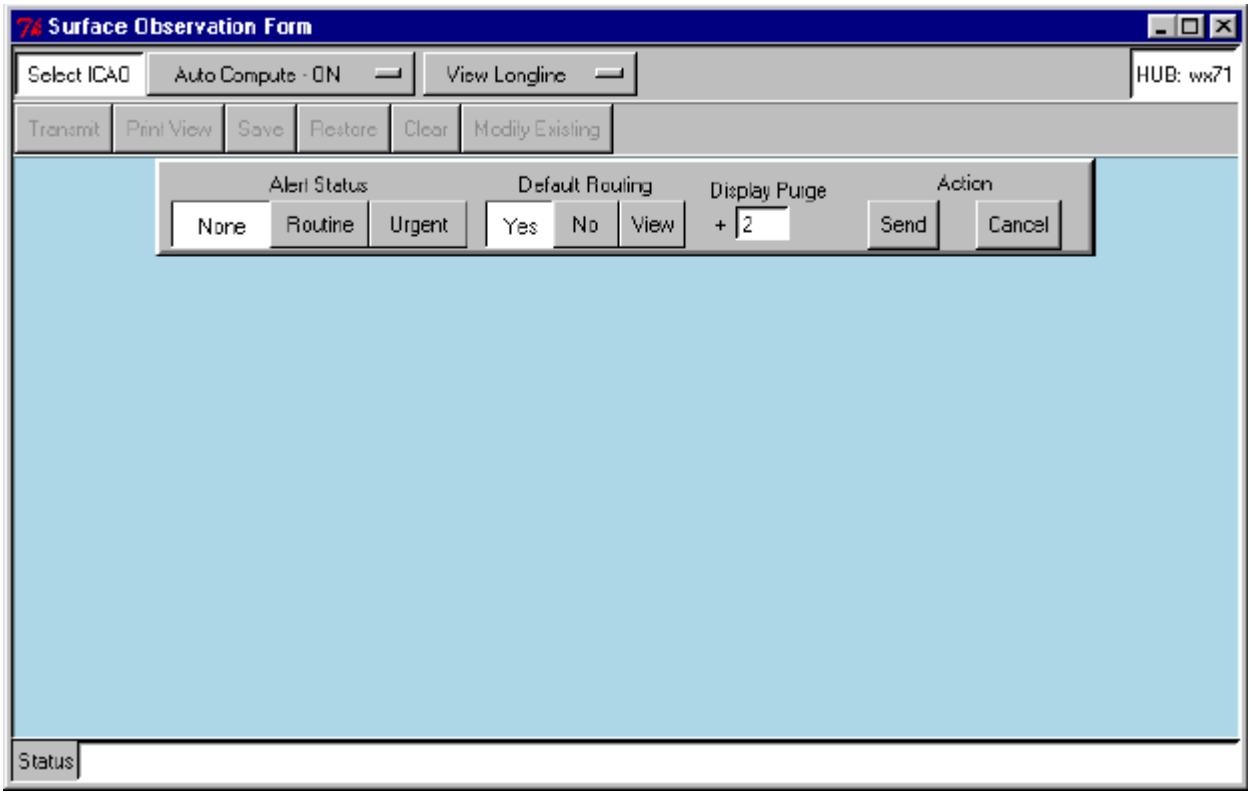
The product will be issued with no alerting. The product will go to the default transmit locations, and local base FCF/ATC customers.

3 To view the default routing location, select **Default Routing |View**.

4 To set the alerting, select **Alert Status | None**, **Urgent**, and **Routine** as appropriate.

***Alert Status / Urgent** and **Routine** function only when **Default Routing | No** is selected.*

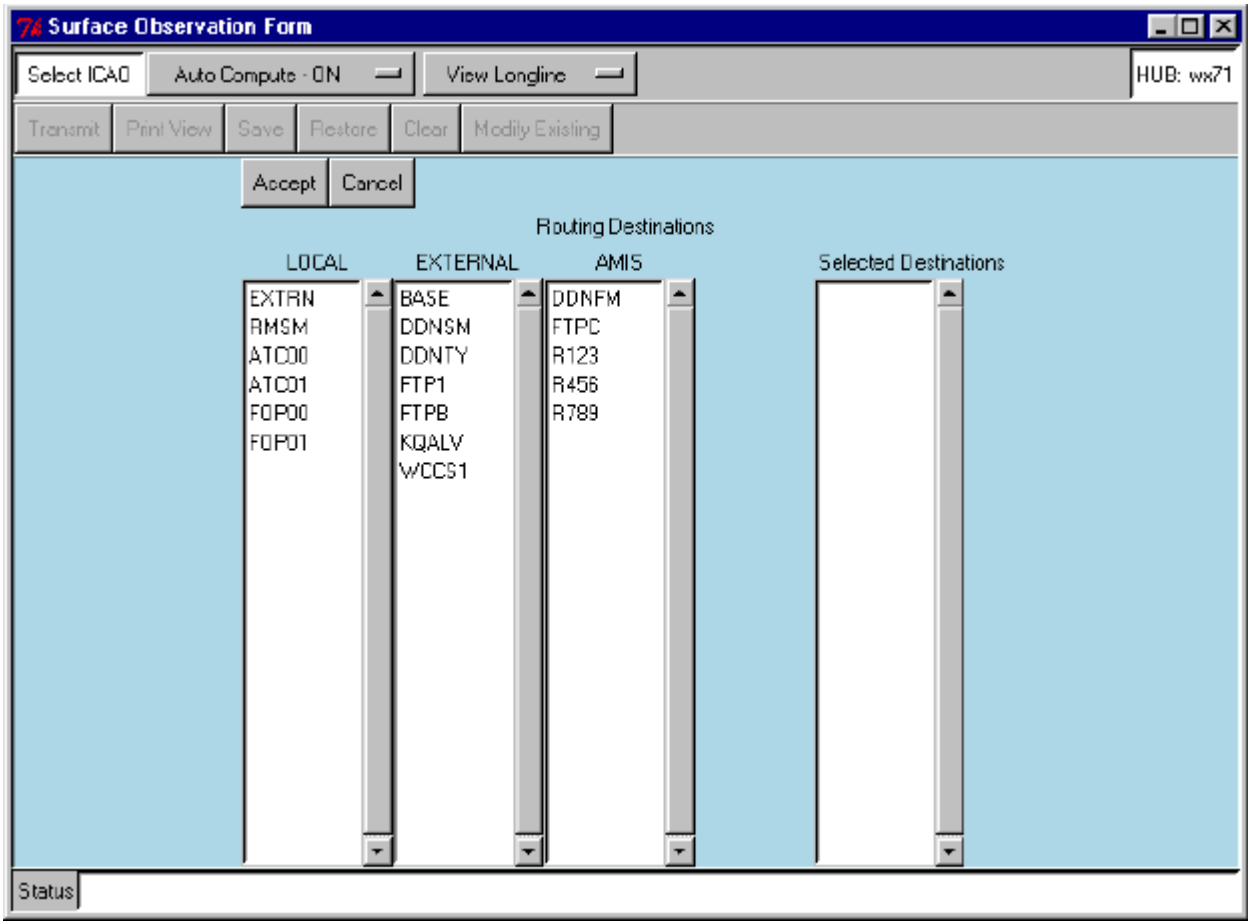
Figure 3.3 Surface Observation Form Transmission Screen



5 To change the default routing, do the following:

- Select **Default Routing |No**. The Routing Destinations screen (see Figure 3.4) appears.

Figure 3.4 Routing Destinations Screen



- To select a destination as a routing destination, double-click it.

  *The selected destination appears in the **Selected Destinations** column.*

  *Local site destinations are listed in the **LOCAL** column. C^2, FTP, VSAT, and AMIS sites receiving data in Appendix 30 external data format are listed in the **EXTERNAL** column. AMIS sites receiving data in AMIS internal database format are listed in the **AMIS** column.*

- to de-select a destination as a routing destination, double click the destination from the **Selected Destinations** column.

  *The destination will be removed from the **Selected Destinations** column.*

- Repeat the above two step until your routing destinations are set as desired. Then do one of the following:

  - To save your routing destination selections, select **Accept.**

- To discard your routing destination selections and exit, select **Cancel**.

*If **Default Routing | No** is selected, and no routing destinations have been set, the product will be sent to the LWDS and FCF displays, only.*

6 To modify **Display Purge**, highlight the value by selecting it with your mouse and type a new value. Valid entries are numeric through 999.

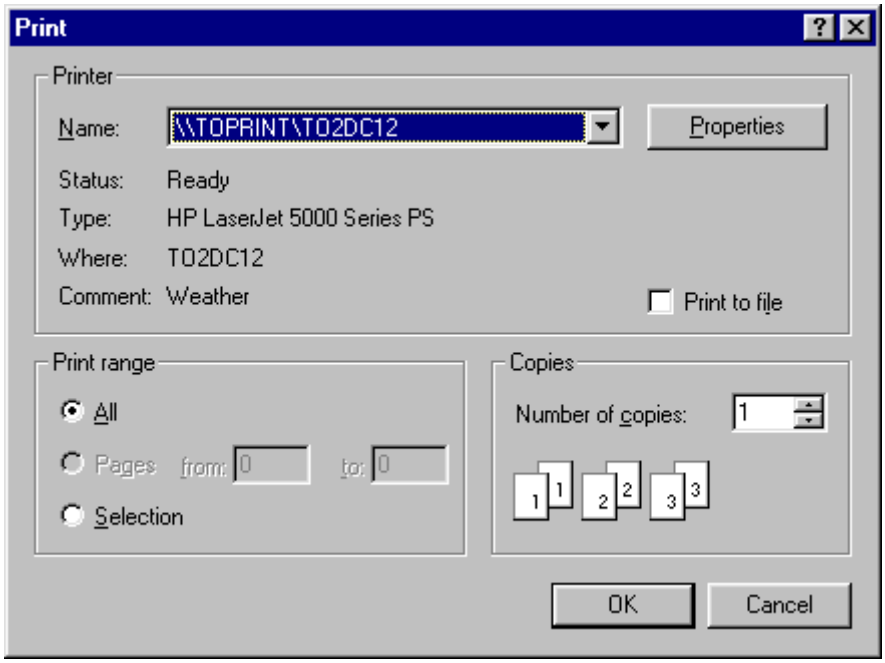
***Display Purge** is the number of hours a product will be displayed at the FCF terminal displays. This value is originally configured by the System Manager.*

Print View

1 To print a copy of the **View** window, select **Print View** from the Action Menubar.

The standard print dialog, similar to Figure 3.5, displays.

Figure 3.5 Standard Print Dialog



Save

Save stores the product is mass storage on the server. You retrieve the saved product with **Restore**. **Save** is typically used for temporary storage of a product or for creating templates of commonly used briefing forms.

Saving a product is not to be confused with the database storage of a product that happens automatically with product transmittal. In the latter case, **Modify Existing** is used to retrieve the product from the product database.

1 To temporarily save the observation to the server for subsequent retrieval, select **Save** from the Action Menubar.

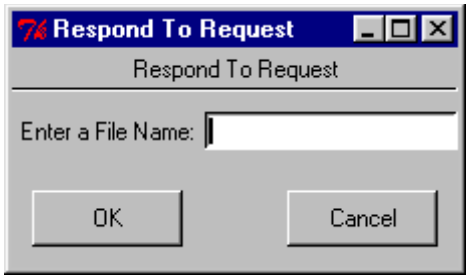
2 Enter a filename in the dialog pop-up that appears (Figure 3.6).

3 Do one of the following:

- Select **OK** to save the product and exit.

  ***Warning**: files saved previously with the same filename will be overwritten without a warning prompt.*

Figure 3.6 Save Pop-Up



- Select **Cancel** to exit without saving the product.

Restore

1 To restore a saved product, select **Restore** from the Action Menubar.

2 Select a product from the product list on the dialog screen that appears (see Figure 3.7).

3 Do one of the following:

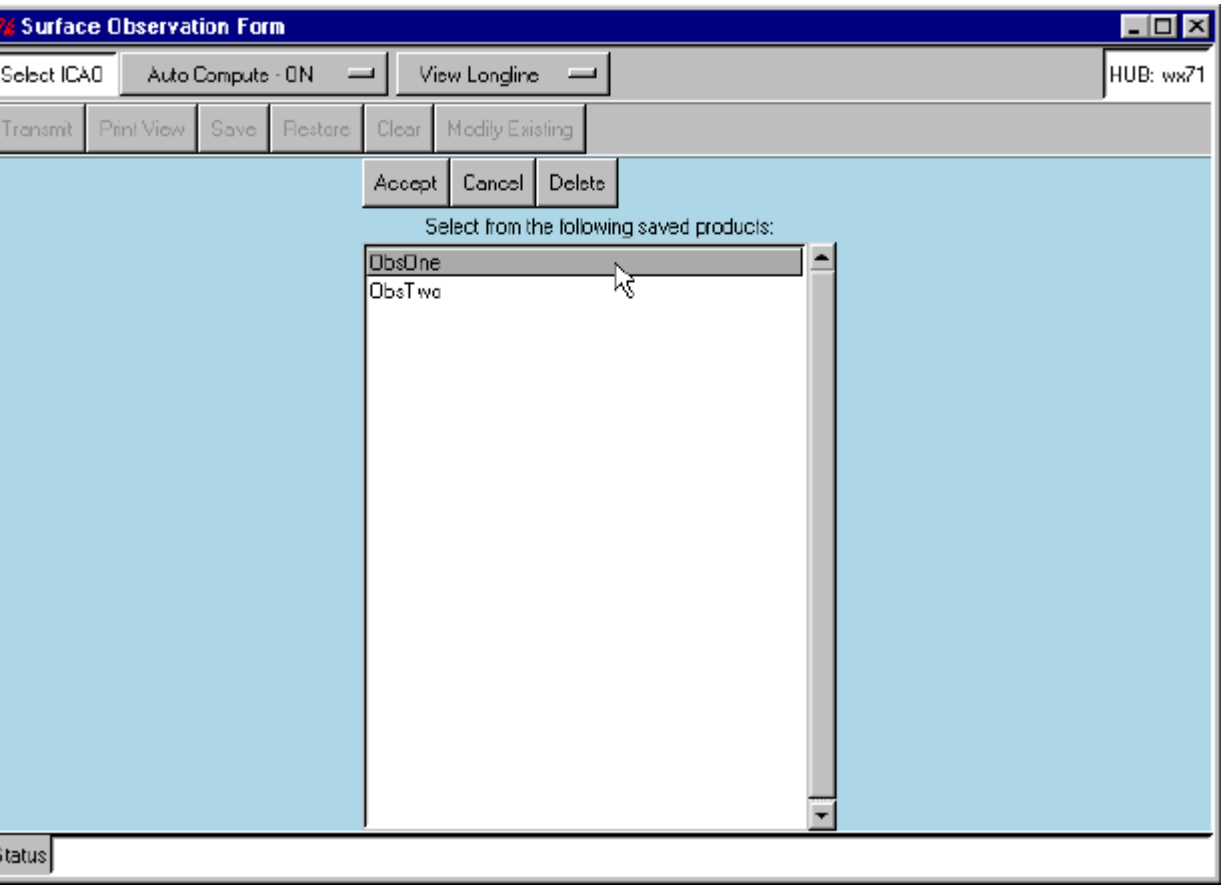
- To restore the product and exit, select **Accept**.

  The Surface Observation form populated with the restored product information appears.

- To exit without restoring the product, choose **Cancel**.
- To delete the product from storage, choose **Delete**.

  The product disappears from the list of saved products.

Figure 3.7 Saved Products List



Clear

1 To clear the Observation form of all entered data, choose **Clear** from the Action Menubar.

*A **Clear** should be performed before each new product is created. The **Clear** action occurs without a prompt for confirmation.*

Weather A/N Forms

Weather Observation

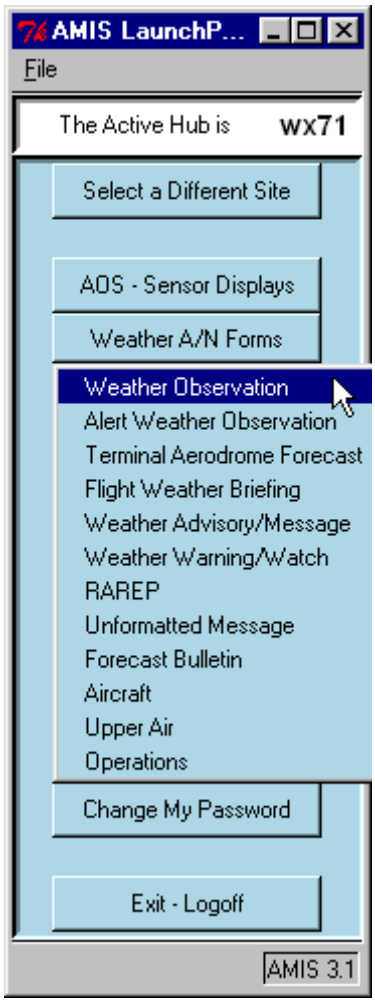
The Weather Observation form permits the entry and transmission of METAR, SPECI, LOCAL, and LOCAL-MISHAP observations.

Launch Form

To launch the Weather Observation form do the following:

1 Select **Weather A/N Forms > Weather Observation** from the AMIS LaunchPad (see Figure 3.8).

Figure 3.8 Selection of Weather Observation Form

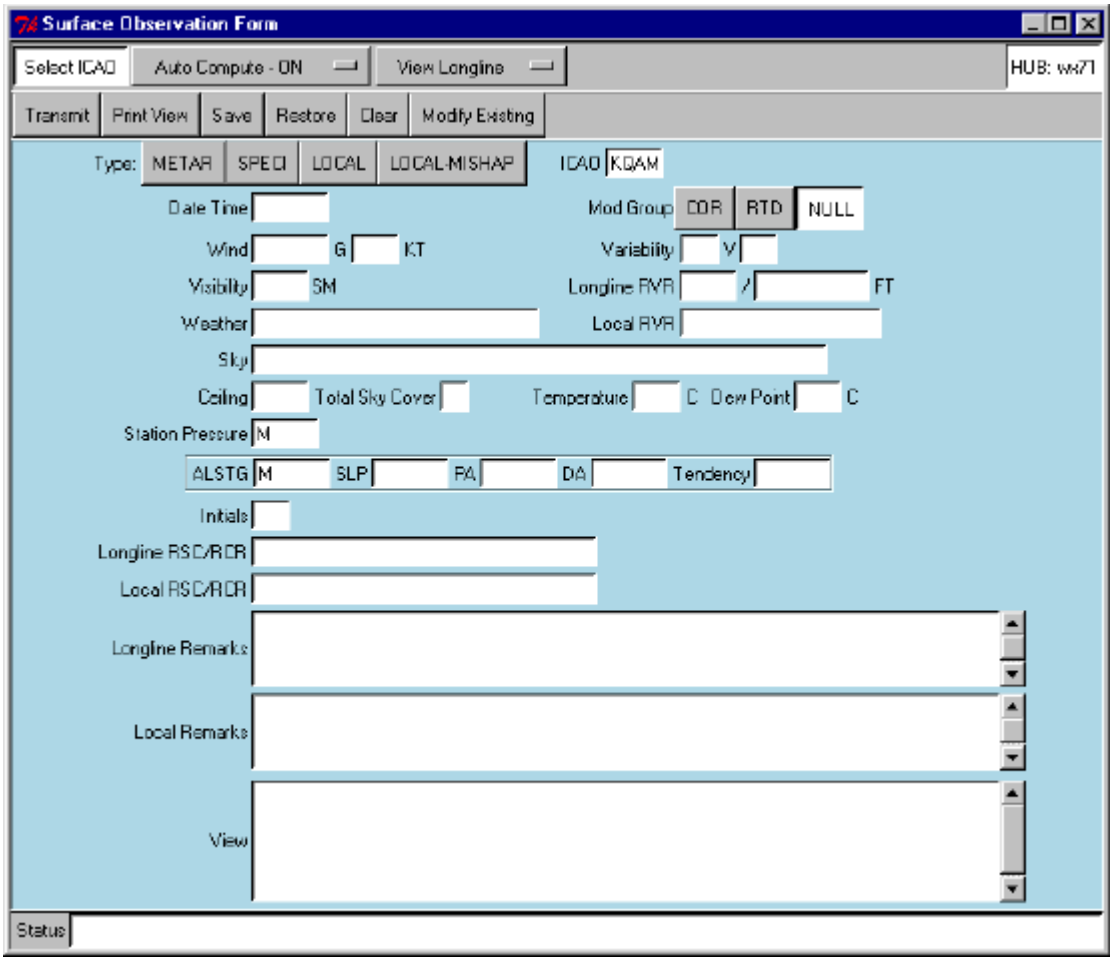


Product Creation

Upon launch of the Weather Observation form, the **Auto Compute-ON**, and **View Longline** toggles as shown below will be selected. Local and longline views are explained in detail later in this section. When the **BUSY** indicator

in the bottom status bar is no longer present, you can start entering data into the form.

Figure 3.9 Weather Observation Form



To complete the Weather Observation form, do the following:

1 Your station's default ICAO is displayed upon entry. You may also select an ICAO from a list by choosing **Select ICAO** at the upper left corner of the form.

2 Select **Type** by choosing METAR for hourly observation type, SPECI for special observations and LOCAL, or LOCAL-MISHAP for local observations.

3 Type the date and time in the **Date Time** field. After initial entry has begun, the field will not let you move on until you have entered a

correctly formatted date/ time (DDHHMM). Moving the mouse outside of the field will prompt the date/time error check.

4 Select **Mod Group/Modify Existing** procedures by doing one of the following:

- To correct an observation already transmitted, do the following:
  - Select **Modify Existing** from the action menubar.
  - Select the appropriate observation from the list presented.
  - Select **COR**.

    *To de-select **COR**, select **NULL**.*
  - Correct or modify the observation.
  - Select **Transmit** from the action menubar.

    *When **Modify Existing** is used, the **Auto Compute** function will be automatically turned off, which means pressure calculations will not occur. You must manually turn the feature back on by selecting **Auto Compute-On**.*
- To denote an observation sent after the time of the observation has expired, select **RTD** (routine delay).

  *To de-select **RTD**, select **NULL**.*

5 At **Wind**, enter the wind direction/speed/gust formatted, for example, as 290100G125KT, E23010KT, 00000KT, or VRB03KT. Field length should not exceed seven characters for wind, and four characters for gust. The form supplies the **G** and **KT** designators. The field is error checked and illegal entries will not be accepted

6 At **Variability**, enter the range of wind variability (200V300). Field length should be three characters for each field. Fields are error checked and illegal entries will not be accepted. The form supplies the **V** designator.

7 At **Visibility**, enter the prevailing visibility formatted, for example, as 1, 1 ½, 9999, or 0500. The visibility should be encoded in the units used at your station (SM: statute miles; NM: nautical miles; M: meters). The form supplies the units suffix (SM, for example). The field length is restricted to five characters. The field is error checked and illegal entries will not be accepted.

   When entering data in meters, you can enter a one or two-digit number. The system then assumes the entry will be in hundreds of meters and automatically fills in the remaining two places. For example, entering 9 results in 0900, 80 results in 8000, and 99 results in 9999.

8 At **Longline RVR** enter the longline Runway Visual Range data formatted as R32L/VR3200FT. Two entries are required. The form supplies the

solidus (**/**) and units of measure (**FT, M**). This field is restricted to five characters and is error checked by the system.

9 At **Local RVR** enter the properly formatted local RVR data. You must enter all data. The field is restricted to 20 characters. No error checking is performed on this field.

10 At **Weather**, enter the properly formatted weather and obstructions to vision (TSSHRA, BR). The field is restricted to 29 characters.

11 At **Sky Condition** enter the properly formatted sky condition starting at the lowest observed cloud amount (SCT003 BKN005 VV005). The field is restricted to 59 characters, and is not error checked.

12 At **Ceiling** enter the properly formatted ceiling (CIG003, CIGM005, CIGW002). The **CIG** designator is provided in the transmitted product, and is only disseminated locally. Field length is restricted to four characters and error checked.

13 At **Total Sky Cover** enter the total sky cover in octas, or eighths of sky (8 for overcast, 5 for broken, etc.) The field is restricted to two characters and is error checked.

14 At **Temperature** and **Dew Point** enter the properly formatted temperature and dew point in whole degrees Celsius (23/20, M10/M12). The form supplies the **C** designator. These fields are each restricted to three characters. These fields are error checked and illegal entries will not be accepted.

15 At **Station Pressure** enter the properly formatted station pressure (29.995, E29.865). The decimal point will be automatically placed in the entry, or you can manually enter the decimal point. When **Auto Compute** is **On**, the **Altimeter**, **Sea Level Pressure**, and **Pressure Tendency** will automatically calculate except in the following circumstances. **SLPNO** will display for **SLP** unless there is a previous 12-hour temperature to calculate from. The **Pressure Tendency** will produce **/////** if the last three hourly observation is missing. The **Density Altitude** calculation will not occur unless **Temperature**, **Dew Point**, and **Station Pressure** are included in the observation. The **Station Pressure** field is error checked. Improper entries will not be allowed.

16 At **ALSTG**, enter the altimeter setting. When **Auto Compute** is **Off**, the **ALSTG** field can be set manually. Enter the information in the same manner as for Station Pressure, step15. Note that when **Auto Compute** is **Off**, the **SLP** and **Tendency** calculations will not occur.

*The **SLP, PA, DA,** and **Tendency** fields are protected and cannot be edited.*

17 At **Initials**, enter your initials. The field is three characters in length. The initials will be displayed in the local displays (FCF, LWDS) at the end of

the observation, with the time [in minutes past the hour] the observation was sent (38/AK).

18 At **Longline RSC/RCR** and **Local RSC/RCR**, enter the correctly formatted longline and local runway conditions (WR// BA FAIR, RCRNA). The fields are restricted to 35 characters in length.

When RSC/RCR conditions have been previously reported, the subsequent observations will pre-fill with this previously reported data as follows:

- For **METAR**, both the **Longline** and **Local RSC/RCR** fields will pre-fill with the last reported condition.
- For **SPECI**, **LOCAL**, and **LOCAL-MISHAP**, the **Local RSC/RCR** field will prefill.
- For **SPECI**, the **Longline RSC/RCR** field will not prefill, but the last reported condition will continue to transmit longline until the field is changed.

To delete the runway conditions enter an asterisk (*) character in the respective field.

***Warning**: without the asterisk, the RCR will continue to pre-fill with previously reported data. This could result in misrepresentation of conditions being reported.*

19 At **Longline Remarks** and **Local Remarks**, enter the properly formatted longline and local remarks (CB W MOV E OCNL LTGICCCC). The **Longline** field is restricted to 320 characters. The **Local** field is restricted to 240 characters.

*Selecting the Right mouse key in either the **Longline** or **Local** field will display a pop-up window that allows selection of Cut, Copy, and Paste functions.*

20 To view the local observation data sent to the ATC, Flight Control Facilities, and other local customers, select **View Local** from the **View Longline/View Local** toggle at the top of the form.

*The **View** window formatting at the bottom of the form changes to local format.*

21 To view the observation data sent longline, select **View Longline** from the **View Longline/View Local** toggle at the top of the form.

*The **View** window formatting at the bottom of the form changes to longline format.*

***View Longline** view is the default view, selected when opening the form.*

Use of Asterisk (*) for Clearing Fields

This information pertains to special and local observations only. The asterisk character should never be used in hourly observations (METAR), except in the RSC/RCR fields.

When you send a special or local observation, only those fields you change in the observation form are updated at the FCF/ATC. That is, if you leave a field blank, it means no change from the previous value. The previous value continues to display at the FCF/ATC.

Consequently, to remove an existing value from the FCF/ATC display and return to a blank field (for example, to stop the display of previously reported rain when there is no present weather) enter an asterisk (*) in the respective field. The asterisks will not show on a printed observation form, nor will they be transmitted to any workstation.

The asterisk is used in the following fields only:

- To drop wind gusts, put an asterisk in the **Wind** character field.
- To remove the RVR entry, put an asterisk in the **Local RVR** field.
- To change to dry runway conditions, put asterisks in both **Longline** and **Local RSC/RCR** fields.
- To remove all remarks, put an asterisk in the **Local Remarks** field.
- To remove all weather, put an asterisk in the **Weather** field.
- To remove a variable wind direction, put an asterisk in both wind direction variability fields.
- To remove a ceiling, put an asterisk in the **Ceiling** field.

  Warning*: failure to use an asterisk character to clear the fields listed above may lead to serious misrepresentation of data displayed at the FCF/ATC. Do not use asterisk when sending single element specials.*

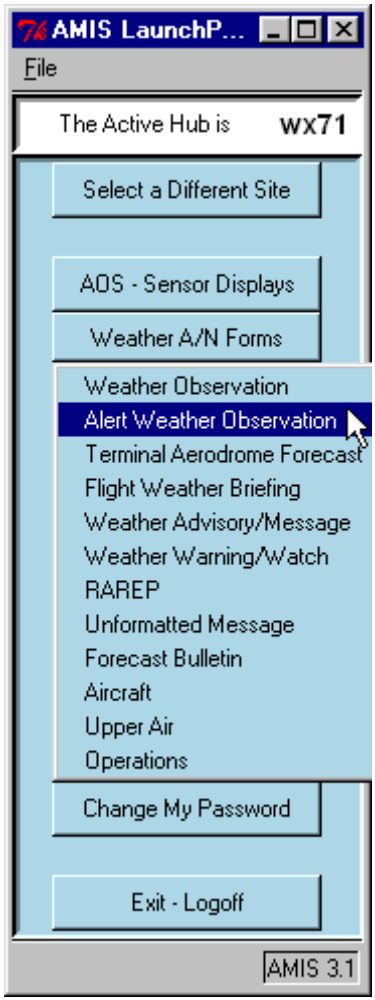
  Warning*: never place an asterisk in the following fields:* ***Date Time****,* ***Visibility****,* ***Sky****,* ***Temperature****,* ***Dew Point****,* ***Wind*** *direction,* ***Wind*** *speed,* ***Station Pressure****, altimeter setting,* ***Total Sky Cover****, or* ***Initials****.*

Alert Weather Observation

The Alert Weather Observation form allows you to quickly create and transmit an Alert Weather Observation.

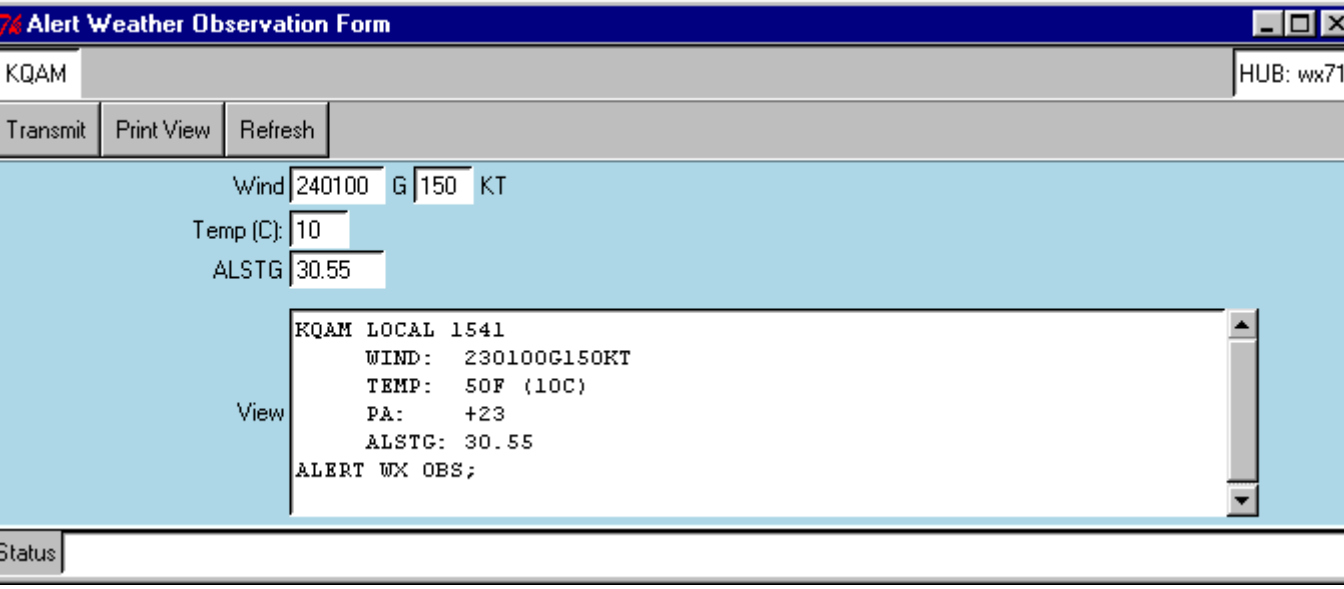
1 To launch the Alert Weather Observation form select **Weather A/N Forms > Alert Weather Observation** from the AMIS LaunchPad (see Figure 3.10).

Figure 3.10 Launch of Alert Weather Observation Form



The form opens with the currently reported wind, temperature, and altimeter setting information displayed in the text entry fields (see Figure 3.11).

Figure 3.11 Alert Weather Observation Form



2 To make changes, double-click the information to change and type the new value.

__Wind__ and temperature (__Temp__) entries are error checked.

3 To send the observation, select **Transmit** from the Action Menubar.

4 To print the **View** window to the printer, select **Print View** from the Action Menubar.

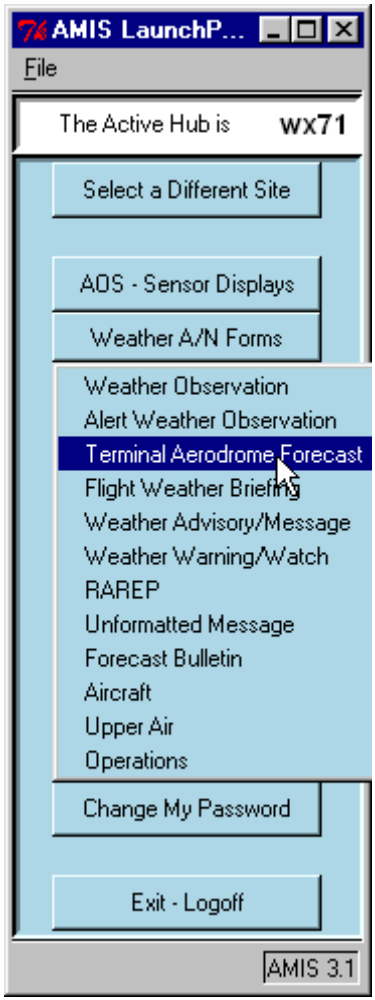
5 To re-populate the form with the current observation parameters, select **Refresh** from the Action Menubar.

Terminal Aerodrome Forecast

The Terminal Aerodrome Forecast (TAF) form permits the entry and transmission of terminal forecasts of up to twelve forecast groups. Data entry fields are included for all mandatory and optional entries with provision for operator assistance for entering icing and turbulence forecast codes.

1 To launch the TAF form select **Weather A/N Forms > Terminal Aerodrome Forecast** from the AMIS LaunchPad (see Figure 3.12).

Figure 3.12 Launch of TAF Form



The TAF form (see Figure 3.13) displays.

To enter or edit fields in the form, ***Modify Existing****,* ***Issue****, or* ***Restore*** *must be selected from the Action Menubar. Once the desired button has been selected, subsequent actions are enabled.*

Figure 3.13 TAF Form

TERMINAL AERODROME FORECAST

Station | HUB: wx70

Transmit | Print View | Save | Clear | Modify Existing | Issue | Restore | ICAO List

Group 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | Insert Group | Delete Group

Initials | Modifier: RTD | AMD | COR | AMD COR | NULL | Valid Time

Winds KT | Visibility | Weather

Clouds | Altimeter QNH INS

Icing | Last 6 6 6 6 6

Turbulence | Last 5 5 5 5 5

Wind Shear Remarks Height | Winds KT OR WSCONDS

Temperature C at Z | C at Z | C at Z | C at Z

Obscuration Remarks

LL Remarks

LCL Remarks

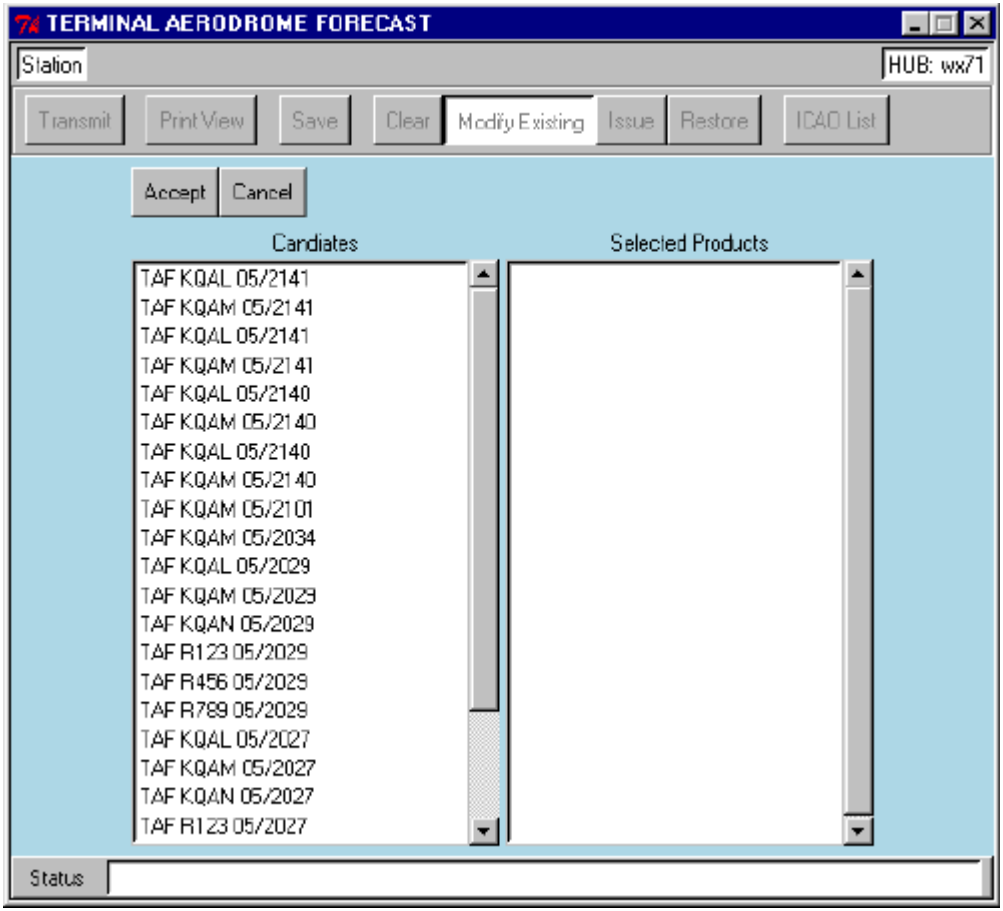
Status

2 Do one of the following:

- To modify a TAF product previously issued and in the product database (COR, AMD, etc.), do the following:
  - Select **Modify Existing** from the Action Menubar.

    The Modify Existing dialog appears (see Figure 3.14).

Figure 3.14 TAF Modify Existing Dialog



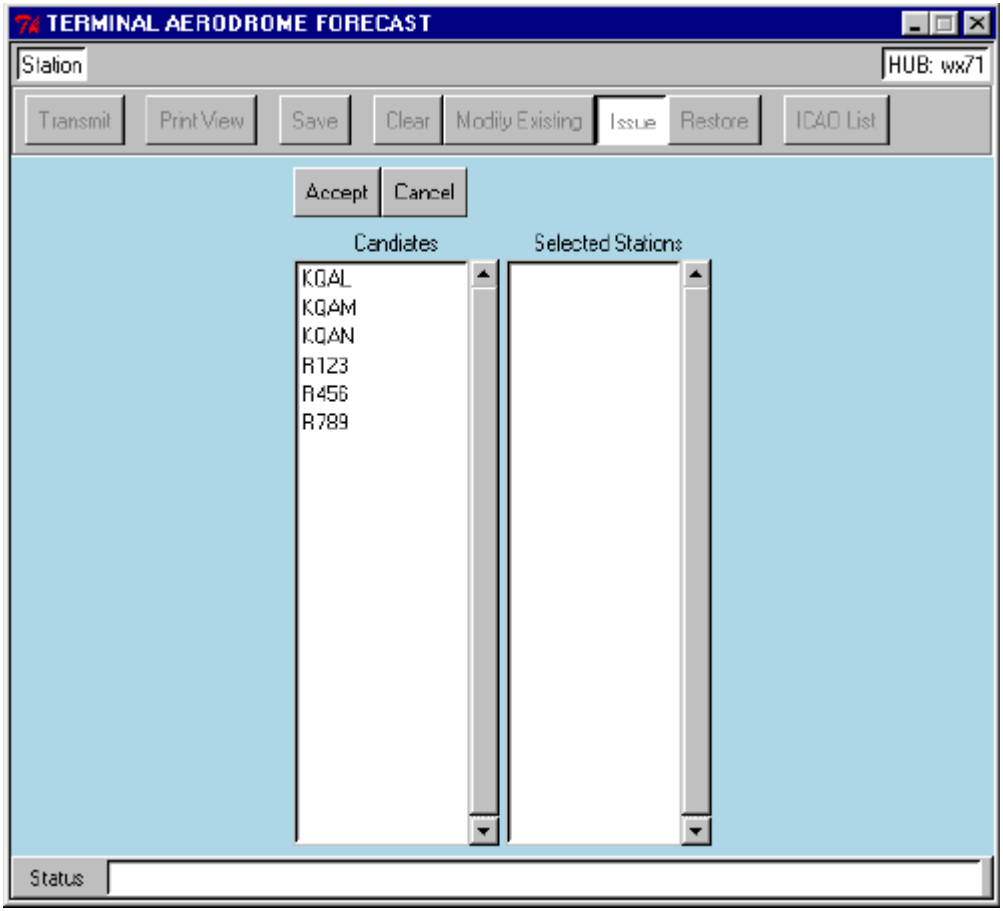
  - From the **Candidates** list, select a single-ICAO product, or a single or multiple Regional (i.e., multi-ICAO) products.

    *When a Regional TAF product is selected from the **Candidates** list, single-ICAO TAF products disappear from the **Candidates** list. This is because single-ICAO TAF products are stored separately in the product database and cannot be modified with Regional TAF products.*

- To issue a new TAF product, do the following:
  - Select **Issue** from the Action Menubar.

The Issue dialog (see Figure 3.15) appears.

Figure 3.15 TAF Issue Dialog



- Select a single ICAO or multiple ICAOs from the **Candidate** list.

  *The selected ICAO(s) transfer over to the **Selected Stations** list.*

  *For multiple ICAO selections, AMIS formats the TAF in the **View** window of the TAF form without an ICAO. AMIS denotes a multi-ICAO product by displaying the word **REGIONAL** in the upper left corner of the form. AMIS processes the TAF for each ICAO that was selected.*

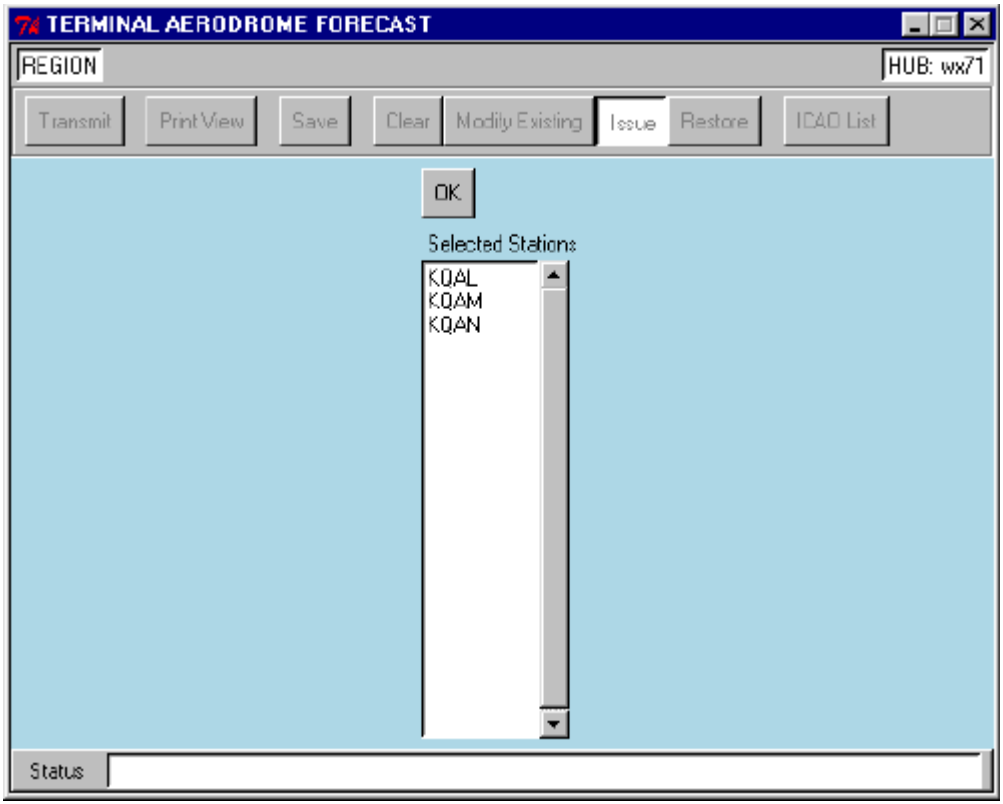
- To exit and have your ICAO selections accepted, choose **Accept**. To exit without having your ICAO selections accepted, choose **Cancel**.

  The TAF form (see Figure 3.13) displays.

- If you selected ICAOs on **Issue**, you can check which ones were selected by choosing **ICAO List** on the Action Menubar.

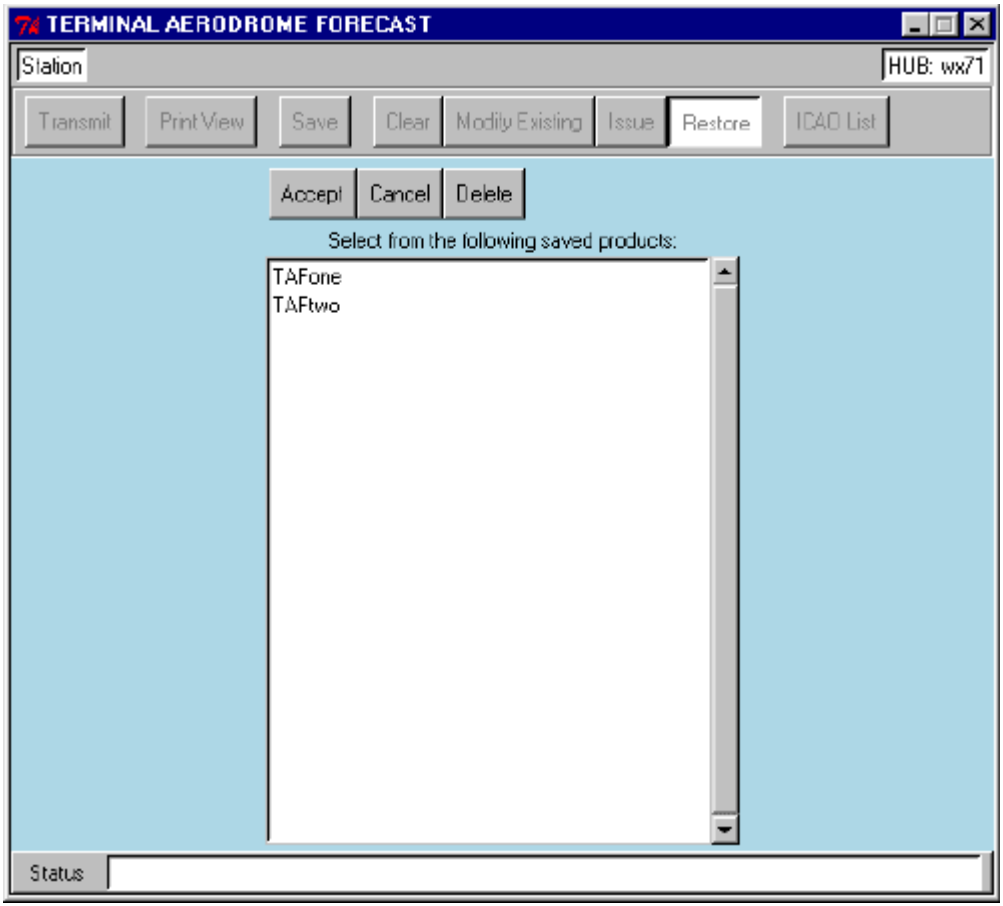
*A screen displays (see Figure 3.16) listing the ICAOs that you selected. Choose **OK** to return to the TAF form.*

Figure 3.16 TAF Selected Stations List



- To modify a previously saved TAF product, do the following:
  - Select **Restore** from the Action Menubar.
  - Select a product from the list of saved products on the dialog screen that appears (see Figure 3.17).

Figure 3.17 TAF Restore Dialog



- To restore the selected product and exit, select **Accept**.

  The TAF form populated with the restored product information appears.

- To exit without restoring the product, choose **Cancel**.
- To delete the product from storage, choose **Delete**.

  The product is removed from the list of saved products.

Form Data Entry

Make entries as desired in the data entry fields provided:

1 As the person completing this form, at **Initials**, enter your initials. The field is restricted to three characters.

2 At **Modifier**, do one of the following:

- If this TAF is from **Issue**, you can select **RTD**.

  *On **Issue, RTD** is the only valid modifier. The other modifiers will be grayed out.*

  *Selecting **NULL** allows you to de-select a selected modifier.*

- If this TAF is from **Modify Existing**, you can select any modifier: **RTD**, **AMD**, **COR**, or **AMD COR**.

  *Selecting **NULL** allows you to de-select a selected modifier.*

3 At **Valid Time,** enter the valid time period of the TAF, or valid time of TAF change group (051717, 2223). The initial **Valid Time** field is restricted to six characters. Subsequent change groups are restricted to four characters.

*Upon transmit of the TAF, the **Valid Time** field is error checked. Incorrect formatting will result in a pop-up error message. To send the TAF, the time must first be corrected.*

4 At **Winds**, enter surface winds direction, speed and gust (230100G125KT, VRB05KT). The **KT** designator is supplied by the system. This field is restricted to ten digits.

Incorrect entries are not displayed in the TAF View window.

5 At **Visibility**, enter acceptable visibility reporting values in meters (9999, 0300). This field is restricted to four characters.

*Incorrect entries will result in **????** displayed in the field.*

As in the observation form, when entering data in meters, you can enter a one or two-digit number, and the field assumes the entry will be in hundreds of meters and fills in the remaining 00. For example, entering 9 results in 0900, 80 results in 8000, and 99 results in 9999.

6 At **Weather**, enter acceptable weather and obstructions to visibility reporting values (RA BR). This field is restricted to 26 characters.

7 At **Clouds**, enter one or more sky cover groups (BKN005 OVC020). This field is restricted to 41 characters.

8 At **Altimeter**, enter forecast lowest altimeter setting in inches of Hg without decimal point (2990). This field is restricted to four characters.

*The **QNH** and **INS** designators are provided by AMIS.*

9 At **Icing/Turbulence**, enter up to five icing/turbulence groups directly into the data entry fields (610009, 530108), or select type and thickness from the menu provided and enter height of the base. These fields are restricted to five characters.

*Incorrect entries result in **?????** displayed in the fields.*

*Use the **Last** button to prefill the icing and turbulence entries from the previously entered group.*

10 At **Wind Shear Remarks**, enter the forecast height/winds of non-convective wind shear. The field for height is restricted to three characters. The field for winds is restricted to six characters.

*Incorrect entries result in **????** or **??????** displayed in the fields.*

*The **KT** designator is provided by AMIS.*

11 To indicate wind shear conditions, select **WSCONDS**. This blanks the two data entry fields and places the remark WSCONDS in the longline format and the remark WIND SHEAR CONDITIONS EXIST in the local format.

12 At **Temperature**, enter forecast temperatures and associated times for the forecast period (32C at 12Z, 10C at 15Z). The temperature fields are restricted to three characters. The time fields are restricted to two characters.

Up to four temperatures and associated times can be entered in each forecast group.

13 At **Obscuration Remarks**, enter obscuration remarks per local policy and procedure. This field is restricted to 41 characters.

14 At **LL Remarks** and **LCL Remarks**, enter remarks intended for longline and local distribution, respectively, per local policy and procedures. These fields are each restricted to 160 characters.

*Right-clicking the mouse in either **Remarks** field displays a pop-up menu that allows you to Cut, Copy, and Paste text in these fields.*

15 To enter additional forecast groups, do the following:

- Select the next group number and continue entering information as desired.

  Not all fields must be completed in every forecast group.

  Up to 12 forecast groups are possible per TAF.

- Select type of change group from selector buttons: **BECMG**, **TEMPO**, or **FM**.

  *Select **NULL** to de-select a selection.*

- To insert a change group at any point in the TAF, select **Insert Group** while in the change group you wish to insert the change group in front of. (For example, to insert a change group between groups three and four, select group four, select **Insert Group**, and enter the new group data. The new group will become group four. The previous group four and subsequent groups will be renumbered accordingly, starting with five.)

- To delete a change group, select that group and then select **Delete Group**.

16 For **Transmit**, **Print View**, **Save**, **Restore**, and **Clear** actions, see "Action Menubar Options".

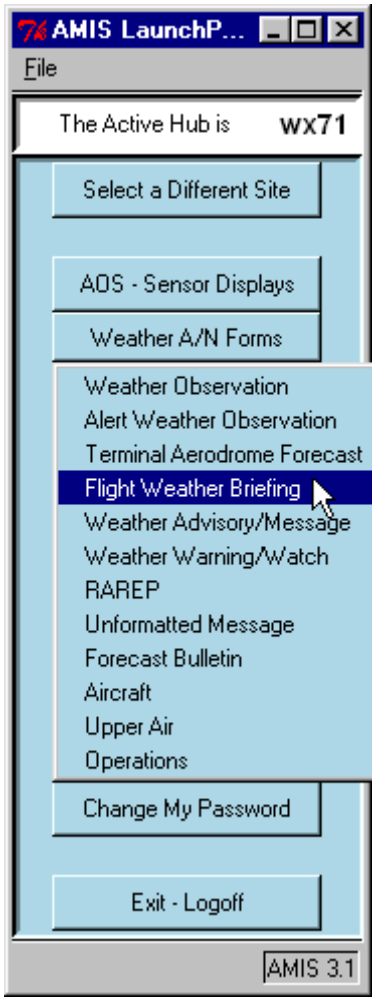
__Note__: when selecting __Transmit__ for a TAF, if it exceeds 2000 characters, you will be prompted that the formatted product is too large for the FCF display. You can then edit the TAF to fit in the display, or you can continue the transmission without change. The TAF is not displayed on the ATCs if the transmission is continued without change.

Flight Weather Briefing

The Flight Weather Briefing (FWB) form is used to prepare for, and to document, the aircrew briefing for a flight.

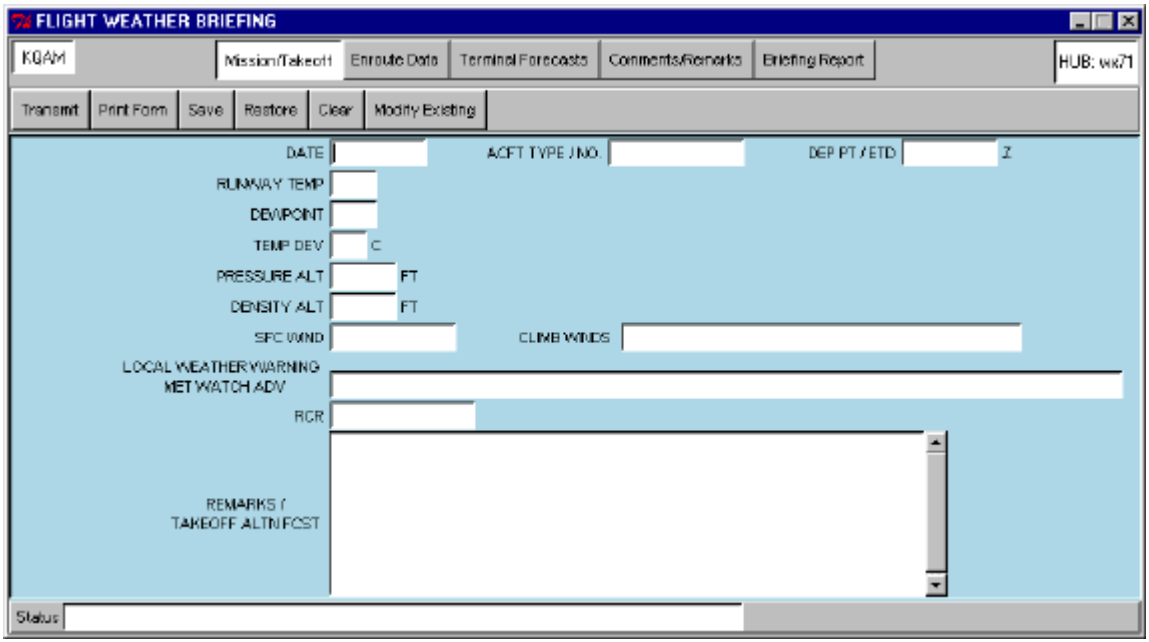
1 To launch the FWB form select **Weather A/N Forms** > **Flight Weather Briefing** from the AMIS LaunchPad (see Figure 3.18).

Figure 3.18 Launch of Flight Weather Briefing (FWB) Form



The FWB form appears (see Figure 3.19).

Figure 3.19 FWB Mission/Takeoff Segment



The FWB form is a multi-part form where each segment of the form is reached in turn by selecting the respective button (**Mission/Takeoff**, **Enroute Data**, **Terminal Forecasts**, **Comments/Remarks**, and **Briefing Report**). These buttons are presented in a selection menu running horizontally across the top of each FWB screen.

Figure 3.20 Selection Menu for FWB Form Segment

Completed FWB forms must be transmitted to be saved in the database and to be available for inclusion in an AAI data file if required. Partially completed forms, such as for regular destinations and alternates or for known recurring missions, may be saved under some agreed upon naming convention and then “Restored” as needed for final completion, printing, and transmission. The following procedure assumes you complete the flight weather briefing sequentially from the top of the initial Mission/Takeoff segment. Format of the entries is a matter of local policy and procedure but suggested formats and field lengths are indicated.

Mission/Takeoff Segment

To complete the Mission/Takeoff segment of the FWB form, do the following:

1 Select **Mission/Takeoff** from the selection menu at the top of any FWB screen (see Figure 3.20).

The Mission/Takeoff segment of the FWB form displays (see Figure 3.19).

2 Optionally select an ICAO by clicking on the button displaying an ICAO in the upper left corner of the form. Your station's ICAO is displayed by default.

3 Enter **DATE**. The date is normally entered in the format *dd mmm yy* (for example, 15 JUL 00). The field is nine characters in length to accommodate the two spaces used in the format.

4 Enter **ACFT TYPE/NO**. Local policy dictates the format of this entry. The field is 13 characters in length.

5 Enter **DEP PT/ETD**. This field usually represents the ICAO of the departure point and the estimated time of departure. This field is nine characters in length.

6 Enter **RUNWAY TEMP**. This field usually represents the runway temperature at time of departure. Units used are set by local policy and should be designated. This field is four characters in length.

7 Enter **DEWPOINT**. This field usually represents the runway dewpoint at time of departure. Units used are set by local policy, but should match the temperature units. This field is four characters in length.

8 Enter **TEMP DEV**. This entry represents the deviation of the temperature from standard temperature in degrees Celsius. This field is three characters in length.

9 Enter **PRESSURE ALT**. This entry represents the pressure altitude at time of departure. Units are feet. This field is six characters in length.

10 Enter **DENSITY ALT**. This entry represents the density altitude calculated for time of departure. Units are feet. This field is six characters in length.

11 Enter **SFC WIND**. This entry represents the surface wind conditions at time of departure. The maximum expected surface wind during the departure is normally entered in this field. This field is 12 characters in length.

12 Enter **CLIMB WINDS**. This entry represents climb winds during departure. More that one level can be entered, as required, to fully describe the wind profile. This field is 40 characters in length.

13 Optionally enter **LOCAL WEATHER WARNING MET WATCH ADV**. This entry represents warning or advisory information. It normally includes the numbers of any existing warnings, watches or advisories valid during departure. This field is 80 characters in length.

14 Optionally enter **RCR**. This entry represents the runway condition rating code, if any, in effect at departure. This field is 14 characters in length.

15 Optionally enter **REMARKS / TAKEOFF ALTN FCST**. This entry describes departure conditions not covered above or, if conditions at the departure point and time meet locally prescribed conditions, it may describe the conditions at an alternate recovery field.

   This field is 540 characters in length. The field will automatically word-wrap or it can be formatted to the limits of the field (lines 60 characters long, up to nine lines).

Enroute Data Segment

To complete the Enroute Data segment of the FWB form, do the following:

1 Select **Enroute Data** from the selection menu at the top of any FWB screen (see Figure 3.20).

   The Enroute Data segment of the FWB form displays (see Figure 3.21).

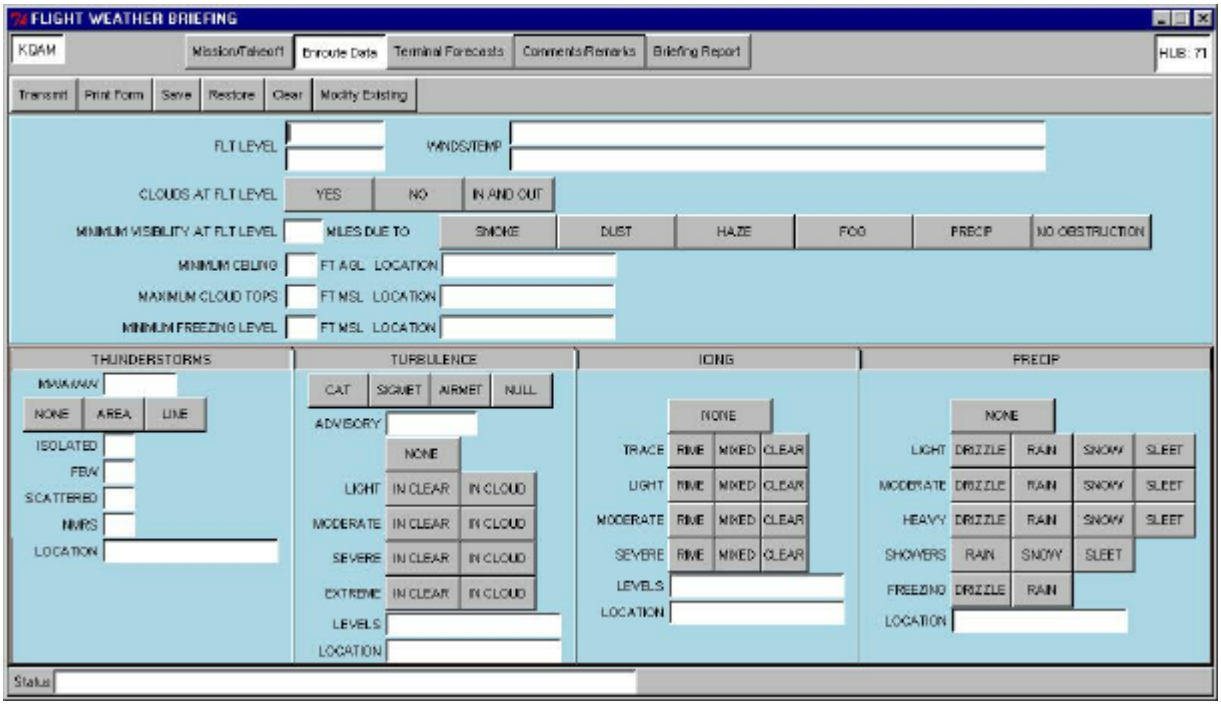
2 Enter **FLT LEVEL**. These entries represent flight levels. Two fields are provided for flights planned to take place at varying levels. The flight levels can be indicated as ranges and are normally entered as above MSL. Each field is 11 characters in length.

3 Enter **WINDS/TEMP**. These entries represent winds and/or temperatures at the indicated flight levels along the planned route of flight.Two fields are provided for flights planned to take place at varying levels. Formats are dictated by local policy and usage. Each field is 63 characters in length to accommodate representation of changing winds and/or temperatures.

4 At **CLOUDS AT FLT LEVEL**, select one of the buttons **YES**, **NO**, or **IN AND OUT** to indicate the expected presence (or absence) of clouds at the planned flight level(s).

5 Enter **MINIMUM VISIBILITY AT FLT LEVEL**. This entry represents the minimum expected visibility at the planned flight level. Units are statute miles. This field is four characters in length.

Figure 3.21 FWB Enroute Data Segment



6 At **DUE TO**, select one or more of the **SMOKE**, **DUST**, **HAZE**, **FOG**, **PRECIP**, **NO OBSTRUCTION** buttons to characterize the restriction(s) to visibility expected at the listed flight level.

Note that all buttons representing the restrictions to visibility can be selected simultaneously. Be careful to select only those buttons that represent the actual conditions expected to occur.

7 If ceilings are expected enroute, enter **MINIMUM CEILING**. This entry is a three-character coded height of the minimum ceiling expected enroute. Units are feet above ground level (AGL).

8 If ceilings are expected enroute, enter **LOCATION**. This entry describes the location of the **MINIMUM CEILING** entry located to the left on the form. This entry can specify an exact location (for example, OMA) or an area (for example, west Texas) or even a general rule (for example, over hilltops). This field is 20 characters in length.

9 Enter **MAXIMUM CLOUD TOPS**. This entry is the three-character coded height of the maximum cloud tops expected enroute. Units are feet above mean sea level (MSL).

10 Enter **LOCATION**. This entry describes the location of the **MAXIMUM CLOUD TOPS** entry located to the left on the form.This field is 20 characters in length.

11 Enter **MINIMUM FREEZING LEVEL.**This entry is a three-character coded value for the lowest freezing level expected along the planned route. Units are feet above mean sea level (MSL), or it can be represented as SFC.

12 Enter **LOCATION**. This entry describes the location of the MINIMUM **FREEZING LEVEL** entry located to the left on the form. For example, the description can be "Entire route". This field is 20 characters in length.

13 **THUNDERSTORMS**. Use this area to describe any thunderstorm activity expected along the planned route by doing the following:.

- Enter **MWA/WW**. Enter the numbers of any existing Metwatch Advisories or Weather Warnings.
- Select one of the following buttons to describe any expected thunderstorm activity: **NONE**, **AREA**, **LINE**.

  *If you select **NONE**, disregard the following procedure for thunderstorms.*

- In the entry fields associated with the expected thunderstorm coverages (**ISOLATED**, **FEW**, **SCATTERED**, **NMRS** (numerous)) for the line or area, enter the highest expected tops using three digits coded in hundreds of feet.

  *Note that **ISOLATED** means 1-2% coverage, **FEW** means 3-15% coverage, **SCATTERED** means 16-45% coverage, and **NMRS** means > 45% coverage.*

- **LOCATION**. This entry describes where the line or area of thunderstorms is expected. This field is 20 characters in length.

14 **TURBULENCE**. Use this area to describe any expected turbulence in the planned route by doing the following:

- Select one of the following buttons: **CAT**, **SIGMET**, **AIRMET**, or **NULL**.
- Enter **ADVISORY**. This entry identifies the most recent turbulence bulletin used in preparing this briefing.
- If no turbulence is expected in the planned route, select **NONE**.

  *If you select **NONE**, disregard the following procedure for turbulence.*

- Select the expected turbulence type and intensity combinations by clicking on the types (**IN CLEAR**, **IN CLOUD**) corresponding to the intensities (**LIGHT**, **MODERATE**, **SEVERE**, **EXTREME**).

  Note that all turbulence type and intensity buttons can be selected simultaneously. Be careful to select only those buttons that represent the conditions expected to occur.

- Enter **LEVELS** and **LOCATION**. These entries represent the flight levels and locations along the route where turbulence is expected.

15 ICING. Use this area to describe any expected icing along the planned route by doing the following:

- If no icing is expected anywhere along the route at the planned flight levels, select **NONE**.

  *If you select **NONE**, disregard the following procedure for icing.*

- Select the expected icing type and intensity combinations by clicking on the types (**RIME**, **MIXED**, **CLEAR**) corresponding to the intensities (**TRACE**, **LIGHT**, **MODERATE**, **SEVERE**).

  Note that all icing type and intensity buttons can be selected simultaneously. Be careful to select only those buttons that represent the actual conditions expected to occur.

- Enter **LEVELS** and **LOCATION**. These entries represent the levels and locations of the expected icing. Each field is 20 characters in length.

16 PRECIP. Use this area to describe any expected precipitation along the planned route by doing the following:

- If no precipitation is expected anywhere along the route, select **NONE**.

  *If you select **NONE**, disregard the following procedure for precipitation.*

- Select the combination of precipitation types and intensities forecast for the route by clicking on the types (**DRIZZLE**, **RAIN**, **SNOW**, **SLEET**) corresponding to the intensities (**LIGHT**, **MODERATE**, **HEAVY**, **SHOWERS**, **FREEZING**).

  Note that all precipitation type and intensity buttons can be selected simultaneously. Be careful to select only those buttons that represent the actual conditions expected to occur.

- Enter **LOCATION**. This entry represents the location(s) of the forecast precipitation. This field is 20 characters in length.

Terminal Forecasts Segment

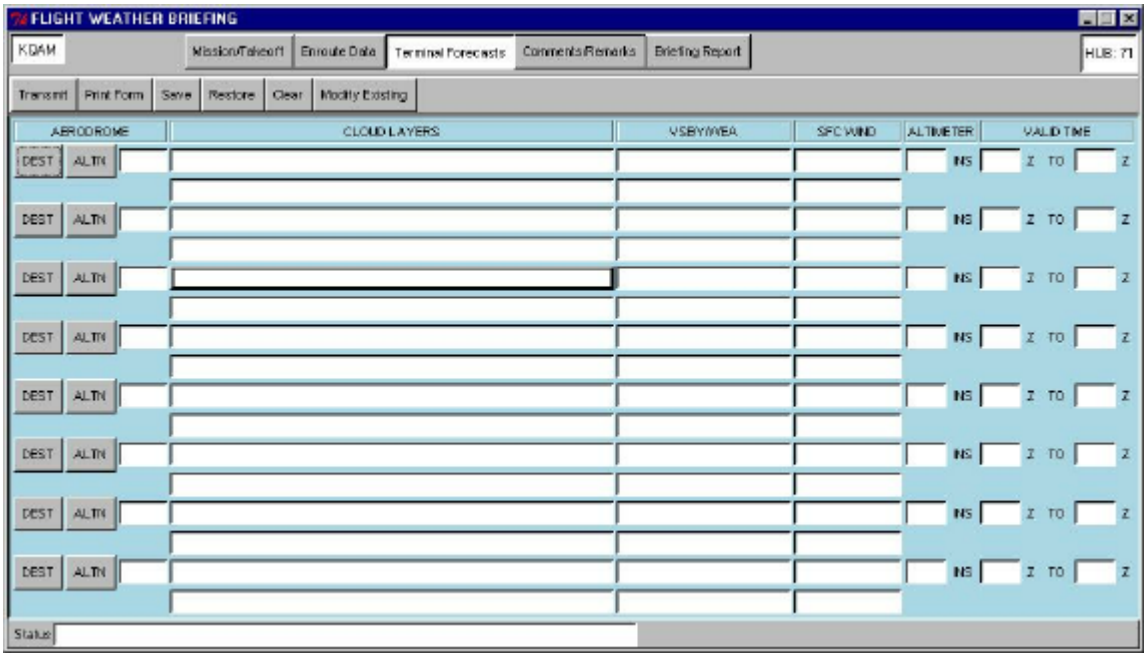
The Terminal Forecasts segment of the FWB form is used to enter the forecast weather conditions for up to eight destinations or alternates. Destinations and alternates can be specified in any combination. For example, you can specify one destination with no alternates; or multiple destinations, each with an alternate; or up to eight destinations with no alternates.

To complete the Terminal Forecasts segment of the FWB form, do the following:

1 Select **Terminal Forecasts** from the selection menu at the top of any FWB screen (see Figure 3.20).

The Terminal Forecasts segment of the FWB form displays (see Figure 3.22).

Figure 3.22 FWB Terminal Forecasts Segment



2 At **AERODROME**, specify *destination* or *alternate* by selecting **DEST** or **ALTN**, respectively. At the associated field located just to the right, specify the respective location by entering an identifier of up to five digits (usually the ICAO).

3 In the respective **CLOUD LAYERS** field, enter the forecast cloud layers as required. This field is 52 characters in length.

4 In the respective **VSBY/WEA** field, enter the forecast visibility with any restrictions to visibility. This field is 20 characters in length.

5 At the respective **SFC WIND** field, enter the forecast surface wind conditions. This field is 12 characters in length.

6 At the respective **ALTIMETER** field, enter the lowest altimeter setting expected during the valid time of the forecast. Enter four characters without the decimal.

7 At the respective set of **VALID TIME** fields, enter the valid time of the forecast (usually one hour either side of the estimated time of arrival (ETA).

Note that for each location, two fields each are provided for clouds, visibility, and winds. The second field is used for cases when the forecast for that location has temporary conditions or for when conditions are forecast to change significantly during the valid time. In contrast, there is only one altimeter setting and set of valid time fields for each location. This is because the altimeter setting is supposed to represent the lowest value for the valid time and the valid time is based upon the ETA.

8 If required by the flight plan, repeat the above steps for any additional locations.

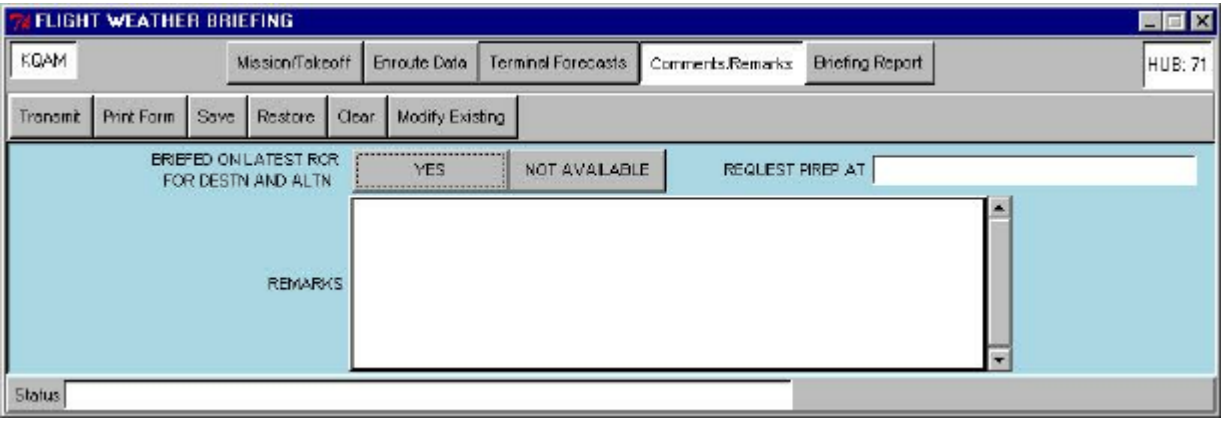
Comments/Remarks Segment

To complete the **Comments/Remarks** segment of the FWB form, do the following:

1 Select **Comments/Remarks** from the selection menu at the top of any FWB screen (see Figure 3.20).

The **Comments/Remarks** *segment of the FWB form displays (see Figure 3.23).*

Figure 3.23 FWB Comments/Remarks Segment



The **Comments/Remarks** segment of the FWB form is used to document whether the pilot was briefed on the latest RCR at the destination and alternate and whether he was briefed as to the radio frequency for PIREPs.

1 At **BRIEFED ON LATEST RCR FOR DEST AND ALTN**, select one of the following:

- If the pilot was briefed on the latest RCR at the destination and alternate, select **YES**.
- If RCR is not available for destination or alternate, select **NOT AVAILABLE**.

2 At **REQUEST PIREP AT**, enter the radio frequency for local Pilot-to-Metro Service (PMSV) for pilot to relay any PIREPs on takeoff, etc.

3 At **REMARKS**, you may enter any explanatory information. For example you can describe anything in the forecast not covered by the information completed so far; you can also describe expected wind/shear/icing/etc. conditions. This field is eight, 60 character lines in length (480 characters).

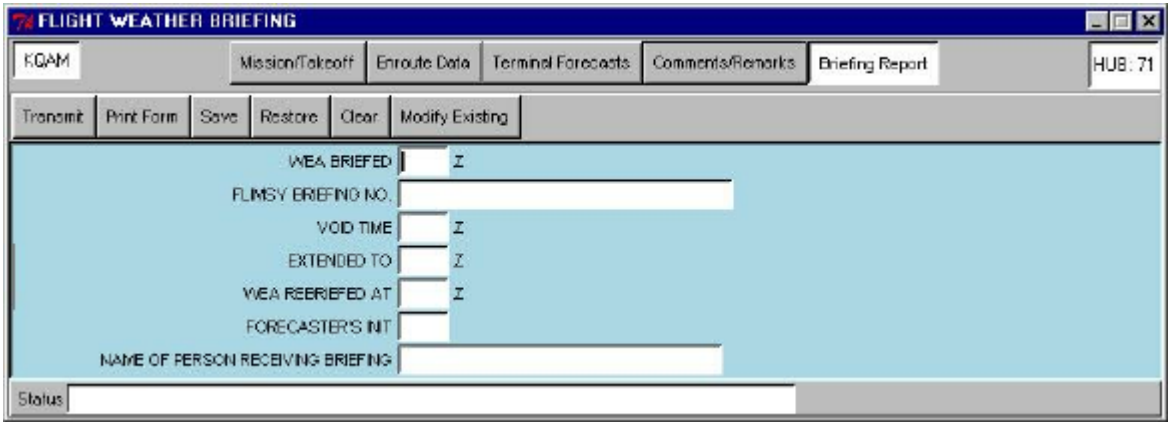
Briefing Report Segment

The **Briefing Report** segment of the FWB form is used to document the flight weather briefing. To complete this segment of the form, do the following:

1 Select **Briefing Report** from the selection menu at the top of any FWB screen (see Figure 3.20).

The **Briefing Report** *segment of the FWB form displays (see Figure 3.24).*

Figure 3.24 FWB Briefing Report Segment



2 At **WEA BRIEFED**, enter the time that the weather was briefed, for example 1255Z.

3 At **FLIMSY BRIEFING NO.**, enter the flimsy briefing number (as applicable), for example 10-5.

4 At **VOID TIME**, enter the void time of the briefing.

5 At **EXTENDED TO**, enter the time the briefing was extended to (as applicable).

6 At **WEA REBRIEFED AT**, enter the time the weather was rebriefed (in the case that VOID TIME was exceeded).

7 At **FORECASTER'S INIT**, as the Weather Forecaster (briefer), enter your initials.

8 At **NAME OF PERSON RECEIVING BRIEFING**, enter the name of the person receiving the briefing.

9 When your briefing form is satisfactorily completed, you can perform any of the following form actions by making selections from the form Action Menubar:

- To provide a hard copy of the completed form, perhaps for the aircrew, select **Print Form**.
- To retain the form information in the system, perhaps until the mission has departed (for the case that changes or extensions to it become necessary), do one of the following:
  - Select **Save**. Name the file using a local naming convention. For subsequent retrieval, select **Restore**, using the same name it was saved with.

    The FWB form appears, populated with your previously saved information.
  - Select **Transmit** and use the default settings. The form will be transmitted internally and stored in the product database. For subsequent retrieval from the database, select **Modify Existing**.

    The FWB form appears, populated with the information from the stored product.

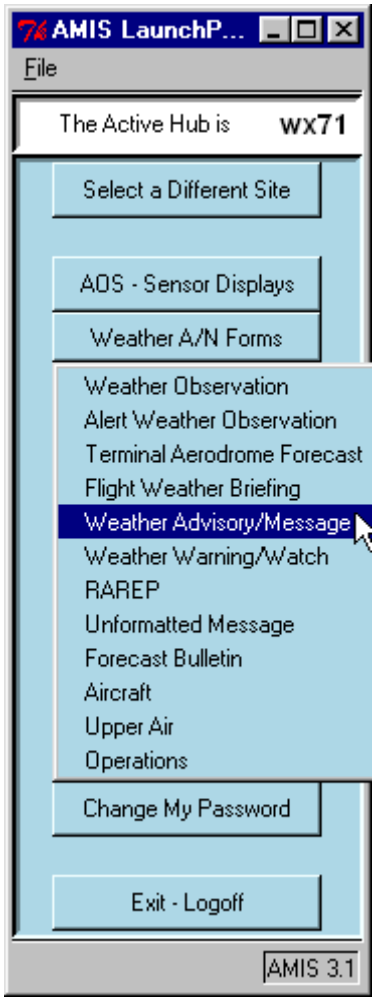
Weather Advisory/Message

The Weather Advisory/Message form is used to create, issue, reissue, verify, and/or cancel a Weather Advisory or a Weather Message.

To launch the Weather Advisory/Message form do the following:

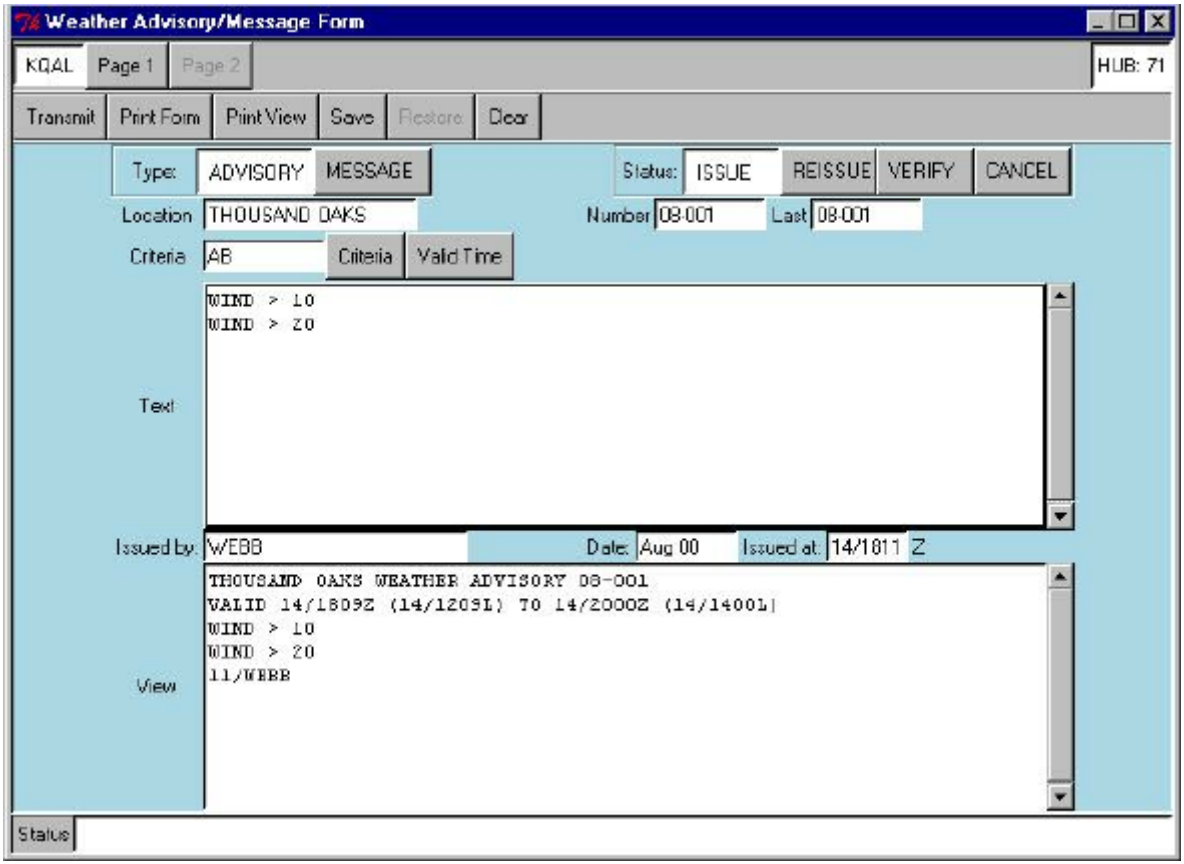
1 Select **Weather A/N Forms >Weather Advisory/Message** from the AMIS LaunchPad (see Figure 3.25).

Figure 3.25 Launch of Weather Advisory/Message Form



The Weather Advisory/Message form appears (see Figure 3.26).

Figure 3.26 Weather Advisory/Message Form



To enter or edit fields in the form, you must first select a Status (ISSUE, REISSUE, VERIFY, CANCEL) or the Restore form action. The system then enables subsequent actions on the form.

1 To issue a new product, do the following:

- At **Status**, select **ISSUE**.

  An ICAO selection screen appears.

- Select the ICAOs to which the product will apply. Select a single ICAO or multiple ICAOs from the **Candidates** list and do one of the following:
  - Select **Accept** to have your selections accepted and exit.
  - Select **Cancel** to exit without having your selections accepted.

  *In the case of multiple ICAO selections, the product will be formatted in the **View** window, and the word **REGION** will be displayed in the*

upper left corner denoting a multi-ICAO product. The system will process the product you enter for each ICAO that was selected.

- At **Type**, do one of the following:
  - For a Weather Advisory, select **ADVISORY**.
  - For a Weather Message, select **MESSAGE**.

2 To modify (for example, to update text or Valid Times) an already issued product from the database, do the following:

- At **Status**, select **REISSUE**.

  A product selection list appears.

- From the **Candidates** list, select a single-ICAO product, or a single or multiple Regional (i.e., multi-ICAO) product(s).

  *When a Regional product is selected from the **Candidates** list, single-ICAO products disappear from the **Candidates** list. This is because single-ICAO products are stored separately in the product database and cannot be modified with Regional products.*

  If updating a Regional product for a single ICAO, the text field cannot be changed.

3 To modify Page 2 for verification, do the following:

- At **Status,** select **VERIFY**.
- Verify occurrences of Advisory data previously issued.

  One product, only, can be selected at a time from the list.

  Once the product has been selected, the page 2 fields can be filled in, but page 1 cannot be edited.

4 To issue a cancellation of an already issued product, and to remove it from the database, do the following:

- At **Status**, select **CANCEL**.

  An ICAO selection list appears.

  Select a single-ICAO product from the list, or multiple Regional products for cancellation. Regional products (i.e. multiple-ICAO products) can be selected simultaneously or individually, but single-icao products disappear from the available selections list once Regional products are selected. This is because single ICAO products are stored separately in the database and cannot be modified with Regional products.

  *No fields can be modified in the displayed product. Upon transmit, the system adds the word **CANCEL** to the product, after the valid time.*

5 To modify a previously saved product, do the following:

- Select **Restore** from the Form Action Menubar.

- Select the name of the saved product from the saved products list.
- Select **Accept** to accept your selection, or **Cancel** to exit.
- To delete a saved product, select **Delete**.

  The product is deleted from storage and the name of the product is removed from the saved products list.

Field Entry instruction

To issue a new Weather Advisory, do the following:

1 At **Status**, select **ISSUE**.

  *An ICAO selection screen appears. From the **Candidates** list, select and the ICAO(s) for which the advisory will be applicable. Select Accept.*

2 At **Type**, select **ADVISORY**.

3 At **Location**, enter the location.

  The location entry is restricted to 20 characters. (It may not be obvious since the field does not scroll. However, characters in excess of 20 can be entered.) The system will notify you if you exceed the limit.

4 At **Criteria**, enter the criteria for which the Advisory is being issued by doing one of the following:

- Enter the letters associated with the criteria in the text entry field.
- Select the **Criteria** button, and do the following.

  A criteria selection list appears.

  - Select the appropriate criteria.
  - Select **Accept**.

    *The Advisory form re-displays with the selected criteria letters in the **Criteria** window and the text of the selected criteria in the **Text** window.*

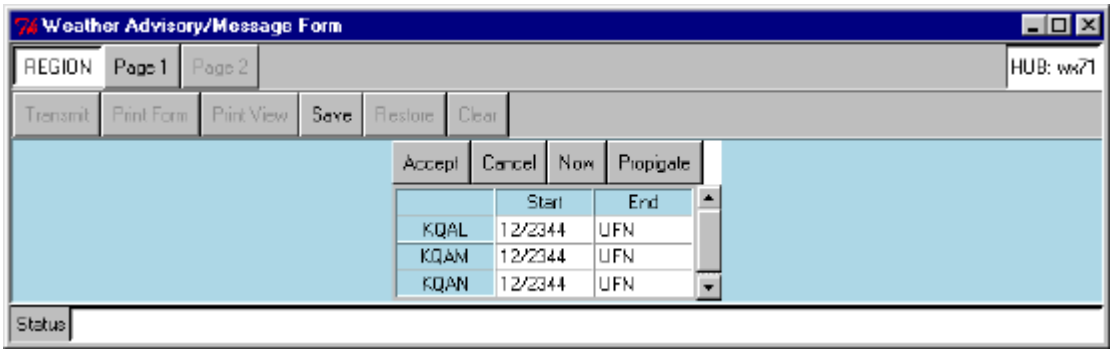
5 To set the valid time(s), do the following:

- Select **Valid Time**.

  A Valid Time entry panel appears displaying the proposed start and end valid times for each of the ICAOs selected in the original Issue station selection. Each of the sites may have separate starting and ending times as necessary.

  ***UFN** signifies until further notice. Advisories/Messages issued with this end time must be reissued with an actual end time or canceled to remove them from display.*

Figure 3.27 Valid-Time Dialog



- To reset the start time with the current clock time, select **Now**.

  This is for the rare case when the conditions requiring the advisory may have already started, and you wish to reflect that fact in the form.

- To propagate a time change you make to one entry, select **Propagate**.

- When you have set the proper start and end times for each site, select **Accept**.

  *The main Advisory form re-displays. The valid times you have selected are now contained in the body of the text and the final format of the Advisory is displayed in the **View** window.*

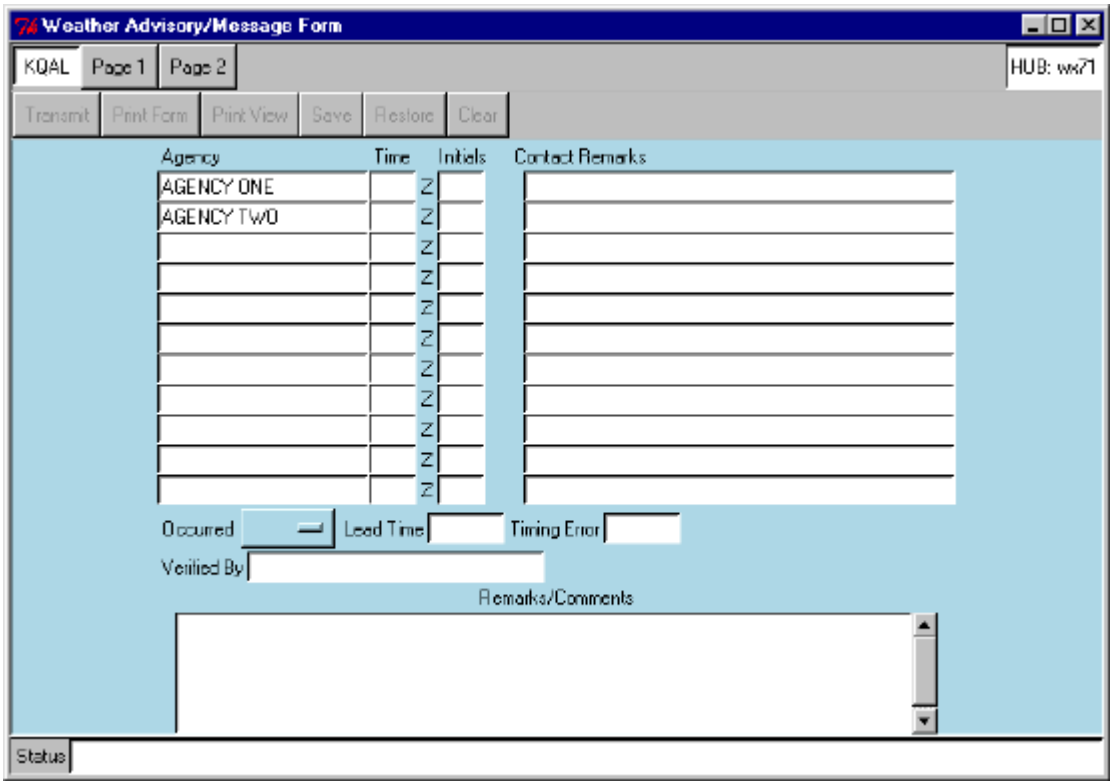
6 At **Issued by**, as the person issuing the Advisory, enter your name.

7 Page 2 of the Advisory/Message form is not available for data entry except for verification. To modify Page 2 for verification, do the following:

- Select **Page 2**.

  *Page 2 of the Advisory form displays with the **Agency** fields prefilled.*

Figure 3.28 Advisory/Message Form, Page 2



- At **Time**, enter the time that you notified the listed agencies.
- At **Initials**, enter the initials of the person contacted at those agencies.
- At **Contact Remarks**, enter any comments you have concerning the agency contact.
- At **Occurred**, as the person verifying the Advisory/Message, select from **YES**, **NO**, and **N/A** to indicate occurrence.
- At **Lead Time**, enter the lead time. This field is six characters in length.
- At **Timing Error**, enter the timing error. This field is six characters in length.
- At **Verified By**, as the person making the verification, enter your name.
- At **Remarks/Comments**, enter any remarks/comments supporting the verification (or explain why it did not verify).

8 To transmit the form, do the following:

- Select **Page 1**.

- Select **Transmit** from the Action Menubar.

  Transmission of the verification stores the information in the database but does not alert or display at the N-TFS Client or the LWDS.

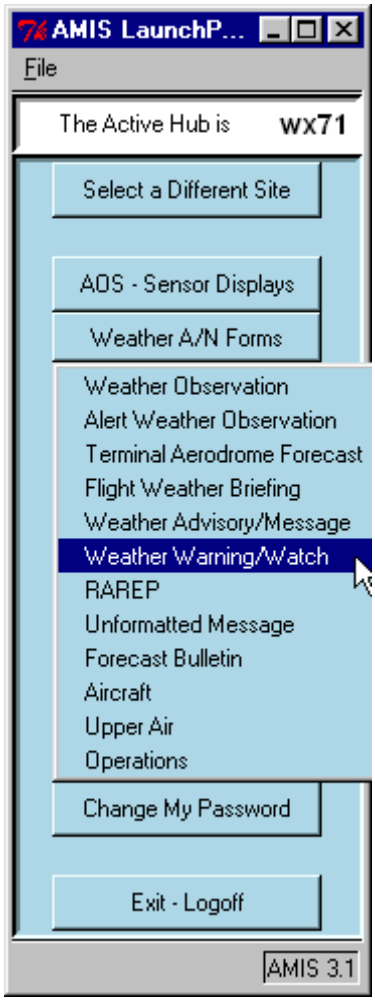
Weather Warning/Watch

The Weather Warning/Watch form is used to create, issue, reissue, verify, and/or cancel a Weather Warning or a Weather Watch.

To launch the Weather Warning/Watch form do the following:

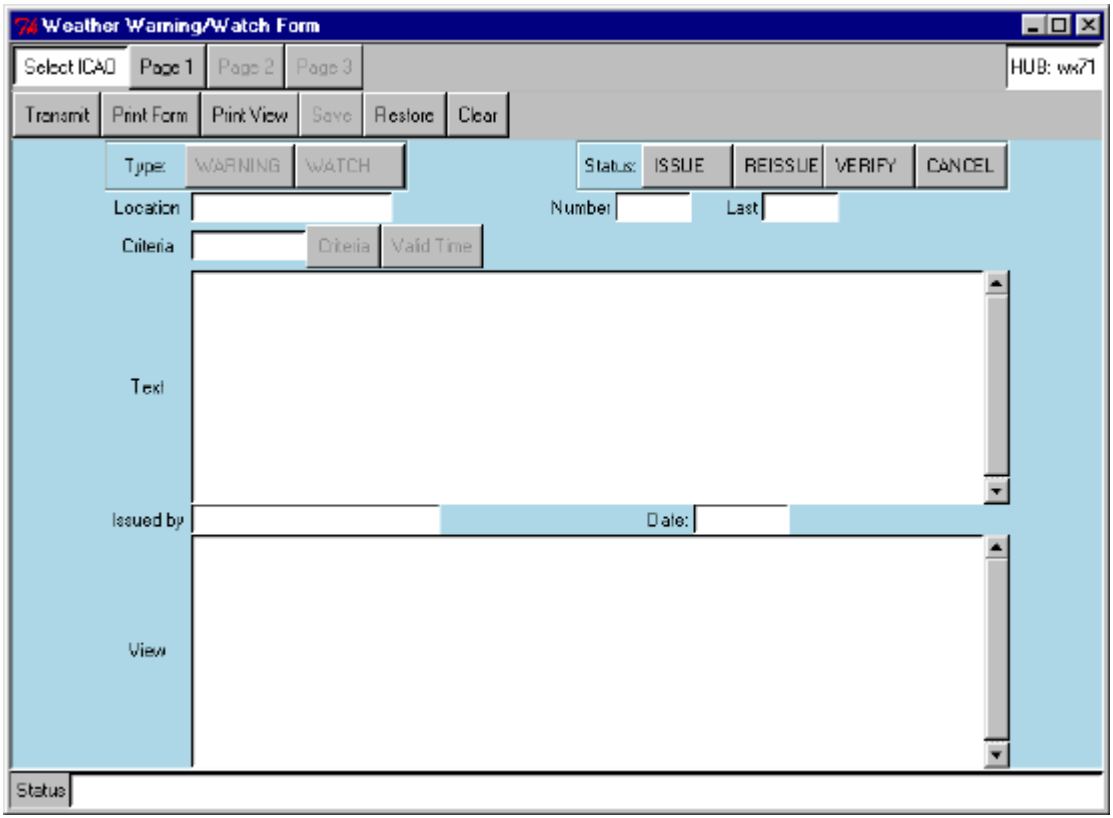
1 Select **Weather A/N Forms >Weather Warning/Watch** from the AMIS LaunchPad (see Figure 3.29).

Figure 3.29 Launch of Weather Warning/Watch Form



The Weather Warning/Watch Form appears (see Figure 3.30).

Figure 3.30 Weather Warning/Watch Form



To enter or edit fields in the form, you must first select a **Status** (**ISSUE**, **REISSUE**, **VERIFY**, **CANCEL**) or the **Restore** form action. The system then enables subsequent actions on the form.

To issue a new product, do the following:

1 At **Status**, select **ISSUE**.

An ICAO selection screen appears.

2 Select a single ICAO or multiple ICAOs from the **Candidates** list.

3 Select **Accept** to accept your selections.

4 Select **Cancel** to exit without having your selections accepted.

*In the case of multiple ICAO selections, the product will be formatted in the **View** window, and the word REGION will be displayed in the upper left corner denoting a multi-ICAO product. The system will process the product you enter for each selected ICAO in the list.*

5 At **Type**, select **WARNING** or **WATCH**.

To modify an already issued product residing in the database, do the following:

1 At **Status**, select **REISSUE**.

An ICAO selection list appears.

2 From the **Candidates** list, select a single-ICAO product or multiple Regional products for updates or corrections to text or valid times. Regional products (i.e. multiple-ICAO products) can be selected simultaneously or individually, but single-ICAO products disappear from the available selections list once Regional products are selected. This is because single ICAO products are stored separately in the database and cannot be modified with Regional products.

If updating a Regional product for a single ICAO, the text field cannot be changed.

To modify Pages 2 and 3 for verification, do the following:

1 At **Status**, select **VERIFY**.

2 Verify occurrences of Advisory, Warning, Watch data previously issued.

3 One product, only, can be selected at a time from the list.

4 Once the product has been selected, the page 2 and 3 fields can be filled in, but page 1 cannot be modified.

To issue a cancellation of an already issued product, and to remove it from the database, do the following:

1 At **Status**, select **CANCEL**.

An ICAO selection list appears.

2 Select a single-ICAO product from the list, or multiple Regional products for cancellation. Regional products (i.e. multiple-ICAO products) can be selected simultaneously or individually, but single-ICAO products disappear from the available selections list once Regional products are selected. This is because single ICAO products are stored separately in the database and cannot be modified with Regional products.

No fields can be modified on the displayed product. Upon transmit, the system adds the word CANCEL to the product, after the valid time.

To modify a previously saved product, do the following:

1 Select **Restore** from the Form Action Menubar.

2 Select the name of the saved product from the saved products list.

3 Select **Accept** to accept your selection, or **Cancel** to exit.

4 To delete a saved product, select **Delete**.

The product is deleted from storage and removed from the saved product list.

Field Entry instructions

To issue a new Weather Warning or Weather Watch, do the following:

1 At **Status**, select **ISSUE**.

*An ICAO selection screen appears. From the **Candidates** list, select and the ICAO(s) for which the advisory will be applicable. Select Accept.*

2 At **Type**, select **WATCH** or **WARNING**.

3 At **Location**, enter the location.

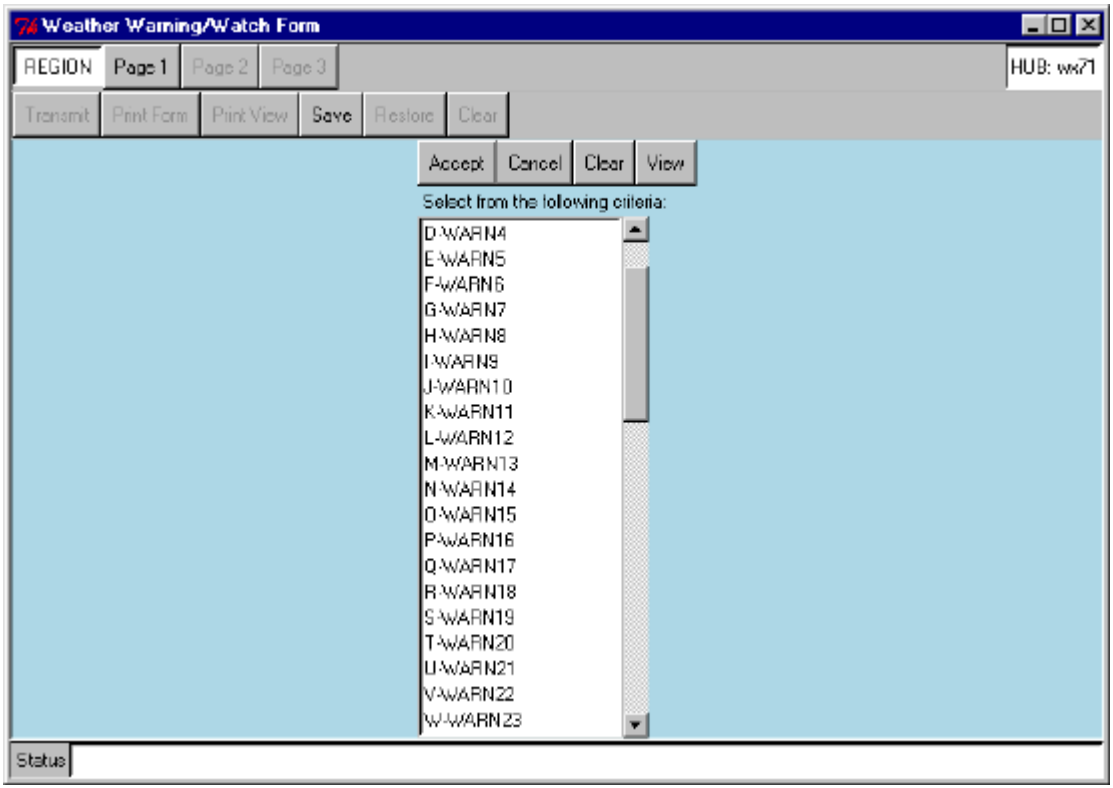
The location entry is restricted to 20 characters. (This field does not scroll, but additional characters in excess of 20 can be entered.) The system will notify you if you exceed the limit.

4 At Criteria, enter the criteria for which the Warning/Watch is being issued by doing one of the following:

- Enter the letters associated with the criteria in the text entry field.
- Select the **Criteria** button and do the following:

A criteria selection list appears.

Figure 3.31 Warning/Watch Criteria Selection



- Select the appropriate criteria from the criteria list.
- Select **Accept**.

*The Warning/Watch form re-displays with the selected criteria letters in the **Criteria** window and the text of the selected criteria in the **Text** window.*

5 To set valid time(s), do the following:

- select **Valid Time**.

A Valid Time entry panel appears displaying the proposed start and end valid times for each of the ICAOs selected in the original Issue station selection. Each of the sites may have separate start and ending times as necessary.

UFN signifies until further notice. Watches/Warnings issued with this end time must be reissued with an actual end time or canceled to remove them from display.

- To reset the start time with the current clock time, select **Now**.

This is for the rare case when the conditions requiring the advisory may have already started and you wish to reflect that fact in the form.

- To propagate a time change you make to one entry, select **Propagate**.

6 When you have set the proper start and end times for each site, select **Accept**.

*The main Warning/Watch form re-displays. The valid times you have selected are now contained in the body of the text and the final format of the Warning/Watch is displayed in the **View** window.*

7 At **Issued by**, as the person issuing the Warning/Watch, enter your name.

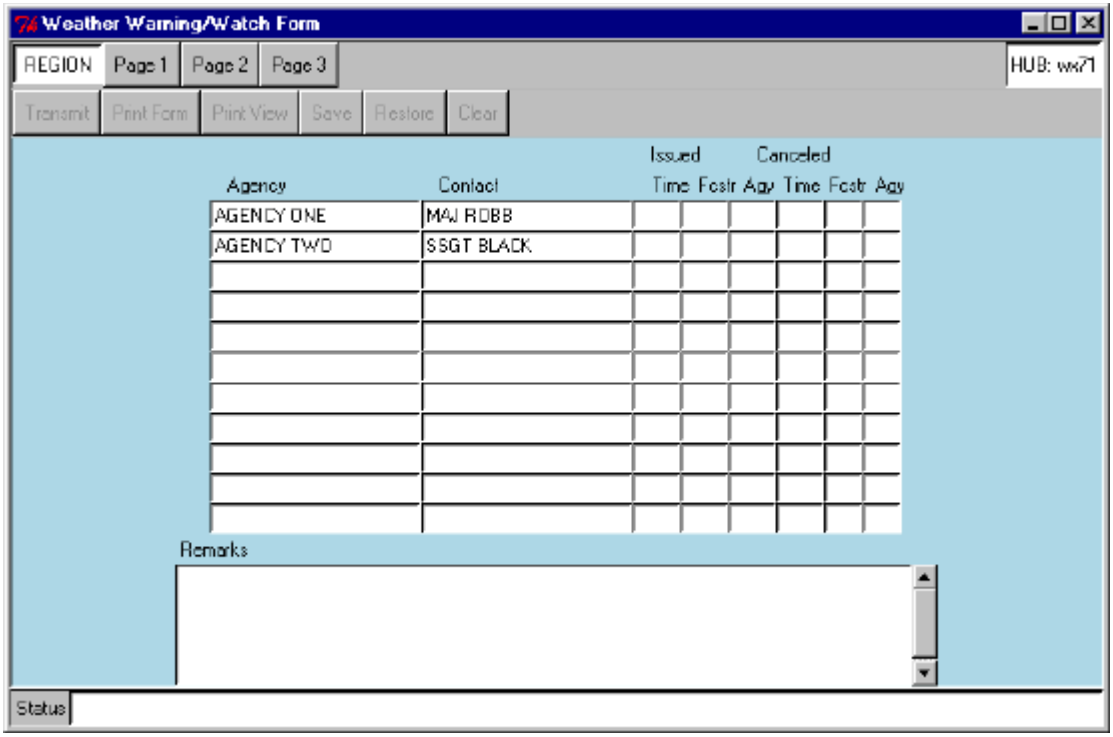
To complete Page 2 for verification, do the following:

1 At **Status**, enter **VERIFY**.

2 Select **Page 2**.

*The Warning/Watch Form Page 2 displays with the **Agency** and **Contact** fields prefilled.*

Figure 3.32 Weather Warning/Watch Page 2



3 For each listed agency, do the following:

- At **Issued Time**, enter the time you notified the agency of the issue.

- At **Issued Fcstr**, as the person that notified the agency, enter your initials.
- At **Issued Agy**, enter the initials of the person contacted at the agency.

4 To document a upcoming cancellation of a Warning/Watch, do the following:

- At **Canceled Time**, enter the time you notified the agency of the upcoming cancellation.
- At **Canceled Fcstr**, as the person that notified the agency, enter your initials.
- At **Canceled Agy**, enter the initials of the person contacted at the agency.

  This cancellation information must be completed before cancelling the product, as the product will no longer be available in the database once it has been cancelled.

- At **Remarks**, enter any comments you have concerning the agency contacts.

To complete Page 3 for verification, do the following:

1 Select **Page 3**.

  *The Weather Warning/Watch form Page 3 displays with the **Watch/ Warning Criteria** and the **Desired Lead Time** fields prefilled (see Figure 3.33).*

Figure 3.33 Weather Warning/Watch Form, Page 3

Weather Warning/Watch Form

REGION | Page 1 | Page 2 | Page 3 | HUB: wx71

Transmit | Print Form | Print View | Save | Restore | Clear

Verified by:

Watch/Warning Criteria	Desired Lead Time	Time Occurred		Not Occurred	Lead Time	Timing Error
WARN3	+30		Z			
			Z			
			Z			
			Z			
			Z			
			Z			
			Z			
			Z			
			Z			
			Z			
			Z			

Pertinent Observations/Bust Review

Status

2 At **Verified by**, as the person providing the verification, enter your name.

3 If the event occurred, do the following:

- At **Time Occurred**, enter the time the event occurred.
- At **Lead Time**, enter the lead-time. This field is six characters in length.
- At **Timing Error**, enter the timing error. This field is six characters in length.

4 If the event did not occur, at the **Not Occurred** window, enter an **X** character.

5 Optionally, at **Pertinent Observations/Bust Review**, do one of the following:

- Enter any remarks/comments supporting the verification.
- Enter any remarks/comments explaining why the event did not verify.

6 To transmit the form, do the following:

- Select **Page 1**.

7 Select **Transmit** from the Form Action Menubar.

Transmission of the verification stores the information in the database but does not alert or display at the N-TFS Client or the LWDS.

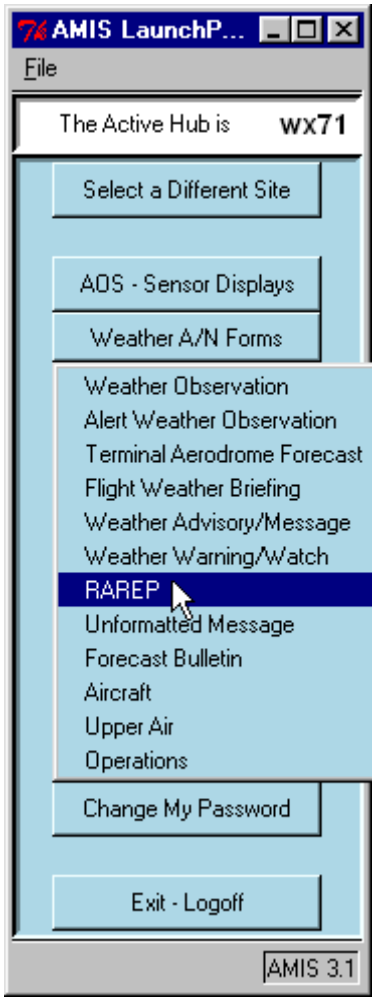
Radar Report (RAREP)

The RAREP form is used to encode and disseminate the radar report taken locally. There are no restricted or protected fields on this form so that care should be taken to check entries prior to transmission.

To launch the RAREP form, do the following:

1 Select **Weather A/N Forms > RAREP** from the AMIS LaunchPad (see Figure 3.34).

Figure 3.34 Launch of RAREP Form



The RAREP form displays (see Figure 3.35).

Figure 3.35 RAREP Form

RADAR WEATHER OBSERVATION - RAREP

KQAM | HUB: wk71

Transmit | Print Form | Print View | Save | Restore | Clear | Modify Existing | Longline | Local

Date | Time | Z | Initials

Mod Group: RTD | AMD | COR | AMD COR

Type: SD | USD | SIGWX

Type of Radar: WSR-88

Station: AMIS KQAM

Month | Year

REPORT 1 | 2 | 3 | 4 | 5 | 6 | 7 | INSERT REPORT | DELETE REPORT

Echo Type: AREA | LN | CELL | CELLS | LYR | SPRL BAND AREA | FINE LN | EYE | CNTR

Cov-Type-Int/Trend

Direction / Distance

Width / Diameter | Movement: System | Cells | Max Clouds: MT | AT

Remarks

Digital Message

VIEW WINDOW

KQAM:

Status

To complete the form, do the following:

1 At **Date**, enter the day of the month (for example, 17) in two digits.

2 At **Time**, enter the time of the report in UTC.

3 At **Initials**, as the person completing the form, enter your initials.

4 At **Mod Group**, optionally select one of **RTD**, **AMD**, **COR**, or **AMD COR**.

*No **Mod Group** selection is required for an original report.*

5 At **Type**, select one of **SD**, **USD**, **SIGWX**.

6 At **Month**, enter the complete spelled out name of the month (for example, September).

7 At **Year**, enter the four-digit year (for example, 2000).

8 Select one of seven **REPORT** buttons to designate the report number.

Up to seven radar reports can be entered for each transmission.

9 At **Echo Type**, select one of **AREA**, **LN**, **CELL**, **CELLS**, **LYR**, **SPRL BAND AREA**, **FINE LN**, **EYE**, **CNTR**.

10 At **Cov-Type-Int/Trend**, enter the coded coverage, type, intensity, and trend (for example, 8TRW++/NC). This field is 11 characters in length.

11 At **Direction / Distance**, enter direction and distance in up to five fields to accurately locate the returns being reported. Use three digits for direction and up to three digits for distance in statute miles (for example, 270/123).

12 At **Width / Diameter**, enter the width and diameter in up to four characters (for example, D30).

13 At **Movement**, enter a description of the movement in fields **System** or **Cells**, for example, A3225. These fields are each six characters in length.

14 At **Max Clouds**, enter a description of cloud tops in fields **MT** and **AT**. These fields are eight and nine characters in length respectively.

*MT is height of the max top, **AT** is the direction and distance of said top (for example, MT 320 AT 320/120).*

15 At **Remarks** and **Digital Message**, enter information in accordance with your local policy and procedures. Each field is 80 characters in length.

16 Optionally, if you have completed a number of reports and decide to insert a new report between two previously entered reports, do the following:

- Using the report number buttons, select the report number you wish to insert the new report in front of.
- Select the **INSERT REPORT** button.
- Complete the new report as described in this procedure.

The inserted report will take the report number of the report that moved. Starting with the report that moved, the system will increase the report numbers by one, up to the limit of seven.

17 Optionally, if you wish to remove a report from the form, do the following:

- Using the report number buttons, select the button for the report you wish to delete.
- Select **DELETE REPORT**.

The report is removed and the higher numbered reports are renumbered accordingly.

18 To print the RAREP as a form, do the following:

- first transmit the report(s), by selecting **Transmit** from the Action Menubar.
- Select **Print Form** from the Action Menubar.

  You will be prompted for a starting and ending date-time-group.
- Enter a start date-time-group and an end date-time-group.
- To print the form, select **OK**.

  All RAREPs made and transmitted during the time period you specified will be printed on the resulting form.

19 To print the contents of the **VIEW WINDOW**, select **Print View** from the Action Menubar.

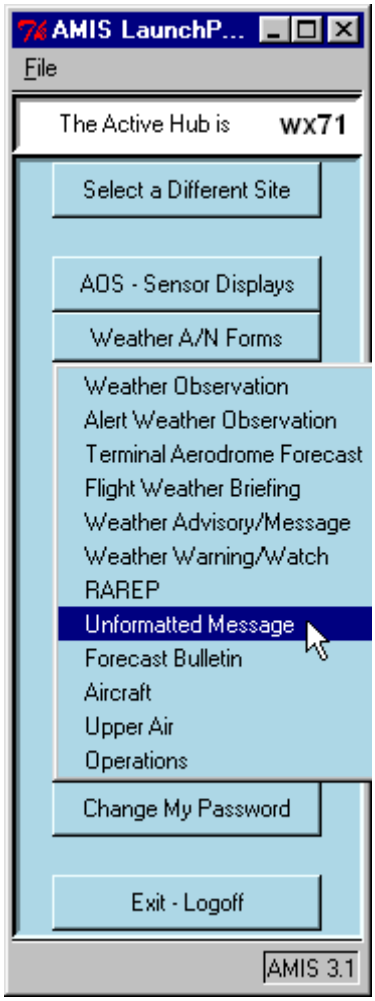
Unformatted Message

The Unformatted Message form is used to compose and disseminate unformatted messages to various locations.

To launch the Unformatted Message form, do the following:

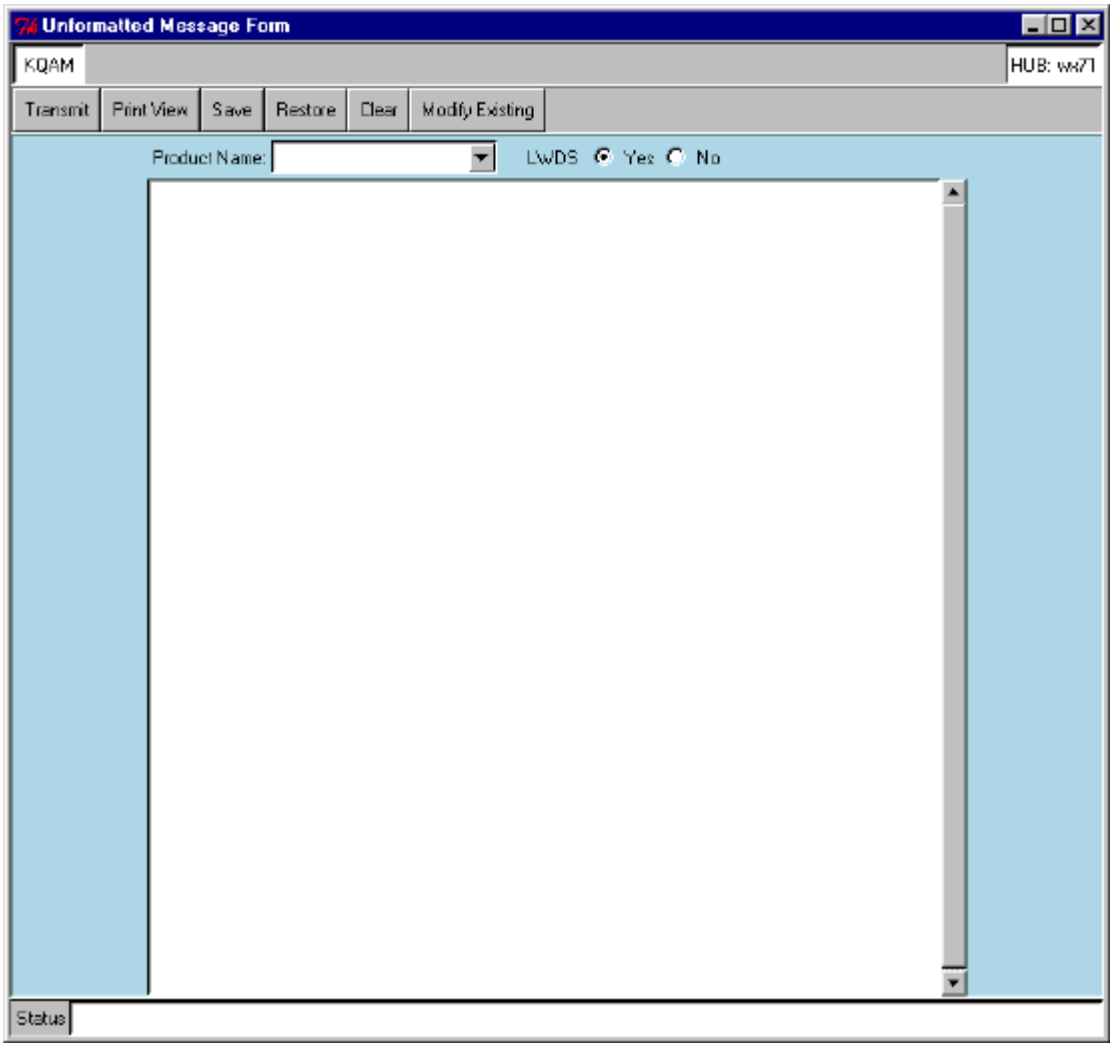
1 Select **Weather A/N Forms > Unformatted Message** from the AMIS LaunchPad (see Figure 3.36).

Figure 3.36 Launch of Unformatted Message Form



The Unformatted Message form displays (see Figure 3.37).

Figure 3.37 Unformatted Message Form



To complete the form, do the following:

1 Optionally, select a different ICAO by clicking on the button in the upper left corner of the form that displays the ICAO.

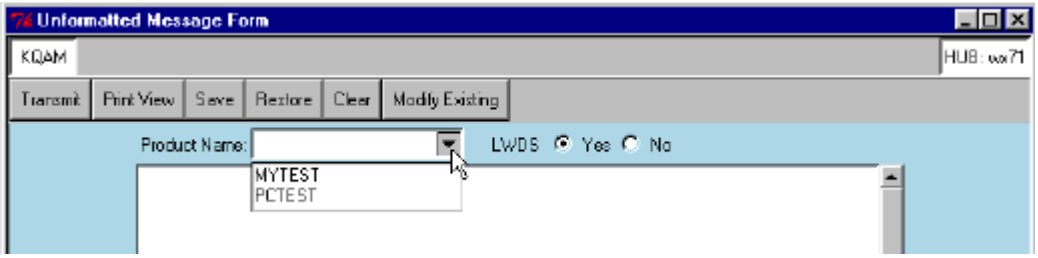
By default, your station's ICAO is displayed.

2 At **Product Name**, click on the arrow to display the list of assigned Unformatted Message names.

Each of these names has Unformatted Message routing destination(s) associated with it.

3 To establish the dissemination of the message you are composing, do one of the following:

- Typically, at **Product Name**, click on the arrow and select a name from the list by clicking on it.



- At the **Product Name** text entry field, enter a name for wildcarding.

  Wildcarding combines all names matching the entered name from left to right.

4 At **LWDS**, select one of **Yes** or **No** depending on whether you want the Unformatted Message to be displayed in the Local Weather Data Set.

5 In the text entry window, enter your message.

  Upon attempting transmission, if the message exceeds 2000 characters you will be notified so that you can optionally modify the message. If you do not modify the message to less than 2000 characters, it will be transmitted but not be displayed at the FCFs.

6 To transmit the completed Unformatted Message product to default locations, do the following:

7 To transmit the completed Unformatted Message product to specified locations, do the following:

8 To set the default purge time, do the following:

9 To select routing destinations from the override panel, do the following:

  The following matrix describes the transmission options available when distributing unformatted messages.

LWDS	Product Name	Default Routed	Destinations
Yes	Yes	Yes	All LWDS Name-routed destinations External destinations
Yes	Yes	No	All LWDS Name-routed destinations Override panel selected destinations

LWDS	Product Name	Default Routed	Destinations
Yes	No	Yes	All LWDS External destinations
Yes	No	No	All LWDS Override panel selected destinations
No	Yes	Yes	Name-routed destinations External destinations
No	Yes	No	Name-routed destinations Override panel selected destinations
No	No	Yes	External destinations
No	No	No	Override panel selected destinations

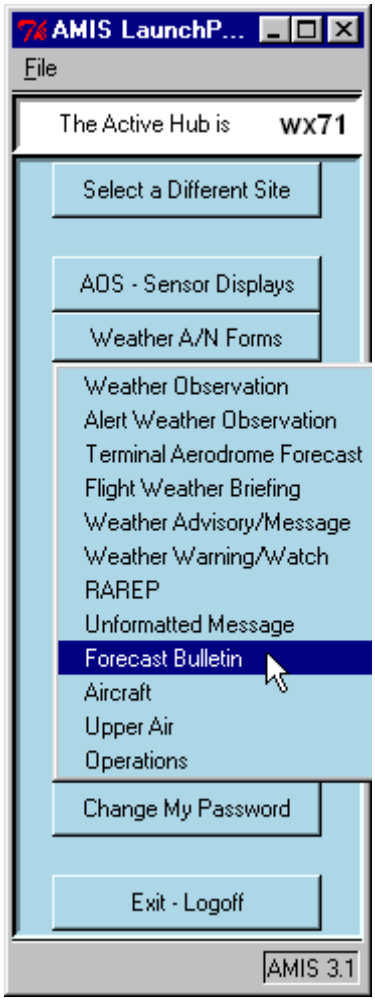
Forecast Bulletin

The Forecast Bulletin form is used to format and disseminate MANOP forecast bulletins locally or directly to other AMIS sites.

To launch the Forecast Bulletin form, do the following:

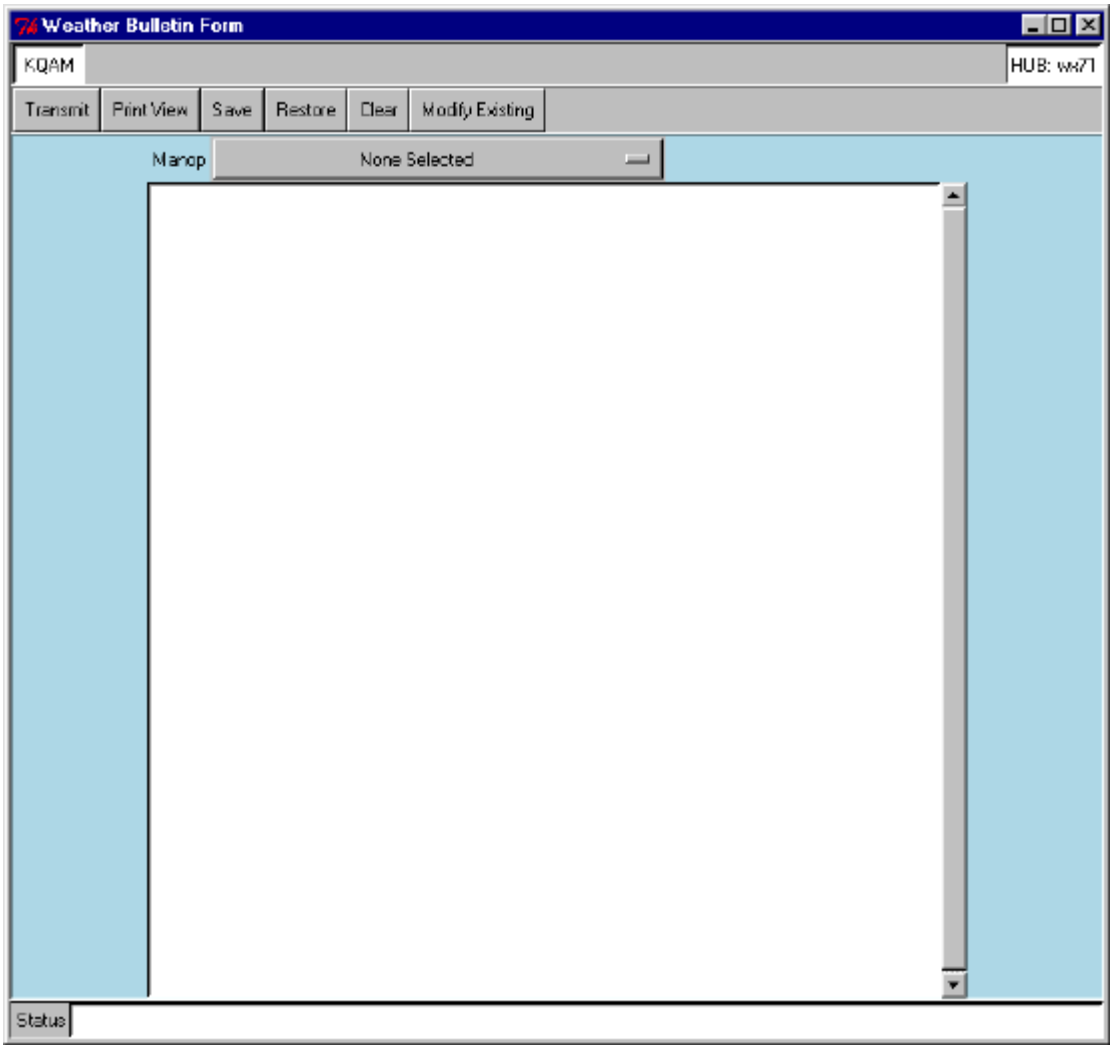
1 Select **Weather A/N Forms** > **Forecast Bulletin** from the AMIS LaunchPad (see Figure 3.38).

Figure 3.38 Launch of Forecast Bulletin



The Forecast Bulletin form appears (see Figure 3.39).

Figure 3.39 Forecast Bulletin Form



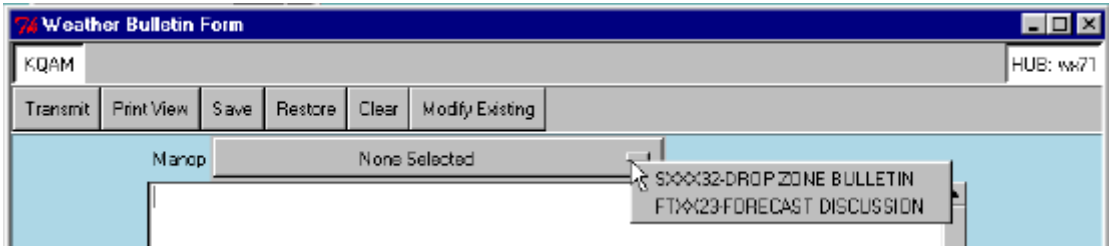
To complete the form, do the following:

1 Optionally, select a different ICAO by clicking on the button in the upper left corner of the form that displays the ICAO.

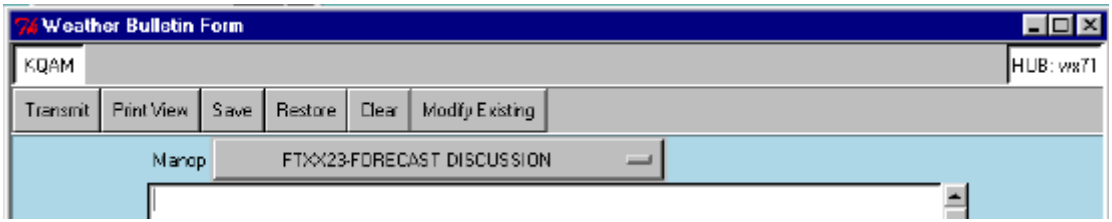
By default, your station's ICAO is selected.

2 At **Manop**, select the MANOP heading for the bulletin by selecting from the drop-down list of headers configured for your system.

*You can display this list by clicking on the **None Selected** button.*



3 The MANOP heading you selected will appear in place of **None Selected**.



4 In the text entry window, enter your message.

Upon attempting transmission, if the message exceeds 2000 characters you will be notified so that you can optionally modify the message. If you do not modify the message to be less than 2000 characters, it will still be transmitted but it will not be displayed at the FCFs.

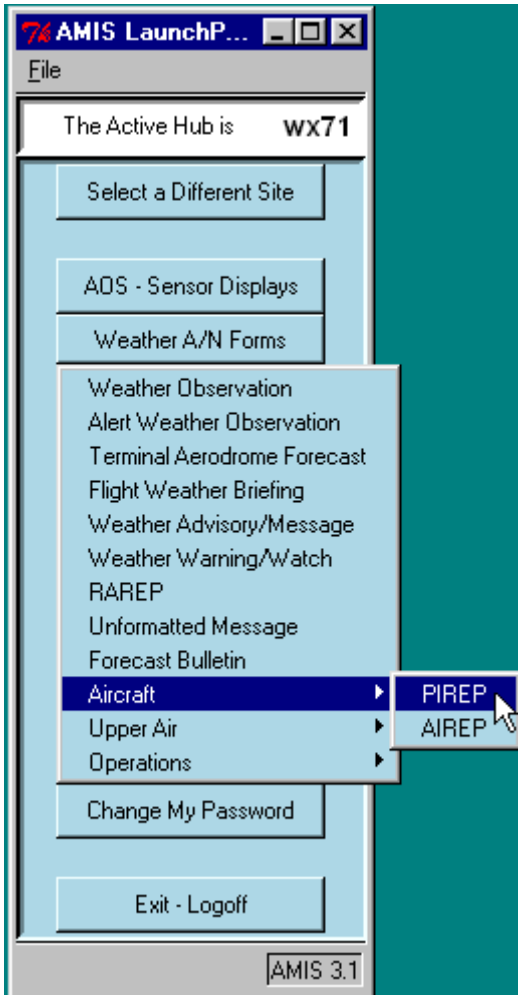
Pilot Report (PIREP)

The PIREP form is used by either the Forecaster or the Observer to generate and transmit a pilot report.

To launch the PIREP form, do the following:

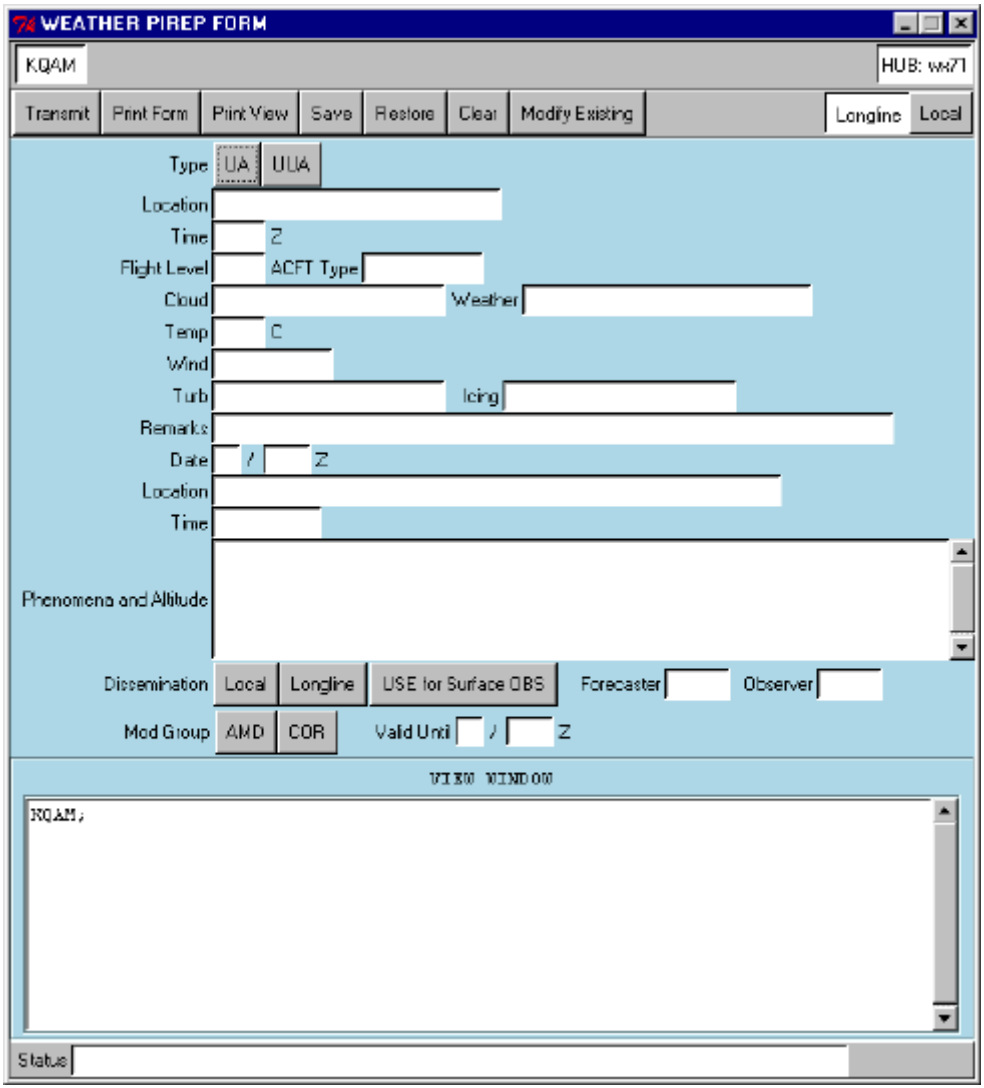
Select **Weather A/N Forms** > **Aircraft** > **PIREP** from the AMIS LaunchPad (see Figure 3.40).

Figure 3.40 Launch of PIREP Form



The PIREP Form appears (see Figure 3.41).

Figure 3.41 PIREP Form



To complete the form, do the following:

1 Optionally, select a different ICAO by clicking on the button in the upper left corner of the form that displays the ICAO.

By default, your station's ICAO is selected.

2 At **Type**, select the PIREP type by choosing one of **UA** or **UUA**.

3 At **Location**, enter the location of the PIREP. This field is 25 characters in length.

4 At **Time**, enter the time the report is created as a four-digit, fixed length UTC time (GGgg).

5 At **Flight Level**, enter flight level of aircraft in up to four characters.

6 At **ACFT Type**, enter the aircraft type in up to ten characters.

7 At **Cloud**, enter base, amount and tops of reported cloud layers in up to 50 characters.

8 At **Weather**, enter weather reported in up to 25 characters.

9 At **Temp**, enter reported temperature in degrees C in up to three digits.

10 At **Wind**, enter reported flight level wind in up to 20 characters.

11 At **Turb**, enter reported turbulence intensity and type in up to 60 characters.

12 At **Icing**, enter reported icing intensity and type in up to 60 characters.

13 At **Remarks**, enter appropriate remarks in up to 80 characters.

14 At **Date**, enter date/time in up to six characters (/ supplied)

15 At **Location**, enter detailed location in up to 50 characters.

16 At **Time**, enter time range in up to nine characters.

17 At **Phenomena and Altitude**, enter a detailed description of reported phenomena and altitude.

18 At **Dissemination** select one, or both, of **Local** and **Longline**.

The form does not transmit based on the dissemination selection (Local, Longline, or both) you have made here. This selection is for the printed PIREP form, only, where these fields are standard.

19 Optionally, select **USE for Surface OBS**.

*Your selection **USE for Surface OBS** does not result in entries placed in any Surface Observations. This selection is for the printed PIREP form, only, where this field is standard.*

20 At **Forecaster**, enter your initials, as appropriate.

21 At **Observer**, enter your initials, as appropriate.

22 To denote an amended product, at **Mod Group**, select **AMD**.

23 To denote a corrected product, at **Mod Group**, select **COR**.

24 At **Valid Until**, enter date/time of end of valid report time (product will not display after this time).

An error message will display if this field is missing or incorrect upon transmit.

25 To view the local PIREP sent to the ATC, Flight Control Facilities and other local customers, select the **Local** button in the upper right portion of the form.

*The **VIEW WINDOW** formatting reflects local format.*

26 To view the PIREP as it will be sent longline, select the **Longline** button in the upper right portion of the form.

*The **VIEW WINDOW** formatting reflects longline format.*

Longline is the default view.

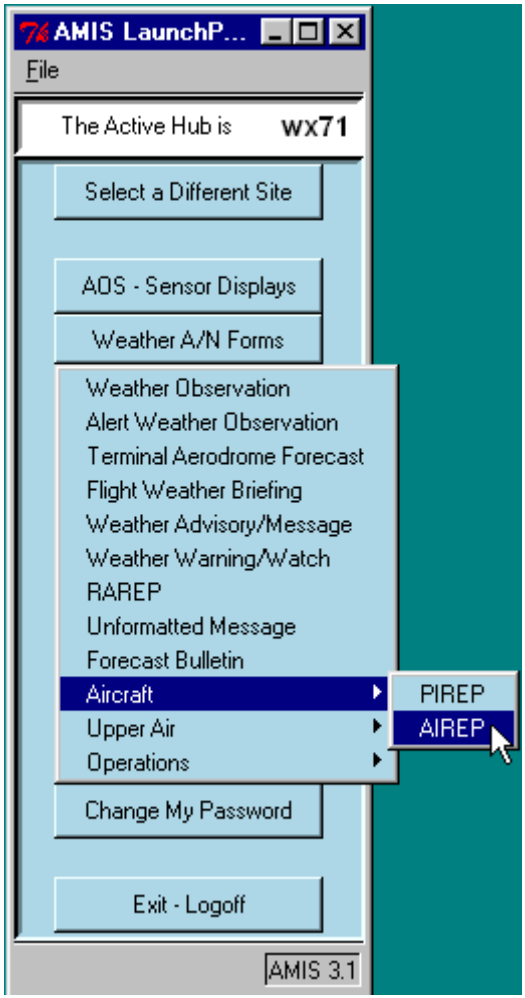
Aircraft Report (AIREP)

The AIREP form is used to generate and distribute aircraft reports.

To launch the AIREP form, do the following:

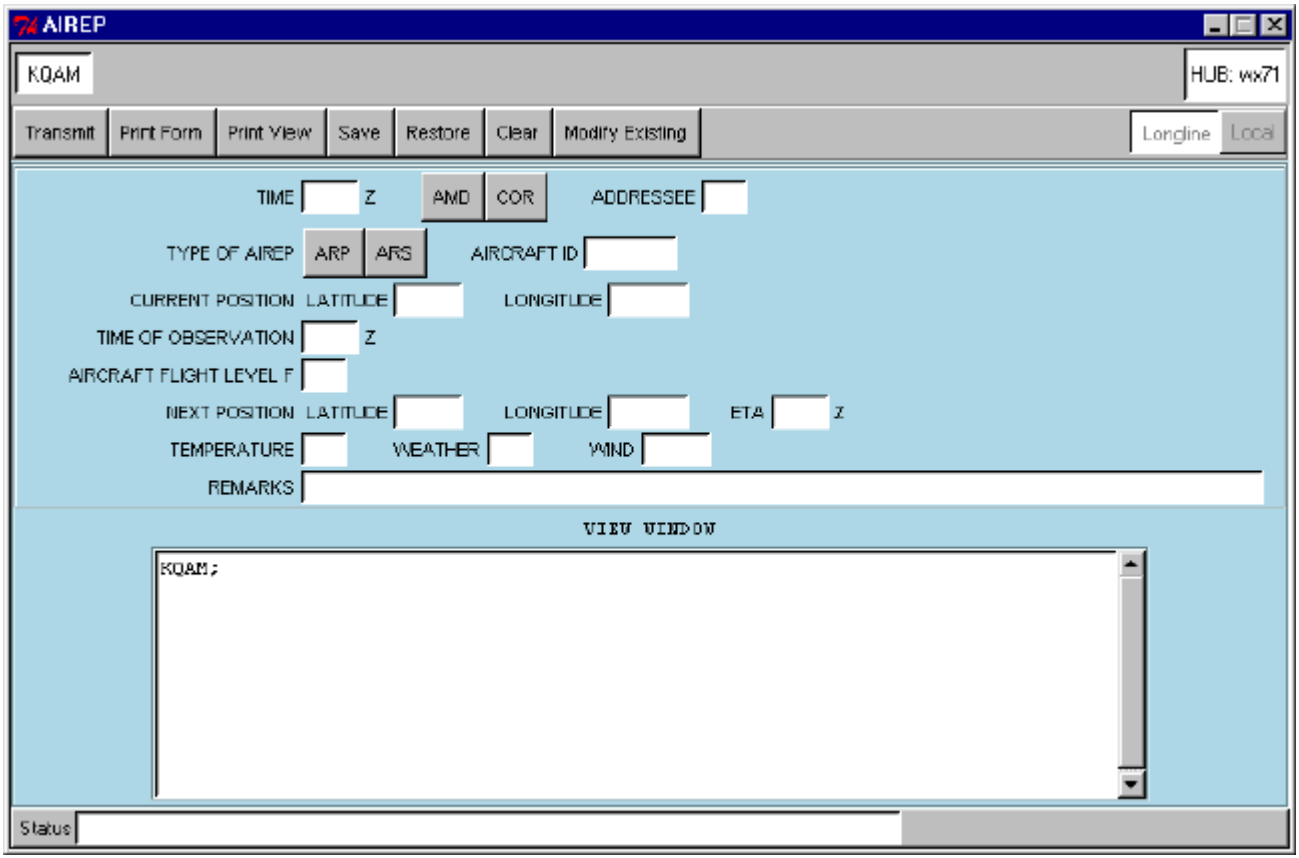
Select **Weather A/N Forms** > **Aircraft** > **AIREP** from the AMIS LaunchPad (see Figure 3.42).

Figure 3.42 AIREP Launch



The AIREP form appears (see Figure 3.43).

Figure 3.43 AIREP Form



To complete this form, do the following:

1 Optionally, select a different ICAO by clicking on the button in the upper left corner of the form that displays the ICAO. By default, your station's ICAO is selected.

2 At **TIME**, enter the UTC time in four digits, HHmm.

3 Select one of **AMD** (amended) or **COR** (corrected) for inclusion in the report.

4 At **ADDRESSEE**, enter the three character collective call sign (for example, AC2).

5 At **TYPE OF AIREP**, select one of **ARP** or **ARS**.

6 At **AIRCRAFT ID**, enter the aircraft identification (variable length, up to seven characters).

7 At **CURRENT POSITION LATITUDE**, enter the latitude, in degrees and minutes (five characters LLLLN or S).

8 At **CURRENT POSITION LONGITUDE**, enter the longitude in degrees and minutes (six characters LLLLLW or E).

9 At **TIME OF OBSERVATION**, enter the time the observation was taken.

10 At **AIRCRAFT FLIGHT LEVEL**, enter flight level in three digits (hundreds of feet MSL).

11 At **NEXT POSITION LATITUDE**, enter the latitude, in degrees and minutes (five characters LLLLN or S).

12 At **NEXT POSITION LONGITUDE**, enter the longitude in degrees and minutes (six characters LLLLLW or E).

13 At **ETA**, enter the estimated time of arrival in four digits.

14 At **TEMPERATURE**, enter the temperature in degrees C using three characters.

15 At **WEATHER**, enter up to three characters encoded for hazards, weather, and flight conditions.

16 At **WIND**, enter the flight level wind in five characters (format ddfff in tens of degrees and knots).

17 At **REMARKS**, enter up to 80 characters of supplementary information in plain text format.

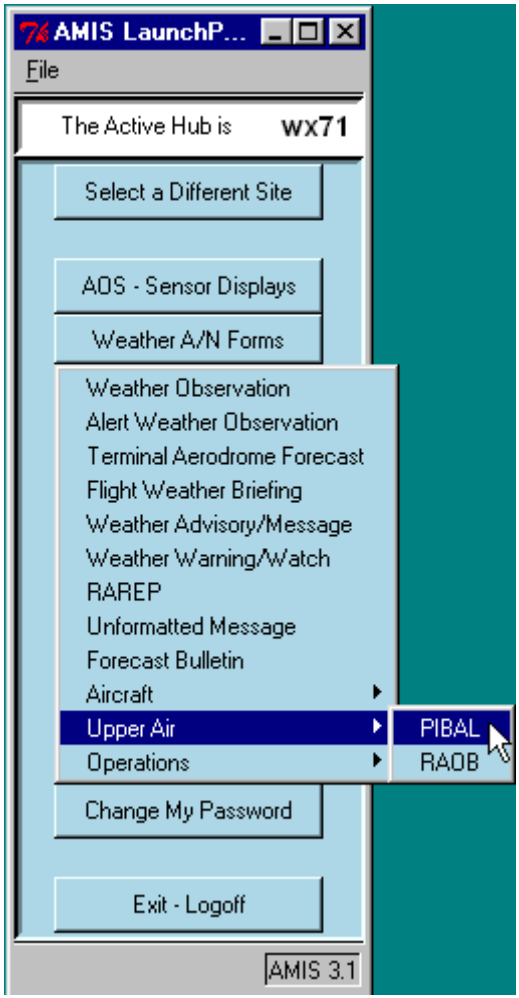
Pilot Balloon (PIBAL) Report

The PIBAL Report form is used to encode and transmit a Pilot Balloon (PIBAL) Report.

To launch the PIBAL form, do the following:

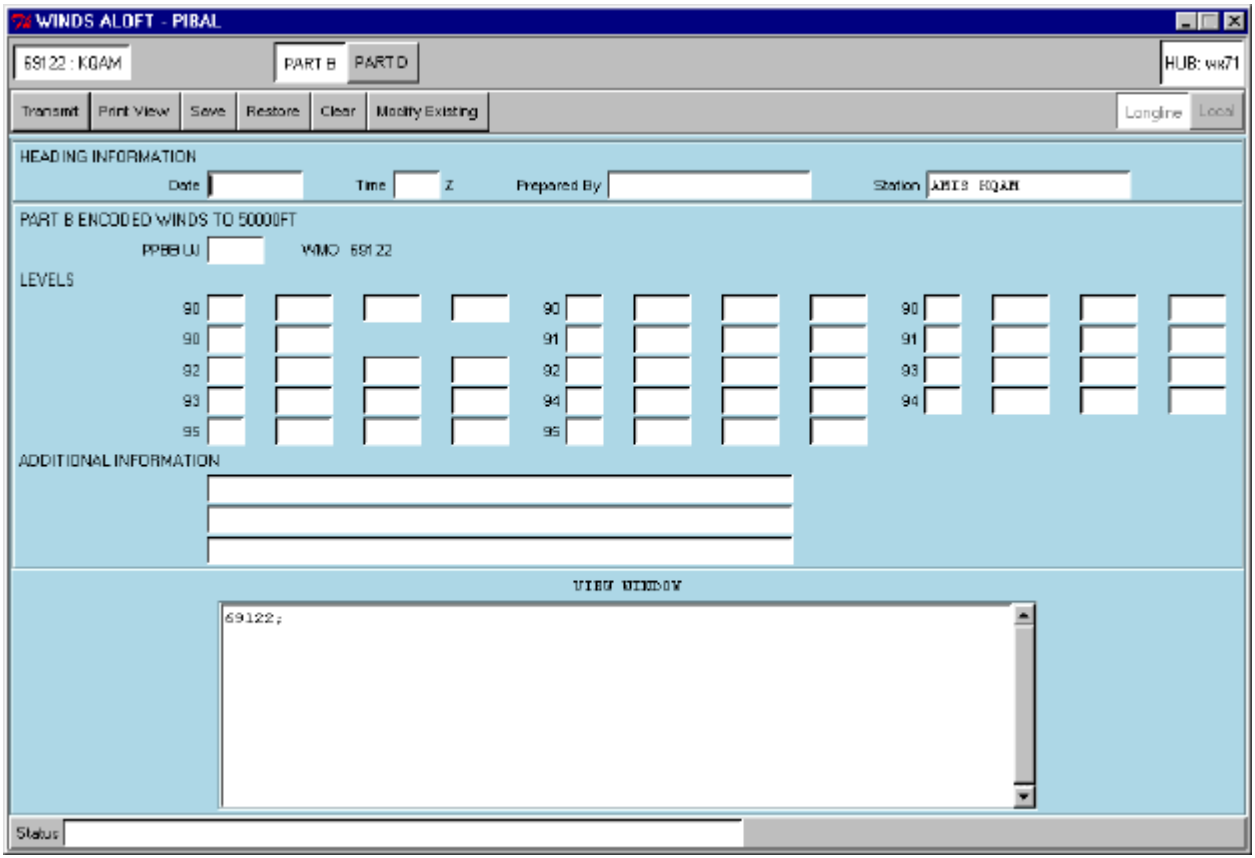
Select **Weather A/N Forms > Upper Air> PIBAL** from the AMIS LaunchPad (see Figure 3.44).

Figure 3.44 Launch of PIBAL Form



The PIBAL form appears (see Figure 3.45).

Figure 3.45 PIBAL Form



PART B of the PIBAL permits the entry of encoded wind direction and speed data from the surface to 50000 feet. The identification code of 9 and the thousands place of the height in feet are provided by the form. This means you need enter only the code for the altitude of each level and the wind direction and speed for each of the altitudes reported. There are ten fields provided for winds from the surface to 9000 feet.

PART D of the PIBAL permits entry of encoded wind direction and speed data above 50000 feet.

To complete this form, do the following:

1 Optionally, select a different ICAO by clicking on the button in the upper left corner of the form that displays the ICAO. By default, your station's ICAO is selected. The ICAO is preceded by the WMO number of the station.

2 At **Date**, enter the date of the observation in a nine-character code of format DD-MMM-YY (for example, 09-AUG-00).

3 At **Time**, enter the UTC time in hours and minutes of the PIBAL observation.

4 At **Prepared By**, as the person preparing the report, enter your name.

5 At **PPBB UJ**, enter the day and hour of the report plus a one digit code for wind equipment used to obtain the data (DDHHa).

6 Enter altitude in the altitude descriptor as a three-digit code.

7 There are three wind direction and speed fields provided for each altitude descriptor. Enter wind speed and direction in tens of degrees and knots in a five-character field (ddfff).

8 At **ADDITIONAL INFORMATION**, enter any explanatory information. The field is three 59-character lines in length.

To complete PART D, do the following:

1 Select the **PART D** button at the top of the display.

2 At **PPDD UJ**, enter the day and hour of the report plus a one digit code for wind equipment used to obtain the data (DDHHa).

3 Encode the winds using the same five-character (ddfff) format.

4 At **ADDITIONAL INFORMATION**, enter any explanatory information. The field is three, 59-character lines in length.

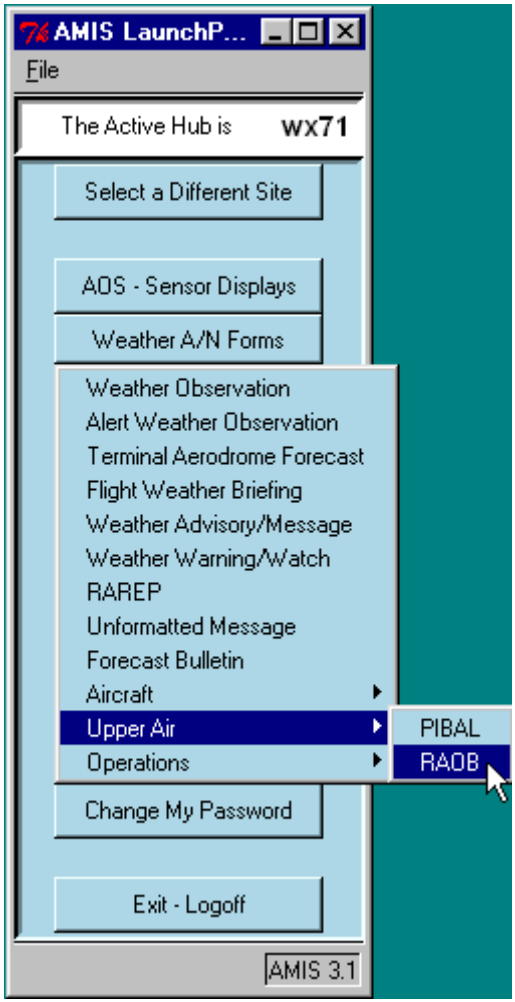
Rawindsonde Observation (RAOB)

The RAOB form is used to encode and distribute a Rawindsonde Observation.

To launch the AIREP form, do the following:

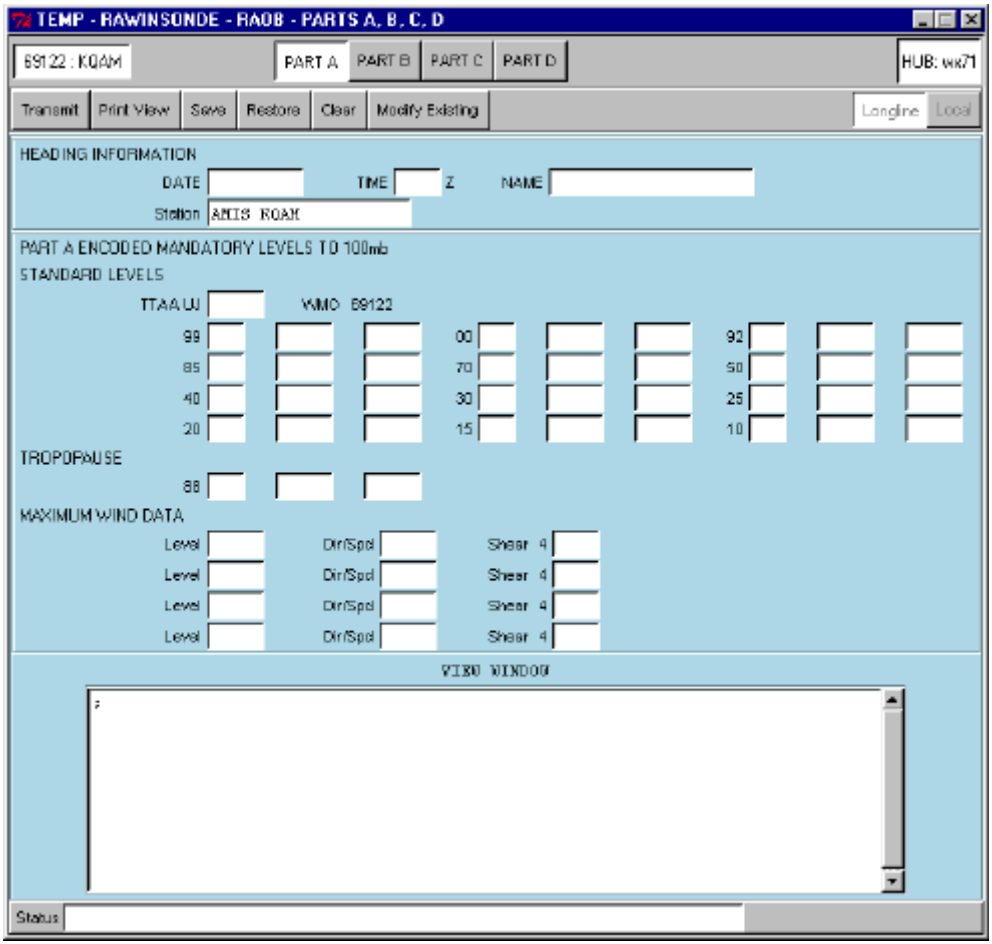
Select **Weather A/N Forms > Upper Air> RAOB** from the AMIS LaunchPad (see Figure 3.46).

Figure 3.46 RAOB Launch



The RAOB form appears (see Figure 3.47).

Figure 3.47 RAOB Form, Part A



To complete this form, do the following:

1 Optionally, select a different ICAO by clicking on the button in the upper left corner of the form that displays the ICAO. By default, your station's ICAO is selected. The ICAO is preceded by the WMO number of the station.

2 At **DATE**, enter the date as DD MMM YY (for example, 10 AUG 00).

3 At **TIME**, enter the UTC time in hours and minutes.

4 At **NAME**, as the person completing the form, enter your name.

5 At **Station**, enter the station location.

To complete PART A, do the following:

1 At **TTAA UJ**, enter a code of the form YYGGI (see description below) for the day and hour of observation and an indicator of the last standard level where a wind value was recorded.

- YY is the day in two digits coded to indicate the units used to measure wind speed.
  - YY = 01 – 31 (day of month) if the wind speed is measured in meters per second.
  - YY = 51 –81 (50 plus day of month) if the wind speed is measured in knots.
- GG is the UTC hour of the observation.
- I is an indicator of the last standard level of reported winds. I is 0 – 9 or /.
  - I is the hundreds value digit of the standard level if the last wind occurs above 100mb (for example, 5 = 500mb).
  - I is the tens value digit if the last wind occurs at or below 100mb (for example, 7 = 70mb).
  - I is a solidus (/) if no winds are reported on standard isobaric surfaces.

2 Enter encoded parameters measured at Standard (Mandatory) Isobaric surfaces below 100mb (including winds at those surfaces below 50000 feet). Encoded parameters are height of the standard surface, temperature, dew point depression, and wind conditions at that surface. The code format is PPHHH TTXDD ddfff.

- PP is the code for the standard surface (for example, 50 = 500mb).

  When PP = 88 it designates the tropopause. If no tropopause is observed it is encoded 88999.
- HHH is the height of the pressure surface in decameters encoded to fit three digits (5700 meters = 570, 16100 meters = 610, etc.).
- TT is temperature in degrees Celsius.
- X is the encoded tenths of a degree for temperature where odd values indicate negative temperatures and even values indicate positive temperatures.
- DD is the dewpoint depression encoded as 00 – 50 for values 0.0 –5.0. For values 6 or greater, dewpoint depression is encoded as the actual dewpoint depression plus 50.
- ddfff is wind encoded in tens of degrees and knots.

  Missing or not observed information is replaced by solidi.

3 In addition, enter information in four fields to describe the height(s) of the maximum wind and the nature of the vector wind shear for 3000 feet above and below the level of maximum wind. The code format is XXPPP.

- XX is an indicator of where the maximum wind occurs in relation to the RAOB termination level.
  - XX = 77 indicates that the maximum wind occurred below the RAOB termination level.
  - XX = 66 indicates that the maximum wind occurred at the RAOB termination level.

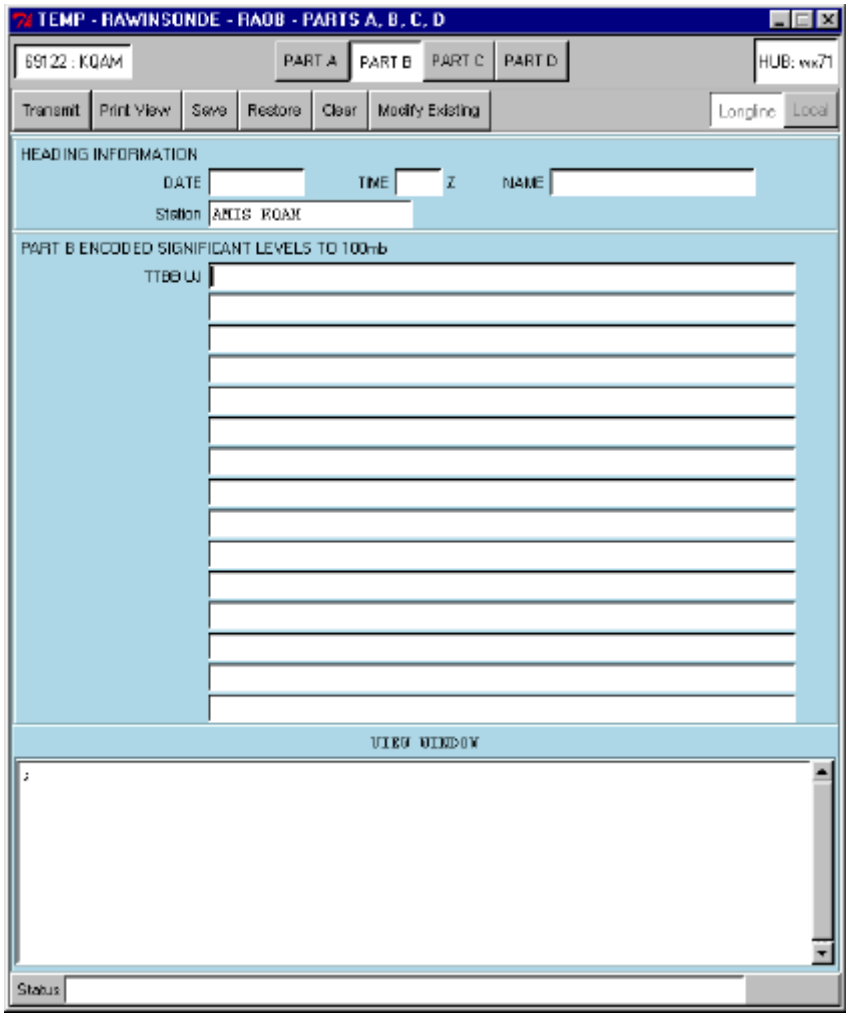
    This convention is used so that you can have an indication of possible higher maximum wind levels above the RAOB termination level.
- PPP is the height of the maximum wind in decameters in three digits (for example, 570 = 5700 meters, 610 = 16100 meters).

PART B is used to encode parameters at significant levels from the surface to 100mb. To complete PART B, do the following:

1 Select PART B button.

RAOB Form, PART B appears, see Figure 3.48.

Figure 3.48 ROAB Form, Part B



2 Enter the encoded parameters in up to 15 lines, each up to 59 characters in length.

This information is coded in five-character groups in the same format used in PART A.

Free text entry can be used to accommodate local and regional coding and separate correction, or Observation Delayed messages. That is, the code used in this section is as specified by your local and/or regional authorities.

PART C is used to encode parameters measured at Standard (Mandatory) Isobaric surfaces above 100 mb. To complete PART C, do the following:

1 Select PART C button.

RAOB Form, PART C appears, see Figure 3.49.

Figure 3.49 RAOB Form, Part C

TEMP - RAWINSONDE - RAOB - PARTS A, B, C, D

69122 : KQAM | PART A | PART B | PART C | PART D | HUB: wx71

Transmit | Print View | Save | Restore | Clear | Modify Existing | Longline | Local

HEADING INFORMATION

DATE | TIME | Z | NAME

Station AMIS KQAM

PART C ENCODED MANDATORY LEVELS ABOVE 100mb

STANDARD LEVELS

TTCC UJ | WMO 69122

70				50				20			
10				07				05			
03				02				01			

TROPOPAUSE

88 | | |

MAXIMUM WIND DATA

Level		Dir/Spd		Shear 4	
Level		Dir/Spd		Shear 4	
Level		Dir/Spd		Shear 4	
Level		Dir/Spd		Shear 4	

VIEW WINDOW

Status

2 Enter the encoded parameters.

Use the same code format you used in PART A.

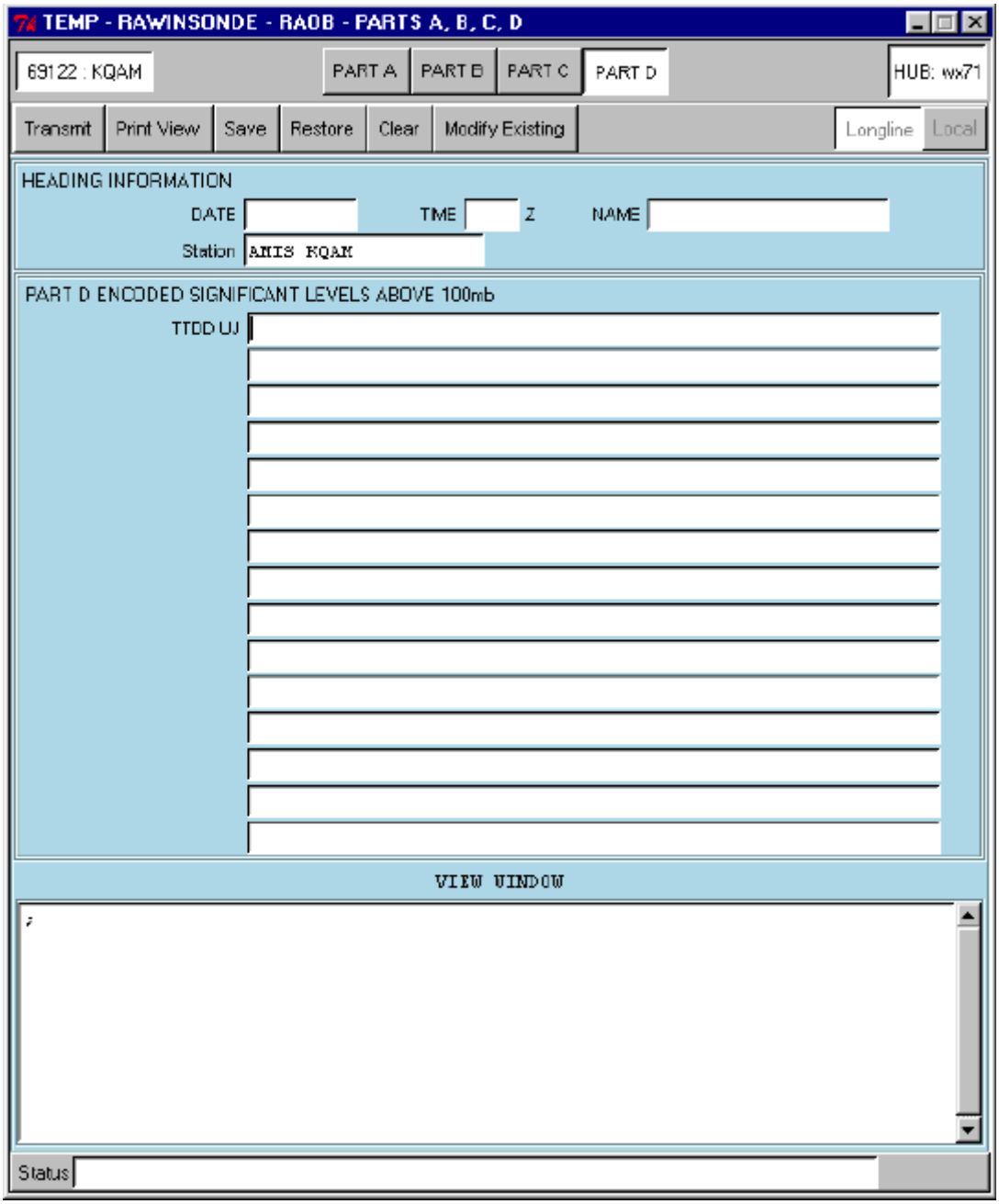
Note that dewpoint temperature depression will be missing more than not in this part.

PART D is used to encode parameters measured at significant isobaric levels above 100mb. To complete PART D, do the following:

1 Select PART D button.

RAOB Form, PART D appears, see Figure 3.50.

Figure 3.50 RAOB Form, Part D



2 Enter the encoded parameters.

Use the same code format you used in PART B.

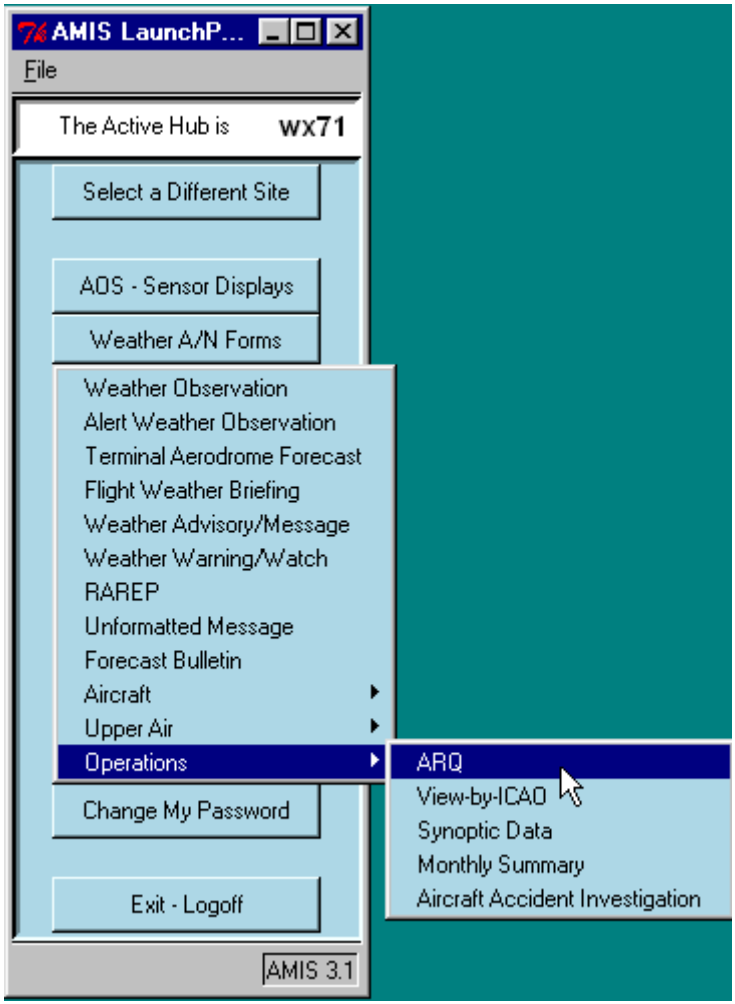
ARQ

The Weather ARQ form is used to request data from the AWN.

To launch the ARQ form, do the following:

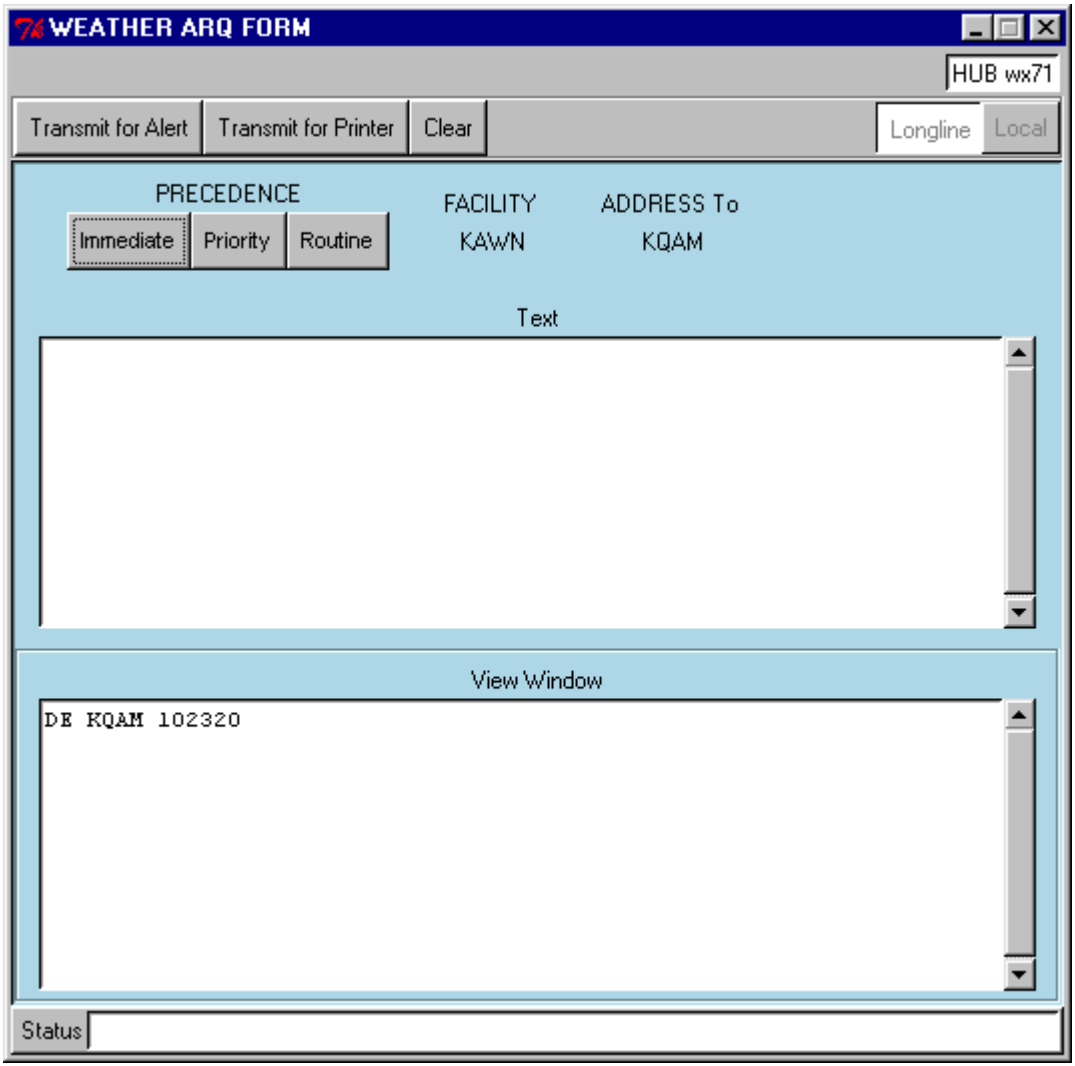
Select **Weather A/N Forms** > **Operations**> **ARQ** from the AMIS LaunchPad (see Figure 3.51).

Figure 3.51 Launch of Weather ARQ Form



The Weather ARQ form appears (see Figure 3.52).

Figure 3.52 Weather ARQ Form



To complete the ARQ form, do the following:

1 At **PRECEDENCE**, specify the precedence of the ARQ by selecting one of **Immediate**, **Priority**, or **Routine**.

2 In the **Text** window, enter your request.

3 To transmit and have an alert returned to you, select **Transmit for Alert** from the Action Menubar.

*If you choose **Transmit for Alert**, the returned information will alert to your AMIS launchpad upon receipt.*

To view the returned data, do one of the following:

- Use the View-by-Criteria (see “View-by-Criteria” on page 3-100) function using type AM.
- Select the product in system alerts, and right-select to access pop-up action menu. Then select **Print** or **View** from the menu to print or view the response (see “Alerts Application” on page 2-13).

4 To transmit and have an alert directed to your printer, select **Transmit for Printer** from the Action Menubar.

*If you select **Transmit for Printer** the returned information will be directed to your specified printer.*

5 To clear form entries, select **Clear** from the Action Menubar.

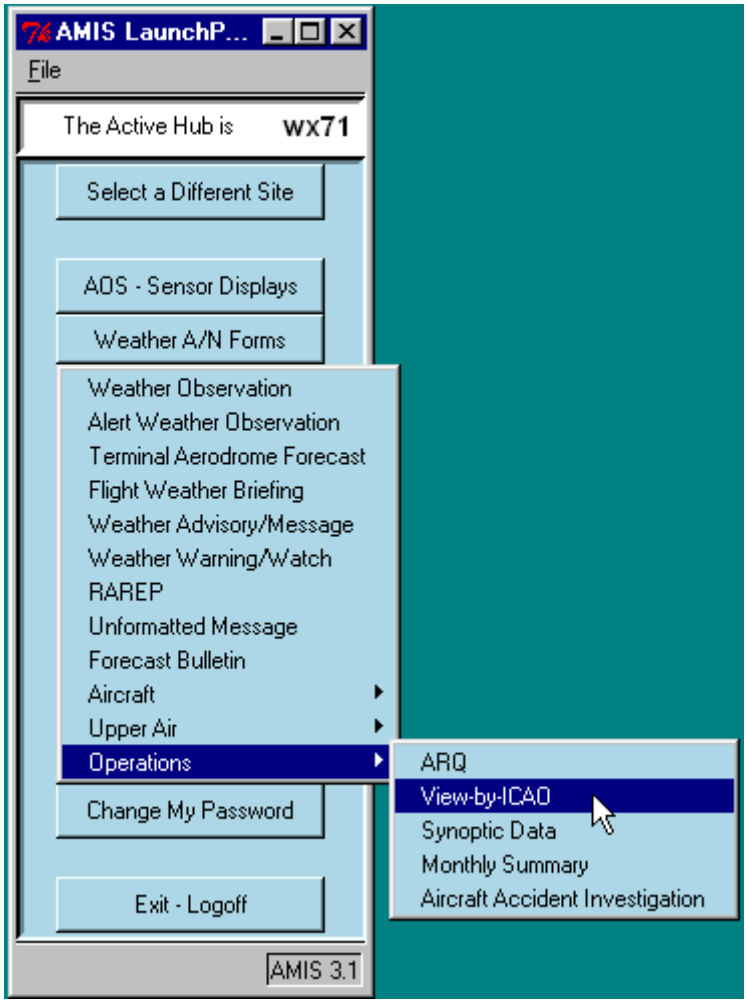
View-by-ICAO

View-by-ICAO is used to search the database for alphanumeric data. The search is based on data type, ICAO (or WMO number), and an optional file time range.

To launch the View-by-ICAO form, do the following:

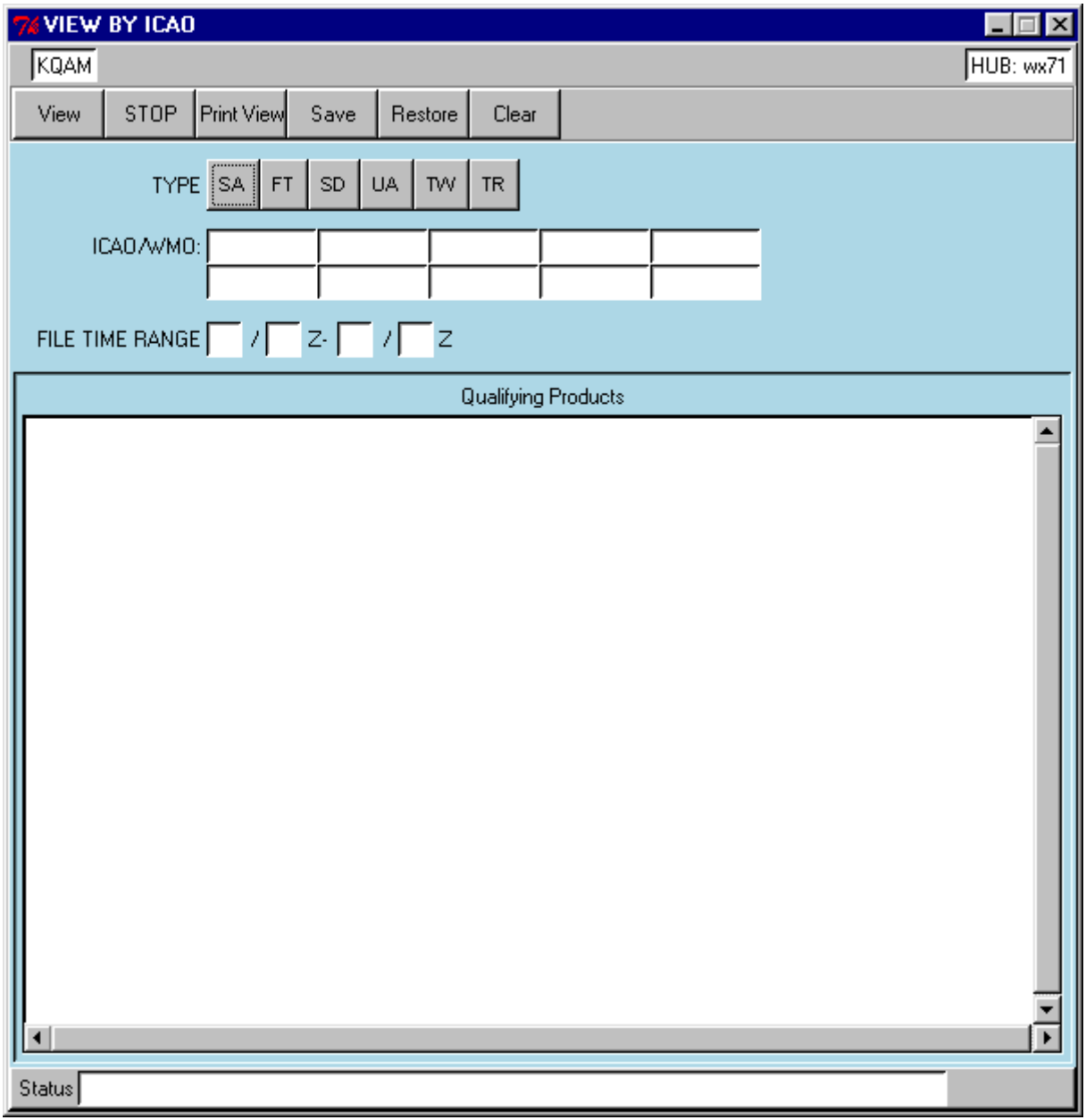
Select **Weather A/N Forms** > **Operations**> **View-by-ICAO** from the AMIS LaunchPad (see Figure 3.53).

Figure 3.53 Launch of View-by-ICAO



The View-by-ICAO form appears (see Figure 3.54).

Figure 3.54 View-by-ICAO Form



To specify your search criteria, do the following:

1 At **TYPE**, select one product type as follows: **SA**, **FT**, **SD**, **UA**, **TW**, or **TR**.

2 At **ICAO/WMO**, enter at least one ICAO or WMO number, up to ten.

3 Optionally, at **FILE TIME RANGE**, enter a file time range (20/12Z-20/18Z).

4 To display the products found as a result of your search, select **View** from the Action Menubar.

A view of the data meeting the filter requirements is displayed in the Qualifying Products window.

If products meeting the filter requirements are not found in the database, a preformatted ARQ form appears for request of the products from the AWN.

5 To abort a search, select **STOP** from the Action Menubar.

If you do not restrict the database search sufficiently, the search may take excessive time.

6 To print the contents of the **Qualifying Products** window, select **Print View** from the Action Menubar.

7 To save your search criteria for later use, select **Save** from the Action Menubar.

8 To restore your previously saved search criteria, select **Restore** from the Action Menubar.

9 To clear the form, select **Clear** from the Action Menubar.

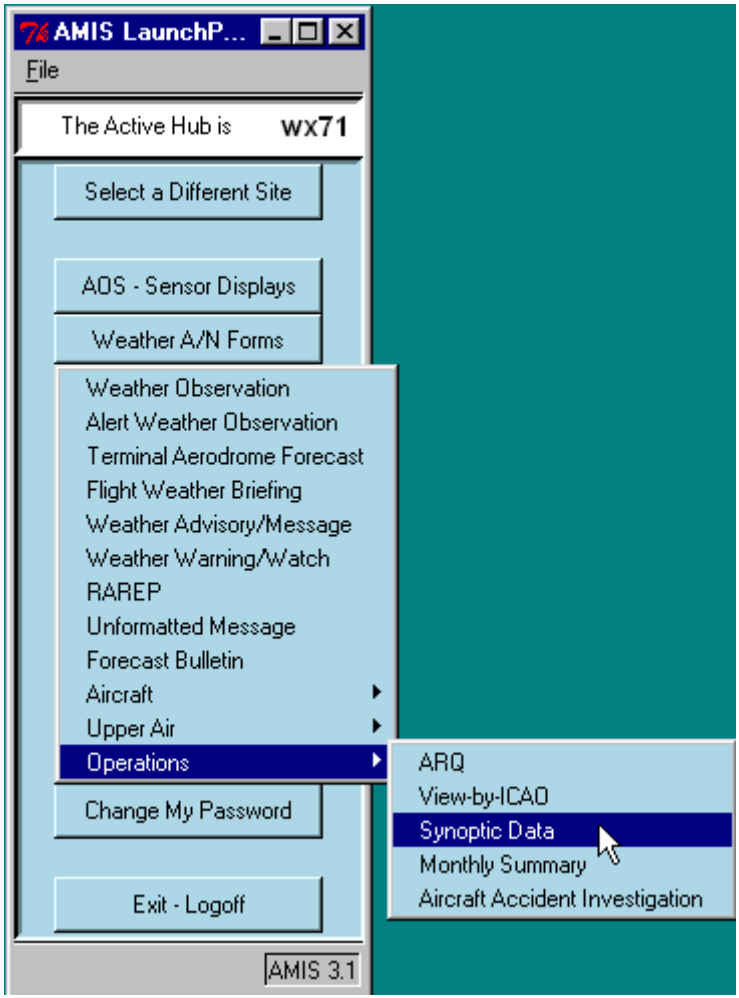
Synoptic Data

The Synoptic and Summary Data form is used to enter synoptic and summary data for the day's observation form.

To launch the Synoptic and Summary Data form, do the following:

Select **Weather A/N Forms** > **Operations**> **Synoptic Data** from the AMIS LaunchPad (seeFigure 3.55).

Figure 3.55 Launch of Synoptic and Summary Data Form



The Synoptic and Summary Data form appears (see Figure 3.56).

Figure 3.56 Synoptic and Summary Data, Page One

SYNOPTIC AND SUMMARY DATA

KQAM | HUB: wx71

Save Today | Reload Form | Print | Synoptic Data | Summary of the Day | Active Runway and Equipment Change

Heading Information

Station :	AMIS KQAM	Station Elevation :	600
Latitude :	3409N	Longitude :	11849W
Time Conversion :	8	Mag to True :	+10
Day Month Year :	10 Sep 00		

			No.	Precip Water Equiv		Snow Fall		Snow Depth	
Midnight to:	Z			IN	IN				
	Z		(1)	IN	IN	IN	IN	IN	IN
	Z		(2)	IN	IN	IN	IN	IN	IN
	Z		(3)	IN	IN	IN	IN	IN	IN
	Z		(4)	IN	IN	IN	IN	IN	IN
		Midnight LST		IN	IN	IN	IN	IN	IN

Status

*Note that all information in the **Heading Information** panel is in protected fields. Consequently, you can not modify this information. **DayMonthYear** is taken from the system clock.*

To complete the form, do the following:

1. Optionally, select a different ICAO by clicking on the button in the upper left corner of the form that displays the ICAO. By default, your station's ICAO is selected.
2. To enter synoptic data, select the **Synoptic Data** button.
3. At **Midnight to**, enter four digit UTC times.
4. Enter properly formatted precipitation amounts (for example, 1.12 inches of rain, .2 inches of snowfall, 3 inches in snow depth) for precipitation measurements.

5 To view the AMIS-derived summary of the day data, or to enter override values, do the following:

- Select **Summary of the Day**.

  The Synoptic and Summary Data form, page two appears (see Figure 3.57).

Figure 3.57 Synoptic and Summary Data Form, Page Two

SYNOPTIC AND SUMMARY DATA

KQAM | HUB: wx71

Save Today | Reload Form | Print | Synoptic Data | Summary of the Day | Active Runway and Equipment Change

Heading Information

Station :	AMIS KQAM	Station Elevation :	600
Latitude :	3409N	Longitude :	11849W
Time Conversion :	8	Mag to True :	+10
Day Month Year :	11 Sep 00		

	Override				AMIS Derived			
Precip		IN			0	IN		
Snow Fall		IN			0	IN		
Snow Depth		IN				IN		
Max Temp		C			M	C		
Min Temp		C			M	C		
Peak Winds Speed		KT			M	KT		
Direction		AT		Z		AT		Z
Direction		AT		Z		AT		Z

Status

*Under the **AMIS Derived** column, note the following fields totaled and computed by AMIS:*

- Precipitation totals that were entered in the Synoptic Data page.

- Maximum and minimum temperature from the day's transmitted observations.
- Peak winds for the day from the day's transmitted observations.

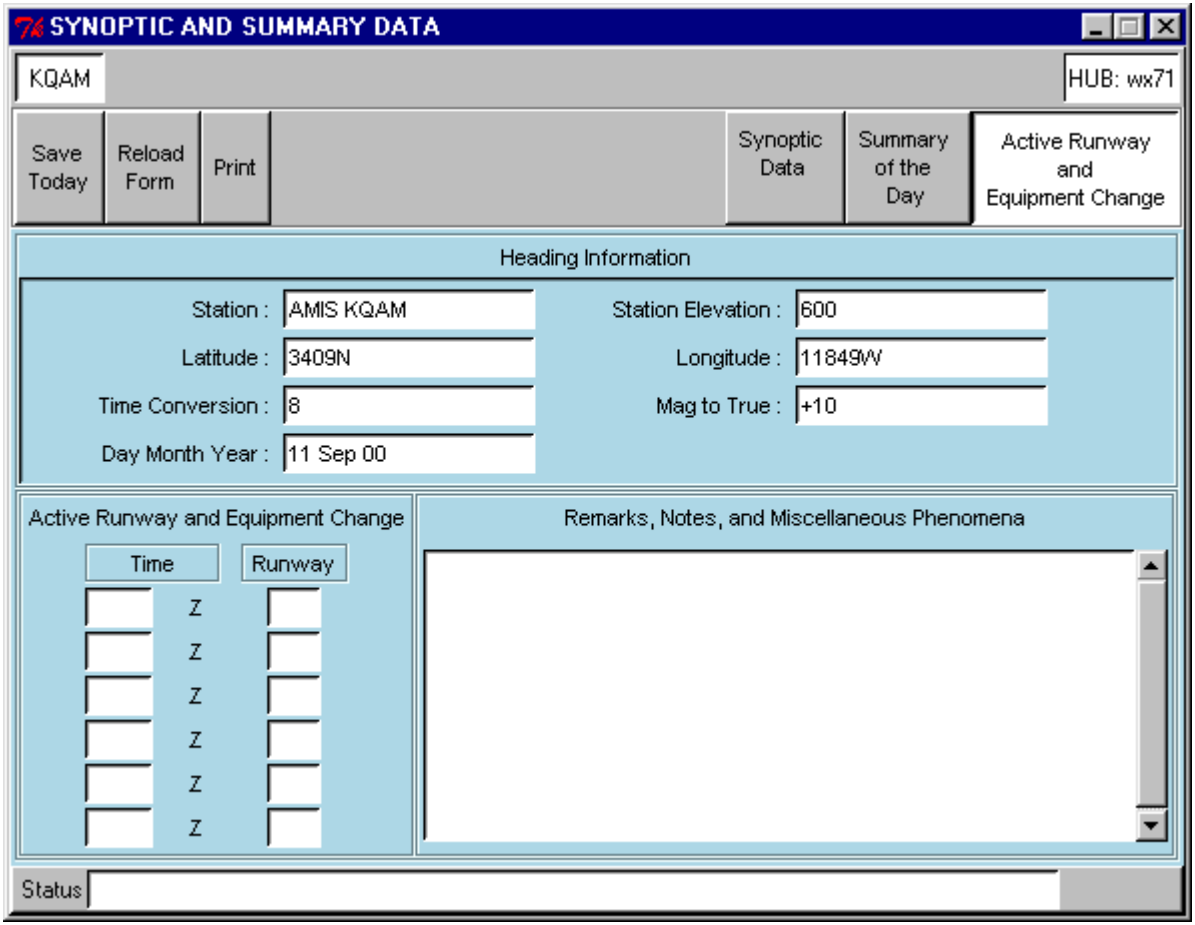
- To override any of the AMIS-computed values, enter the respective value under the **Override** column.

6 To enter runway and equipment changes, do the following:

- select **Active Runway and Equipment Changes**.

  The Synoptic and Summary Data form, page three appears (see Figure 3.58).

Figure 3.58 Synoptic Data and Summary Data, Page Three



- At **Time**, enter the four digit UTC time.
- At **Runway**, enter the identifier for the active runway.

- At **Remarks, Notes, and Miscellaneous Phenomena**, enter any information pertinent to station operations or any preceding observations.

7 To save the completed form data, select **Save Today** from the Action Menubar.

8 When you launch the form, the form loads the last sent data for the day (if applicable). Additionally, data can be reloaded at any time by selecting **Reload Form**.

9 To print AF Form 3813 containing all observations and synoptic and summary data for the day, do the following:

- Select **Print**. From the pull down menu, select the day for which a printed copy is desired. Options are **Today**, **Yesterday**, **2 days ago**, and **3 days ago**.

  The print preview display will pop-up.

  - To print the displayed 3813, select **Print**.

    The standard print dialog will display.

  - To save the form at the server for CD archiving, select **Save at HUB**.
  - To exit, select **Quit**.

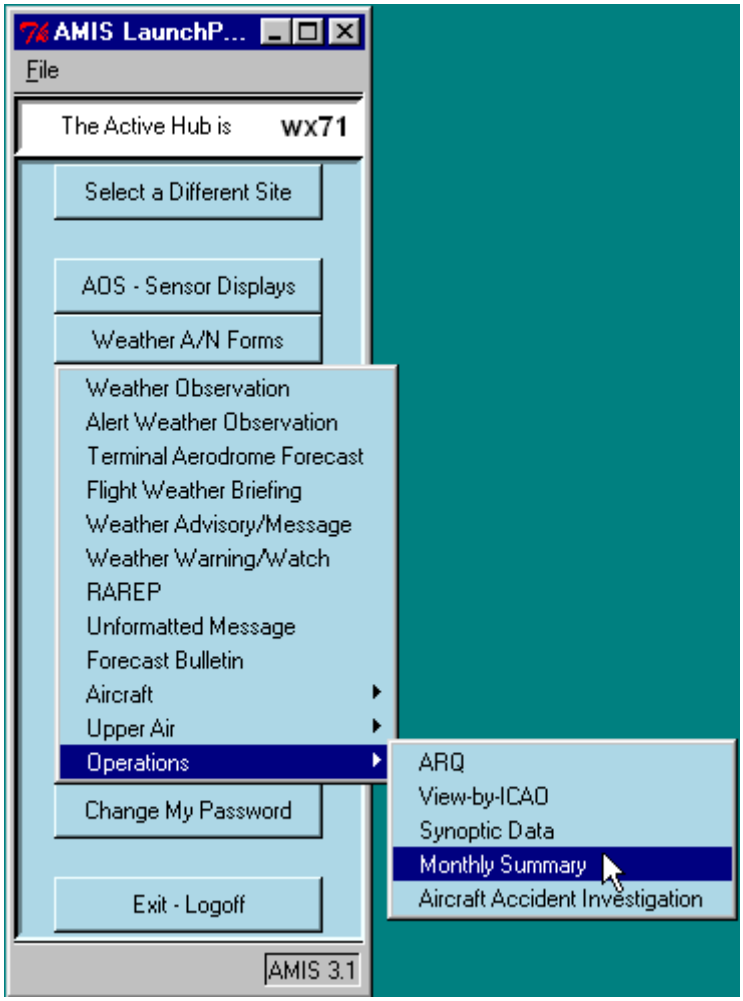
Monthly Summary Data

The Monthly Summary form is used to display monthly summary data for all available stations.

To launch the Monthly Summary form, do the following:

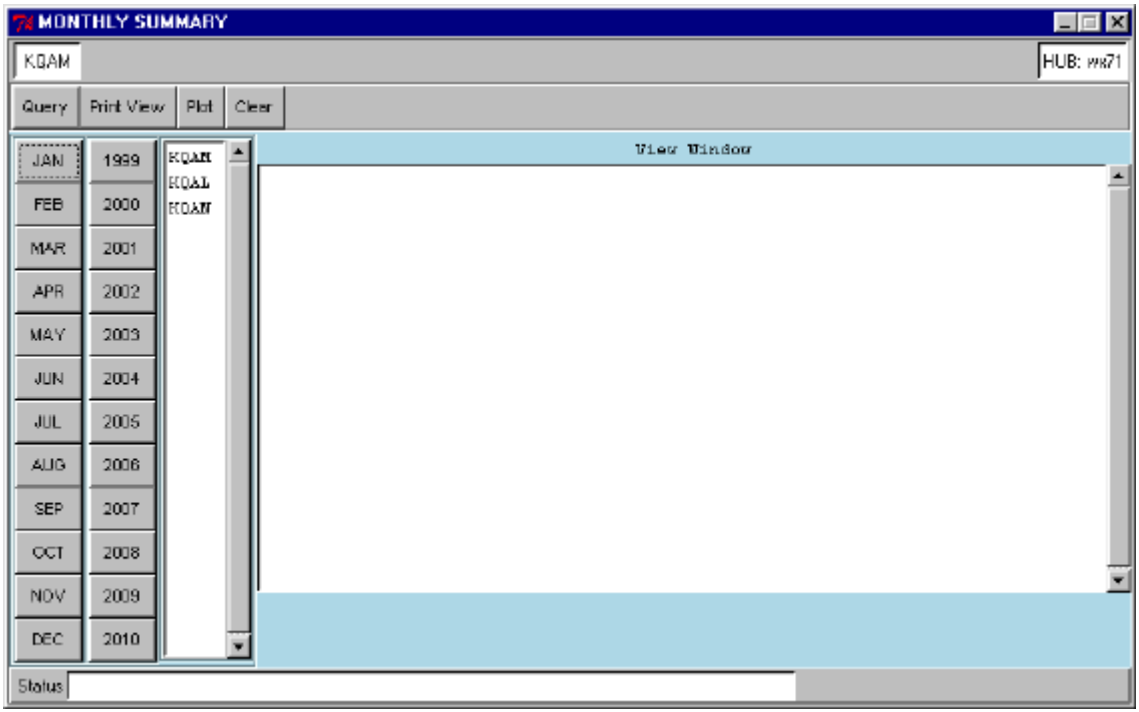
Select **Weather A/N Forms > Operations> Monthly Summary** from the AMIS LaunchPad (see Figure 3.59).

Figure 3.59 Launch of Monthly Summary Form



The Monthly Summary form appears (see Figure 3.60).

Figure 3.60 Monthly Summary Form



To set your query criteria, do the following:

1. From the 12 buttons (labeled with names of the months) extending vertically down the left side of the form, select one or more months for which you wish to see the summary data.
2. From the 12 buttons (labeled with years) extending vertically down the left side of the form, select one or more years for which you wish to see the summary data.
3. Similarly, select one or more station(s) for which you wish to see the summary data.
4. To generate the report, select **Query** from the Action Menubar.

   *The requested information, if available in the product database, will be displayed in the **View Window**.*

   *The designator **UNK**, meaning unknown, will display for information not available in the database.*
5. To save the data in the **View Window** to your client computer into an Excel spreadsheet, select **Plot** from the Action Menubar.

The data will be saved to `C:\Program Files\Amis\forms`*, where* `C` *is your hard drive designator.*

6 To print the information displayed in the **View Window**, select **Print View** from the Action Menubar.

7 To clear the form, select **Clear** from the Action Menubar.

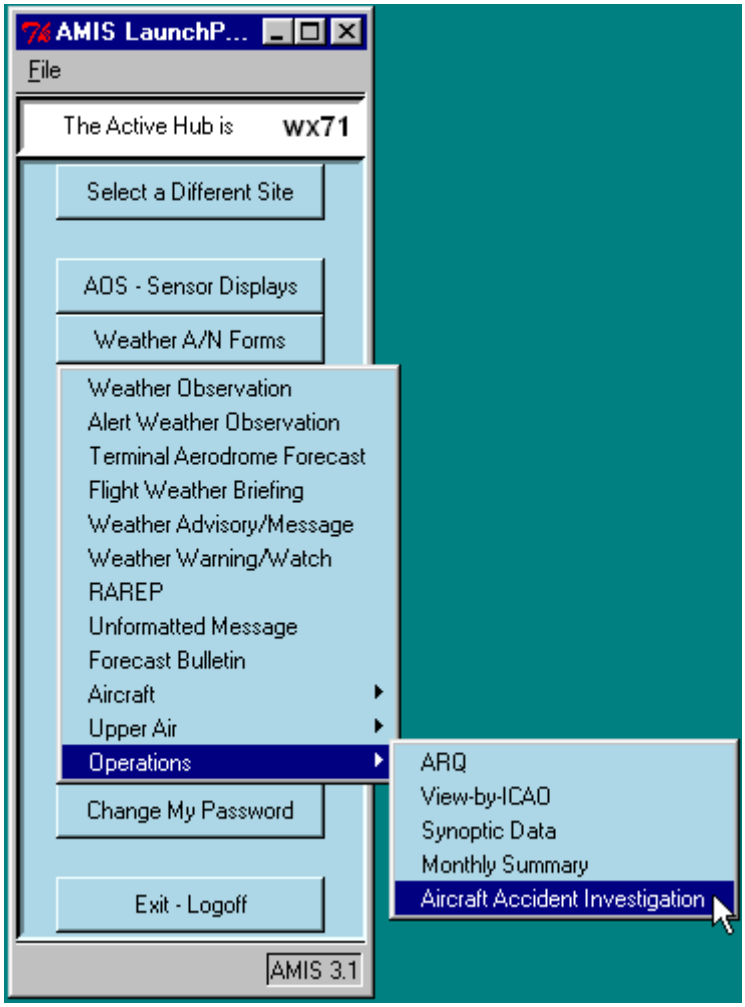
Aircraft Accident Investigation

The Aircraft Accident Investigation (AAI) form is used to create an archive file of items related to an aircraft incident.

To launch the Aircraft Accident Investigation form, do the following:

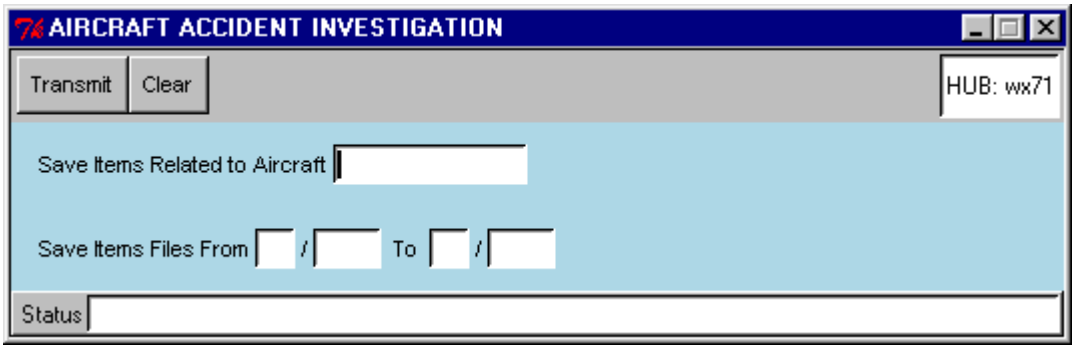
Select **Weather A/N Forms > Operations> Aircraft Accident Investigation** from the AMIS LaunchPad (see Figure 3.61).

Figure 3.61 Aircraft Accident Investigation Form Launch



The Aircraft Accident Investigation form appears (see Figure 3.62).

Figure 3.62 Aircraft Accident Investigation Form



To complete the form, do the following:

1 At **Save Items Related to Aircraft**, enter the aircraft identification.

To have items such as Flight Weather Briefings retrieved from the database for inclusion in the AAI archive file, you must enter the identical aircraft identification that was used in the transmittal of the products.

2 At **Save Items Files From**, enter the time period desired. The maximum allowable time period is 24 hours.

3 To initiate the archive, select **Transmit**.

The system saves the following to the AAI archive:

- *Local and external products.*
- *All local alphanumeric and graphics products.*
- *Most AFWA vector products.*
- *All AWN Observations, TAFs, Upper-air Observations, Watches, Warnings, and SIGMETs.*

4 To clear the form, select **Clear**.

The AAI archive can be written to a CD for retention, or for use in an actual aircraft accident investigation (see “AAI” on page 6-25).

Weather A/N View

Local Weather Data Set

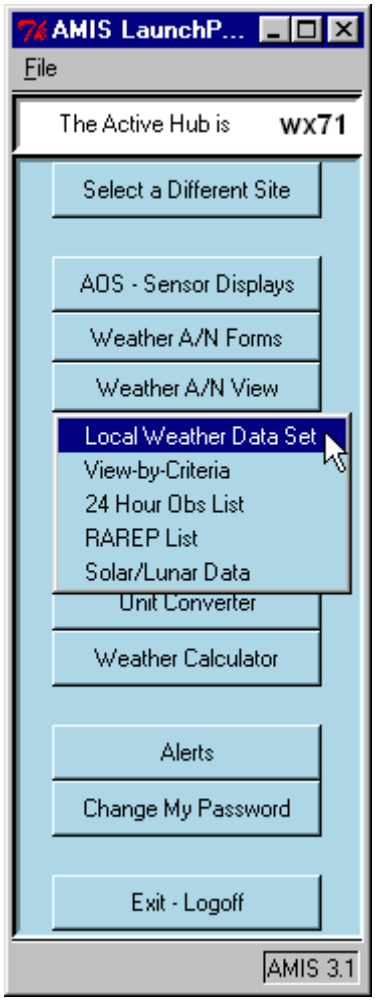
The Local Weather Data Set is used to view local alphanumeric data for the site. The top section of the display contains observation and forecast information (METAR, SPECI, LOCAL, AWO, and TAF) for the site displayed.

The bottom section of the display contains the active Weather Advisories/ Messages, Weather Watch/Warnings, PIREPs, AIRADs, and Unformatted Messages for the site.

To launch the Local Weather Data Set display, do the following:

Select **Weather A/N View > Local Weather Data Set** from the AMIS LaunchPad (see Figure 3.63).

Figure 3.63 Launch of Local Weather Data Set



The Local Weather Data Set display appears (see Figure 3.64).

Figure 3.64 Local Weather Data Set

LOCAL WEATHER DATA SET

KQAM

HUB: wx71

Print Top | Print Bottom | Update | Refresh Rate every 60 seconds | 48 seconds left

Observation,Forecast

```
Received  08/2326Z
KQAM LOCAL 2326
     WIND:  230100G150KT
     TEMP:  50F (10C)
     PA:    +23
     ALSTG: 30.55
ALERT WX OBS;


Received  08/2313Z
KQAM LOCAL 2313
     WIND:  230100G150KT
     TEMP:  50F (10C)
     PA:    +23
     ALSTG: 30.55
ALERT WX OBS;


Received  08/2258Z
KQAM LOCAL 2258
```

Other Weather Information

```
Received  06/1627Z
WEATHER WARNING 09-A01
VALID 061602Z (06/0902L) TO UFN
NATE


Received  09/1927Z
TEST WEATHER ADVISORY 09-003
VALID 09/1927Z (09/1227L) TO UFN (UFN)
WIND > 10
27/TSGT ADCOCK

Received  06/1500Z
HERE WEATHER ADVISORY 09-002
VALID 06/1500Z (06/0800L) TO UFN (UFN)
WIND > 10
00/TSGT ADCOCK

Received  05/2359Z
HERE WEATHER ADVISORY 09-A01
```

Status

To make use of the LWDS display, do the following:

1 Optionally, select a different ICAO by clicking on the button in the upper left corner of the form that displays the ICAO. By default, your station's ICAO is selected.

2 To force an update of the displayed information, select **Update** from the Action Menubar.

The panel is automatically updated each minute (default).

The window in the upper right of the display indicates how many seconds remain before the next automatic update.

3 To modify the automatic update rate while the panel is active, do the following:

- Select the button labeled **Refresh Rate every... seconds**.

A selection menu appears listing refresh rates from 1-5 minutes.

- Select one refresh rate from the selection list.

4 To print the information from the top panel, select **Print Top** from the Action Menubar.

5 To print the information from the bottom panel, select **Print Bottom** from the Action Menubar.

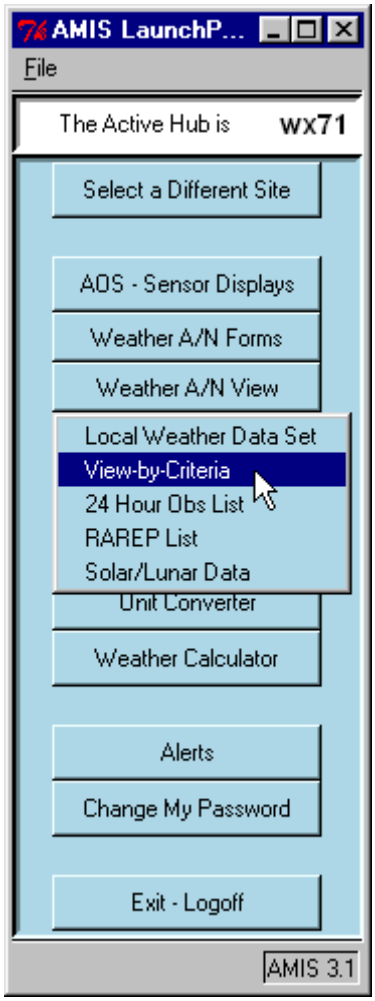
View-by-Criteria

The View-by-Criteria display is used to specify searches of the database for alphanumeric products of interest to your operation.

To launch the View-by-Criteria display, do the following:

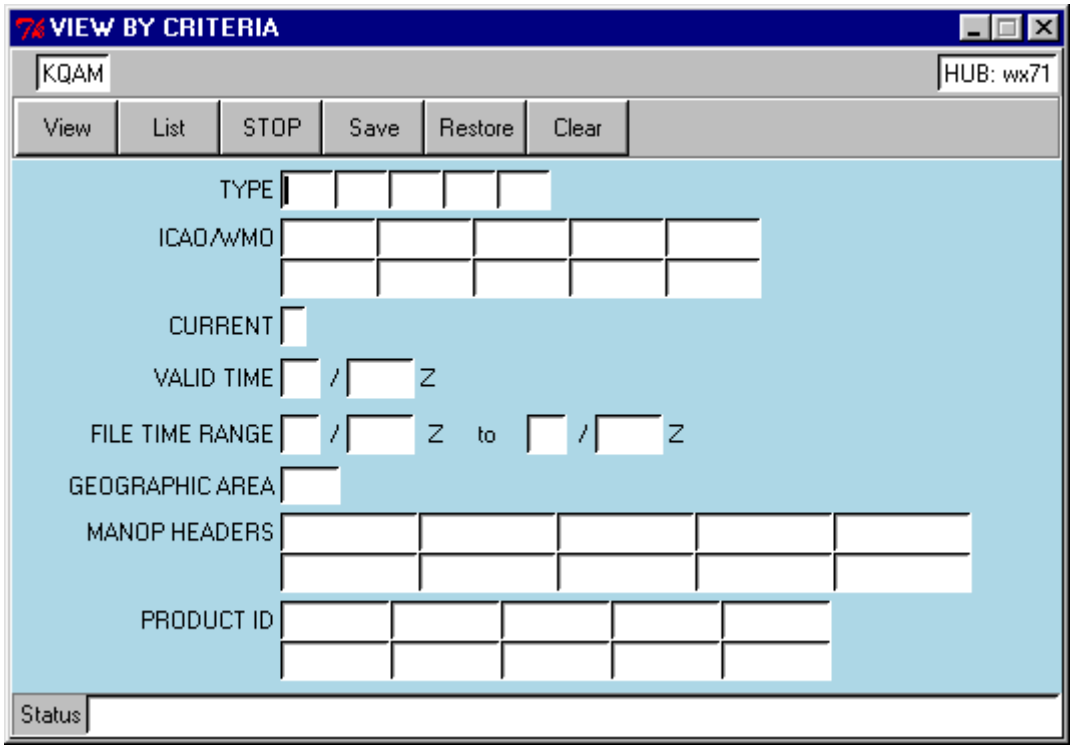
Select **Weather A/N View > View-by-Criteria** from the AMIS LaunchPad (see Figure 3.65).

Figure 3.65 Launch of View-by-Criteria



The View-by-Criteria display appears (see Figure 3.66).

Figure 3.66 View-by-Criteria Display



To enter search criteria, enter any combination of the following:

1 At **TYPE**, enter up to five product types (for example, **SA**, **SP**, **UA**, **FT**).

These TYPE fields are case-sensitive to allow query on local products.

2 At **ICAO/WMO**, enter up to ten ICAOs and/or WMO numbers.

3 At **CURRENT**, enter the time in currency form (one character, 0-7 indicating C, C-1, C-2, etc.).

4 At **VALID TIME**, enter an absolute valid time.

5 At **FILE TIME RANGE**, enter a starting and ending time to denote a time range.

6 At **GEOGRAPHIC AREA**, enter designator for the geographic area (for example, **US**).

7 At **MANOP HEADERS**, enter up to ten MANOP headers (for example, **SAUS64**).

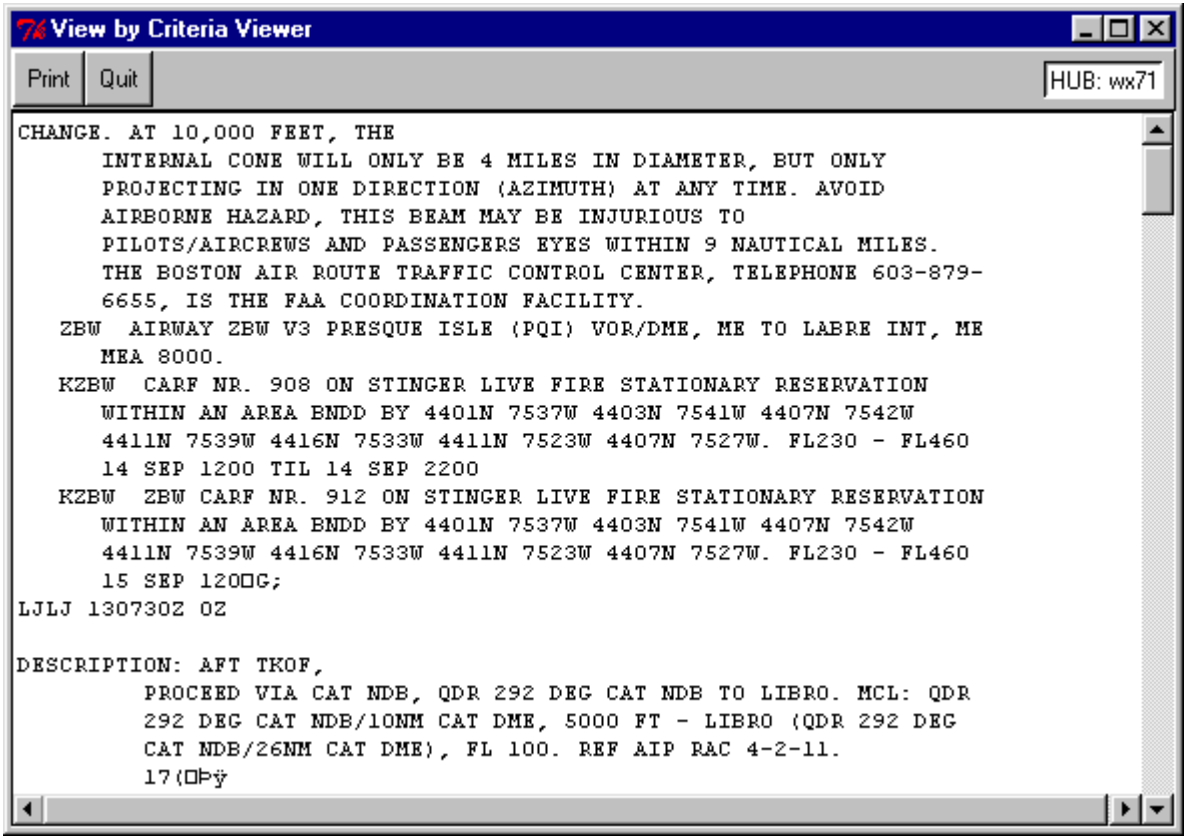
8 At **PRODUCT ID**, enter up to ten product IDs (for example, **AA0900**)

9 To view the list of products that meet your search criteria, do one of the following:

- Select **View** from the Action Menubar.

  The View-by-Criteria Viewer displays. The products meeting your search criteria are displayed.

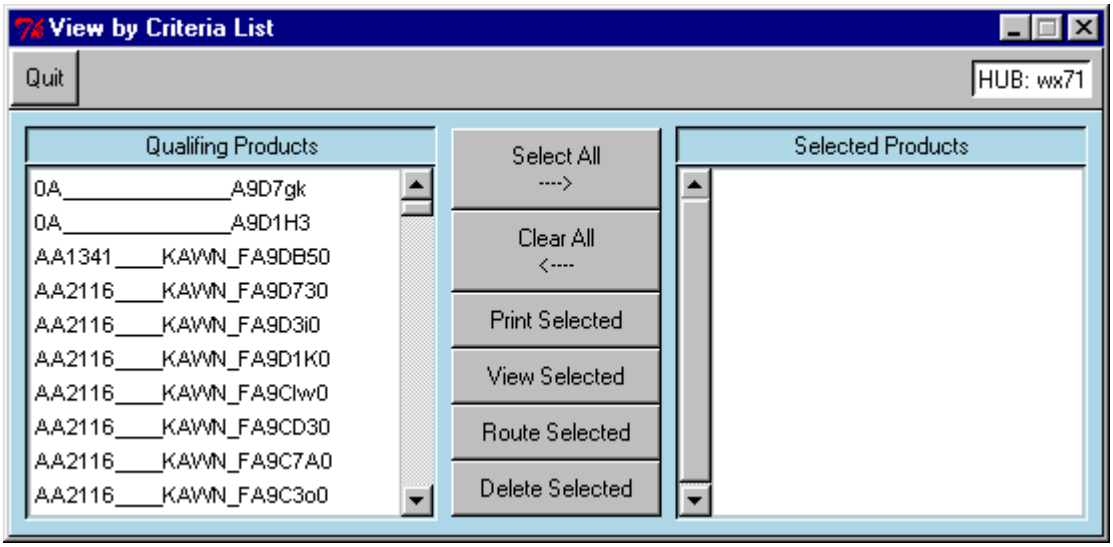
Figure 3.67 View-by-Criteria Viewer



- Select **List** from the Action Menubar.

  The View by Criteria List panel displays.

Figure 3.68 View-by-Criteria List



*Names of the products meeting your search criteria are listed in the **Qualified Products** window.*

*This **List** approach is recommended so that you can further select from among the qualifying products prior to viewing.*

- To perform an action on a qualifying product (for example, viewing or printing the product), select the product from the **Qualifying Products** window.

  *The product is moved to the **Selected Products** window.*

- To move all products from the **Qualifying Products** list to the **Selected Products** list, select **Select All**.
- To move all products from the **Selected Products** list back to the **Qualifying Products** list, select **Clear All**.
- To print product(s) in the **Selected Products** list, select **Print Selected**.
- To view product(s) in the **Selected Products** list, select **View Selected**.
- To route product(s) in the **Selected Products** list, select **Route Selected**.

  *Note that the **Route** option is available only when you have **A/N Forms** authorization associated with your user account.*

- To delete product(s) in the **Selected Products** list from the database, select **Delete Selected**.

  This action will not delete from the database products marked for Aircraft Accident Investigation (AAI) retention.

*Note that the **Delete** option is available only when you have **A/N Forms** authorization associated with your user account.*

- To stop a search in progress, select **STOP**.

  The fields provided are used to filter (restrict) the search so that only those data items of interest are retrieved. Searches insufficiently restricted can result in excessive delays while the system attempts to list (or display a view) of all qualifying alphanumeric products in the database.

10 To save your search criteria for facilitating subsequent database searches for the same products, select **Save** from the Action Menubar.

11 To conduct the same (or similar) search, launch this form and select **Restore** from the Action Menubar.

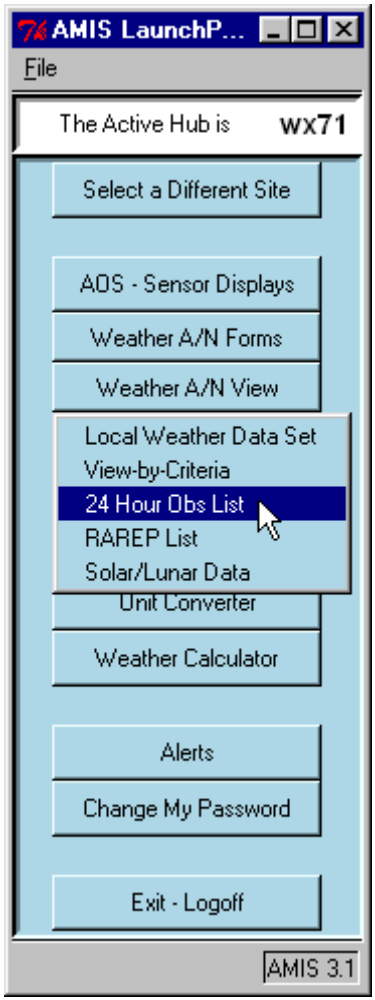
24-Hour Observation List

The 24-Hour Observation List is used to display the last 24 hours of observations (METAR, SPECI, LOCAL, and RAREPs).

To launch the 24-Hour Observation List, do the following:

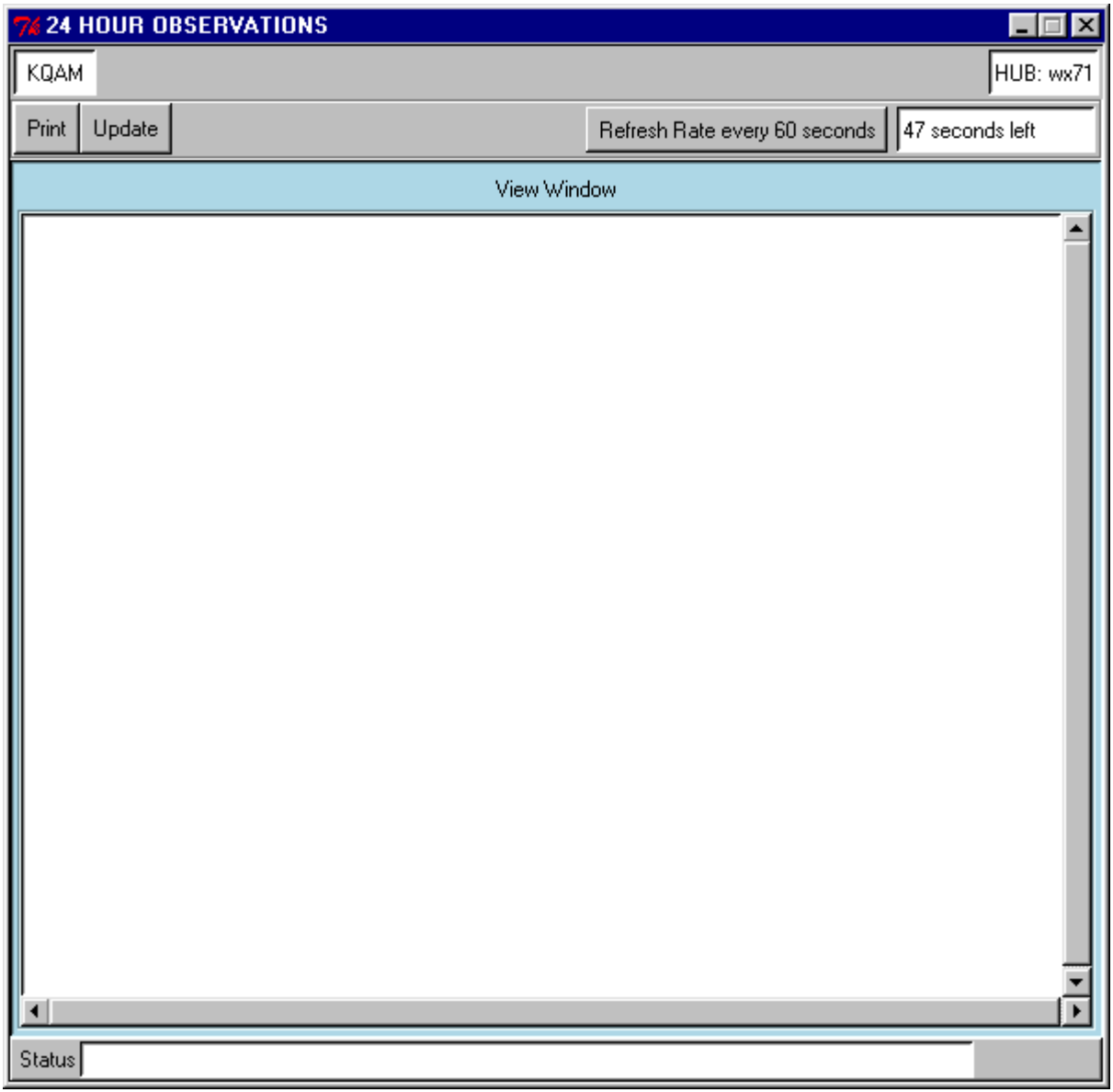
Select **Weather A/N View > 24 Hour Obs List** from the AMIS LaunchPad (see Figure 3.69).

Figure 3.69 Launch of 24-Hour Observation List



The 24-Hour Observation List appears (see Figure 3.70).

Figure 3.70 24-Hour Observations List



To make use of this display, do the following:

1 Optionally, select a different ICAO by clicking on the button in the upper left corner of the form that displays the ICAO. By default, your station's ICAO is selected.

2 To force an update of the displayed information, select **Update** from the Action Menubar.

The panel is automatically updated each minute (default).

The window in the upper right of the display indicates how many seconds remain before the next automatic update.

3 To modify the automatic refresh rate while the panel is active, do the following:

- Select the button labeled **Refresh Rate every... seconds**.

  A selection menu appears listing refresh rates from 1-5 minutes.

- Select one refresh rate from the selection list.

  *The **View Window** displays a copy of the transmitted products, and the comeback copy of the products from the AWN.*

  When the GMT day ends, you will see a line across the viewing area stating that observations below the line are for the previous GMT day.

4 To print the information in the **View Window**, select **Print** from the Action Menubar.

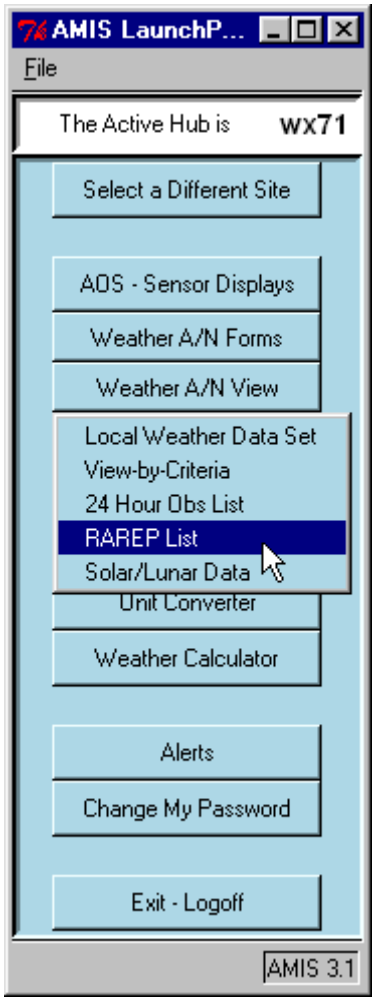
Radar Report (RAREP) List

The RAREP List is used to display the last 24 hours of observations (METAR, SPECI, LOCAL, and RAREPs).

To launch the RAREP List, do the following:

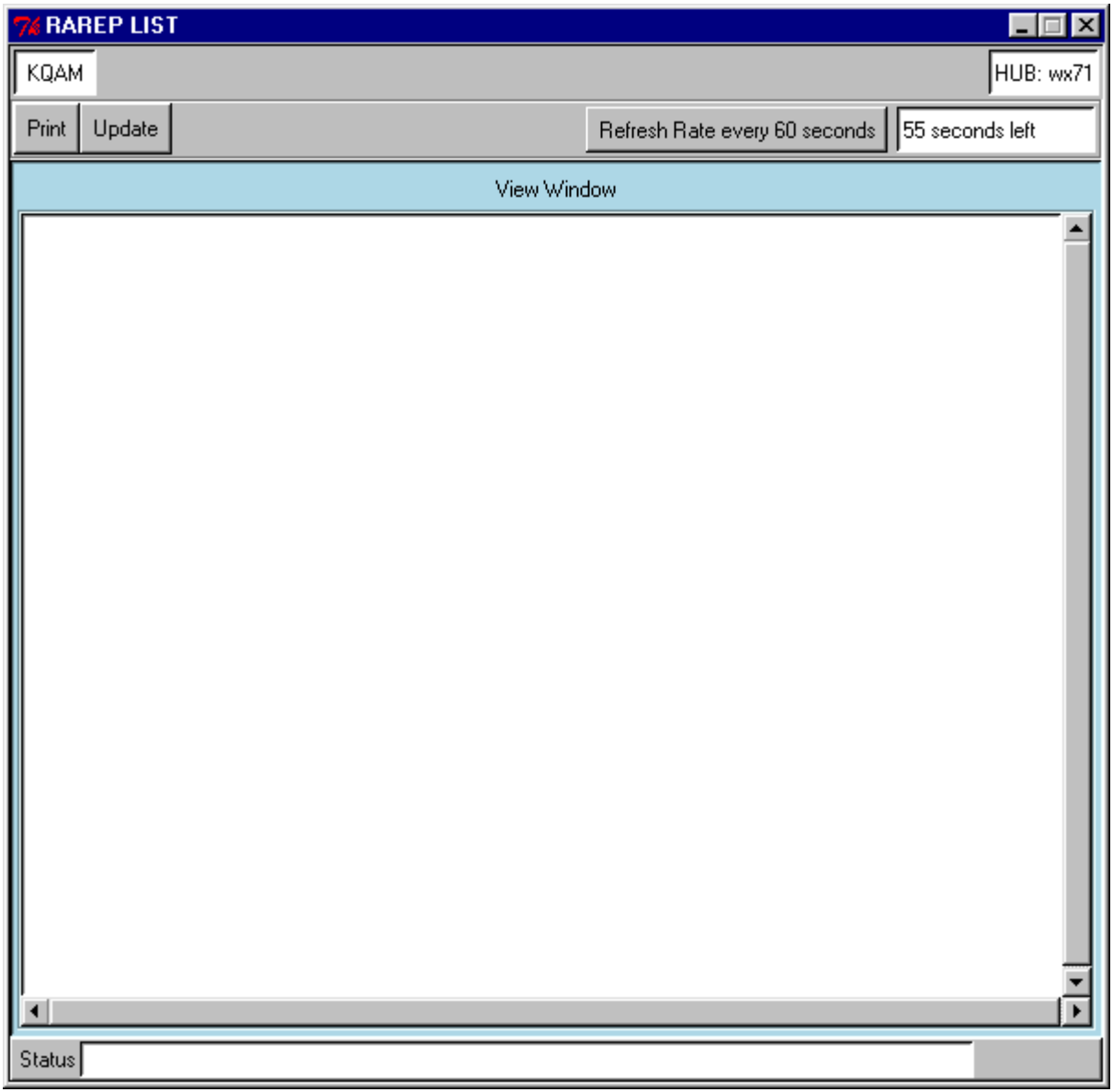
Select **Weather A/N View** > **RAREP List** from the AMIS LaunchPad (see Figure 3.71).

Figure 3.71 Launch of RAREP List



The RAREP List appears (see Figure 3.72).

Figure 3.72 RAREP List



To make use of this display, do the following:

1 Optionally, select a different ICAO by clicking on the button in the upper left corner of the form that displays the ICAO. By default, your station's ICAO is selected.

2 To force an update of the displayed information, select **Update** from the Action Menubar.

The panel is automatically updated each minute (default).

The window in the upper right of the display indicates how many seconds remain before the next automatic update.

3 To modify the automatic refresh rate while the panel is active, do the following:

- Select the button labeled **Refresh Rate every ... seconds**.

  A selection menu appears listing refresh rates from 1-5 minutes.

- Select one refresh rate from the selection list.

  *The **View Window** displays a copy of the transmitted products, and the comeback copy of the products from the AWN.*

  When the GMT day ends, you will see a line across the viewing area stating that observations below the line are for the previous GMT day.

4 To print the information in the **View Window**, select **Print** from the Action Menubar.

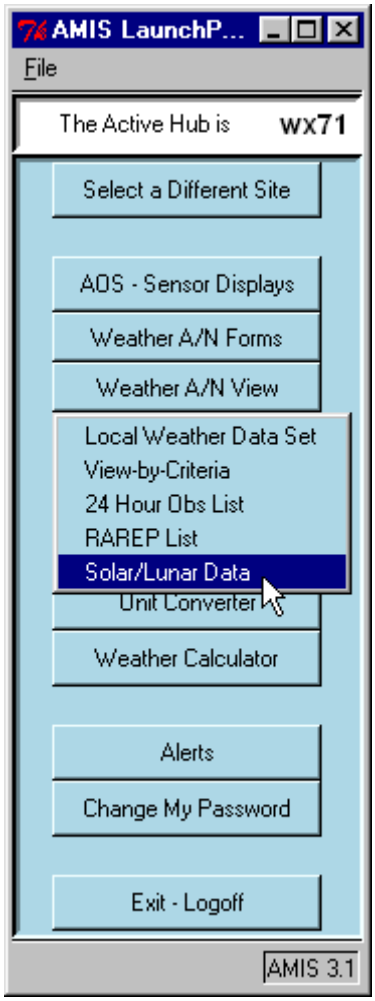
Solar/Lunar Data

The Solar/Lunar Data screen is used to access ephemeris data.

To launch the Solar/Lunar Data Report, do the following:

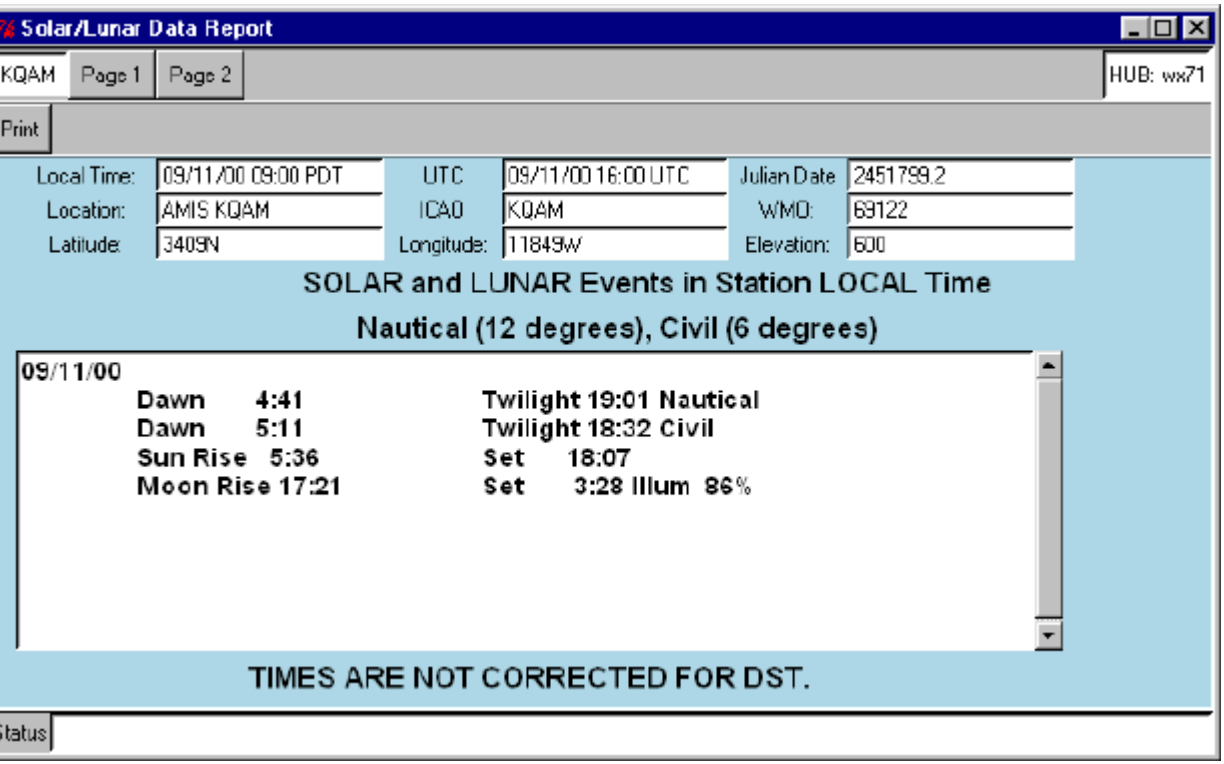
Select **Weather A/N View > Solar/Lunar Data** from the AMIS LaunchPad (see Figure 3.73).

Figure 3.73 Launch of Solar/Lunar Data



The Solar/Lunar Data Report display appears (see Figure 3.74).

Figure 3.74 Solar/Lunar Data Report, Page One



To make use of the Solar/Lunar Data Report, do the following:

1 Optionally, select a different ICAO by clicking on the button in the upper left corner of the form that displays the ICAO. By default, your station's ICAO is selected.

Information for the specified site is automatically displayed in the windows labeled ***Local Time, UTC, Julian Date, Location, ICAO, WMO, Latitude, Longitude****, and* ***Elevation****.*

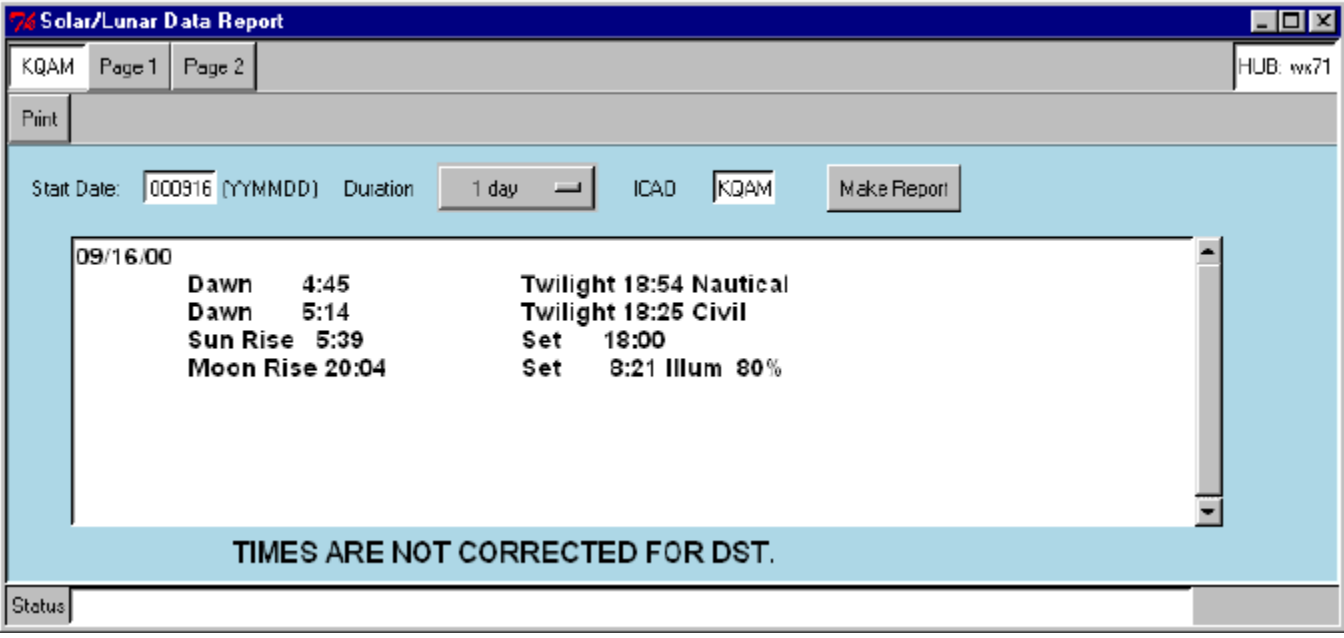
The solar/lunar data for the current date and specified site is displayed in the view window. Note that the times displayed are local standard times (that is, the times are not corrected for daylight savings time, DST).

The second page of the Solar/Lunar Data Report enables you to view an extended report of solar/lunar data for the specified site. To make use of page two, do the following:

1 Select the **Page 2** button.

Page 2 of the Solar/Lunar Data Report appears (see Figure 3.75).

Figure 3.75 Solar/Lunar Data Report, Page Two



2 Optionally, at **Start Date**, enter the start date in YYMMDD format.

*By default, **Start Date** is prefilled with the current date.*

3 Optionally, at **Duration**, from the drop-down menu, select one of **1**, **7**, **15**, or **31 days** duration.

*By default, a duration of **1 day** is selected.*

4 To generate a report for your selected duration, select **Make Report**.

The report will be displayed in the view window.

5 To print the report, select **Print** from the Action Menubar.

CHAPTER

4

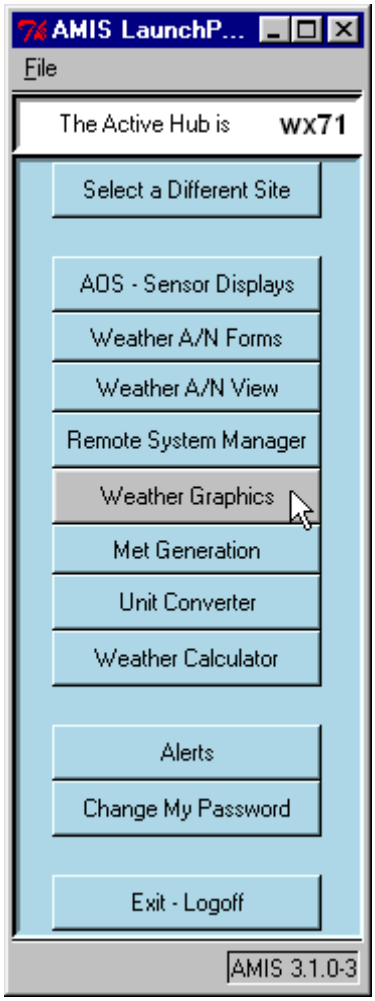
Graphics Product Operations

Weather Graphics

The WxGraphics tool allows the user to compose and display a wide range of weather products. The WxGraphics tool can be used to query the database and display available products and also to edit and/or enhance such products as needed. In addition to viewing centrally and locally produced charts, the WxGraphics tool permits zooming and panning, animating, decluttering, saving the various products to the database, and printing composites as desired. You can create loops of graphic products, slide shows, and briefing packages. You can also edit existing products and transmit products to other AMIS sites.

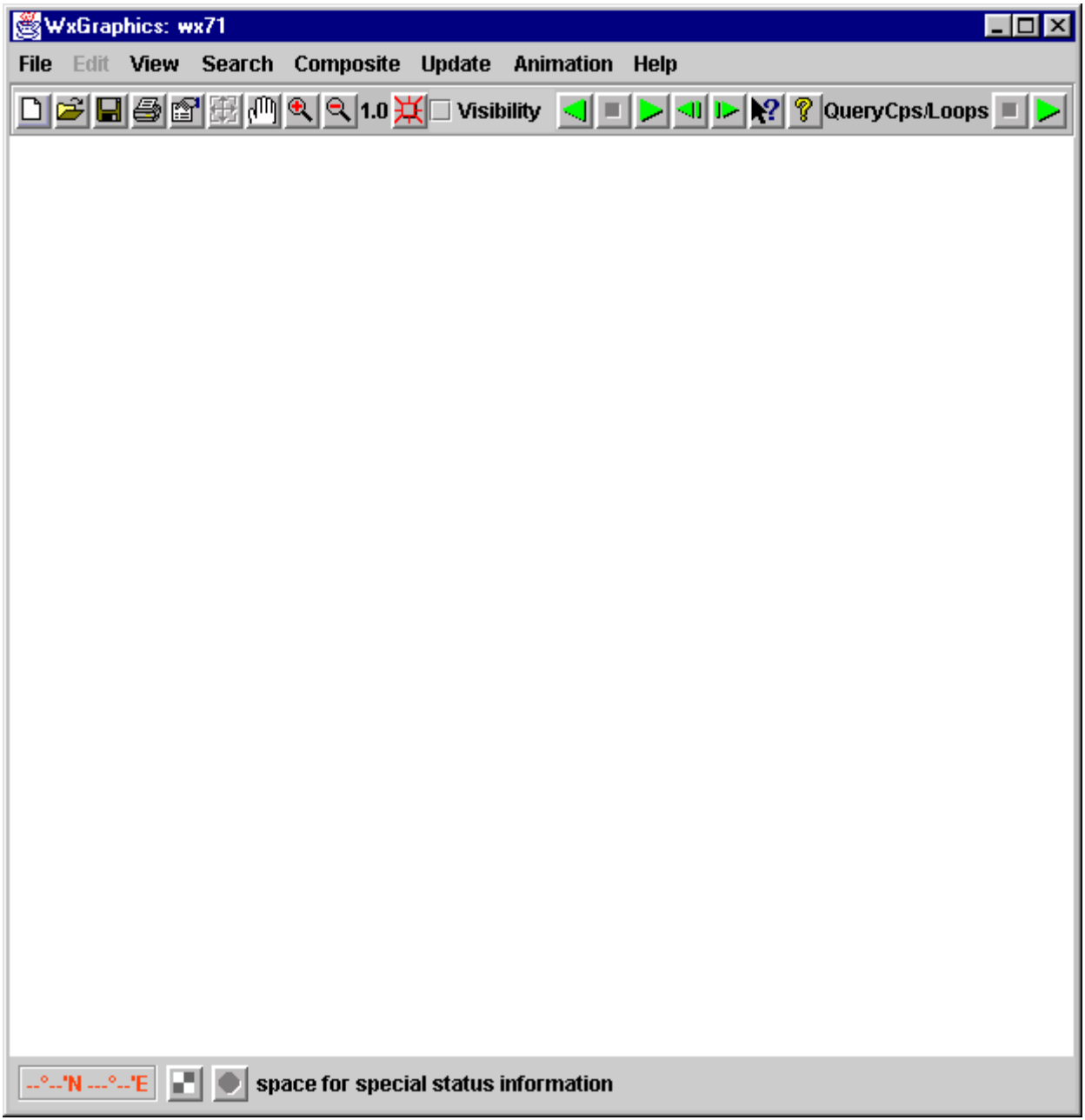
To launch the Weather Graphics application, select **Weather Graphics** from the AMIS LaunchPad (see Figure 4.1).

Figure 4.1 Launch of Weather Graphics



The Weather Graphics panel appears (see Figure 4.2).

Figure 4.2 Weather Graphics Panel



The Weather Graphics panel above in Figure 4.2 shows the Menubar and the Top Toolbar (without any additions) . Three additional toolbars (Searches,

Composites, and Animations) are individually selectable from the Menubar by selecting **View > Toolbars**. Additionally, the editing function adds buttons to the Top Toolbar.

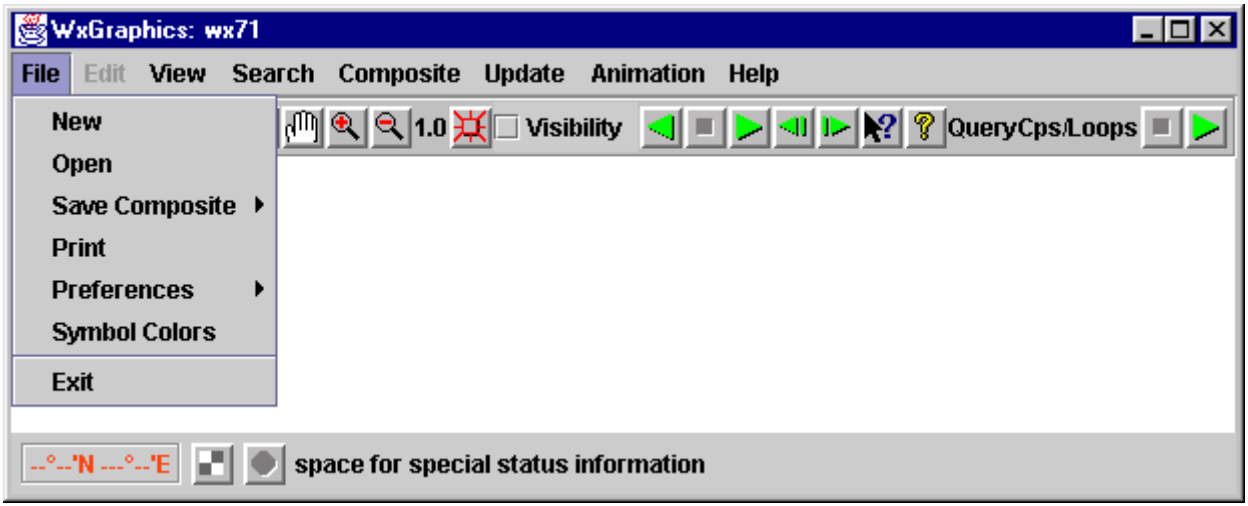
You can resize the Weather Graphics window just as you can resize the window of most other Windows applications. Depending on the size of the Weather Graphics window, the Top Toolbar may be located differently, for example, it may appear on two lines, rather than on one line as shown above.

Menubar Functions

File Menu

The Weather Graphics Menubar is shown below.

The **File** menu of the Menubar includes the following selections:



- **New** is used to initiate the creation of a new workchart. This may be incorporated into a composite product as a new layer. **New**, when clicked, displays the DialogEditStart panel.
- **Open** is used to initiate the loading of a product available on the server into the WeatherViewer canvas. **Open**, when clicked, displays the Search Criteria dialog.

- The **Save Composite** menu is used to initiate the saving of the composite product in different formats and locations. The **Save Composite** menu consists of:
  - **Definition** initiates saving the definition of a single composite product definition or the definition of a group composite set. **Definition**, when clicked, displays the Save Composite Dialog.
  - **As Local Image** initiates saving the composite product displayed in the WeatherViewer canvas as an image locally on the client PC. **As Local Image**, when clicked, displays the Save dialog.
  - **As Remote Image** initiates saving the composite product displayed in the WeatherViewer canvas as an image on the server. **As Remote Image**, when clicked, displays the Save Composite as Image on Server dialog.
- **Print** is used to print the product displayed in the WeatherViewer canvas. This function is also available from the Top Toolbar by selecting the **Print Composite** button.
- The **Preferences** menu consists of several options as follows:
  - The **Fill Areas** menu (related to editing):

    Fading radio button—fill via fading causes LAWC filled areas to display with a semi-transparent color.

    Patterns radio button—fill via patterns displays the fills with the selected pattern (cross-hatch, etc.) specified by the user at the time of LAWC creation.

    See "Local Area WorkCharts (LAWCs)" on page 4-95 for more detailed instructions on creating filled areas when editing.
  - The **Legend** menu:

    The **None** checkbox, when checked, removes the legend from the WeatherViewer canvas.

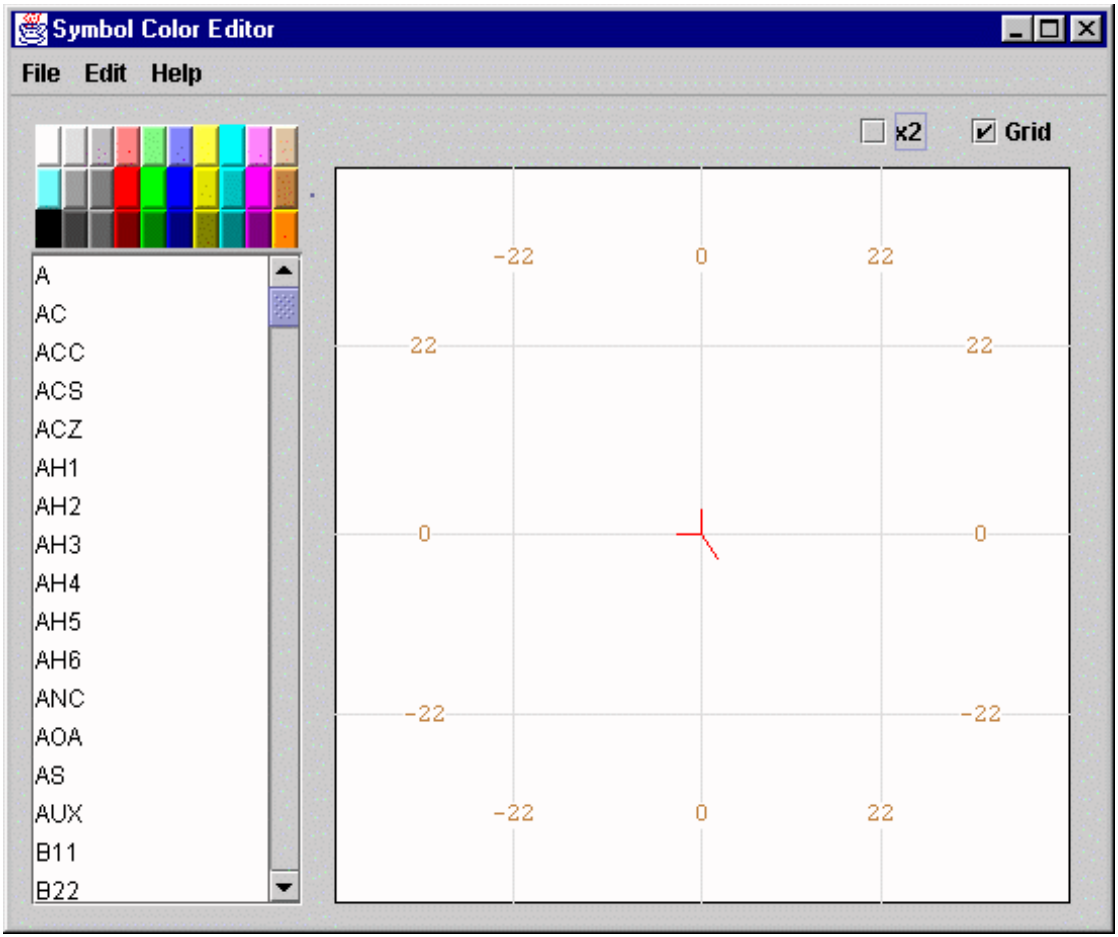
    Color initiates the setting of the color of all legend text. **Color**, when selected, displays a horizontal Color Tile Group.

    The available legend locations are: **Top** radio button sets the legend displayed to the top of the WeatherViewer canvas. **Bottom** radio button sets the legend displayed to the bottom of the WeatherViewer canvas.

    Available legend sizes are: the **9** radio button sets the displayed legend to 9-point type, the **12** radio button sets the displayed legend to 12-point type, and the **15** radio button sets the displayed legend to 15-point type.

- The **PI Set Rotation** checkbox, when checked, enables rotation of the product(s) displayed in the WeatherViewer canvas.
- The **Component Details** checkbox, when checked, causes the display of the component details sections of the ProdListDialog and Layer List.

- **Symbol Colors** enables viewing/editing of the weather symbols used in the Weather Viewer. Selecting from the list of available symbols displays the current setting for that symbol.

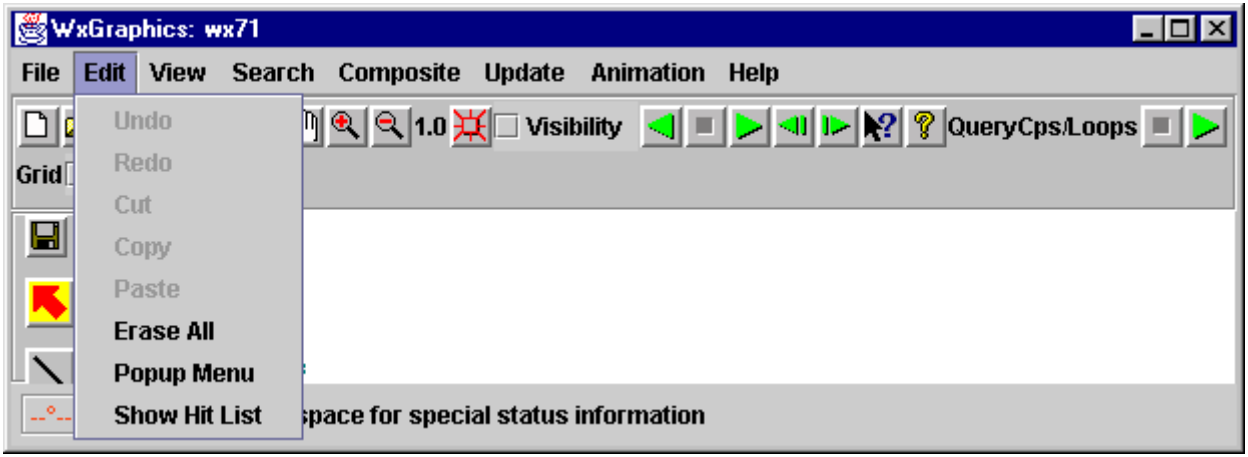


Selecting a symbol from the list displays the symbol in the grid. You may select a color change from the color panel on the left. Selecting **File >Save** will save the changes. The **x2** check box will enlarge the symbol in the display two times. The **Grid** check box turns the grid on/off.

- **Exit** causes the WeatherViewer to exit.

Edit Menu

The **Edit** function provides some support for the editing process. The **Edit** menu is available only when editing is in progress.

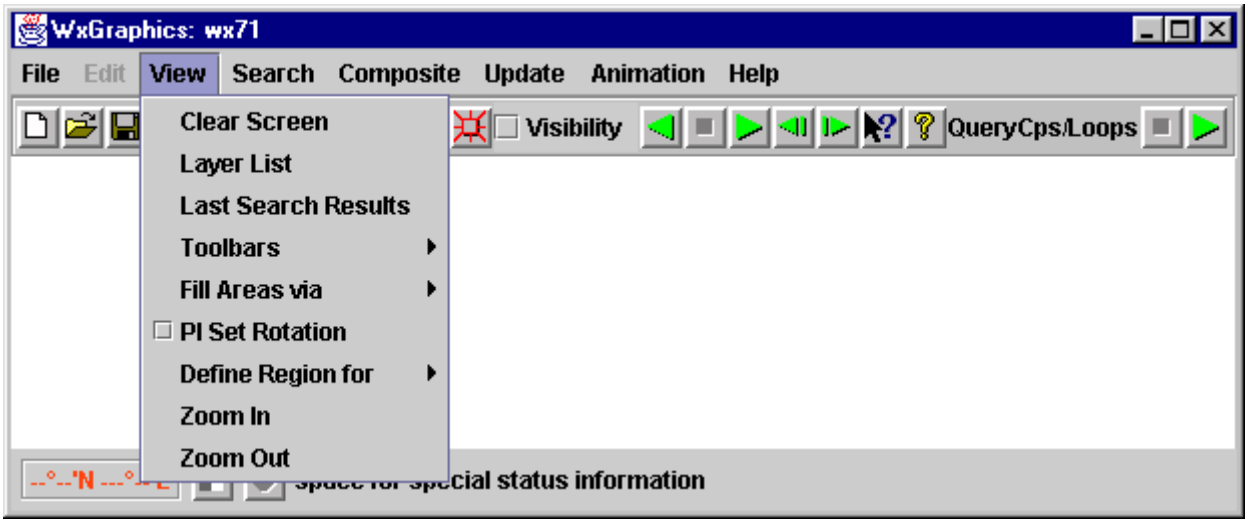


The **Edit** menu of the Menubar includes the following selections:

- **Undo** deletes the last editing action. **Undo** is active only when the **Select Single Feature** selection of the Left Toolbar is active, a feature in the WeatherViewer canvas has been selected, and an action has been performed (for example, Move or Copy). **Undo** does not toggle.
- **Erase All** clears the WeatherViewer canvas to blank while leaving the current editing session on. This simplifies presentation sessions where the WeatherViewer is being used as a white board.
- **Popup Menu** displays the editor popup menu when the **Select Single Feature** entry of the Left Toolbar is active and a feature in the WeatherViewer canvas has been selected.

  When **Popup Menu** is clicked the popup menu assigned to the feature selected displays. Setting the cursor above the selected feature and clicking with the right mouse button also performs this function.
- **Show Hit List** initiates the display of the Edit Hits panel. The Edit Hits panel is a list of the selected features that you wish to change. Changes can be made to overlapping products using this feature.

View Menu



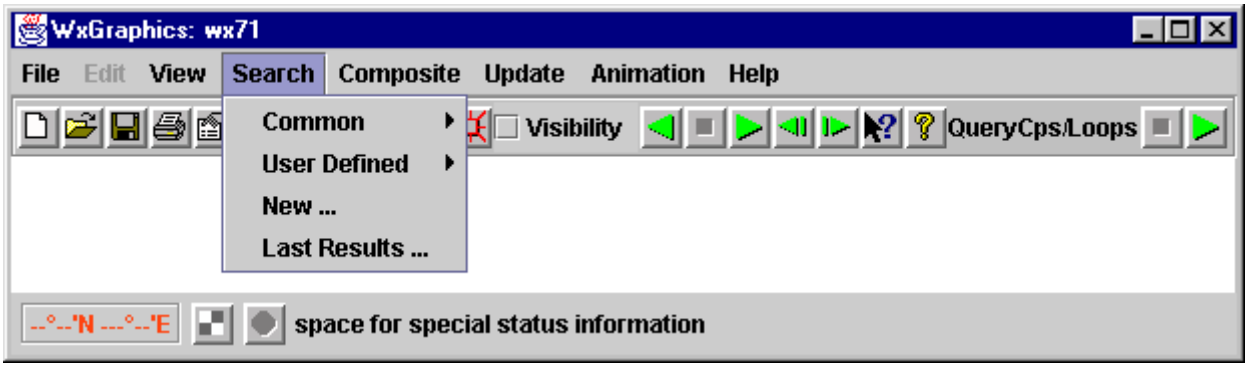
The **View** menu of the Menubar includes the following selections:

- **Clear Screen** removes all products from the WeatherViewer canvas. Additionally, all products in any currently displayed slide-show are cleared.
- **Layer List** displays the Layer List dialog. The Layer List dialog is nominally used to initiate all existing product and composite modifications.
- **Last Search Results** displays your last generated search results. Search results are displayed at the time of the search in the ProdListDialog. Use **Last Search Results** when you have removed the ProdListDialog from the screen and you want to display another product of the same type as the current product.
- Using the Search Criteria dialog. The **Last Search Results** entry, when clicked, displays the contents of this last product database search in the ProdListDialog.
- The **Toolbars** menu contains Top Toolbar display elements whose visibility can be toggled. The **Toolbars** menu consists of:
  - The **Searches** checkbox, when checked, initiates the display of a group of buttons on the Top Toolbar, each of which has been assigned a fixed search criteria set. When that button is clicked, the associated search is performed. Each of the buttons is labeled with a 'Q'. These preset queries match the queries defined in the **Search** > **Common** pull-down.

- The **Composites** checkbox, when checked, enables the slide-show. As part of the enabling, a group of sequentially numbered display squares is displayed on the Top Toolbar. After the slide-show is activated, the display squares sequentially change background color from gray to yellow.
- The **Animation @** checkbox, when checked, enables animation.

- The **Fill Areas via** menu contains the figure fill methods:
  - **Fading** radio button, when selected, defines that vector graphic figures will be filled with a continuous single color or grayscale.
  - **Patterns** radio button, when selected, defines that vector graphic figures will be filled with a preset pattern.
- The **PI Set Rotation** checkbox, when checked, enables rotation of the product(s) displayed in the WeatherViewer canvas.
- The **Define Region for** menu allows a user selected section to be magnified to the bounds of the WeatherViewer canvas for viewing or defining as a background.
  - **Zoom/Roam Area** allows a user selected section to be magnified to the bounds of the WeatherViewer canvas. First, the **Zoom/Roam Area** entry is selected. Next, the zoom/roam area is determined by pressing a mouse button and dragging the cursor to size the pink rectangle to the selected area. This function can also be performed at any time by selecting CTRL-left mouse and dragging/expanding the display area to be zoomed.
  - **Area of Interest(AOI)** initiates the creation of a new map whose bounds are an area of interest. First, the **Area of Interest(AOI)** entry is selected. Next, the zoom/roam area is determined by pressing a mouse button and dragging the cursor to size the pink rectangle to the selected area. When the mouse button is released the AOIDialog is displayed. This function can also be performed at any time by selecting CTRL-right mouse and dragging/expanding the display area to be defined. See "Area of Interest Dialog (AOIDialog)" on page 4-29 for more detailed AOI instructions.
- **Zoom In** increases the image magnification upon each mouse click.
- **Zoom Out** decreases the image magnification upon each mouse click.

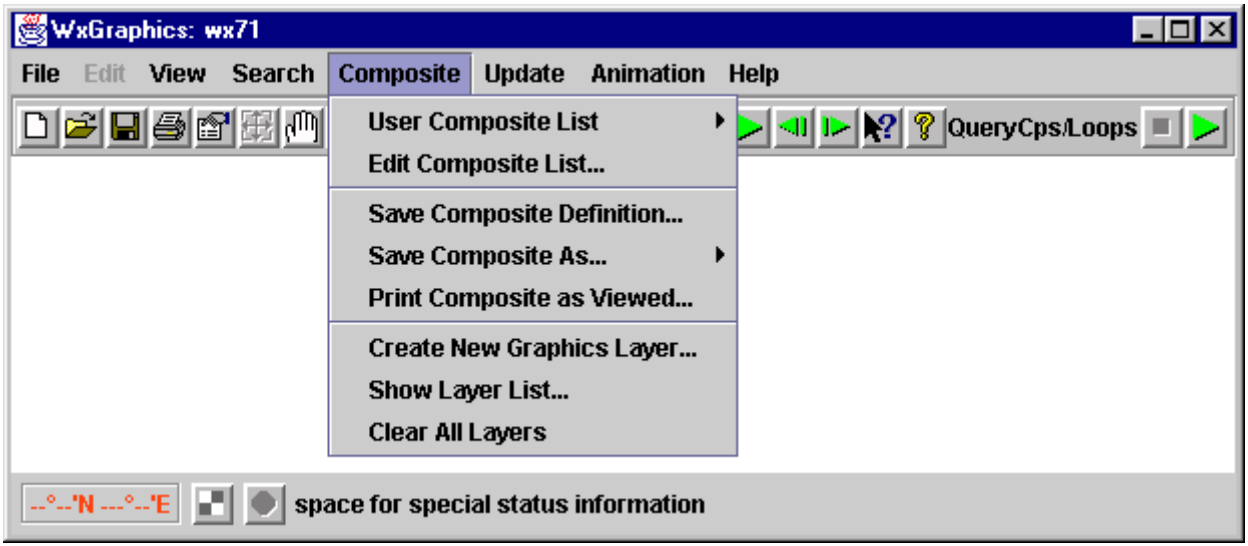
Search Menu



The **Search** menu of the Menubar includes the following selections:

- The **Common** menu displays a predefined set of the searches available in the Search Criteria dialog. These entries have been preset for your installation. Selecting one of these entries displays the results of the search in the ProdListDialog.
- The **User Defined** menu displays the collection of searches created in the UserListDialog. These are intended to be searches the user frequently uses. Selecting one of these entries displays the search product in the WeatherViewer canvas. To create a user-defined search for saving here, see “Search Criteria Dialog” on page 4-47.
- **New...** displays the Search Criteria dialog.
- **Last Results...** displays the contents of the last search performed on the Search Criteria dialog.

Composite Menu



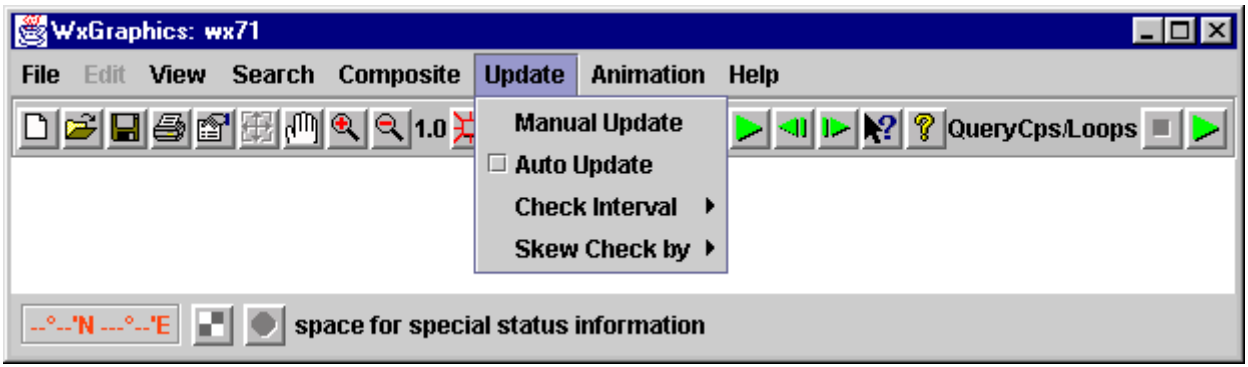
The **Composite** menu of the Menubar includes the following:

- The **User Composite List** menu contains a collection of lists of composite products. Each list of up to 12 composite products is a slide-show group. In addition, each composite of the list can be individually selected for display in the WeatherViewer canvas by clicking it with the mouse.
- **Edit Composite List…** initiates the **User Composite List** editing process and the slide-show display. When the **Edit Composite List…** entry is selected, the CpsListDialog is displayed. For more information, see "Animating Products and Composites" on page 4-91.
- **Save Composite Definition** initiates saving the composite product displayed in the WeatherViewer canvas on the server. The **Save Composite Definition** entry, when clicked, displays the Save Composite Dialog.
- The **Save Composite As…** menu saves the composite as an image. This extends the number of sites that can display this product. For more information, see "Composite Products" on page 4-64.
  - **Local Image** initiates saving the composite product displayed in the WeatherViewer canvas as an image locally. The **Local Image**, when clicked, displays the Save dialog.
  - **Remote Image** initiates saving the composite product displayed in the WeatherViewer canvas as an image on the server. The **Remote Image**, when clicked, displays the Save Composite as Image on Server dialog.

- **Print Composite as Viewed…** is used to initiate the printing of the product displayed in the WeatherViewer canvas.
- **Create New Graphics Layer…** is used to initiate the creation of a new workchart product. This may be incorporated into a composite product as a new layer. The **Create New Graphics Layer…** entry, when clicked, displays the DialogEditStart panel.
- **Show Layer List...** displays the Layer List dialog. The Layer List dialog is nominally used to initiate all existing product and composite modifications. For more information, see “Layer List Dialog” on page 4-42.
- **Clear All Layers...** removes the currently displayed composite product from the WeatherViewer canvas.

Update Menu

The Update function provides for updating of composite products in an animation loop. A composite product that is more recently generated replaces the previous current product as the current product. Replacement percolates through each of the composites in the loop.



The **Update** menu of the Menubar includes the following selections:

- **Manual Update** is used to request updates to a product that have occurred since the last one was entered. If the product is updated on an automatic schedule, **Manual Update** is useful for entering updates that do not follow the automatic schedule.
- The **Auto Update** checkbox, when checked, initiates the updating of products automatically on a regular schedule. The presence of a more recent version of a product is checked at a frequency specified below.

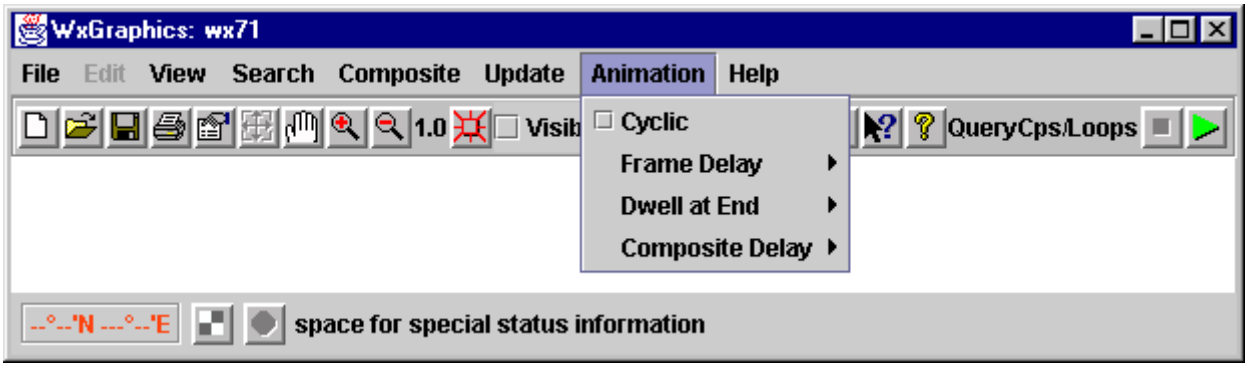
- The **Check Interval** menu sets the automatic updating frequency of members of the animation loop. A check for the availability of more recent composite products is set to occur at a specified interval.

  Automatic updates can be set to occur on the hour and at 15 and 30 minutes after the hour. This is based on wall clock time.

- **Skew Check by** enables updating at the above selected intervals but shifted forward in time. Thus if the checking interval is 30 minutes and the check skew is five minutes, checking for an updated composite product will occur at five minutes and 35 minutes after the hour.

Animation Menu

The Animation menu sets the animation display parameters, including display rate, delay between repetitions of an animation sequence and selection of single or forward and reverse sweep directions. When multiple animation sequences are displayed, referred to as a slideshow, the delay between different slideshow elements may also be specified.



The **Animation** menu of the Menubar includes the following selections:

- The **Cyclic** checkbox, when checked, causes the animation sequence to alternately run forward and backward.

  If the **Cyclic** checkbox is unchecked, the animation sequence will run in one direction. The starting animation direction is forward. If the **Cyclic** checkbox is unchecked while animation is in progress, the animation direction is the one occurring at the time it was unchecked.

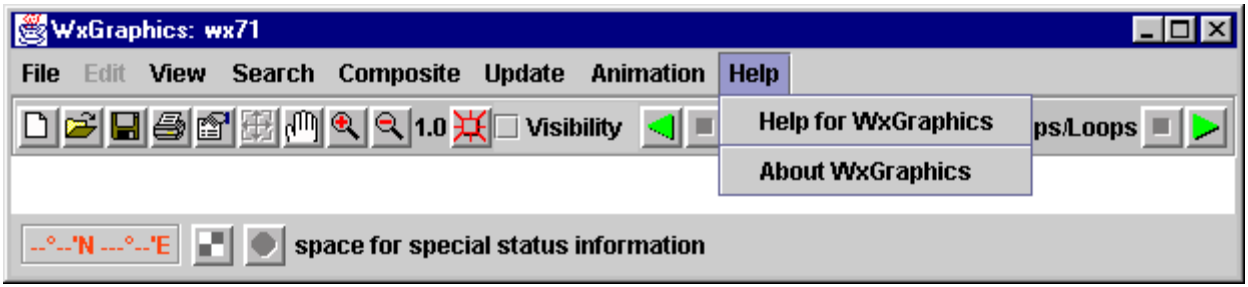
- The **Frame Delay** menu contains a collection of radio buttons. Each radio button represents a delay that specifies the duration of display for each member of the animation loop. The range of delays is from 0.1 to 1.5 seconds.

- The **Dwell at End** menu contains a collection of radio buttons. Each radio button represents a delay that is inserted following each element of the

animation sequence. The range of delays is from zero (none) to one second.

- The **Composite Delay** menu contains a collection of radio buttons. Each radio button represents a delay that is inserted following each single composite or composite animation sequence when a slideshow is being displayed. The range of delays is from two to 20 seconds. These delays are independent of any animation delays.

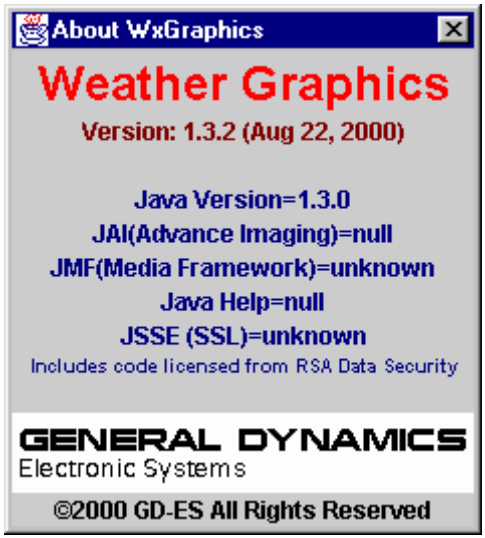
Help Menu



The **Help** menu of the Menubar includes the following selections:

- **Help for WxGraphics** is used to initiate the help facility of AMIS by displaying the WxGraphics Help panel.The WxGraphics Help panel contains a tabbed display. The tabs provide selection of the three modes for navigating help file contents:
  - The Table of Contents provides a tree display listing the topics to be discussed. A collapsible/expandable display hides or displays additional information as required. Selecting an icon-identified line will display the requested information associated with it in the window on the right.
  - The Index mode displays a list of selectable items. Selecting a line with the desired item will display the requested information associated with it in the window on the right. Additionally a word search capability of the index mode exists.
  - The Search mode searches the entire help documentation set for a single user-specified word. Each file name where the word was found is listed. The number of times the word appeared in that file is listed adjacent to that file name. Selecting a line with the desired file name will display the requested information associated with it in the window on the right.
- **About WxGraphics** displays an informational panel as shown in Figure 4.3.

Figure 4.3 Weather Graphics Informational Panel



Top Toolbar Functions

The Top Toolbar provides a number of convenience buttons for functions that can alternatively be initiated from menu selections. The Top Toolbar additionally provides unique functions associated with animation and slide-shows.

Three additional toolbars (Searches, Composites, and Animations) are individually selectable from the Menubar by selecting **View > Toolbars**. Additionally, the editing function adds buttons to the Top Toolbar. The Top Toolbar, without any of these additions, is shown in Figure 4.4.

Figure 4.4 Weather Graphics Top Toolbar

The Top Toolbar functions are described as follows:

- The **Create New Graphics Overlay** button is used to initiate the creation of a new vector graphic product. This new product can be incorporated into a composite product as a new layer. The **Create New Graphics Overlay** button, when clicked, displays the DialogEditStart panel.
- The **Add Weather Component** button is used to initiate the loading of a product available on the server into the WeatherViewer canvas. The

Add Weather Component button, when clicked, displays the Search Criteria dialog.

- The **Save Composite** button initiates saving the composite product displayed in the WeatherViewer canvas on the server. The **Save Composite** button, when clicked, displays the Save Composite Dialog.
- The **Print Composite** button is used to print the product displayed in the WeatherViewer canvas.
- The **Show/Edit Layer List** button displays the Layer List dialog. The Layer List dialog is nominally used to initiate all existing product and composite modifications.
- The **Show Panning Reference** button displays a vertical and horizontal pink line, which form a cross hair in the center of the WeatherViewer image. This function is useful when the user wants to move the image only vertically or horizontally and the system is not in Pan Mode. By clicking on the horizontal pink line, the image will only move horizontally. By clicking on the vertical pink line, the image will only move vertically.
- The **Pan Mode** (**Drag/Center**) button enables continuous dragging of the image with the mouse.
- The **Zoom In (Enlarge)** button increases the image magnification upon each mouse click.
- The **Zoom Out (Shrink)** button decreases the image magnification upon each mouse click.
- The **Scale To Component** button restores the magnification of the displayed image to one and centers the image in the WeatherViewer canvas.
- The **Component Visibility** checkbox Visibility toggles the visibility of the selected component in the WeatherViewer Canvas. If no component of the displayed image has been selected by the user, the default selection is used. The default selection is the top component in the Layer List File List.
- The **Play Reversed** button steps through the images in an animation sequence ordered from last to first.
- The **Stop Animation** button stops the animation sequence at one of the images in the sequence. The image where the animation is stopped continues to be displayed.
- The **Play Forward** button steps through the images in an animation sequence ordered from first to last.

- The **Step Reversed** button displays the previous image of the animation sequence. If the current image being displayed is the first image, the last image is displayed.
- The **Step Forward** button displays the next image of the animation sequence. If the current image being displayed is the last image, the first image is displayed.
- The **Help On** button displays the WeatherViewer's Help panel. This provides explanations of the functions performed by the various components of the WeatherViewer.
- The **About WxViewer** button displays a panel containing technical information about the construction of the WeatherViewer.

Searches Toolbar

An additional Searches Toolbar is available. To display this toolbar, do the following:

1 Fom the Menubar, select **View** > **Toolbars** > **Searches**.

*The **Searches** selection on the **View** > **Toolbars** menu is marked with a checkmark.*

The Searches Toolbar is displayed with the Top Toolbar (see Figure 4.5).

Figure 4.5 Top Toolbar with Searches Toolbar

To remove the display of this toolbar, do the following:

1 Fom the Menubar, select **View** > **Toolbars** > **Searches**.

*The checkmark is removed from the **Searches** selection on the **View** > **Toolbars** menu.*

The Searches Toolbar disappears.

The Searches Toolbar buttons are described as follows:

- Each **Query** button is preset preset with fixed search criteria. Moving the cursor over a **Query** button displays a Tool Tip indicating what the search criteria for that button is. Clicking on a **Query** button performs the respective search of the database. Search results are returned in the ProdListDialog.
- The **Stop Composites Loop** button (positioned after the **Query** buttons, at the **Cps/Loops** label) stops the slide-show at one of the

composites in the sequence. The single composite or composite animation where the slide-show is stopped continues to be displayed.

- The **Play/Pause Composites Loop** button (positioned after the **Query** buttons, at the **Cps/Loops** label) steps through the slide-show of single composites and composite animations in a first to last order.

Composites Toolbar

An additional Composites Toolbar is available. To display this toolbar, do the following:

1 Fom the Menubar, select **View** > **Toolbars** > **Composites**.

*The **Composites** selection on the **View** > **Toolbars** menu is marked with a checkmark.*

The Composites Toolbar is displayed with the Top Toolbar (see Figure 4.6).

Figure 4.6 Top Toolbar with Composites Toolbar

To remove the display of this toolbar, do the following:

1 Fom the Menubar, select **View** > **Toolbars** > **Composites**.

*The checkmark is removed from the **Composites** selection on the **View** > **Toolbars** menu.*

The Composites Toolbar disappears.

The Searches Toolbar buttons are described as follows:

- The **Composite** buttons 1 are a set of numbered buttons that perform two functions:
  - When a slide-show is not being performed, the buttons allows the user to select any of the composites in the loaded slide-show for display.
  - When a slide-show is being performed, the buttons are used only to display the position of the active composite. They do not perform any selection from the user.

Animation Toolbar

An additional Animation Toolbar is available. To display this toolbar, do the following:

1 Fom the Menubar, select **View** > **Toolbars** > **Animation @**.

*The **Animation @** selection on the **View** > **Toolbars** menu is marked with a checkmark.*

The Animation Toolbar is displayed with the Top Toolbar (see Figure 4.7).

Figure 4.7 Top Toolbar with Animation Toolbar

To remove the display of this toolbar, do the following:

1 Fom the Menubar, select **View** > **Toolbars** > **Animation @**.

*The checkmark is removed from the **Animation @** selection on the **View** > **Toolbars** menu.*

The Animation Toolbar disappears.

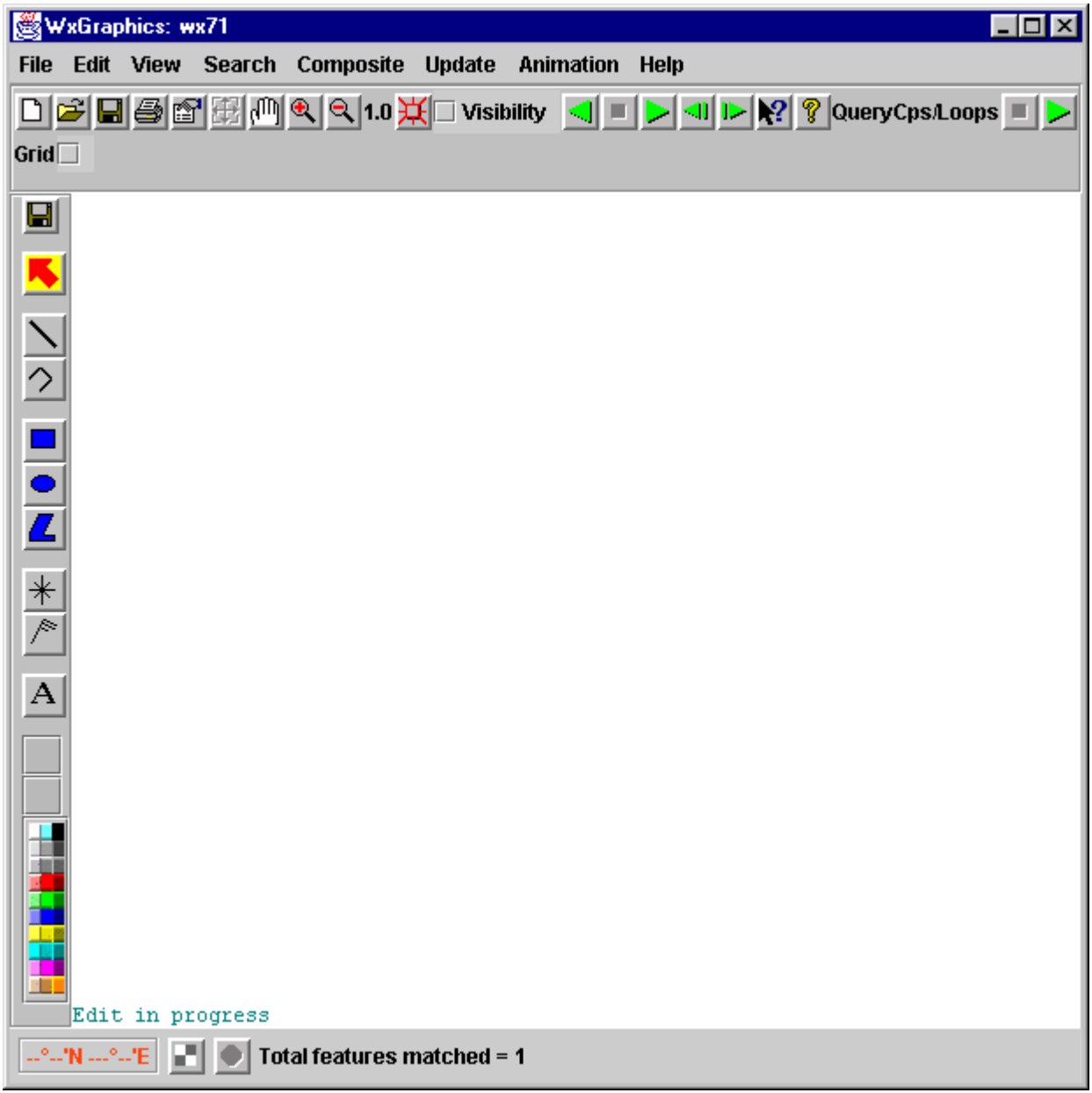
The Animation Toolbar buttons are described as follows:

- The **Set Position** slider allows the user to step through images of an animation sequence by moving the slider.

Editor Toolbar (Left Toolbar) Functions

The editor toolbar (Left Toolbar) provides all editing functions for vector graphic products. When displayed, the Left Toolbar is located along the left side of the WeatherViewer (see Figure 4.8). Note also the Top Toolbar **Grid** checkbox added by the Editor.

Figure 4.8 Left Toolbar



- The **Save and Exit** button displays the DialogEditSave panel, which provides an exit only function and a save vector graphics product and exit.

- The **Select Single Feature** button initiates the editing of existing vector graphics product figures in the WeatherViewer canvas. This is the starting point for any figure modification actions.
- The **Create Straight Line** button enables the user to draw single segment lines in the WeatherViewer canvas. Clicking the **Create Straight Line** button also displays the Top Toolbar straight line specification entries controlling line characteristics. See "Top Toolbar Additions for Lines" on page 4-22.
- The **Create Polyline** button enables the user to draw multi-segment lines in the WeatherViewer canvas. The **Top Toolbar Category** combo box allows the user to select a grouping containing the lines, fronts, etc. he wishes to create. Clicking the **Create Polyline** button also displays the Top Toolbar line specification entries controlling line characteristics. See "Top Toolbar Additions for Lines" on page 4-22.
- The **Create Rectangle** button enables the user to draw squares and rectangles in the WeatherViewer canvas. Clicking the **Create Rectangle** button displays the Symbolics panel. The Symbolics panel contains the selection of fill types for the rectangle.
- The **Create Diamond/Ellipse** button enables the user to draw diamonds or ellipses depending on the state of the **Smooth** checkbox in the Top Toolbar. Clicking the **Create Diamond/Ellipse** button displays the Symbolics panel. The Symbolics panel contains the selection of fill types for the figure.
- The **Create Polygon** button enables the user to draw self-closing polygons. These may be line segments or smooth curves depending on the state of the **Smooth** checkbox in the Top Toolbar. Clicking the **Create Polygon** button displays the Symbolics panel. The Symbolics panel contains the selection of fill types for the figure.
- The **Create Meteorological Symbol** button allows the user to draw selected meteorological symbols. Clicking the **Create Meteorological Symbol** button displays the Top Toolbar meteorological symbol specification entries controlling meteorological symbol characteristics. Clicking the **Create Meteorological Symbol** button also displays a Symbolics panel, which contains a set of meteorological symbols. See "Top Toolbar Additions for Met Symbols" on page 4-27.
- The **Create Wind Barb** button enables the user to draw wind barbs on the WeatherViewer canvas. Clicking the **Create Wind Barb** button displays the Top Toolbar's wind barb specification entries controlling wind barb characteristics. See "Top Toolbar Additions for Wind Barbs" on page 4-28.

- The **Create Text** button enables the user to enter text from the keyboard in the WeatherViewer canvas. Clicking the **Create Text** button displays the Top Toolbar's text specification entries controlling text characteristics. See "Top Toolbar Additions for Text" on page 4-28.
- The **Color Tile Group** buttons allow the user to select the foreground and background colors for text display. The selected foreground color is displayed in the top large square. The selected background color is displayed in the bottom large square.

Top Toolbar Additions for Lines

The Editor **Create Straight Line** button produces additions to the Top Toolbar as shown in Figure 4.9.

Figure 4.9 Top Toolbar Additions for Create Straight Line

The Editor **Create Polyline** button produces similar additions to the Top Toolbar as shown in Figure 4.10.

Figure 4.10 Top Toolbar Additions for Create Polyline

- The **Grid** checkbox, when checked, identifies the active area in the WeatherViewer canvas by surrounding the active area with a red rectangle.
- The **Smooth** checkbox, when checked,

- Selections made in the **Width** combo box specify the line width relative to the standard size for the symbol.
- Selections made in the **Category** combo box specify which Symbolics panel is displayed. Candidate **Category** selections are **Most Used**, **Fronts**, **Special**, and **Arrows**.

  The Symbolics panels contain sets of line symbols for the specified category. There is one button per symbol. Clicking a button will specify that line symbol to be used in line creation.

Figure 4.11 Symbolics Panel for Lines "Most Used" Category

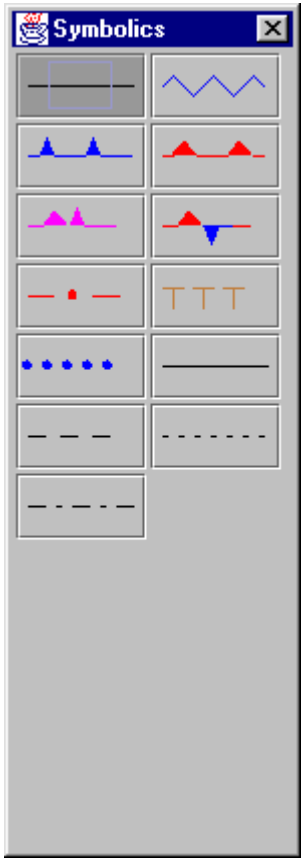


Figure 4.12 Symbolics Panel for Lines “Fronts” Category

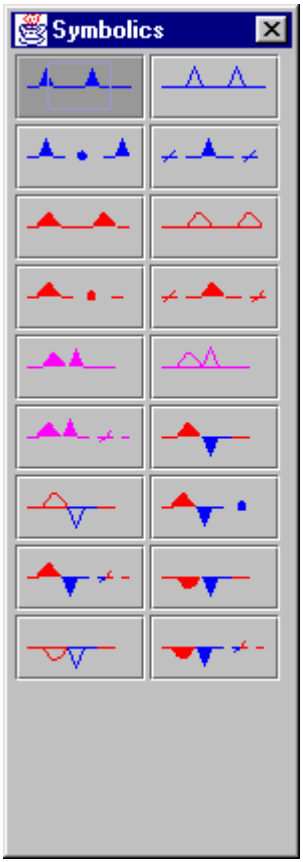


Figure 4.13 Symbolics Panel for Lines “Special” Category

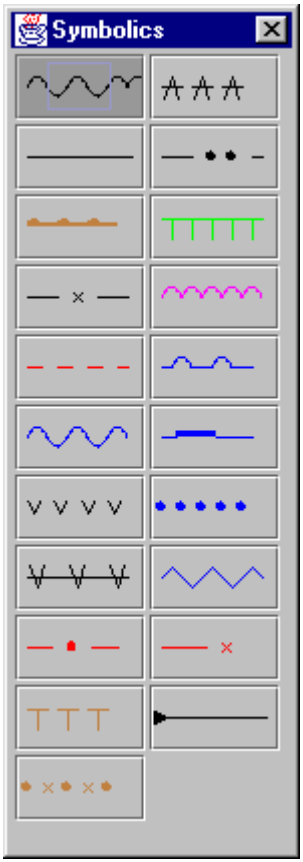
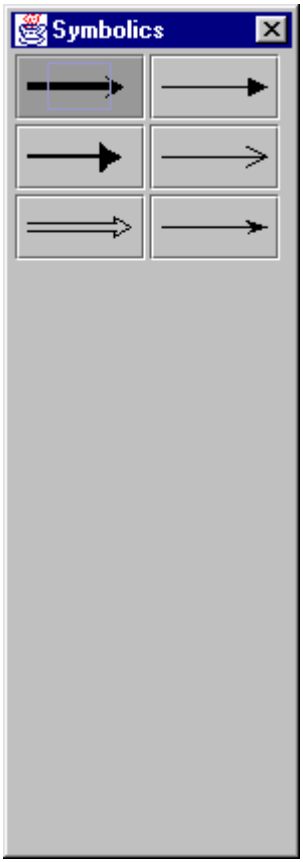


Figure 4.14 Symbolics Panel for Lines “Arrows” Category



Top Toolbar Additions for Figures

The Editor figure creation buttons (**Create Rectange**, **Create Diamond/ Ellipse**, and **Create Polygon**) produce similar additions to the Top Toolbar as shown in Figure 4.15 and Figure 4.16.

Figure 4.15 Top Toolbar for Create Rectangle

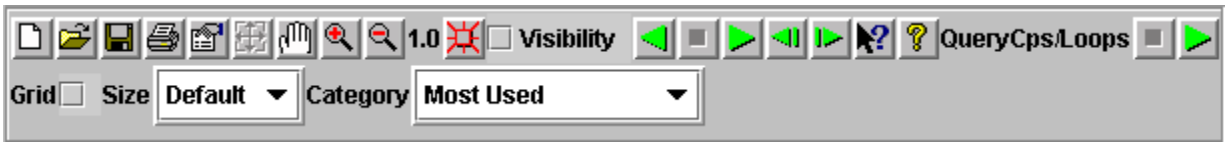
Figure 4.16 Top Toolbar for Create Diamond/Ellipse and Polygon

- The **Grid** checkbox, when checked, identifies the active area in the WeatherViewer canvas by surrounding the active area with a red rectangle.
- The **Smooth** checkbox, when checked, converts the straight lines of the figure to Bezier curves. A diamond becomes a circle or ellipse, etc.

Top Toolbar Additions for Met Symbols

The Editor **Create Meteorological Symbol** button produces the Top Toolbar as shown in Figure 4.17.

Figure 4.17 Top Toolbar for Create Met Symbol



- The **Grid** checkbox, when checked, identifies the active area in the WeatherViewer canvas by surrounding the active area with a red rectangle.
- Selections made in the **Size** combo box specify the size multiplier of the default value.

  The default value is a standard meteorological symbol set for your usage.
- Selections made in the **Category** combo box specify which Symbolics panel is displayed. The candidate Category selections are as follows:

  - Most Used
  - Freezing
  - Tropical
  - Past Weather
  - Miscellaneous
  - Severe
  - VIS Obstructions
  - Cloud Amount
  - Pressure Tendency
  - Precipitation
  - Icing/Turbulence
  - Cloud Type
  - Ship Direction

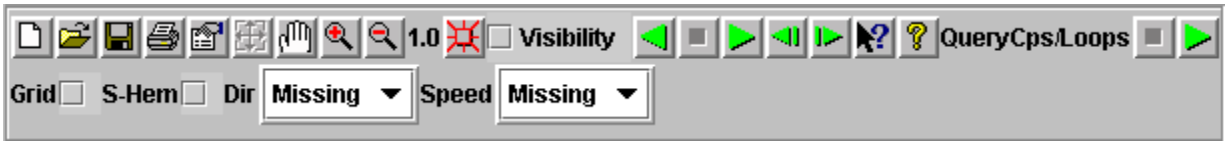
  The Symbolics panel contains a set of meteorological symbols for the specified category. There is one button per symbol. Clicking a button displays the symbol in the WeatherViewer canvas. For an example

Symbolics panel, see Figure 4.14, “Symbolics Panel for Lines “Arrows” Category” on page 4-26.

Top Toolbar Additions for Wind Barbs

The Editor **Create Wind Barb** button produces the Top Toolbar as shown in Figure 4.18.

Figure 4.18 Top Toolbar for Create Wind Barb



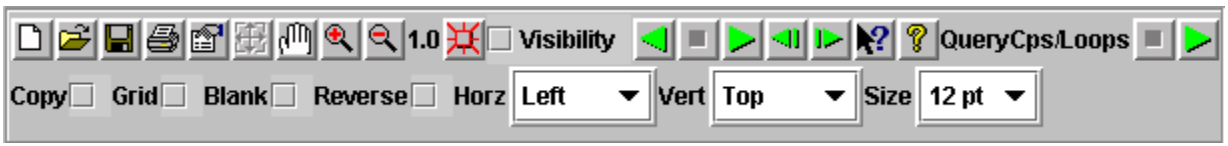
- The **Grid** checkbox, when checked, identifies the active area in the WeatherViewer canvas by surrounding the active area with a red rectangle.
- The **S-Hem** checkbox, when checked, identifies the area as in the Southern Hemisphere.
- Selections made in the **Dir** combo box specify the wind direction, in degrees.

  0 degrees and 360 degrees are identical.
- Selections made in the **Speed** combo box specify the wind speed in knots.

Top Toolbar Additions for Text

The Editor **Create Wind Barb** button produces the Top Toolbar as shown in Figure 4.19.

Figure 4.19 Top Toolbar for Create Text



- The **Copy** checkbox, when checked, sets the WeatherViewer in copy mode. A copy of the selected feature is created where the left mouse button is clicked.
- The **Grid** checkbox, when checked, identifies the active area in the WeatherViewer canvas by surrounding the active area with a red rectangle.
- The **Blank** checkbox, when checked, set the selected text to the foreground hue and the text background to the background hue.

*After **Blank** has been checked, blanking is applied to all new text entries.*

To execute blanking on a current text entry, at least one new character must be entered after blanking has been checked. If all characters of the current text entry have been made, delete and re-enter the last text character.

- Selections made in the **Horz** combo specify the direction of text growth.
  - **Right** causes the right boundary of text to be fixed and to grow toward the left.
  - **Left** causes the left boundary of text to be fixed and to grow toward the right.
  - **Center** causes the center of text to be fixed and to grow toward both left and right.
- Selections made in the **Vert** combo box specify the vertical orientation of the text. Candidate selections are **Top**, **Capital**, **Half**, **Base**, and **Bottom**.
- Selections made in the **Size** combo box specify the text font size.

Primary Dialog Panels

Area of Interest Dialog (AOIDialog)

The AOIDialog is used to create background files on the server. These background files contain the specified area of interest determined by the user.

With a map product displayed in the WeatherViewer canvas, it is a two-step process to display the AOIDialog:

1. On the Menubar, select
   View > Define Region for > Area of Interest (AOI).
2. Press the left mouse button and a pink rectangle will appear.

   Dragging the cursor will resize the pink rectangle.

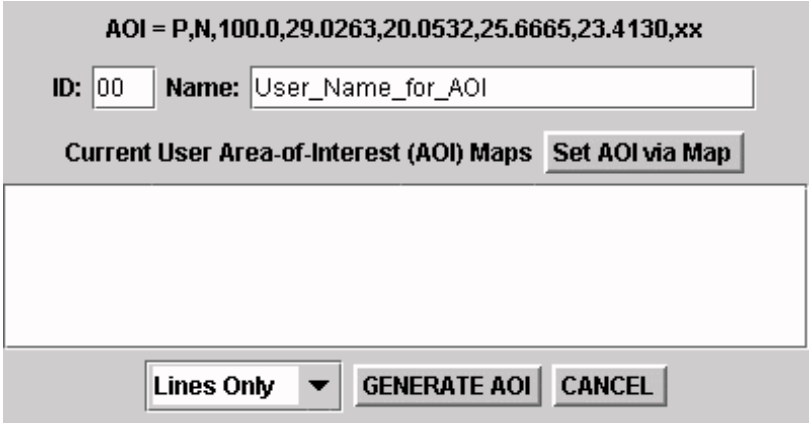
   When the pink rectangle encloses the desired area of interest, releasing the mouse button will display the AOIDialog.

Alternatively, do the following:

1. Simultaneously press the control key (Ctrl) and the right mouse button and a pink rectangle will appear.

   Dragging the cursor with the control key and right mouse button depressed will resize the pink rectangle.

When the pink rectangle encloses the desired area of interest, releasing both the control key and the mouse button will display the AOIDialog.



The AOIDialog contains:

- The **ID** text entry field is a two-character field used internally to identify the location and orientation of the map. The **ID** text entry field characters may be upper case alphabetic or numeric characters.

  The **ID** text entry field is prefixed with a 'U' in map entries in the database created with this tool.

  The value of the **ID** text entry field should be different from any others for every map created from a new user generated area of interest. This is because the ID is associated with the complete projection data of the map. The map projection includes corner latitudes, projection type, orientation, and all parameters needed to define this map.

- The **Name** text entry field is an identifier that is appended to the **ID** value with an underscore. The **Name** text entry field may contain alphanumeric characters and underscores. Illegal characters are converted to underscores.

- The **Area of Interest List** contains a singly selectable list of all area of interest files in the server's database. It is provided to permit new maps of the same area but with alternative characteristics to be generated.

- The **Set AOI via Map** button will load for modification the background file selected in the Area of Interest List. A new map of the selected background area can then be created which is a line map instead of a colored area map or vice versa.

  When creating such a new map, the **ID** field should remain the same while the **Name** field should be different. Not changing the **Name** field will result in the new map file overwriting the selected map file.

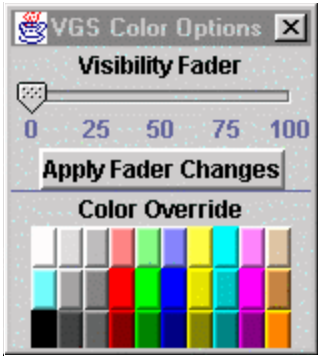
- The **Type Selector** combo box contains format display selections. These selections include:
  - The **Lines Only** entry creates a map of a colored map outline on a white background. The hue of the outline is selectable using the VGS Color Options dialog, which can be displayed from the Layer List dialog.
  - The **Filled Areas** entry creates a map containing blue areas for oceans and brown areas for land. Area hues are NOT selectable. Should you make a hue selection in the VGS Color Options dialog, the entire canvas is uniformly displayed in that hue. To restore, the map, select the white tile of the Color Tile Group of the VGS Color Options dialog.
- The **GENERATE AOI** button creates a new map on the server in the specified area and of the specified type. It is identified by the concatenation of the **ID** number preceded by a 'U' and the name. The two are joined by an underscore. After the file is loaded on the server, the AOIDialog is removed.
- The **CANCEL** button removes the AOIDialog and deletes any activity performed in it.

Color Dialogs

The Color dialog allows for color override control and implements fading of the product (vector, grid, and image). Color dialogs vary among product types: VGS Color Options dialog, Image Color Options dialog, and Grid Color Options dialog.

VGS Color Options Dialog

The VGS Color Options dialog provides the capability to change both the color and opacity of all the elements of a vector graphic product.



The VGS Color Options dialog contains three components:

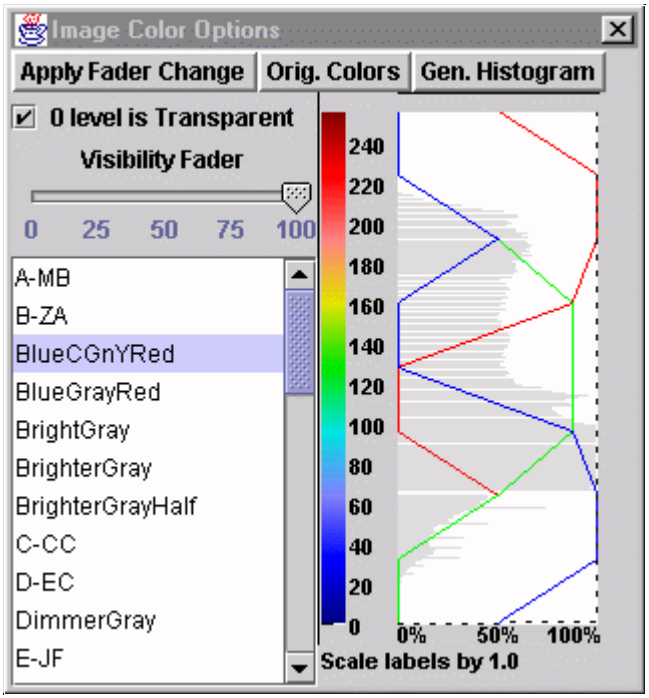
- **Apply Fader Changes** applies the current **Visibility Fader** slider value to the selected product in the Layer List File List. To apply, click the left mouse button.
- The **Visibility Fader** specifies the opacity value of the VGS contents. To set the value, drag the slider with the mouse button pressed. The slider may also be moved by pressing the mouse button within the slider track.

  Zero represents transparent and one hundred represents fully opaque. Although the slider adjusts the opacity value, this value is not changed by moving the slider.
- The **Color Override** group is a collection of 30 elements of varying hues and gray scale values. Clicking a tile with the left mouse button applies that color to the workchart elements of the product.

  The entries made here override those made for individual features in the product. To allow those to be displayed, click on the white tile.

Image Color Options Dialog

The Image Color Options dialog associated with single sensor channel or depth images, when it is initially displayed, contains buttons to apply specified opacity, restore original colors, and display a histogram of colors used. It also contains a checkbox to set the lowest color value to transparent, a slider to specify the contents opacity value, and a list of selectable color schemes.



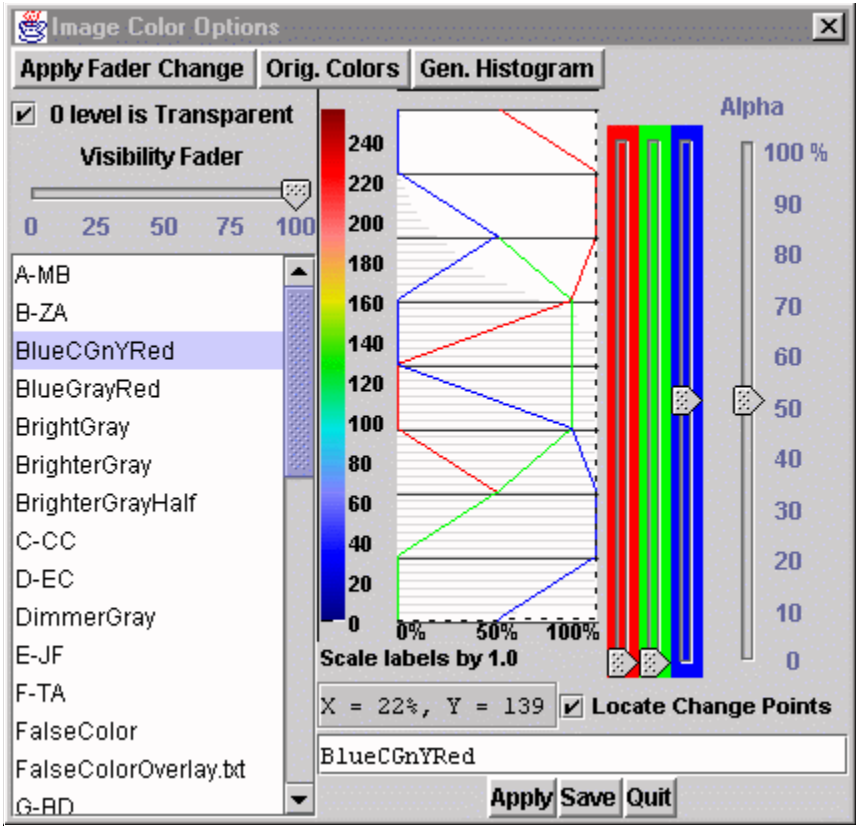
The Image Color Options dialog, when initially displayed, contains seven components:

- The **0 Level is Transparent** checkbox, when checked, sets to transparent the lowest value on the color scale. This normally results in the background value or the black value being transparent. This is used to facilitate overlaying of images. Whatever is beneath an opaque section of image cannot be displayed.
- The **Visibility Fader** slider is identical in function and purpose to the **Visibility Fader** slider above.
- The Histogram panel displays two sets of data: a histogram of the grayscale or color content of the image and a map of the percentage of grayscale or red-green-blue and opacity over the range of possible color values.
- **Apply Fader Change** is identical in function and purpose to the **Apply Fader Changes** button above.
- **Orig. Colors** restores the color selection displayed when the product was originally selected.

- **Gen. Histogram**, when clicked, with the left mouse button generates a histogram of the gray-scale or color content of the image. This feature can aid in editing color curves.
- The Color Selections list is a singly selectable list of gray-scale entries and color grouping entries. Selecting a color selection entry with the left mouse button will apply it to image selected in the Layer List File List. Its color or gray-scale composition curve and opacity curve will be displayed in the histogram panel.

  The Color Selections Editing popup is displayed when a list entry is clicked with the right mouse button.

If the **Edit Color Graph** entry of the Color Selections Editing popup is clicked with the left mouse button, the red-green-blue/grayscale and opacity curves within the Histogram panel are made editable.



To facilitate editing, the following additional features are provided:

- **Locate Change Points** checkbox. Each of the red-green-blue/grayscale and opacity curves are drawn as a set of straight line segments. The

points where any of the curves change slope are called change points. The color curves are edited at the change points. A change point is selected for editing when it is clicked with the left mouse button.

The **Locate Change Points** checkbox, when checked, locates each of the change points by displaying a black horizontal line across the Histogram panel.

- **Color and Alpha** sliders. The red, green, and blue sliders individually adjust the red-green-blue curves at the selected change point.

  The red, green, and blue sliders move synchronously to adjust the single gray-scale line at the selected change point.

  The Alpha slider adjusts the dashed opacity line at the selected change point.

- The **Cursor Position** box lists the current position of the cursor when it is in the Histogram panel as a set of x-y coordinates. The units of both the horizontal position and vertical position are listed according to coordinate scaling.

- The **Save As** text field lists the file name of the modified color curve. Alphanumeric, underscore, and dots are the only accepted characters. When a non-accepted keystroke is entered, it is replaced with an underscore.

- **Apply** displays the changes to the Histogram panel in the WeatherViewer image.

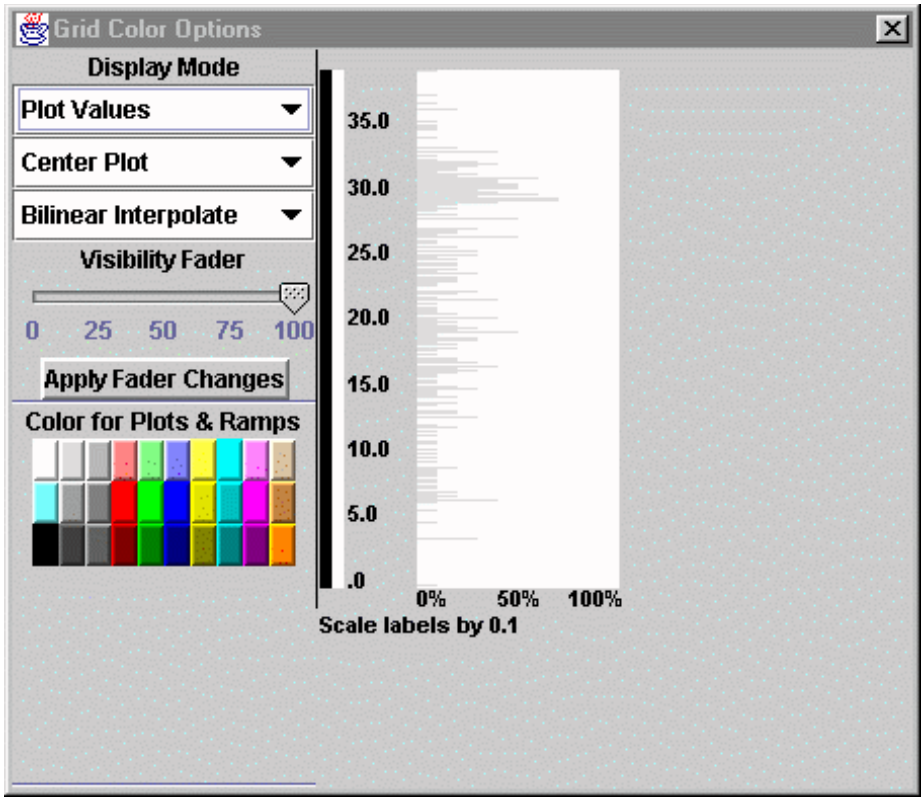
- **Save** saves the changes to the Histogram panel to a file specified in the Save As text field.

- **Quit** restores the Image Color Options dialog to the format displayed when it was first displayed, i.e. without editing facilities.

Grid Color Options Dialog

The Grid Color Options dialog when it is initially displayed contains six major components. These include three combo boxes to specify state, a

color tile group, a slider to specify the opacity value of the grid contents, and a button to apply the specified opacity of the grid contents to the product.



The Grid Color Options dialog, when initially displayed, contains six components:

- **Display Format** combo box. The top combo box lists the grid display formats. These include:
  - **Plot Values**. The grid is represented as a matrix of numbers displayed in the WeatherViewer canvas.
  - The **Linear Ramp** transforms the grid matrix pattern into a false color pattern. The **Linear Ramp** provides a linear relationship between the range of grid values and the range of color densities.

    The WeatherViewer canvas is subdivided into areas, in the center of which is the grid value. The number of areas is determined by the size of the grid matrix.

Each area is assigned a color density relative to its grid matrix value. The color density values are read from the color curve in the Histogram panel.

The opacity values vary as the color density values with transparent at the bottom and opaque at the top.

- The **Opaque Ramp** is similar to the **Linear Ramp** except that the false coloring is fully opaque over the range of color densities. Any product below the level of the grid product will not be visible. In the Layer List, no products above the grid product will be visible.
- The **Color Table** is the most versatile method of representing a grid matrix by false color. The shape of the color curve may be adjusted at each point along the ordinate of the Histogram panel. Red-green-blue curves are independently modifiable.

- The **Grid Value Location** combo box locates the grid value at one of nine positions within a grid area.

  This is provided so that when multiple grids are displayed in **Plot Values** mode in the WeatherViewer canvas, grid values need not overlay one another.

- **Color Uniformity Select** combo box. For **Nearest Neighbor**, hue and alpha are constant over each of the grid areas. This produces a patchwork appearing false color display. Hue and alpha are determined by value at the corresponding grid position.

  For **Bilinear Interpolate**, there is a smooth color transition from grid to grid over the entire WeatherViewer canvas. The hue and alpha is interpolated between each cell and its four bounding cells.

- The **Visibility Fader** slider is identical in function and purpose to the **Visibility Fader** slider above.
- The **Apply Fader Changes** button is identical in function and purpose to the **Apply Fader Changes** button above.
- The Histogram panel is identical in function and purpose to the Histogram panel above.
- The **Color Selections** list is identical in function and purpose to the **Color Selections** list above.

When the **Display Format** combo box is set to **Color Table**, values may be edited by right clicking the color selection and then selecting the **Edit Color Graph** entry with the left mouse button. This results in the red-green-blue/grayscale and opacity curves within the Histogram panel being made editable.

To facilitate editing, the **Locate Change Points** checkbox; **Color and Alpha** sliders; **Cursor Position** box; **Save As** text field; and **Apply**, **Save** and **Quit** buttons are provided. These are all identical in function and purpose to those listed above.

Composite List Dialog (CpsListDialog)

The CpsListDialog provides creation and editing capabilities for the persistent slide-show display sets. Each composite entry in the composite Product List of the CpsListDialog corresponds to an associated Top Toolbar numbered composite display square. The composite product displayed during a slide-show and identified by a yellow background display square will thus be the corresponding member of the composite Product List.

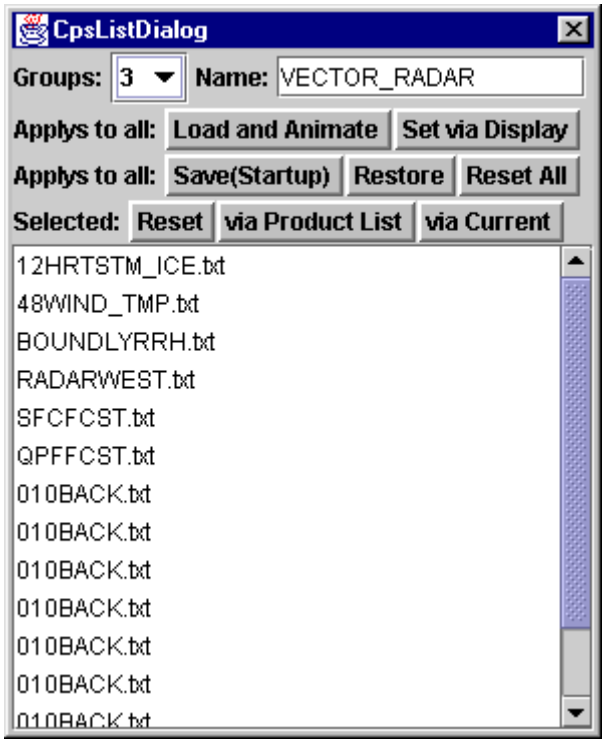
The elements of the CpsListDialog include a combo box, a text entry field, a Product List, and eight control buttons.

To initiate the CpsListDialog, do the following:

1 From the Menubar, select **Composite** > **Edit Composite List…**.

The CpsListDialog appears (see Figure 4.20).

Figure 4.20 CpsListDialog



A functional description of the CpsListDialog includes the following:

- The **Groups** combo box selects the group to be created and/or displayed.
- The **Name** text entry field assigns a name to the group selected in the Group combo box. This name is displayed when **Composite** > **User Composite List** is selected from the Menubar. The default name is the numeric value in the **Groups** combo box.
- The **Load and Animate** button provides the only mechanism to initiate persistent slide-shows. The slide-show will begin with the first product.
- The **Set via Display** button loads the entire group currently set for display into the set selected in the **Groups** combo box. This provides a convenient method to create a slide-show. To create a slide-show using this method, see "Creating Slide Shows" on page 4-91.
- The **Save(Startup)** button saves the displayed list of single composites and composite animations by user login name on the N-TFS Server.

  NOTE: All changes to this dialog are instantly updated in the toolbar. The setup need only be saved if these changes are to be made persistent.

- The **Restore** button reloads the Product List with whatever elements are persistent (saved) for the current group. The elements of the group must have been saved for the **Restore** button to perform a restore.
- The **Reset All** button sets all of the elements of the selected group to none. Nothing will be displayed during a slide-show.
- The **Reset** button sets the selected element of the selected group to none. During a slide-show, the reset element will be skipped. It will not effect the slide-show in any way.
- The **via Product List** button performs a copy of the selected list entry in the ProdListDialog to the selected composite list entry in the Product List of the CpsListDialog. This requires the ProdListDialog be displayed. A composite product must be selected in the ProdListDialog as well as an element position in the CpsListDialog.
- The **via Current** button performs a copy of the composite currently displayed in the WeatherViewer canvas to the selected composite Product List entry of the CpsListDialog.
- The Product List in the CpsListDialog is a singly selectable list of up to 15 composite products. In addition to the entry and deletion capabilities provided by the CpsListDialog buttons, the relative position of elements to each other can be changed.

To reposition a product in the CpsListDialog Product List, do the following:

1 With the left mouse button depressed, drag the selection to its new position and release the mouse button.

Edit Save Dialog (DialogEditSave)

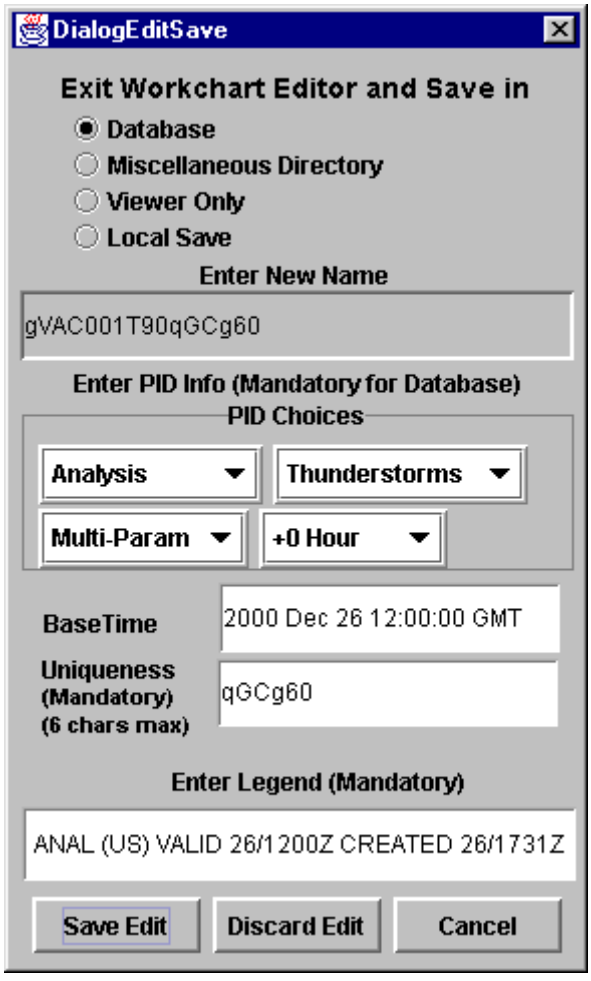
The Edit Save dialog enables the user to save the results of an editing session as a new product.

The Edit Save dialog is initiated by doing the following:

1 From the Left Toolbar, select the **Save and Exit** button.

The Edit Save dialog appears (see Figure 4.21).

Figure 4.21 DialogEditSave



A description of the Edit Save dialog follows:

- At the top of the dialog, the system location where the newly named product is to be stored is entered via one of four radio buttons:
  - **Database.** Saves the product in the server's database.
  - **Miscellaneous Directory.** Saves the product in a special directory on the server reserved for products that are not necessarily defined.
  - **Viewer Only.** Saves the product on the WeatherViewer as a temporary image.
  - **Local Save.** Saves the product in the local database.

Clicking on one of the radio button entries selects it.

- The PID of the new product is comprised of the predefined prefix specified in the window under the **Enter New Name** title and the selections made in the four combo boxes beneath that window.

  Text may be entered into the window when the product is to be saved in the Miscellaneous Directory only.

- A portion of the PID is also formed from the selections of the four combo boxes under the **PID Choices** title. The top two combo boxes list product types and elevation levels/categories. The bottom two combo boxes list parameter types and forecast hours.

  Clicking on one of the entries of the combo box menu will select that entry.

- The time the product was saved is listed in the text entry field titled **BaseTime**. This time is intended to help define at what time the saved product is valid. The **BaseTime**, when adjusted by the forecast hours, defines when the product is valid.

  The **BaseTime** is preset when the Edit Save dialog is created. This also displays the **BaseTime** format.

  For products without a base time, the **BaseTime** contents may be edited.

- The PID also contains a six-character suffix that is intended to ensure its uniqueness. This six-character suffix is entered into the **Uniqueness** text entry field. **Uniqueness** is composed of alphanumeric and underline characters. All other characters are converted into an underline.

  Uniqueness is not required for products stored in the Miscellaneous Directory.

- A legend describing the product is entered in the text entry field titled **Enter Legend**.

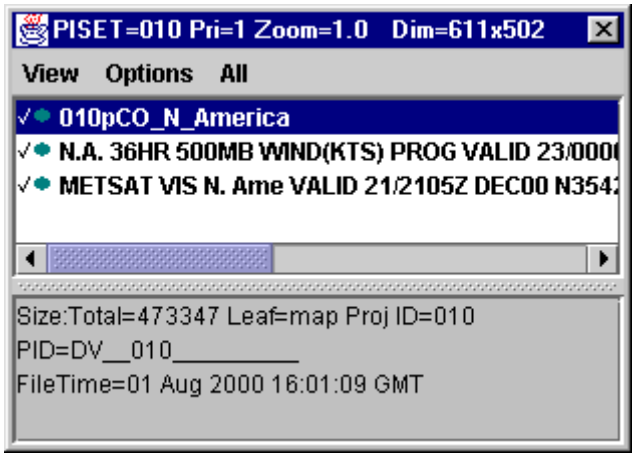
- The **Save Edit** button, when clicked, will save the contents of the editing session to the specified location and remove the **Edit Save** dialog.

- The **Discard Edit** button, when clicked, will terminate the editing session, remove the Left Toolbar, and delete from the WeatherViewer image any features entered there.

Layer List Dialog

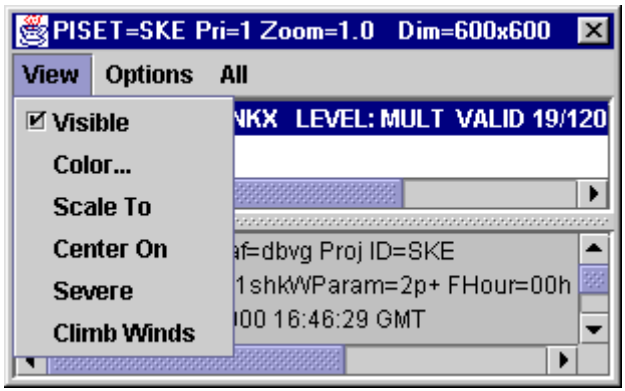
The Layer List dialog lists the components displayed in the WeatherViewer. It is the primary dialog for controlling images within the WeatherViewer.

Figure 4.22 Layer List Dialog



The selections of the Layer List **View** menu (see Figure 4.23) are described as follows:

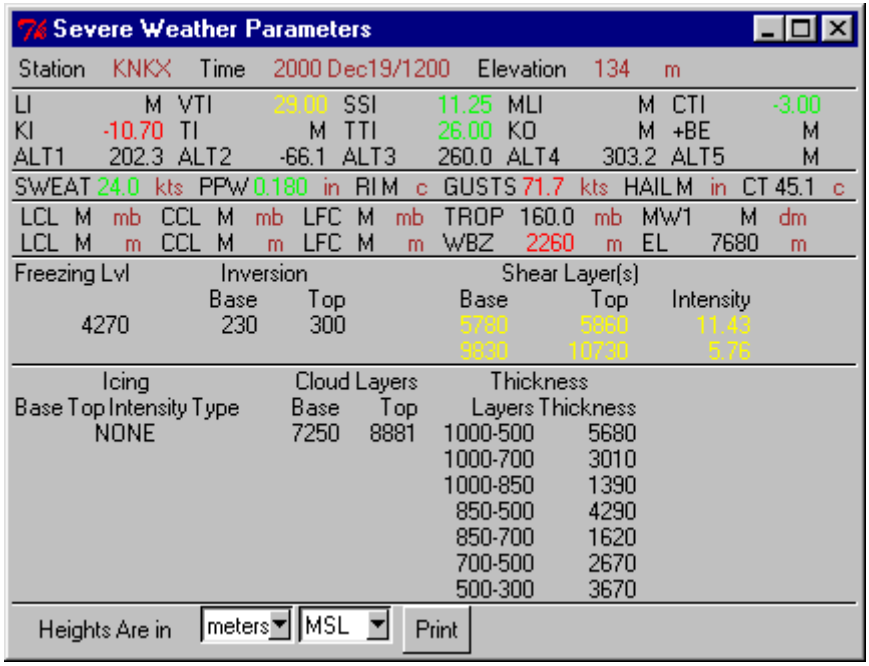
Figure 4.23 Layer List View Menu



- **Visible**, when checked, causes the WeatherViewer display of the selected file in the Layer List File List to be visible. **Visible**, when not checked, causes the display of the selected file to be invisible.
- **Set Color** displays the Color Options dialog suitable for the selected entry. This enables the modification of the color characteristics of the selected product.
- **Scale To** sets the selected entry to standard format. Also the image boundaries are set to those of the WeatherViewer canvas and the image is centered in the WeatherViewer canvas.

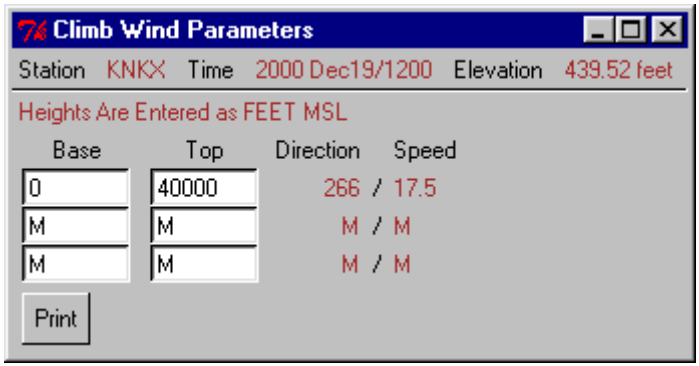
- **Center On** centers the product in the WeatherViewer canvas. The image is also oriented so that the reference longitude is at 90 degrees from the horizontal.
- **Severe** displays the Severe Weather Parameters panel.

Figure 4.24 Severe Weather Parameters Panel



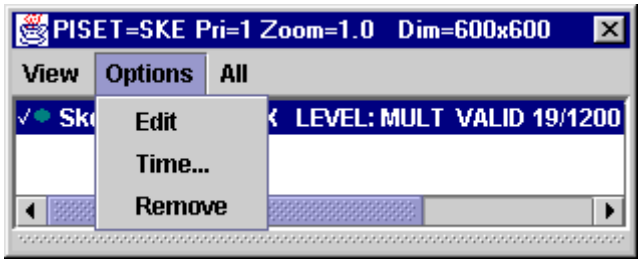
- **ClimbWinds** displays the Climb Wind Parameters panel.

Figure 4.25 Climb Wind Parameters Panel



The selections of the Layer List **Options** menu (see Figure 4.26) are described as follows:

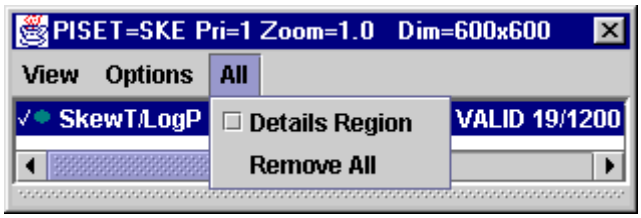
Figure 4.26 Layer List Options Menu



- **Edit** enables the editing of products by displaying the appropriate editor functions either on the Top Toolbar or on the left side of the WeatherViewer.
- **Time…** displays the Time Options dialog.
- **Remove** removes the selected file from the Layer List File List.

The selections of the Layer List **All** menu (see Figure 4.27) are described as follows:

Figure 4.27 Layer List All Menu



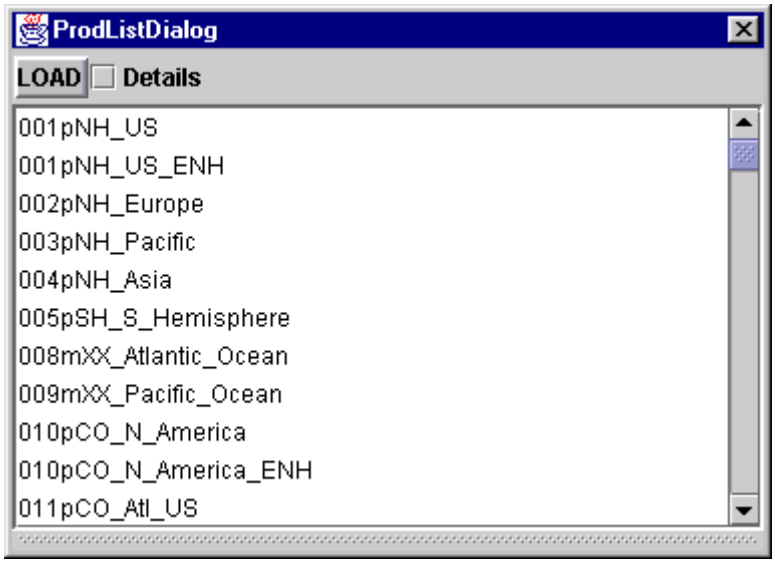
Details Region, when checked, displays the Layer List File Details beneath the File List (**Details Region** is checked in Figure 4.22, unchecked in Figure 4.27).

Remove All deletes all files from the Layer List File List and clears the WeatherViewer display.

Product List Dialog (ProdListDialog)

The ProdListDialog (see Figure 4.28) displays the products resulting from a search. The search may have been initiated by the Search Criteria dialog or by one of the fixed searches initiated from the Menubar **Search** menu. The ProdListDialog consists of a list of products, a button to display the selected product in the WeatherViewer, and a check initiating the display of file characteristics of the selected product.

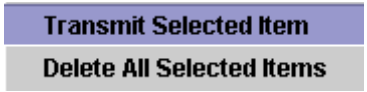
Figure 4.28 Product List Dialog (ProdListDialog)



- The list of product selections is initially at the bottom of the dialog. Clicking on the desired product highlights it.
- The **LOAD** button, when clicked, displays the selected product in the WeatherViewer.
- The **Details** checkbox, when checked, creates a window below the list of product selections window if it does not already exist. The file characteristics of selected product display entry is then displayed in this window.

The Transmit/Delete popup is displayed whenever a right click occurs on a product(s) in the Product List of the ProdListDialog.

Figure 4.29 Transmit/Delete Popup

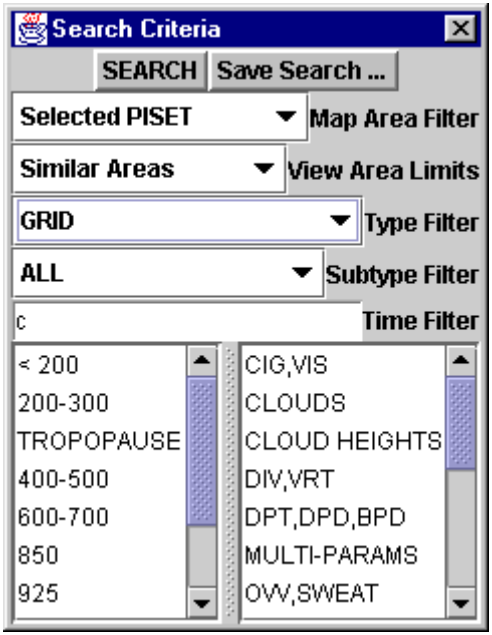


- **Transmit Selected Item** enables the transmission of the selected product by displaying the Transmit dialog.
- **Delete All Selected Items** deletes from the server all products selected in the Product List of the ProdListDialog.

Search Criteria Dialog

The Search Criteria dialog enables the user to search for products in the product database. The dialog consists of several groups of database search keys, a button to display the results of the search, and a button to locally save the collection of selected search keys.

Figure 4.30 Search Criteria Dialog



The search key groups include the combo box selections of **Map Area Filter**, **View Area Limits**, **Type Filter**, and **Subtype Filter**; the text field selection of **Time Filter**; and the lists of pressure levels and weather parameters. The search keys enable the user to locate any of the products in the database.

- The Pressure Levels list is displayed in a lower left column and the Weather Parameters list displayed in a lower right column.
- The Pressure Levels list and Weather Parameters list are both visible for **Type Filter** selections of vector graphic, grid, and grib products.
- The Weather Parameters list alone is visible for **Type Filter** selections of image, vertical, and alphanumeric products.

To initiate a search of the database, do the following:

1 Select one of the keys from **Map Area Filter**, **View Area Limits**, **Type Filter**, or **Subtype Filter** by clicking on the selected combo box and then on the selected menu entry.

2 Set the key for the **Time Filter** by using either a version description or a date/time description. Do one of the following:

- To use a version description, the default '**c**' (current) entry defines the last version created. You can specify an earlier version by entering **c-1**, **c-2**, **c-3**, etc. The larger the number, the earlier the version.

  The format requires that no spaces be used in specifying the version number.

- To use a date/time description, delete the preset '**c**' character and enter a time code. The time code format is {two-digit day of the month}/{two-digit hour}{two-digit minute}. The hour is based on a 24 hour clock. For example, 10/0230. This indicates the tenth day of the month at 0230 hours. The month is normally implied to be the current month. If the entered day value is greater than the current day value, then the month implied is the previous month.

3 Select one of the keys from either the Pressure Levels list or the Weather Parameters list by clicking on a list entry.

4 Click the **Search** button to initiate a search of the database based on the selected entries in each of the search keys. The search results are displayed in the ProdListDialog.

5 Select **Save Search...** to display the UserListDialog. The UserListDialog enables the user to save his Search Criteria search keys under an identifying name.

Time Options Dialog

The Time Options dialog (see Figure 4.31) is invoked by selection of **Options > Time...** from the Layer List dialog. The Time Options dialog sets the time characteristics for a single product and the animation control parameters. Animations are comprised of a series of products. These products may originate from a variety of sites that distribute weather products. Each element of the animation series must be a version of the same product displaced in time.

Figure 4.31 Time Options Dialog

The Time Options dialog consists of:

- **Apply Changes** sets the time parameters selected into the single product or animation product selected in the Layer List File List. Once complete, the Time Options dialog is removed.
- The **Time** text entry field accepts a product version number or a time code. The default **c** entry specifies the current version (most recent) of the product. A - character followed by a number can follow the **c** to indicate a prior version of the product, for example, **c-2**.

  A second mechanism of time entry of the created file is also provided. After removing the predefined **c**, the user enters a time code. The time code format is {two digit day of the month}/{two digit hour}{two digit minute}. The hour is based on a 24-hour clock. For example, 10/0230 indicates the tenth day of the current month at 0230 hours.
- The **Multi-Time Options** checkbox, when checked, enables the animation mode functions below. If the checkbox is unchecked, the Time Options dialog is used for a single product.
- The **Step Limit** combo box is used to select the number of elements in an animation sequence. The number can very between 1 and 24.
- The WeatherViewer can simultaneously animate time sequences of several products with different PIDs. Products may have one or more frame elements missing. The **Show Interval** combo box specifies when to substitute a product's earlier existing frame for the later missing frame. The entries specify the maximum time interval beyond which no frame for the missing time will be displayed.

  For either animation direction, the product's effective time must be less than the selected time to be included.

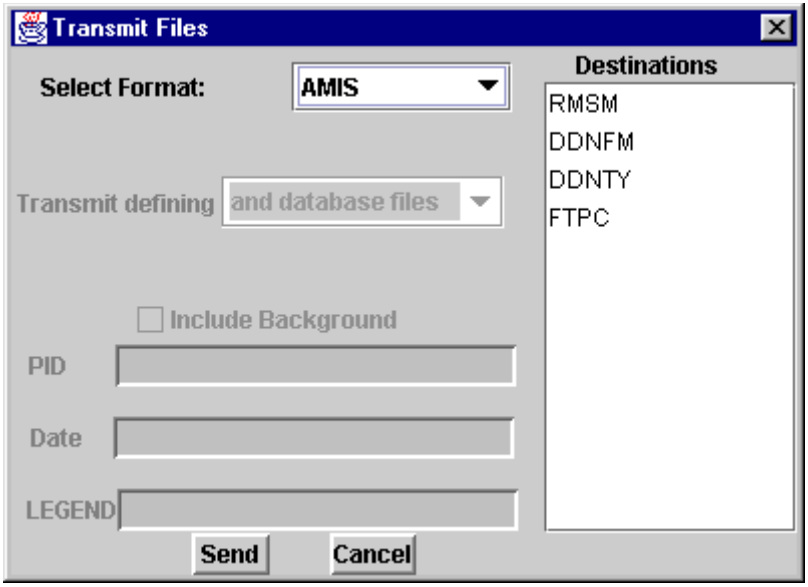
  The zero reference is the time of the last existing element for any product.

  If no acceptable substitute is available for that frame, no product will be displayed in the missing time interval.

Transmit Files Dialog

The Transmit Files dialog (see Figure 4.32) directs the transmission of all files.

Figure 4.32 Transmit Files Dialog



The Transmit Files dialog is described as follows:

- The **Select Format** combo box provides a selection of destination formats. Image products and all vector graphic products are transmittable to all formats. Although some individual products are not transmittable to GIF/JPG and NITF destinations, composite products containing them are convertible to an appropriate image for transmission to these destinations. The candidate destination formats are:
  - **AMIS** is selected when transmitting to other AMIS sites. Selecting the **AMIS** format ensures that an exact copy of the file is transmitted. All files created or edited by the WeatherViewer can be transmitted using this format.
  - **External** is selected when transmitted to sites that can process Air Force Appendix 30. Individual color curve files, grid products, and GIF/JPEG images cannot be transmitted using this format.
  - **GIF/JPG** is selected when image files are transmitted to a destination capable of receiving them. AMIS products and composite products are converted to a GIF/JPEG image for transmission to these sites.

Individual color curve files, grid products, and background products cannot be transmitted using this format.

  - **NITF** is selected when image files are transmitted to a site capable of receiving them. AMIS products and composite products are converted to a NITF image for transmission to these sites. Individual color curve files, grid products, and background products cannot be transmitted using this format.

- The **Transmit defining** combo box allows the user to select additional files when transmitting composite products to other AMIS sites. The candidate additional files for transmission are:
  - **and database files** causes database files associated with the composite to be included in the transmission.
  - **and all files** includes any additional files associated with the composite to be included in the transmission.
  - **only** sends the composite definition only. This is for use when the receiving site has the database and other files in their system already.
- The **Destinations** list is a multi-selection list containing all the destination sites for the format selected.
- The **Include Background** checkbox, when checked, will also transmit the background file assigned to the PI Set of the file already being transmitted. If no background file is assigned to the PI Set, no background file is transmitted.
- The **PID** text entry field contains a user-generated product identification number for the file(s) to be transmitted.
- The **Date** text entry field contains a user-generated date for the file(s) to be transmitted. The entry format is date/time GMT.
  - The date format is *yyyymmmdd*, where *yyyy* is a four-digit year, *mmm* is a three-character month, and *dd* is a two-digit day of the month.
  - The time format is Greenwich Mean Time specified as four-digit military time.
  - An example **Date** text entry is 2000Jan01/1515 GMT.
- The **LEGEND** text entry field contains a user-generated descriptive comment about the file(s) to be transmitted. All printable characters are allowed.
- **Send** initiates transmission. The Transmit Files dialog is then dismissed.
- The **Cancel** button dismisses the Transmit Files dialog.

NOTE *The **PID, Date**, and **LEGEND** text entry fields are active only when all of the following conditions are met:*

- **External** format is specified for the transmission.
- The file(s) to be transmitted are a composite file set or any single image, vector graphic, or vertical file.
- The **Include Background** checkbox is checked.

NOTE *When initially displayed, the **PID, Date**, and **LEGEND** text entry fields contain a value which depicts the format for the entry. This formatting represents the current system time and an acceptable PID. Make changes, if appropriate, and transmit the product.*

User List Dialog (UserListDialog)

The UserListDialog enables the user to generate and maintain a local list of search criteria sets. These search criteria sets are the search key group selections made in the Search Criteria dialog. The UserListDialog consists of a text entry field for the new criterion set name, a list of the existing search criterion set names, a button to add new search criterion set name to the list, and a button to delete a single member of the list.

The text entry field for entering new search criterion set names is at the top of the UserListDialog. The name entered may include alphanumeric and underscore characters. There is no limit to the length of the name.

The display list is at the bottom of the UserListDialog. The display list accommodates 12 entries containing search criteria sets. To add a new set, if

the display list is already displaying a full complement of 12 sets, delete one of the displayed sets.

To reposition a member of the search set, do the following:

1 Drag the selection to its new position with the left mouse button depressed and release the mouse button.

To add the new search criterion set name to the display list, do the following:

1 Select **Append**.

To delete an entry of the display list, do the following:

1 Select the entry to be deleted.

2 Select **Delete**.

To access the search results of one of the search criterion sets, do the following:

1 On the Menubar, select **Search** > **User Defined**, and then click the selection.

Basic Operations

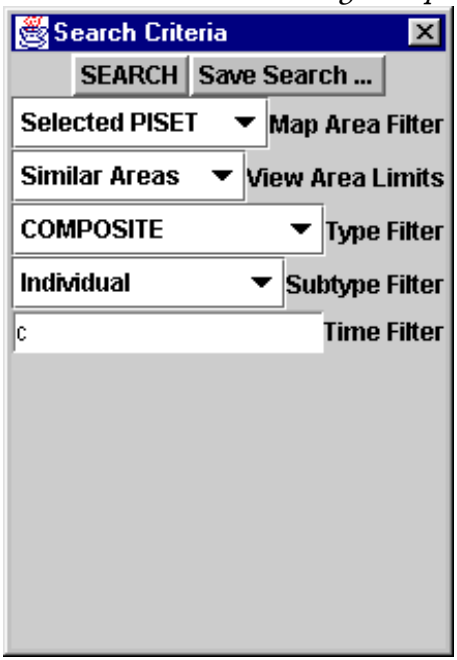
Displaying a Product

AMIS supports the search and display of all products in the accessible database. To search for and display a product in the database, do the following:

1 Display the Search Criteria dialog by doing one of the following:

- On the Menubar, select **File** > **Open**.
- On the Top Toolbar, click the **Add Weather Component** button.
- On the Menubar, select **Search** > **New**.

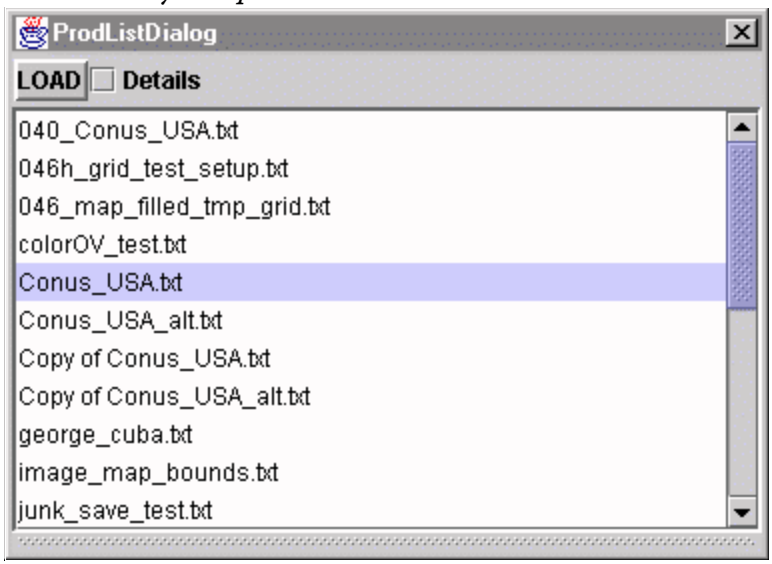
The Search Criteria dialog is displayed.



2 Select a search parameter for each of the filter fields of the Search Criteria dialog.

3 Click the **SEARCH** button with the left mouse button.

The ProdListDialog is displayed. It contains the list of database products that meet your specified search criteria.



4 Select a Product List entry.

5 Click the **Load** button with the left mouse button.

The selected product is displayed.

Deleting Display Contents

To remove a single product at a time from the WeatherViewer, do the following:

1 On the Layer List dialog, select **Options > Remove**.

To remove all products from the WeatherViewer, do one of the following:

- At the Menubar, select **Composite >Clear All Layers**.
- At the Layer List dialog, select **All > Remove All**.
- On the Menubar, select **View > Clear Screen**.

  *Note, however, that **Clear Screen** has the side effect of also clearing all composite products of any current slide show.*

Displaying the Layer List Dialog

The Layer List dialog is the primary dialog for controlling images within the WeatherViewer.

1 To display the Layer List dialog, do one of the following:

- On the Menubar, select **View > Layer List**.
- On the Menubar, select **Composite >Show Layer List….**
- On the Top Toolbar, click on the **Show/Edit Layer List** button.

  The Layer List dialog is displayed.

Layer List Popup

The Layer List popup duplicates the Layer List dialog menu functions as a convenience to the user.

To display the LayerList popup, do the following:

1 Display the Layer List dialog by doing one of the following:

- On the Menubar, select **View > Layer List**.
- On the Menubar, select **Composite >Show Layer List….**
- On the Top Toolbar, click on the **Show/Edit Layer List** button.

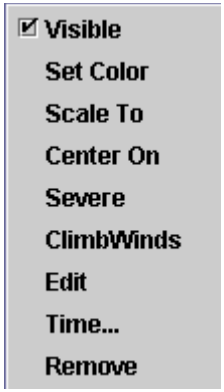
  The Layer List dialog is displayed.

2 From the Layer List File List, select a component description and right click the mouse.

The Layer List popup appears (see Figure 4.33).

See "Layer List Dialog" on page 4-42 for the description of the selections in the Layer List popup.

Figure 4.33 Layer List Popup



Rotate Image

The WeatherViewer enables the user to rotate an image in order to view the image with reference to different longitudes.

To rotate an image, do the following:

1 Do one of the following:

- On the Menubar, select **File >Preferences >PI Set Rotation**.
- On the Menubar, select **View > PI Set Rotation**.

2 Press the left mouse button and drag the mouse in an arc.

The image will rotate in the direction of the arc formed by the mouse.

Reduce Image

The WeatherViewer enables the user to reduce an image down to a minimum level of 0.5 (1/2 the size of the original), where each step doubles the area of the previous step.

To reduce an image, do one of the following:

- On the Menubar, select **View >Zoom Out**.
- On the Top Toolbar, click on the **Zoom-Out (shrink)** button.

Magnify Image

In order to have an intelligible display, some features in a densely packed image are hidden. These features will only become visible under some level of magnification. The WeatherViewer permits the user to magnify an image up to a maximum magnification of 64 (times original size) where each step halves the area of the previous step.

To magnify an image, do one of the following:

- On the Menubar, select **View > Zoom In**.
- On the Top Toolbar, click on the **Zoom-In (Enlarge)** button.

  Each time the button is clicked, the image will enlarge by 1.414.

Restore Image to its Original Size

To restore an image to its original size, do the following:

1 On the Top Toolbar, click on the **Scale To Component** button.

  The image is restored to its original size.

Magnify Selected Area

In order to have an intelligible display, some features in a densely packed image are hidden. These features will only become visible under some level of magnification. The WeatherViewer provides the user with the ability to magnify any portion of the image to the boundaries of the canvas. This method permits a magnification level that is continuously variable. The image may then be dragged by the cursor, so that every part of it is visible.

To magnify a selected area of an image, do the following:

1 On the Menubar, select **View > Define Region for > Zoom/Roam Area**.

2 Press the left mouse button, the map centers on this location.

  A pink rectangle representing the bounds of the enlarged image will appear.

3 Drag the rectangle until the pink rectangle encompasses the bounds to be viewed and release the mouse button.

  The selected image portion is enlarged to fill the entire canvas.

Displaying Alphanumeric Plot Products

Available alphanumeric data in the AMIS database can be plotted graphically over a selected PI Set. When the alphanumeric plot product is

displayed, the user can graphically select any station (or group of stations) on the map, and the system will automatically retrieve and present a list of alphanumeric products (observations, forecasts, etc.) valid for the selected station(s).

To display an alphanumeric plot product, do the following:

1 Load a PI Set into the canvas display area (e.g., 040pRW_CONUS).

Use the procedure "Layer List Popup" on page 4-55 to search and display a PI Set.

The selected map background is displayed.

2 Display the Search Criteria dialog.

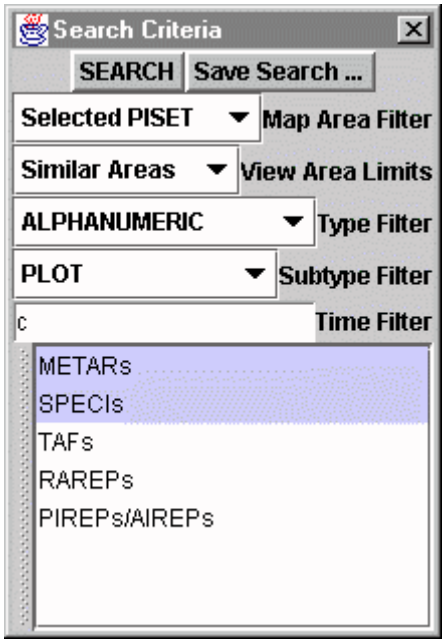
Use the procedure "Layer List Popup" on page 4-55 to search and display a PI Set.

The ***Seach Criteria*** *dialog is displayed.*

3 At **Type Filter**, select **ALPHANUMERIC**.

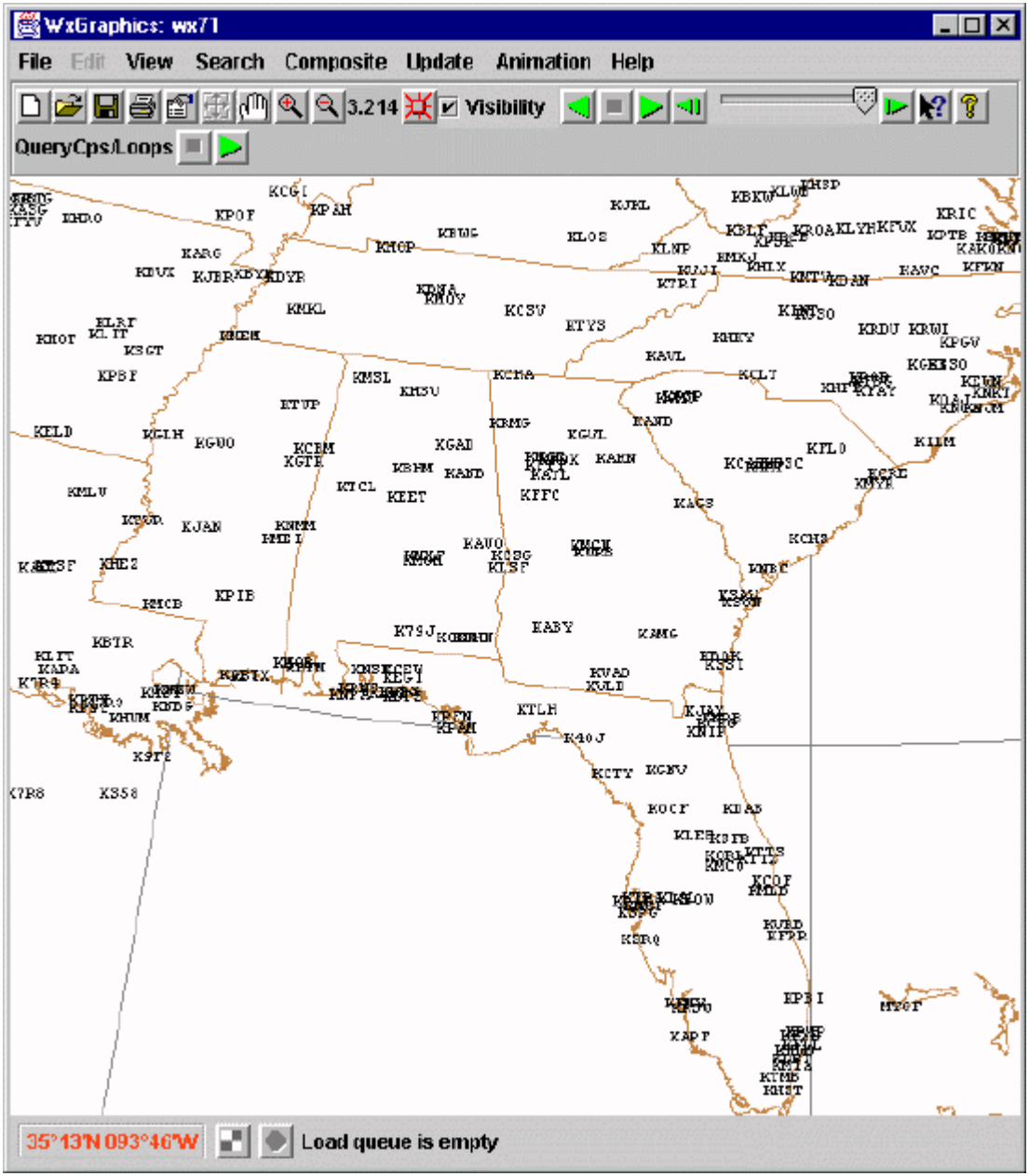
4 At the lower half of the search dialog, select **METARs**, **SPECIs**, **TAFs**, **RAREPS**, and **PIREPs/AIREPs** as desired.

The Search Criteria dialog with the parameters set is shown below.



5 Click the **SEARCH** button with the left mouse button to retrieve the graphical alphanumeric plot product.

The alphanumeric plot product is displayed in the Weather Graphics canvas display area.

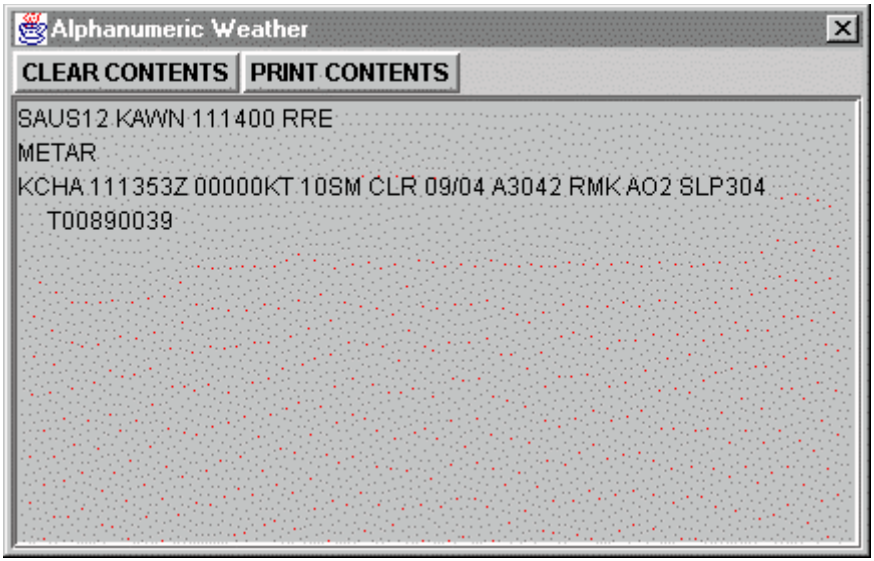


To view alphanumeric products for a single station, do the following:

1 Position the cursor on any station on the map.

2 Click the right mouse button.

The Alphanumeric Weather panel appears listing the available alphanumeric products (e.g., METARs, SPECI) for the station selected.

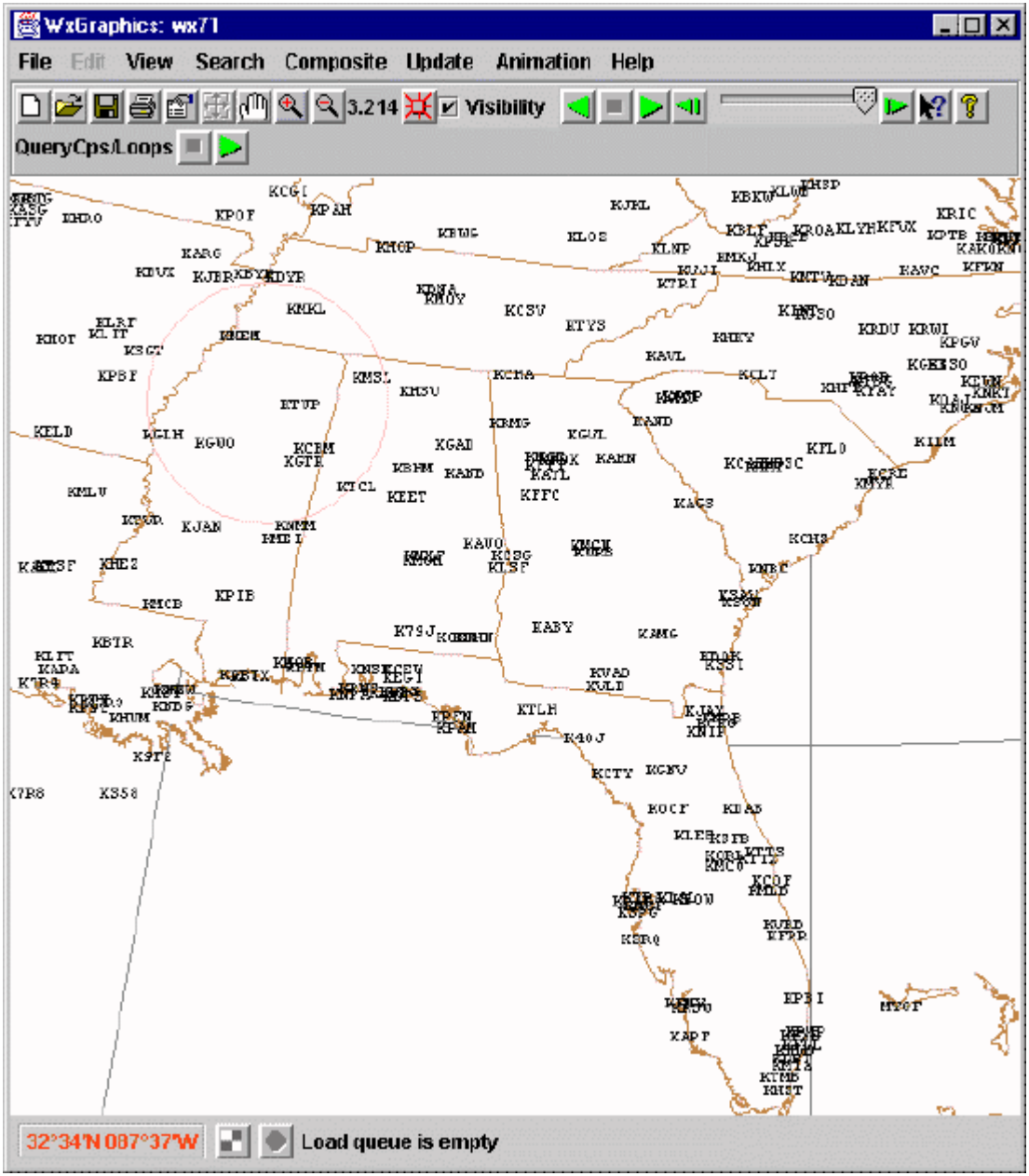


To view alphanumeric products for a group of stations, do the following:

1 Position the cursor at a start point on the map.

2 Depress and hold the right mouse button and drag the cursor outward from the start point.

An expanding/collapsing circle appears on the map defining the area of interest.



3 When the expanding/collapsing circle defines the desired area, release the right mouse button.

The Alphanumeric Weather panel appears listing all of the available alphanumeric products (e.g., METARs, SPECI) for the stations within the selected area.

To clear the list of alphanumeric products from the list, do the following:

1 In the Alphanumeric Weather panel, select **CLEAR CONTENTS**.

The list of alphanumeric products is cleared from the panel.

*Note that the list of alphanumeric products will always be appended on subsequent queries, unless **CLEAR CONTENTS** is selected before each query.*

To print the list of alphanumeric products from the list, do the following:

1 In the Alphanumeric Weather panel, select **PRINT CONTENTS**.

The alphanumeric products are sent to the printer.

Displaying Multiple PI Sets

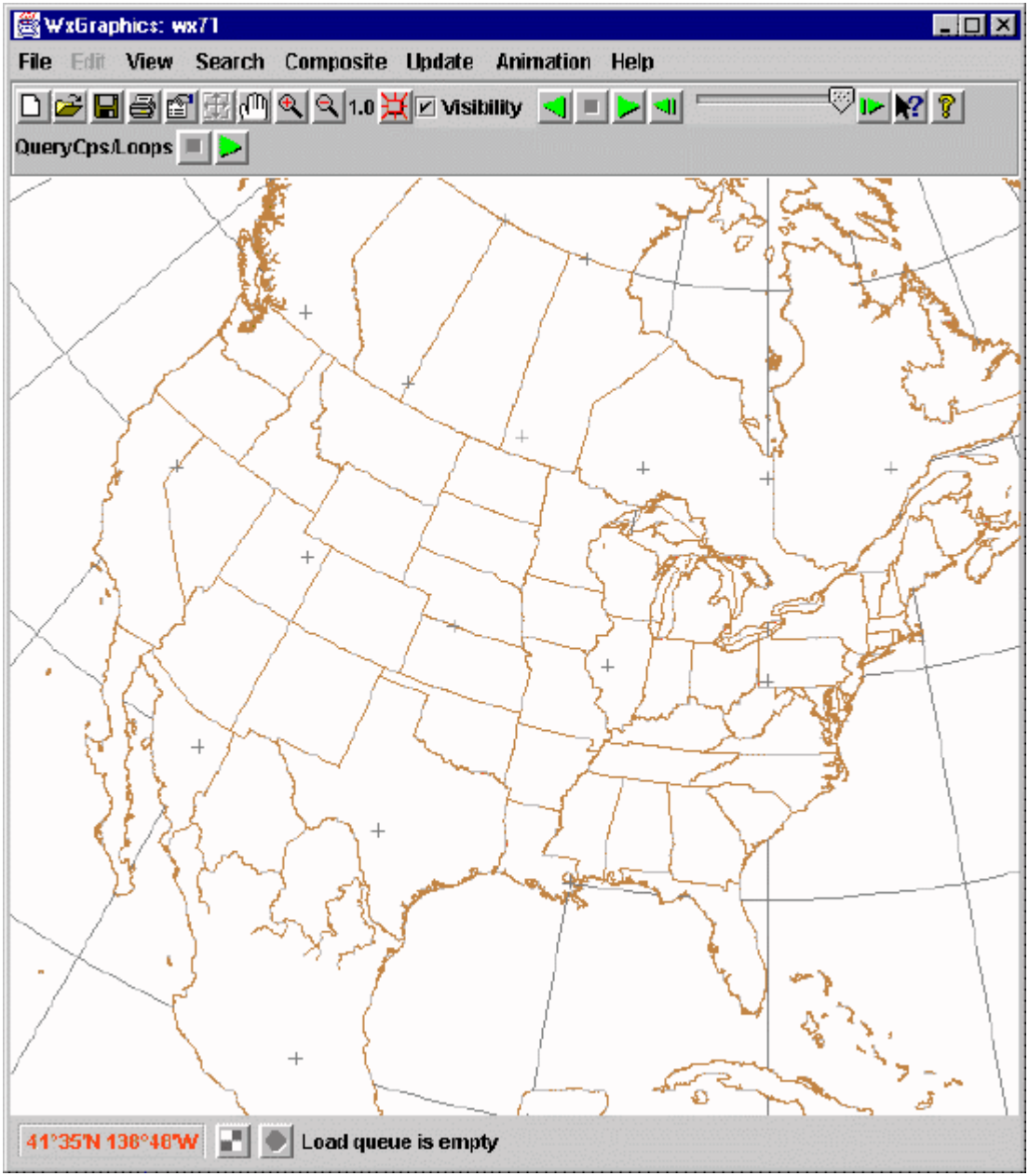
AMIS Weather Graphics supports the display of multiple PI Sets (or graphic products registered to different PI Sets) on the same canvas. The PI Sets and/or products are geographically registered and properly displayed with the correct orientation.

To load products registered to multiple PI Sets, do the following:

1 Load a PI Set 40 into the canvas display area.

Use the procedure "Layer List Popup" on page 4-55 to search and display a PI Set.

Map background for PI Set 40 is displayed in the canvas.



2 With PI Set 40 displayed, load PI Sets 39 and 44 into the canvas.

Use the procedure "Layer List Popup" on page 4-55 to search and display a PI Set.

PI Set 39, 40, and 44 maps are all displayed on the same canvas (and properly registered).

3 To load a vector graphic product registered to PI Set 001, do the following:

4 Open the Search Criteria dialog.

5 At **Map Area Filter**, select **All Backgrounds**.

6 At **View Area Limits**, select **All Areas**.

7 At **Type Filter**, select **Vector Graphic**.

8 At **Subtype Filter**, select **All**.

9 Select **Search**.

10 Load any Northern Hemisphere products in the list

PI Set 39, 40, and 44 maps are all displayed on the same canvas (and properly registered), along with vector graphics products registered to PI Set 001.

Mercator and Northern and Southern Hemispheric projections should not be mixed. Attempting to load these backgrounds and/or products together will result in an error message warning the user that the products are incompatible. The warning message will ask the user to remove the product from the display canvas.

Composite Products

Creating/Saving Individual Composites

A (individual) composite product is a collection of various spatially related individual products that are displayed simultaneously in the WeatherViewer. Typically, such a composite is created from already existing products.

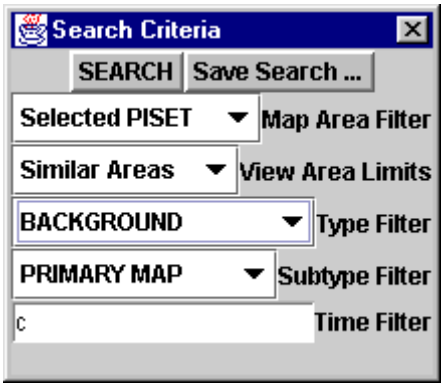
To create a Composite product, do the following:

1 Select each product that will be contained in the composite from the ProdListDialog and display it in the WeatherViewer. For example, to load a background, do one of the following equivalent actions:

- From the Menubar, select **File > Open**.
- From the Toolbar, select the Add Weather Component button .

The Search Criteria dialog appears (see Figure 4.34).

Figure 4.34 Search Criteria Dialog

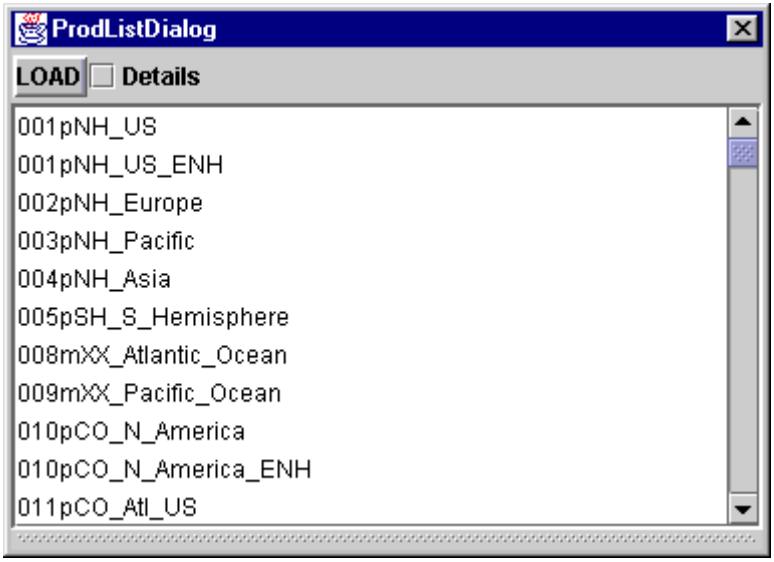


2 At **Type Filter**, select **BACKGROUND**.

3 Access the list of available backgrounds by selecting **SEARCH**.

The ProdListDialog appears (see Figure 4.35), listing the available backgrounds.

Figure 4.35 ProdListDialog



4 Select a background from the list by double clicking the list item or by highlighting the list item and selecting **LOAD**.

5 As desired, load vector graphic components by doing one of the following.

- From the Menubar, select **File > Open**.

- From the Toolbar, select the Add Weather Component button .

  The Search Criteria dialog appears (see Figure 4.34).

6 At **Type Filter**, select **VECTOR GRAPHIC**.

7 Access the list of available vector graphic components by selecting **SEARCH**.

  The ProdListDialog appears (see Figure 4.35), listing the available vector graphic components.

8 Select a component from the list by double clicking the list item or by highlighting the list item and selecting **LOAD**.

  Note that some displayed products may hide products display beneath them. Reordering the products so that the more opaque product(s) are beneath those that are hidden can solve the problem.

9 Optionally, display the Layer List dialog by doing one of the following:

- From the Menubar, select **View > Layer List**.
- From the Top Toolbar, select the **Show/Edit Layer List** button .

  The first product listed in the Layer List File List is the bottom displayed product. The last product listed in the Layer List File List is the top displayed product. Reordering the products in the Layer List File List changes their relative display order.

10 Optionally, to reorder products in the Layer List File List, do the following:

- In the Layer List File List, press the mouse button on the product entry to be moved.
- Drag the entry to the location immediately below where it is to be situated and release the mouse.

  The File List is reordered and the displayed images are reordered accordingly.

11 Repeat step 10 as necessary.

To save the composite definition on the N-TFS Server, do the following:

1 Display the Save Composite Dialog by doing one of the following:

- At the Menubar, select **File > Save Composite > Definition**.
- At the Menubar, select **Composite > Save Composite Definition**.
- At the Toolbar, select the Save Composite button .

  The Save Composite Dialog appears (see Figure 4.36).

Figure 4.36 Save Composite Dialog

2 At **Name,** enter a name for the composite definition.

3 Select **Save Composite**.

The composite definition is saved on the N-TFS Server.

To save the composite image on the N-TFS Server, do the following:

1 Do one of the following:

- On the Menubar, select **File** > **Save Composite** > **As Remote Image**.
- On the Menubar, select **Composite** >**Save Composite As…** > **Remote Image**.

The Save Composite as Image on Server dialog is displayed.

2 Enter a file name in the text entry window and click the **OK** button.

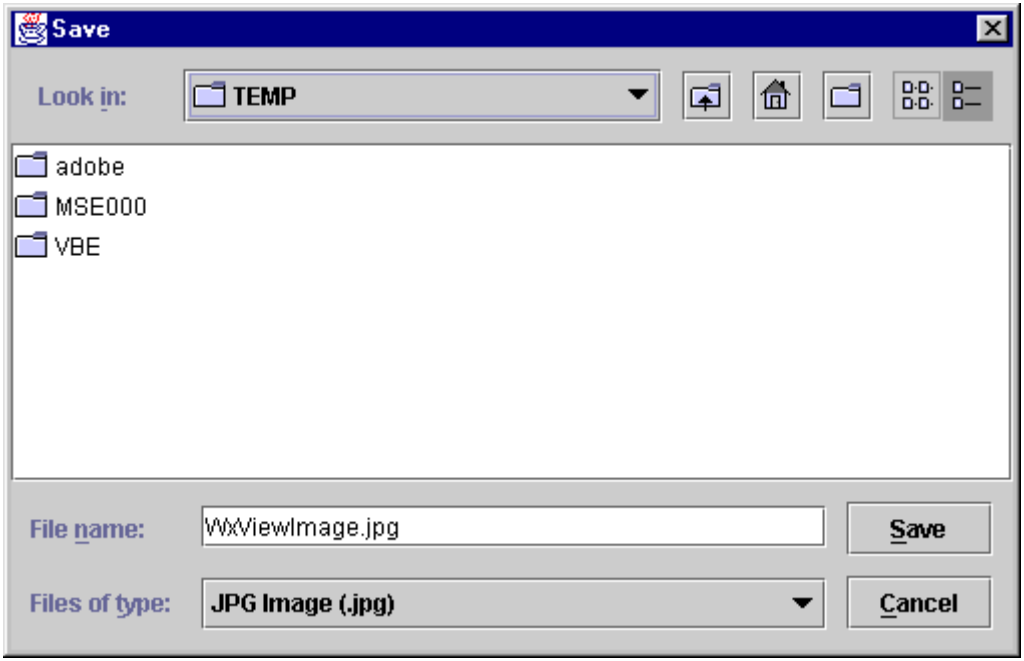
The composite image is saved on the N-TFS Server.

To save the composite image locally, do the following:

1 Display the Save dialog by doing one of the following:

- On the Menubar, select **File** > **Save Composite** > **As Local Image**.
- On the Menubar, select **Composite** > **Save Composite As…** > **Local Image**.

The Save dialog for saving files locally is displayed.



2 At **File name**, enter a file name.

3 At **Files of type**, select a file type.

4 Select **Save**.

The composite image is saved locally (on your client workstation).

Creating/Saving Group Composites

A group composite is a named set of individual composite products that are displayed separately in the WeatherViewer.

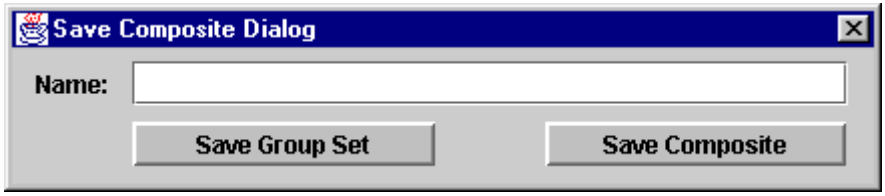
To create and save a group composite, do the following:

1 Load the composite slots with desired products, and save each slot as an individual composite if not already defined (see "Creating/Saving Individual Composites" on page 4-64).

For example, load a radar product in slot 1, a Upper-Level Hazards chart in slot 2, and a SFC analysis product in slot 3.

2 When the products are ordered as desired, select **File > Save Composite > Definition**.

The Save Composite Dialog appears.



3 At **Name**, enter a name for the group composite, for example FLTBRIEF.

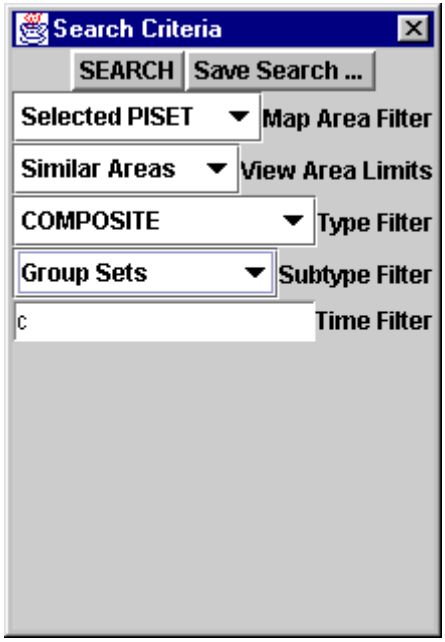
4 Select **Save Group Set**.

The products with their respective slots will be saved on the N-TFS Server as a group composite definition.

To load a group composite (or group set), do the following:

1 Select **File** > **Open**.

The Search Criteria dialog appears.

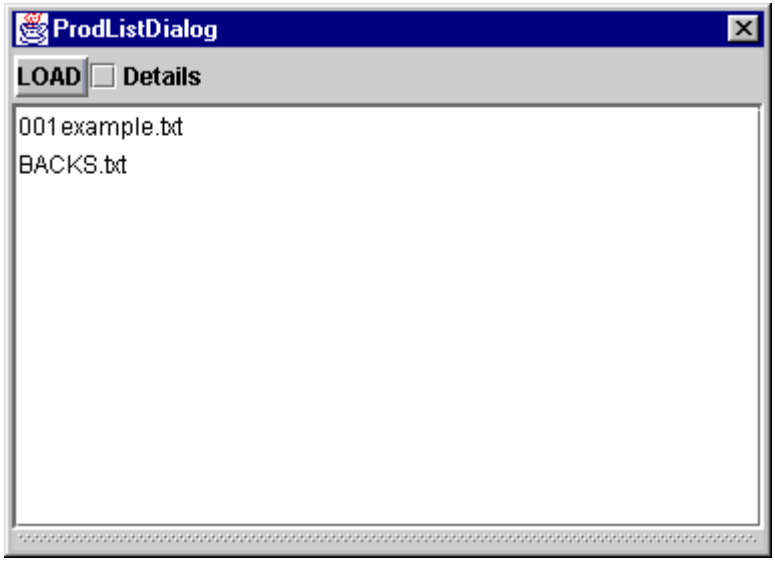


2 At **Type Filter**, select **COMPOSITE**.

3 At **Subtype Filter**, select **Group Sets**.

4 Select **SEARCH**.

The ProdListDialog appears.



5 From the list in the ProdListDialog, select your desired group set.

6 Select **LOAD**.

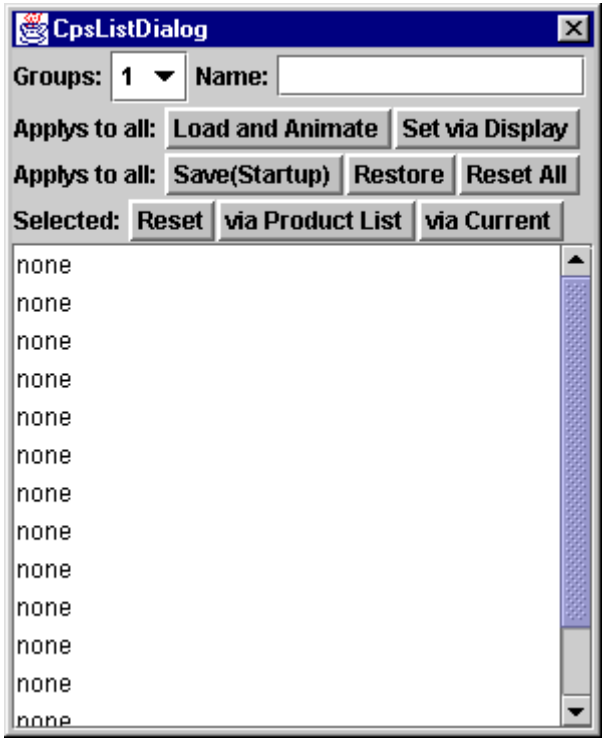
The individual composites defined in the Group Set load in the order they were saved, and the Play Composite Loop feature is turned on (that is, the loop will begin to cycle through the various products).

To save a group composite as a Use Composite (the group composite is saved by user login name on the N-TFS Server), do the following:

1 Load the composite slots with desired products and save each slot as an individual composite if not already defined (see "Creating/Saving Individual Composites" on page 4-64).

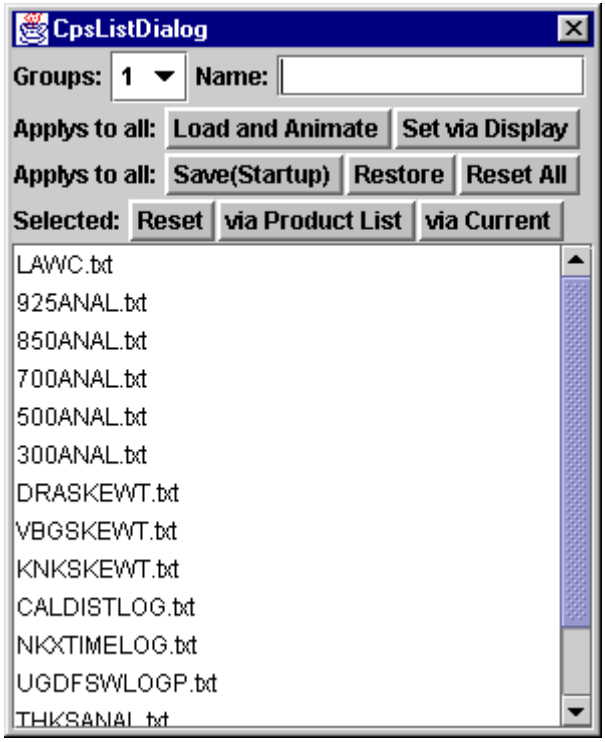
2 From the Menubar, select **Composite** > **Edit Composite List...**.

The CpsListDialog displays.



3 From the CpsListDialog, select **Set Via Display**.

The CpsListDialog sets as shown below.

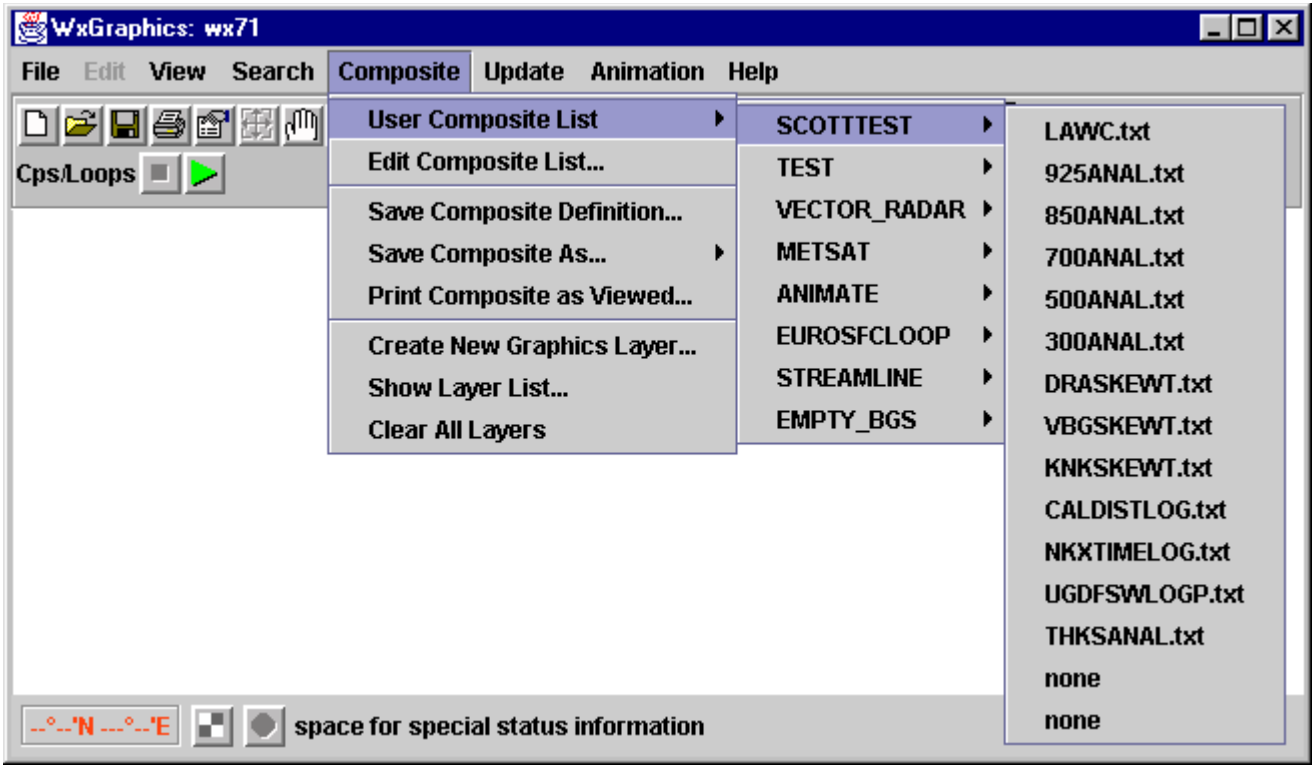


4 At **Name**, enter a name (for example SCOTTTEST).

5 Select **Save(Startup)**.

The group composite can now be accessed through the User Composite list.

6 From the Menubar, select **Composite > User Composite List**.

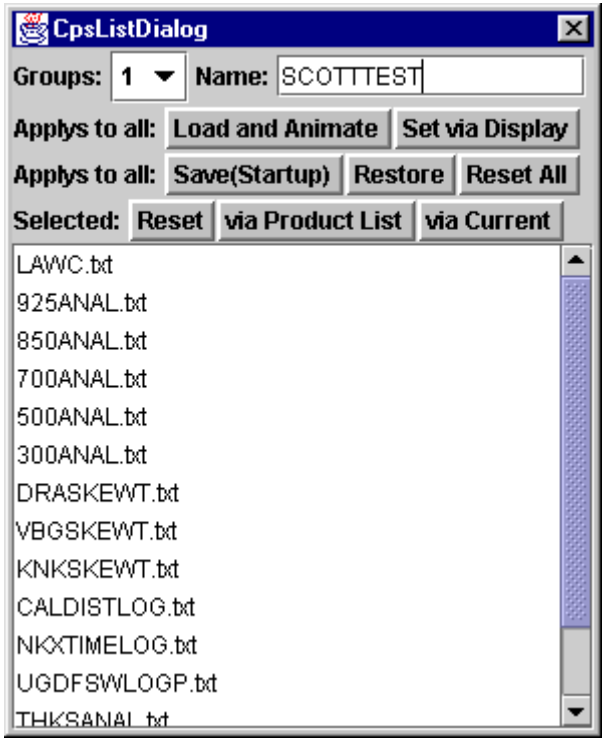


Composites can be individually loaded from the rightmost pull-down menu shown above.

To load and animate a User Composite, do the following:

1 From the Menubar, select **Composite > Edit Composite List...** .

The CpsListDialog appears.



2 At **Groups**, select the number of the desired group composite.

3 Select **Load and Animate**.

The individual composites defined in the Group Set load in the order they were saved, and the Play Composite Loop feature is turned on (that is, the loop will begin to cycle through the various products).

Using Toolbar Composite Buttons

The WeatherViewer provides a fixed set of 15 composite buttons. Each button is labeled with a integer from 1 - 15. The assignment for each button is displayed in a Tool Tip whenever the cursor is over that button.

These composite buttons serve a dual function. Each composite button can be assigned to a single composite or to an animation sequence. When displaying a slide-show, the position of each composite button corresponds to the location of an animation in the slide-show sequence. If there is no corresponding composite or animation for a button, that button is unassigned.

When a single composite or animation is selected, the button will change from a gray background to a yellow background. In a slide-show sequence, each button will change from a gray background to a yellow background when the animation corresponding to that button is displayed.

To display the composite buttons, do the following:

1 On the Menubar, select **View** > **Toolbars** > **Composites**.

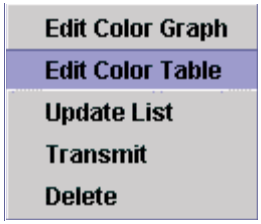
To select a single composite or animation, do the following:

1 On the Top Toolbar, select the desired **Composite** button.

Editing/Enhancing Products/Composites

Color Selections Editing Popup

The Color Selections Editing popup menu is displayed whenever an entry in the Colors Selection list of the Grid Color Options dialog or Image Color Options dialog is selected with the right mouse button.



- **Edit Color Graph** adds editing features to the displayed Color Options dialog. Editing a color graph on the color options dialog consists of modifying the value of color graphs at existing change points, creating or deleting change points, or altering graphs from ramp to step and vice versa.
- **Edit Color Table** displays the Color Table panel.

  Editing the Color Table panel consists of modifying the textual value of color table entries, creating or deleting lines of the color table, and altering color table lines from ramp to step and vice versa.
- **Update List**
- **Transmit** displays the Transmit Files dialog with a preset **Select Format** value of AMIS. This is the only format that accepts color table files. The Transmit Files dialog transmits the color table files to the selected destinations.
- **Delete** removes the color tables files from the server.

Edit Color Graph

To get different visual effects, the shape of the color graph can be changed. This can be accomplished by changing the composition of grayscale or red, green and blue elements of the graph at the current change points; by adding new change points; or a combination of the two.

To enter the color graph editing mode in the Color Options dialog, do the following:

1 If the Layer List dialog has not been displayed, do one of the following:

- On the Menubar, select **View > Layer List**.
- On the Menubar, select **Composite > Show Layer List...**.
- On the Top Toolbar, click on the **Show/Edit Layer List** button.

The Layer List dialog is displayed.

2 If the color dialog is not displayed, do one of the following:

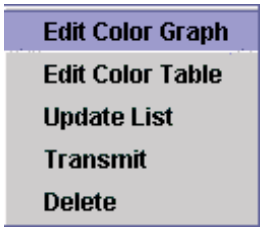
- In the Layer List File List, click on the color dot of the grid product whose color is to be edited.
- In the Layer List File List, click on the description of the grid file whose color is to be edited and select **View > Color...**.

3 In the Display Format combo box, click on the **Color Table** entry.

The Color Selections list is displayed.

4 Right click on the color selection to be edited.

The Color Selection popup is displayed.



5 Click on the **Edit Color Graph** entry.

The editing facilities of the Color Table are displayed. These include color and alpha slider bars, control buttons and checkboxes, new name entry, and a Histogram positional display capability.

Edit Color Table

To get different visual effects, the shape of the color graph can be changed. This can be accomplished by modifying or adding to the contents of the Color Table.

To enter the Color Table editing mode, do the following:

1 If the Layer List dialog is not displayed, do one of the following:

- On the Menubar, select **View > Layer List**.
- On the Menubar, select **Composite > Show Layer List....**
- On the Top Toolbar, click on the **Show/ Edit Layer List** button.

  The Layer List dialog is displayed.

2 If the color dialog is not displayed, do one of the following:

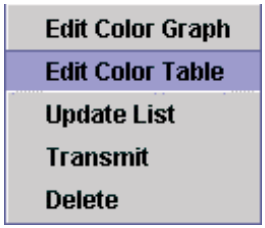
- In the Layer List File List, click on the color dot of the grid product whose color is to be edited.
- In the Layer List File List, click on the description of the grid file whose color is to be edited and select **View > Color…**.

3 In the Display Format combo box, click on the **Color Table** entry.

  The Color Selections list is displayed.

4 Right click on the color selection to be edited.

  The Color Selection popup is displayed.



5 Click on the **Edit Color Table** entry.

  The Color Table panel is displayed. This panel permits additions and modifications to the color table. For color table editing rules, see "Editing Color Tables" on page 4-82.

Transmitting Color Tables

Color tables can be transmitted for use only to other AMIS sites.

To transmit a color table, do the following:

1 If the Layer List dialog has not been displayed, do one of the following:

- On the Menubar, select **View > Layer List**.
- On the Menubar, select **Composite > Show Layer List....**
- On the Top Toolbar, click on the **Show/ Edit Layer List** button.

  The Layer List dialog is displayed.

2 If the color dialog is not displayed, do one of the following:

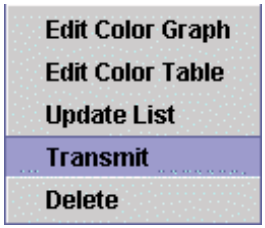
- In the Layer List File List, click on the color dot of the grid product whose color is to be edited.
- In the Layer List File List, click on the description of the grid file whose color is to be edited and select **View > Color….**

3 In the **Display Format** combo box, click on the **Color Table** entry.

  The Color Selections list is displayed.

4 Right click on the color selection to be transmitted.

  The Color Selection popup is displayed.



5 Click on the **Transmit** entry.

  The Transmit Files dialog is displayed in a configuration for transmitting color table files. This will facilitate the transmission of the modified color table file to the selected installation.

Update List

It is possible for the displayed color table list in the Color Options dialog to become out of synchronization with the complete list. This can be due to other users adding to or deleting files from the list.

To update the color table list, do the following:

1 If the Layer List dialog has not been displayed, do one of the following:

- On the Menubar, selelct **View > Layer List**.
- On the Menubar, select **Composite > Show Layer List....**
- On the Top Toolbar, click on the **Show/Edit Layer List** button.

  The Layer List dialog is displayed.

2 If the color dialog is not displayed, do one of the following:

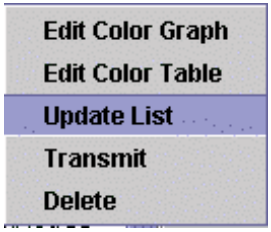
- In the Layer List File List, click on the color dot of the grid product whose color is to be edited.
- In the Layer List File List, click on the description of the grid file whose color is to be edited and select **View> Color….**

3 In the Display Format combo box, click on the **Color Table** entry.

The Color Selections list is displayed.

4 Right click on the color selection to be updated.

The Color Selection popup is displayed.



5 Click on the **Update List** entry.

The color table list is updated with any changes not currently reflected on your color table list.

Deleting a Current Edit

The WeatherViewer provides the ability to delete only the entries of the current editing session. If other products are displayed, they will be unaffected.

To delete the contents of the current edit, do the following:

1 On the Menubar, select **Edit > Erase All**.

Deleting Color Tables

1 If the Layer List dialog has not been displayed, do one of the following:

- On the Menubar, select **View > Layer List**.
- On the Menubar, select **Composite > Show Layer List....**
- On the Top Toolbar, click on the **Show/Edit Layer List** button.

The Layer List dialog is displayed.

2 If the color dialog is not displayed, do one of the following:

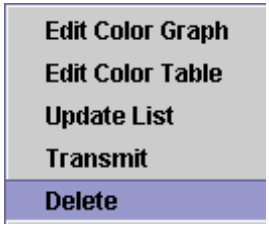
- In the Layer List File List, click on the color dot of the grid product whose color is to be edited.
- In the Layer List File List, click on the description of the grid file whose color is to be edited and select **View > Color**.

3 In the Display Format combo box, click on the **Color Table** entry.

The Color Selections list is displayed.

4 Right click on the color selection to be deleted.

The Color Selection popup is displayed.

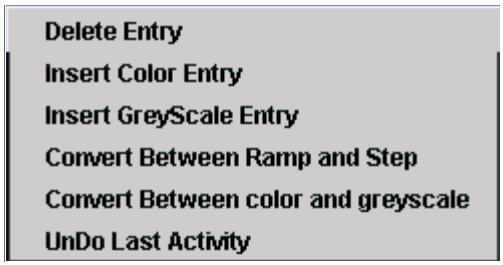


5 Click on the **Delete** entry.

The selected color selection is deleted.

Histogram Popup

The Histogram popup menu is displayed by a right mouse click within the Histogram panel. It provides a set of controls for the color graphs displayed in the Histogram panel.



The Histogram popup menu contains the following entries:

- The **Delete Entry** entry removes a change point from the color graph displayed in the Histogram panel. This is equivalent to removing a line in the Color Table.
- The **Insert Color Entry** entry inserts a change point into the color graph displayed in the Histogram panel. The new change point will be in the ramp format. The red, green, blue, and alpha values are preset. This is equivalent to adding a line of color data in the Color Table.

- The **Insert GreyScale Entry** entry inserts a change point into the color graph displayed in the Histogram panel. The new change point will be in the ramp format. The grayscale and alpha values are preset. This is equivalent to adding a grayscale line in the Color Table.
- The **Convert Between Ramp and Step** entry toggles a change point from ramp to step or vice versa.
- The **Convert Between color and greyscale** entry toggles a change point between a color value and a grayscale value. This is equivalent to changing a line in the Color Table from color to grayscale or vice versa.
- The **Undo Last Activity** removes the last entry selected from the Histogram popup menu. Clicking this entry twice results in no undoing.

Opening the Color Table

To open the color table, do the following:

NOTE *During the creation and editing process of the color table, no supervision is performed by AMIS. Out-of-range entries and other errors are caught only at the time the color table is saved. Additionally, a red-green-blue entry with only red and green entries are misinterpreted as a grayscale entry with an alpha value.*

1 If the Layer List dialog has not been displayed, do one of the following:

- On the Menubar, select **View > Layer List**.
- On the Menubar, selelct **Composite > Show Layer List**.
- On the Top Toolbar, click on the **Show/Edit Layer List** button.

The Layer List dialog is displayed.

2 If the Color dialog is not displayed, do one of the following:

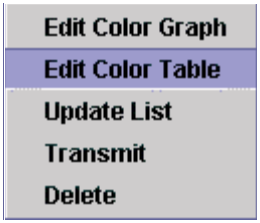
- In the Layer List File List, click on the color dot of the grid product whose color is to be edited.
- In the Layer List File List, click on the description of the grid file whose color is to be edited and select **View > Color**.

3 In the Display Format combo box, select **Color Table**.

The Color Selections list is displayed.

4 Right click on the color selection to be edited.

The Color Selection popup is displayed.



5 Click on the Edit Color Table entry.

The color table for the selected color selection is displayed.

Editing Color Tables

The color table and the graphical color display are different representations of the same information. The color table is a textual alternative to the graphical color display.

The color table contains a sequence of rows of text. Row entries can be separated by commas, spaces, or tabs. Rows are separated by carriage-return line-feeds. Ramp data is represented by single rows. Each row will contain from two to five columns.

Step data is represented by row pairs except for the top row. The top row will contain from two to five columns. The first of the row pair will contain one column. The second of the row pair will contain from two to five columns.

Rows will contain either grayscale or color data. Color tables can be any combination of grayscale rows and color rows.

The first column of all rows represents the weather parameter or image pixel value. Weather parameter values may be either all integer or all floating point numbers. Integers representing an image pixel value may only vary from 0 to 255. Floating point numbers may be positive or negative.

All rows other than the first represent color/grayscale data or alpha data. These rows are all represented by integers having values from 0 to 255. Values may be separated by commas, spaces, or tabs. Grayscale data may contain two or three rows. The second row is the grayscale value. Here 0 represents black and 255 represents white. The third row contains alpha data. Here 0 represents transparent and 255 represents opaque. If the alpha data is missing, it has a default value of 255. Color data may contain four or five rows. The second row represents the red value. The third row represents the green value. The fourth row represents the blue value. The fifth row contains alpha data. Here 0 represents transparent and 255 represents opaque. If the alpha data is missing, it has a default value of 255.

NOTE *When editing color curves textually, the first column in the Simple Text Editor panel must be in numerically increasing order (that is, 0-255). Failure to do this will result in display of the error "!Out of order first column value".*

The color table is composed of four components. These include:

- The **Apply Changes** button performs as a *Save* function. The Color Table data is verified for correctness when the **Apply Changes** button is clicked.
- The **Save via Name Below** button performs as a *Save As* function. The Color Table data is verified for correctness when the **Save via Name Below** button is clicked.
- The **Name** text field provides space for entering file name used in conjunction with the **Save via Name Below** button. The name field accepts alphanumeric and underscore characters. All other printable characters are converted to underscores.
- The **Color Table** text area is a space to enter or edit the color table data. Data should be entered according to the rules above. Neither text entry nor text editing is verified by AMIS for correctness until the file is saved.

Editing Grids

To edit a grid product, do the following:

1 Display the grid product to be edited.

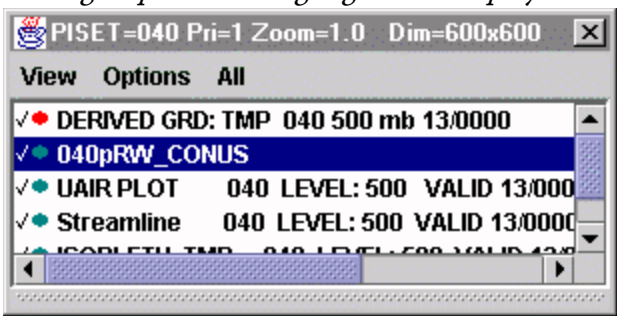
2 If the Layer List dialog is not displayed, do one of the following:

- On the Menubar, select **View > Layer List**.
- On the Top Toolbar, click the **Show/Edit Layer List** button.

The Layer List dialog is displayed.

3 Click on the grid product in the Layer List File List.

The grid product is highlighted to display that it has been selected.



4 From the Layer List menubar, select **Options > Edit**.

The Grid Editing toolbar is displayed on the Top Toolbar.

5 Edit the grid by doing one of the following:

- To edit the grid as a single element, do the following:
  - On the left most combo box, click the **Single** button.
  - On the center combo box, click the selected operation: **Add**, **Subtract**, **Multiply**, **Divide**, or **Set**.
  - On the right text entry field, enter the second operator.
  - Click on the selected grid element.

    The operation specified in the Top Toolbar is executed
- To edit the grid as multiple elements, do the following:
  - On the lifetimes combo box, click the **Group** button.
  - On the center combo box, click the selected operation: **Add**, **Subtract**, **Multiply**, **Divide**, or **Set**.
  - On the right text entry field, enter the second operator.
  - Click on a vertex of the figure enclosing the grid points to be altered with the left mouse button.
  - Drag the cursor to the next vertex and click the left mouse button.

    A black line figure will enclose the grid elements after more than two vertices have been selected.
  - When all the grid elements are enclosed, click the right mouse button

    The operation specified in the Top Toolbar is executed on the enclosed grid elements. The area enclosing the grids altered is set to gray.

6 To undo the last edit performed, click on the **Undo** button.

The last grid edit is undone.

7 On the Top Toolbar, click the Exit button.

*The **Exit** button initiates the display of the Confirm Save dialog, which offers either a Save and Exit (**Save**) operation or an Undo Edits and Exit (**Discard**) operation.*

8 Do one of the following:

- To save and exit, click on the **Save** button.
- To remove the edits of the current session, click on the **Discard** button.

  The grid edits of the current session are undone and the Grid Editing toolbar is removed from the Top Toolbar.

Editing Vector Graphic Plots

To edit a vector graphic plot product, do the following:

1 Display the vector graphic plot product to be edited.

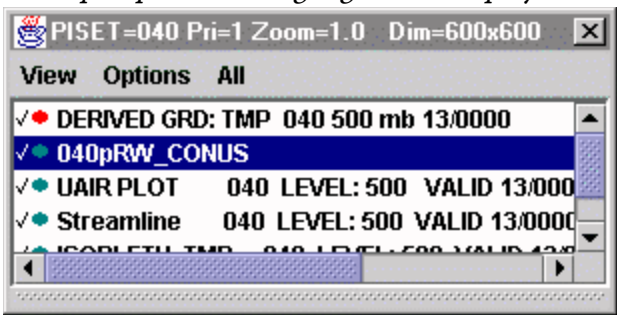
2 If the Layer List dialog is not displayed, do one of the following:

- On the Menubar, selelct **View** > **Layer List**.
- On the Top Toolbar, click the **Show/Edit Layer List** button.

  The Layer List dialog is displayed.

3 Click on the plot product in the Layer List File List.

The plot product is highlighted to display that it has been selected.

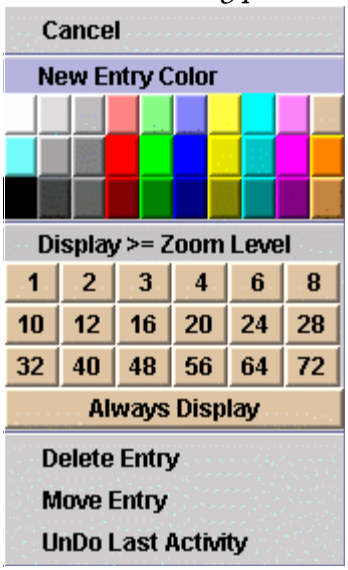


4 Click on the **Options** menu and then click the **Edit** button.

The Plot Editing toolbar is displayed.

5 Click the right mouse button on the selected feature in the WeatherViewer image.

The Plot Editing panel is displayed.



6 Do one of the following:

- On the Top Toolbar, click on the **Save Plot** button.

  The save plot operation updates the plot file selected in the Layer List with the modified plot value(s). The Plot Editor exits.

- On the Top Toolbar, click on the **Discard Plot** button.

  The discard plot operation undoes all plot editing done during the current session. The Plot Editor exits.

Adding Color Curve Change Point

The shape of the color curves can be more completely controlled by adding additional change points in the Histogram panel.

To add a change point to either the Grid Color Options dialog or the Image Color Options dialog, do the following:

1 If editing grids or full-color images and the Color Options dialog is not in edit mode, on the Color Set Selection list, right click on the selected entry.

The Color Set Selections Editing popup is displayed.

2 Click on the **Edit Color Graph** entry.

The editing features of the Color Options dialog are displayed. Color sliders are on the right side of the Histogram panel.

3 On either Color Options dialog, check the **Locate Change Points** checkbox.

A black horizontal line is displayed at each change point.

4 Click the right mouse button in the Histogram panel and then click the **Insert Color** entry.

5 Click the mouse button where the new change point is to be added.

The new change point is inserted.

The color and alpha values at the change point are initially predetermined. If they are unacceptable, see "Editing Color Curve or Alpha Value" on page 4-89.

6 Click the **Apply** button to display the modified color curve in the WeatherViewer canvas.

Adding Grayscale Curve Change Point

The shape of the grayscale curves can be more completely controlled by adding additional change points in the Histogram panel.

To add a change point to either the Grid Color Options panel or the Image Color Options panel, do the following:

1 If editing grids or full-color images and the Color Options dialog is not in edit mode, on the Color Set Selection list, right click on the selected entry.

The Color Set Selections Editing popup is displayed.

2 Click on the **Edit Color Graph** entry.

The editing features of the Color Options dialog are displayed. Grayscale sliders are on the right side of the Histogram panel.

3 On either Color Options dialog, check the **Locate Change Points** checkbox.

A black horizontal line is displayed at each change point.

4 Click the right mouse button in the Histogram panel and then click the **Insert Greyscale** entry.

5 Click the left mouse button where the new change point is to be added.

The new change point is inserted.

The grayscale and alpha values at the change point are initially predetermined. If they are unacceptable, see "Editing Grayscale Curve or Alpha Value" on page 4-90.

6 Click the **Apply** button to display the modified grayscale curve in the WeatherViewer canvas.

Color/Grayscale Conversion

Combining color with grayscale may sometimes be useful in accentuating specific conditions. The **Convert Between color and greyscale** entry of the Histogram popup provides a means to make the transformation.

To combine color with grayscale, do the following:

1. If the Color Options dialog is in edit mode, the color sliders are on the right side of the Histogram panel. If not, see "Color Selections Editing Popup" on page 4-75.
2. On the Histogram panel, click the right mouse button to display the Histogram popup. On the Histogram popup, click **Convert Between color and greyscale** entry.
3. Click the left mouse button at the change point to be converted.

   The change point will toggle between color and grayscale.

   The color and alpha values at the change point are initially predetermined. If editing of the resulting color curves/grayscale is required, see "Editing Color Curve or Alpha Value" on page 4-89.
4. Click the **Apply** button to display the modified color curve in the WeatherViewer canvas.

Ramp/Step Conversion

Ramps provide continuously varying color density over a range of pixel intensities. Steps provide an identical color density over a range of pixel intensities. Thus, steps may be used to highlight areas of similar grid values. This transformation may be executed by the Histogram popup entry, **Convert Between Ramp and Step**.

To convert between ramp and step, do the following:

1. If the Color Options dialog is in edit mode, the color sliders are on the right side of the Histogram panel. If not, see "Color Selections Editing Popup" on page 4-75.
2. On the Histogram panel, click the right mouse button to display the Histogram popup. On the Histogram popup, click **Convert Between Ramp and Step** entry.
3. Click on the change point to be converted.

   The change point will toggle between ramp and step.

   If editing of the resulting color curves/grayscale is required, see "Editing Color Curve or Alpha Value" on page 4-89.

4 Click the **Apply** button to display the modified color curve in the WeatherViewer canvas.

Delete Change Point

If an unwanted change point exists in the color graph, the **Delete Entry** entry of the Histogram popup provides a means to remove it.

To delete a change point, do the following:

1 If the Color Options dialog is in edit mode, the color sliders are on the right side of the Histogram panel. If not, see "Color Selections Editing Popup" on page 4-75.

2 On the Histogram panel, click the right mouse button to display the Histogram popup. On the Histogram popup, click **Delete Entry**.

3 Click on the change point to be deleted.

The change point is deleted.

4 Click the **Apply** button to display the modified color curve in the WeatherViewer canvas.

Editing Color Curve or Alpha Value

The color graphs of the Histogram panel of both the Grid Color Options panel and the full-color Image Color Options dialog can be edited by doing the following:

1 If the Color Options dialog is in edit mode, the color sliders are on the right side of the Histogram panel. If not, see "Color Selections Editing Popup" on page 4-75.

2 Click on the black line at the change point to be edited.

The color and alpha sliders will move to their values at the selected change point.

For color graphs, moving a slider will move the corresponding color graph or alpha graph at the change point.

For gray-scale graphs, moving any of the color sliders will move the gray-scale graph at the change point. Moving the alpha slider will move the alpha graph.

3 Repeat steps 1 and 2 as needed.

4 Click the **Apply** button to display the modified color curve in the WeatherViewer canvas.

Editing Grayscale Curve or Alpha Value

The grayscale graphs of the Histogram panel of both the Grid Color Options panel and the Image Color Options dialog can be edited by doing the following:

1 If the Color Options dialog is in edit mode, the color sliders are on the right side of the Histogram panel. If not, see "Color Selections Editing Popup" on page 4-75.

2 Click on the black line at the change point to be edited.

The color will all move to the grayscale value at the selected change point and the alpha slider will move to its value at the selected change point.

Moving any of the color sliders will move the gray-scale graph at the change point. Moving the alpha slider will move the alpha graph.

3 Repeat steps one and two as needed.

4 Click the **Apply** button to display the modified grayscale curve in the WeatherViewer canvas.

Displaying Color Dialog

The Color dialog provides the color control for all products used in the WeatherViewer.

To display the Color dialog, do the following:

1 If the Layer List dialog is not displayed, do one of the following:

- On the Menubar, select **View > Layer List**.
- On the Menubar, select **Composite > Show Layer List**.
- On the Top Toolbar, click on the **Show/Edit Layer List** button.

The Layer List dialog is displayed.

2 Do one of the following:

- In the Layer List File List, click on the color dot of the product whose color is to be edited.
- In the Layer List File List, click on the description of the file whose color is to be edited.

3 On the Layer List dialog Menubar, select **View > Color**.

The Color dialog is displayed.

Animating Products and Composites

Creating Slide Shows

A slide-show is a group of single composites and/or composite animations, displayed sequentially. A slide-show is only displayed in the forward direction. Any product created as a composite can be included, including single grids, VGS, or image products.

Slide-shows may be either transient or persistent. A transient slide-show can be displayed until the **Clear Screen** entry of the Menubar **View** menu is clicked or the WeatherViewer is exited. A persistent slide-show can be displayed until it is changed.

To create a transient slide-show:

1 On the Menubar, select **View** > **Toolbars** > **Composites**.

The row of sequentially numbered composite display squares is displayed on the Top Toolbar.

2 Click on the Top Toolbar composite square associated with the display sequence position.

The selected composite square background will change from gray to yellow.

3 Select a composite to be displayed in the WeatherViewer canvas.

To load a composite product into the WeatherViewer canvas, see "Layer List Popup" on page 4-55. At Type Filter, **COMPOSITE** should be selected.

The product is displayed in the WeatherViewer canvas AND the product is loaded into slide-show list at the selected display square position.

4 Repeat steps 2 and 3 until the slide-show is complete.

To display or restart a transient slide-show, do the following:

1 On the Top Toolbar, click the

green triangular slide-show Start button.

To stop the display of a transient slide-show, do the following:

1 On the Top Toolbar, click the

red square slide-show Stop button.

The persistent slide-show sequentially displays the elements contained in one of the CpsListDialog lists. To create a persistent slide-show you must enter each display element into one of the CpsListDialog lists.

To create a persistent slide-show, do the following:

1 On the Menubar, select **Composite > Edit Composite List...**.

2 The CpsListDialog is displayed.

3 On the **Groups** combo box, select the group number to be created.

4 On the **Name** text entry field, enter the name for the current group.

5 If no name is entered, the group name defaults to its group number.

6 Do one of the following:

- On the Menubar, select **File > Open**.
- On the Top Toolbar, click on the **Add Weather Component** button.

The Search Criteria dialog displays.

7 At **Type Filter**, select **COMPOSITE**.

8 Select the **SEARCH** button.

The ProdListDialog displays.

9 In the CpsListDialog list, click on the list location where the next product is to be loaded.

If this selection is not made, every product is put into the first location. This will result in every product overwriting the last.

Products can be entered into the CpsListDialog list from selections made in the ProdListDialog list or from the product displayed in the WeatherViewer canvas.

To enter a product from the ProdListDialog list:

1 Click on the list location where the product is to be selected.

2 On the CpsListDialog, click on the **via Product List** button.

The selected product name is copied from the ProdListDialog to the selected position on the CpsListDialog.

To enter a product from the WeatherViewer canvas:

1 On the CpsListDialog, click on the **via Current** button.

The product name of the displayed product is entered into the selected position on the CpsListDialog.

To enter a full slide-show set of products from the WeatherViewer canvas into a group, do the following:

1 Enter each product from the WeatherViewer canvas to a numbered composite display square.

2 In the **Groups** combo box, select the group where the composite list will be created.

3 In the **Name** text entry box, enter the desired name.

4 On the CpsListDialog, click on the **Set via Display** button.

The currently displayable slide-show set is loaded into the selected group.

To delete a single product from the CpsListDialog, do the following:

1 Select the product in the CpsListDialog and click the **Reset** button.

To delete all products in the CpsListDialog, do the following:

1 Click on the **Reset All** button.

To make the entries into the CpsListDialog permanent, they must be saved. To save the current creation, do the following:

1 On the CpsListDialog, click on the **Save(Startup)** button.

To start a persistent slide-show from the beginning, do the following:

1 On the Menubar, click the **Edit Composite List…**.

The CpsListDialog is displayed.

2 On the **Groups** combo box, select the group to be displayed.

3 Click the **Load and Animate** button.

The slide-show will start.

To stop a persistent slide-show, do the following:

1 On the Top Toolbar, click the

red square slide-show Stop button.

To restart a persistent slide-show from the last element displayed, do the following:

1 On the Top Toolbar, click the

green triangular slide-show Start button.

Creating Animations

Animations are comprised of a series of products. These products may originate from a variety of sites that distribute weather products. Each element of the animation series must be a version of the same product displaced in time.

Animation series are created with the Menubar **Update** menu selections and the Time Options dialog. Animation is enabled when the **@Animation** checkbox is checked. **@Animation** is located within the **Toolbars** submenu of the Menubar's **View** menu. Animation series are executed using the characteristics specified in the Menubar **Animation** menu. Control of the

animation sequence is via the directional and stop buttons on the Top Toolbar.

The Menubar **Update** menu is used to define the collection method for the currently displayed product. The Time Options dialog is used to define the characteristics of the currently displayed animation product. The Menubar **Animation** menu is used to define the display characteristics for all animation products.

The Menubar **Update** menu selects between manually and automatically initiated animation element acquisition. The automatic acquisition mode, **Auto Update**, should be used if the product currently displayed in the WeatherViewer is regularly updated. The WeatherViewer will attempt to add new products to the animation series only at the specified intervals. This sampling only occurs when the WeatherViewer is running on the local station. It may be reduced to an icon, however.

The manual acquisition mode, **Manual Update**, should be used whenever products are updated irregularly.

The animation characteristics section of the Time Options dialog specifies the number of animation elements and a time interval. The time interval specifies when samples are to be taken or the maximum duration of their applicability.

The parameters in both Menubar **Update** menu and Time Options dialog must be set before starting the acquisition of animation products.

The **@Animation** checkbox must be checked prior to the start of actual animation.

The Menubar **Animation** menu specifies the timing characteristics and if the animation is bi-directional. The parameters in the Menubar **Animation** menu may be set at any time, including when the animation is running.

Toolbar Single Step Buttons

The WeatherViewer provides a single step capability to display successive products that are a timed series. Stepping both forward in time and backward in time is enabled. The availability of this feature is independent of animation status.

Support for single stepping on the Top Toolbar includes a forward stepping button and a backward stepping button.

Clicking on either the forward stepping button or the backward stepping button will display the next product in the series. When the final product in

the series is displayed, the next product displayed will be the first product in the series for the requested direction.

Toolbar Animation Sequences

The WeatherViewer provides an animation capability to display a timed series of products in sequence. Sequences both forward in time and backward in time are displayed.

Support for animation on the Top Toolbar includes a forward display button and a backward display button, a stop button, and a slider bar (see below) displaying where the currently displayed product is in the animation sequence.

Clicking on either the forward display button or the backward display button will start the animation in the selected direction.

Clicking on the stop button will stop the animation, leaving the last product displayed in the WeatherViewer. The stop button is red during animation sequencing and gray otherwise.

When animation is in progress, the slider bar is solely for display and does not respond to dragging. When animation is not in progress, dragging the slider bar will step through the members of the animation series in sequence.

To place the WeatherViewer in animation mode:

1 Click on the Menubar, select **View** > **Toolbars** >**@Animation**.

   The slider bar, only, is displayed indicating that the WeatherViewer is in animation mode.

Local Area WorkCharts (LAWCs)

Creating Single New Product

AMIS supports the creation of new Local Area Work Charts (LAWCs). A LAWC can be saved on the user's computer or the N-TFS Server. A LAWC can contain any of the following:

- FBD features including meteorological symbols and wind barbs.
- Isopleth and Streamline features comprised of either open or closed lines.
- Highlighted areas.

- Legends and text.

To create a new product, do the following:

1 Do one of the following:

- On the Menubar, select **File** > **New**.
- On the Top Toolbar, click the **Create New Graphics Overlay** button.

The DialogEditStart panel is displayed (see Figure 4.37).

Figure 4.37 DialogEditStart Panel

2 Do one of the following:

- If one map is to be displayed in the WeatherViewer, click **Single Map** with the left mouse button
- If one or more maps will overlay a background map, click **Multiple Maps** with the left mouse button.

3 Click **Continue** with the left mouse button.

- *The Menubar **Edit** menu becomes active.*

- *The Left Toolbar is displayed.*

The Create buttons of the Left Toolbar are as follows:

Create Straight Line

Create Polyline

Create Rectangle

Create Diamond/Ellipse

Create Polygon

Create Meteorological Symbol

Create Wind Barb

Create Text

4 To specify the feature's color, do the following:

NOTE: Selecting the desired Color Tile will set the hue of any feature. However, the hue should be set only for those filled areas and lines/ polylines without predefined hues.

- With **Create Straight Line** or **Create Polyline** selected, click on a Color Tile element with the left mouse button.

  All future lines/polylines are drawn in that hue.

- With **Create Rectangle**, **Create Diamond/Ellipse**, or **Create Polygon** selected, click on a Color Tile element with the left mouse button.

  All future filled areas are drawn in that hue.

5 Determining the filled area's density. With **Create Rectangle, Create Diamond/Ellipse**, or **Create Polygon** selected, on the Menubar select **View** > **Menubar** > **Fill Areas Via**. Then do one of the following:

- Click the **Fading** button.

  The fill style is similar to .

- Click the **Patterns** button.

  The fill style is similar to .

6 To save the product, on the Left Toolbar, click the **Save and Exit** button.

Create Wind Barb

1 Click the **Create Wind Barb** button of the Left Toolbar on the left side of the WeatherViewer.

The symbol editing functions are displayed in the Top Toolbar.

2 Click the left mouse button at the symbol location.

*A wind barb, as specified by the values in the **Dir** and **Speed** combo boxes and the **S-Hem** checkbox, is displayed in the current foreground color.*

Create Text

1 Click the **Create Text** button of the Left Toolbar on the left side of the WeatherViewer.

The text editing functions are displayed in the Top Toolbar.

2 Click the left mouse button at the start of text entry.

A pink text cursor is displayed.

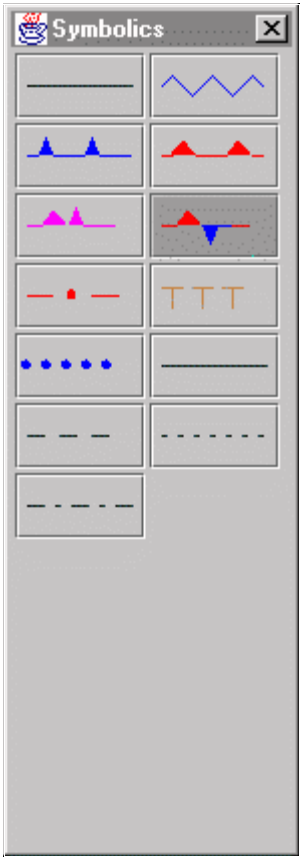
3 Enter text from the keyboard.

Create Straight Line

1 Click the **Create Straight Line** button of the Left Toolbar on the left side of the WeatherViewer.

- *The Line editing functions are displayed in the Top Toolbar.*

- *The default/last requested Symbolics panel is displayed.*
- *The Symbolics panel contains several icon labeled buttons. Clicking a button will create a line resembling the button icon symbol.*



2 Press the left mouse button at one of the line end points and drag the mouse to the other line end point.

A pink straight line is anchored at the first end point and continuously updated to the cursor.

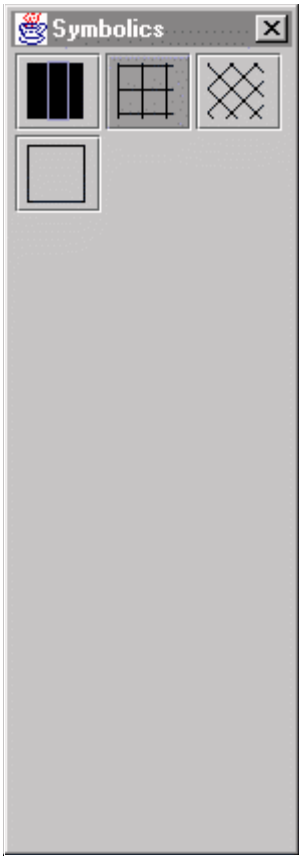
3 Release the left mouse button.

A line, configured as the selected Symbolics icon button, is displayed in the current foreground color.

Create Rectangle

1 Click the **Create Rectangle** button of the Left Toolbar located on the left side of the WeatherViewer.

- *The Rectangle editing functions are displayed in the Top Toolbar.*
- *The default/last requested Symbolics panel is displayed.*
- *The Symbolics panel contains several icon labeled buttons. Clicking a button will shade the rectangle according to the button icon symbol.*



2 Press the left mouse button at one of the rectangle vertices and drag the cursor to the diagonally opposite rectangle vertex.

- *A pink rectangle will grow as determined by the diagonal vertices.*
- *One diagonal vertex is the first point selected and the diagonally opposite vertex is the cursor.*

3 Release the left mouse button.

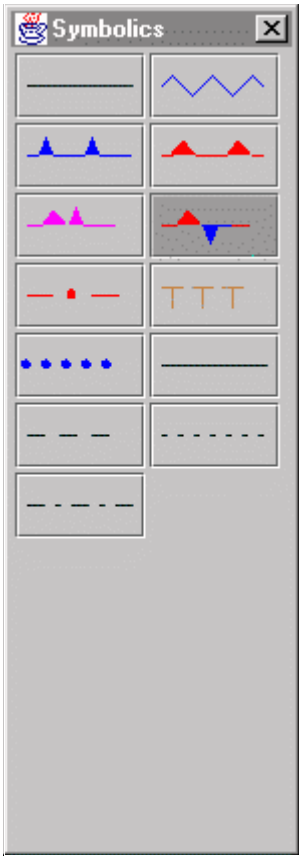
- *The rectangle is displayed in the current foreground color with the Symbolics panel specified shading.*

Create Polyline

1 Click the **Create Polyline** button of the Left Toolbar located on the left side of the WeatherViewer.

- *The Line editing functions are displayed in the Top Toolbar.*

- *The default/last requested Symbolics panel is displayed.*
- *The Symbolics panel contains several icon labeled buttons. Clicking a button will create a line resembling the button icon symbol.*



2 Click the left mouse button at one of the line end points.

3 Drag the mouse to the next line point in sequence.

A pink straight line is anchored at the last selected point and continuously updated to the cursor.

4 Click the left mouse button.

A line, configured as the selected Symbolics icon button, is created.

5 Repeat steps three and four for each additional point added.

6 Click the right mouse button.

The pink line will disappear and Create Polyline is exited.

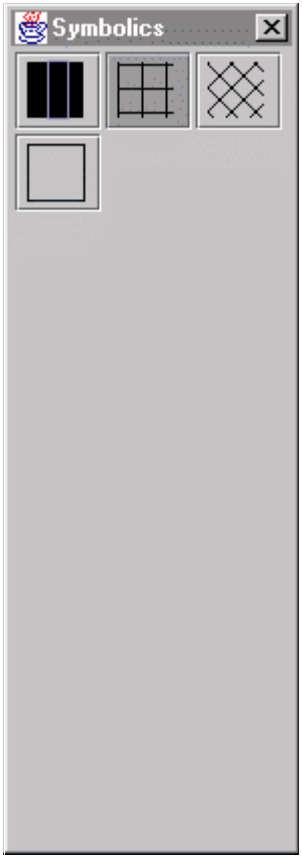
Create Polygon

1 Click the **Create Polygon** button of the Left Toolbar located on the left side of the WeatherViewer.

- *The Polygon editing functions are displayed in the Top Toolbar.*

- *The default/last requested Symbolics panel is displayed.*

The Symbolics panel contains several icon labeled buttons. Clicking a button will shade the rectangle according to the button icon symbol.



2 Click the left mouse button at a polygon point.

3 Drag the mouse to the next point in sequence.

A pink straight line is anchored at the last selected point and continuously updated to the cursor.

4 Click the left mouse button.

With the entry of the third or greater point, the Polygon is automatically closed. A line will automatically be drawn between the first and last entered points. The polygon is configured according to the selected Symbolics icon button and is displayed in the current foreground color.

5 Repeat steps 3 and 4 for each additional point added.

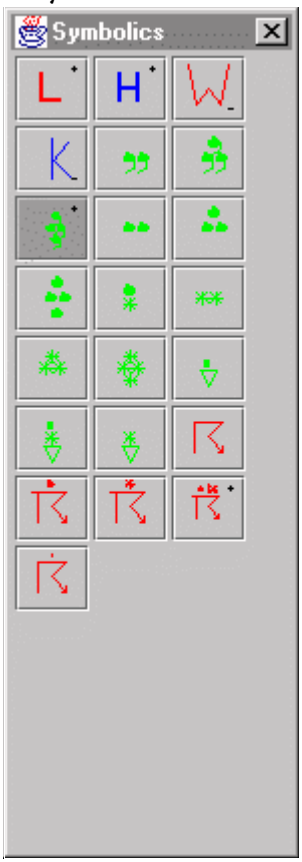
Create Meteorological Symbols

1 Click the **Create Meteorological Symbol** button of the Left Toolbar located on the left side of the WeatherViewer.

- *The symbol editing functions are displayed in the Top Toolbar.*

- *The default/last requested Symbolics panel is displayed.*

The Symbolics panel contains several icon labeled buttons. Clicking a button will create a meteorological symbol resembling the button icon symbol.



2 Click the left mouse button at the symbol location.

A meteorological symbol, as specified by the selected Symbolics icon button, is displayed.

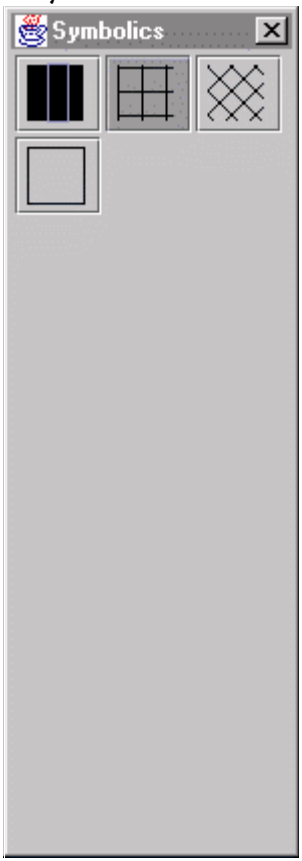
Create Diamond/Ellipse

1 Click the **Create Diamond/Ellipse** button of the Left Toolbar.

- *The Diamond/Ellipse editing functions are displayed in the Top Toolbar.*

- *The default/last requested Symbolics panel is displayed.*

The Symbolics panel contains several icon labeled buttons. Clicking a button will shade the diamond/ellipse according to the button icon symbol.



2 Press the left mouse button at one of the rectangle vertices and drag the cursor to the diagonally opposite rectangle vertex.

- *A pink rectangle will grow as determined by the diagonal vertices.*
- *One diagonal vertex is the first point selected and the diagonally opposite vertex is the cursor.*

3 Release the left mouse button.

A diamond is formed from the four midpoints of the rectangle. If the Smooth checkbox was checked, an ellipse is formed from the four midpoints of the rectangle. The diamond/ellipse is displayed in the current foreground color with the Symbolics panel specified shading.

Setting Color Saturation

Color saturation or grayscale density may be set during either the creation or editing of a filled feature. If the selected fill is black, grayscale density is determined. If the selected fill is a hue, color saturation is determined. Filled features are rectangles, diamonds/ellipses, and polygons whose interior is filled.

The level of color saturation/grayscale density is determined by the selection from the Symbolics panel. The Symbolics panel contains a collection of icon buttons, each of which represents a different pattern. The pattern translates into a saturation level.

Setting color saturation is a two step process.

1 On the Menubar, select **Preferences** > **Fill Areas** > **Fading**.

The WeatherViewer is set in saturation mode and filled features with a color at different levels of saturation.

2 When creating filled features, do the following:

- On the Left Toolbar, click on one of the filled features. This may be the rectangle, diamond/ellipse, or polygon.

Each time the filled feature icon is clicked, the Symbolics panel is displayed. Select the pattern icon corresponding to the level of saturation desired.

3 To insert filled rectangles, do the following:

- Press the left mouse button at one of the rectangle vertices.
- Drag the cursor to the diagonally opposite rectangle vertex.

A pink rectangle will grow as determined by the diagonal vertices.

One diagonal vertex is the first point selected and the diagonally opposite vertex is the cursor.

- Release the mouse button.

4 To insert an ellipse, do the following:

- On the Top Toolbar check the Smooth checkbox.
- Press the left mouse button at one of the rectangle vertices.

- Drag the cursor to the diagonally opposite rectangle vertex.

  A pink rectangle will grow as determined by the diagonal vertices.

  One diagonal vertex is the first point selected and the diagonally opposite vertex is the cursor.

- Release the mouse button.

  A diamond is formed from the four midpoints of the rectangle. If the Smooth checkbox was checked, an ellipse is formed from the four midpoints of the rectangle that have been smoothed using a Bezier curve.

5 To insert polygons, do the following:

- Click the left mouse button at a polygon point.
- Drag the mouse to the next point in sequence.

  A pink straight line is anchored at the last selected point and continuously updated to the cursor.

- Click the left mouse button.

  With the entry of the third or greater point, the Polygon is automatically closed. A line will automatically be drawn between the first and last entered points.

- Repeat steps three and four for each additional point added.
- Click the right mouse button to terminate polygon development.

Setting Fill Pattern

Color or grayscale fill pattern may be set during either the creation or editing of a filled feature. If the selected fill is black, the grayscale fill pattern is determined. If the selected fill is a hue, the color fill pattern is determined. Filled features are rectangles, diamonds/ellipses, and polygons whose interior is filled.

The level of color saturation/grayscale density is determined by the selection from the Symbolics panel. The Symbolics panel contains a collection of icon buttons, each of which represents a different pattern. The pattern translates into a saturation level.

Setting the fill pattern consists of setting the WeatherViewer in saturation mode and selecting the saturation level.

To set the fill pattern, do the following:

1 On the Menubar, select **Preferences** > **Fill Areas** > **Fading**.

The WeatherViewer is set in saturation mode and filled features with a color at different levels of saturation.

2 To set the saturation level when creating filled features, do tlhe following:

- On the Left Toolbar, click on one of the filled features. This may be the rectangle, diamond/ellipse, or polygon.
- Each time the filled feature icon is clicked, the Symbolics panel is displayed. Select the pattern icon desired.

3 To insert filled rectangles, do the following:

- Press the left mouse button at one of the rectangle vertices.
- Drag the cursor to the diagonally opposite rectangle vertex.

  A pink rectangle will grow as determined by the diagonal vertices.

  One diagonal vertex is the first point selected and the diagonally opposite vertex is the cursor.
- Release the mouse button.

4 To insert a filled ellipse, do the following:

- On the Top Toolbar check the **Smooth** checkbox
- Press the left mouse button at one of the rectangle vertices.
- Drag the cursor to the diagonally opposite rectangle vertex.

  A pink rectangle will grow as determined by the diagonal vertices.

  One diagonal vertex is the first point selected and the diagonally opposite vertex is the cursor.
- Release the mouse button.

  A diamond is formed from the four midpoints of the rectangle. If the Smooth checkbox was checked, an ellipse is formed from the four midpoints of the rectangle that have been smoothed using a Bezier curve.

5 To insert polygons, do the following:

- Click the left mouse button at a polygon point.
- Drag the mouse to the next point in sequence.

  A pink straight line is anchored at the last selected point and continuously updated to the cursor.
- Click the left mouse button.

  With the entry of the third or greater point, the Polygon is automatically closed. A line will automatically be drawn between the first and last entered points.
- Repeat steps 2 and 3 for each additional point added.
- Click the right mouse button to terminate polygon development.

Add Points to Lines or Figures

Additional points may be added to change the shape of an existing line or figure. This may be done to lines, polylines, rectangles, diamonds/ellipses, or polygons. This process will change any figure to a polygon.

To add points, do the following:

1 If it is not already displayed, display the Left Toolbar.

2 Select the **Single Feature** button of the Left Toolbar.

3 Click the right mouse button on the line or figure where the new point is to be added.

The Point Editing popup menu is displayed.

4 Click **Add Point** in the Point Editing popup menu.

Small pink circles will appear at the points forming the line and the closed/filled figure vertices.

5 Press the left mouse button at the selected location on the line or outline of the figure where the point is to be added.

A move cursor will appear.

6 Optionally, drag the mouse to the new location if required.

Upon release of the mouse button, the new point is located beneath the cursor.

7 Optionally, add additional points by repeatedly selecting and dragging and/or releasing that point, as above.

8 Click the right mouse button at an unoccupied location.

*The pink circles will disappear and the **Add Point** mode is exited.*

Copy Object

To copy an object, do the following:

1 If it is not already displayed, display the Left Toolbar and do the following:

- Select the **Single Feature** button of the Left Toolbar.
- Click the right mouse button on the figure to be copied.
- The Point Editing popup menu is displayed.
- Click the **Copy** in the Point Editing popup menu.
- The object will change from its original color to pink. A copy of the object will follow the cursor.

- Press the left mouse button when the copy is located where desired.
- The copy is deposited.
- Optionally, to create more copies, move the next copy to its new location and repeat the last action.
- To leave the editing mode, click the right mouse button where no figure is present.

  The object will revert to its original color.

2 If the editor is already in the copy mode, do the following:

- Click on the object to be copied.
- The object will change from its original color to pink. A copy of the object will follow the cursor.
- When the copy is complete, press the left mouse button.

  The copy action is complete.

- To leave the editing mode, click the right mouse button where no figure is present.

  The object will revert to its original color.

Delete Object

To delete an object do one of the following:

1 If it is not already displayed, display the Left Toolbar and do the following:

- Select the **Single Feature** button of the Left Toolbar.
- Click the right mouse button on the figure to be deleted.

  The popup menu is displayed.

- Click the **Delete** in the popup menu.

  The object is deleted.

2 If the editor is already in the delete mode, click on the object to be deleted.

  The object is deleted.

Delete Points on Lines or Figures

Points may be deleted to change the shape of an existing line figure. This may be done to lines, polylines, rectangles, diamonds/ellipses, or polygons. This process may change a closed figure to a series of line segments.

To delete points, do the following:

1 If it is not already displayed, display the Left Toolbar.

2 Select the Single Feature button of the Left Toolbar.

3 Click the right mouse button on the line or figure where the point is to be deleted.

The Point Editing popup menu is displayed.

4 Click the **Delete Point** in the Point Editing popup menu.

Small pink circles will appear at the points forming the line and vertices of the closed/filled figure vertices.

The delete cursor will appear.

5 Click over the point to be deleted.

The point is deleted.

6 Optionally, delete additional points by repeatedly clicking on them, as above.

7 Click the right mouse button at any location other than the selected line.

*The pink circles will disappear and **Delete Point** mode is exited.*

Editing Attributes for Figures

Figures can be filled with several different fill densities or crosshatched patterns by doing the following:

1 On the Menubar, select **View** > **Fill Areas via**.

2 If the filled area is to be of a continuous fill, click on the **Fading** radio button.

3 If the filled area is to be crosshatched, click on the **Patterns** radio button.

4 If it is not already displayed, display the Left Toolbar.

5 Select the **Single Feature** button of the Left Toolbar.

6 Click the right mouse button on the line where the characteristic is to be changed.

The Point Editing popup menu is displayed.

The figure editing additions will also be added to the Top Toolbar.

7 Click the **Attribute** in the Point Editing popup menu.

*Selection of **Attribute** enables you to select a new fill density or crosshatching pattern.*

*The **Symbolics** panel appears. It contains a selection of buttons, each containing a different crosshatching icon. The icons represent both fill density and crosshatch pattern. The percent of fill density is specified on the Tool Tip.*

8 Optionally, check the **Smooth** checkbox on the Top Toolbar.

The figure becomes a smooth curve. Rectangles become ovals or circles; diamonds become ellipses, etc.

9 Click on the selected button in the Symbolics panel.

The color density or crosshatching of the figure will reflect the selection.

Editing Attributes for Lines

Lines can be of various types, such as fronts, streamlines, plain lines, etc. The WeatherViewer provides a large selection of these line types. The specific line type can be changed after the line is drawn using the **Attribute** command.

1 If it is not already displayed, display the Left Toolbar.

2 Select the **Single Feature** button of the Left Toolbar.

3 Click the right mouse button on the line where the characteristic is to be changed.

The Point Editing popup menu is displayed.

The line editing additions will also be added to the Top Toolbar.

4 Click the **Attribute** in the Point Editing popup menu.

The Symbolics panel appears. It contains a selection of buttons, each containing a line style icon. Each button also represents a different line style.

Different sets of line types on the Symbolics panel can be selected in the Category combo box.

5 Click on the selected button in the Symbolics panel.

The characteristics of the line will reflect the selection.

Editing Reverse Points

Depending on the direction that the line was drawn, fronts can be represented in the wrong direction. Rather than redrawing the line starting from the other direction, a **Reverse Points** entry will change the direction of various line types. Do the following:

1 If it is not already displayed, display the Left Toolbar.

2 Select the **Single Feature** button of the Left Toolbar.

3 Click the right mouse button on the line that is to be reversed.

The Editing popup menu is displayed.

4 Click the **Reverse Points** in the editing popup menu.

The orientation of the line will reverse. This will not be visible in all cases.

Move Object

To move an object, do the following:

1 If it is not already displayed, display the Left Toolbar and do the following:

- Select the **Single Feature** button of the Left Toolbar.
- Click the right mouse button on the figure to be moved.

  The Point Editing popup menu is displayed.
- Click the **Move** in the Point Editing popup menu.

  The object will change from its original color to pink. The object will follow the cursor.
- When the move is complete, press the left mouse button.

  The move action is complete.
- To leave the editing mode, click the right mouse button where no figure is present.

  The object will revert to its original color.

2 If the editor is already in the move mode, do the following:

- Click on the object to be moved.

  The object will change from its original color to pink. The object will follow the cursor
- When the move is complete, press the left mouse button.

  The move action is complete.

- To leave the editing mode, click the right mouse button where no figure is present.

  The object will revert to its original color.

Move Points for Lines or Figures

To move points for lines, or for closed or filled figures, do the following:

1. If it is not already displayed, display the Left Toolbar.
2. Select the **Single Feature** button of the Left Toolbar.
3. Click the right mouse button on the line or figure to be whose point is to be moved.

   The Point Editing popup menu is displayed.
4. Click **Move Point** in the Point Editing popup menu.

   Small pink circles will appear at the points in the line/polyline or at the figure vertices.
5. Press the left mouse button on the pink circle to move the point beneath it and drag the cursor to the new location. Release the button.

   The line/polyline or figure is reconfigured with the point moved.

   The line/polyline or figure will not change until the button is released.
6. To leave editing mode, click the right mouse button where no object is present.

   The pink circles will disappear.

Front/Back Placement for Objects

To emphasize/de-emphasize an object, the object can be put in front of or behind other objects occupying a similar location in the WeatherViewer canvas. To do this, do the following:

1. If it is not already displayed, display the Left Toolbar.
2. Select the **Single Feature** button of the Left Toolbar.
3. Click the right mouse button on the line or figure to be moved to front or back.

   The Point Editing popup menu is displayed.
4. To make the selected object appear in front of any other object, select **Front** from the Point Editing popup menu.

   Where the selected object and another object overlap, the selected line or figure is displayed as being in front.

5 To make the selected object appear behind any other object, select **Back** from the Point Editing popup menu.

Where the selected object and another object overlap, the other object is displayed as being in front.

The DialogEditSave panel is displayed.

Transmitting Products

Transmitting a Product

To transmit either composites or single products, do the following:

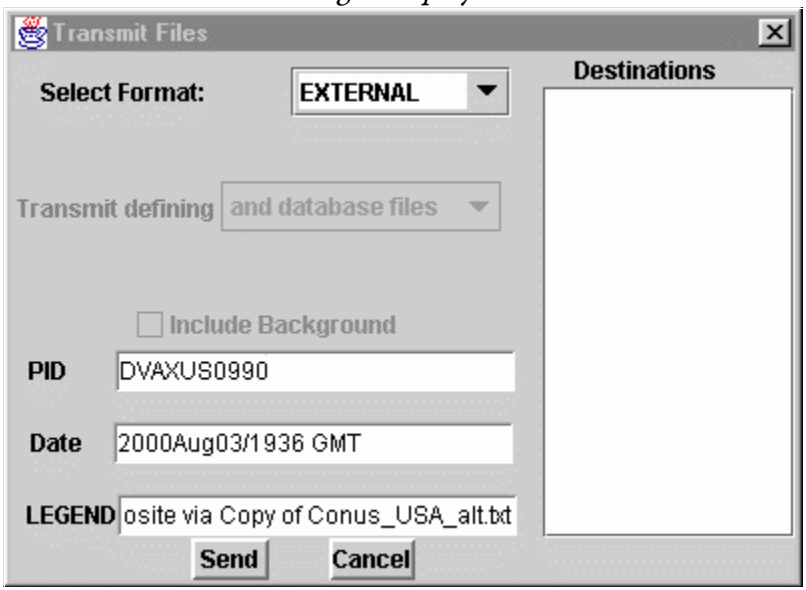
1 Display the ProdListDialog. For the activity required to display this dialog, see "Layer List Popup" on page 4-55.

2 On the ProdListDialog, click the right mouse button on the Product List entry to transmit.

The Transmit/Delete popup is displayed.

3 Click **Transmit Selected Item**.

The Transmit Files dialog is displayed.



For the functions and restrictions of the various components of the Transmit Files dialog, see "Transmit Files Dialog" on page 4-50.

Transmitting Color Tables

Color tables can be transmitted to other AMIS sites only. To transmit a color table, do the following:

1 If the Layer List dialog has not been displayed, do one of the following:

- On the Menubar, select**View** > **Layer List**.
- On the Menubar, select **Composite** > **Show Layer List**….
- On the Top Toolbar, click on the **Show/Edit Layer List** button.

The Layer List dialog is displayed.

2 If the color dialog is not displayed, do one of the following:

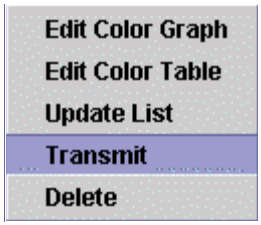
- In the Layer List File List, click on the color dot of the grid/image product whose color is to be edited.
- In the Layer List File List, click on the description of the grid file whose color is to be edited and select **View** > **Color…**.

3 In the **Display Format** combo box, click on the **Color Table** entry.

The Color Selections list is displayed.

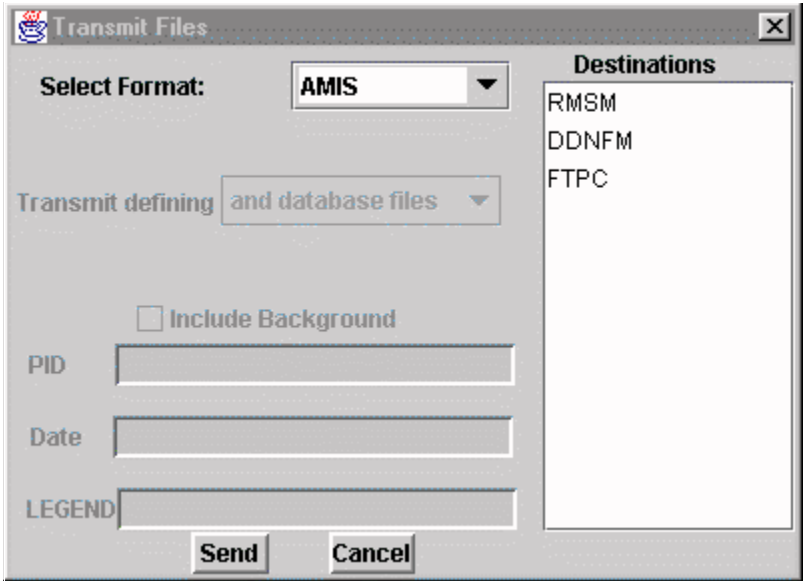
4 Right click on the color selection to be transmitted.

The Color Selection popup is displayed.



5 Click on the **Transmit** entry.

The Transmit Files dialog is displayed.



For the functions and restrictions of the various components of the Transmit Files dialog, see “Transmit Files Dialog” on page 4-50.

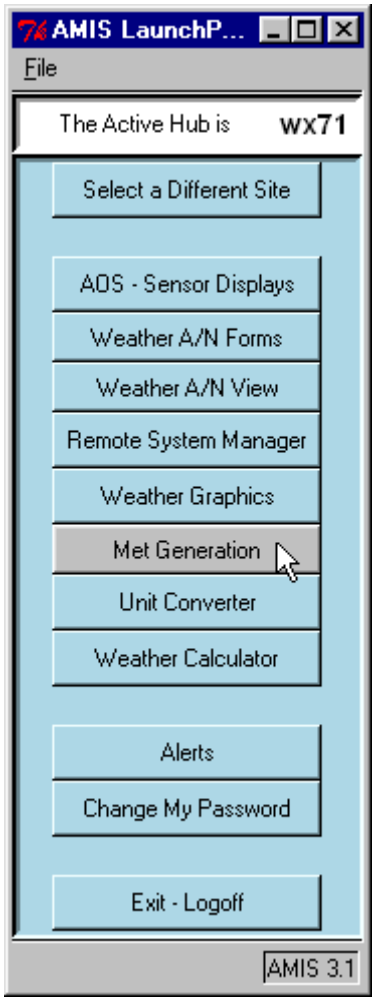
CHAPTER

5

MET Generation

Graphical products, both horizontal and vertical, are generated via the Met Generation function. To launch the Met Generation function, select **Met Generation** from the AMIS LaunchPad (see Figure 5.1).

Figure 5.1 MET Generation Selection

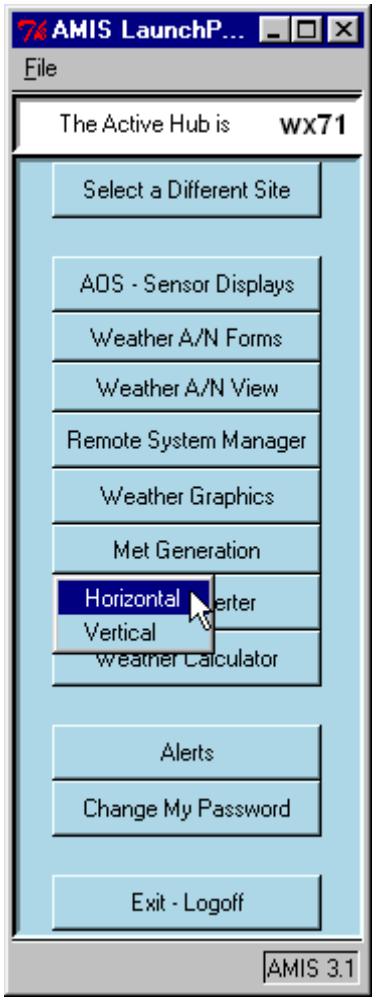


Horizontal MET Products

To display the panel from which all horizontal meteorological generations are initiated, do the following:

1 From the AMIS LaunchPad, select **Met Generation** > **Horizontal** (see Figure 5.2)

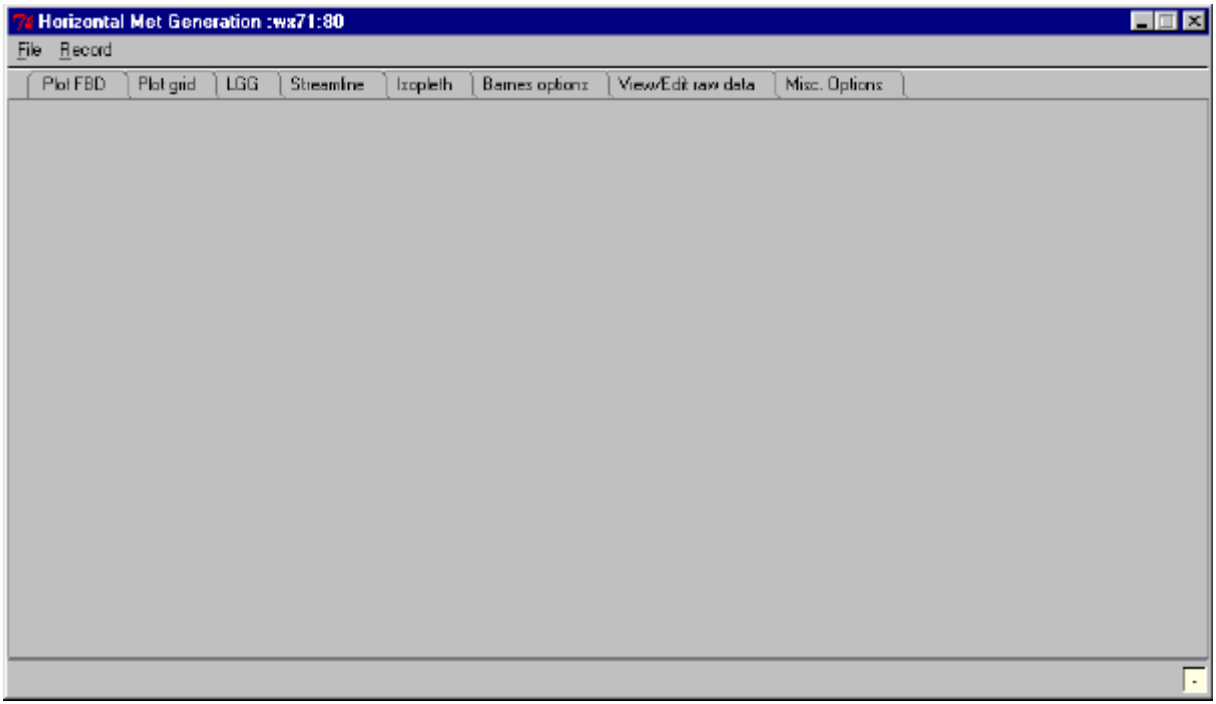
Figure 5.2 Launch of Met Generation—Horizontal



The Horizontal Met Generation Screen displays (see Figure 5.3).

The specific horizontal met generation functions are presented as tabs along the top of the panel, permitting the user to set up the desired product generation via button and menu selections. Selection of a specific tab will display the set-up panel for that function.

Figure 5.3 Horizontal Met Generation Screen



The functions supported by the horizontal met generation panel include:

- **Plot FBD**
- **Plot grid**
- **LGG** (Locally Generated Grid)
- **Streamline**
- **Isopleth**
- **Barnes options**
- **View/Edit raw data**
- **Misc. Options**

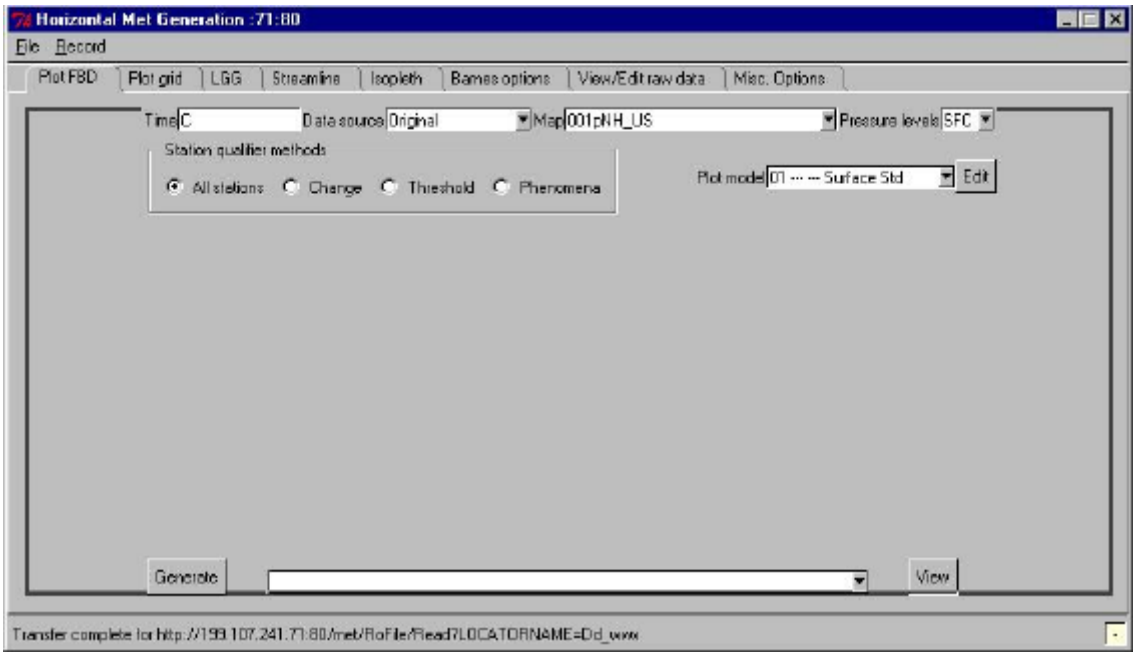
In general, Met Generations are performed at the N-TFS Server, that is, the N-TFS Client specifies the set-up conditions, passes that information to the server, which then executes the requested Met Generation, the server reports completion back to the client. Once you have made your selections and set-up is complete, you select the **Generate** button to start the Met Generation process. The button will remain grayed out until the requested Met Generation is completed by the server. A small progress bar at the lower

right of the panel will display while the met generation is in progress. The status bar at the bottom left of the panel will display status messages concerning the met generation in progress and upon completion will list the database name assigned the product.

FBD Plots

Met Generation Function Plot FBD

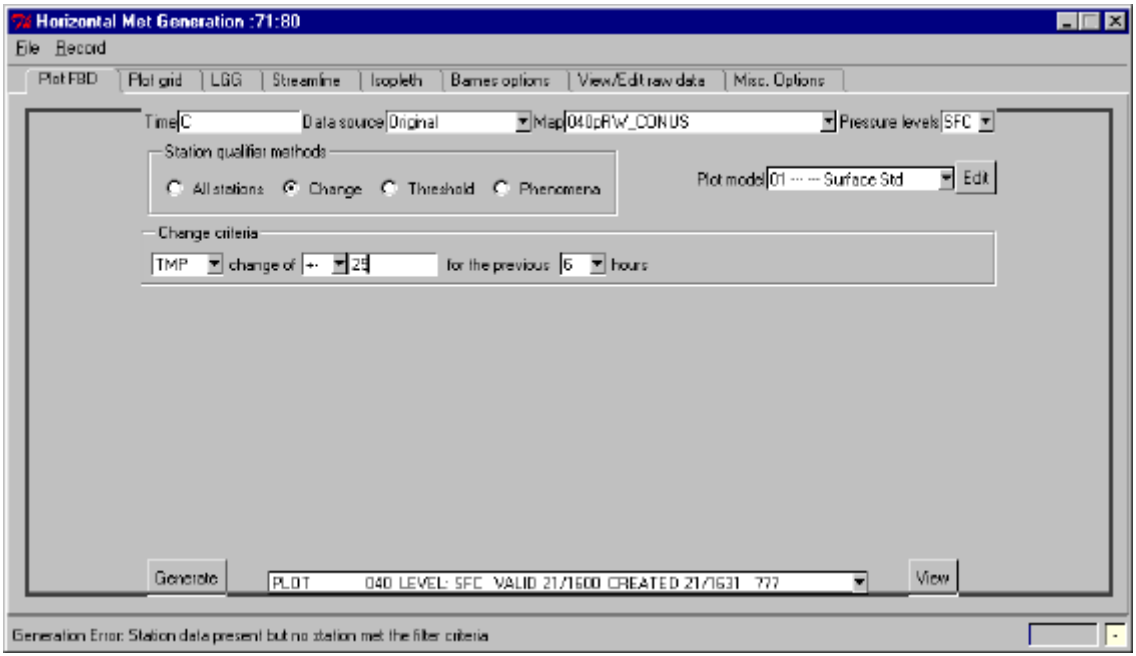
Figure 5.4 Met Generation Plot FBD Panel



The above panel is reached via the **Met Generation**, **Horizontal** pick on the **AMIS System Entry** (Launch Pad) menu and the **Plot FBD** tab. This function allows you to generate station plots of formatted binary data (FBD) from surface or upper-air data on a selected background. The Plot FBD function permits you to create and view FBD plots of surface and upper air data in a number of specifiable configurations. Depending upon your needs, you can plot:

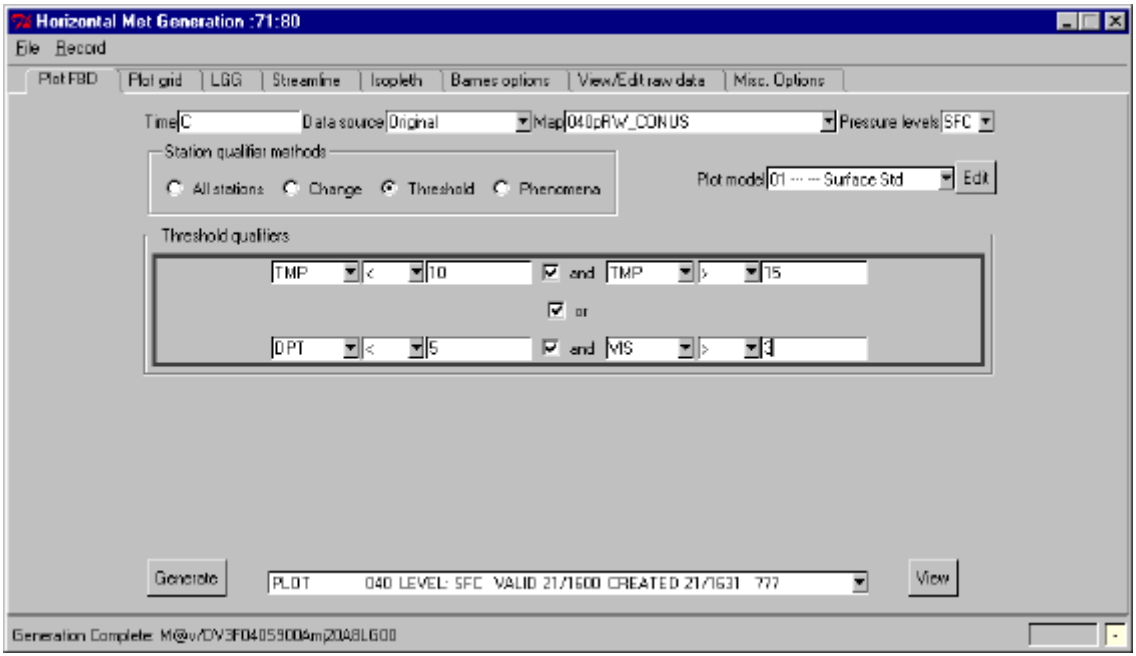
- All stations found for the map you specify (see Figure 5.4).
- Only those stations exhibiting a change in a specified parameter over a specified period of time (see Figure 5.5).

Figure 5.5 Plot FBD—Stations Exhibiting Change in Specified Parameter



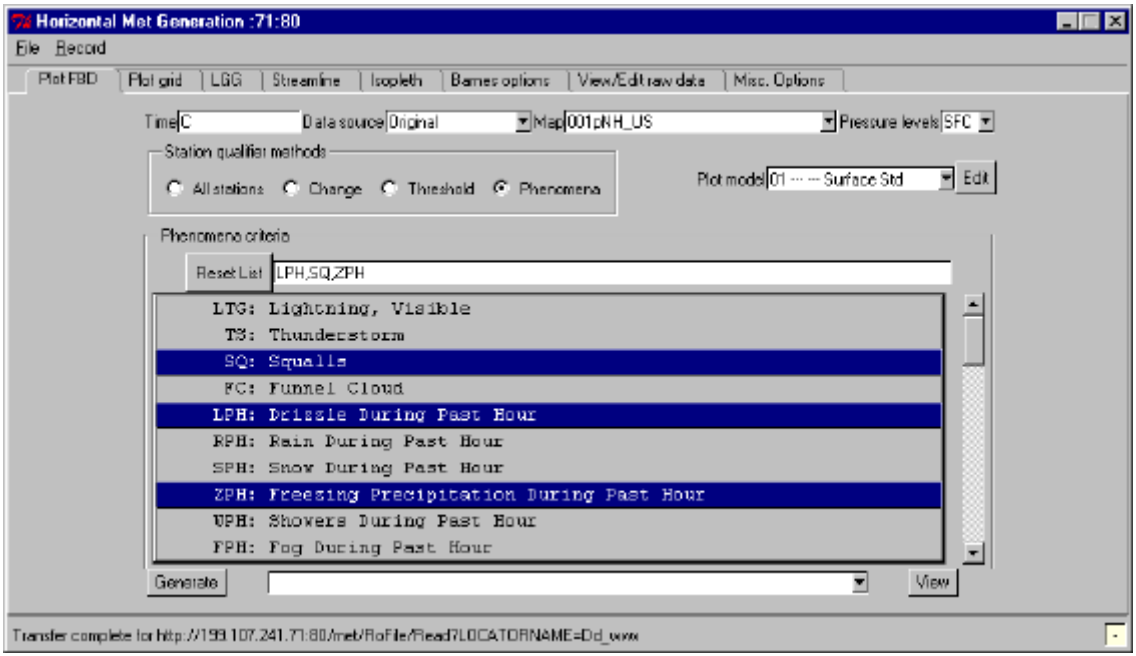
- Only those stations where specified parameter(s) meet specified threshold value(s) (see Figure 5.6).

Figure 5.6 FBD—Stations Meeting Specified Threshold Values



- Only those stations where specified weather phenomena are reported during the time specified (see Figure 5.7).

Figure 5.7 Plot FBD—Stations Exhibiting Specified Weather Phenomena



For all stations you must select the **All stations** radio button and specify the following before requesting the plot to be generated:

- **Time** (dd/hhmm or C, C-1,C-2…dd/hh00-dd/hh00).
- **Data source.**

  The data source is selectable between Original, Override, and Non-standard.

  Override data is original data that has been altered in some way and saved.

  Non-standard data is completely new.

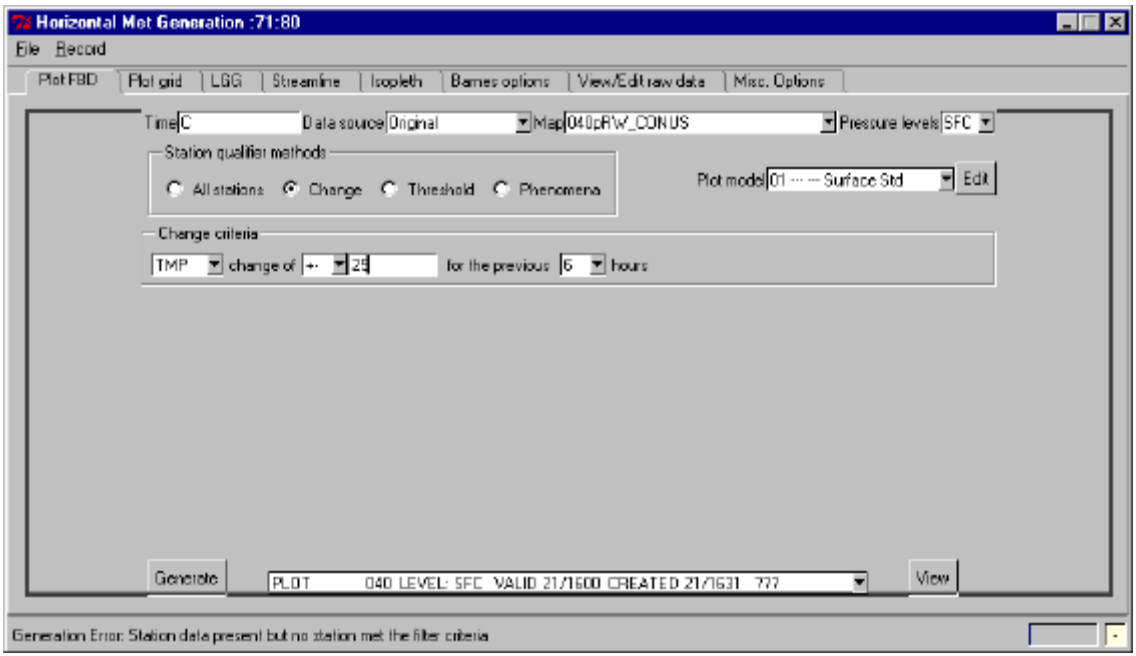
  For an explanation of how to generate Override and Non-standard data, see "View/Edit Surface and/or Upper-Air FBD" on page 5-34.
- Map (Any available).
- Pressure levels (SFC – 010mb).
- Plot Model (01 – 29).

An FBD plot is generated when the desired information is selected/entered into the panel and the **Generate** button is selected. When completed, the product legend will be displayed in the **Completed Product List** (white bar).

The **View** button allows products generated from this panel to be viewed immediately. This display of the product is for viewing only and cannot be further manipulated or processed. Only one product can be viewed at a time. In order to use the product in a composite or animation or other application, or to edit it in any way, it must be loaded into the Weather Graphics function as described elsewhere in this guide (see “Graphics Product Operations” on page 4-1).

Note: *The Completed Product List contains all products generated during the current Horizontal Met Generation session and will be cleared when the session is terminated. Selecting the down arrow at the right end of the Completed Product List field will display the entire list for the session. You may select any product in the list for display.*

Figure 5.8 Plot FBD—Stations Exhibiting Change in Specified Parameter



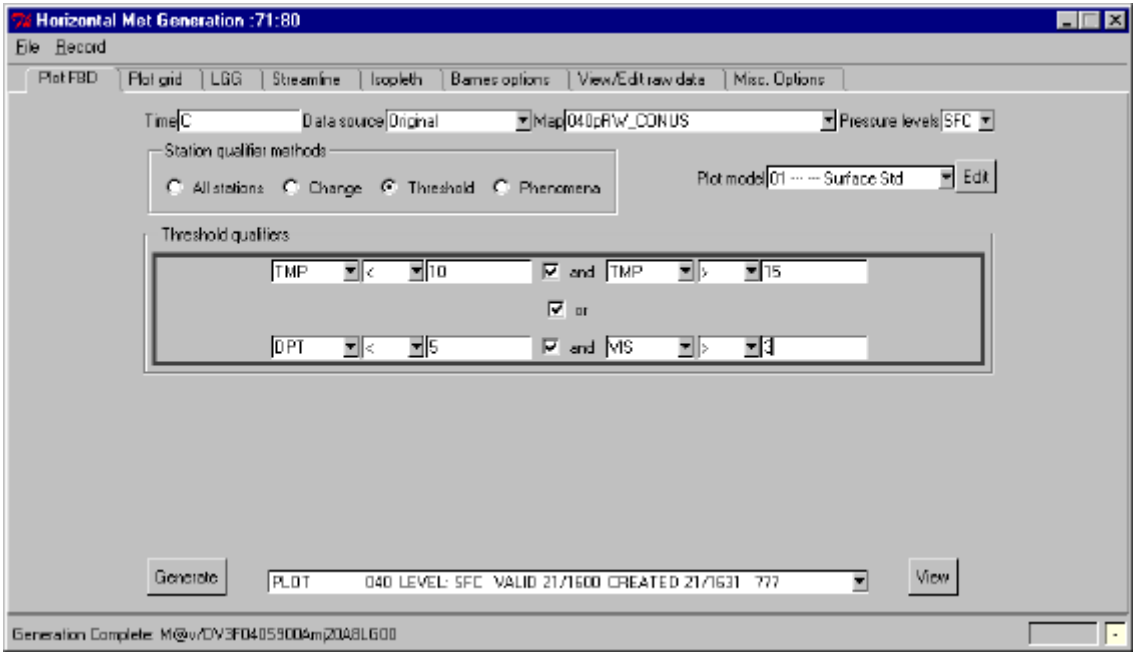
For Change parameters you must select the **Change** radio button and specify the following before requesting the plot to be generated:

- **Time** (dd/hhmm or C, C-1,C-2… dd/hh00-dd/hh00)
- **Data source** (Original, Override, Non-standard)
- **Map** (Any available)
- **Pressure levels** (SFC – 010mb)
- **Plot Model** (01 – 29)

You must then enter the **Change criteria** by selecting a parameter from the pull-down list, a change of (+, -), amount of change, and number of hours from the pull-down list.

An FBD plot is generated when the desired information is selected/entered into the panel and the **Generate** button is selected. When completed, the product legend will be displayed in the Completed Product List (white bar). Products generated from this panel can be viewed immediately by selection of the **View** button.

Figure 5.9 Plot FBD—Stations Meeting Specified Threshold Values



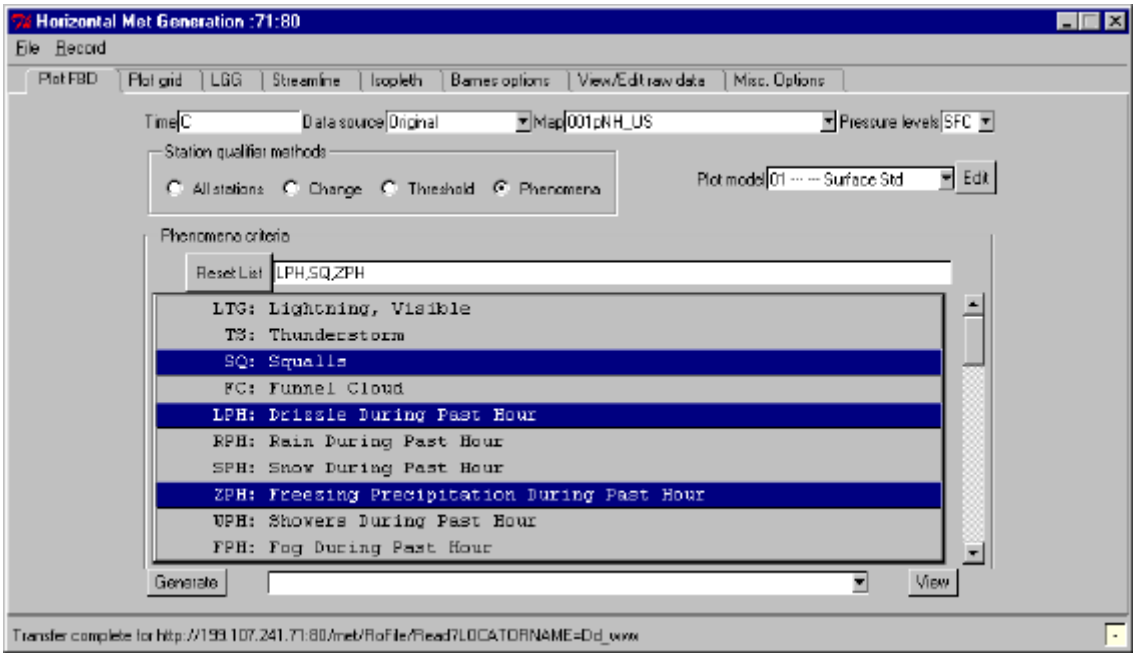
For parameter threshold values you must select the **Threshold** radio button and specify the following before requesting the plot to be generated:

- **Time** (dd/hhmm or C, C-1,C-2…. dd/hh00-dd/hh00)
- **Data source** (Original, Override, Non-standard)
- **Map** (Any available)
- **Pressure levels** (SFC – 010mb)
- **Station qualifier method** (Threshold)
- **Plot Model** (01 – 29)

You must then enter the **Threshold qualifiers** by selecting a parameter from the pull-down list, a threshold delimiter (<, >, =), a value. You may then specify a range for the threshold by selecting the **and** check-box. You may also use combinations of selections by selecting the **or** check-box.

An FBD plot is generated when the desired information is selected/entered into the panel and the **Generate** button is selected. When completed, the product legend will be displayed in the Completed Product List (white bar). Products generated from this panel can be viewed immediately by selection of the **View** button.

Figure 5.10 FBD Plot—Stations Exhibiting Specified Weather Phenomena



For parameter phenomena you must select the **Phenomena** radio button and specify the following before requesting the plot to be generated:

- **Time** (dd/hhmm or C, C-1,C-2…. dd/hh00-dd/hh00)
- **Data source** (Original, Override, Non-standard)
- **Map** (Any available)
- **Pressure levels** (SFC – 010mb)
- **Plot Model** (01 – 29)

You must then select the Phenomena **criteria** by selecting weather phenomena from the scrollable list. Each phenomena selected will be added to the selection list.

An FBD plot is generated when the desired information is selected/entered into the panel and the **Generate** button is selected. Select **Reset List** to clear entries. When completed, the product legend will be displayed in the Completed Product List (white bar). Products generated from this panel can be viewed immediately by selection of the **View** button.

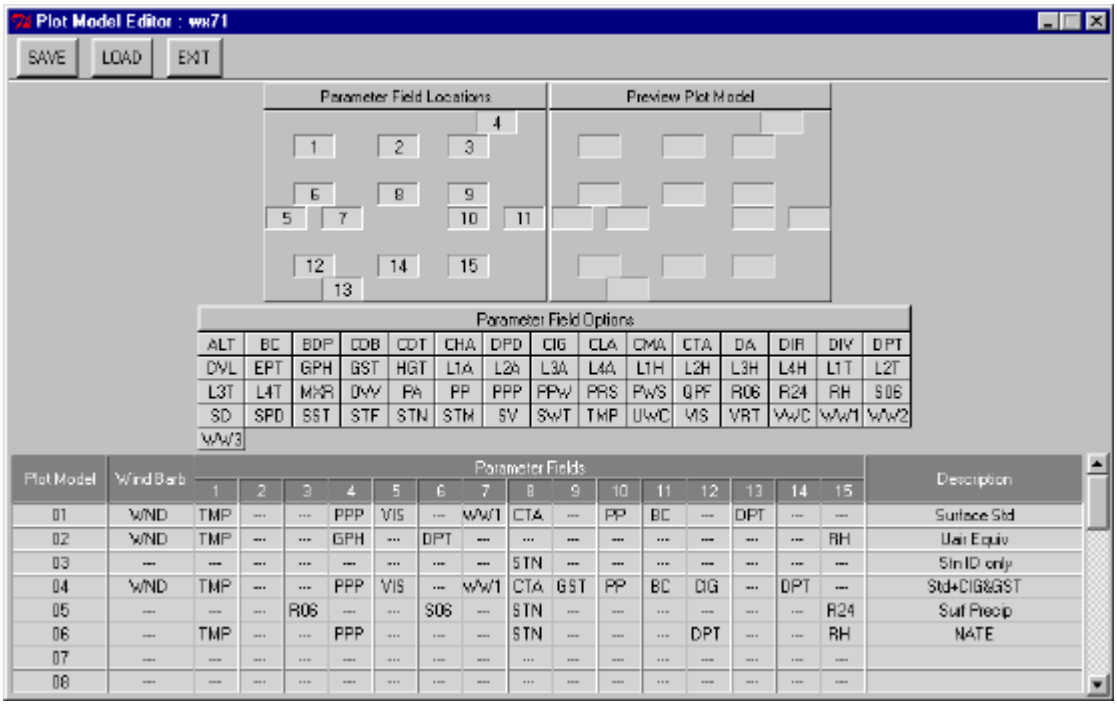
> ***Note****: Since weather phenomena are not reported in upper-air data, the phenomena selection is not available for upper-air plots.*

Plot Model Editing

You are provided standard surface and upper-air plot models to use for FBD plotting. In addition, there are up to 26 other plot models available for specialized plotting of parameters of local interest. Those 26 plot models are locally specified using the panel shown below. There is also a standard UGDF plot model provided for a total of 29 possible plot models.

WARNING *Plot models are not exclusive to each user. Anyone using the system may change a plot model at any time. If you have made changes to a specific plot model, you may want to view it prior to requesting a Plot generation.*

Figure 5.11 Plot Model Editor



To view / edit Plot Models, select the **Edit** button next to the Plot model pull-down list on the right of the **Plot FBD** display.

The Plot Model Editor screen will display (see Figure 5.11).

The **Parameter Field Locations** displayed on the top left of the panel are numbered from one through 15 and show the lay-out of plot model fields. In defining a plot model you may select any of the 15 locations for your parameters. The top right of the panel (**Preview Plot Model**) will reflect the parameter locations for the plot model as you are editing.

To view / edit one of the 28 plot models:

1 Select the plot model number in the left column under **Plot Model**.

*The row of the number selected will turn green and the parameter entries in that row will be displayed in the **Preview Plot Model**.*

***Note**: You are not allowed to edit plot model #1 as it is the surface standard.*

To remove current parameters in the plot model being edited:

1 Left double click over the parameter in the row being edited.

To insert a parameter into the plot model:

1 select the parameter from the **Parameter Field Options** area.

2 select the **Parameter Field** location where you want that parameter plotted in the row being edited.

*The **Preview Plot Model** window will be updated with the parameter in the location you have chosen.*

To plot a wind barb:

1 select the **Wind Barb** field in the row being edited.

***WND** will appear in the column. Left double click in this field to remove the wind barb.*

2 Optionally name the plot model for ease of reference by entering a name in the **Description** field.

To save your plot edits:

1 select **Save** on the top bar of the display.

To discard your edits or exit after viewing only:

1 select **Exit** on the top bar of the display.

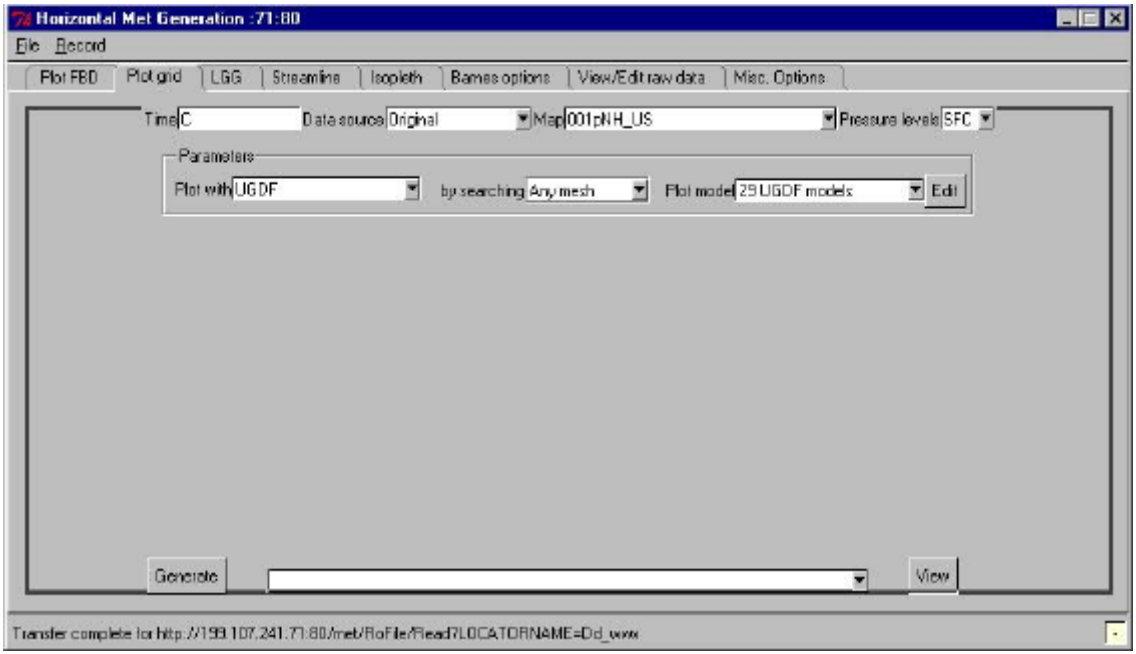
To discard your edits and begin edits again:

1 select **Load** to re-load the plot models as last saved.

Care should be taken when creating a custom plot model to ensure that the values being plotted do not overlay one another when displayed. You should not expect to be able to use all 15 available parameter field locations in one plot function.

Plotting Gridded Data

Figure 5.12 Plot Gridded Data Panel



The above panel is reached via the **Met Generation**, **Horizontal** pick on the **AMIS System Entry** (Launch Pad) menu and the **Plot grid** tab. This function allows you to generate plots using gridded fields that have already been generated either externally or locally.

You must specify the following before requesting the plot to be generated:

- **Time** (dd/hhmm or C, C-1,C-2….).
- **Data source**.

  Original, All products.

  Original- UGDF as received from AFWA.

  All products- Priority given to edited grid data, then original.
- **Map** (Any available).
- **Pressure levels** (SFC – 010mb).

  You must then enter the Parameters selections, ***Plot with:***
- **UGDF**.

- **Locally Generated grid**
- **Product source**
- **Product name**

Selecting **UGDF** data will use gridded data received from AFWA. **Locally Generated grid** will select a locally generated grid from the database, based on the parameters set above. When selecting **Product source**, selecting the **Search** button will display a list of available grid sources. When selecting **Product name**, selecting the **Search** button will display the **Grid Browser** panel. For further information, see "Searching for Grids" on page 5-28.

You must then specify a source mesh size:

- Select from the **by searching** pull-down list:
  - **Any mesh**
  - **Whole mesh**
  - **Half mesh**
  - **1/8 mesh**

You must then specify a plot model:

- select a plot model from the **Plot model** pull-down list.

A Grid plot is generated when the desired information is selected/entered in the panel and the **Generate** button is selected. When completed, the product legend will be displayed in the **Completed Product List** (white bar).

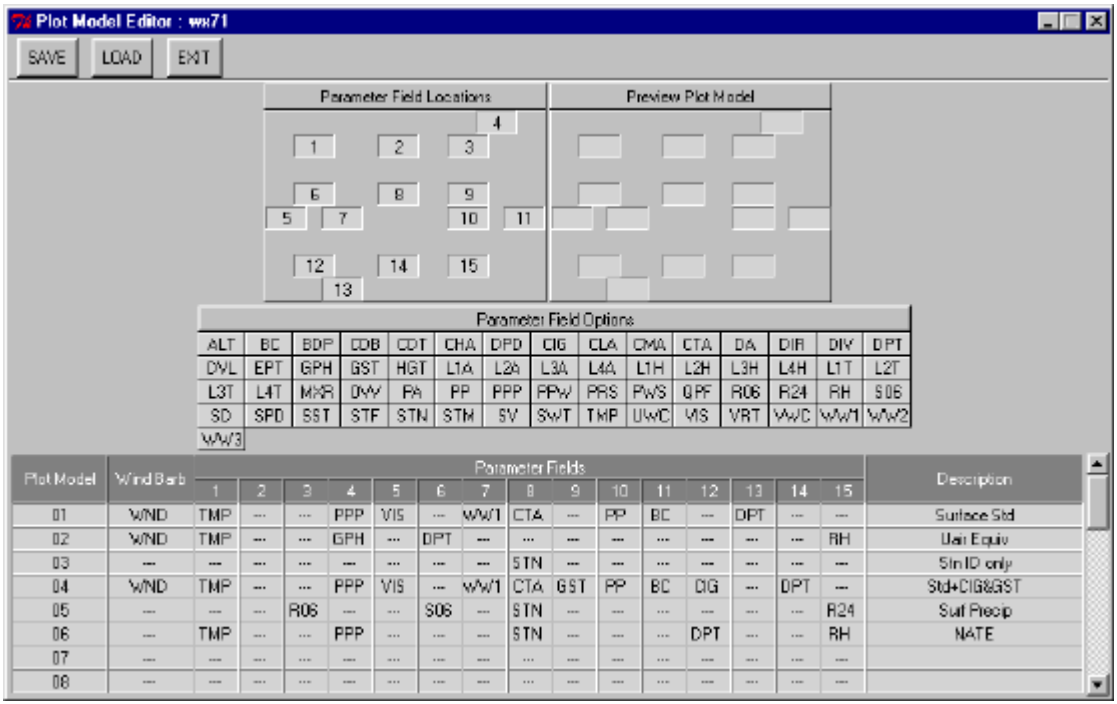
The **View** button allows products generated from this panel to be viewed immediately. This display of the product is for viewing only and cannot be further manipulated or processed. Only one product can be viewed at a time. In order to use the product in a composite or animation or other application, or to edit it in any way, it must be loaded into the Weather Graphics function as described elsewhere in this guide (see "Graphics Product Operations" on page 4-1).

Plot Model Editing

You are provided standard surface and upper-air plot models to use for FBD plotting. In addition, there are up to 26 other plot models available for specialized plotting of parameters of local interest. Those 26 plot models are locally specified using the above panel. There is also a standard UGDF plot model provided for a total of 29 possible plot models. Actually, since 26 of the plot models can be used for customized plotting the number of possible plot models is limited only by the inventiveness of the user.

***Warning**: Plot models are not exclusive to each user. Anyone using the system may change a plot model at any time. If you have made changes to a specific plot model, you may want to view it prior to requesting a Plot generation.*

Figure 5.13 Plot Model Editor



To view / edit Plot Models, select the **Edit** button next to the Plot model pull-down list on the right of the **Plot FBD** display.

The Plot Model Editor screen will display (see Figure 5.13).

The **Parameter Field Locations** displayed on the top left of the panel are numbered from one through 15 and show the lay-out of plot model fields. In defining a plot model you may select any of the 15 locations for your parameters. The top right of the panel (**Preview Plot Model**) will reflect the parameter locations for the plot model as you are editing.

To view / edit one of the 28 plot models:

1 Select the plot model number in the left column under **Plot Model**.

*The row of the number selected will turn green and the parameter entries in that row will be displayed in the **Preview Plot Model**.*

***Note**: You are not allowed to edit plot model #1 as it is the surface standard.*

To remove current parameters in the plot model being edited:

1 Left double click over the parameter in the row being edited.

To insert a parameter into the plot model:

1 Select the parameter from the **Parameter Field Options** area.

2 select the **Parameter Field** location where you want that parameter plotted in the row being edited.

*The **Preview Plot Model** window will be updated with the parameter in the location you have chosen.*

To plot a wind barb:

1 Select the **Wind Barb** field in the row being edited.

WND will appear in the column.

2 To remove the wind barb, left-double click in the column.

3 Optionally, name the plot model for ease of reference by entering a name in the **Description** field.

To save your plot edits:

1 Select **Save** on the top bar of the display.

To discard your edits or exit after viewing only:

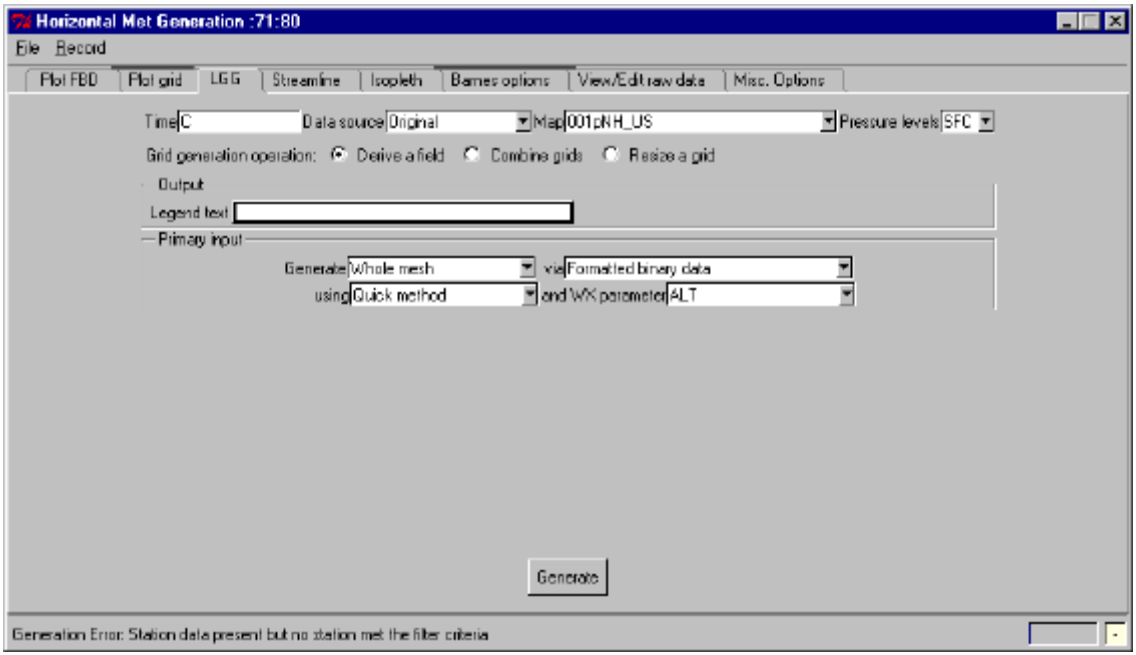
1 Select **Exit** on the top bar of the display.

To discard your edits and begin edits again:

1 Select **Load** to re-load the plot models as last saved.

Care should be taken when creating a custom plot model to insure that the values being plotted do not overlay one another when displayed. You should not expect to be able to use all 15 available parameter field locations in one plot function.

Figure 5.14 LGG Derive a Field



The above panel is reached via the **Met Generation**, **Horizontal** pick on the **AMIS System Entry** (Launch Pad) menu and the **LGG** tab. This function allows you to generate locally generated grids (LGG) for later use in other products such as isopleths and streamlines. Depending on your needs, you can choose one of the following:

- Derive a field from FBD data.
- Combine grids from various sources (see Figure 5.15).
- Resize a grid, change the mesh size of an existing grid (see Figure 5.16).

For **Derive a field,** you must select the **Derive a field** radio button and specify the following before requesting the LGG to be generated:

- **Time** (dd/hhmm or C, C-1, C-2…..)
- **Data source** (Original, Override, Non-standard)
- **Map** (Any available)
- **Pressure levels** (SFC – 010mb)

You may then specify **Output** (optional):

- Legend text, to facilitate identification of the LGG for later use.

You must then specify the **Primary Input** selections from the pull-down lists:

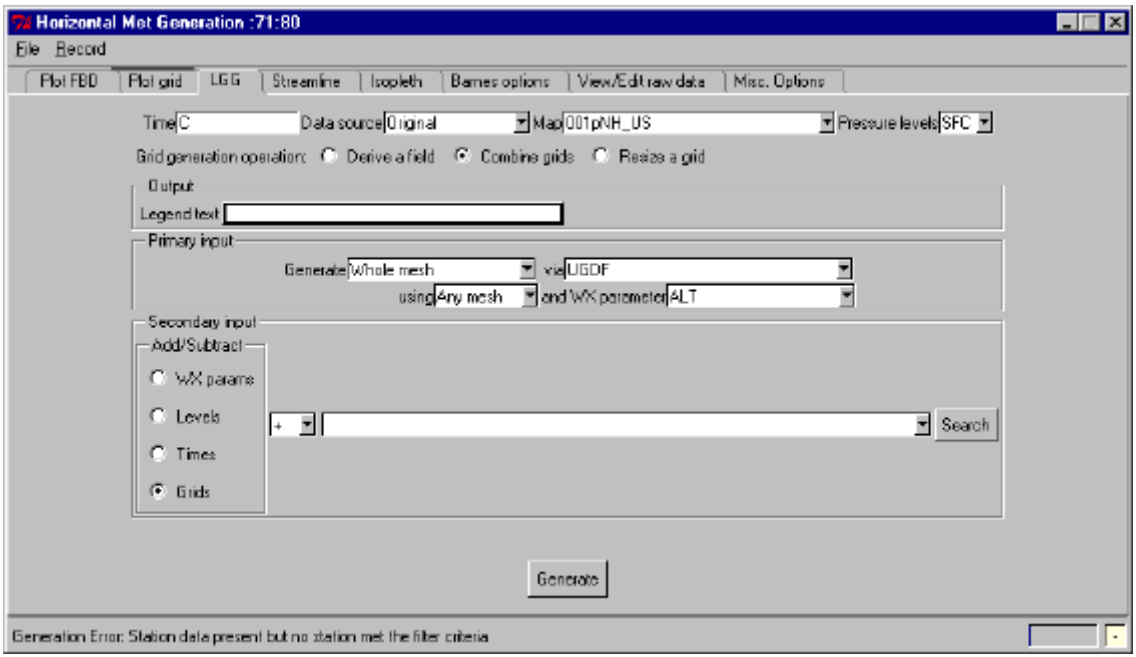
- **Generate** (Whole mesh, half mesh, 1/8 mesh).
- **via** (Formatted binary data).
- **using** (Quick method, Barnes defaults, My Barnes options).
- **with WX parameter**.

  For additional information see Appendix IV, "AMIS Weather Parameters".

An LGG is generated when the desired information is selected/entered into the panel and the **Generate** button is selected. The LGG can be selected for subsequent met generations (Grid plots, Isopleths, Grid combinations, etc), using the Product Source, or Poduct Name generate selections. The Product Name selection will automatically prefill with the last LGG legend name. (For more information, see "Searching for Grids" on page 5-28.)

Note: *No view button is available for the LGG function. If you wish to view or otherwise manipulate the grid generated here you must use the Weather Graphics function. (See "Graphics Product Operations" on page 4-1).*

Figure 5.15 LGG Combine Grids



For **Combine grids**, you must select the **Combine grids** radio button and specify the following before requesting the LGG to be generated:

- **Time** (dd/hhmm or C, C-1, C-2…..).
- **Data source** (Original, Override, Non-standard).
- **Map** (Any available).
- **Pressure levels** (SFC – 010mb).

  *You may then specify **Output** (optional):*

- **Legend text**, to facilitate identification of the LGG for later use.

  *You must then specify the **Primary Input** selections from the pull-down lists:*

- **Generate** (Whole mesh, half mesh, 1/8 mesh).

  This will be the mesh size of the grid you will create.

- **via** (UGDF, Locally Generated grid, Product name, Formatted binary data).

  *When **via** Product name is selected an additional field will pop-up with a **Search** button. You must select the **Search** button and the **Grid Search** panel will be displayed. You may select a grid to be used from the filtered list. (See "Searching for Grids" on page 5-28).*

- **using** (Quick method, Barnes defaults, My Barnes options) when via FBD is selected.

  (Any mesh, whole mesh, half mesh, 1/8 mesh) when via UGDF, LGG or Product name is specified. This is the size of the grid that will be used as input.)

  Quick method is the standard method of creating a grid from actual plot data using the "nearest-neighbor" technique. This method basically creates grid points by interpreting the closest plot data to each point. This method will take the least processing time of the analysis techniques, but produces the least accurate analysis.

- **with WX parameter**.

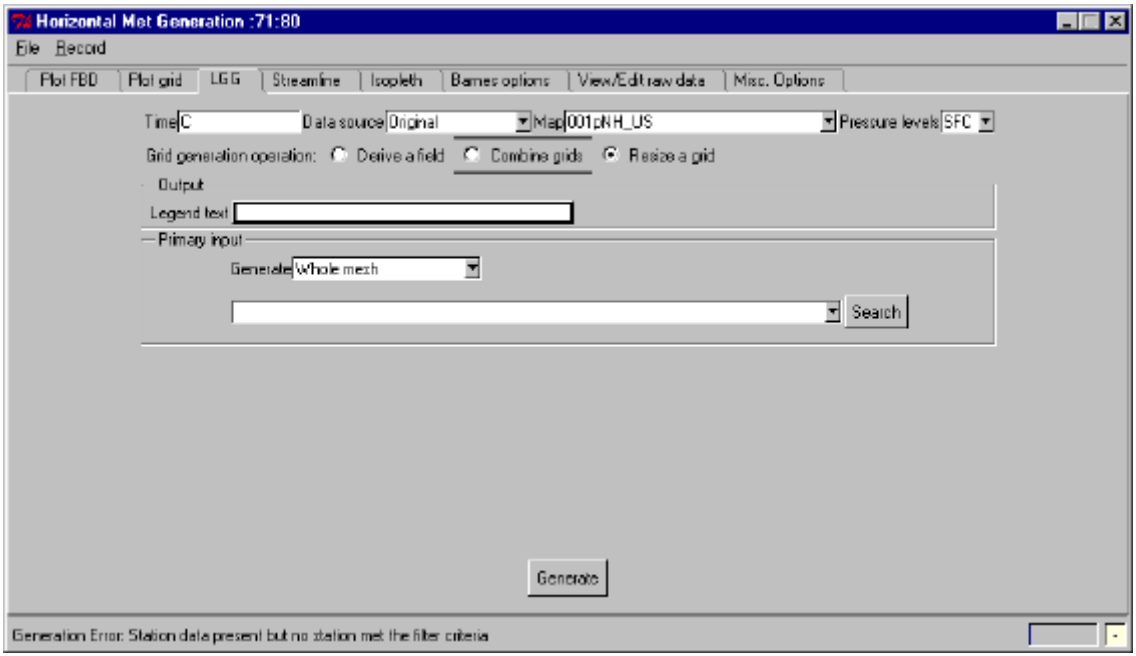
You must then specify selections from the **Secondary input** panel:

- **Add/Subtract** (WX params, Levels, Times, Grids) radio buttons.
- Operand (-, +, --, - +) pull-down list.
- Second field: (Wx parameter, Level, Time, grid input field) depending on selection in **Add/subtract**).

  *You must select the **Search** button and the **Grid Search** panel will be displayed. You may select a grid to be used from the filtered list. (See "Searching for Grids" on page 5-28).*

An LGG is generated when the desired information is selected/entered into the panel and the **Generate** button is selected.

Figure 5.16 LGG Resize



For **Resize a grid,** you must select the **Resize a grid** radio button and specify the following before requesting the LGG to be generated:

- Time (dd/hhmm or C, C-1, C-2…..)
- Data source (Original, Override, Non-standard)
- Map (Any available)
- Pressure levels (SFC – 010mb)

  You may then specify Output (optional):

- **Legend text**, to facilitate identification of the LGG for later use.

You must then specify the **Primary Input** selections from the pull-down lists:

- **Generate** (Whole mesh, half mesh, 1/8 mesh.

  This is the size the gridded product will be resized to upon completion.

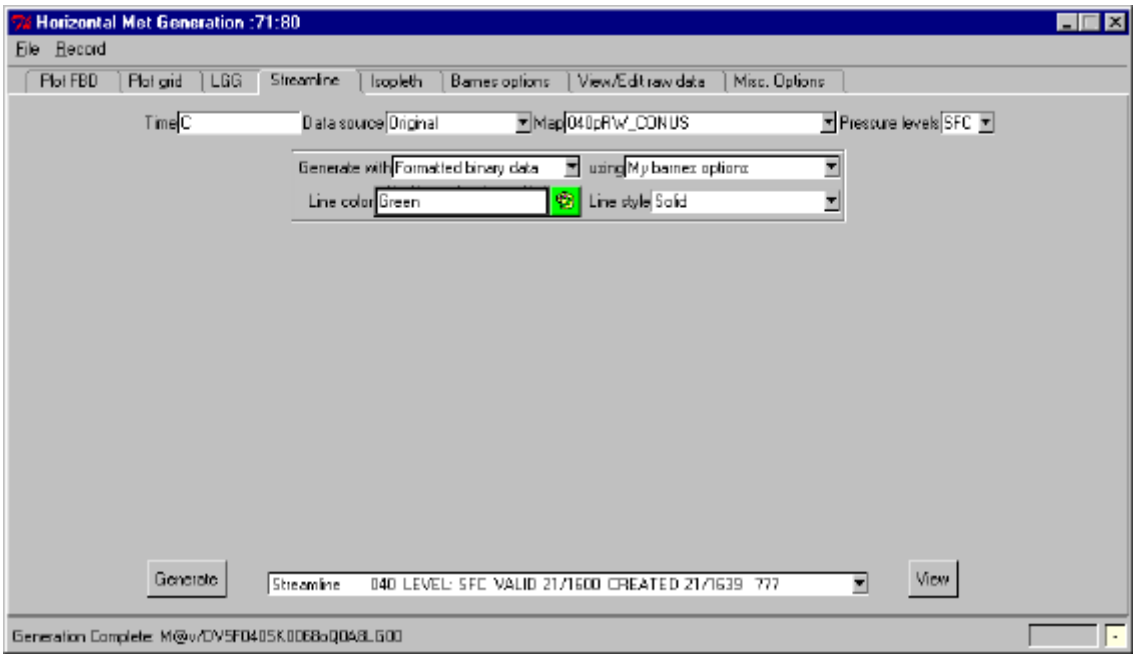
- Grid input field will pop-up with a **Search** button.

  *You must select the **Search** button and the **Grid Search** panel will be displayed. You may select a grid to be used from the filtered list. (See "Searching for Grids" on page 5-28).*

A resized LGG is generated when the desired information is selected/entered into the panel and the **Generate** button is selected.

Streamline

Figure 5.17 Streamlines Panel



The above panel is reached via the **Met Generation**, **Horizontal** pick on the **AMIS System Entry** (Launch Pad) menu and the **Streamline** tab. This function allows you to generate streamline analyses.

You must specify the following before requesting the Streamline to be generated:

- **Time** (dd/hhmm or C, C-1, C-2…..).
- **Data source** (Original, Override, Non-standard).
- **Map** (Any available).
- **Pressure levels** (SFC – 010mb).
- **Generate with** (UGDF, Locally Generated grid, Product source, Formatted binary data).

  *When selecting **Product source**, selecting the **Search** button will display a list of available grid sources.*

- **using**.

  Quick method, Barnes defaults, My Barnes options when via FBD is selected.

  > ***Note:*** *If you wish to use Barnes options of your own choosing you must make these choices before initiating product generation. To make your Barnes options, select the Barnes Options tab at the top of the panel, see "Barnes Options" on page 5-30.*
  >
  > *Quick method is the standard method of creating a grid from actual plot data using the "nearest-neighbor" technique. This method basically creates grid points by interpreting the closest plot data to each point. This method will take the least processing time of the analysis techniques, but produces the least accurate analysis.*

  Any mesh, whole mesh, half mesh, 1/8 mesh when via UGDF, LGG or Product source is specified.

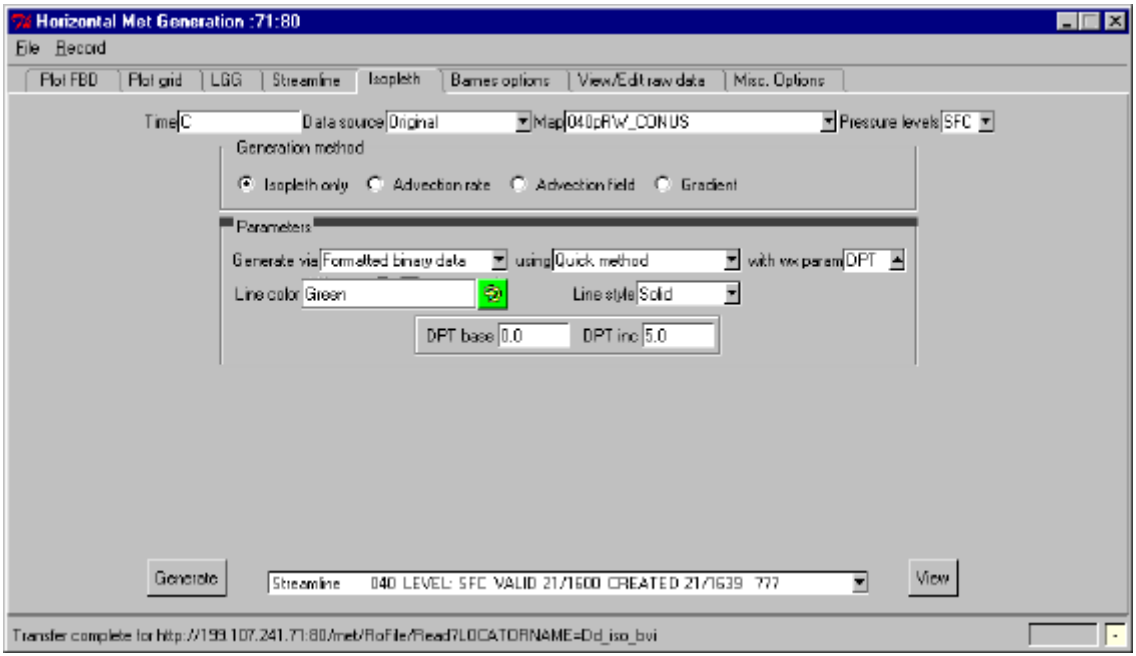
- **Line color** select the color block, choose from the pop-up color table.
- **Line style** (select the line style, solid or dashed).

A Streamline is generated when the desired information is selected/entered in the panel and the **Generate** button is selected. When completed, the product legend will be displayed in the **Completed Product List** (white bar).

The **View** button allows products generated from this panel to be viewed immediately. This display of the product is for viewing only and cannot be further manipulated or processed. Only one product can be viewed at a time. In order to use the product in a composite or animation or other application, or to edit it in any way, it must be loaded into the Weather Graphics function as described elsewhere in this manual (see "Graphics Product Operations" on page 4-1).

Parameter Isopleths

Figure 5.18 Isopleth Panel



The above panel is reached via the **Met Generation**, **Horizontal** pick on the **AMIS System Entry** (Launch Pad) menu and the **Isopleth** tab. This function allows you to generate isopleths of various meteorological parameters.

You must specify the following before requesting the Isopleth to be generated:

- **Time** (dd/hhmm or C, C-1, C-2…..).
- **Data source** (Original, Override, Non-standard).
- **Map** (Any available).
- **Pressure levels** (SFC – 010mb).

You must select a Generation method (radio button) to be used for the Isopleth generation:

- **Isopleth only** (Standard isopleth).
- **Advection rate** (An instantaneous rate of change calculated for the weather parameter expected at the end of the specified period. When

selecting this option, two fields will display at the bottom of the panel for Total hours and Step. Total hours will be the total number of hours, in the future, the finished isopleth represents. The Step hours is the interval to specify for the calculation of the Total Hours and should therefore not exceed it. The smaller the interval, the more accurate the forecast isopleth, but the longer it will take to generate).

- **Advection field** (Create an Isopleth of the weather parameter for a specified number of hours in the future. When selecting this option, two fields will display at the bottom of the panel for Total hours and Step. Total hours will be the total number of hours, in the future, the finished isopleth represents. The Step hours is the interval to specify for the calculation of the Total Hours, and should therefore not exceed it. The smaller the interval, the more accurate the forcast isopleth, but the longer it will take to generate.)
- **Gradient** (A somewhat advanced function for computing the LaPlacian of a continuous scalar field. When selecting this option, two fields will display at the bottom of the panel for Total hours and Step. Total hours represent the total number of hours, in the future, the finished isopleth represents. The Step hours is the interval to specify for the calculation of the Total Hours and should therefore not exceed it. The smaller the interval, the more accurate the forcast isopleth, but the longer it will take to generate.)

  Note: *Gradient values computed via the LaPlacian are very small (on the order of 10e-12), and thus cannot easily be displayed as an isopleth product. Gradient isopleth labels are computed by scaling the actual values calculated to the display and are essentially unitless. The interpretation of the displayed values (i.e., isopleth labels) is that positive values indicate areas of rising values over a distance, and negative values indicate areas of falling values over a distance. The size of the labels are directly related to the size of the actual gradient.*

For **Isopleth only** you must select the **Isopleth only** radio button and specify the following in the **Parameters** section before requesting the Isopleth to be generated:

- **Generate via** (UGDF, Locally generated grid, Product source, Product name, Formatted binary data).

  *When selecting **Product source**, selecting the **Search** button will display a list of available grid sources.*

  *When selecting **Product name**, selecting the **Search** button will display the **Grid Browser** panel. See "Searching for Grids" on page 5-28 for further information.*

*This choice (**Product Name**) will also prefill the history list with the last LGG that was generated. Selecting the history list down-arrow will display a list of LGG's created since the launch of the current Met Generator panel.*

- **using**

  Quick method, Barnes defaults, My Barnes options when Generate via FBD is selected.

  > ***Note**: If you wish to use Barnes options of your own choosing you must make these choices before initiating product generation. To make your Barnes options, select the Barnes Options tab at the top of the panel. (See "Barnes Options" on page 5-30).*
  >
  > *Quick method is the standard method of creating a grid from actual plot data using the "nearest-neighbor" technique. This method basically creates grid points by interpreting the closest plot data to each point. This method will take the least processing time of the analysis techniques, but produces the least accurate analysis.*

  Any mesh, whole mesh, half mesh, 1/8 mesh when Generate via UGDF, LGG, Product name, or Product source is specified.

- **with wx param** (parameter pull-down list).
- **Line color** select the color block, choose from the pop-up color table.
- **Line style** (Solid, dashed).
- (Param) **base** (enter a starting value).
- (Param) **inc** (enter an increment value).

  *The Isopleth **base/inc** fields are pre-filled from system tables configured by the System Manager. They determine a starting base value and increment value for generating and labeling the contours. If no table entry is available for a parameter, "0" and "AUTO" will be prefilled in these fields, and the system will determine a suitable base and increment. Care should be taken when entering these fields. Too great an increment can cause a MET generation to complete with no data drawn on it, as no intersection with data was possible. Increment values that are too small will be automatically changed to larger values.*

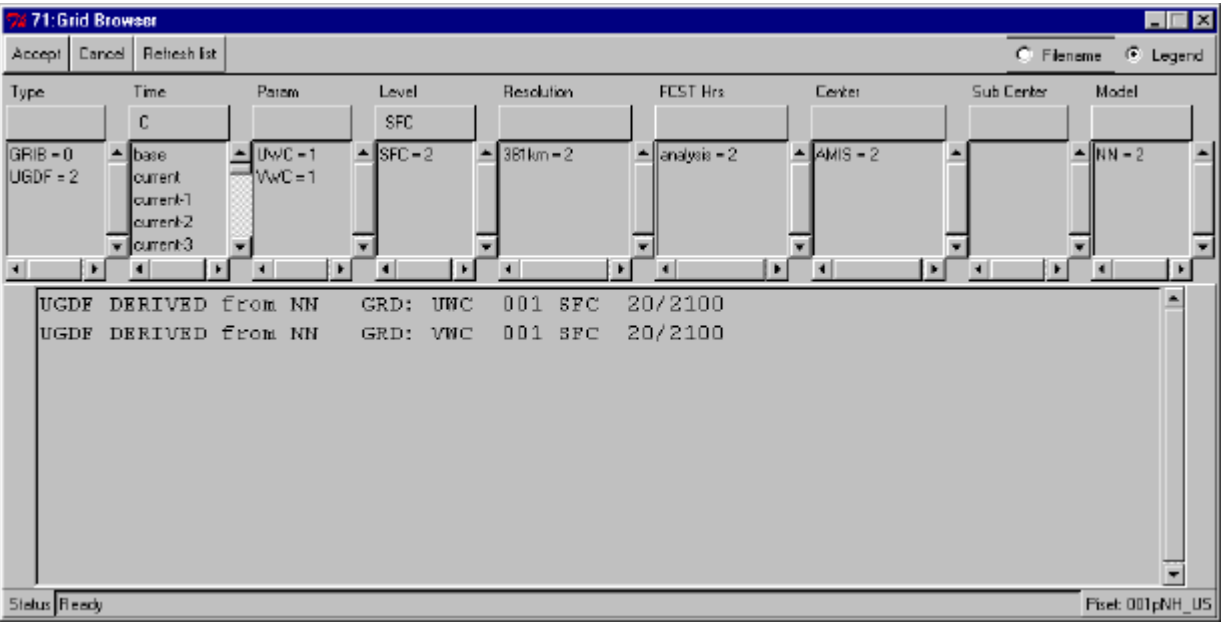
An Isopleth is generated when the desired information is selected/entered in the panel and the **Generate** button is selected. When completed, the product legend will be displayed in the **Completed Product List** (white bar).

The **View** button allows products generated from this panel to be viewed immediately. This display of the product is for viewing only and cannot be further manipulated or processed. Only one product can be viewed at a time. In order to use the product in a composite or animation or other application, or to edit it in any way, it must be loaded into the Weather

Graphics function as described elsewhere in this manual (see “Graphics Product Operations” on page 4-1).

Searching for Grids

Figure 5.19 Search for UGDF Grids/GRIB Data



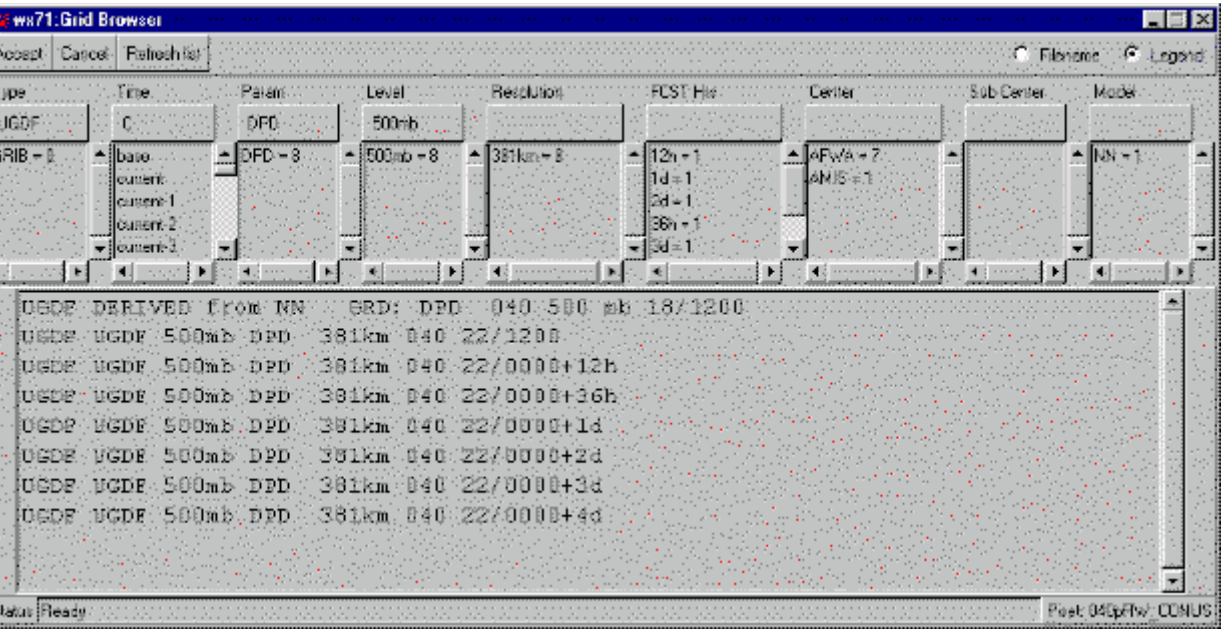
The above panel is displayed from the **Plot Grid**, **LGG**, and **Isopleth** functions when **Product name** has been selected as the data source and then **Search** is selected. It is used to select UGDF grids and GRIB data to be used in the above functions.

The columns under the headers (**Type, Time, Param, Level, Resolution, FCST Hrs, Center, Sub Center** and **Model**) list how many products in the hit list meet each category under that header. In the above panel the user selected Current time, Original data source, map background 040 Conus, 500mb pressure level, from the **Plot grid** panel. Under the **Time** column in the box, ‘**current**’ is displayed. Under the **Level** column in the box, ‘**500mb**’ is displayed, in the column below “**500mb=125**” is displayed. Under the **Type** column, “**GRIB=74”** and “**UGDF=51**” appear in the box below. These indicate that a total of 125 products have been located using the initial selection criteria from the **Plot grid** panel, 74 are **GRIB** data and 51 are **UGDF**.

Figure 5.20 Search for UGDF Grids (UGDF Filter)

The above panel is displayed when you select **UGDF** under the **TYPE** column. Notice the count for **GRIB** is now zero and the **Level** column indicate "**500mb=51**". You have narrowed the hit list down to 51 UGDF grids at 500mb, for background 040 Conus for current time.

Figure 5.21 Search for UGDF Grids (DPD Filter)



The above panel is displayed when you select **DPD** under the **Param** column. Notice the count for Level is now "**500mb=8**", the **Param** column now indicates **DPD** and the box below indicates "**DPD=8**". You have narrowed the hit list down to 8 UGDF grids at 500mb, for background 040 Conus, current time and parameter DPD.

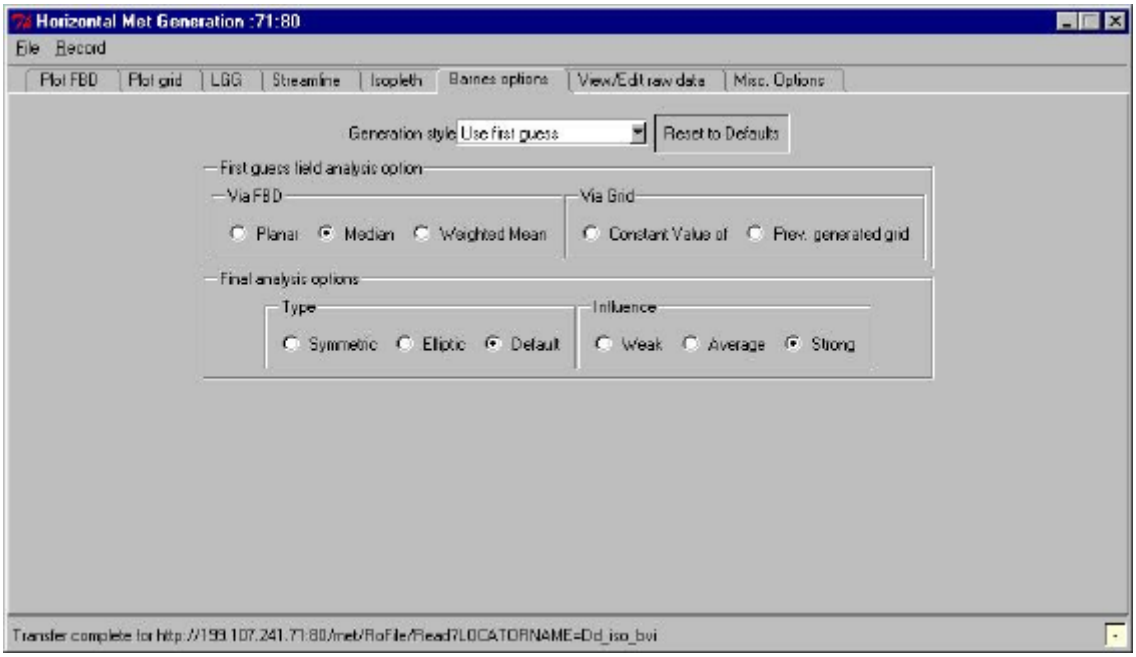
The search for grid/grib can be filtered using Type, Time, Param, Level, Resolution, FCST Hrs, Center or Sub-center producing the grid, or model used to produce the grid. Note that the original filters chosen on the plot grid, LGG or Isopleth panel (time, data source, map background, and pressure level) are used for the initial display when this panel is summoned. Selecting any of the entries in each of these menus will further limit the list of products displayed. The small panel immediately below the column headers contains the currently selected value for that column. The list of available products meeting the selected criteria is displayed below the columns used to filter the list. Products in the list can be displayed using the

legend assigned the product or the database filename, by selecting the **Filename** or **Legend** radio buttons in the top right of the panel.

Once you have located the grid desired, it is accepted for use by highlighting (selecting) the desired grid and then selecting the **Accept** button at the top left of the panel. You can **Refresh** the list as necessary to see changes in the list and can **Cancel** the search at any time and return to the previous panel (**Plot Grid**, **LGG** or **Isopleth**). The grid accepted from this panel will be entered into the Grid source data list field on the previous panel.

Barnes Options

Figure 5.22 Barnes Options



The above panel is reached via the **Met Generation**, **Horizontal** pick on the **AMIS System Entry** (Launch Pad) menu and the **Barnes options** tab. This function allows you to establish your desired Barnes Options as to Generation Style and first guess and final analysis options, to be applied when generating Isopleths, LGG or Streamlines. If you wish to use Barnes analysis options, those options must be selected prior to setting the other parameters of the function you are initiating.

Selecting the **Reset to Defaults** button sets the Barnes options to Barnes Defaults. These defaults are Median First Guess and Symmetric or Elliptic Final Analysis and Strong influence, depending on level.

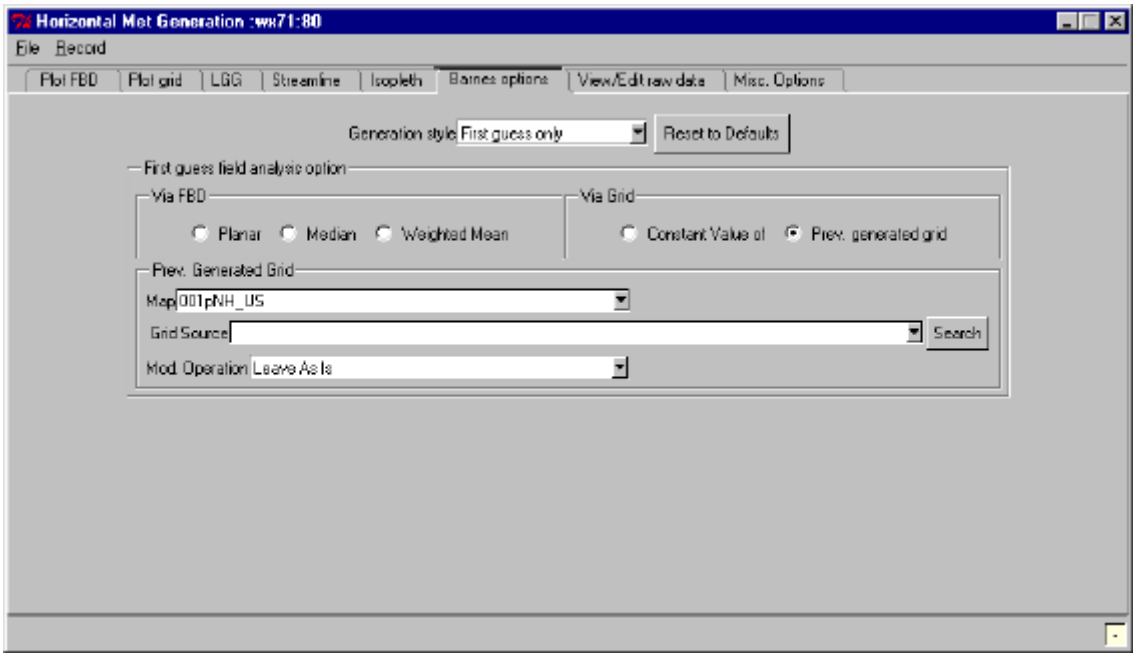
Selecting **Use first guess**, from the pull-down list for Generation style, you may select first guess analysis options:

- **Via FBD**
  - **Planar** when few FBD stations exist
  - **Median** when large numbers of FBD exist
  - **Weighted Mean** for a weighted mean of all available reporting stations.

Selecting first guess analysis option:

- **Via Grid**
  - **Constant value** radio button, enter a constant value for first guess grid.
  - **Prev. generated grid** radio button, for a first guess grid from another grid. Grid Source panel will pre-fill with the last LGG as in previous "Product Name" panels. Select Search or use the History List to select grids. (See “Searching for Grids” on page 5-28).

Figure 5.23 Barnes Options



In the above panel specify a Map background, Grid source and mod operation (Leave as is, add, subtract, multiply or divide from the pull-down list) to adjust the selected grid.

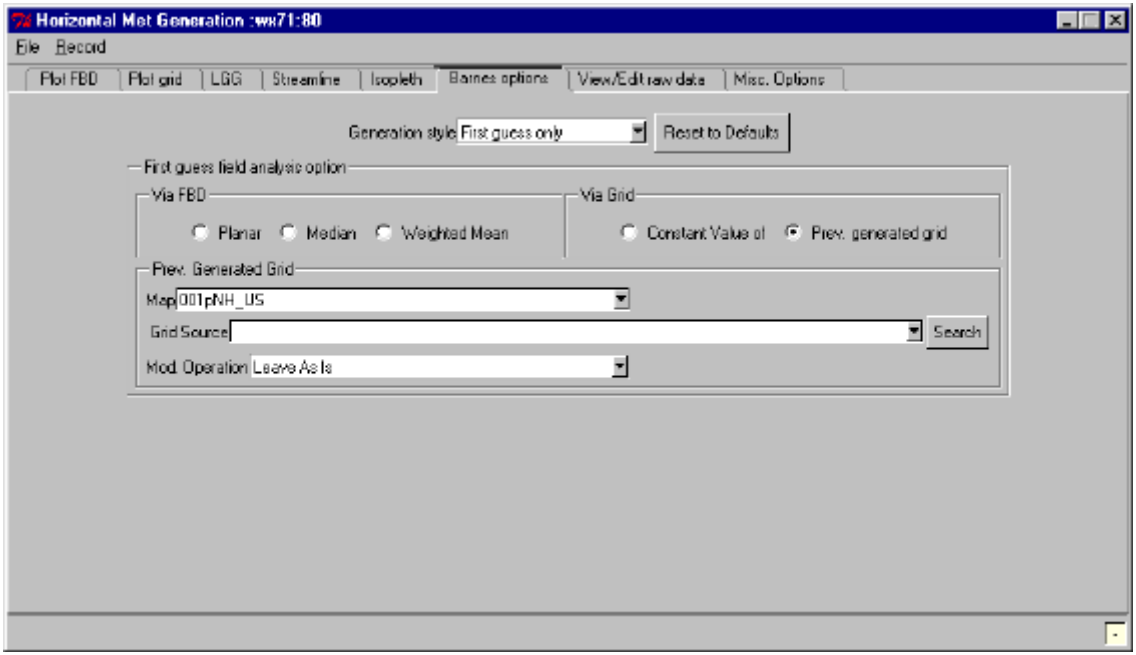
You may also select the **Final Analysis, Type** options:

- **Symmetric** for Surface pressure level.
- **Elliptic** for Upper Air pressure levels.
- **Default** automatically select for pressure level.

You may also select **Influence**:

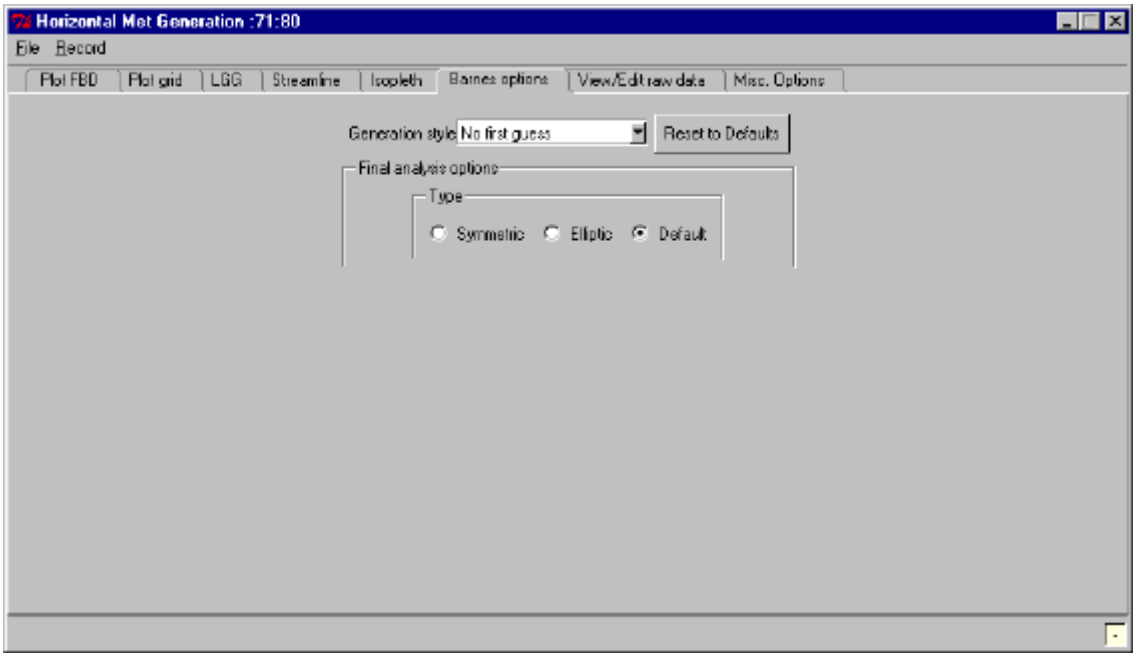
- **Weak** (resulting grid largely from first guess grid).
- **Average** (resulting grid largely from FBD).
- **Strong** (resulting grid equally from first guess grid and FBD).

Figure 5.24 Barnes Options



Selecting **First Guess only** for Generation style, you may select first guess analysis options as described above only. No Final Analysis options are required.

Figure 5.25 Barnes Options



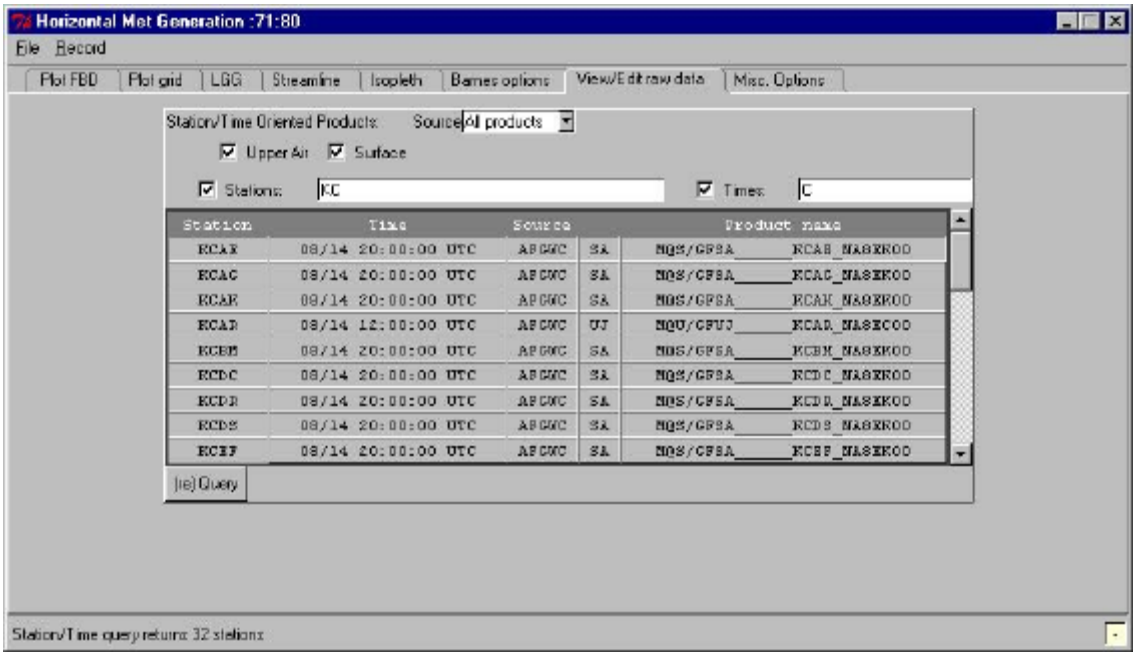
Selecting **No first guess** for Generation style, you may select the Final Analysis Type options:

- **Symmetric** (for Surface pressure level)
- **Elliptic** (for Upper Air pressure levels)
- **Default** (automatically select for pressure level)

  Note: *There is no Generation or View button on this panel as it is used strictly to establish your desired Barnes options and not to initiate product generation.*

View/Edit Surface and/or Upper-Air FBD

Figure 5.26 Selection of Surface and/or Upper-Air FBD



The above panel is reached via the **Met Generation**, **Horizontal** pick on the **AMIS System Entry** (Launch Pad) menu and the **View/Edit raw data** tab. This function allows you to select surface and/or upper-air FBD for the purpose of inspecting and/or editing formatted binary data files. The stations modified in this area are used in creating graphical products such as specialized plots and isopleths.

You have the choice of data source, and the selection of upper air or surface or both to limit the search. Data source choices are:

- All products
- Original
- Override
- Non standard.

Override data is original data that has been altered in some manner and saved. It does not replace the original data that remains in the database, but can be accessed separately. *Non standard* data is information that is made up from scratch including such things as ICAO, latitude and longitude, etc.

as well as measured or observed weather parameters. *Override* data is used mostly in "what-if" and testing situations and *Non standard* data is mostly used for creating training scenarios and other similar applications. All products simply lists all FBD data available in the database and allows the user to choose. In most cases *Original* is the data source of choice.

When the **Times** box is checked, the search for applicable data is filtered by C, C-1, C-2, and by date/time group or time range (02/12, 02/12-02/13).

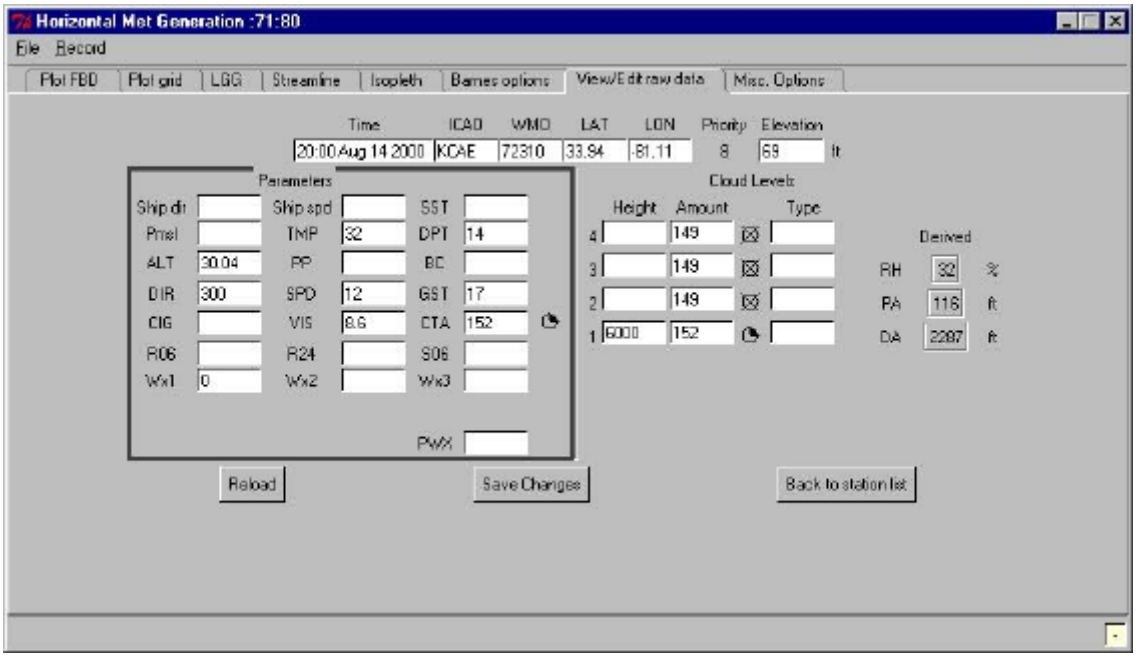
When the **Stations** box is checked, the data entry field next to it is used to further limit the search for applicable data. The entries permit "wildcarding" to find those stations you are most interested in. For example, placing a *K* in the field will cause the query to return only those stations whose ICAO begins in *K*, while *KB* will return only those stations whose ICAO begins with *KB*. This also works with numerical station identifiers (WMO numbers) so that *72* entered in the field will return all stations with WMO numbers beginning in *72*.

When all filter criteria are specified, select **(re)Query** to pull-up a list of selectable FBD files to view and/or edit.

> ***Note:*** *If a station has an alpha ICAO as well as a WMO number listed in the database, it will only be listed via the ICAO query.*
>
> *When all filter criteria are specified, select* ***(re)Query*** *to pull-up a list of selectable FBD files to view and/or edit.*

Selecting the ICAO or WMO number of a station in the returned list displays the FBD data panel for the data type chosen (surface or upper air).

Figure 5.27 Viewing/Editing Surface FBD



The above panel is displayed when viewing/editing FBD surface information. The header information (Time and Elevation) should not be changed for override data. The header information (Time, ICAO, WMO, LAT, LON, and Elevation) can be changed if you are creating non standard data. Note that all entries in the panel are in numerical form. Those parameters with symbols associated, display the symbol next to the data entry. Since the FBD format includes positions for all possible synoptic observation entries there will normally be a number of the data fields that are blank.

When editing the surface FBD (for whatever purpose) remember to use only valid entries in the various fields if you expect to get results you can use in plotting or isoplething. For example, the CTA field shojld only include values from 149 (missing) to 159 (obscured) and the Wx1, Wx2, and Wx3 fields are for values from 0 to 99. The codes for wx parameters, cloud types, sky cover, and pressure change characteristics are contained in Appendix IV of this manual.

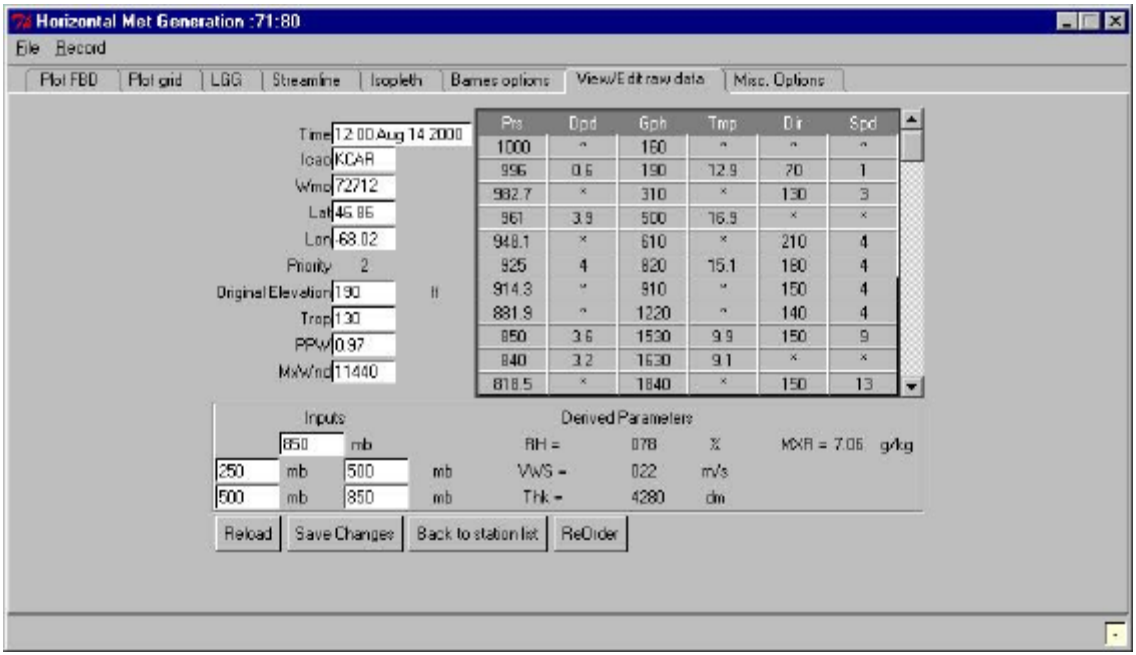
There are three parameters derived from information in the FBD code displayed on the right side of the panel. You can check calculations of these values by varying the entries in the parameters columns.

To return the data to the original form select the **Reload** button.

To save your changes as override data select the **Save Changes** button. If you make repeated override changes to the same station and time, only the most recent save will be retained in the database. After the initial save any changes made to that override data would be written over the previous override.

To return to the previous panel select the **Back to station list** button.

Figure 5.28 Viewing/Editing Upper-Air FBD



The above panel is displayed when viewing/editing FBD upper air data. The header information on the left (ICAO, WMO, Lat, Lon) down through Original Elevation should not be changed for override data. It may be changed if you are creating non-standard data.

Missing data is designated by an asterisk (*) in the field. Make desired changes. If you have changed a pressure level value (or blanked one out) select **ReOrder** button to place the data in the correct pressure level order. If you wish to add pressure levels, there are always five blank rows for data entry at the end of the data list. Enter the new pressure level and its associated parameters and select **ReOrder** button. You may also replace an existing pressure level with a new one including all parameters. Blanking out just the pressure level value and selecting **ReOrder** will remove the

entire row. However, it will leave a duplicate level at the end of the list that must then be erased.

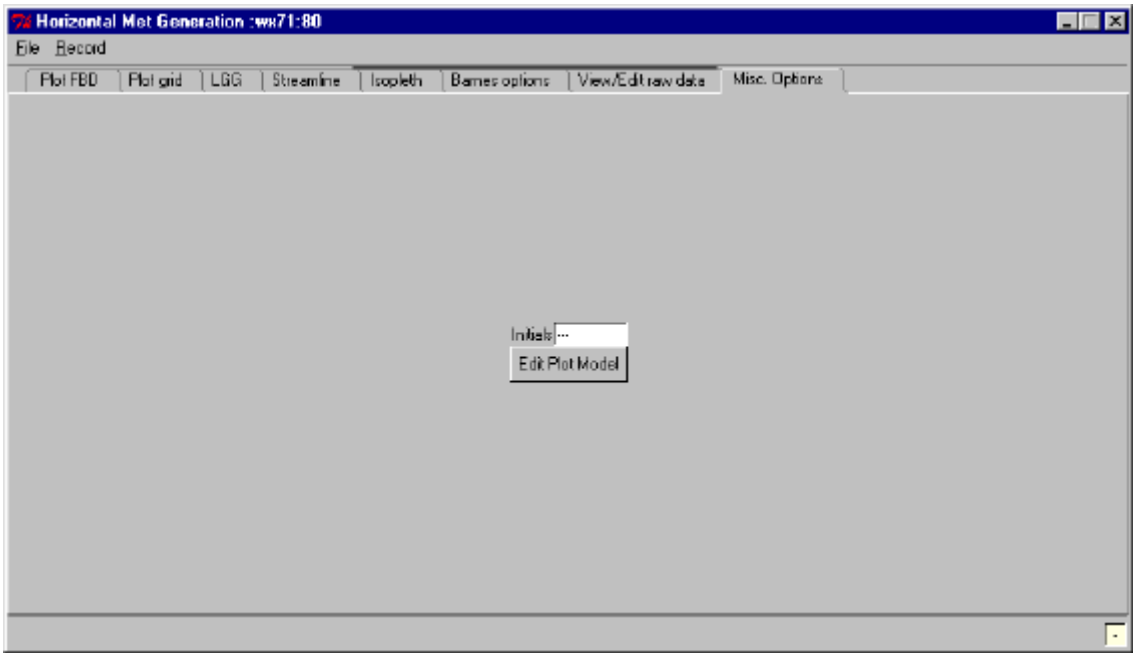
When you have made the desired changes, select the **Save Changes** button to place the override data into the database. Subsequent saves will be written over the previous override data.

There are derived parameters listed at the bottom of the panel. To have those parameters (RH or MXR) computed for a pressure level, enter the level in the single Inputs field to the left. For calculations of vertical wind shear (VWS) in a layer, enter the two pressure levels in the input fields to its left. For calculation of thickness (Thk) of a layer, enter the two pressure levels in the input fields to its left. Order of entry of the pressure levels has no effect on the calculations.

To return to the previous panel to select another station select the Back to station list button.

Misc. Options

Figure 5.29 Misc. Options Panel



The above panel is reached via the **Met Generation**, **Horizontal** pick on the **AMIS System Entry** (Launch Pad) menu and the **Misc.** options tab. It is used

to enter your initials to be used in the generation of labels for met generation products and to access the plot model edit function. The users initials will be included at the end of the legend text for each generation.

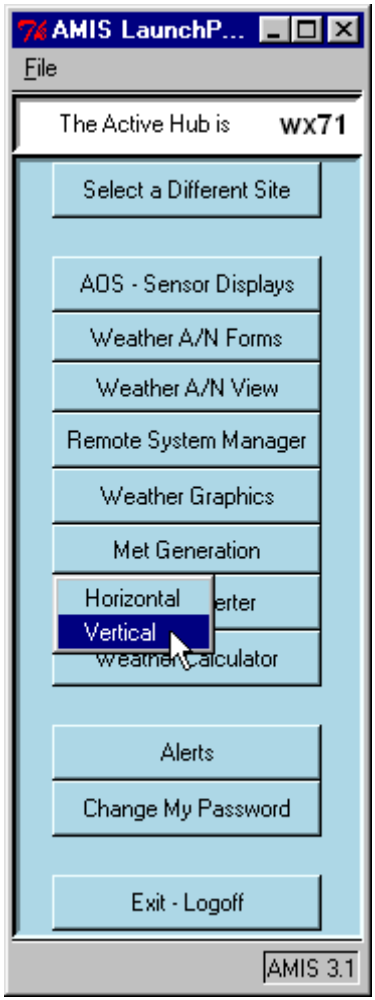
Upon entry to this panel the Initials entry is active, enter your initials. You may select the Edit plot model button to access the plot model edit function as described previously in this section.

Vertical MET Products

To display the panel from which all vertical meteorological generations are initiated, do the following:

1 From the AMIS LaunchPad, select **Met Generation** > **Vertical** (see Figure 5.30)

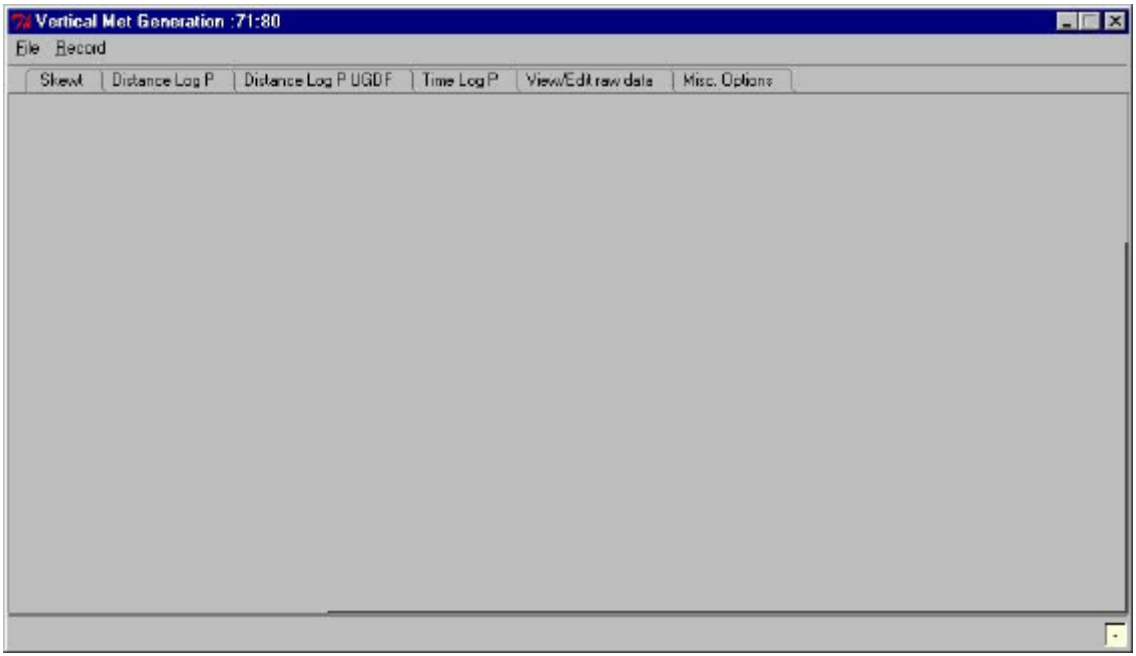
Figure 5.30 Launch of Met Generation—Vertical



The Vertical Met Generation Screen displays (see Figure 5.31).

The specific Vertical met generation functions are presented as tabs along the top of the panel, permitting the user to set up the desired product generation via button and menu selections. Selection of a specific tab will display the set-up panel for that function.

Figure 5.31 Met Generation—Vertical



The functions supported by the vertical met generation panel include:

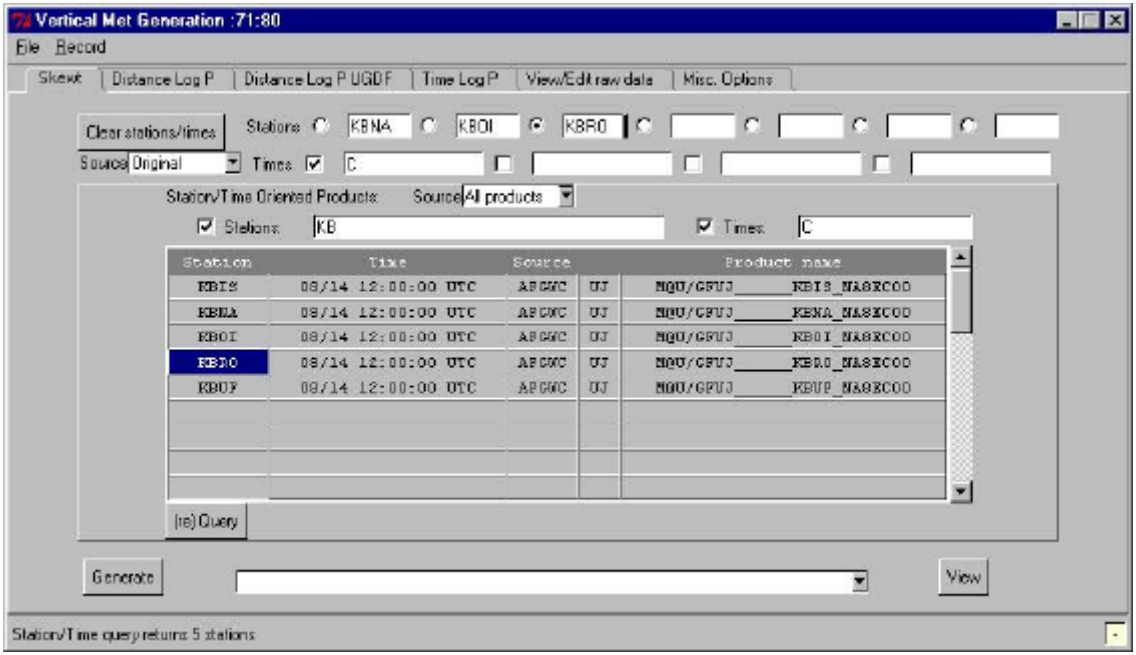
- Skewt
- Distance Log P
- Distance Log P UGDF
- Time Log P
- View/Edit raw data
- Misc. options

In general, Met Generations are performed at the N-TSFS Server, that is, the N-TFS Client specifies the set-up conditions, passes that information to the server, which then executes the requested Met Generation, the server reports completion back to the client. Once you have made your selections and set-up is complete, you select the **Generate** button to start the Met Generation process. The button will remain grayed out until the requested Met Generation is completed by the server. A small progress bar at the lower right of the panel will display while the met generation is in progress. The status bar at the bottom left of the panel will display status messages concerning the met generation in progress and upon completion will list the database name assigned the product.

The Vertical Met Generation function enables you to specify, generate and view vertical graphical products. In the vertical mode it is also possible to View/Edit Raw Data for both surface and upper-air FBD and to make graphical edits on the Skew-T/Log-P diagram and its attendant Severe Wx and Climb Winds panels.

Skew-T/Log-P Diagram

Figure 5.32 Skew-T/Log-P Panel



1 To specify, generate, and view skewed temperature versus log pressure energy diagrams (Skew-T/Log-P) for any available upper air FBD, select the Skewt tab you may:

- Enter a station **ICAO**.

  Enter up to seven ICAOS. Individually select them using the corresponding radio buttons.

- Enter **Time** (up to 4) (dd/hhmm or C, C-1, C-2 ……)

- **Data Source**

  *The data source is selectable between **Original**, **Override**, and **Non-standard**.*

Override *data is original data that has been altered in some way and saved.*

Non-standard *data is completely new.*

For an explanation of how to generate ***Override*** *and* ***Non-standard*** *data (see "View/Edit Surface and/or Upper-Air FBD" on page 5-56).*

2 Or you may:

- Use the **Query** panel to inquire about available data.
- **Source** (All products, Original, Override, Non-standard)
- Check **Stations** box

  When the ***Stations*** *box is checked, the data entry field next to it is used to further limit the search for applicable data. The entries permit "wildcarding" to find those stations you are most interested in. For example, placing a K in the field will cause the query to return only those stations whose ICAO begins in K, while KB will return only those stations whose ICAO begins with KB. This also works with numerical station identifiers (WMO numbers) so that 72 entered in the field will return all stations with WMO numbers beginning in 72.*

  Note: *If a station has an alpha ICAO as well as a WMO number listed in the database it will only be listed via the ICAO query.*

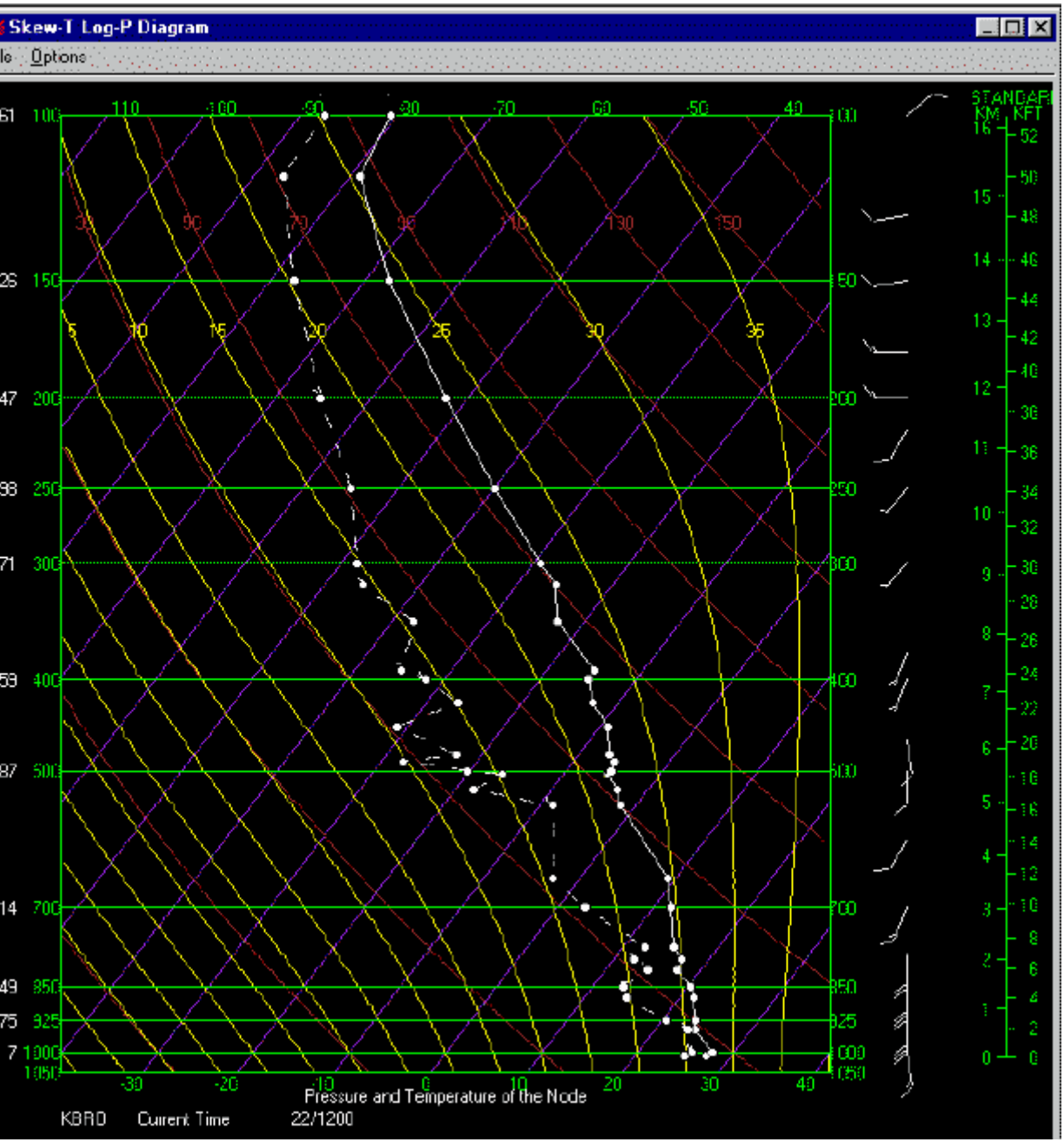
- Check the **Times** box

  When the ***Times*** *box is checked, the data entry field next to it is used to further limit the search for applicable data. The entries may be absolute (dd/hhmm) or Currency (C, C-1, C-2….).*

- Select **Query**

  The query panel is used to display a list of stations (and/or times) for which data is available. Selecting a station ICAO (or WMO number) from the list will move the station to the station list and place a check into the active box to the left of the station. The system is capable of doing only one station at a time but can do up to three times per station per generation.

Figure 5.33 Skew-T/Log-P Panel



An Skew-T is generated when the desired information is selected/entered into the panel and the **Generate** button is selected. When completed, the product legend will be displayed in the **Completed Product List** (white bar).

The **View** button allows products generated from this panel to be viewed immediately. Only one product can be viewed at a time. If multiple times are selected for a station the diagram displayed will have a set of temperature/ dewpoint curves for each active time. The convention used is that the lines of the most recent time (current) will be white, the next previous time will be red, and the earliest time will be blue.

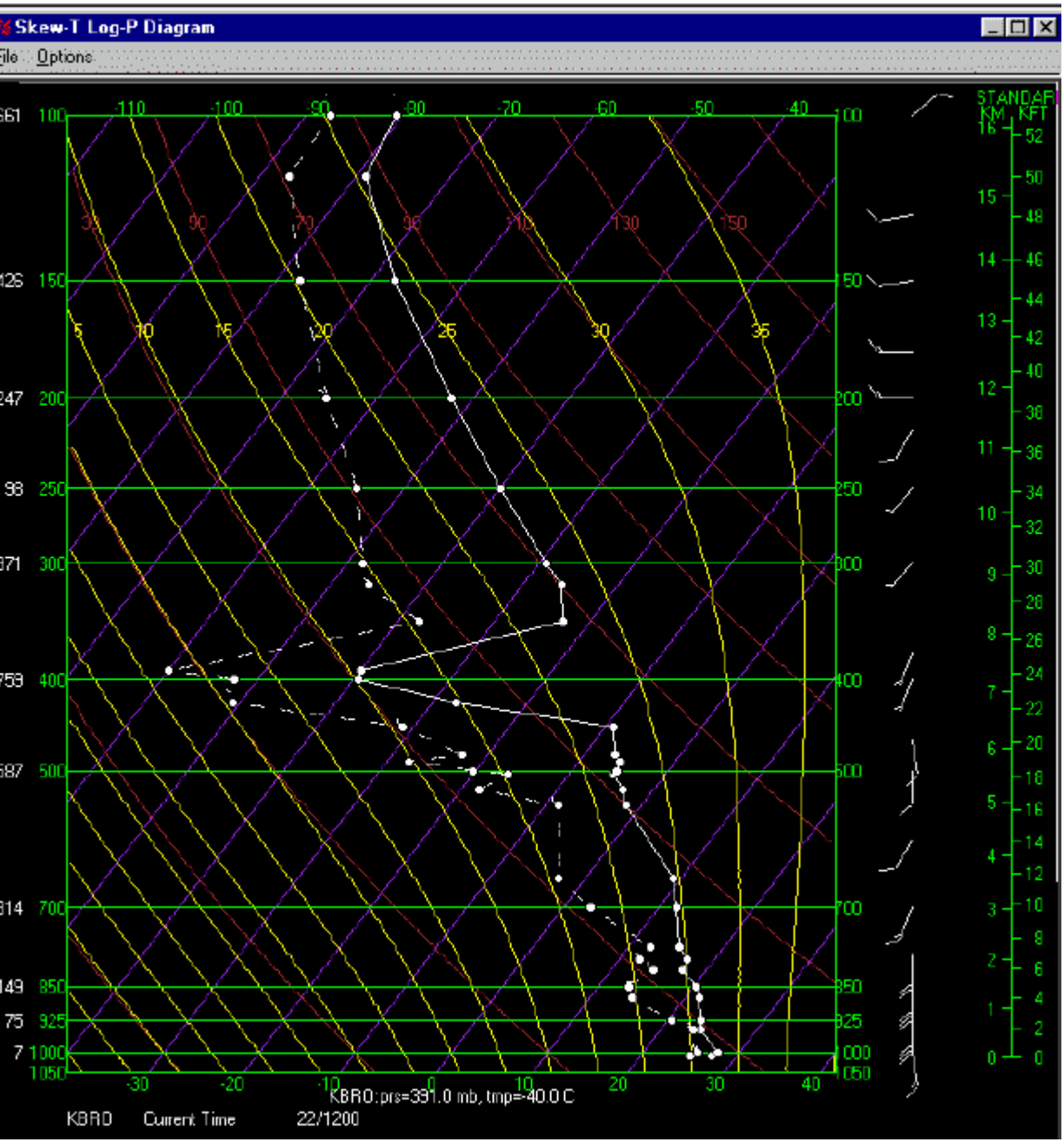
In order to use the product in an animation or other application, it must be loaded into the Weather Graphics function as described elsewhere in this manual (see "Graphics Product Operations" on page 4-1).

> ***Note****: The Completed Product List contains all products generated during the current Vertical Met Generation session and will be cleared when the session is terminated. Selecting the down arrow at the right end of the Completed Product List field will display the entire list for the session. You may select any product in the list for display.*

Modifying the Skew-T/Log-P Diagram

The temperature and dewpoint curves on the Skew-T/Log-P diagram can be modified graphically by left selecting and dragging the points (dots on the TMP and DPT lines) on the curve horizontally, along a constant pressure level. It is not possible to change the pressure level of a point. The curves are separately modified so that changing the temperature curve does not change the dewpoint curve. You must manually move both points if you wish to maintain a particular dewpoint depression at that level.

Figure 5.34 Skew-T/Log-P Mod panel



Selecting a point, displays/updates the temperature and pressure display at the bottom of the diagram. This permits a more accurate assignment of a change in temperature.

If you wish to return the curve(s) to the original configuration you may select the **File** menu at the upper left of the panel and from that menu select **Reload**.

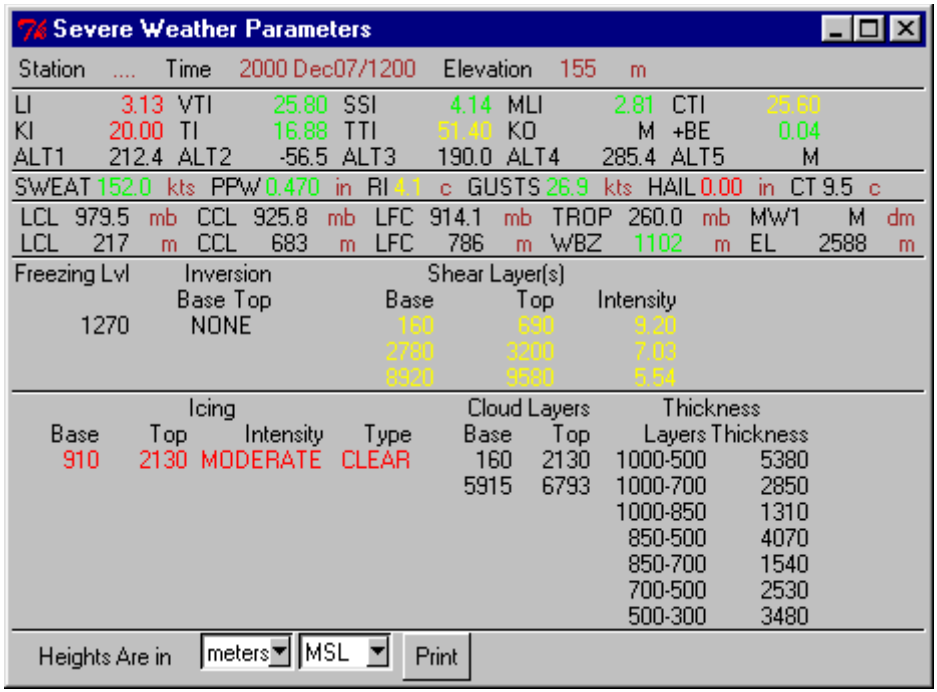
Once the curve(s) have been changed to your satisfaction, select **File, Save/ Recompute** to save the changes as override data and to recompute the severe weather indices panel associated with the diagram.

Severe Weather Parameter Indices

The **Severe Weather Parameters** panel is displayed by selecting:

- **File**
- **Severe** on the Skew-T Log-P Diagram panel.

Figure 5.35 Severe Weather Parameters Panel



The various indices are color coded for threshold values entered by the system manager for the using location and may or may not represent the critical points at the location of the station being analyzed. Changing the

units of height at the bottom of the panel will cause the various heights on the panel to be changed to reflect the new units.

- Heights are in: (**feet / meters**) pull-down list

  (**MSL / AGL**) pull-down list

Values on this panel are automatically recomputed whenever the diagram on the Skew-T Log-P Diagram panel is changed and File, Save/Recompute is selected.

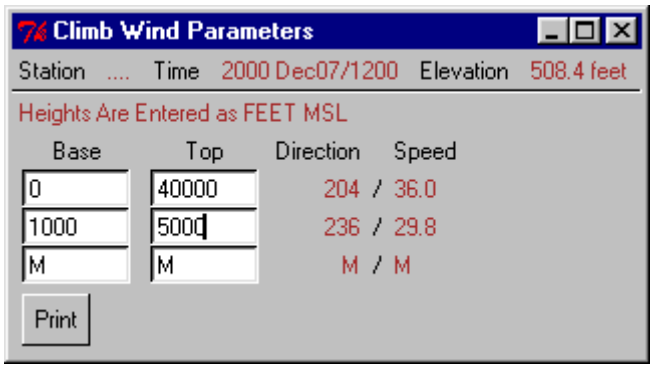
You can print the Severe Weather Parameters panel information by selecting the **Print** button near the bottom of the panel. The standard Windows print dialog is displayed. To print, select **OK**. To exit without printing, select **Cancel**. The information is printed in a textual tabular format.

Climb Wind Parameters Panel

This Climb Wind Parameters panel is displayed by selecting:

- **File**
- **ClimbWind** on the Skew-T Log-P Diagram panel.

Figure 5.36 Climb Wind Parameters Panel

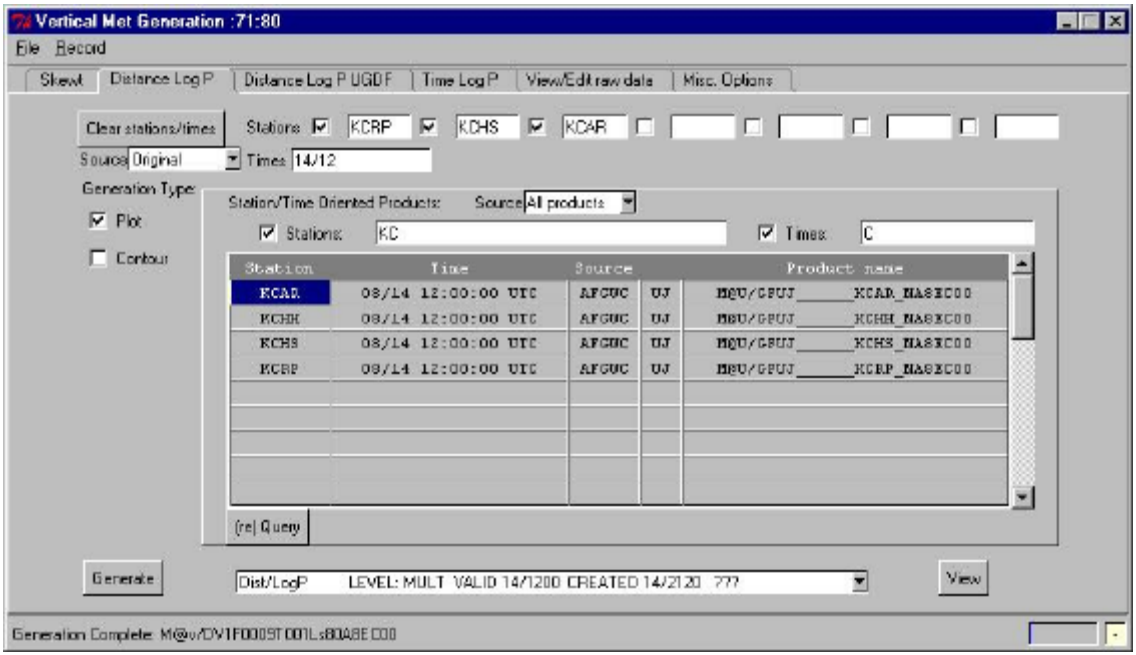


The three layers are interactive. Enter the base and top of the layer for which a climb wind is desired (in feet above MSL) and the associated climb wind will be computed and displayed immediately to the right. Entering a base higher than the top may result in unexpected values.

You can print the Climb Wind panel information by selecting the **Print** button near the bottom of the panel. The standard Windows print dialog is displayed. To print, select **OK**. To exit without printing, select **Cancel**. The information is printed in a textual tabular format.

Distance vs. Log-P from FBD

Figure 5.37 Distance vs. Log-P from FBD



The above panel is reached via the **Met Generation**, **Vertical** pick on the **AMIS System Entry** (Launch Pad) menu, and the **Distance Log P** tab. This function allows you to to specify, generate and view a distance versus log pressure cross section of the atmosphere.

1 To specify, generate, and view Distance log pressure energy diagrams (Distance Log-P) for any available upper air FBD, select the Distance Log P tab you may:

- Enter a station **ICAOs/ WMOs** (up to 7)
- Enter **Time** (dd/hhmm or C, C-1, C-2 ……)
- **Data Source**

  The data source is selectable between Original, Override, and Non-standard.

  Override data is original data that has been altered in some way and saved.

  Non-standard data is completely new.

  For an explanation of how to generate Override and Non-standard data (see “View/Edit Surface and/or Upper-Air FBD” on page 5-34).

2 Or you may:

- Use the **Query** panel to inquire about available data.
- **Source** (All products, Original, Override, Non-standard)
- Check **Stations** box

  *Note: See **Stations** check box explanation above in Skew-T section.*

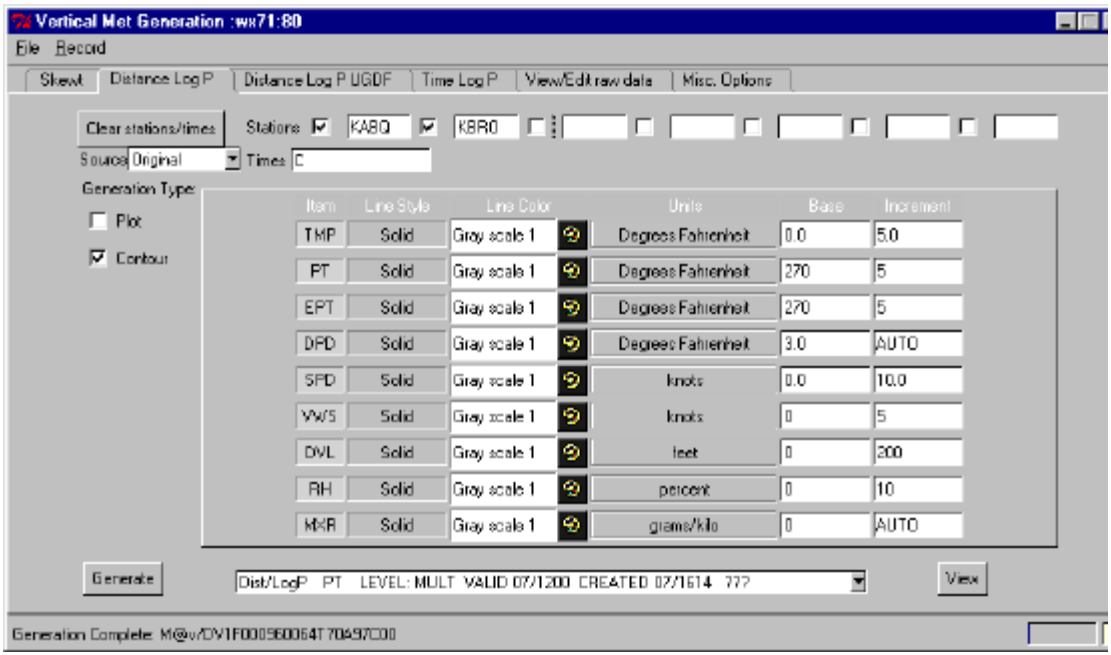
Up to seven station ICAOs (or WMO numbers, or a mix of both) may be entered. At least two must be entered for a generation to occur. If there is no data or insufficient data at one or more of the selected stations to generate a particular parameter contour a message to that effect will appear in the status line at the bottom of the panel.

You must then select a check-box:

- **Plot** and / or **Contour**

The plot function provides a cross section that has a vertical plot of the data above each of the stations that includes only the wind barb and geopotential height of the standard pressure surfaces. The contour function provides an isopleth of the parameter(s) selected in the vertical cross section. Selecting both of the functions combines the plot and the contour results on one cross section.

Figure 5.38 Distance vs. Log-P Parameter



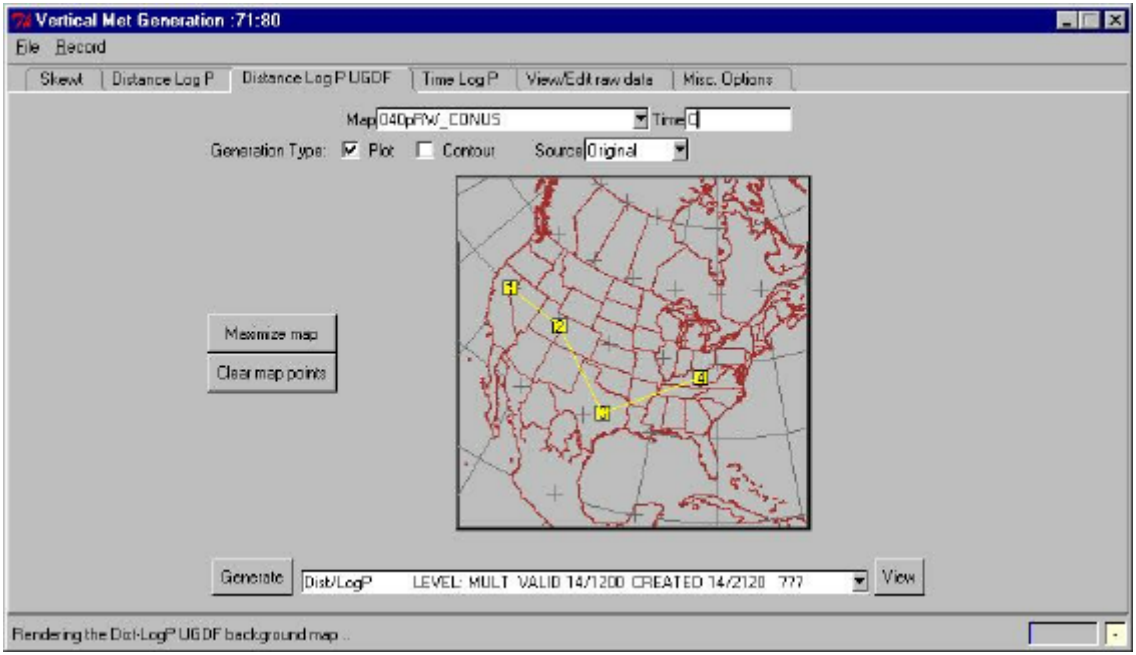
The **Contour** panel displayed above is used to specify the parameter(s) desired along with the line style, line color, and the units to use when contouring the parameter (including the base value and the desired increment). You may select any number of parameters to be contoured, up to the nine possibilities provided.

A Distance Log P is generated when the desired information is selected/ entered into the panel and the **Generate** button is selected. When completed, the product legend will be displayed in the **Completed Product List** (white bar).

The **View** button allows products generated from this panel to be viewed immediately. This display of the product is for viewing only and cannot be further manipulated or processed. Only one product can be viewed at a time. In order to use the product in a composite or animation or other application, or to edit it in any way, it must be loaded into the Weather Graphics function as described elsewhere in this guide (see "Graphics Product Operations" on page 4-1).

Distance vs. Log-P from UGDF

Figure 5.39 Distance vs. Log-P from UGDF



The above panel is reached via the **Met Generation**, **Vertical** pick on the **AMIS System Entry** (Launch Pad) menu, and the **Distance Log P UGDF** tab. This function allows you to specify, generate, and view a vertical cross section of the atmosphere using UGDF data.

1 To specify, generate, and view Distance log pressure diagrams (Distance Log-P UGDF) for any available UGDF, select the Distance Log P UGDF tab you may:

- **Map** (Any available)
- Enter **Time** (add/ham or C, C-1, C-2 ……)
- **Data Source** (Original, All products)

2 Select map points:

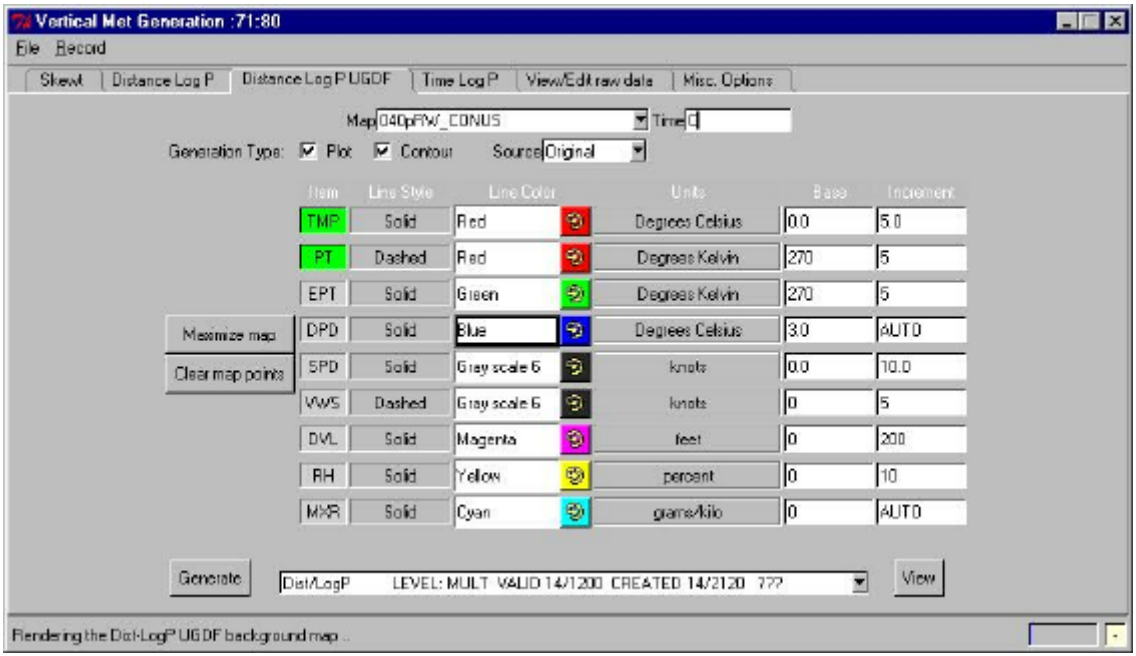
- Select map points (up to seven) on the selected background using the left-mouse

3 You must then select a check-box:

- **Plot** and / or **Contour**

The plot function provides a cross section that has a vertical plot of the data above each of the stations that includes only the wind barb and geopotential height of the standard pressure surfaces. The contour function provides an isopleth of the parameter(s) selected in the vertical cross section. Selecting both of the functions combines the plot and the contour results on one cross section.

Figure 5.40 Distance vs. Log-P UGDF Parameter



The **Contour** panel displayed above is used to specify the parameter(s) desired along with the line style, line color, and the units to use when contouring the parameter (including the base value and the desired increment). You may select any number of parameters to be contoured, up to the nine possibilities provided.

A Distance Log P UGDF is generated when the desired information is selected/entered into the panel and the **Generate** button is selected. When completed, the product legend will be displayed in the **Completed Product List** (white bar).

The View button allows products generated from this panel to be viewed immediately. This display of the product is for viewing only and cannot be further manipulated or processed. Only one product can be viewed at a time. In order to use the product in a composite or animation or other application, or to edit it in any way, it must be loaded into the Weather Graphics function as described elsewhere in this manual (see “Graphics Product Operations” on page 4-1).

Time vs. Log-P from FBD

Figure 5.41 Time vs. Log-P from FBD

The above panel is reached via the **Met Generation**, **Vertical** pick on the **AMIS System Entry** (Launch Pad) menu, and the **Time Log P** tab. This function allows you to specify, generate and view a vertical cross section of the atmosphere above a specified station with the passage of time. Such a cross section can provide a history of past changes that may facilitate anticipation of future changes.

1 To specify, generate, and view Time log pressure energy diagrams (Time Log-P) for any available upper-air FBD, select the Time Log P tab you may:

- Enter **Time** (up to 3) (dd/hhmm or C, C-1, C-2 ……)
- Station
- **Data Source**

  The data source is selectable between Original, Override, and Non-standard.

  Override data is original data that has been altered in some way and saved.

  Non-standard data is completely new.

For an explanation of how to generate Override and Non-standard data, see "View/Edit Surface and/or Upper-Air FBD" on page 5-56.

2 You must then select a check-box:

- **Plot** and / or Contour

The plot function provides a cross section that has a vertical plots of the data above the station for each of the times specified that includes only the wind barb and geopotential height of the standard pressure surfaces. The contour function provides an isopleth of the parameter(s) selected in the vertical cross section. Selecting both of the functions combines the plot and the contour results on one cross section.

Figure 5.42 Time vs. Log-P Parameter

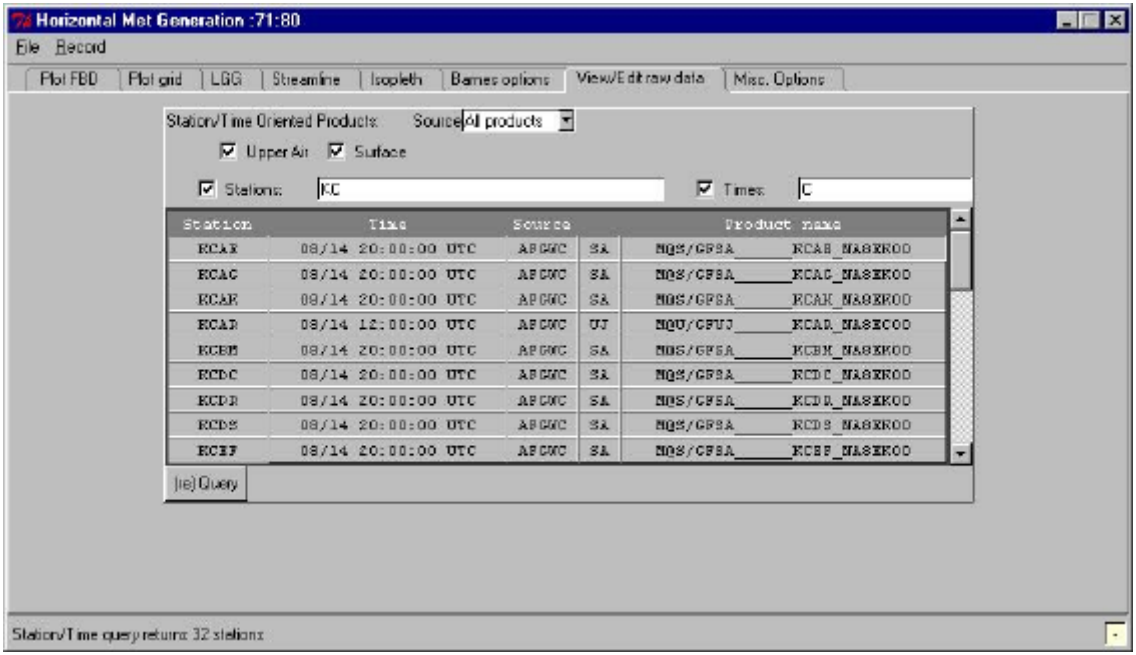
The **Contour** panel displayed above is used to specify the parameter(s) desired along with the line style, line color, and the units to use when contouring the parameter (including the base value and the desired increment). You may select any number of parameters to be contoured, up to the nine possibilities provided.

A Time Log P is generated when the desired information is selected/entered into the panel and the **Generate** button is selected. When completed, the product legend will be displayed in the **Completed Product List** (white bar).

The **View** button allows products generated from this panel to be viewed immediately. This display of the product is for viewing only and cannot be further manipulated or processed. Only one product can be viewed at a time. In order to use the product in a composite or animation or other application, or to edit it in any way, it must be loaded into the Weather Graphics function as described elsewhere in this manual (see “Graphics Product Operations” on page 4-1).

View/Edit Surface and/or Upper-Air FBD

Figure 5.43 Selection of Surface and/or Upper-Air FBD



The above panel is reached via the **Met Generation**, **Vertical** pick on the **AMIS System Entry** (Launch Pad) menu, and the **View/Edit raw data** tab. This function allows you to select surface and/or upper-air FBD for the purpose of inspecting and/or editing formatted binary data files. The stations modified in this area are used in creating graphical products such as specialized plots and isopleths.

You have the choice of data source, and the selection of upper air or surface or both to limit the search. Data source choices are:

- All products

- **original**
- override
- **non-standard**

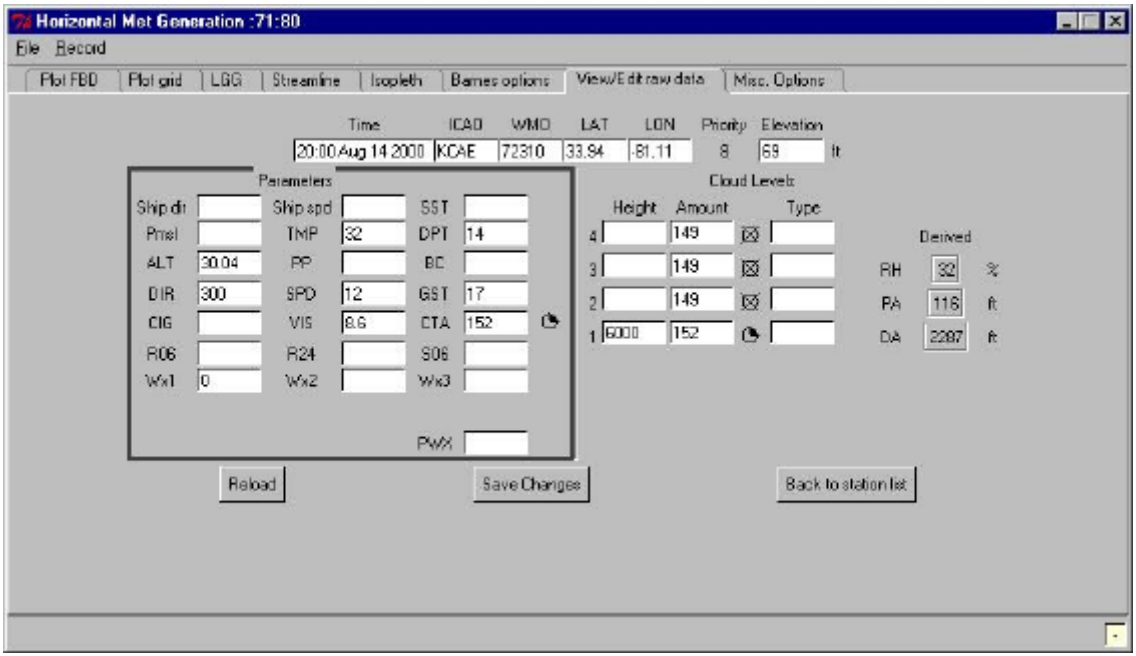
Override data is original data that has been altered in some manner and saved. It does not replace the original data that remains in the database, but can be accessed separately. Non-standard data is information that is made up from scratch including such things as ICAO, latitude and longitude, etc. as well as measured or observed weather parameters. Override data is used mostly in "what-if" and testing situations and non-standard data is mostly used for creating training scenarios and other similar applications. All products simply lists all FBD data available in the database and allows the user to choose. In most cases Original is the data source of choice.

When the **Stations** box is checked, the data entry field next to it is used to further limit the search for applicable data. The entries permit "wildcarding" to find those stations you are most interested in. For example, placing a *K* in the field will cause the query to return only those stations whose ICAO begins in *K*, while *KB* will return only those stations whose ICAO begins with *KB*. This also works with numerical station identifiers (WMO numbers) so that *72* entered in the field will return all stations with WMO numbers beginning in 72.

> ***Note:*** *If a station has an alpha ICAO as well as a WMO number listed in the database it will only be listed via the ICAO query.*

Selecting the ICAO or WMO number of a station in the returned list displays the FBD data panel for the data type chosen (surface or upper air).

Figure 5.44 Viewing/Editing Surface FBD



The above panel is displayed when viewing/editing FBD surface information. The header information (Time, ICAO, WMO, LAT, LON Elevation) should not be changed for override data. It can be changed if you are creating non-standard data. Note that all entries in the panel are in numerical form. Those parameters with symbols associated, display the symbol next to the data entry. Since the FBD format includes positions for all possible synoptic observation entries there will normally be a number of the data fields that are blank.

When editing the surface FBD (for whatever purpose) remember to use only valid entries in the various fields if you expect to get results you can use in plotting or isoplething. For example, the CTA field allows only values from 149 (missing) to 159 (obscured) and the Wx1, Wx2, and Wx3 fields are for values from 0 to 99. See Appendix IV, “AMIS Weather Parameters” for information regarding the codes for Wx parameters, cloud types, sky cover, and pressure change characteristics.

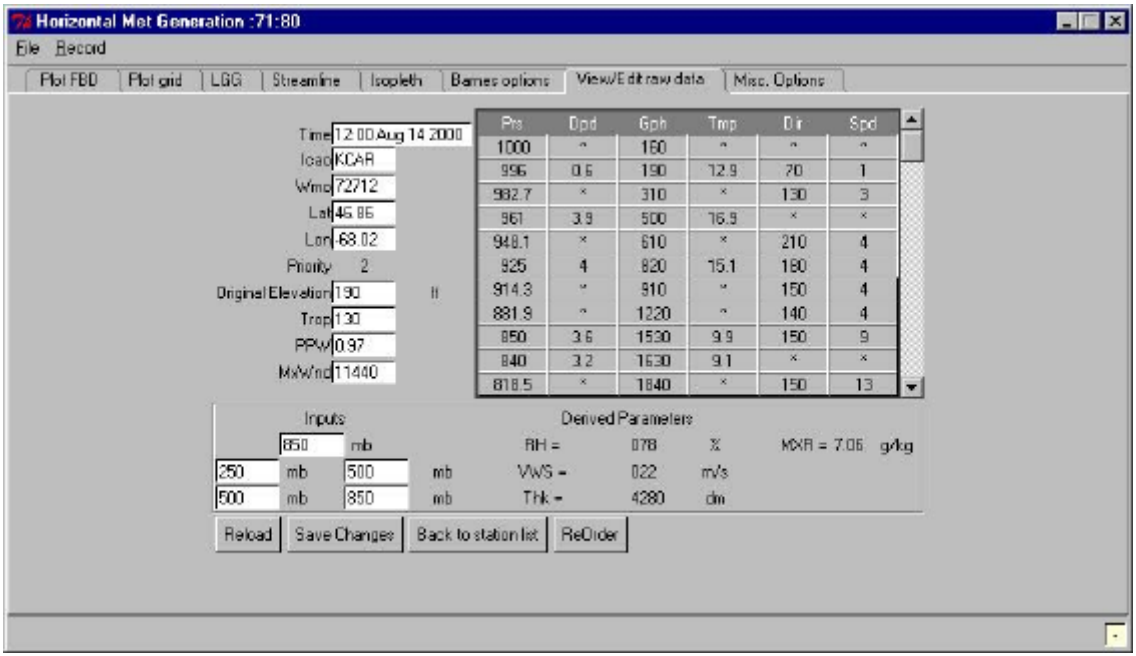
There are three parameters derived from information in the FBD code displayed on the right side of the panel. You can check calculations of these values by varying the entries in the parameters columns.

To return the data to the original form select the Reload button.

To save your changes as override data select the Save Changes button. If you make repeated override changes to the same station and time, only the most recent save will be retained in the database. After the initial save any changes made to that override data would be written over the previous override.

To return to the previous panel select the **Back to station list** button.

Figure 5.45 Viewing/Editing Upper-Air FBD



The above panel is displayed when viewing/editing FBD upper air data. The header information on the left (Time, ICAO, WMO, Lat, Lon) down through Original Elevation should not be changed for override data. It may be changed if you are creating non- standard data.

Missing data is designated by an asterisk (*****) in the field. Make desired changes. If you have changed a pressure level value (or blanked one out) select **ReOrder** button to place the data in the correct pressure level order. If you wish to add pressure levels, there are always five blank rows for data entry at the end of the data list. Enter the new pressure level and its associated parameters and select **ReOrder** button. You may also replace an existing pressure level with a new one including all parameters. Blanking out just the pressure level value and selecting **ReOrder** will remove the

entire row. However, it will leave a duplicate level at the end of the list that must then be erased.

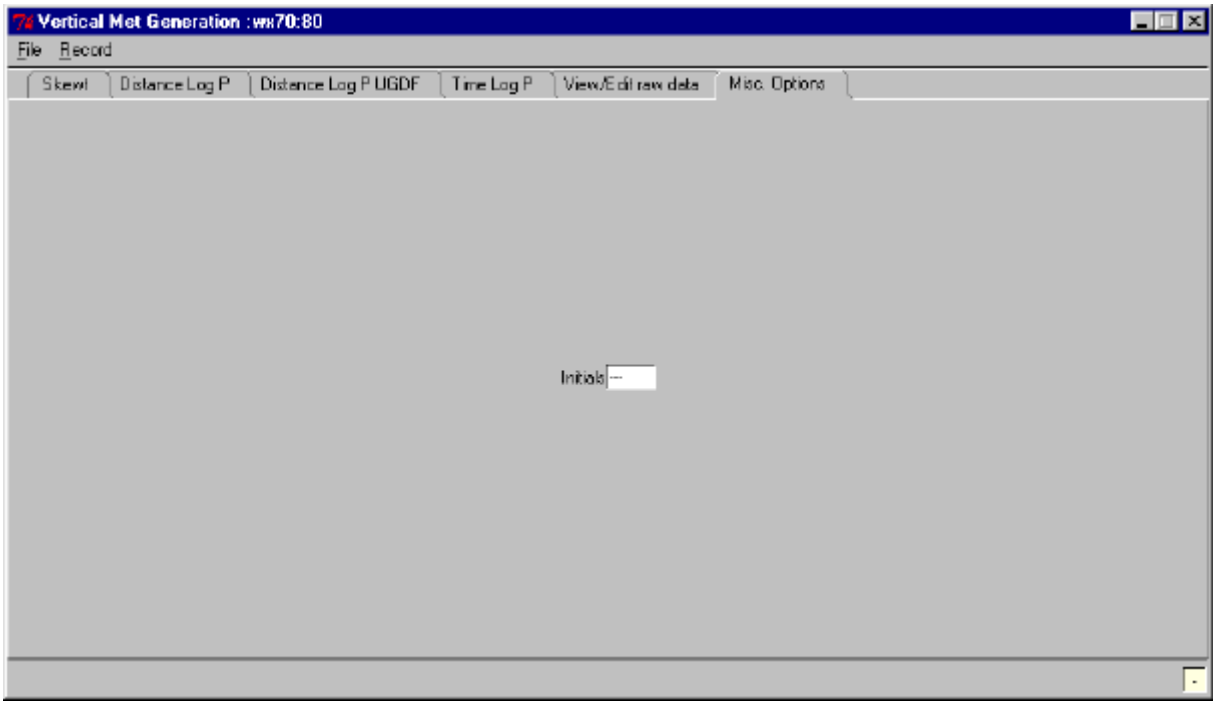
When you have made the desired changes, select the **Save Changes** button to place the override data into the database. Subsequent saves will be written over the previous override data.

There are derived parameters listed at the bottom of the panel. To have those parameters (RH or MXR) computed for a pressure level, enter the level in the single Inputs field to the left. For calculations of vertical wind shear (VWS) in a layer, enter the two pressure levels in the input fields to its left. For calculation of thickness (Thk) of a layer, enter the two pressure levels in the input fields to its left. Order of entry of the pressure levels has no effect on the calculations.

To return to the previous panel to select another station select the Back to station list button.

Misc. Options

Figure 5.46 Misc. Options Panel



The above panel is reached via the **Met Generation**, **Vertical** pick on the **AMIS System Entry** (Launch Pad) menu and the **Misc. options** tab, is used to enter your initials to be used in the generation of labels for met generation products and to access the plot model edit function.

Upon entry to this panel the Initials entry is active, enter your initials. You may select the "Edit plot model" button to access the plot model edit function as described previously in the Horizontal Met Generation section. (see "Plot Model Editing" on page 5-12).

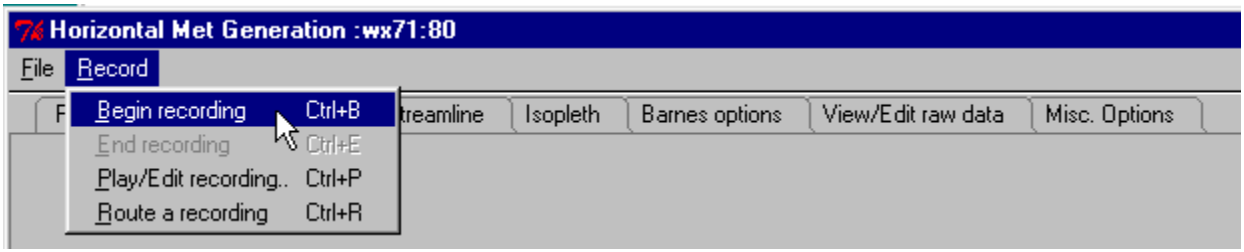
Command Sequences

You can record, play, edit, and route command sequences from this function. Command sequences are used to create a standard set of graphics products to be viewed in the Weather Graphics function, and inserted into slide shows, loops and for briefings.

To begin recording a command sequence:

1 With either the Horizontal or Vertical Met Generation panels displayed, select **Record > Begin recording** (see Figure 5.47).

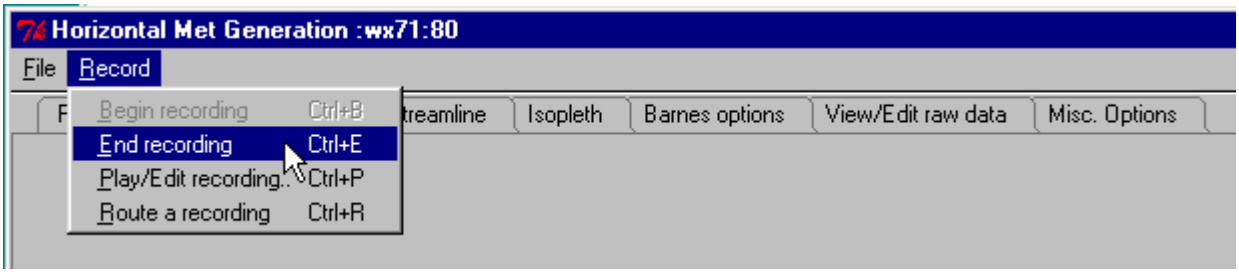
Figure 5.47 Command Sequences Begin Recording



2 Make selections from the Met Generation panel to create a single graphics product or a set of products. All selections are made in the same manner as described above in the Met Generation paragraphs. You may create as many products as required.

3 When completed select **Record > End recording** (see Figure 5.48).

Figure 5.48 Command Sequences End Recording



4 Enter a **Name of Recording** for the command sequence created and **Save**

Figure 5.49 Command Sequences Name

5 To not save these command sequence steps, select **Cancel**.

6 To make edits to the command sequence before saving, select **Re-edit**.

Command sequences may be executed from this panel and they can be executed automatically by using the Remote System Manager scheduler function (see "Scheduler" on page 6-190).

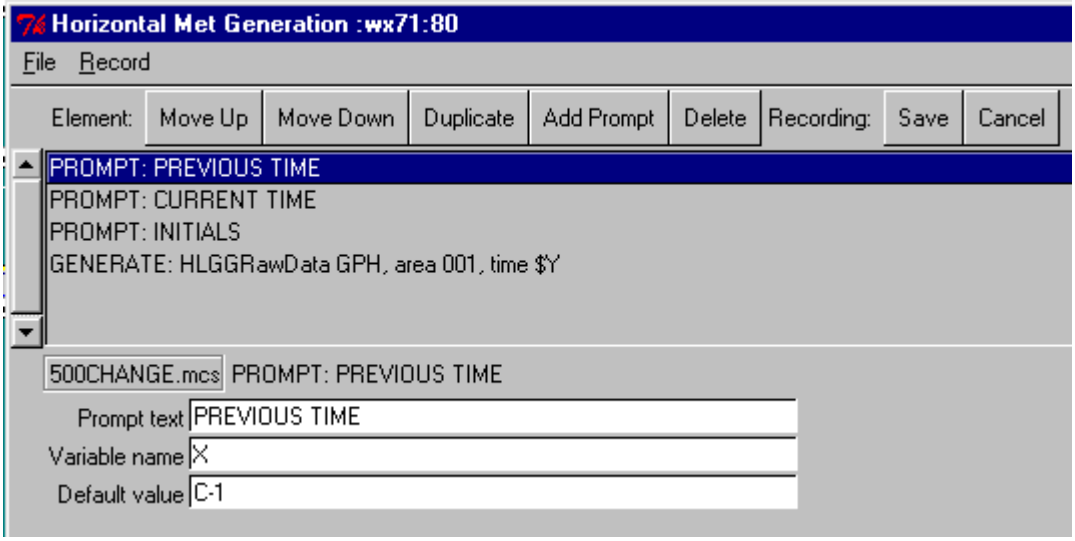
To play or edit a previously recorded command sequence, do the following:

1 Select **Record > Play/Edit recording**.

A list of avaliable command sequences and AMIS destinations are displayed, see .

Route Command Sequences Dialo *You may select the name of a command sequence from the list to **Play** or **Edit**. Upon selection of a name, selecting **Play** will execute the command sequence. Selecting **Edit** will begin an edit session for the command sequence.*

Figure 5.50 Command Sequences Edit



2 When editing a command sequence you can re-arrange the order of activities, delete steps, add prompts for execution:

- **Move up** (move an action) in the list.
- **Move down** (move an action) in the list.
- **Duplicate** (copy an action) in the list.
- **Add prompt** (for an action) in the list.
- **Delete** (remove an action) in the list.

3 When you have completed the edits for the command sequence, do one of the following:

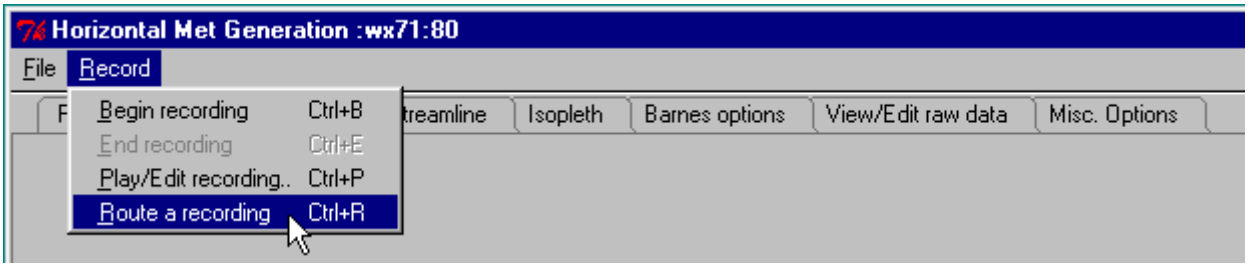
- **Save** to save your edits.
- **Cancel** to discard your edits.

Macros can be scheduled to occur in the background at timed intervals, when certain products arrive, or when specific METWatch events occur. Ask your System Manager to configure these items so they are automatically completed when you need them.

To route a command sequence to other AMIS sites, do the following:

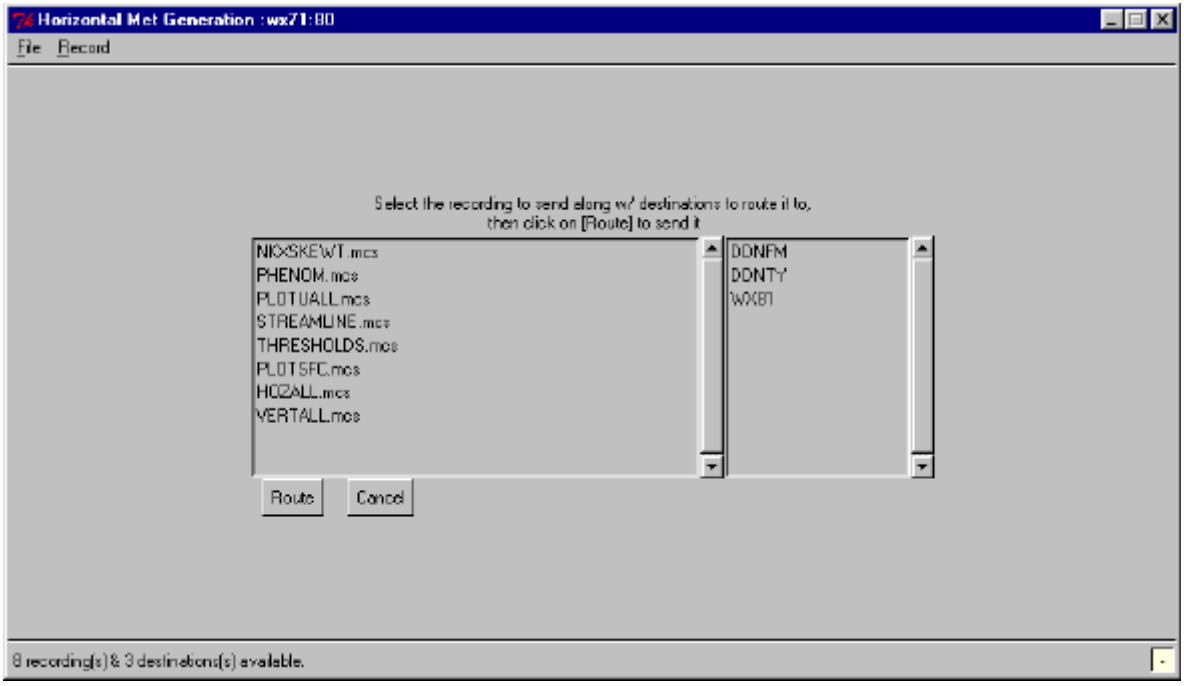
1 Select **Record** > **Route a recording** (see Figure 5.51).

Figure 5.51 Command Sequences Route a Recording



A list of avaliable command sequences and AMIS destinations are displayed, see Figure 5.52.

Figure 5.52 Route Command Sequences Dialog



2 From the list of command sequences, select the command sequence to route.

3 From the list of destinations, select the destination(s) to route to.

*The available destinations are configured by the System Manager via **RSM > Configure > Destinations**. Candidate destinations are "awds" destination types with "AWDS" data type (see "Destinations" on page 6-44).*

4 Select the **Route** button.

Completion status is displayed at bottom of dialog.

To exit the command sequences dialog, do the following:

1 Select **Cancel**.

The Horizontal or Vertical Met Generation panel displays, as appropriate.

CHAPTER

6

System Administration Operations

In the N-TFS, both the CSSO/System Administrator role and the System Manager role are privileged administrative roles, the CSSO/System Administrator being the more privileged. The CSSO/System Administrator is a site official with *CSSO Access* (see "Profiles/authorizations" on page 2-1) associated with his/her N-TFS user account. The System Manager is a site official with *System Manager Access* (see "Profiles/authorizations" on page 2-1) associated with his/her N-TFS user account.

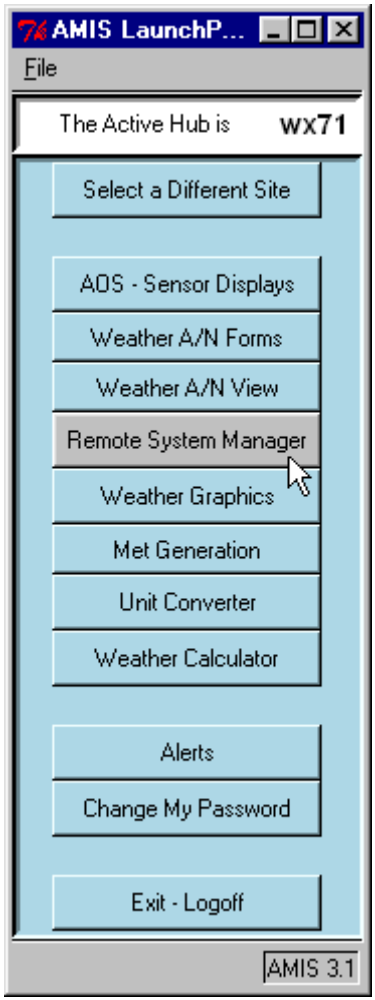
System Manager Activities

The AMIS System Manager uses the Remote System Manager program to conveniently configure and maintain an AMIS site.

To launch the Remote System Manager application from a N-TFS Client, do the following:

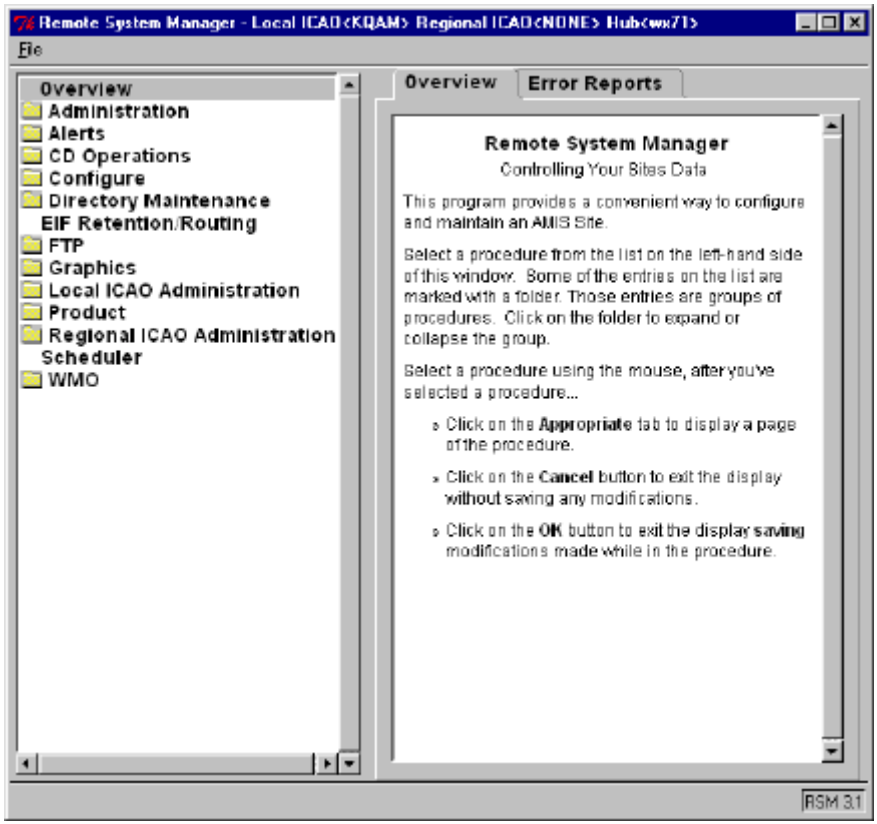
1 At the AMIS LaunchPad, select **Remote System Manager** (see Figure 6.1).

Figure 6.1 Launch of RSM Application from N-TFS Client



The initial screen for the Remote System Manager application appears (see Figure 6.2).

Figure 6.2 Initial Remote System Manager Screen



Administration

Database Usage

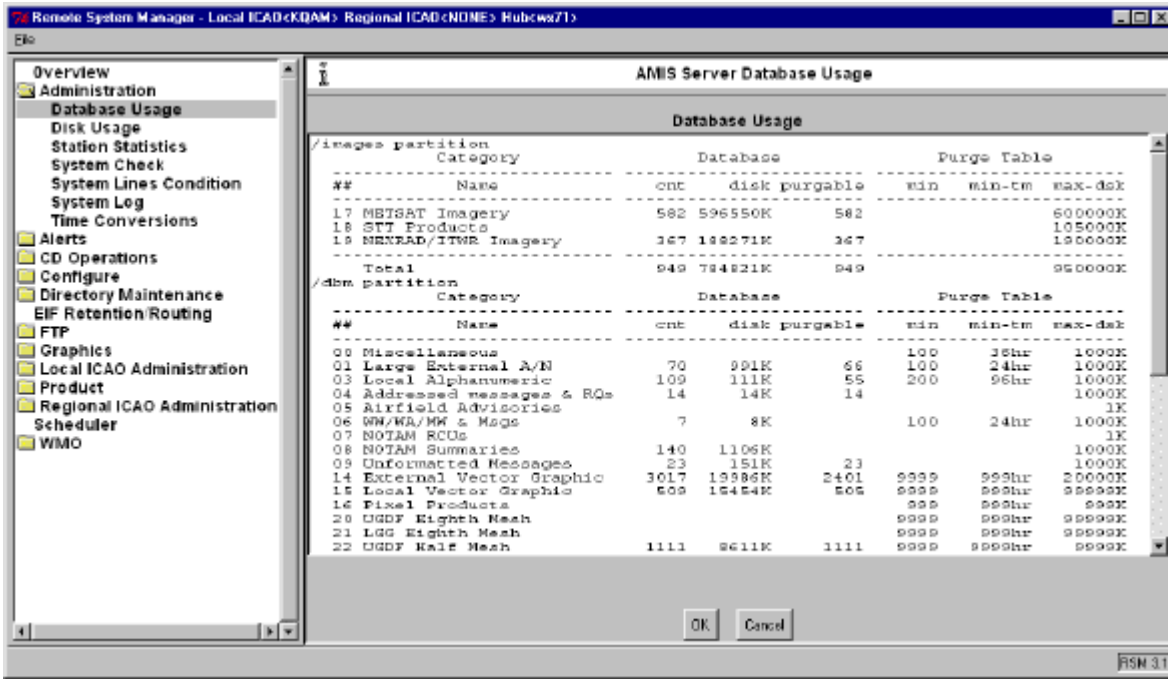
The Database Usage table enables the System Manager to review the amount of remaining mass storage on the N-TFS Server. The amount of mass storage available, and the amount used, is presented in kilobytes. The System Manager typically uses this information to adjust the product storage time period and number of products.

To access the Database Usage table, do the following:

1 Select the **Administration** folder, and select **Database Usage**.

The Database Usage table appears (see Figure 6.3).

Figure 6.3 Database Usage Table



The Database Usage table is vertically scrollable and contains the following information:

- **##**—purge category number.
- **Name**—purge category name.
- **cnt**—number count of products (both purgeable and non-purgeable).
- **disk**—amount of disk space (KB) used by the products.
- **purgable**—the number of products considered purgable.
- **min**—the minimum number of products to retain when purging.
- **min-tm**—minimum hours to keep the products.
- **max-dsk**—maximum amount of disk space allocated.

AMIS tests the following conditions, in the order presented, to determine if a product will get purged in a category:

1 Is there any special processing for the product?

For example, AIRADs have special processing requirements. Such specially processed products are either *never* purged, or they are purged

at some specified expiration time. Such products are not counted as purgable.

If this condition is false, AMIS tests for condition 2.

2 Is the product in an AAI set?

AMIS keeps products included in an AAI set for 24 hours after the product filetime, as opposed to the product receipt time. Any such products are not counted as purgable until this time has elapsed.

If this condition is false, AMIS tests for condition 3.

3 Is **disk** > **max-dsk** for the category?

max-dsk *is a strict limit for purgable product. If this condition is true, AMIS purges the oldest purgable products to keep the category below* ***max-dsk****.*

If this condition is false, AMIS tests for condition 4.

4 Is **cnt** > **min** for the category?

If this condition is true, AMIS tests for condition 5.

5 Are there any purgable products in the category whose filenames are older than **min-tm** hours?

If this condition is true, AMIS will purge any such products.

If this condition is false, no products will be purged at this time.

To exit the **Database Usage** table, do the following:

1 Select **OK** or **Cancel**.

Disk Usage

The **Disk Usage** table reports the amount of used and available disk space, and how much of the file system's total capacity is currently occupied. The display provides information for each disk partition, and indicates where the partitions are mounted.

To access the **Disk Usage** table, do the following:

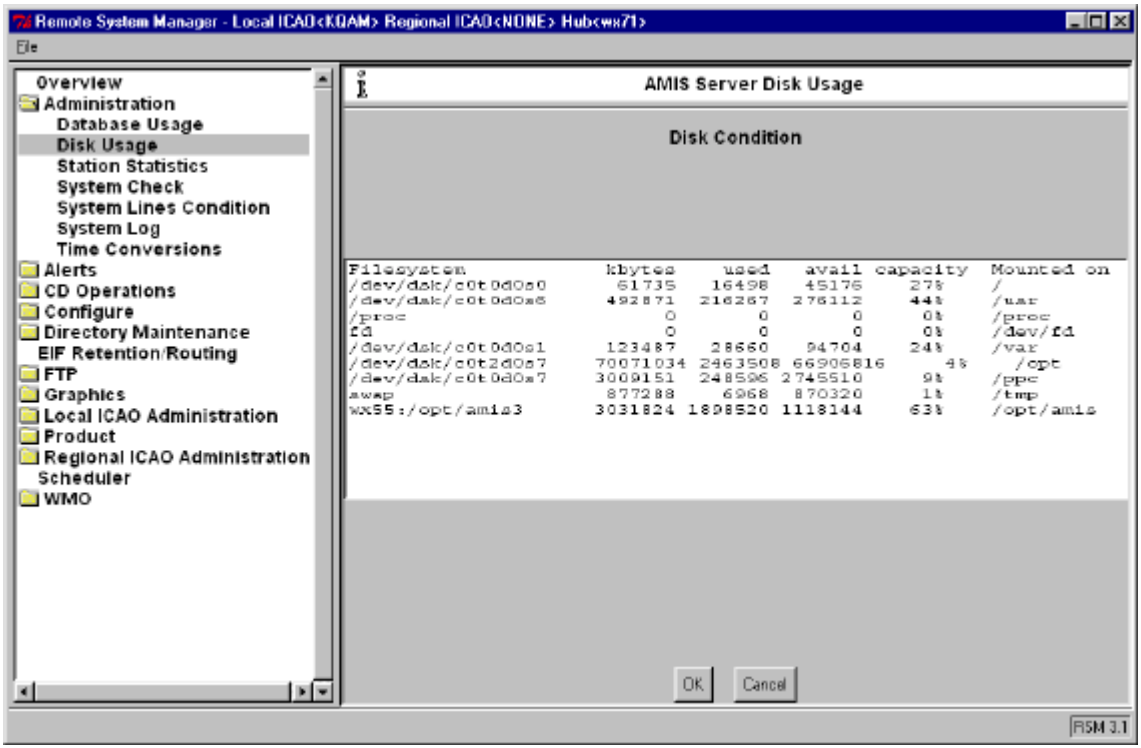
1 Select the **Administration** folder, and select **Disk Usage**.

2 The **Disk Usage** table appears (see Figure 6.4).

To exit the **Disk Usage** table, do the following:

1 Select **OK** or **Cancel**.

Figure 6.4 Disk Usage Table



Station Statistics

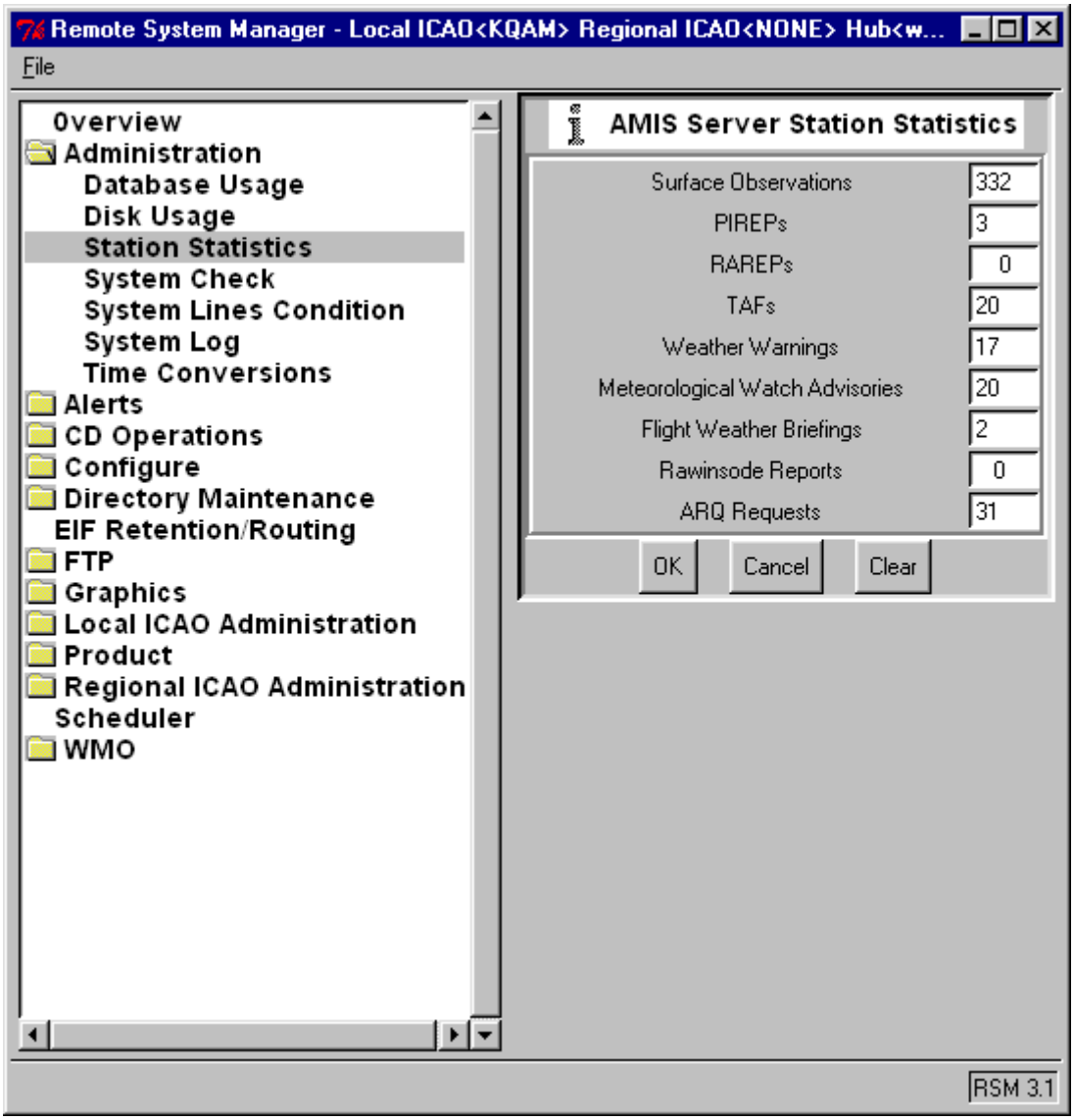
AMIS automatically counts, on a monthly-to-date basis, various products such as Surface Observations and PIREPs as they are produced. The **Station Statistics** table enables the System Manager to review and update these statistics as well as save them to an Excel spreadsheet.

To access the **Station Statistics** table, do the following:

1 Select the **Administration** folder, and select **Station Statistics**.

2 The **Station Statistics** table appears (see Figure 6.5).

Figure 6.5 Station Statistics Table



To modify any of the product counts, do the following:

1 Select the corresponding text field or position the cursor in the text field and enter the new count value.

2 Optionally, select **Clear** to clear all counts.

To save the table to an Excel spreadsheet (from client PC only), do the following:

1 Select the **File** pull-down menu in the upper left of the display.

2 Select **Save As...**

3 In the save dialog that appears, type the save filename with an extension of *.xls*.

4 Select **Save** to save the file or **Cancel** to exit without saving.

To exit the **Station Statistics** table, do one of the following:

- To exit without saving any changes, select **OK**.
- To exit without saving any changes, select **Cancel**.

System Check

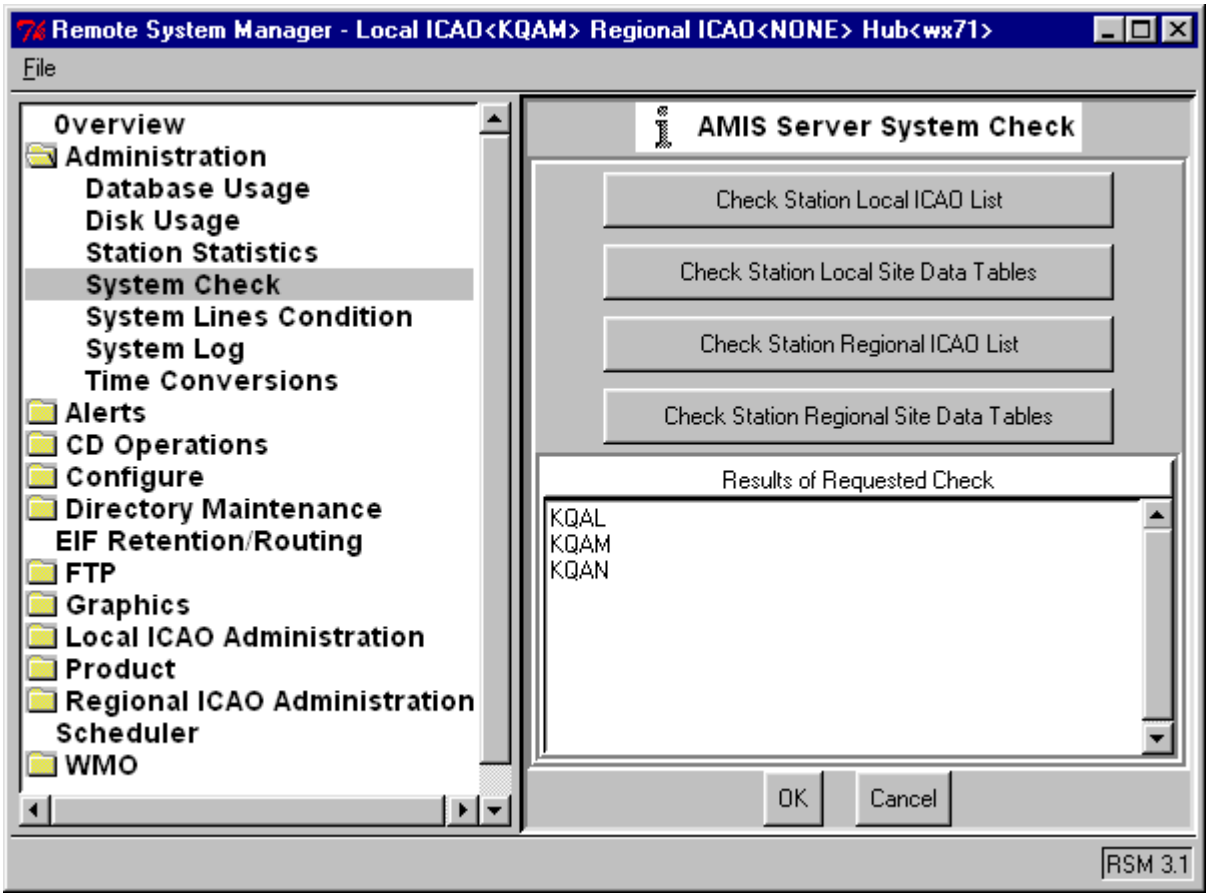
The System Manager uses the System Check table to list the current ICAO configuration, and to ensure that data is entered into critical fields in the Local and Regional site data tables for each ICAO.

To access the **System Check** table, do the following:

1 Select the **Administration** folder, and select **System Check**.

2 The **System Check** table appears (see Figure 6.6).

Figure 6.6 System Check Table



To display the current local ICAO list, do the following:

1 Select **Check Station Local ICAO List**.

*The local ICAOs are listed in the **Results of Requested Check** window.*

To display the current regional ICAO list, do the following:

1 Select **Check Station Regional ICAO List**.

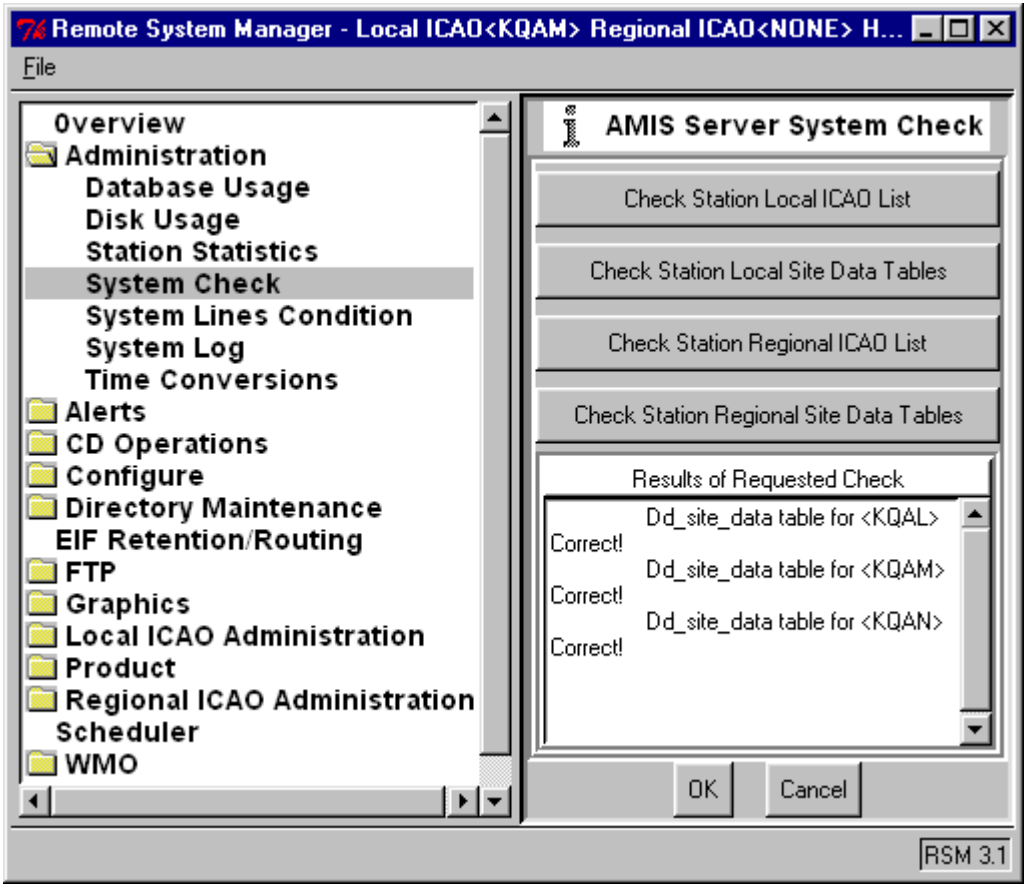
*The regional ICAOs are listed in the **Results of Requested Check** window.*

To check the local ICAO site data tables for complete entries, do the following:

1 Select **Check Station Local Site Data Tables**.

*At **Results of Requested Check**, the site data table is listed along with the corresponding ICAO.*

*For tables that have no missing data, **Correct!** is displayed.*



*For tables that have data missing for one or more fields, **Null Fields** is displayed, along with identification of the missing fields.*

To check the regional ICAO site data tables for complete (as opposed to accurate) entries, do the following:

1 Select **Check Station Regional Site Data Tables**.

*At **Results of Requested Check**, the site data table is listed along with the corresponding regional ICAO.*

*For tables that have no missing data, **Correct!** is displayed.*

*For tables that have data missing for one or more fields, **Null Fields** is displayed, along with identification of the missing fields.*

To exit the **System Check** table, do the following:

1 Select **OK** or **Cancel**.

System Lines Condition

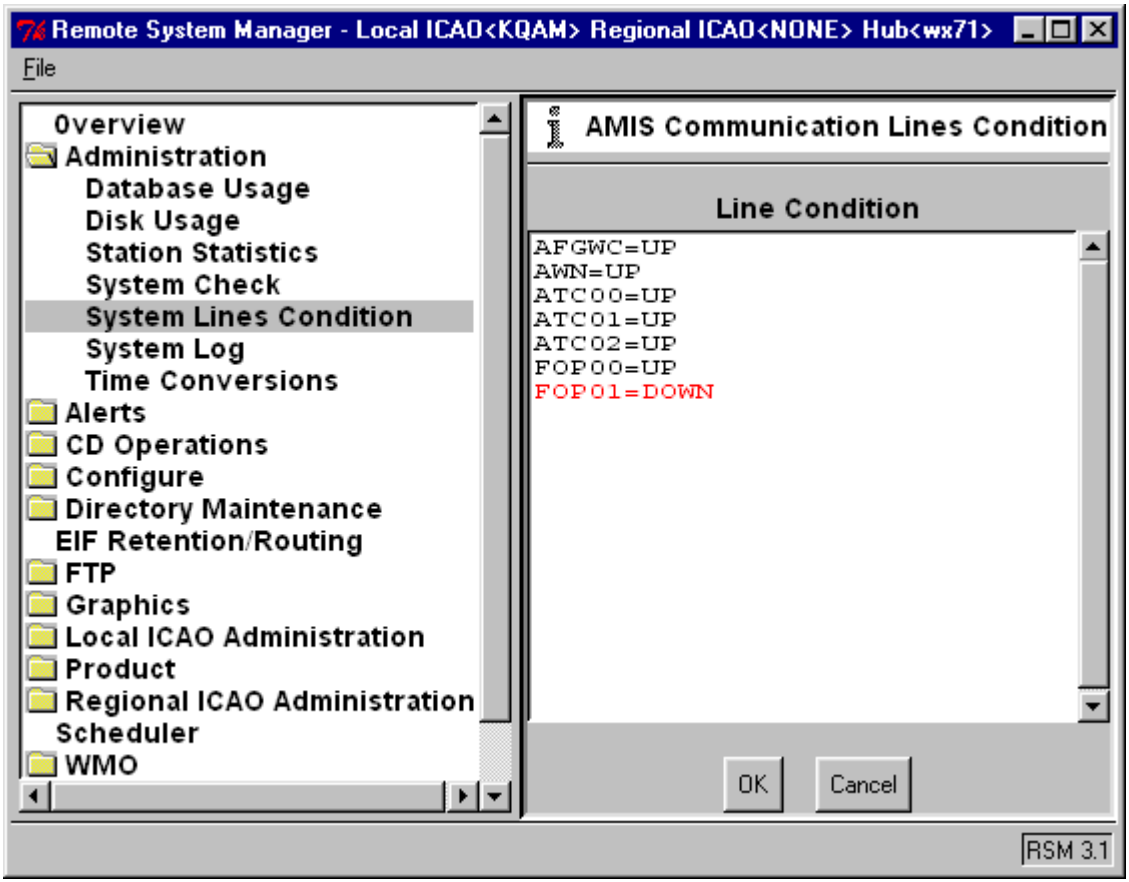
The System Lines Condition table displays the current status of on-base communication lines between the C/DM and the external longlines, and between the C/DM and FCF/ATC and FCF/FO workstations.

To access the **System Lines Condition** table, do the following:

1 Select the **Administration** folder, and select **System Lines Condition**.

2 The **System Lines Condition** table appears (see Figure 6.7).

Figure 6.7 System Lines Condition Table



*Each communication line is identified along with the corresponding line status, listed as **UP** or **DOWN**.*

*The status of the external lines may additionally be listed as **INIT**. This means the line is initializing. When initialization is complete, the status will change to **UP** or **DOWN**.*

*If the display lists **CTL--Down**, all FCF workstations are effectively down because the FCF portion of the C/DM software is down.*

*If the display lists **ADCIO Down**, the AWN and AFWA are effectively down because the longlines portion of the C/DM software is down.*

To exit the **System Lines Condition** table, do the following:

1 Select **OK** or **Cancel**.

System Log

The System Log table enables the System Manager to attend to significant system events by viewing and/or printing the System Log, or portions of it.

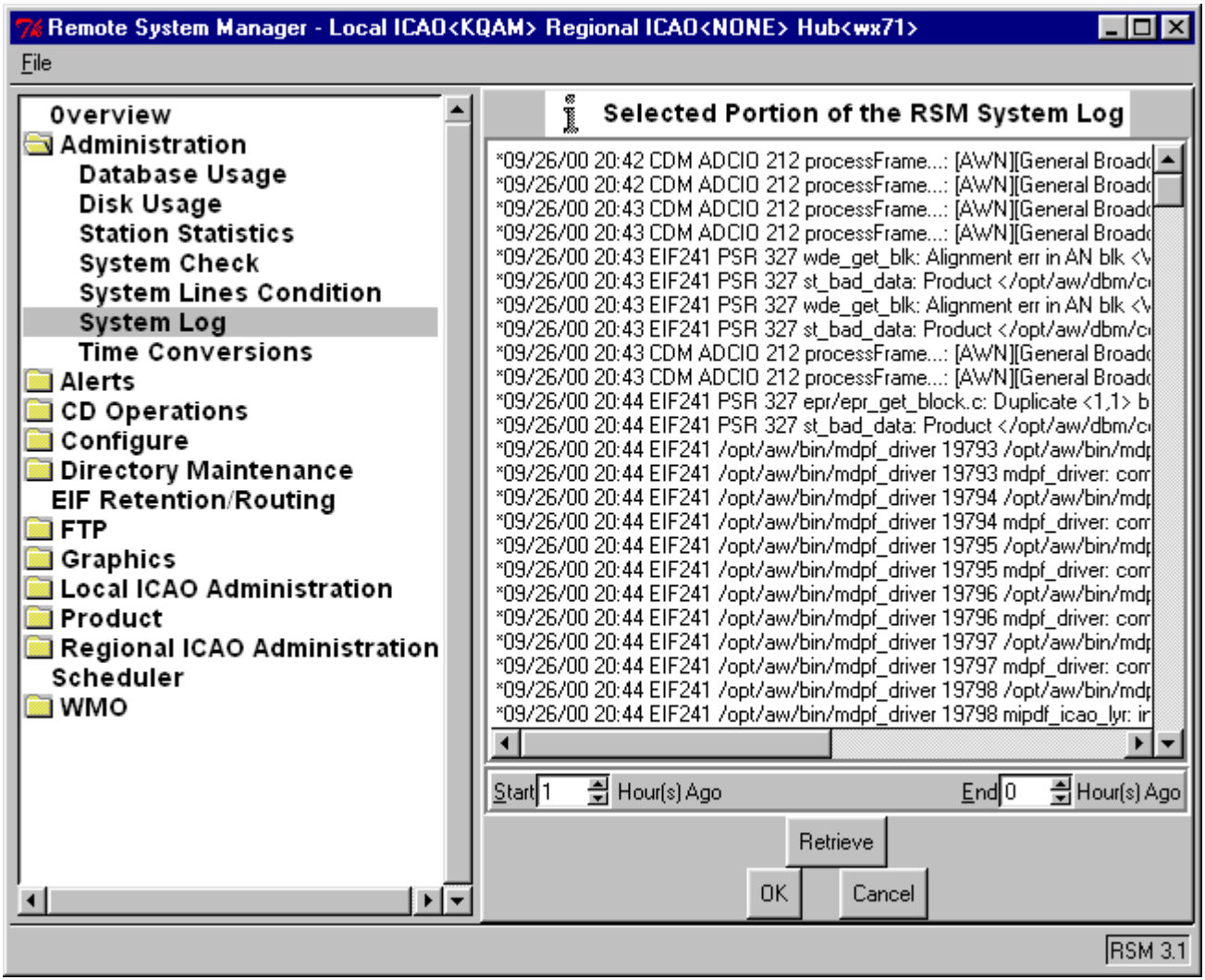
The AMIS System Log is used to aid the System Manager in troubleshooting and monitoring the system. Log messages pertain to the AMIS system processes, events related to the product database, Met processing, product transmission, and various other system events.

To access the **System Log** table, do the following:

1 Select the **Administration** folder, and select **System Log**.

2 The **System Log** table appears (see Figure 6.8).

Figure 6.8 System Log Table



To select a portion of the log for display, do the following:

1 At **Start**, enter the start hour (for example, 5 hours ago).

2 At **End**, enter the end hour (for example, 2 hours ago).

3 Select **Retrieve**.

The selected portion of the log displays.

To print the displayed portion of the system log, do the following:

1 At the pull-down menu in the upper left of the display, select **File > Print Table**.

2 At the print dialog that appears, do the following:

- Optionally, select **Properties** and then, for paper orientation, select **Landscape**.
- Select **OK** to print, **Cancel** to exit without printing.

To exit the **System Log** table, do the following:

1 Select **OK** or **Cancel**.

Time Conversions

The initial Time Conversions display is a static display of the current system time expressed in four time systems: UNIX, local, GMT, and AMIS. The System Manager can modify the time value in any of the four representations and the system will convert and display the respective time value in the remaining three time systems.

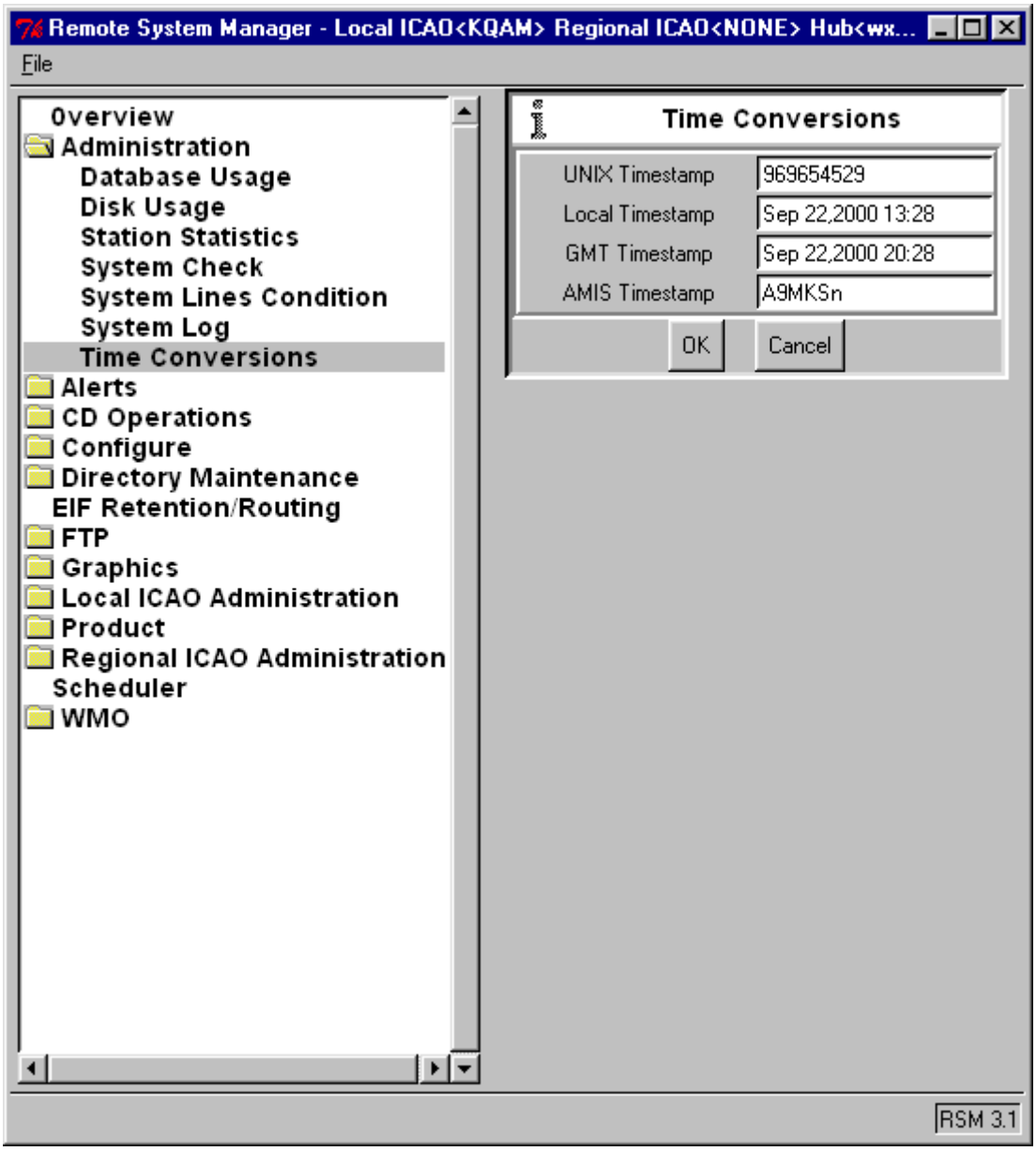
The UNIX time is an integer value representing the Julian time of the N-TFS Server operating system. Local and GMT times are representations based on the UNIX time, accounting for time zones and longitude. AMIS time is an internal time representation based on the UNIX time. An AMIS timestamp is associated with each product in the N-TFS Server resident product database.

To access the **Time Conversions** table, do the following:

1 Select the **Administration** folder, and select **Time Conversions**.

The Time Conversions table appears (see Figure 6.9).

Figure 6.9 Time Conversions Table



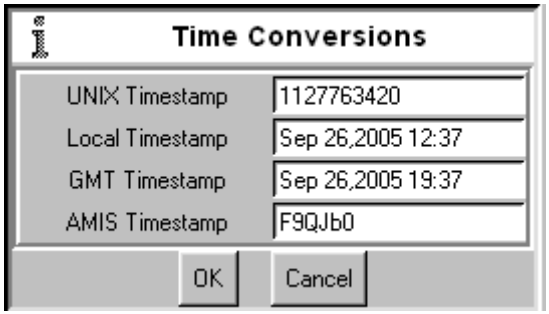
To convert a time in one of the four time systems to the remaining three time systems, do the following:

1 Modify the value of one of the four entries.

2 At the keyboard, press **Enter**.

The new display shows the converted values (see Figure 6.10).

Figure 6.10 Time Conversion



To exit the Time Conversions table, do the following:

1 Select **OK** or **Cancel**.

Alerts

The alert tables enable the System Manager to alert a user, system group, list of users, or combined list of users and groups for a product arrival, product issuance, or system error.

The alert priority for Advisory/Message and Warning/Watch product issuance alerts and system error alerts is permanently set by the system to *Urgent* . The alert priority for product arrival alerts may be set by the System Manager to *Urgent* or *Routine*.

Advisory/Message

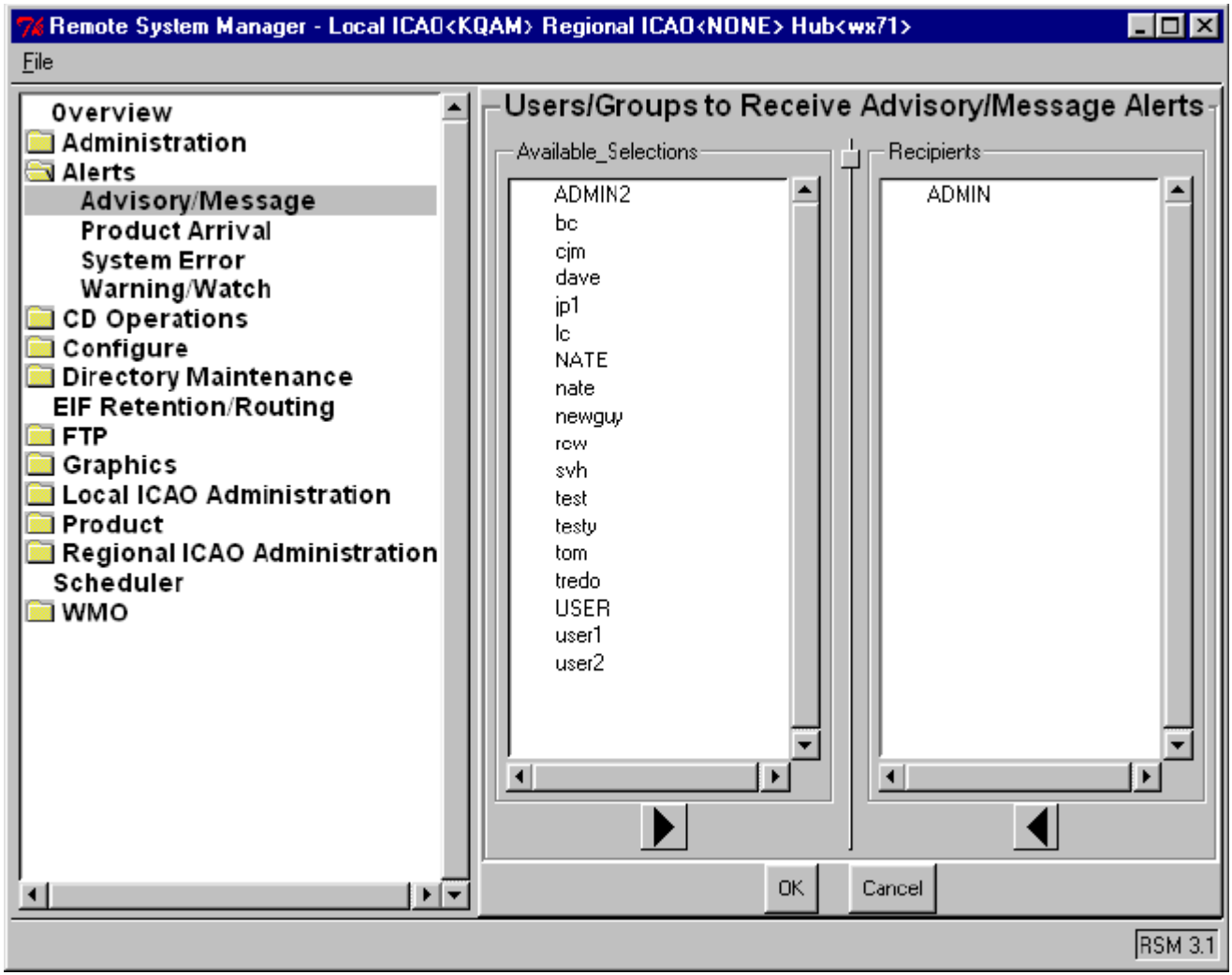
The Alerts Advisory/Message table enables the System Manager to configure the system to alert users/groups upon issue of Weather Advisory or Weather Message products.

To access the Alerts Advisory/Message table, do the following:

1 Select the **Alerts** folder, and select **Advisory/Message**.

The Alerts Advisory/Message table appears (see Figure 6.11).

Figure 6.11 Alerts Advisory/Message Table



The users and groups listed under **Available Selections** are the candidate alert recipients. The users and/or groups ultimately listed under **Recipients** are the actual Advisory and Message alert recipients.

To adjust the **Available Selections** and/or **Recipients** list, do one of the following:

- To move a user/group name from one list to the other, double click the name.

- To move a user/group name from the **Available Selections** list to the **Recipients** list, highlight the name and select the right arrow button ▶.
- To move a user/group name from the **Recipients** list to the **Available Selections** list, highlight the name and select the left arrow button ◀.

To exit the Alerts Advisory/Message table, do one of the following:

- To exit and save any changes, select **OK**.
- To exit without saving any changes, select **Cancel**.

Product Arrival

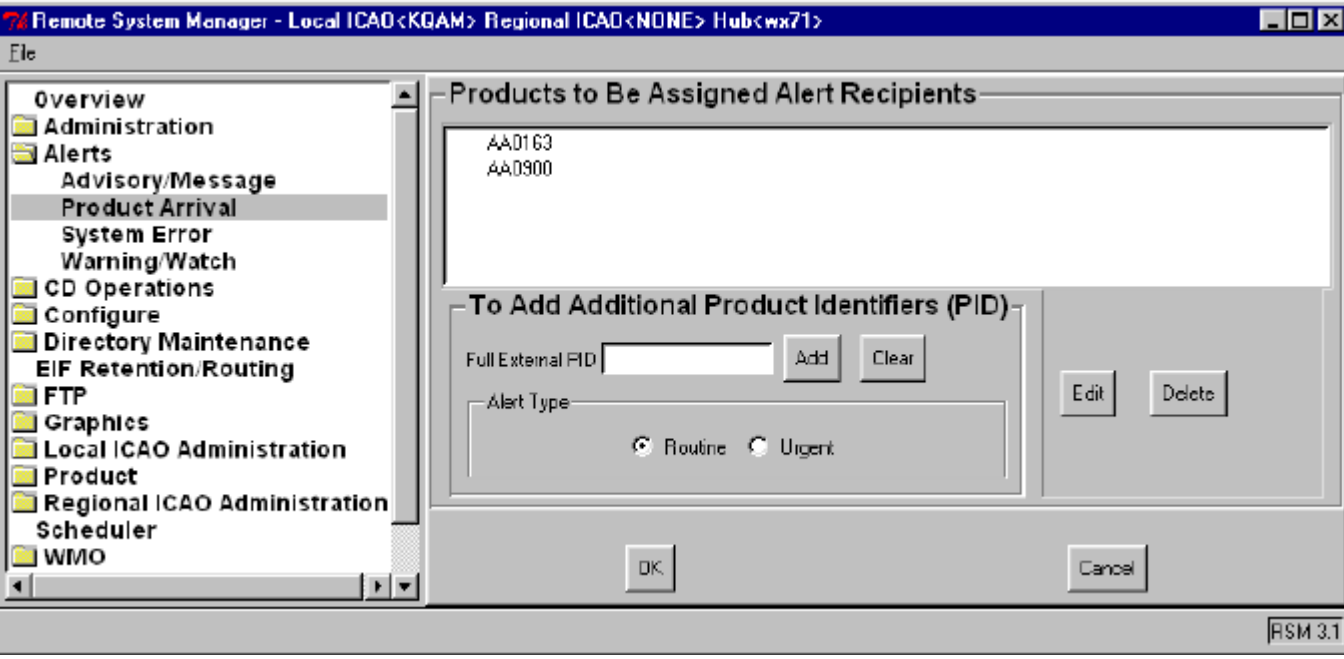
The Alerts Product Arrival table enables the System Manager to configure the system to alert users/groups upon arrival of specific products to the database.

To access the Alerts Product Arrival table, do the following:

1 Select the **Alerts** folder, and select **Product Arrival**.

The Alerts Product Arrival table appears (see Figure 6.12).

Figure 6.12 Alerts Product Arrival Table



To configure alerting on the arrival of specific products, do the following:

1 Under **To Add Additional Product Identifiers (PID)**, at **Full External PID**, type the complete external product identifier of the product whose arrival you want to alert on.

*Optionally, to clear any mistakes on entry of the PID, select **Clear**.*

Any PID entered here must first be accepted into the system via the Product Retention table (the entire PID or an acceptable wildcard). See "Retention" on page 6-169.

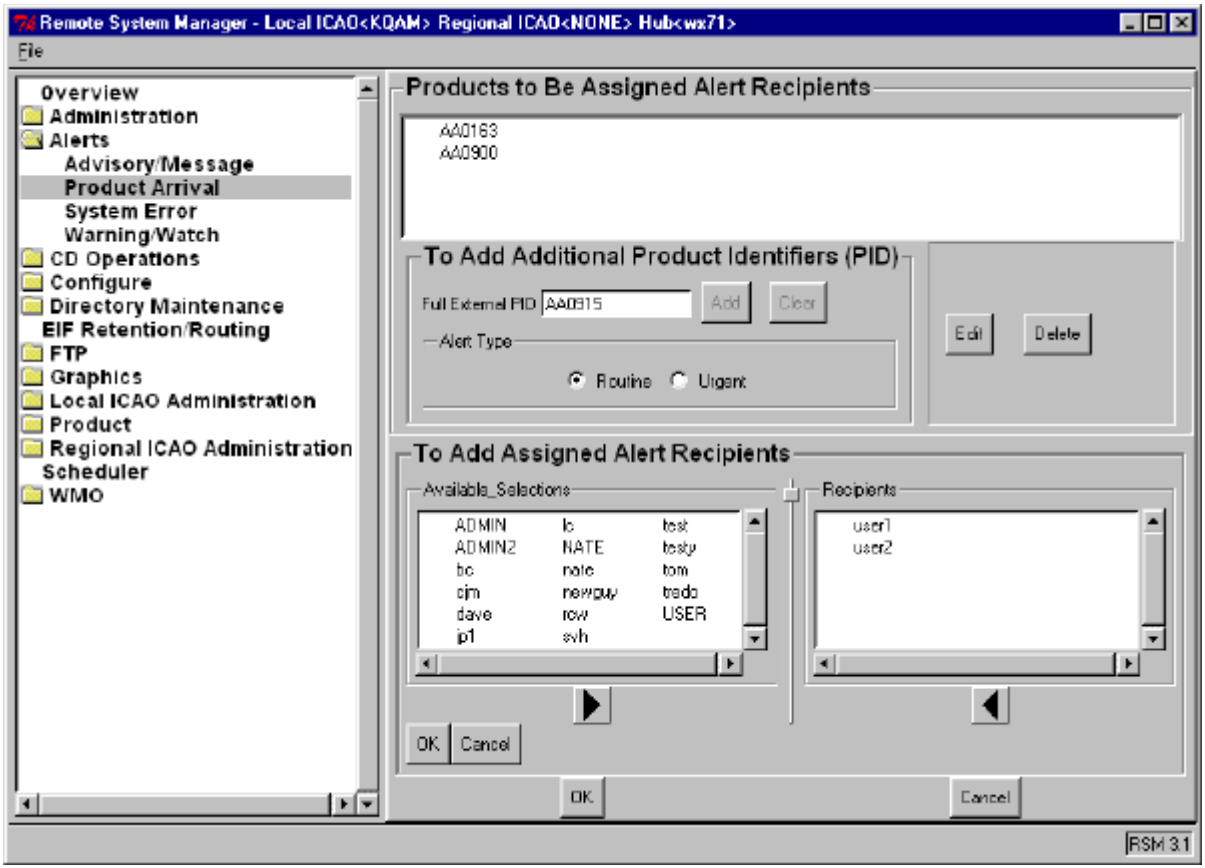
See Appendix II, "File Naming Conventions" for information on AMIS file naming conventions.

2 At **Alert Type**, select **Routine** or **Urgent**.

3 Select **Add**.

An additional alert recipients panel appears (see Figure 6.13).

Figure 6.13 Alerts Product Arrival Table Recipients Panel



*The users and groups listed under **Available Selections** are the candidate alert recipients. The users and/or groups ultimately listed under **Recipients** are the actual alert recipients.*

4 To adjust the **Available Selections** and/or **Recipients** list, do one of the following:

- To move a user/group name from one list to the other, double click the name.
- To move a user/group name from the **Available Selections** list to the **Recipients** list, highlight the name and select the right arrow button .
- To move a user/group name from the **Recipients** list to the **Available Selections** list, highlight the name and select the left arrow button .

5 Exit and save the changes by selecting **OK**.

To delete an alerting product, do the following:

1 In the **Products to Be Assigned Alert Recipients** window, highlight the respective PID and select **Delete**.

To edit the recipients associated with an alerting product, or the alert type, do the following:

1 In the **Products to Be Assigned Alert Recipients** window, highlight the respective PID and select **Edit**.

2 Optionally, at **Alert Type**, select **Routine** or **Urgent**.

3 Optionally, adjust the **Available Selections** and/or **Recipients** list by following step 4 above.

4 To exit and save changes, select **OK**.

To leave the Alerts Product Arrival table, do one of the following:

- To exit and save any changes, select **OK**.
- To exit without saving any changes, select **Cancel**.

System Error

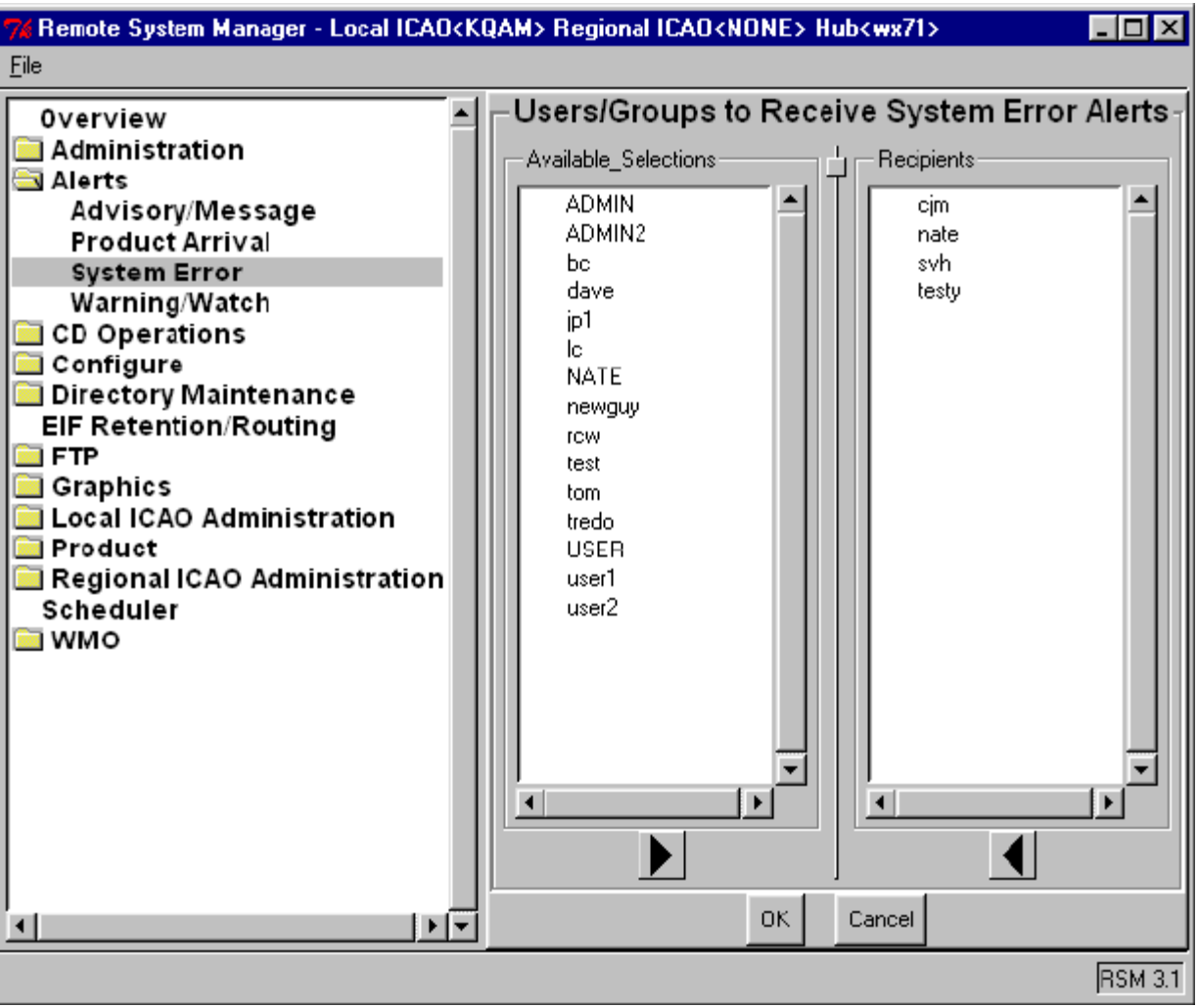
The Alerts System Error table enables the System Manager to configure the system to alert users/groups based on system error conditions. ADCIO, FCF, PPC, and database messages will be generated if problems occur with the respective processes implementing these functions.

To access the Alerts System Error table, do the following:

1 Select the **Alerts** folder, and select **System Error**.

The Alerts System Error table appears (see Figure 6.14).

Figure 6.14 Alerts System Error Table



The users and groups listed under **Available Selections** are the candidate alert recipients. The users and/or groups ultimately listed under **Recipients** are the actual alert recipients.

To adjust the **Available Selections** and/or **Recipients** list, do one of the following:

- To move a user/group name from one list to the other, double click the name.
- To move a user/group name from the **Available Selections** list to the **Recipients** list, highlight the name and select the right arrow button .
- To move a user/group name from the **Recipients** list to the **Available Selections** list, highlight the name and select the left arrow button .

To leave the Alerts System Error table, do one of the following:

- To exit and save any changes, select **OK**.
- To exit without saving any changes, select **Cancel**.

Warning/Watch

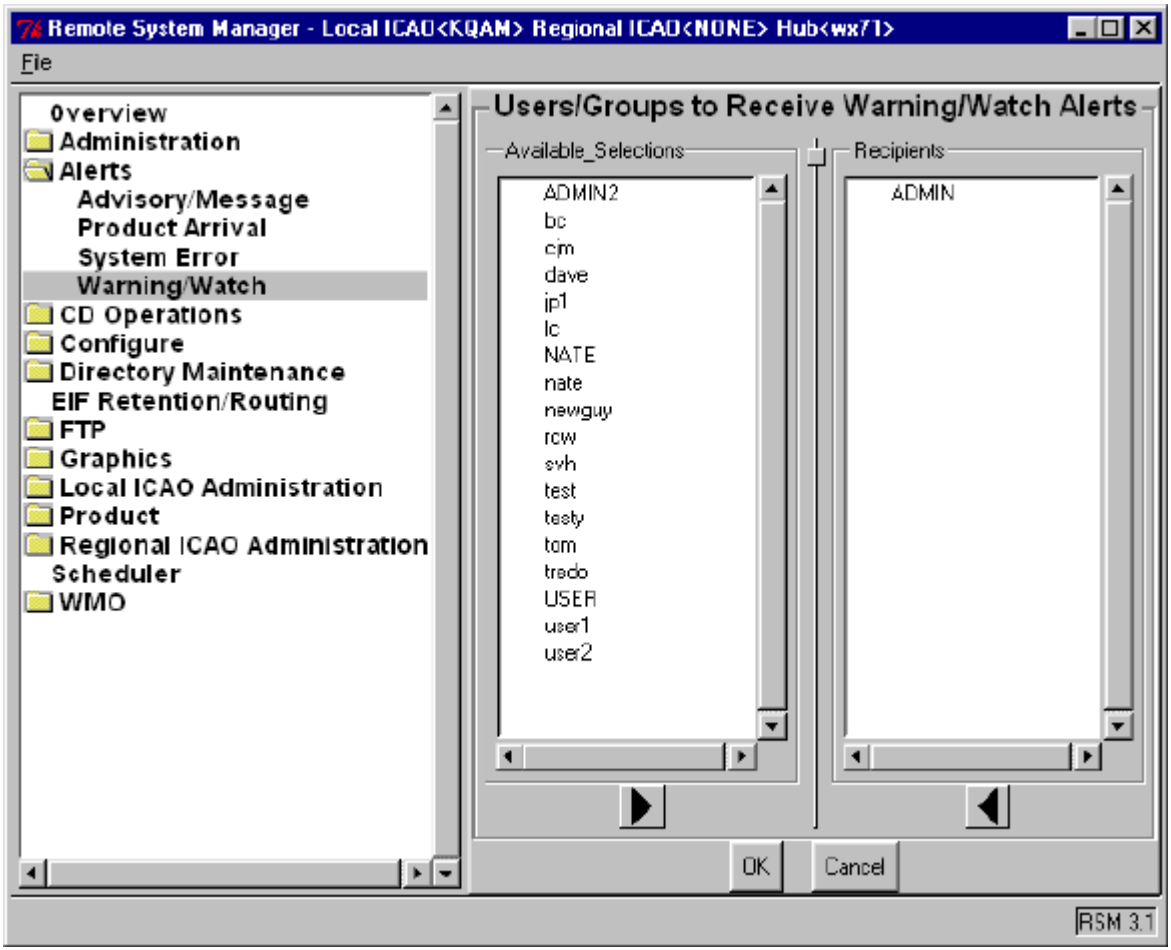
The Warning/Watch table enables the System Manager to configure the system to alert a user or a list of system groups upon issue of Weather Warning or Weather Watch products.

To access the Alerts Warning/Watch table, do the following:

1 Select the **Alerts** folder, and select **Warning/Watch**.

The Alerts Warning/Watch table appears (see Figure 6.15).

Figure 6.15 Alerts Warning/Watch Table



The users and groups listed under **Available Selections** are the candidate alert recipients. The users and/or groups ultimately listed under **Recipients** are the actual Advisory and Message alert recipients.

To adjust the **Available Selections** and/or **Recipients** list, do one of the following:

- To move a user/group name from one list to the other, double click the name.
- To move a user/group name from the **Available Selections** list to the **Recipients** list, highlight the name and select the right arrow button ▶.
- To move a user/group name from the **Recipients** list to the **Available Selections** list, highlight the name and select the left arrow button ◀.

To leave the Alerts Warning/Watch table, do one of the following:

- To exit and save any changes, select **OK**.
- To exit without saving any changes, select **Cancel**.

CD Operations

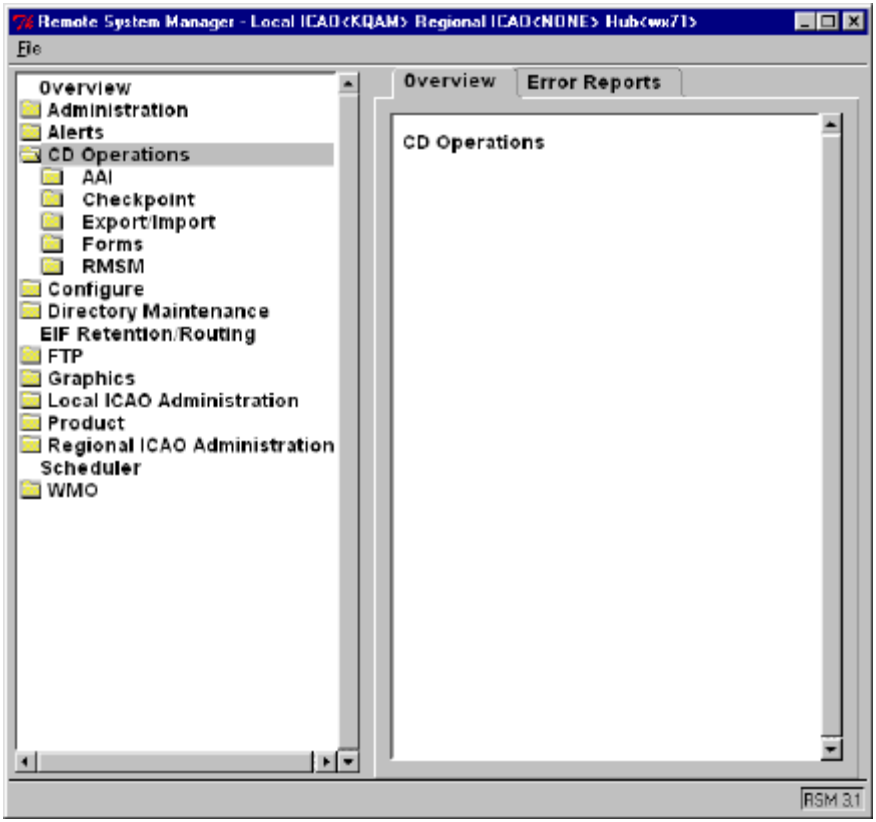
The CD operations enables the System Manager to save selected system files and tables to a CD medium, and to restore various files from a CD to the server. This includes the ability to write an aircraft accident investigation (AAI) archives, save various RSM tables and files, import and export files, and process the RMSM queue.

To access the CD operations, do the following:

1 Select the **CD Operations** folder to expand menu of choices.

The CD sub-folder list appears (see Figure 6.16).

Figure 6.16 CD Operations Sub-folders



AAI

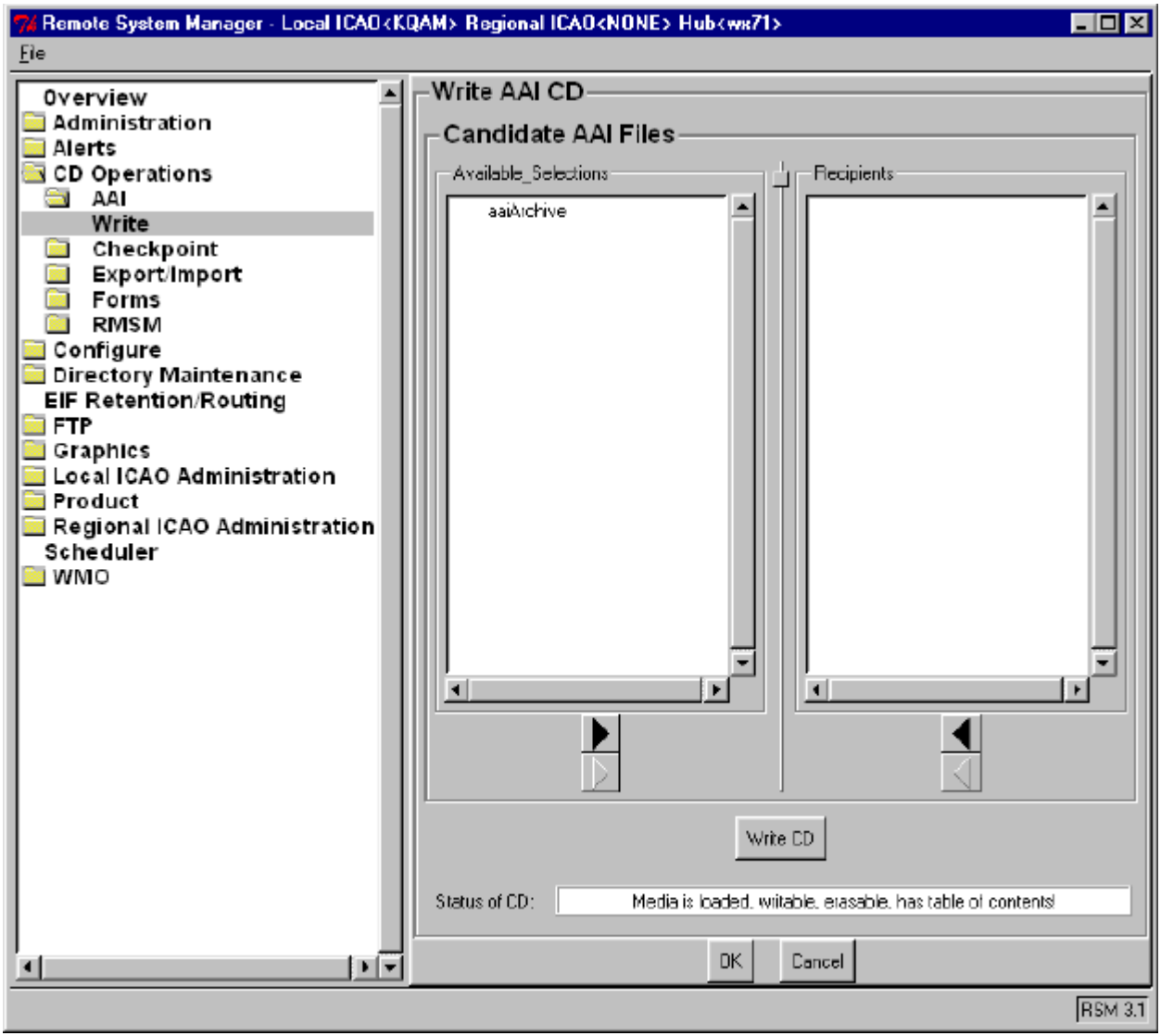
The AAI (Aircraft Accident Investigation) function enables the System Manager to write an existing AAI file (see “Aircraft Accident Investigation” on page 3-94) to CD.

To write an AAI file to CD, do the following:

1 Select the **AAI** folder, and select **Write**.

The Write AAI CD screen displays (see Figure 6.17).

Figure 6.17 Write AAI CD Screen



2 To select an AAI file or files to be copied to CD, do one of the following:

- Double-click one or more filenames in the **Available Selections** list.
- Select one or more filenames in the **Available Selections** list and press the right arrow button ▶ at the bottom of the list.

- To effectively select all selections in the **Available Selections** list simultaneously, press the lowermost right arrow button ▶ at the bottom of the list.

  *The selected filename or filenames are moved to the **Recipients** list.*

3 To de-select a filename from the **Recipients** list, do one of the following:

- In the **Recipients** list, double-click the filename.
- In the **Recipients** list, select the filename and press the left arrow button ◀ at the bottom of the list.
- To effectively de-select all selections from the **Recipients** list simultaneously, press the lowermost left arrow button ◀ at the bottom of the list.

4 Ensure that the CD drive contains a writable CD and that the device is ready.

  *The **Status of CD** window, near the bottom of the display, indicates such information.*

5 To write the selected file(s) to CD, select **Write CD**.

  *The **Status of CD** window will display the status of the write operation.*

6 To exit the function, select OK or **Cancel**.

WARNING *There will NOT be a confirmation dialog allowing you to undo changes made by writing files to CD. Once the write is initiated, the files being written will overwrite existing files on the CD. Therefore, it is recommended that you organize and label your back-ups and AAI archives, keeping them separate and secure from other CD archives that are routinely overwritten.*

Checkpoint

The Checkpoint function enables the System Manager to write checkpoint files/directories to CD and to restore checkpoint files/directories from CD.

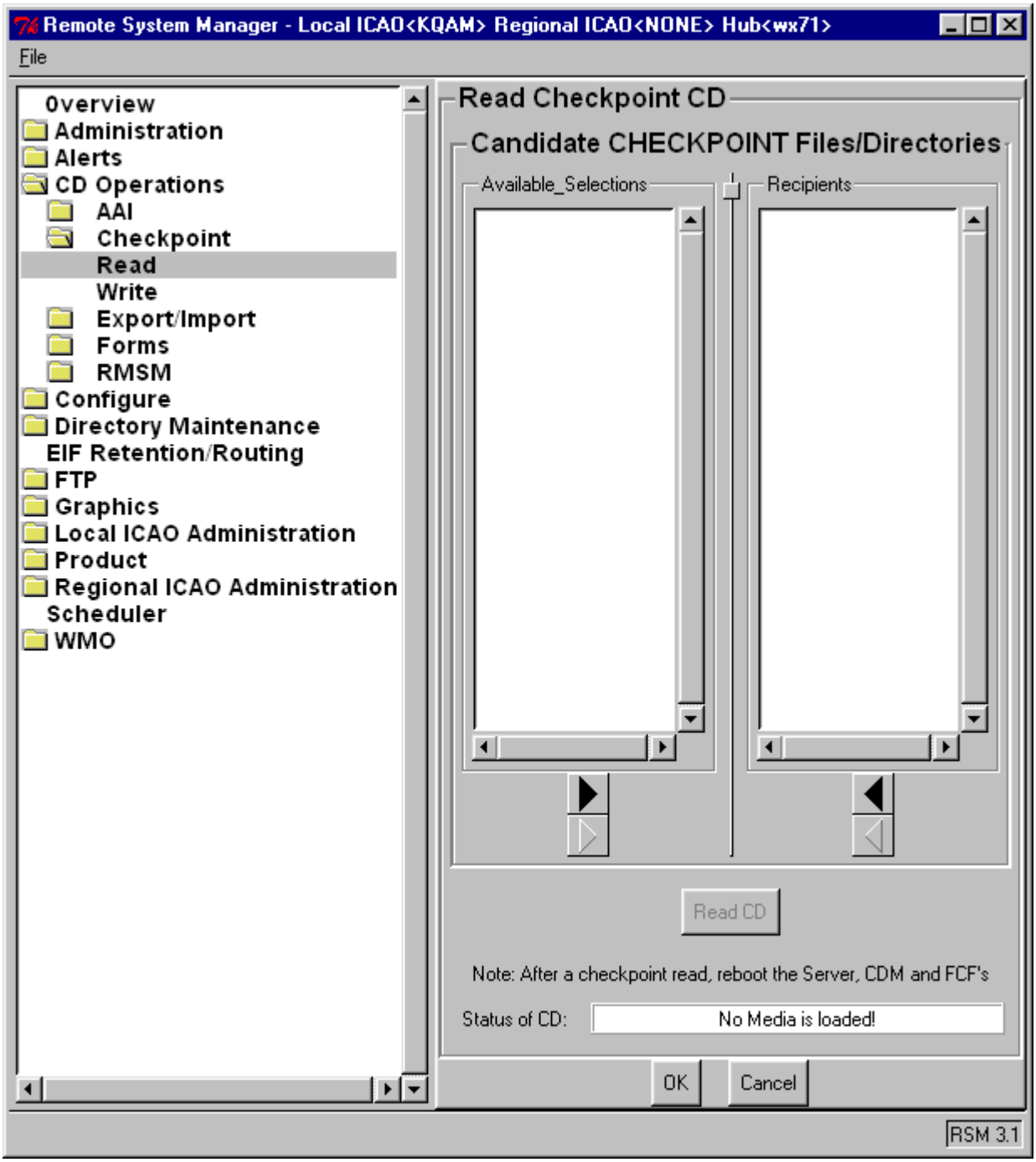
A checkpoint file contains site-specific information and tables. A checkpoint file can be used to reload tables and files in the event of system failure. Additionally, a checkpoint file can be used as a special configuration base. For example, METWATCH criteria often change on a seasonal basis. A checkpoint file can be used to configure the relevant site-settable tables by season.

To restore a checkpoint files/directories from CD, do the following:

1 Select the **Checkpoint** folder, and select **Read**.

*The **Read Checkpoint CD** screen appears (see Figure 6.18).*

Figure 6.18 Read Checkpoint CD Screen



2 Ensure that the CD drive contains the checkpoint CD and that the device is ready.

*The **Status of CD** window, near the bottom of the display, indicates such information.*

3 To select checkpoint files/directories to be read from CD, do one of the following:

- Double-click one or more selections in the **Available Selections** list.
- Select one or more selections in the **Available Selections** list and press the uppermost right arrow button ▶ at the bottom of the list.
- To effectively select all selections in the **Available Selections** list simultaneously, press the lowermost right arrow button ▶ at the bottom of the list.

*The selected filenames/directory names are moved to the **Recipients** list.*

4 To de-select a filename/directory name from the **Recipients** list, do one of the following:

- In the **Recipients** list, double-click the selection.
- In the **Recipients** list, select the item and press the uppermost left arrow button ◀ at the bottom of the list.
- To effectively de-select all selections from the **Recipients** list simultaneously, press the lowermost left arrow button ◀ at the bottom of the list.

5 To restore the selected checkpoint files/directories, select **Read CD**.

*The **Status of CD** window will display the status of the read operation.*

6 To exit the function, select OK or **Cancel**.

***Note**: The N-TFS Server, C/DM, and FCFs must be re-booted after a checkpoint read.*

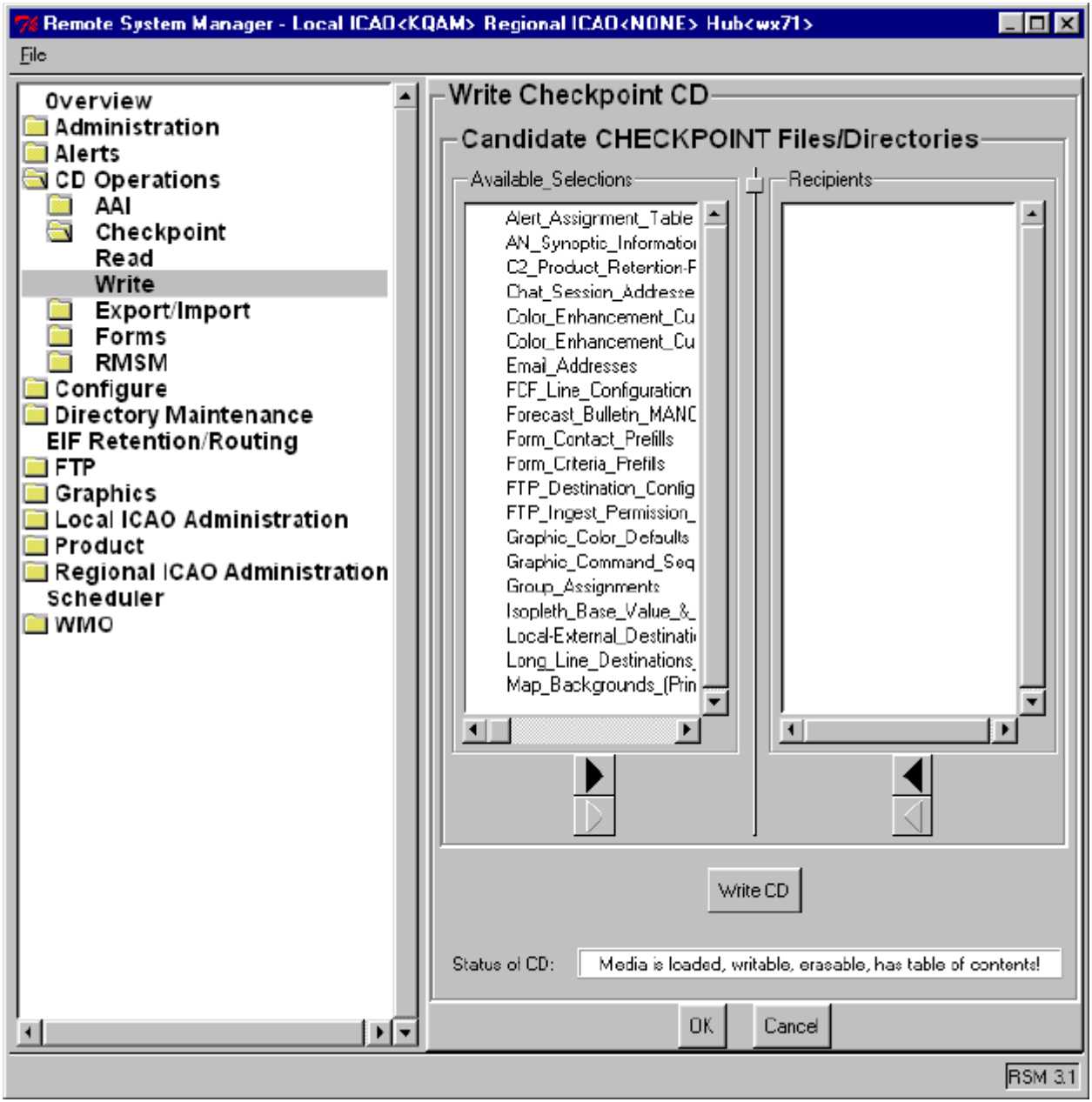
WARNING *There will NOT be a confirmation dialog allowing you to undo changes made when reading checkpoint files from CD. Once the read is initiated, the selected files will overwrite your existing system files and tables, or be added to your configuration. The previous settings can be restored only from a back-up checkpoint file, if available. Therefore, it is recommended that you create a checkpoint CD just before restoring checkpoint files. Additionally, make checkpoint archives on a regularly scheduled basis, so that a recent system back-up is always available. This also gives you an operational copy of your tables and files. If system problems occur after making changes, the system can be restored to it's original working state, and down-time will be minimized.*

To write checkpoint files/directories to CD, do the following:

1 Select the **Checkpoint** folder, and select **Write**.

The Write Checkpoint CD screen appears (see Figure 6.19).

Figure 6.19 Write Checkpoint CD Screen



2 Ensure that the CD drive contains a writable CD and that the device is ready.

*The **Status of CD** window, near the bottom of the display, indicates such information.*

3 To specify the files/directories to be written to the checkpoint file, do one of the following:

- Double-click one or more selections in the **Available Selections** list.
- Select one or more selections in the **Available Selections** list and press the right arrow button at the bottom of the list.
- To effectively select all selections in the **Available Selections** list simultaneously, press the lowermost right arrow button at the bottom of the list.

*The specified selections are moved to the **Recipients** list.*

4 To de-select a selection from the **Recipients** list, do one of the following:

- In the **Recipients** list, double-click the selection.
- In the **Recipients** list, select an item and press the left arrow button at the bottom of the list.
- To effectively de-select all selections from the **Recipients** list simultaneously, press the lowermost left arrow button at the bottom of the list.

5 To write the checkpoint file, select **Write CD**.

*The **Status of CD** window will display the status of the write operation.*

6 To exit the function, select OK or **Cancel**.

WARNING *There will NOT be a confirmation dialog allowing you to undo changes made by writing files to CD. Once the write is initiated, the files being written will overwrite existing files on the CD. Therefore, it is recommended that you organize and label your back-ups and AAI archives, keeping them separate and secure from other CD archives that are routinely overwritten.*

Export/Import

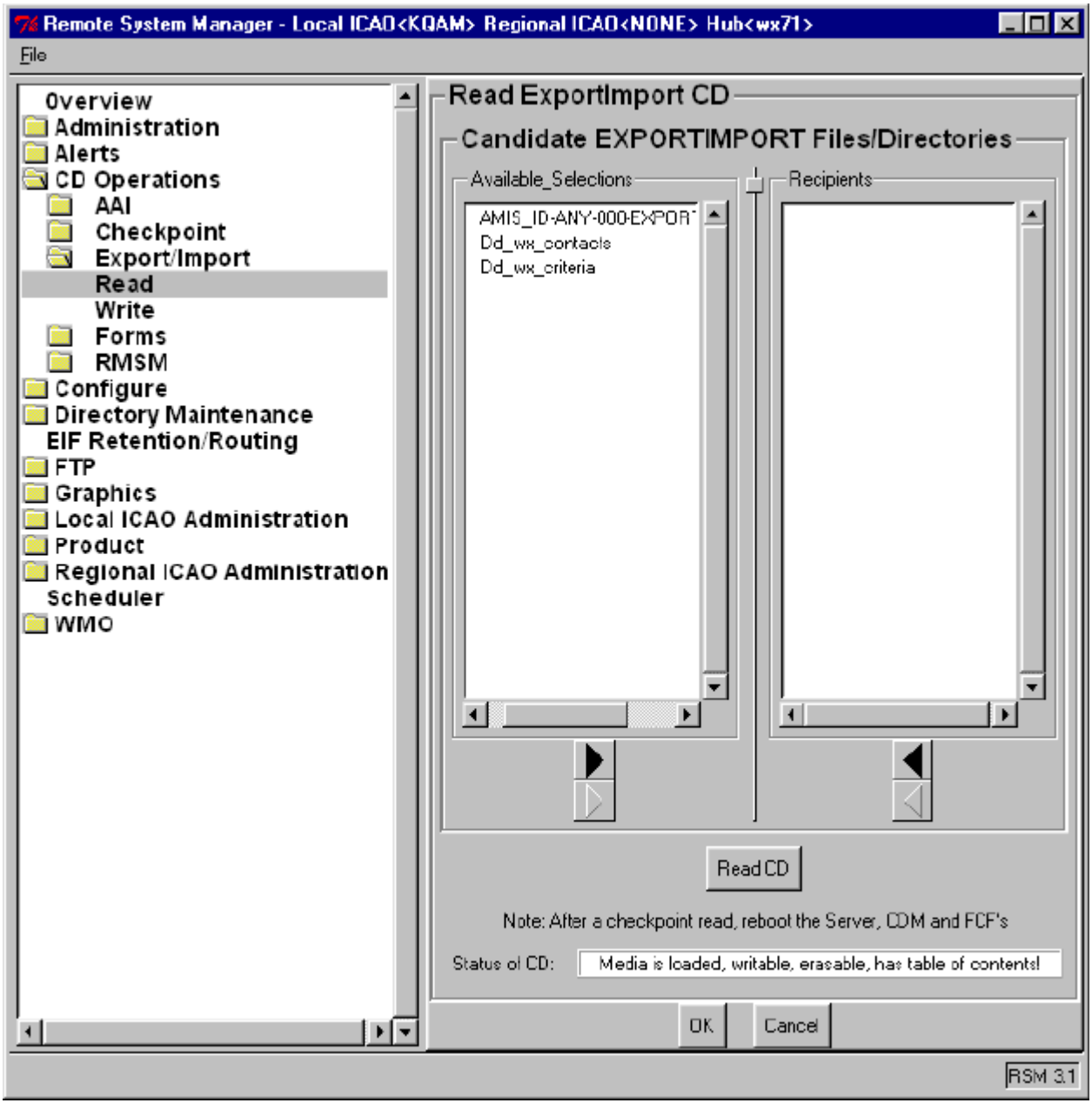
A export/import file contains system information and tables, while at the same time—in contrast to a checkpoint file—not containing particular site identification information. Consequently, as System Manager, you can *export* your system tables and files to a different AMIS system. Additionally, you can *import* tables and information from other AMIS sites.

To import system information contained on a CD, do the following:

1 Select the **Export/Import** folder, and select **Read**.

The Read ExportImport CD screen appears (see Figure 6.20).

Figure 6.20 Read ExportImport CD Screen



2 Ensure that the CD drive contains the checkpoint CD and that the device is ready.

*The **Status of CD** window, near the bottom of the display, indicates such information.*

3 To select candidate import files/directories to be read from CD, do one of the following:

- Double-click one or more selections in the **Available Selections** list.
- Select one or more selections in the **Available Selections** list and press the right arrow button at the bottom of the list.
- To effectively select all selections in the **Available Selections** list simultaneously, press the lowermost right arrow button at the bottom of the list.

*The selected filenames/directory names are moved to the **Recipients** list.*

4 To de-select a filename/directory name from the **Recipients** list, do one of the following:

- In the **Recipients** list, double-click the selection.
- In the **Recipients** list, select the item and press the left arrow button at the bottom of the list.
- To effectively de-select all selections from the **Recipients** list simultaneously, press the lowermost left arrow button at the bottom of the list.

5 To restore the selected checkpoint files/directories in the **Recipients** list, select **Read CD**.

*The **Status of CD** window will display the status of the read operation.*

6 To exit the function, select OK or **Cancel**.

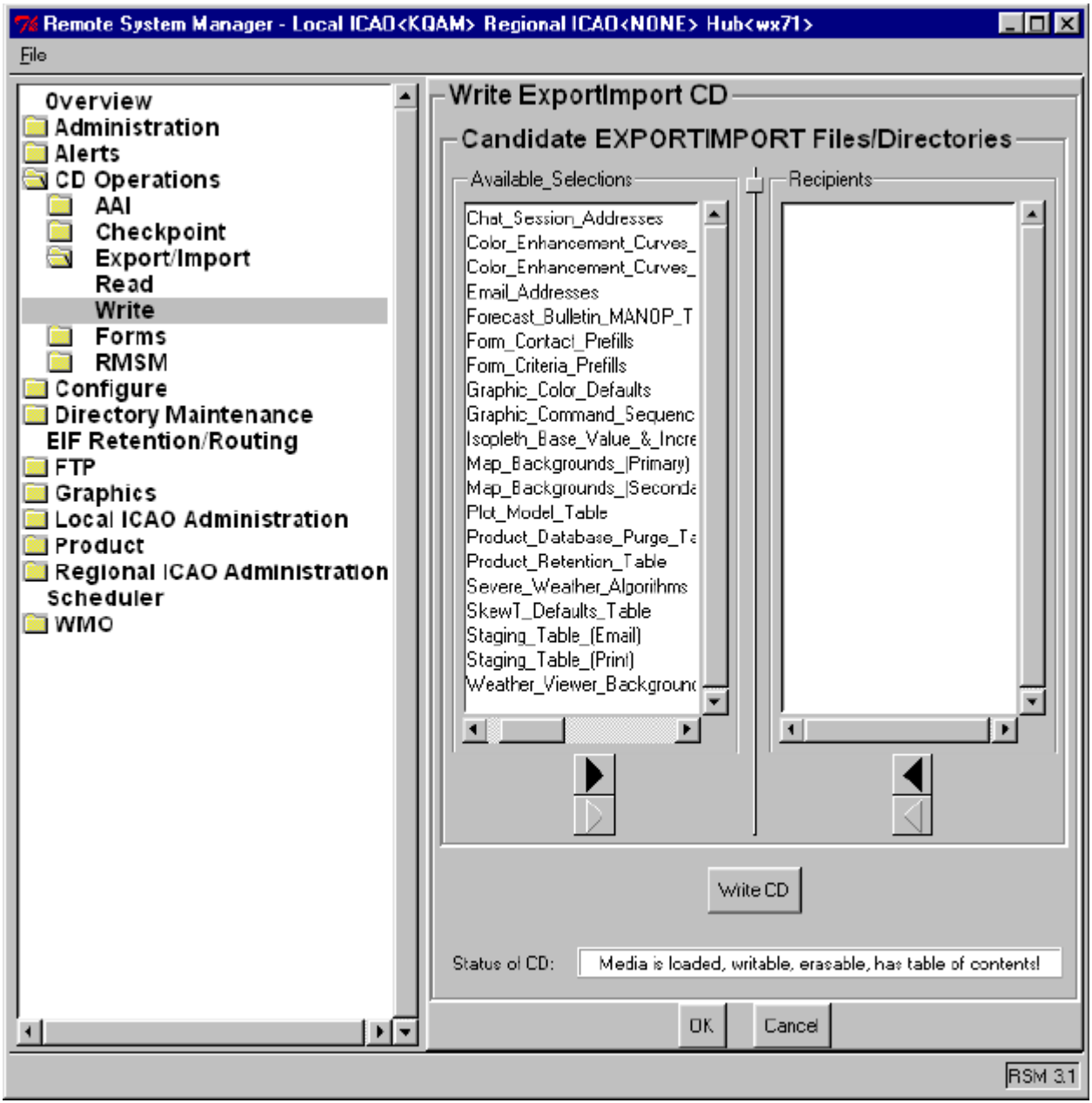
WARNING *There will NOT be a confirmation dialog allowing you to undo changes made when reading import files from CD. Once the read is initiated, the selected files will overwrite your existing system files and tables, or be added to your configuration. The previous settings can be restored only from a back-up checkpoint file, if available. Therefore, it is recommended that you create a checkpoint CD just before reading import files. Additionally, make checkpoint archives on a regularly scheduled basis, so that a recent system back-up is always available. This also gives you an operational copy of your tables and files. If system problems occur after making changes, the system can be restored to it's original working state, and down-time will be minimized.*

To export system information to a CD, do the following:

1 Select the **Export/Import** folder, and select **Write**.

The Write ExportImport CD screen appears (see Figure 6.21).

Figure 6.21 Write ExportImport CD Screen



2 Ensure that the CD drive contains a writable CD and that the device is ready.

*The **Status of CD** window, near the bottom of the display, indicates such information.*

3 To specify the candidate export files, do one of the following:

- Double-click one or more selections in the **Available Selections** list.
- Select one or more selections in the **Available Selections** list and press the right arrow button at the bottom of the list.
- To effectively select all selections in the **Available Selections** list simultaneously, press the lowermost right arrow button at the bottom of the list.

*The specified selections are moved to the **Recipients** list.*

4 To de-select a selection from the **Recipients** list, do one of the following:

- In the **Recipients** list, double-click the selection.
- In the **Recipients** list, select an item and press the left arrow button at the bottom of the list.
- To effectively de-select all selections from the **Recipients** list simultaneously, press the lowermost left arrow button at the bottom of the list.

5 To write the selected export files listed in the **Recipients** list, select **Write CD**.

*The **Status of CD** window will display the status of the write operation.*

6 To exit the function, select OK or **Cancel**.

WARNING *There will NOT be a confirmation dialog allowing you to undo changes made by writing files to CD. Once the write is initiated, the files being written will overwrite existing files on the CD. Therefore, it is recommended that you organize and label your back-ups and AAI archives, keeping them separate and secure from other CD archives that are routinely overwritten.*

Forms

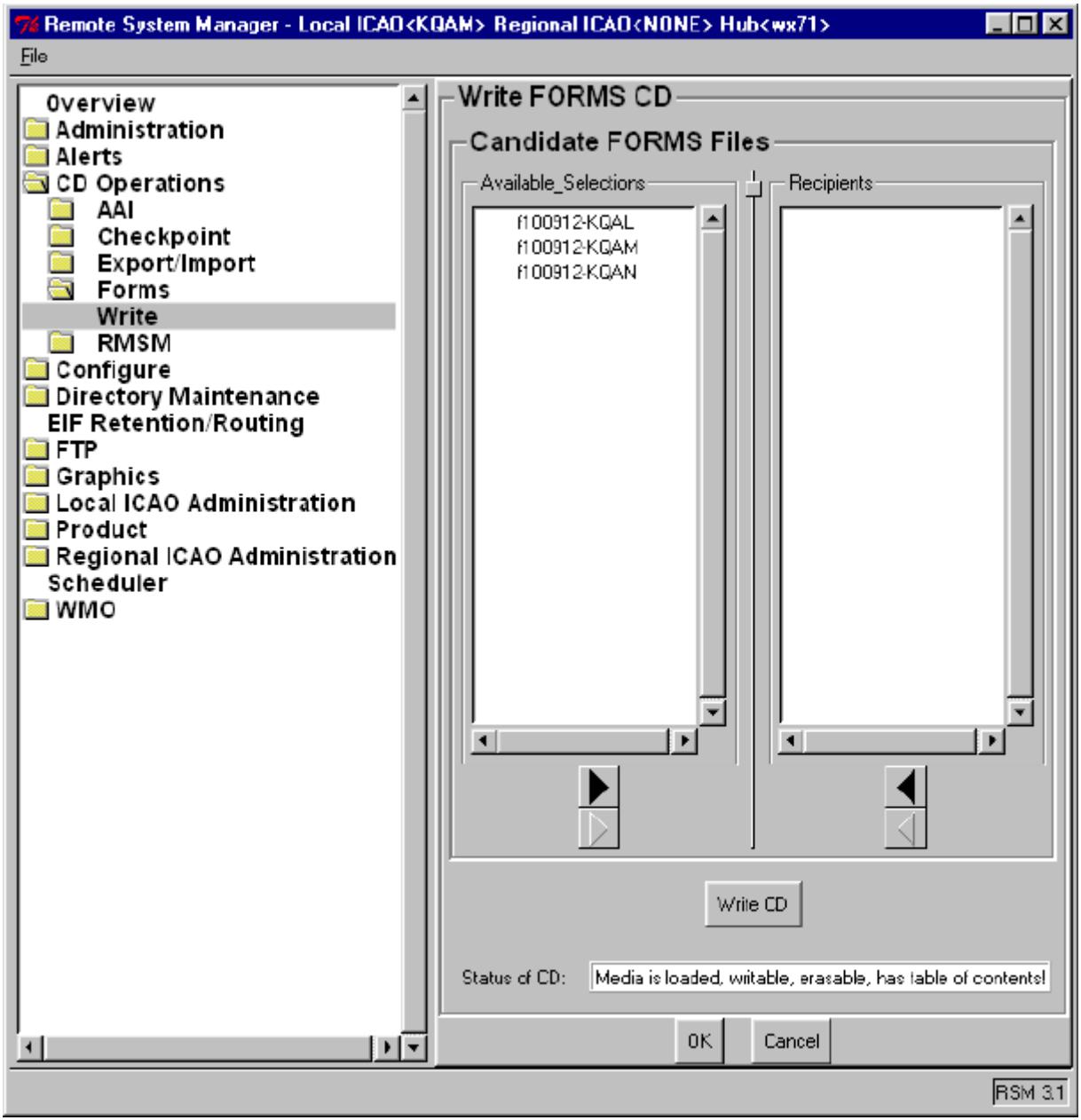
The Forms operation enables the System Manager to write AF Form 3813 to CD. For example, when the AF Form 3813 is saved using the **Save at HUB** feature (see "Synoptic Data" on page 3-86), the form is made available for archiving through this Forms operation.

To write AF Form 3813 to CD, do the following:

1 Select the **Forms** folder, and select **Write**.

The Write Forms CD screen appears (see Figure 6.22).

Figure 6.22 Write Forms CD Screen



2 Ensure that the CD drive contains a writable CD and that the device is ready.

*The **Status of CD** window, near the bottom of the display, indicates such information.*

3 To specify the candidate forms files to be written, do one of the following:

- Double-click one or more selections in the **Available Selections** list.
- Select one or more selections in the **Available Selections** list and press the right arrow button at the bottom of the list.
- To effectively select all selections in the **Available Selections** list simultaneously, press the lowermost right arrow button at the bottom of the list.

*The specified selections are moved to the **Recipients** list.*

4 To de-select a selection from the **Recipients** list, do one of the following:

- In the **Recipients** list, double-click the selection.
- In the **Recipients** list, select an item and press the left arrow button at the bottom of the list.
- To effectively de-select all selections from the **Recipients** list simultaneously, press the lowermost left arrow button at the bottom of the list.

5 To write the selected forms files listed under **Recipients**, select **Write CD**.

*The **Status of CD** window will display the status of the write operation.*

6 To exit the function, select OK or **Cancel**.

WARNING *There will NOT be a confirmation dialog allowing you to undo changes made by writing files to CD. Once the write is initiated, the files being written will overwrite existing files on the CD. Therefore, it is recommended that you organize and label your back-ups and AAI archives, keeping them separate and secure from other CD archives that are routinely overwritten.*

RMSM

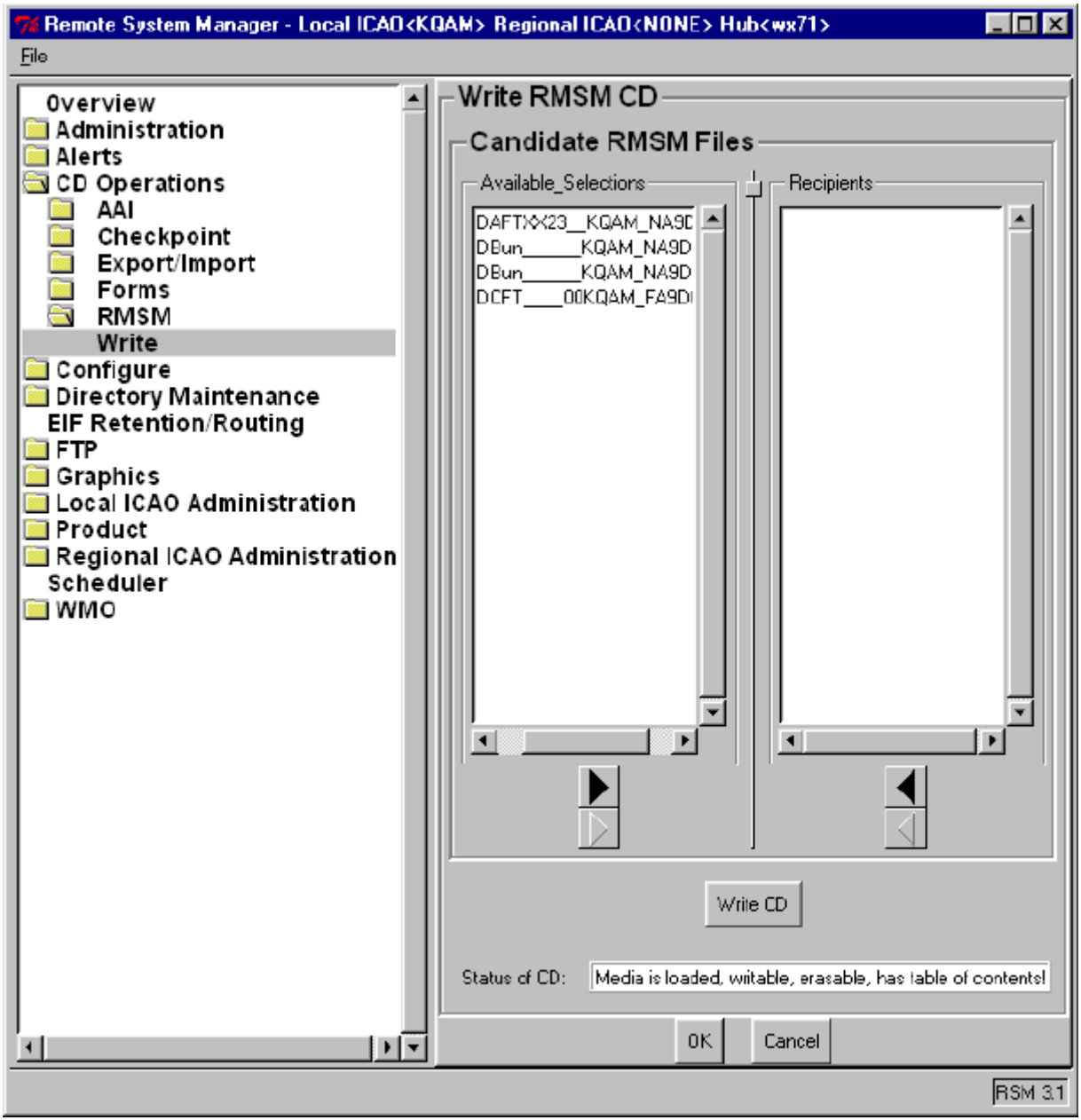
The RMSM queue contains products which are, in turn, to be copied to a CD. The queue is built as operators produce products and request that the distributed product be included in the RMSM queue. The RMSM table enables the System Manager to write the RMSM queue to CD.

To write the RMSM queue to CD, do the following:

1 Select the **RMSM** folder, and select **Write**.

The Write RMSM CD screen appears (see Figure 6.23).

Figure 6.23 Write RMSM CD Screen



2 Ensure that the CD drive contains a writable CD and that the device is ready.

*The **Status of CD** window, near the bottom of the display, indicates such information.*

3 To specify the candidate RMSM files to be written, do one of the following:

- Double-click one or more selections in the **Available Selections** list.
- Select one or more selections in the **Available Selections** list and press the right arrow button at the bottom of the list.
- To effectively select all selections in the **Available Selections** list simultaneously, press the lowermost right arrow button at the bottom of the list.

*The specified selections are moved to the **Recipients** list.*

4 To de-select a selection from the **Recipients** list, do one of the following:

- In the **Recipients** list, double-click the selection.
- In the **Recipients** list, select an item and press the left arrow button at the bottom of the list.
- To effectively de-select all selections from the **Recipients** list simultaneously, press the lowermost left arrow button at the bottom of the list.

5 To write the selected RMSM files listed under **Recipients**, select **Write CD**.

*The **Status of CD** window will display the status of the write operation.*

6 To exit the function, select OK or **Cancel**.

WARNING *There will NOT be a confirmation dialog allowing you to undo changes made by writing files to CD. Once the write is initiated, the files being written will overwrite existing files on the CD. Therefore, it is recommended that you organize and label your back-ups and AAI archives, keeping them separate and secure from other CD archives that are routinely overwritten.*

Configure

The AMIS system uses a variety of methods to forward products to external destinations; alerts to users or groups of users; and automation of the creation of products using weather data prefills. The system configuration activities encompass product-routing destination and product-transmission configuration tables, system group management, and Warning/Advisory prefill table maintenance.

Chat IP Addresses

The Chat IP Addresses table allows you to configure ICAO server names and IP address for establishing chat sessions via the AMIS launchpad.

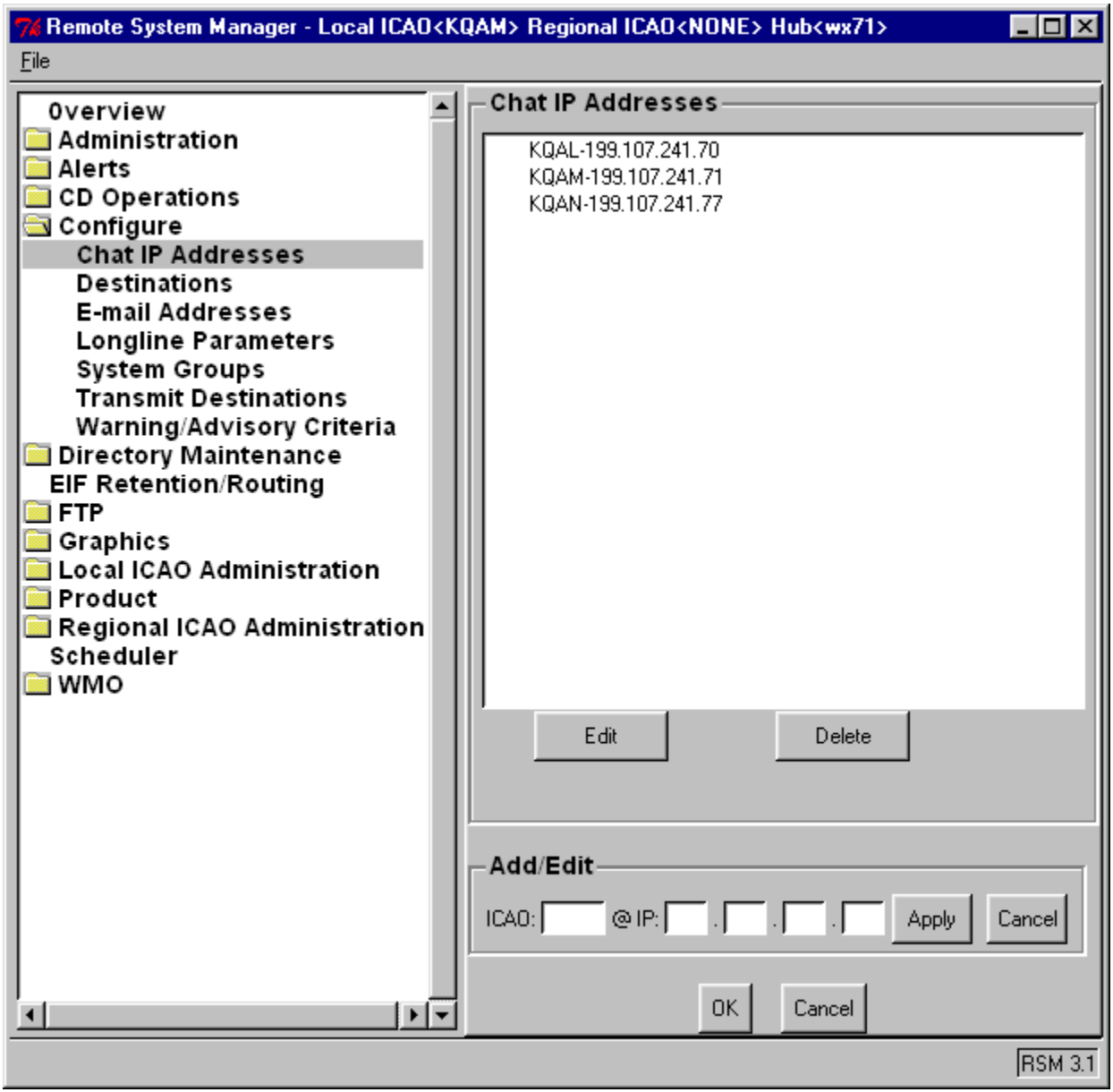
To access the Chat IP Addresses table, do the following:

1 Select the **Configure** folder, and select **Chat IP Addresses**.

The Chat IP Addresses table appears (see Figure 6.24).

*The chat addresses that already exist are listed as entries under **Chat IP Addresses**.*

Figure 6.24 Chat IP Addresses Table



To add a chat address to the Chat IP Addresses table, do the following:

1 Under **Add/Edit**, at **ICAO**, enter the ICAO portion of the address.

The format of the chat address is ICAO-IP address.

2 At **@ IP**, enter the IP address distributed among the four entry windows.

3 To add the address, select **Apply**.

*The new address is listed in the **Chat IP Addresses** window.*

4 To clear the entry fields, select **Cancel**.

To modify an existing chat address, do the following:

1 In the **Chat IP Addresses** window, select the entry to be modified.

2 Select Edit.

*Under **Add/Edit**, the **ICAO** and **@ IP** fields are populated with the entry.*

3 Make changes and do one of the following:

- To save the changes, select **Apply**.
- To clear the fields, select **Cancel**.

To delete an existing chat address, do the following:

1 In the **Chat IP Addresses** window, select the entry to be deleted.

2 Select **Delete.**

*The chat address is removed from the **Chat IP Addresses** window.*

The chat address is no longer valid.

To leave the Chat IP Addresses table, do one of the following:

- To exit normally, select **OK**.
- To exit and cancel any changes in progress, select **Cancel.**

Destinations

The Destinations function enables the System Manager to establish and maintain a list of local site workstations and external sites, along with communication parameters, in support of product routing. The Destinations function also enables the System Manager to establish ICAO sets and assign distribution of these sets to FCF workstations. For additional information, see “PPC Software Overview” on page 1-6.

Note: for data transmissions to be successful, both the transmitting and the receiving AMIS sites must have each other’s address configured in their Destinations table.

The Destinations function makes use of six destination types. These destination types, and guidelines for their use, are described in the following table, Table 6.1, “Destination Types for Product Routing”.

Table 6.1 Destination Types for Product Routing

Destination Type	Description
awds	External AMIS site with an N-TFS Server. Use this destination type to route your AMIS products to another N-TFS Server via DDN.
eif - C2	External site, such as a C^2 command post, configured to operate in a secure mode. Use this destination type to connect to a WCCS system and route products to it.
ftp - Export FTP	External passive FTP site. A passive FTP site is one that logs in to AMIS to get products. Use this type of destination to configure a site that has login access to your system.
ftpa - FTP Put	External active FTP site. An active FTP site is one that AMIS logs in to. AMIS then puts products into a directory on the external system. Use this type of destination to configure a site that grants your AMIS login access.
terminal	Local workstation such as a ATC or FO used by the ATC Tower and Base Operations to view the local weather conditions.
vsat	External VSAT site. Use this destination type to route products to a site with a configured VSAT.

The Destinations function further makes use of four data formats for product routing. These data formats are described in the following table, Table 6.2, “Data Formats”.

Table 6.2 Data Formats

Routing Format	Description
AWDS	AMIS internal data format. To interpret and store AMIS products, a destination must be running the AMIS database application. Use this format to route products to other AMIS sites.
EXTERNAL	The Appendix 30 transmission format used by the AWN and AFWA. AMIS receives products from and transmits products to the AWN and AFWA in this format. Use this format for routing products to other AMIS sites, or any other site that interprets Appendix 30 format.

Table 6.2 Data Formats

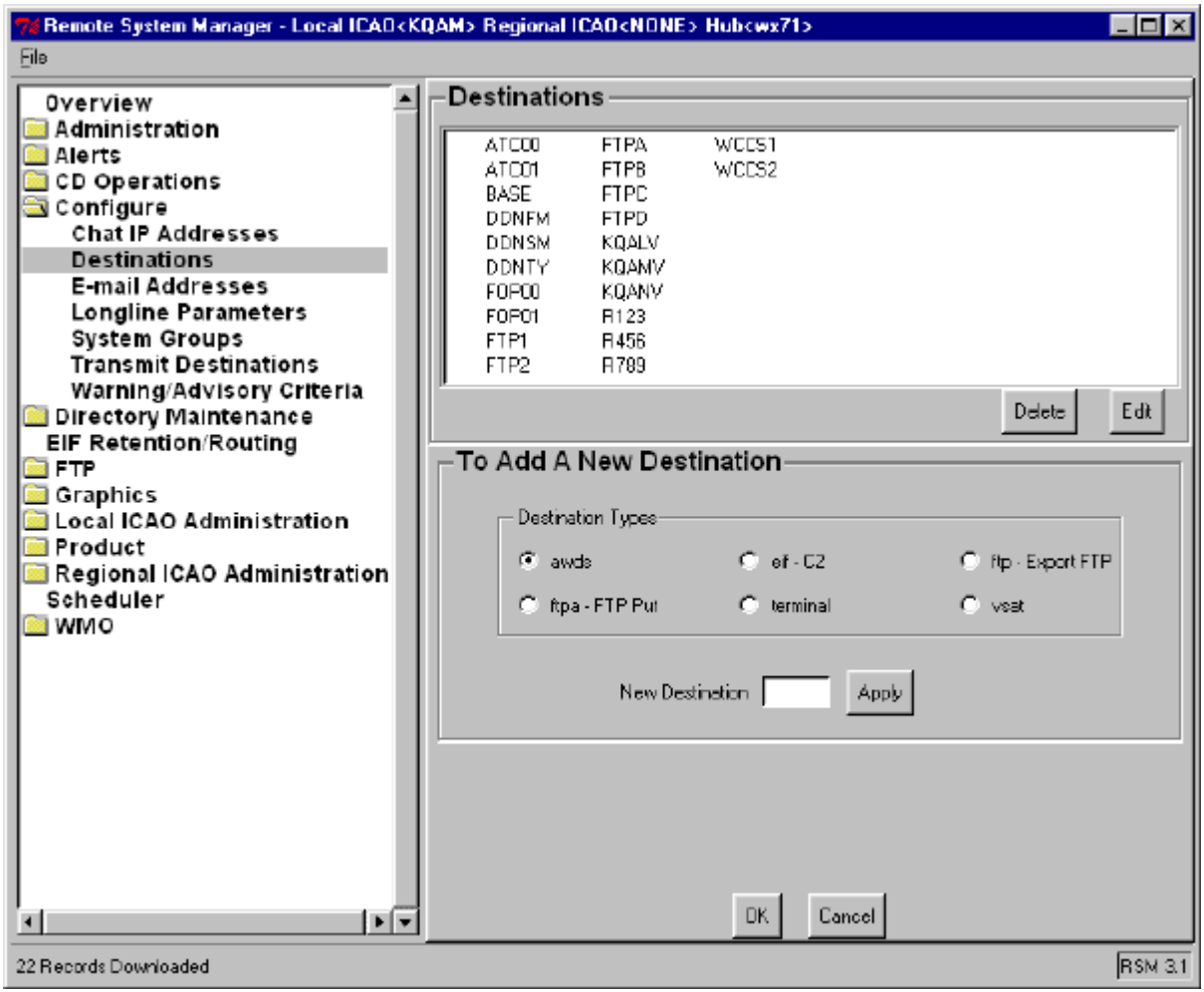
Routing Format	Description
NITF	Imagery data format used for high-resolution imagery analysis. Use this format for routing products to C^2 or other external systems than interpret NITF format.
RAW	Format used for transmitting GIF and JPEG images. Use this format to route products to any site that has a graphics application capable of displaying GIF and JPEG images.

To access the Destinations function, do the following:

1 Select the **Configure** folder, and select **Destinations**.

The initial Destinations screen appears (see Figure 6.25).

Figure 6.25 Initial Destinations Screen



To add an AMIS destination (see Table 6.1, “Destination Types for Product Routing” on page 45) for product routing, do the following:

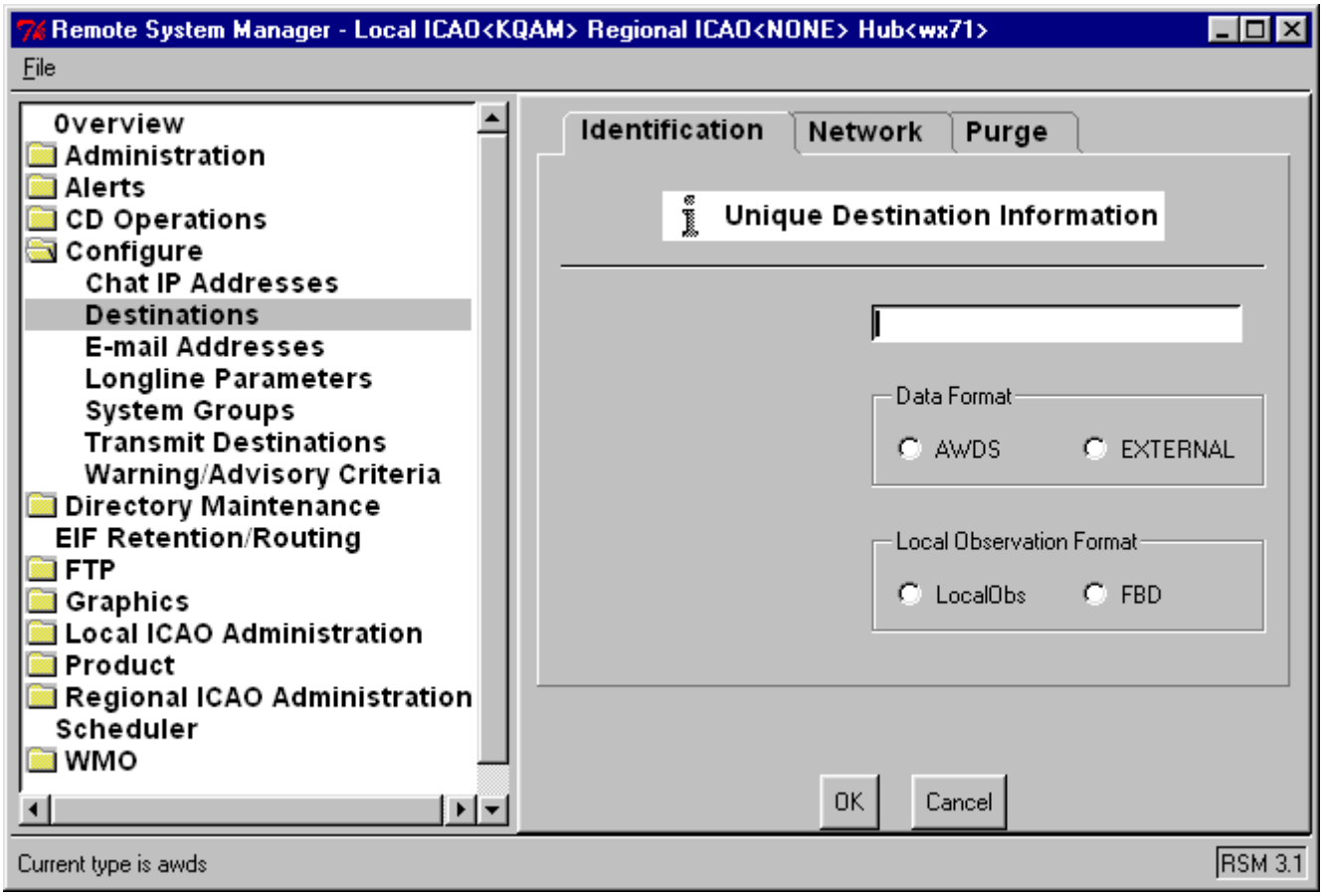
1 At **Destination Types**, select **awds**.

2 At **New Destination**, type an identifier for the site, up to five characters.

3 Select **Apply**.

*The screen for the **Identification** tab appears (see Figure 6.26).*

Figure 6.26 Product Routing to AMIS Site Identification Tab



4 Optionally, at the unlabeled window, type a plain language description of the destination.

5 At **Data Format**, specify the format of products to be routed to the site by selecting one of **AWDS** or **EXTERNAL** (see Table 6.2, "Data Formats" on page 45).

6 At **Local Observation Format** specify the format of the local alphanumeric surface observations to be routed to the site by selecting one of **LocalObs** or **FBD**.

In the LocalObs format, winds are magnetic. In the FBD format, winds are true.

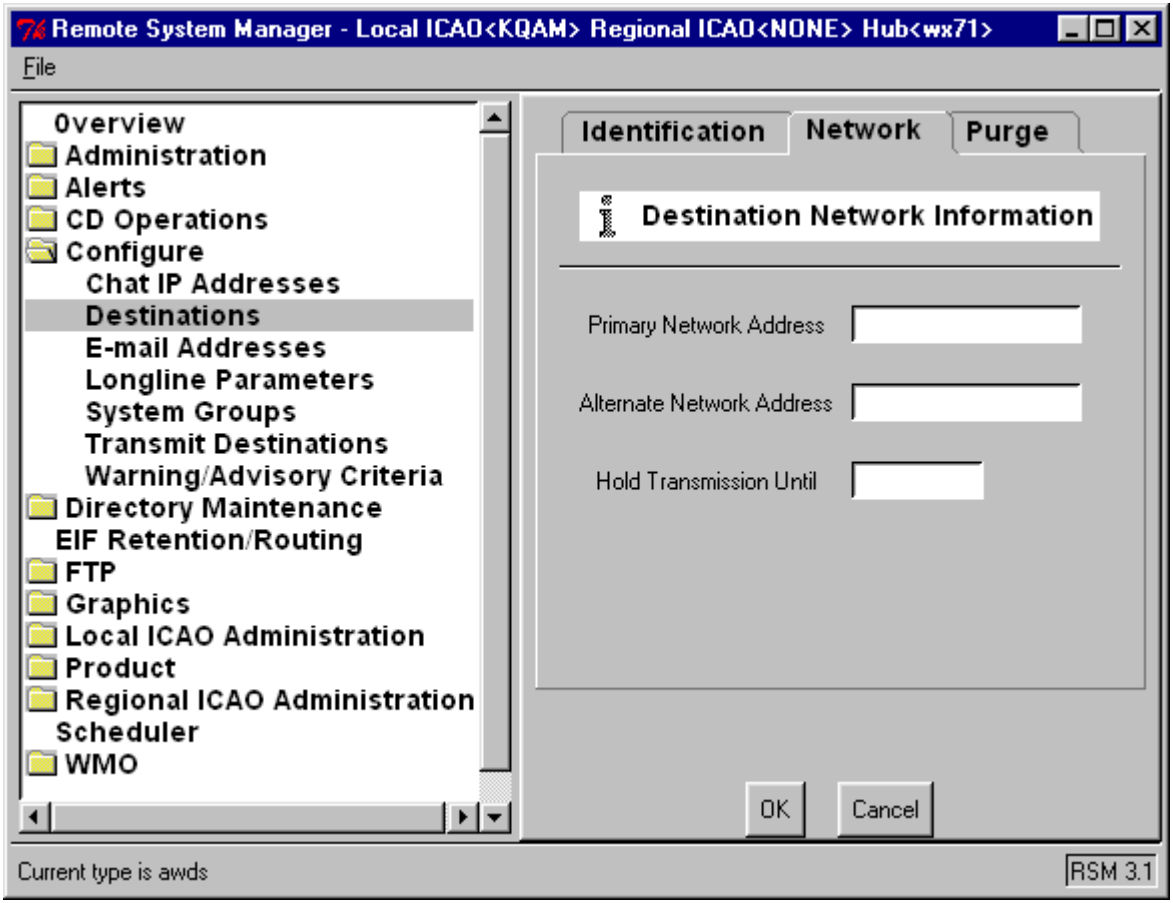
For FBD format, if the conversion of the local surface observation to FBD is successful, both the original surface observation and the FBD

conversion will be routed to the destination. If the conversion is unsuccessful, the original surface observation, only, will be routed.

7 Select the **Network** tab.

*The screen for the **Network** tab appears (see Figure 6.27).*

Figure 6.27 Product Routing to AMIS Site Network Tab



8 At **Primary Network Address**, enter the Internet Protocol (IP) address of the destination in four, one - three digit numbers separated by periods (for example, 199.107.241.84).

You may need to contact the System Manager of the destination site for this IP address.

9 Optionally, for the case of failure associated with the primary IP address, at **Alternate Network Address**, enter another IP address for the site.

You may need to contact the System Manager of the destination site for this IP address.

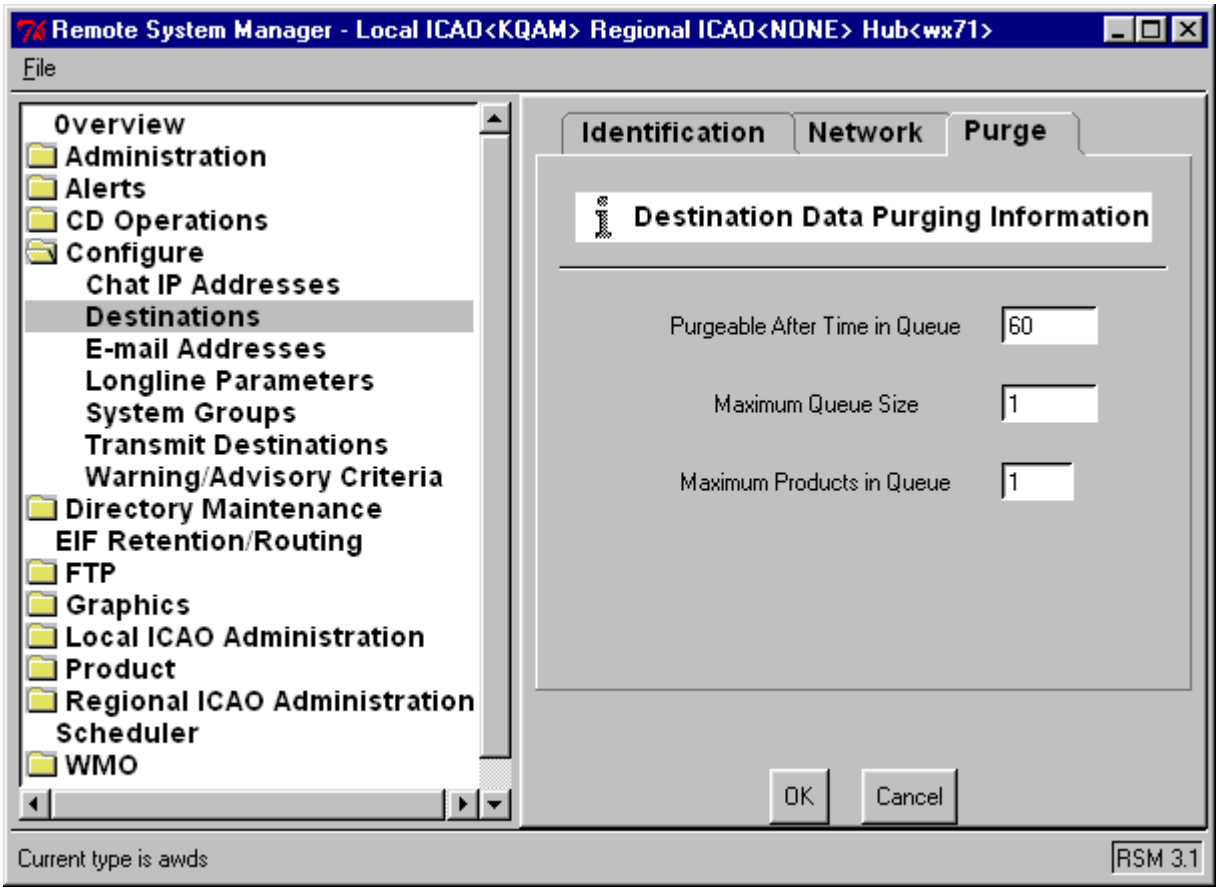
10 Optionally, at **Hold Transmission Until**, enter the local time year, month, day, hour, minute (YYMMDDHHMM) to suspend routing to the destination.

If the destination becomes unreachable, AMIS will queue the products to be routed to it, in accordance with other purge parameters (see following), until the time specified in this field.

11 Select the **Purge** tab.

*The screen for the **Purge** tab appears (see Figure 6.28).*

Figure 6.28 Product Routing to AMIS Site Purge Tab



12 At **Purgeable After Time in Queue**, enter the numbers of minutes to hold a product, before purging it, if the destination is unreachable.

The default is 60 minutes. Enter any number from 60 - 999.

13 At **Maximum Queue Size**, enter the number of megabytes of disk storage to be allocated for products queued when the destination is unreachable.

The default is one megabyte. Enter any number from 0 - 250.

14 At **Maximum Products in Queue**, enter the number of products allowed in the product queue formed when the destination is unreachable.

The default is one product. Enter any number from 0 - 10000.

Maximum Products in Queue *may not exceed 10,000 for any one destination. Additionally, the sum of* ***Maximum Products in Queue*** *for all destinations may not exceed 100,000.*

15 Do one of the following:

- To exit the function while saving any changes made under all three tabs, select **OK**.
- To exit the function without saving any changes made under all three tabs, select **Cancel**.

To add a C^2 destination (see Table 6.1, "Destination Types for Product Routing" on page 45) for product routing, do the following:

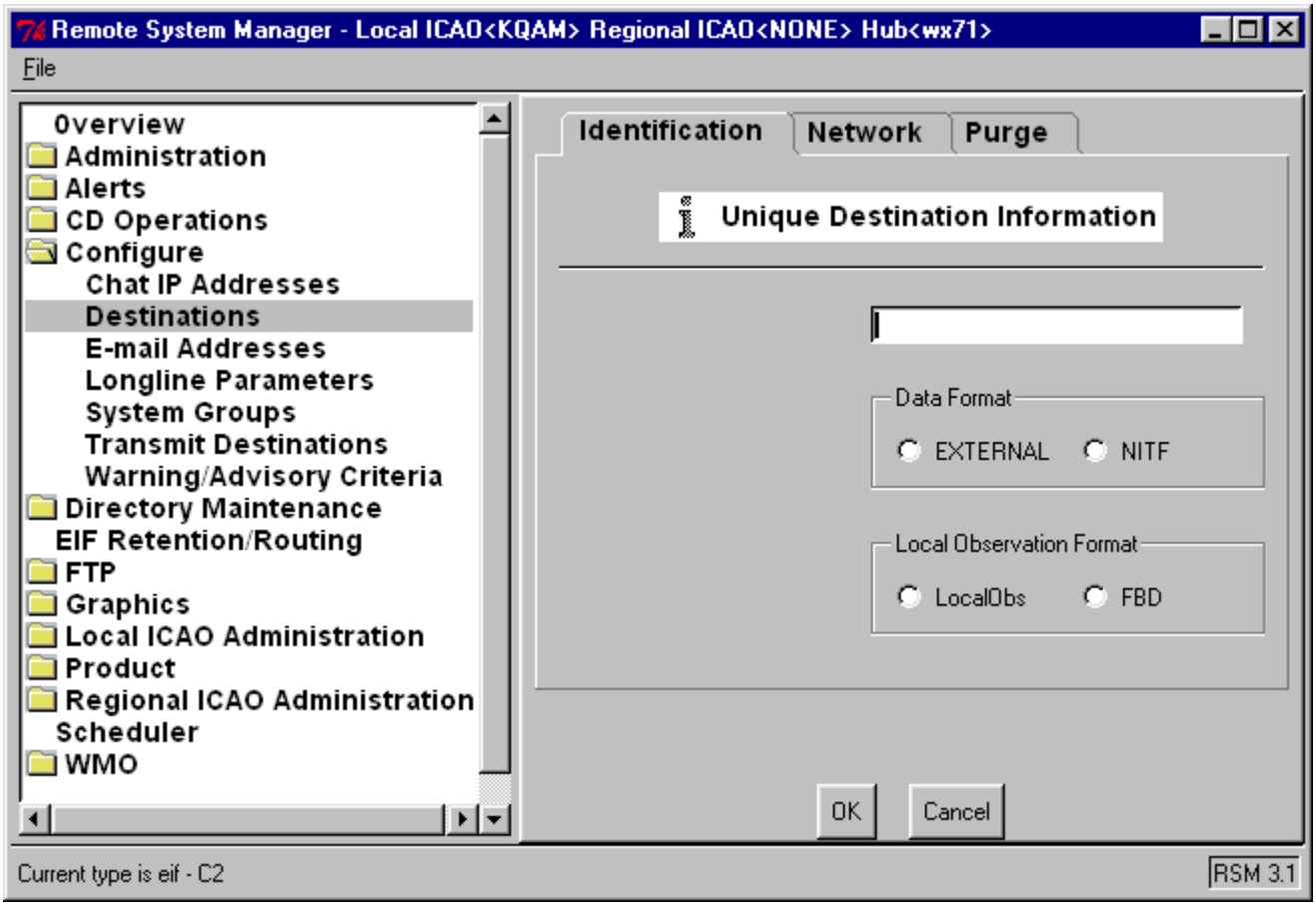
1 With the "Initial Destinations Screen" on page 6-47) displayed, at **Destination Types**, select **eif - C2**.

2 At **New Destination**, type an identifier for the site, up to five characters.

3 Select **Apply**.

The screen for the ***Identification*** *tab appears (see Figure 6.29).*

Figure 6.29 Product Routing to C^2 Site Identification Tab



4 Optionally, at the unlabeled window, type a plain language description of the destination.

5 At **Data Format**, specify the format of products to be routed to the site by selecting one of **EXTERNAL** or **NITF** (see Table 6.2, “Data Formats” on page 45).

6 At **Local Observation Format** specify the format of the local alphanumeric surface observations to be routed to the site by selecting one of **LocalObs** or **FBD**.

In the LocalObs format, winds are magnetic. In the FBD format, winds are true.

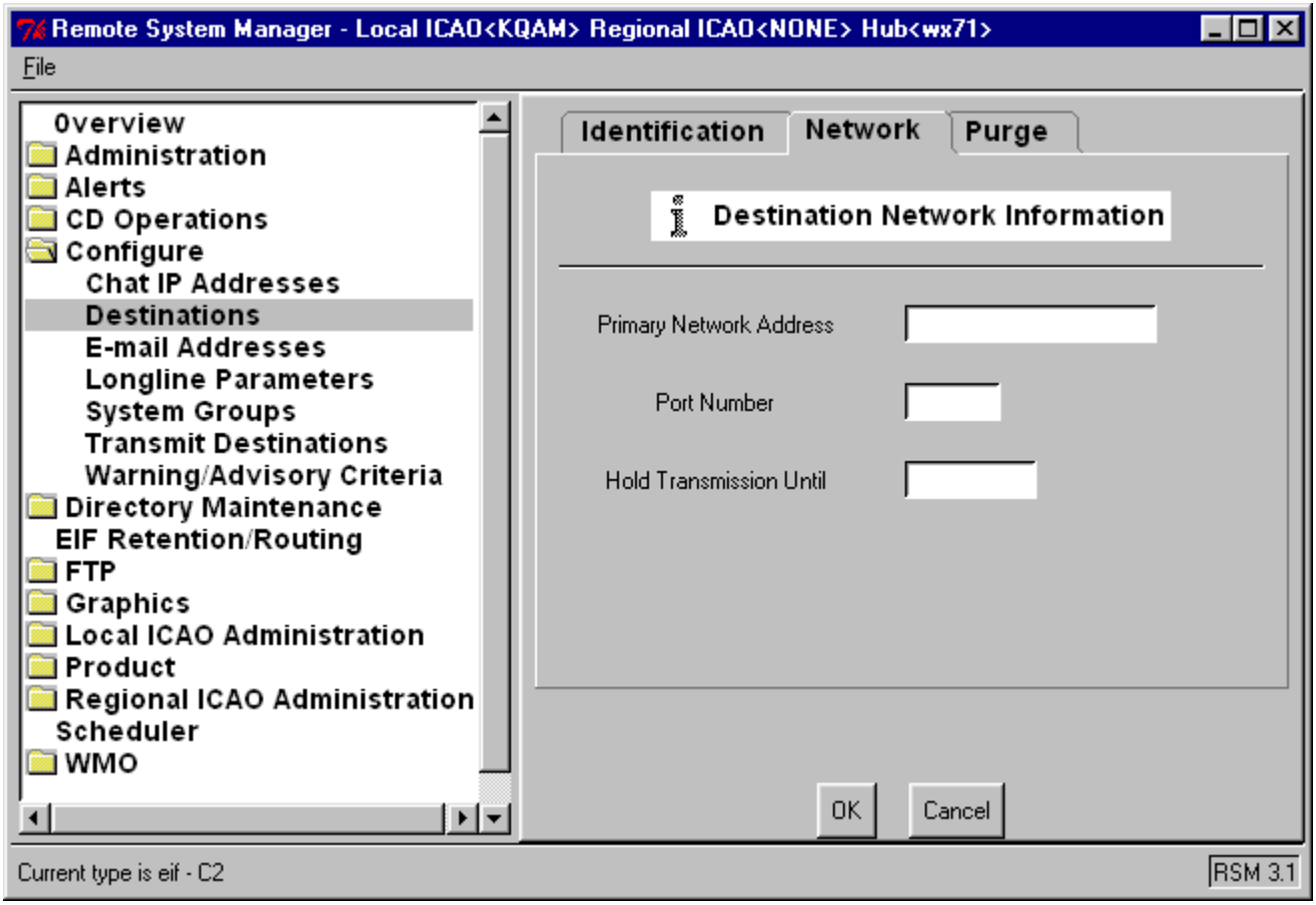
For FBD format, if the conversion of the local surface observation to FBD is successful, both the original surface observation and the FBD

conversion will be routed to the destination. If the conversion is unsuccessful, the original surface observation, only, will be routed.

7 Select the **Network** tab.

*The screen for the **Network** tab appears (see Figure 6.30).*

Figure 6.30 Product Routing to C^2 Site Network Tab



8 At **Primary Network Address**, enter the Internet Protocol (IP) address of the destination in four, one - three digit numbers separated by periods (for example, 199.107.241.84).

You may need to contact the System Manager of the destination site for this IP address.

9 At **Port Number**, enter the Transmission Control Protocol (TCP) port number of the C^2 system in up to four digits. AMIS establishes the communication connection with the C^2 system via this port.

You may need to contact the System Manager of the destination site for this port number.

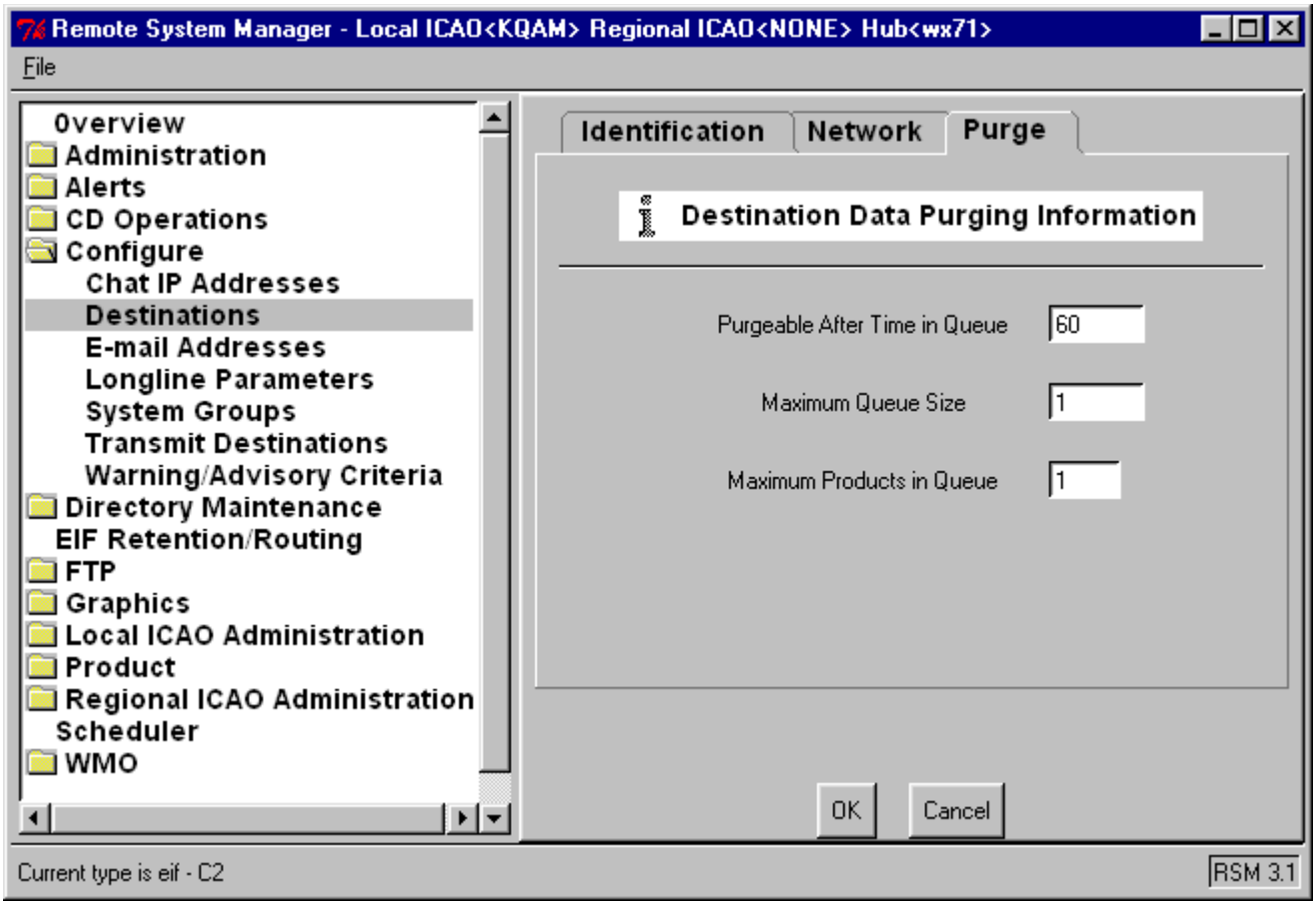
10 Optionally, at **Hold Transmission Until**, enter the local time year, month, day, hour, minute (YYMMDDHHMM) to suspend routing to the destination.

If the destination becomes unreachable, AMIS will queue the products to be routed to it, in accordance with other purge parameters (see following), until the time specified in this field.

11 Select the **Purge** tab.

*The screen for the **Purge** tab appears (see Figure 6.31).*

Figure 6.31 Product Routing for C^2 Site Purge Tab



12 At **Purgeable After Time in Queue**, enter the numbers of minutes to hold a product, before purging it, if the destination is unreachable.

The default is 60 minutes. Enter any number from 60 - 999.

13 At **Maximum Queue Size**, enter the number of megabytes of disk storage to be allocated for products queued when the destination is unreachable.

The default is one megabyte. Enter any number from 0 - 250.

14 At **Maximum Products in Queue**, enter the number of products allowed in the product queue formed when the destination is unreachable.

The default is one product. Enter any number from 0 - 10000.

***Maximum Products in Queue** may not exceed 10,000 for any one destination. Additionally, the sum of **Maximum Products in Queue** for all destinations may not exceed 100,000.*

15 Do one of the following:

- To exit the function while saving any changes made under all three tabs, select **OK**.
- To exit the function without saving any changes made under all three tabs, select **Cancel**.

To add a passive FTP destination (see Table 6.1, “Destination Types for Product Routing” on page 45) for product routing, do the following:

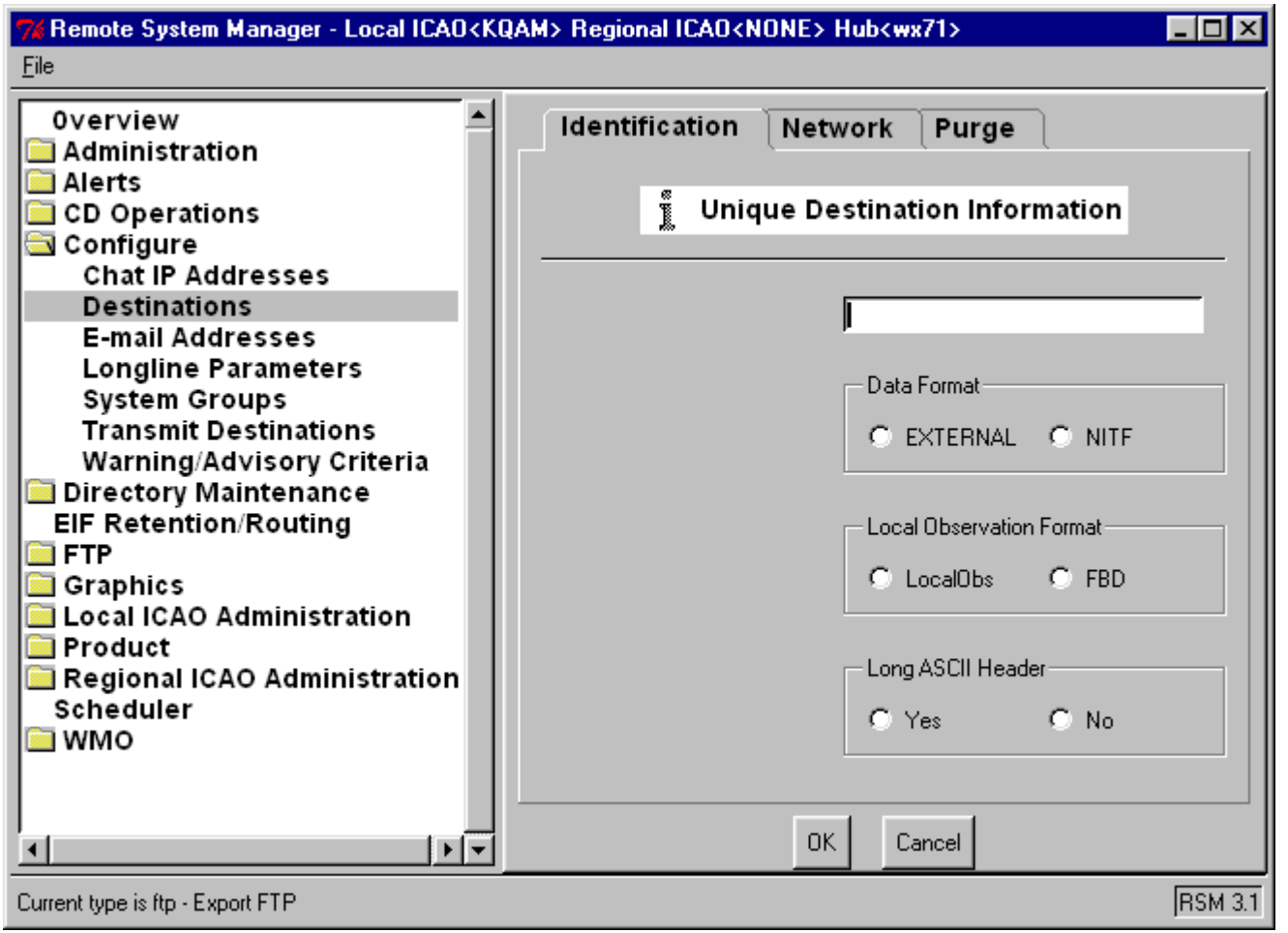
1 With the “Initial Destinations Screen” on page 6-47) displayed, at **Destination Types**, select **ftp - Export FTP**.

2 At **New Destination**, type an identifier for the site, up to five characters.

3 Select **Apply**.

*The screen for the **Identification** tab appears (see Figure 6.32).*

Figure 6.32 Product Routing to Passive FTP Site Identification Tab



4 Optionally, at the unlabeled window, type a plain language description of the destination.

5 At **Data Format**, specify the format of products to be routed to the site by selecting one of **EXTERNAL** or **NITF** (see Table 6.2, “Data Formats” on page 45).

6 At **Local Observation Format** specify the format of the local alphanumeric surface observations to be routed to the site by selecting one of **LocalObs** or **FBD**.

In the LocalObs format, winds are magnetic. In the FBD format, winds are true.

For FBD format, if the conversion of the local surface observation to FBD is successful, both the original surface observation and the FBD conversion will be routed to the destination. If the conversion is unsuccessful, the original surface observation, only, will be routed.

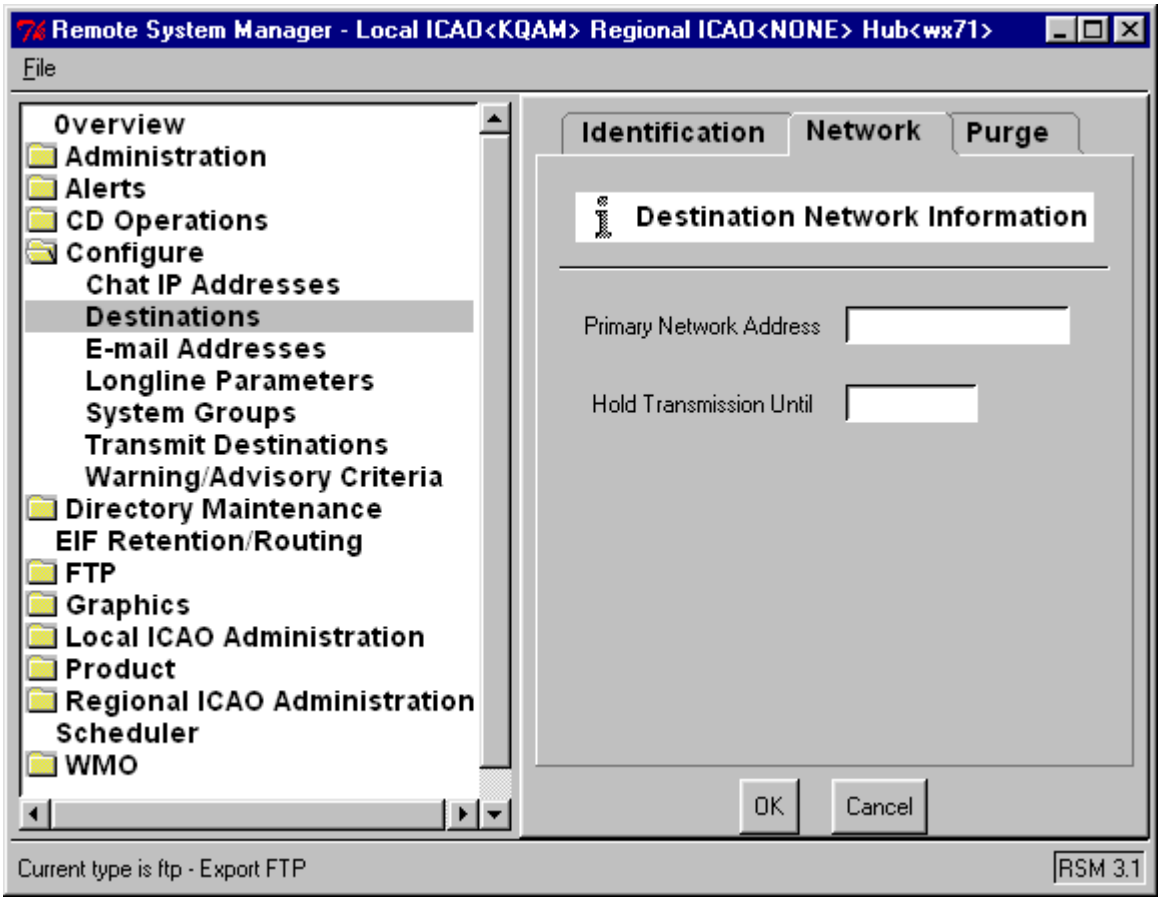
7 At **Long ASCII Header**, select one of **Yes** or **No**.

Long ASCII Header is a new format used by VSAT and WPMDS. An ASCII header is appended to the product before transmission.

8 Select the **Network** tab.

*The screen for the **Identification** tab appears (see Figure 6.33).*

Figure 6.33 Product Routing to Passive FTP Site Network Tab



9 At **Primary Network Address**, enter the Internet Protocol (IP) address of the destination in four, one - three digit numbers separated by periods (for example, 199.107.241.84).

When the external system initiates login, the N-TFS Server validates this IP address. The site uses the "guest@unknown" password for anonymous FTP. If products are not transmitted to the site's queue before login, an error message is generated to the AMIS system log.

You may need to contact the System Manager of the destination site for this IP address.

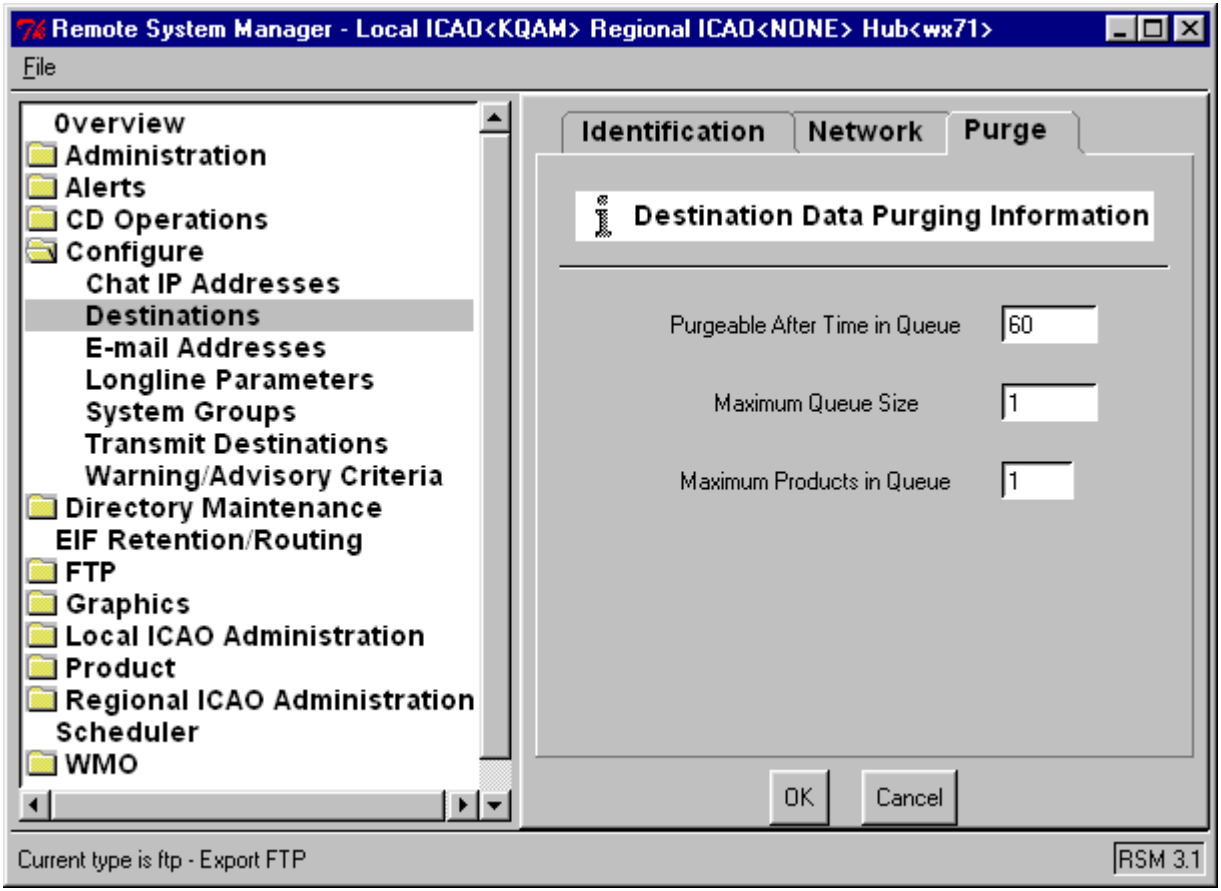
10 Optionally, at **Hold Transmission Until**, enter the local time year, month, day, hour, minute (YYMMDDHHMM) to suspend routing to the destination.

If the destination becomes unreachable, AMIS will queue the products to be routed to it, in accordance with other purge parameters (see following), until the time specified in this field.

11 Select the **Purge** tab.

*The screen for the **Purge** tab appears (see Figure 6.34).*

Figure 6.34 Product Routing to Passive FTP Site Purge Tab



12 At **Purgeable After Time in Queue**, enter the numbers of minutes to hold a product, before purging it, if the destination is unreachable.

The default is 60 minutes. Enter any number from 60 - 999.

13 At **Maximum Queue Size**, enter the number of megabytes of disk storage to be allocated for products queued when the destination is unreachable.

The default is one megabyte. Enter any number from 0 - 250.

14 At **Maximum Products in Queue**, enter the number of products allowed in the product queue formed when the destination is unreachable.

The default is one product. Enter any number from 0 - 10000.

Maximum Products in Queue *may not exceed 10,000 for any one destination. Additionally, the sum of* ***Maximum Products in Queue*** *for all destinations may not exceed 100,000.*

15 Do one of the following:

- To exit the function while saving any changes made under all three tabs, select **OK**.
- To exit the function without saving any changes made under all three tabs, select **Cancel**.

To add an active FTP destination (see Table 6.1, "Destination Types for Product Routing" on page 45) for product routing, do the following:

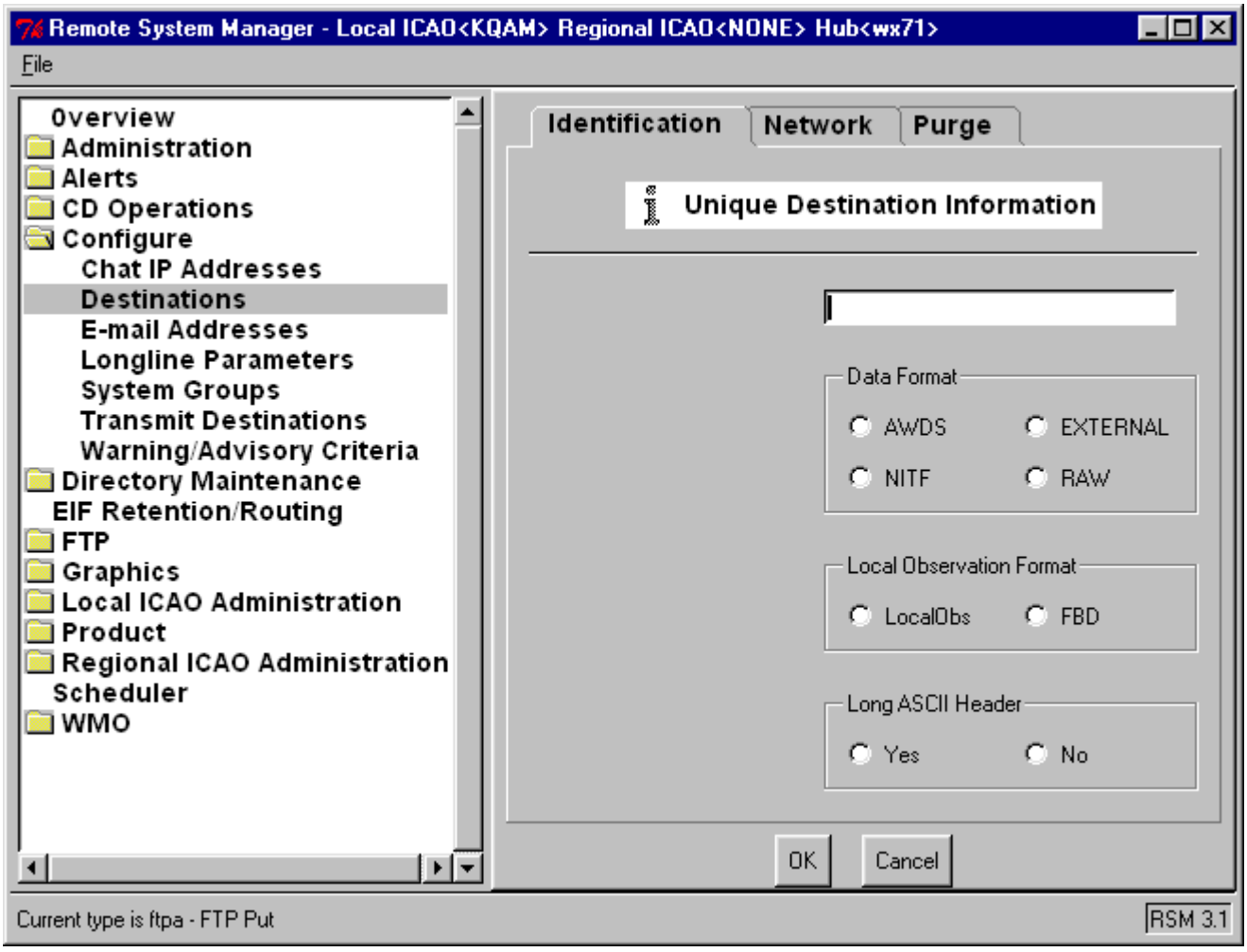
1 With the "Initial Destinations Screen" on page 6-47 displayed, at **Destination Types**, select **ftpa - FTP Put**.

2 At **New Destination**, type an identifier for the site, up to five characters.

3 Select **Apply**.

The screen for the ***Identification*** *tab appears (see Figure 6.35).*

Figure 6.35 Product Routing to Active FTP Site Identification Tab



4 Optionally, at the unlabeled window, type a plain language description of the destination.

5 At **Data Format**, specify the format of products to be routed to the site by selecting one of **AWDS**, **EXTERNAL**, **NITF**, or **RAW** (see Table 6.2, "Data Formats" on page 45).

6 At **Local Observation Format** specify the format of the local alphanumeric surface observations to be routed to the site by selecting one of **LocalObs** or **FBD**.

In the LocalObs format, winds are magnetic. In the FBD format, winds are true.

For FBD format, if the conversion of the local surface observation to FBD is successful, both the original surface observation and the FBD conversion will be routed to the destination. If the conversion is unsuccessful, the original surface observation, only, will be routed.

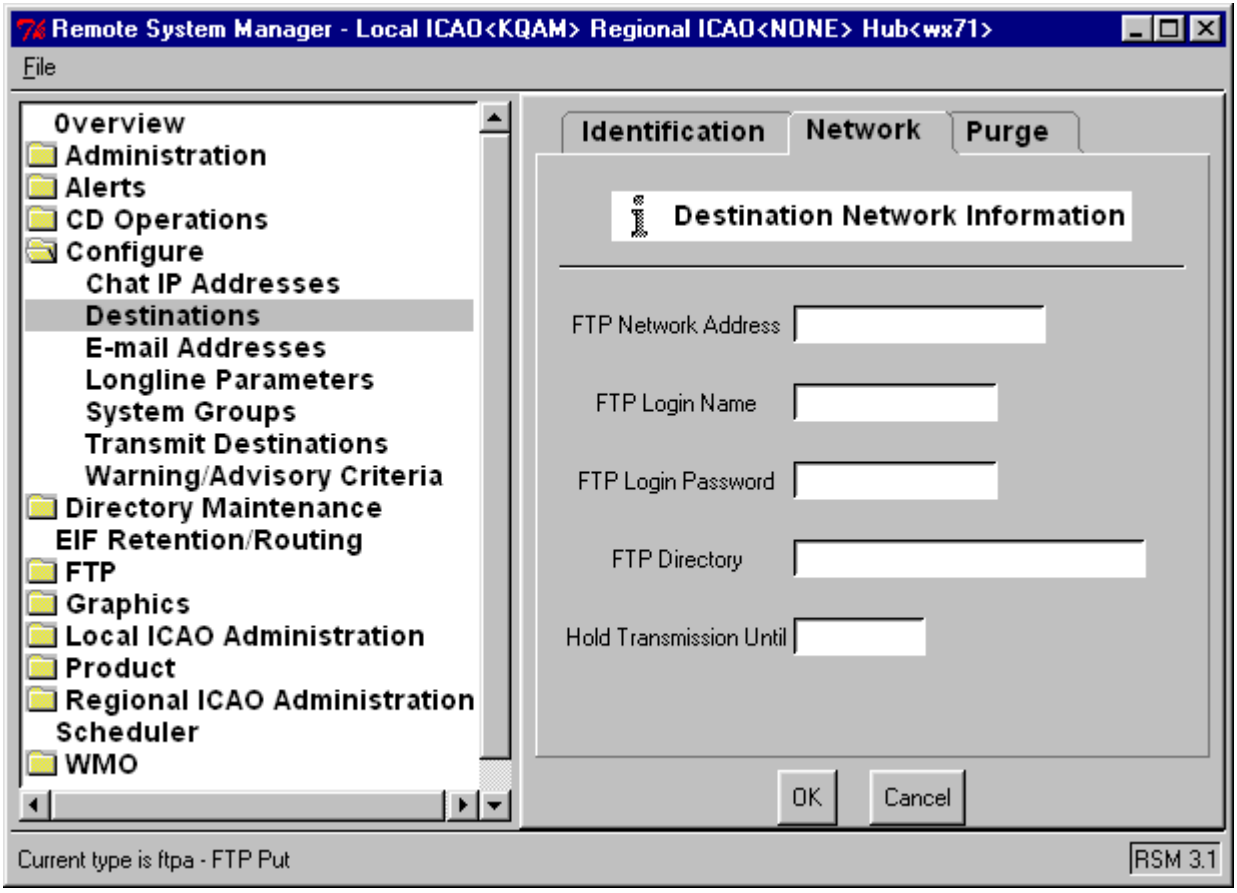
7 At **Long ASCII Header**, select one of **Yes** or **No**.

Long ASCII Header is a new format used by VSAT and WPMDS. An ASCII header is appended to the product before transmission.

8 Select the **Network** tab.

*The screen for the **Network** tab appears (see Figure 6.36).*

Figure 6.36 Product Routing to Active FTP Site Network Tab



9 At **FTP Network Address**, enter the Internet Protocol (IP) address of the destination system in four, one - three digit numbers separated by periods (for example, 199.107.241.84).

You may need to contact the System Manager of the destination site for this IP address.

10 At **FTP Login Name**, enter the login name that AMIS will use to login to the destination FTP site.

This login name must correspond with an account set up on the destination system for this purpose. You may need to contact the System Administrator of the destination FTP system to set up this account and to give you the login information.

11 At **FTP Login Password**, enter the password that AMIS will use to login to the destination FTP site.

This password must correspond with an account set up on the destination system for this purpose. You may need to contact the System Administrator of the destination FTP system to set up this account and to give you the login information.

12 At **FTP Directory**, enter the full path name of the destination directory to which AMIS will FTP the products.

You may need to contact the System Administrator of the destination FTP system to get this information.

*Note: some systems do not require that you specify a directory to FTP into. For these cases, at **FTP Directory**, enter an "*" character to indicate that no "change directory (cd)" is required.*

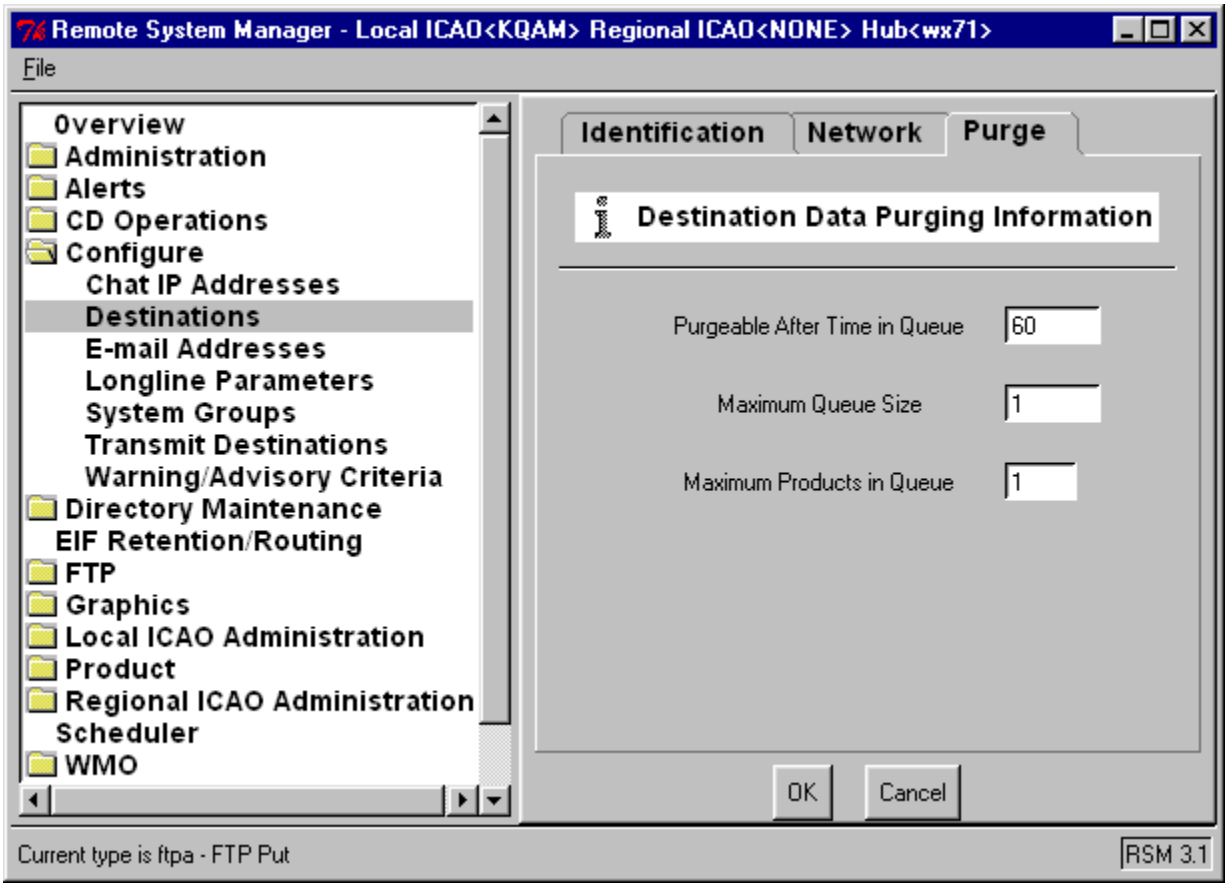
13 Optionally, at **Hold Transmission Until**, enter the local time year, month, day, hour, minute (YYMMDDHHMM) to suspend routing to the destination.

If the destination becomes unreachable, AMIS will queue the products to be routed to it, in accordance with other purge parameters (see following), until the time specified in this field.

14 Select the **Purge** tab.

*The screen for the **Purge** tab appears (see Figure 6.37).*

Figure 6.37 Product Routing to Active FTP Site Purge Tab



15 At **Purgeable After Time in Queue**, enter the numbers of minutes to hold a product, before purging it, if the destination is unreachable.

The default is 60 minutes. Enter any number from 60 - 999.

16 At **Maximum Queue Size**, enter the number of megabytes of disk storage to be allocated for products queued when the destination is unreachable.

The default is one megabyte. Enter any number from 0 - 250.

17 At **Maximum Products in Queue**, enter the number of products allowed in the product queue formed when the destination is unreachable.

The default is one product. Enter any number from 0 - 10000.

Maximum Products in Queue *may not exceed 10,000 for any one destination. Additionally, the sum of* ***Maximum Products in Queue*** *for all destinations may not exceed 100,000.*

18 Do one of the following:

- To exit the function while saving any changes made under all three tabs, select **OK**.
- To exit the function without saving any changes made under all three tabs, select **Cancel**.Add local workstation destination for product routing

To add a FCF terminal destination (see Table 6.1, “Destination Types for Product Routing” on page 45) for product routing, do the following:

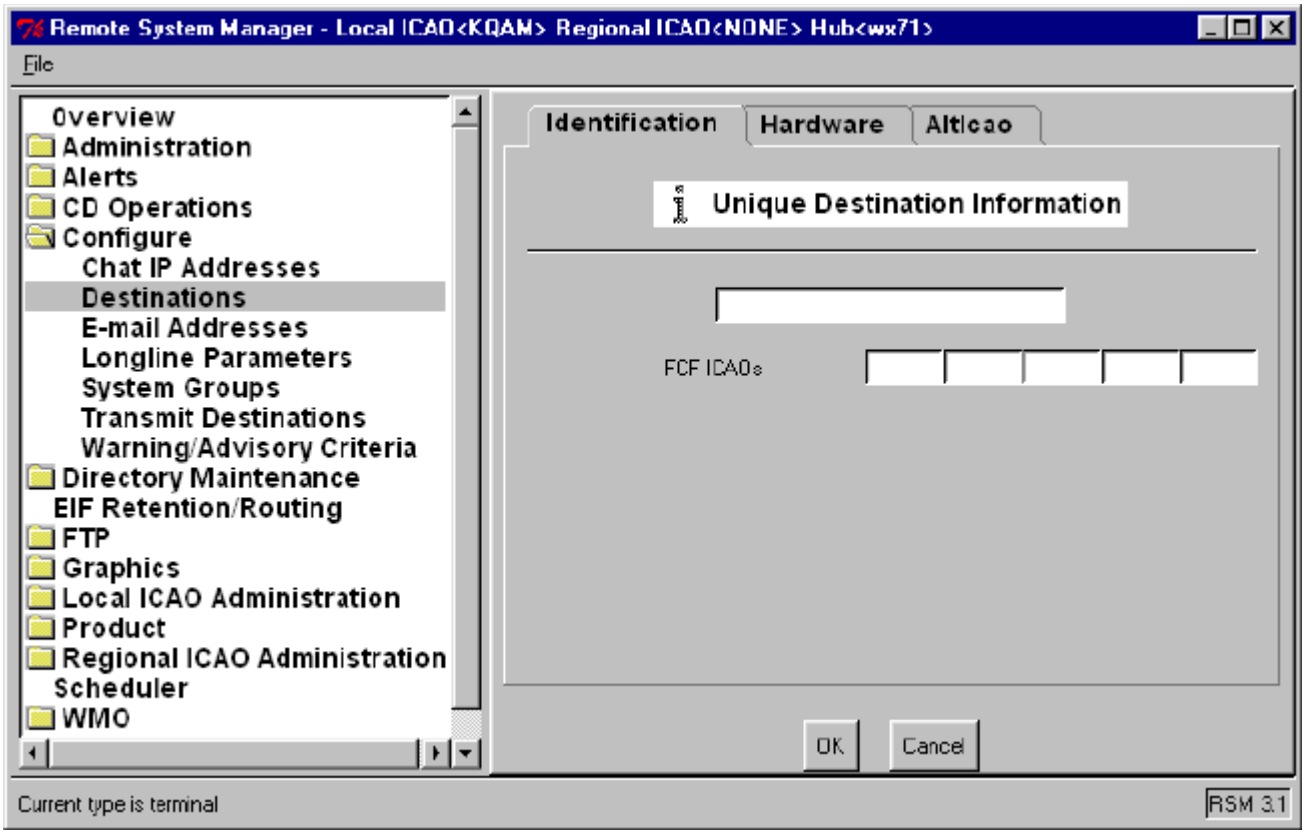
1 With the “Initial Destinations Screen” on page 6-47 displayed, at **Destination Types**, select **terminal**.

2 At **New Destination**, type an identifier for the site, up to five characters.

3 Select **Apply**.

*The screen for the **Identification** tab appears (see Figure 6.38).*

Figure 6.38 Product Routing to Local Workstation Identification Tab



4 Optionally, at the unlabeled window, type a plain language description of the destination.

5 At **FCF ICAOs**, enter up to five ICAOs, one ICAO per window, to include in the FCF Data set.

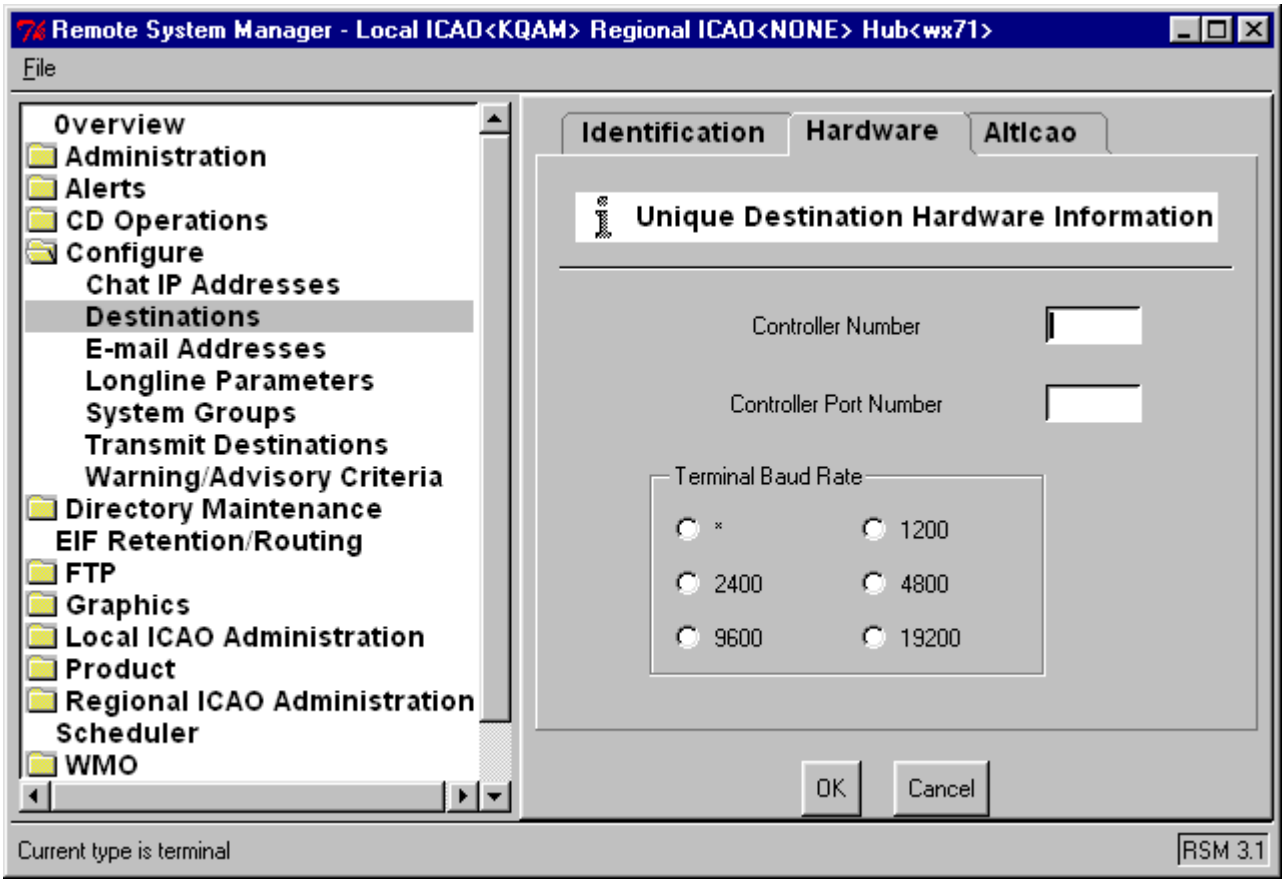
NOTE *Listing your primary ICAO as an alternate airfield in an FCF data set has the following undesirable side effects:*

- *After sending a local observation, the FCF/FO workstations will receive two alerts each: one for the local data arriving, the other for data received by an alternate airfield.*
- *AIRADs may appear twice in the AIRAD list after rebooting a FCF/FO workstation.*
- *The alternate base TAF on the FCF/ATC may display alert weather observations or other unusual information within the TAF.*

6 Select Hardware tab.

*The screen for the **Hardware** tab appears (see Figure 6.39).*

Figure 6.39 Product Routing to Local Workstation Hardware Tab



7 At **Controller Number**, enter the number of the C/DM controller board to which the terminal is assigned.

This controller board number is a one digit number with a value of 1-3.

8 At **Controller Port Number**, enter the port number of the C/DM controller board to which the terminal is connected.

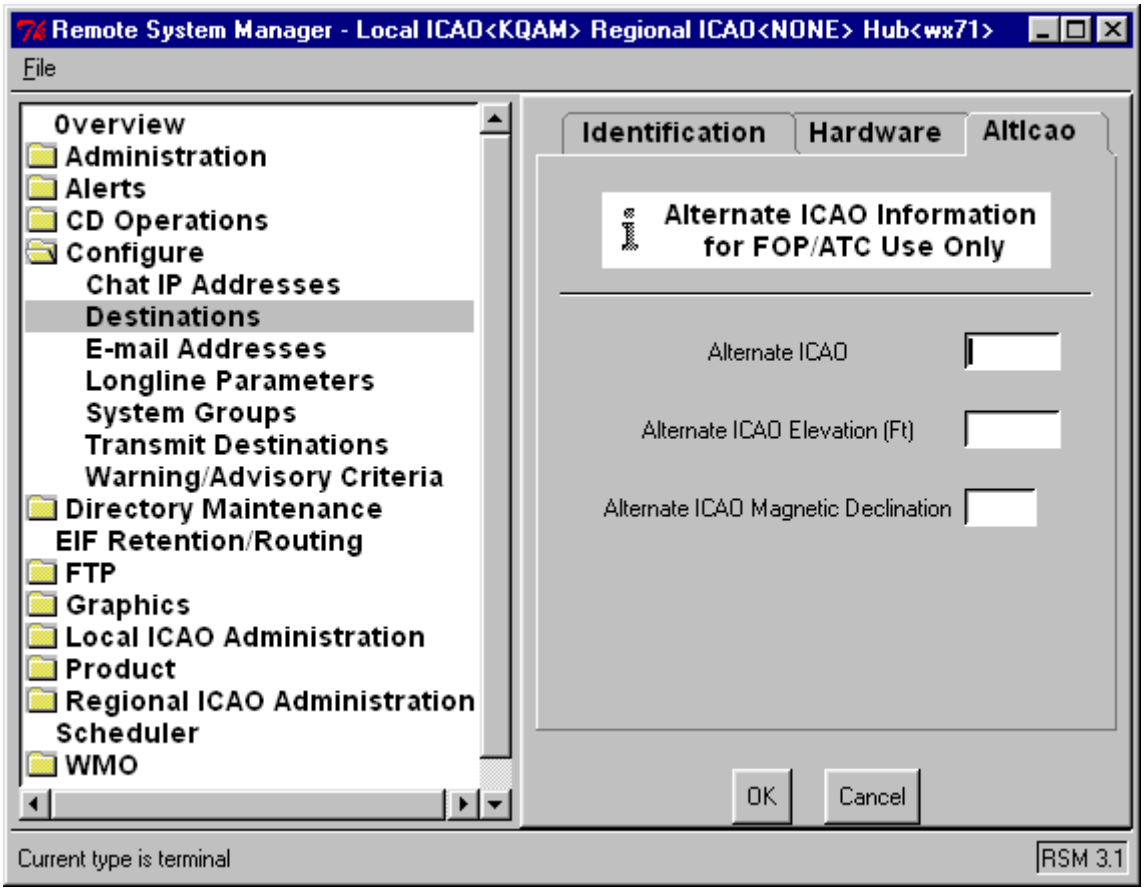
This port number is a number 0 - 15.

9 At **Terminal Baud Rate**, select one of *****(automatic detection/selection), **1200**, **2400**, **4800**, **9600**, **19200**.

10 Select the **AltIcao** tag.

*The screen for the **AltIcao** tab appears (see Figure 6.40).*

Figure 6.40 Product Routing to Local Workstation AltIcao Tab



11 At **Alternate ICAO**, enter the secondary ICAO.

This configures the Local Observation set for the FCFs to a different ICAO than the default local ICAO.

***Alternate ICAO** is not used at most sites.*

12 At **Alternate ICAO Elevation (Ft)**, enter the elevation of the secondary station, in feet.

13 At **Alternate ICAO Magnetic Declination**, enter the magnetic declination correction for the secondary station (for example, +10).

14 Do one of the following:

- To exit the function while saving any changes made under all three tabs, select **OK**.

- To exit the function without saving any changes made under all three tabs, select **Cancel**.

To add a VSAT destination (see Table 6.1, “Destination Types for Product Routing” on page 45) for product routing, do the following:

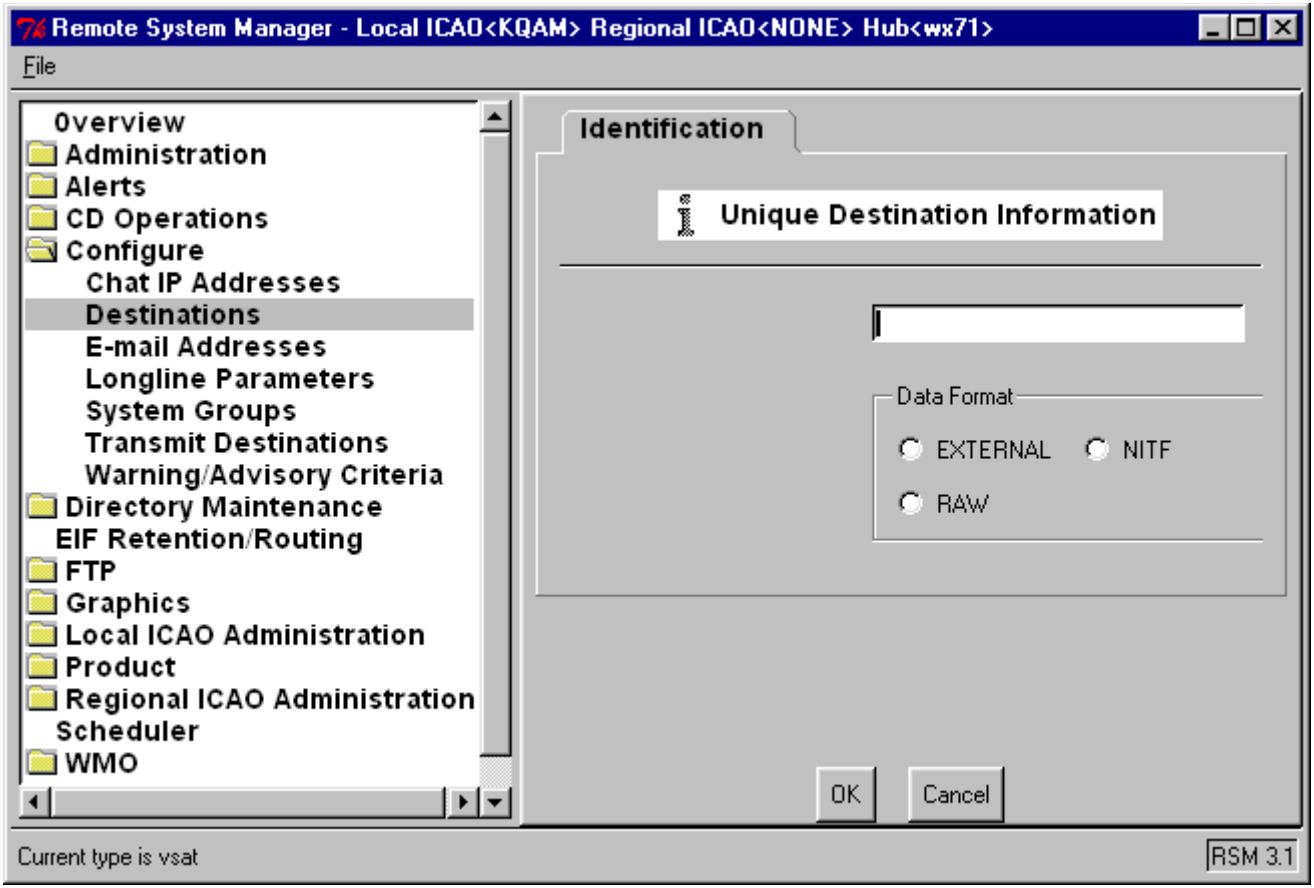
1 With the “Initial Destinations Screen” on page 6-47 displayed, at **Destination Types**, select **vsat**.

2 At **New Destination**, type an identifier for the site, up to five characters.

3 Select **Apply**.

*The screen for the **AltIcao** tab appears (see Figure 6.41).*

Figure 6.41 Product Routing to VSAT Site Identification Tab



4 Optionally, at the unlabeled window, type a plain language description of the destination.

5 At **Data Format**, specify the format of products to be routed to the site by selecting one of **EXTERNAL**, **NITF**, or **RAW** (see Table 6.2, "Data Formats" on page 45).

6 Do one of the following:

- To exit the function while saving any changes made, select **OK**.
- To exit the function without saving any changes made, select **Cancel**.

E-mail Addresses

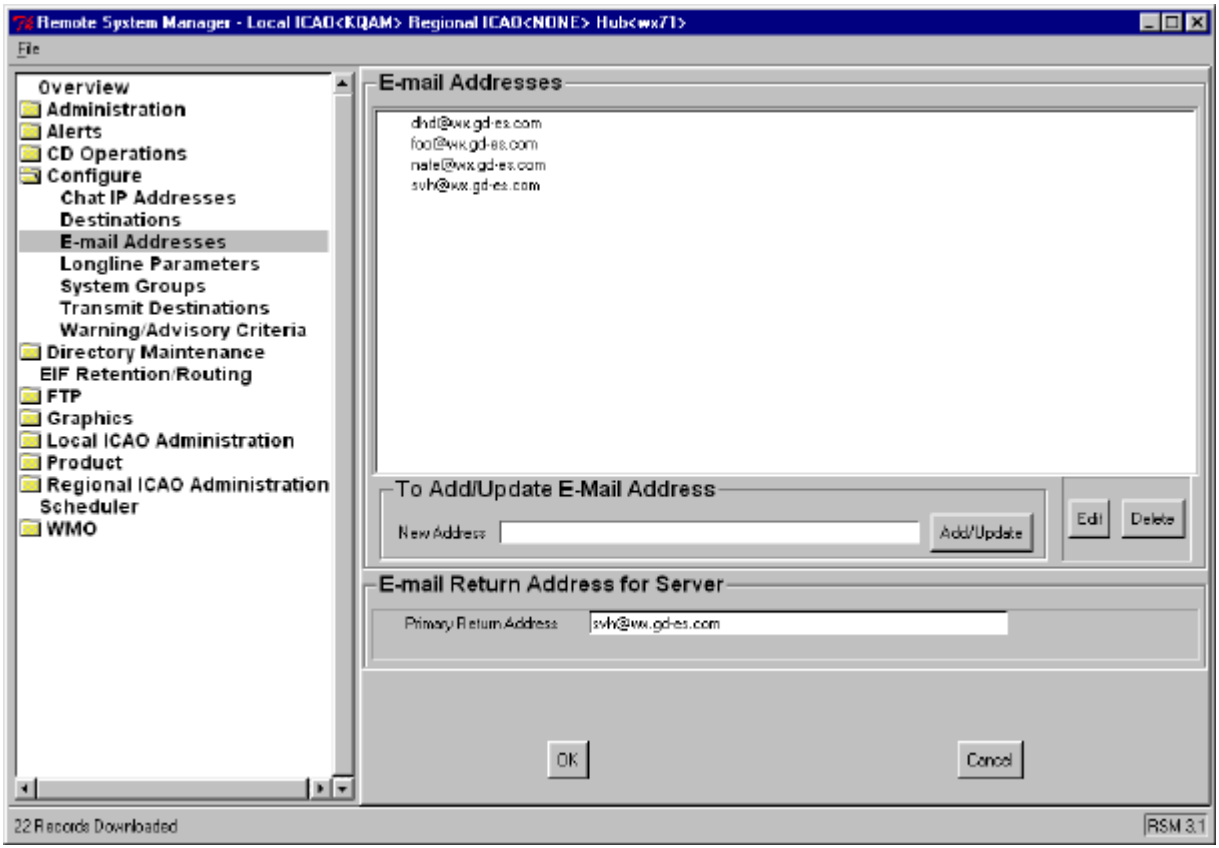
The E-mail Addresses table enables the System Manager to configure and maintain a list of E-mail addresses to be used in conjunction with the E-mail Stage table for E-mail routing of alphanumeric products.

To access the E-mail Addresses table, do the following:

1 Select the **Configure** folder, and select **E-mail Addresses**.

The E-mail Addresses screen appears (see Figure 6.42).

Figure 6.42 E-mail Addresses Screen



To add an E-mail address, do the following:

1 At **New Address**, enter the new E-mail address.

2 Select **Add/Update**.

*The new address is listed in the **E-mail Addresses** window.*

To set a E-mail address to be used for delivery of products that fail delivery to any E-mail address listed in the E-mail Addresses window, do the following:

1 At **Primary Return Address**, enter the E-mail address.

To modify an address listed in the **E-mail Addresses** window, do the following:

1 In the **E-mail Addresses** window, select the address to be modified.

2 Select **Edit**.

*The selected address displays at **New Address**.*

3 Make changes to the address.

4 To save the changes, select **<Add/Update>**.

*Note the modified address listed in the **E-mail Addresses** window.*

To delete an address listed in the **E-mail Addresses** window, do the following:

1 In the **E-mail Addresses** window, select the address to be deleted.

2 Select **Delete**.

*The deleted address is removed from the list in the **E-mail Addresses** window.*

To leave the E-mail Addresses table, do the following:

1 Select OK or Cancel.

2 If you changed the table, a confirmation alert may appear. Do one of the following:

- To save changes select **Yes**.
- To not save changes, select **No**.

Longline Parameters

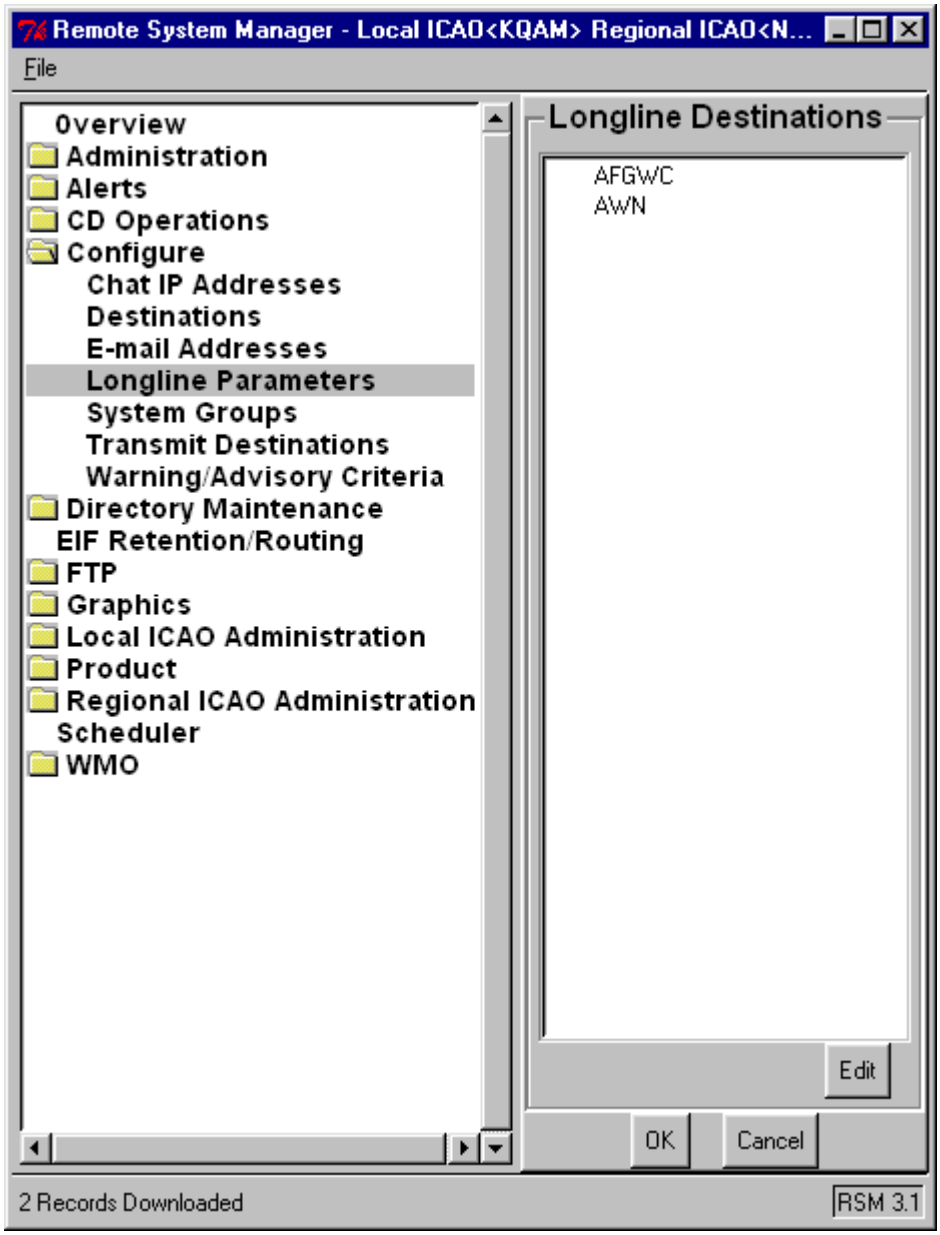
The Longline Parameters table enables the System Manager to display and modify the current configuration for communication between external data sources and the C/DM.

To access the Longline Parameters table, do the following:

1 Select the **Configure** folder, and select **Longline Parameters**.

The Longline Parameters table appears (see Figure 6.43).

Figure 6.43 Longline Parameters Screen



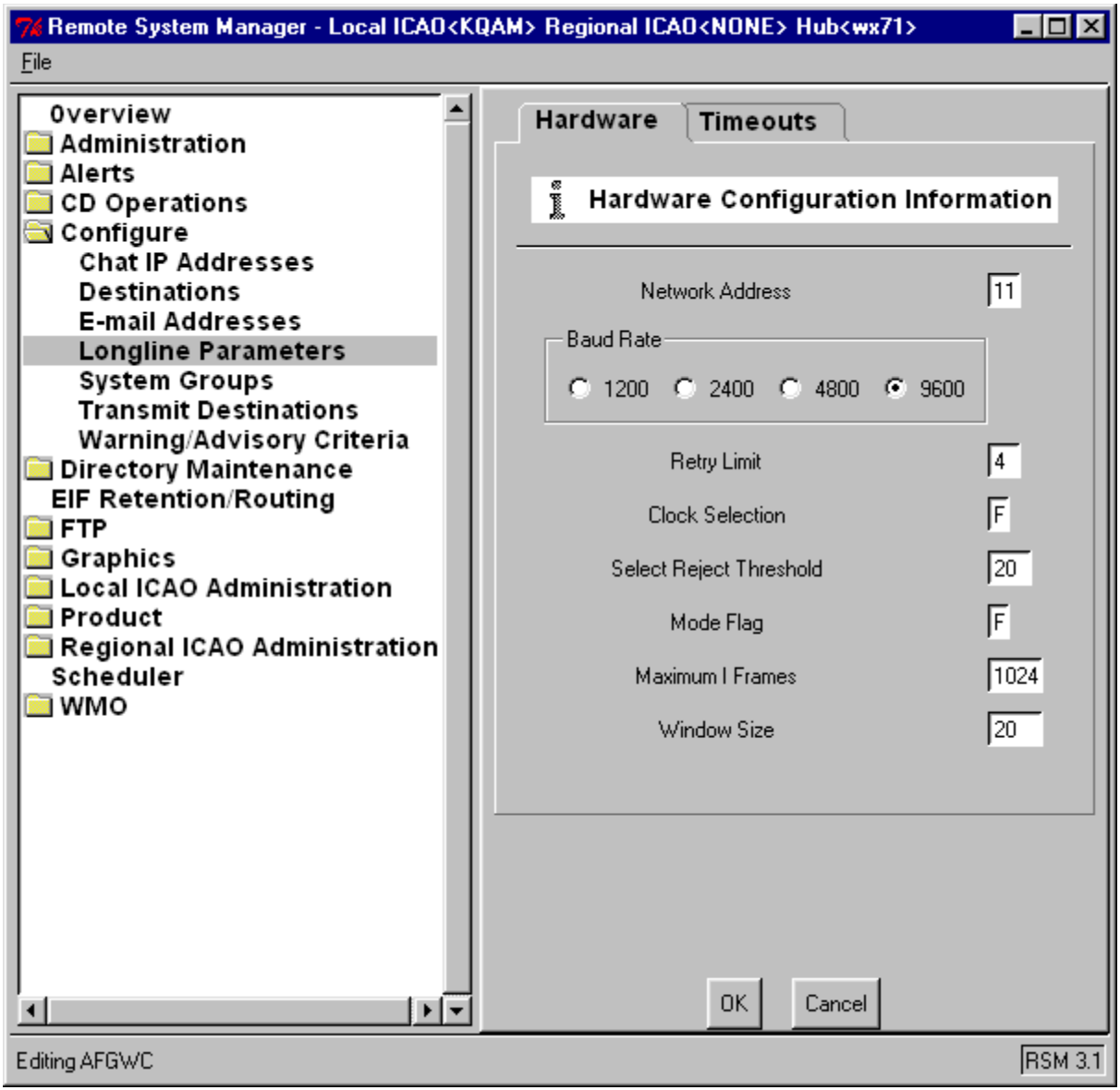
To modify longline destination data, do the following:

1 Select a site from the **Longline Destinations** window.

2 Select **Edit.**

Hardware configuration information for the selected site appears (see Figure 6.44).

Figure 6.44 Longline Parameters Hardware Configuration Information



3 Optionally, at any of **Network Address**, **Retry Limit**, **Clock Selection**, **Select Reject Threshold**, **Mode Flag**, **Maximum | Frames**, and **Window Size**, replace the old data by entering new data.

WARNING *Information in this table should be already configured properly at AMIS sites. All entries/settings should remain static. Any changes should be accomplished by direction from a technician or competent technical support agenct representative.*

4 Optionally, at **Baud Rate**, select one of **1200**, **2400**, **4800**, and **9600**.

5 Do one of the following:

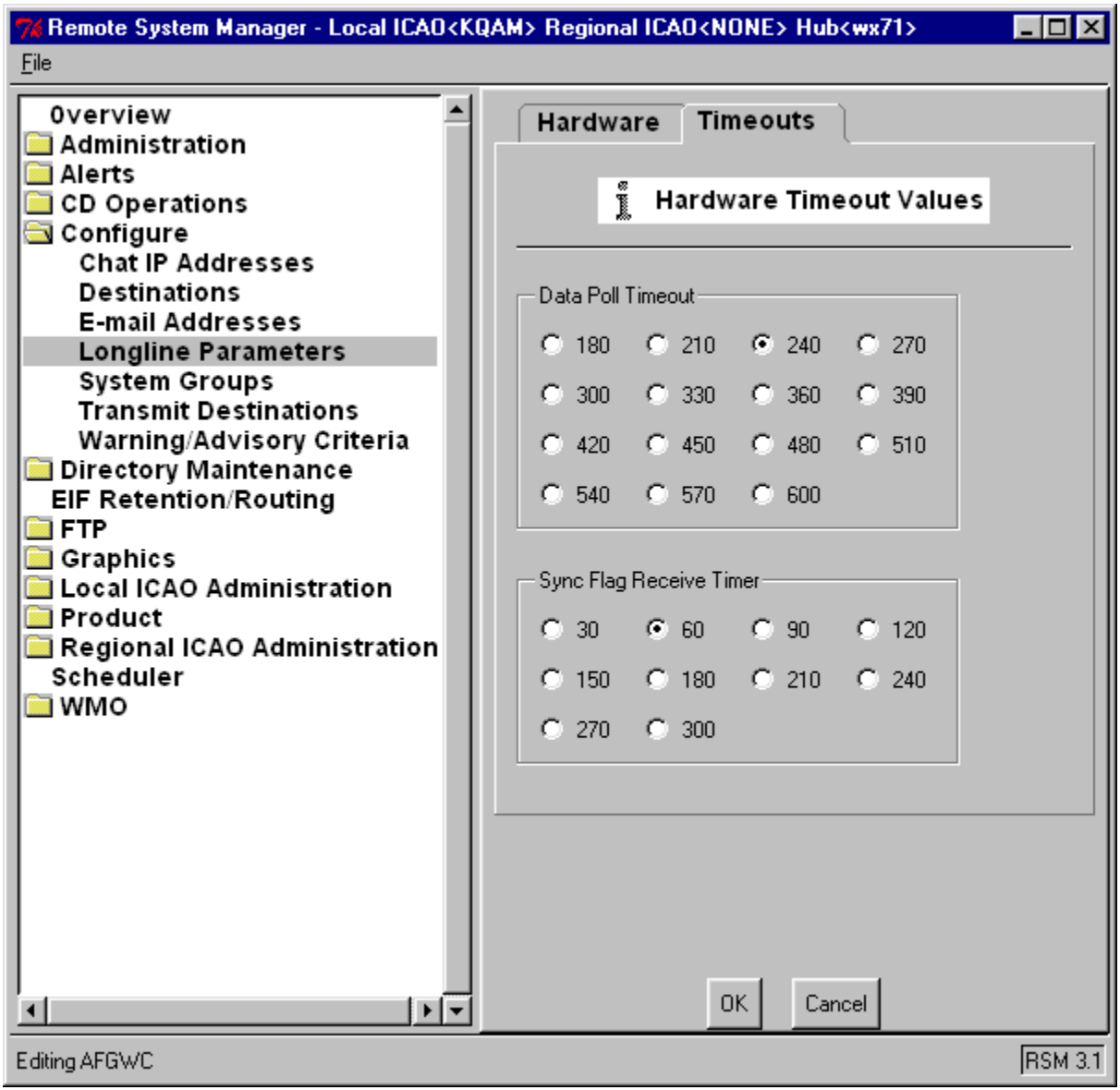
- To save any changes and exit, select **OK**.
- To exit without saving any changes, select **Cancel**.

To select hardware time-out values:

1 Select the **Timeouts** tab along the top of the table.

Hardware time-out values are displayed (see Figure 6.45).

Figure 6.45 Longline Parameters Hardware Timeouts



2 Optionally, at **Data Poll Timeout**, select one timeout value.

3 Optionally, at **Sync Flag Receive Timer**, select one timer value.

4 Do one of the following:

- To save any changes and exit, select **OK**.

- To exit without saving any changes, select **Cancel**.

System Groups

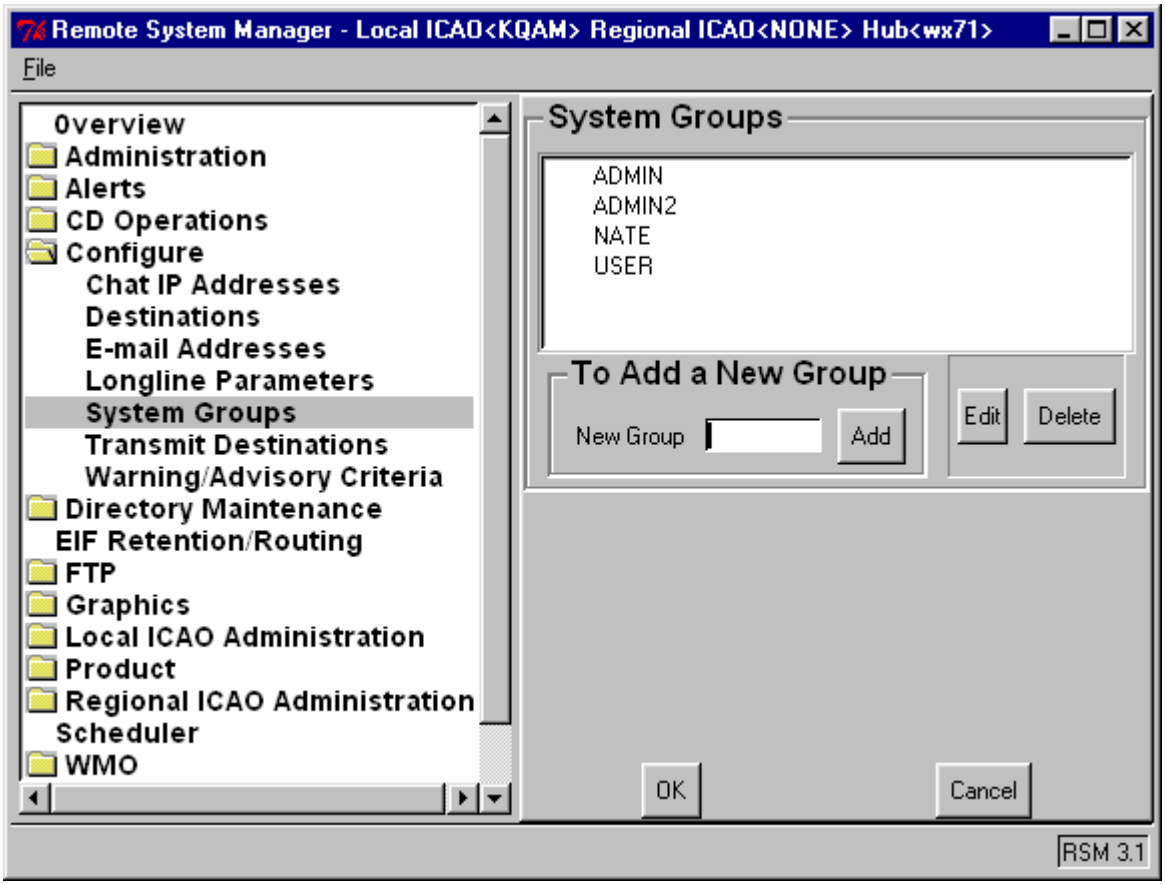
The System Groups table enables the System Manager to assign individual users to named groups. You can group several users together by function (for example, group AN Forms access only). You can group accounts together for specific alerting , simplifying your administrative task. For example, you can create an OBSERVER group and assign each of the observer accounts to that group. Then assign specific alerting to the group, instead of each individual account in the group.

To access the System Groups table, do the following:

1 Select the **Configure** folder, and select **System Groups**.

The System Groups table appears (see Figure 6.46).

Figure 6.46 System Groups Table

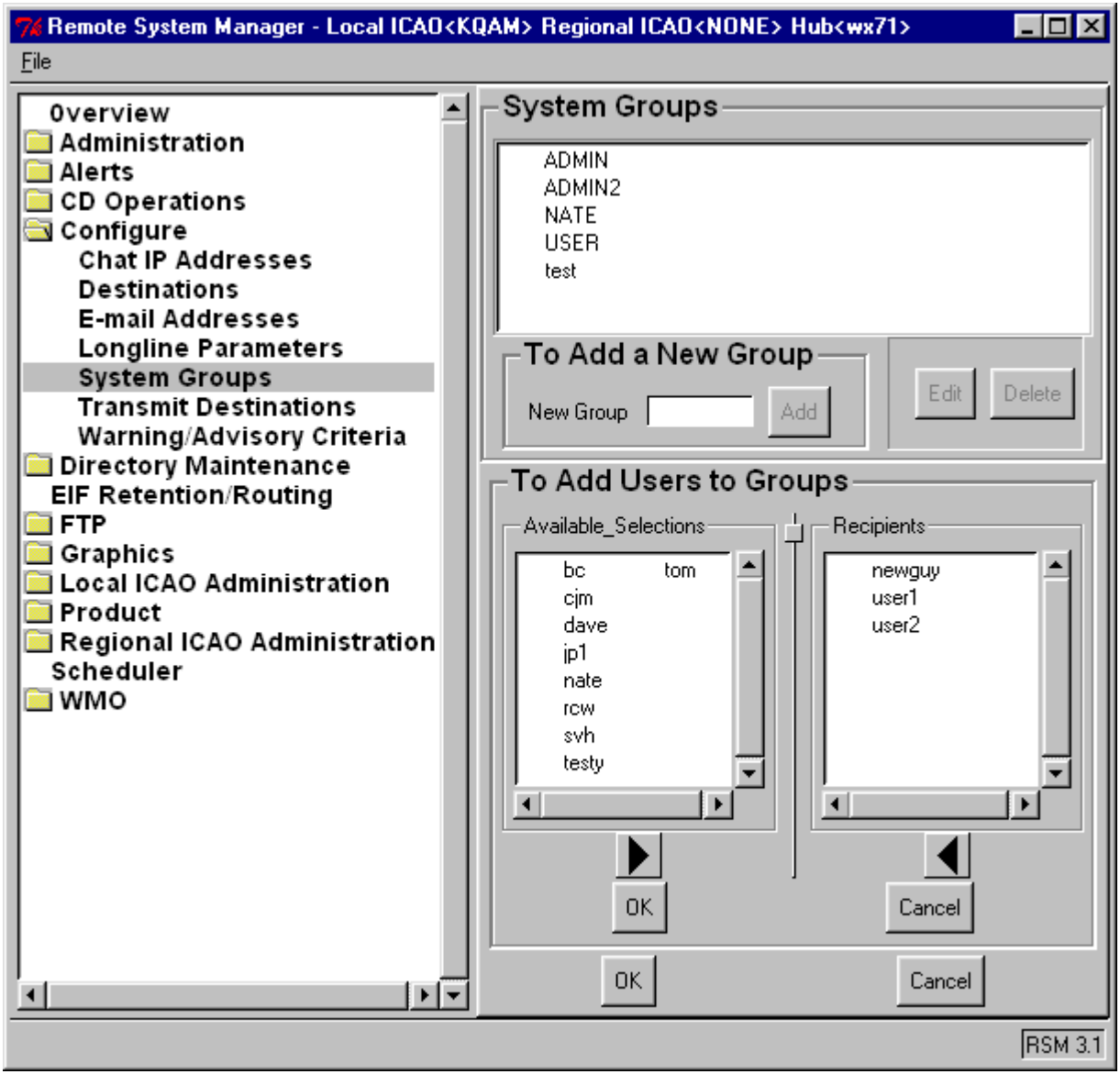


The existing groups are listed by name in the **System Groups** window. To add a new group, do the following:

1 At **New Group**, enter a name for the group and select **Add**.

The Add Users to Groups panel appears (see Figure 6.47) with the name of the new group listed under System Groups.

Figure 6.47 Add Users to Groups Panel



2 Select the new group membership by moving individual users from the **Available Selections** list to the **Recipients** list. Do one of the following:

- Double-click a user name in the **Available Selections** list.

  *The selection moves to the **Recipients** list.*

- Select a user name in the **Available Selections** list and press the right arrow button.

  *The selection moves to the **Recipients** list.*

3 Repeat step 2 until the group has all intended members.

4 Do one of the following:

- To exit **Add Users to Groups** and save changes, select **OK**.
- To exit **Add Users to Groups** without saving changes, select **Cancel**.

To change the membership of a group listed in **System Groups**, do the following:

1 Select the group name from **System Groups**.

2 Select Edit.

  *The **Add Users to Groups** panel appears with the group members listed under **Recipients**.*

3 Modify the **Recipients** list to reflect the new desired membership.

4 Do one of the following:

- To exit **Add Users to Groups** and save changes, select **OK**.
- To exit **Add Users to Groups** without saving changes, select **Cancel**.

To delete a group listed in **System Groups**, do the following:

1 At **System Groups,** select the group to delete.

2 Select **Delete**.

  *The name of the deleted group is removed from the **System Groups** list.*

3 Do one of the following:

- To exit and save changes, select **OK**.
- To exit without saving changes, select **Cancel**.

Transmit Destinations

The Transmit Destinations table enables the System Manager to specify multiple transmit paths that have been configured for longline

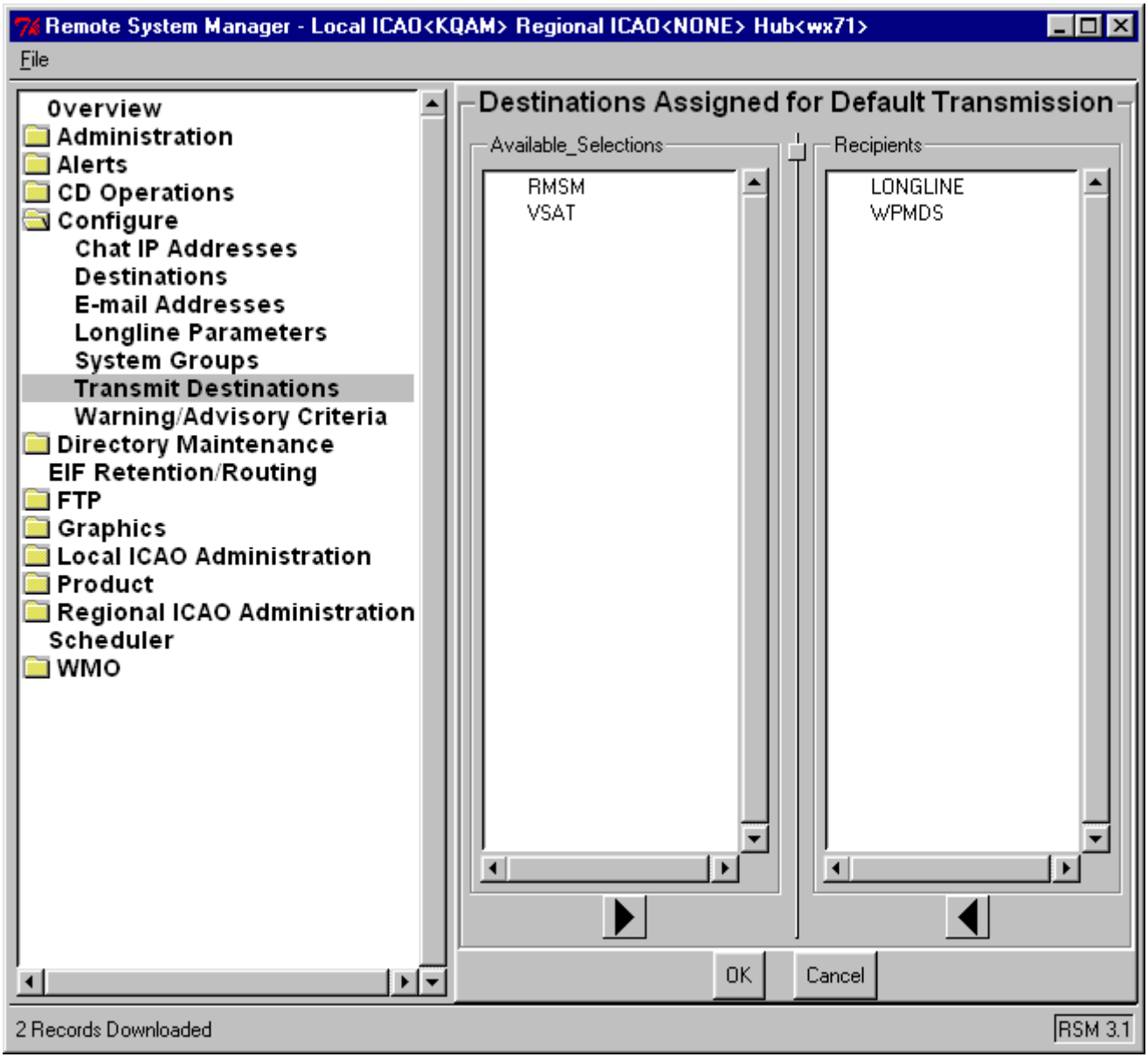
communications, FTP sources (VSAT, WPMDS), as well as the RMSM queue. This gives the ability to transmit, by default, products in a variety of methods.

To access the Transmit Destinations table, do the following:

1 Select the **Configure** folder, and select **Transmit Destinations**.

The Transmit Destinations table appears (see Figure 6.48).

Figure 6.48 Transmit Destinations Table



2 To add a destination in the **Available Selections** list to the default transmission destinations, do one of the following:

- Double-click a destination in the **Available Selections** list.

  *The selection moves to the **Recipients** list.*

- Select a destination in the **Available Selections** list and press the right arrow button.

  *The selection moves to the **Recipients** list.*

3 To deselect a destination listed in the **Recipients** list, do one of the following:

- Double-click a destination in the **Recipients** list.

  *The selection moves back to the **Available Selections** list.*

- Select a destination in the **Recipients** list and press the left arrow button.

  *The selection moves back to the **Available Selections** list.*

4 To leave the Transmit Destinations table, do one of the following:

- To exit while saving any table changes, select **OK.**
- To exit without saving any table changes, select **Cancel.**

Warning/Advisory Criteria

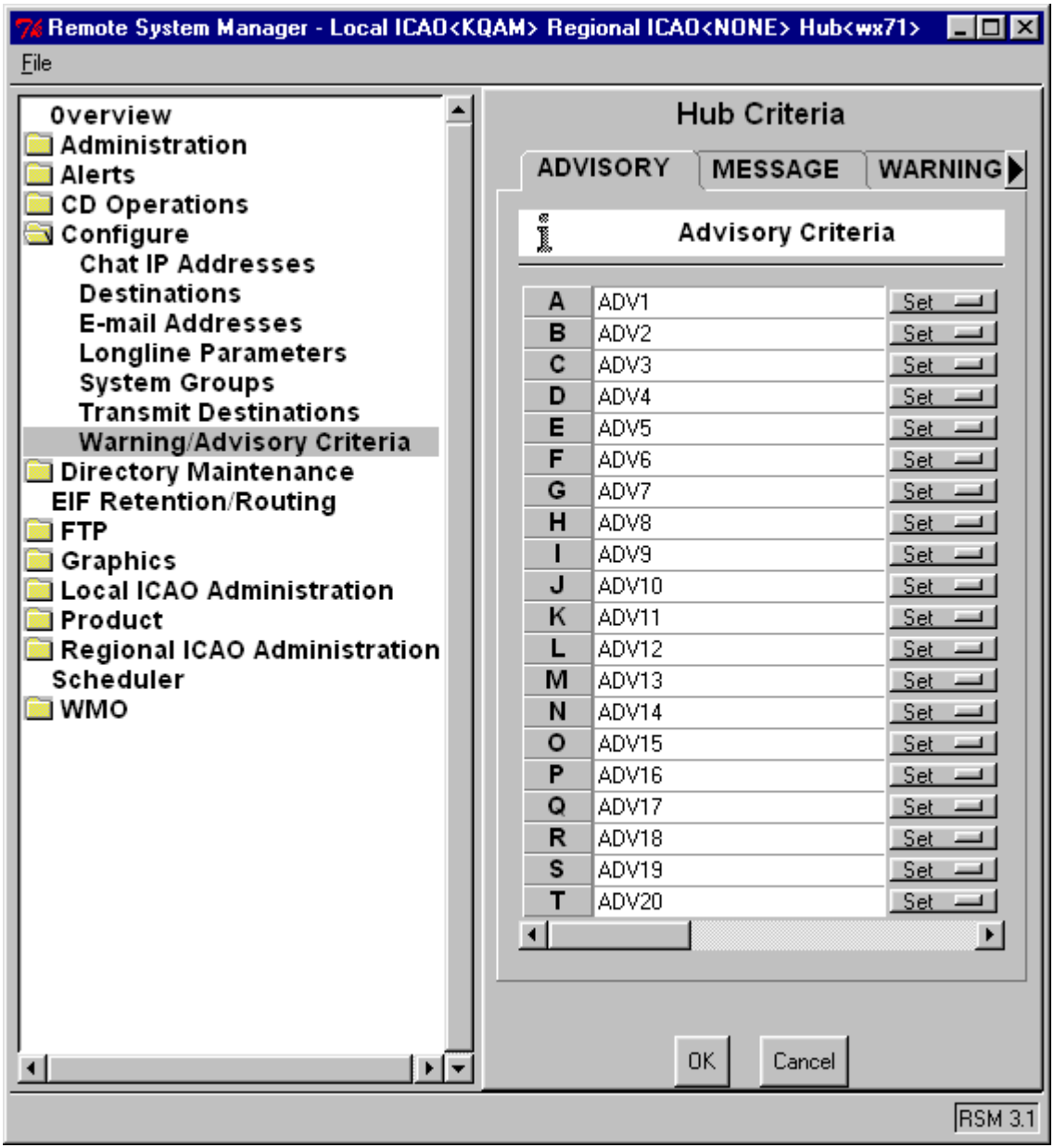
The Warning/Advisory Criteria table enables the System Manager to specify prefill information that automatically fills into the respective Warning/Advisory alphanumeric forms. The table will accommodate up to 60 criteria settings for each of the four Warning/Advisory product types. The criteria are identified A-Z, a-z, and 1-8 and have a corresponding System Manager supplied name.

To access the Warning/Advisory Criteria table, do the following:

1 Select the **Configure** folder, and select **Warning/Advisory Criteria**.

  The Warning/Advisory Criteria table appears (see Figure 6.49).

Figure 6.49 Warning/Advisory Criteria Table



To set the prefill information, do the following:

1 Choose type of prefill product to modify by selecting one of the following tabs running horizontally near the top of the display: **ADVISORY**, **MESSAGE**, **WARNING**, and **WATCH**.

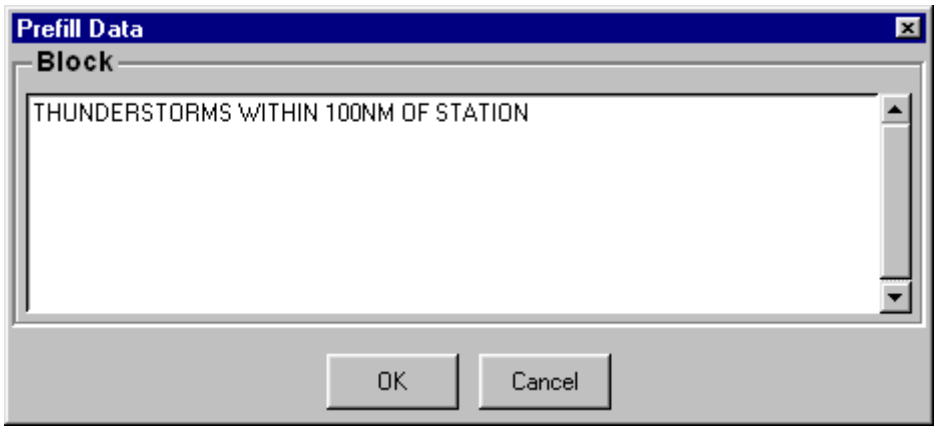
Adjacent to the tabs is an arrow button. Use the arrow button to reveal all four tabs.

2 Enter criteria name (for example, THUNDERSTORM1) in the window adjacent to the criteria identifier.

3 To set the prefill entry for the respective alphanumeric form **Text** field, do the following:

- Press the menu selection button corresponding to the criteria (adjacent and to the right of the criteria name window) and select **Block**.

  A Prefill Data dialog appears.

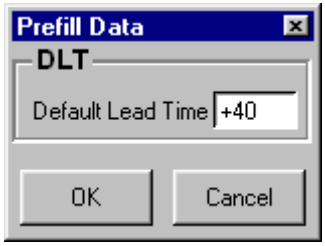


- Enter prefill text, for example, THUNDERSTORMS WITHIN 100NM OF STATION.
- Do one of the following:
  - To save and return to **Hub Criteria** panel, select **OK**.
  - To return to **Hub Criteria** panel without saving, select **Cancel**.

4 For product types **WARNING** and **WATCH** only, to set the default lead-time (**DLT**) prefill, do the following:

- Press the menu selection button corresponding to the criteria (adjacent and to the right of the criteria name window) and select **DLT**.

*A **Prefill Data** dialog appears.*

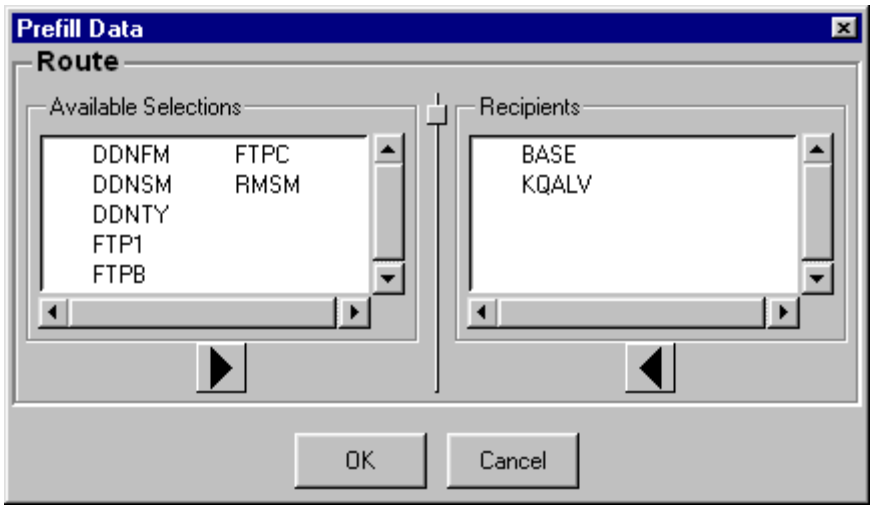


- At **Default Lead Time**, enter up to a six digit DLT value.
- Do one of the following:
  - To save and return to **Hub Criteria** panel, select **OK**.
  - To return to **Hub Criteria** panel without saving, select **Cancel**.

5 To set the routing prefill, do the following:

- Press the menu selection button corresponding to the criteria (adjacent and to the right of the criteria name window) and select **Route**.

  *A **Prefill Data** dialog appears.*



- To select a destination from the **Available Selections** list, do one of the following:
- Double-click a destination in the **Available Selections** list.

  *The selection moves to the **Recipients** list.*
- Select a destination in the **Available Selections** list and press the right arrow button.

*The selection moves to the **Recipients** list.*

- Do one of the following:
  - To save and return to **Hub Criteria** panel, select **OK**.
  - To return to **Hub Criteria** panel without saving, select **Cancel**.

6 To print a copy of the displayed form, do the following:

- select **File** at upper left and select **Print**.

  The standard print dialog appears.
- Do one of the following:
  - To print, select **OK**
  - To exit print, select **Cancel**.

7 To leave the **Advisory/Warning Criteria** table, do one of the following:

- To save table changes and exit back to main panel, select **OK.**
- To exit without saving table changes, select **Cancel.**

Directory Maintenance

The directory maintenance functions enable the System Manager to perform selected directory maintenance functions, for example, deleting a file, for selected AMIS directories. The following directories are included: AAI Queue, Command Sequences, Composites/Loops, Flawed-In, Flawed-Out, Image Backgrounds, Image Miscellaneous, Primary Backgrounds, and Secondary Backgrounds.

AAI Queue

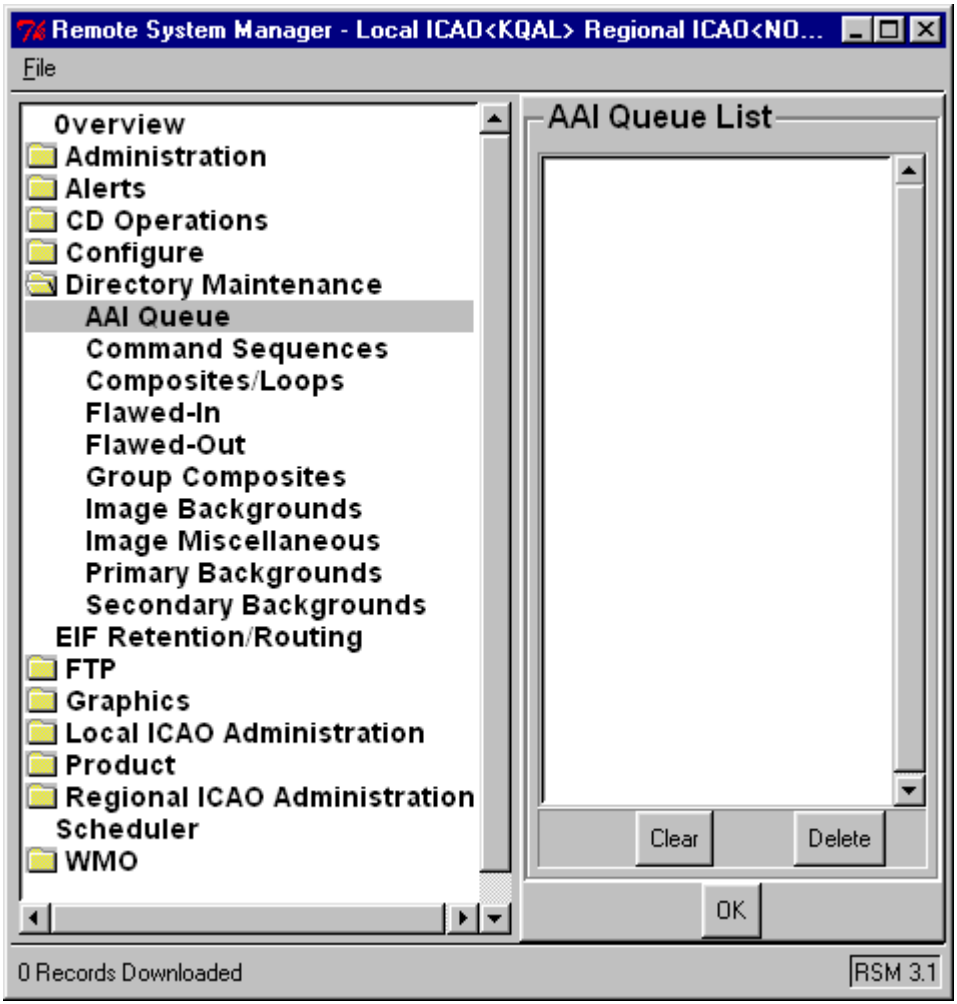
The AAI Queue directory contains AAI archive files created with the Aircraft Accident Investigation A/N Form (see "Aircraft Accident Investigation" on page 3-94). The System Manager can delete AAI archives.

To access the AAI Queue directory, do the following:

1 Select the **Directory Maintenance** folder, and select **AAI Queue**.

A listing of the AAI Queue directory appears (see Figure 6.50).

Figure 6.50 AAI Queue



To delete an AAI archive from the AAI Queue directory, do the following:

1 In the **AAI Queue List** window, select the file name by clicking it.

2 Optionally, remove a file from selection by selecting **Clear**.

3 Select **Delete**.

*The file name disappears from the **AAI Queue List** window.*

WARNING *There is no confirmation message associated with **Delete**. Once **Delete** is selected, the file is no longer accessible on disk.*

4 To leave the AAI Queue directory display, select **OK**.

Command Sequences

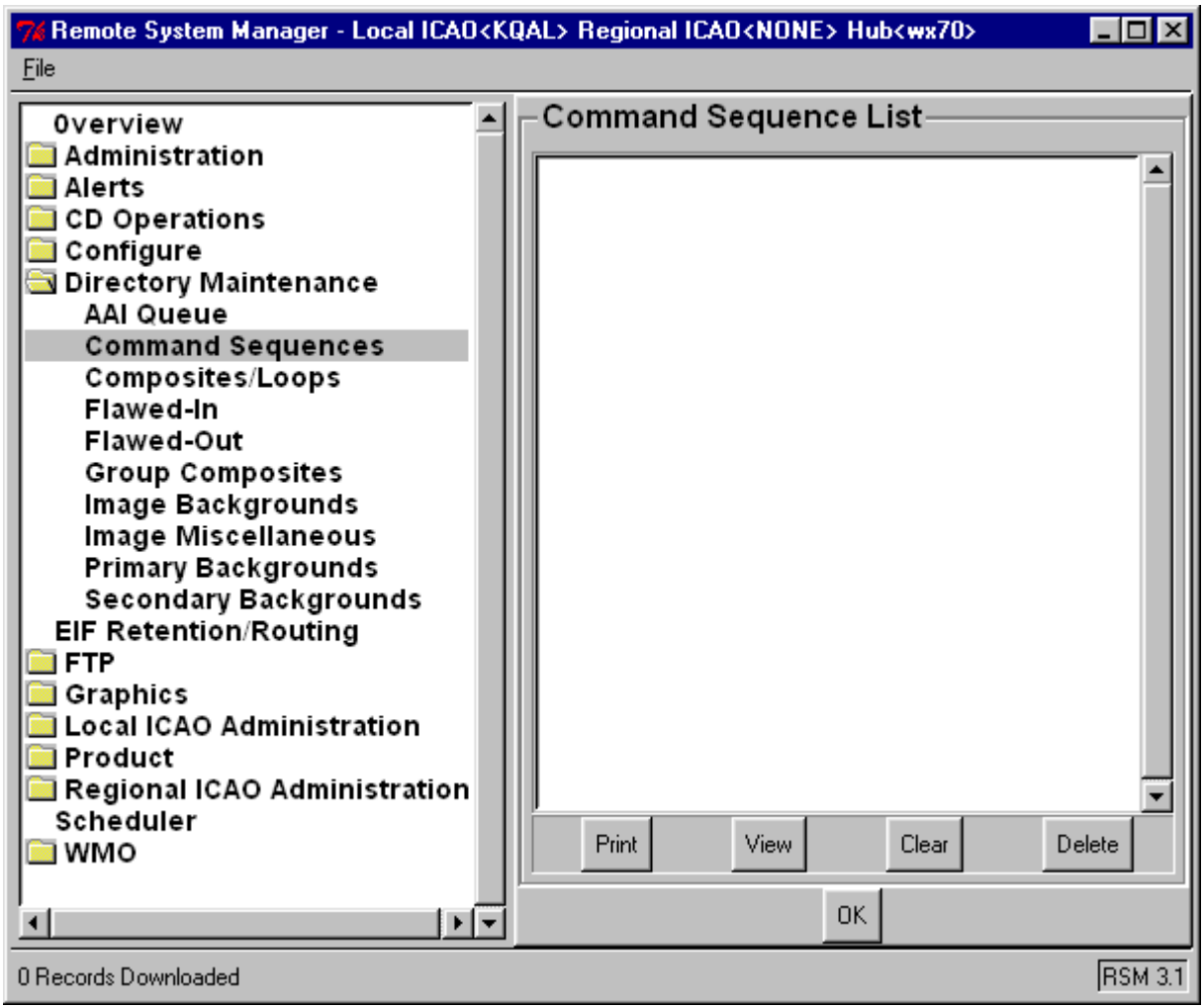
Command sequences are macros created from the MET Generation functions (see “Command Sequences” on page 5-61).The System Manager can print, view, and delete command sequences.

To access the Command Sequences directory, do the following:

1 Select the **Directory Maintenance** folder, and select **Command Sequences**.

A listing of the Command Sequences directory appears (see Figure 6.51).

Figure 6.51 Command Sequences



To delete command sequence file(s) from the Command Sequence directory, do the following:

1 In the **Command Sequence List** window, select a file name by clicking it.

2 Optionally, to select multiple files, do one of the following:

- To select multiple non-adjacent files, in the **Command Sequence List** window, hold down the **Ctrl** key and then click each file name you want to select.
- To select multiple adjacent files, in the **Command Sequence List** window, click at the start of the selection, scroll to the end of the selection, and then hold down the **Shift** key and click.

3 Optionally, to remove file names from selection, select **Clear**.

4 Select **Delete**.

*The file name(s) disappear from the **Command Sequence List** window.*

WARNING *There is no confirmation message associated with **Delete**. Once **Delete** is selected, the file is no longer accessible on disk.*

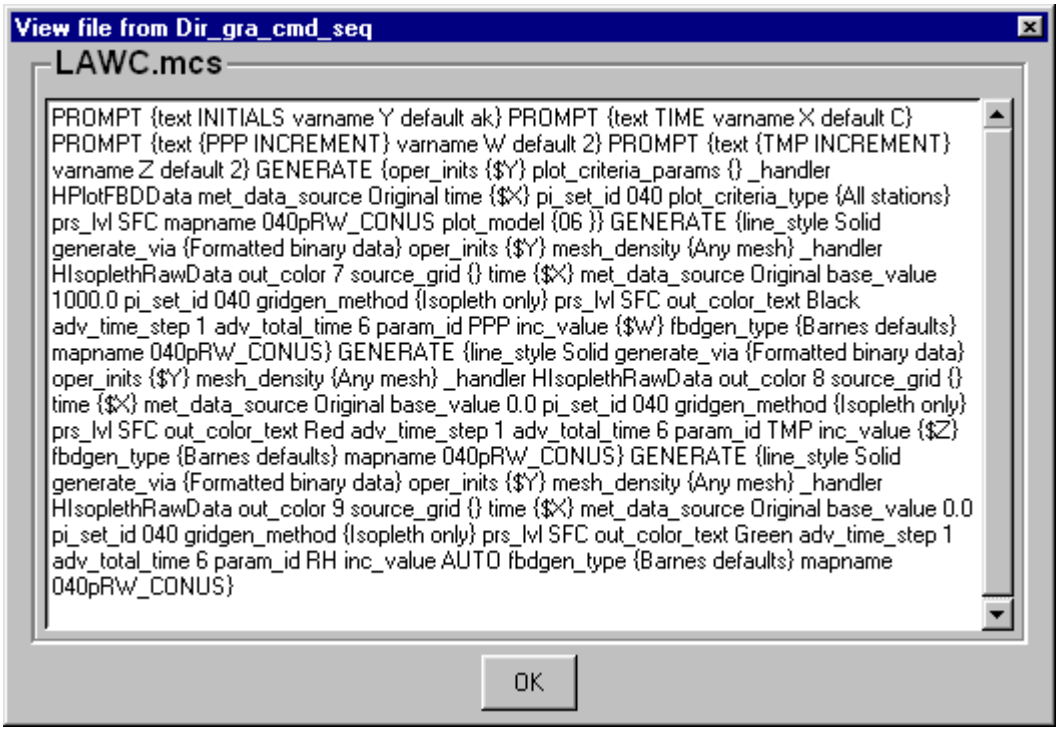
To view a command sequence file, do the following:

1 In the **Command Sequence List** window, select a file name by clicking it.

2 Select **View**.

A display of the command sequence file appears. The directory name and command sequence file name are displayed at top left of display (see Figure 6.52).

Figure 6.52 Command Sequences View



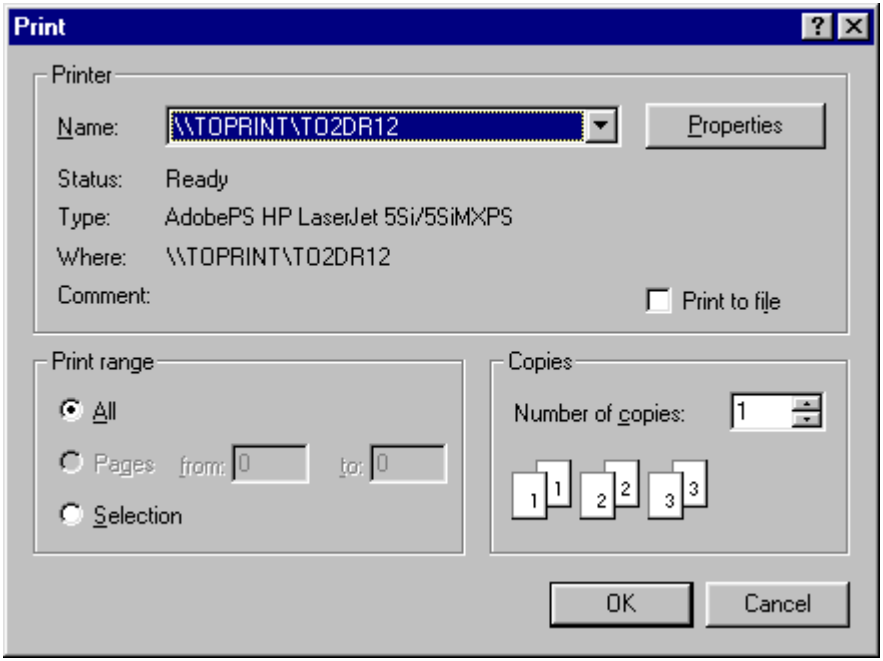
3 To leave the Command Sequences view display, select **OK**.

To print a command sequence file, do the following:

1 In the **Command Sequence List** window, select a command sequence file name by clicking it.

2 Select **Print**.

A print dialog appears.



3 At the Print dialog, select **OK**.

You are returned to the Command Sequences Directory display.

4 To leave the Command Sequences directory display, select **OK**.

Composites/Loops

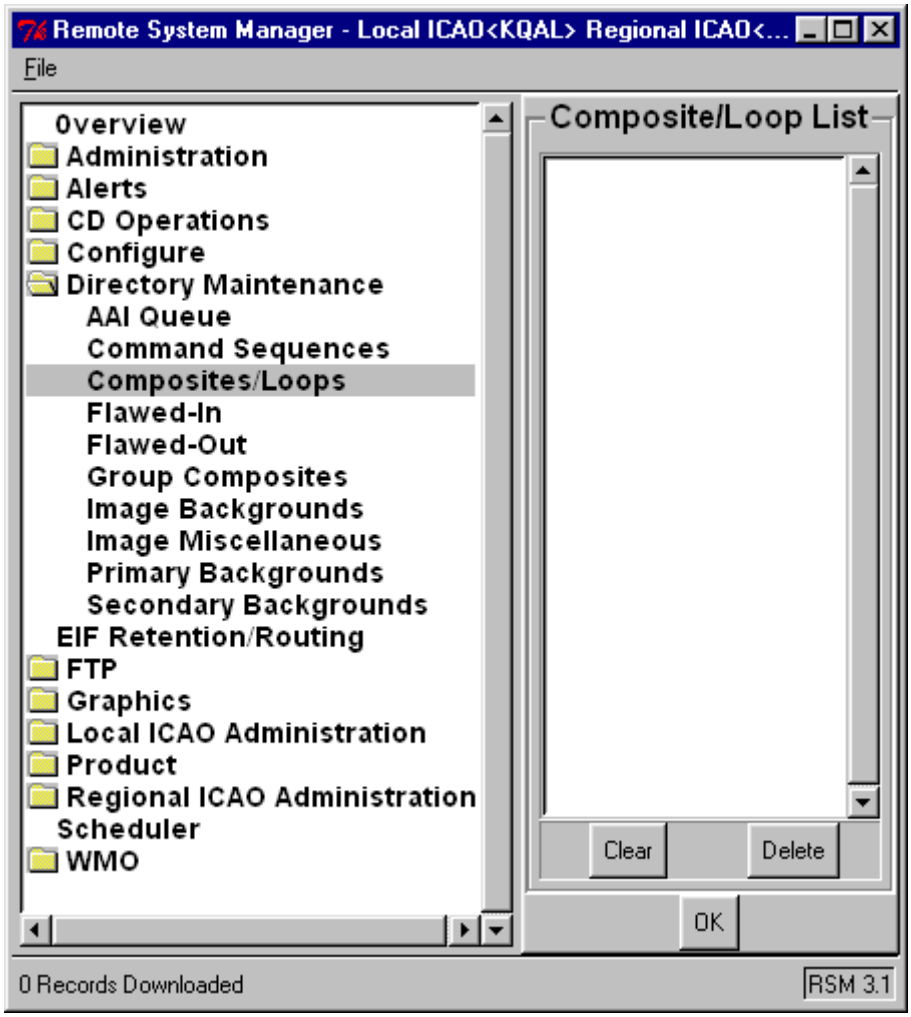
Composites/Loops are composites and loop sequences saved from the Weather Graphics functions (see “Weather Graphics” on page 4-1). The System Manager can delete such files.

To access the Composites/Loops directory, do the following:

1 Select the **Directory Maintenance** folder, and select **Composites/Loops**.

A listing of the Composites/Loops directory appears (see Figure 6.53).

Figure 6.53 Composites/Loops



To delete composite/loop file(s) from the Composite/Loops directory, do the following:

1 In the **Composite/Loop List** window, select a file name by clicking it.

2 Optionally, to select multiple files, do one of the following:

- To select multiple non-adjacent files, in the **Composite/Loop List** window, hold down the **Ctrl** key and then click each file name you want to select.
- To select multiple adjacent files, in the **Composite/Loop List** window, click at the start of the selection, scroll to the end of the selection, and then hold down the **Shift** key and click.

3 Optionally, to remove file names from selection, select **Clear**.

4 Select **Delete**.

*The file name(s) disappear from the **Composite/Loop List** window.*

WARNING *There is no confirmation message associated with **Delete**. Once **Delete** is selected, the file is no longer accessible on disk.*

5 To exit the Composite/Loop directory display, select **OK**.

Flawed-In

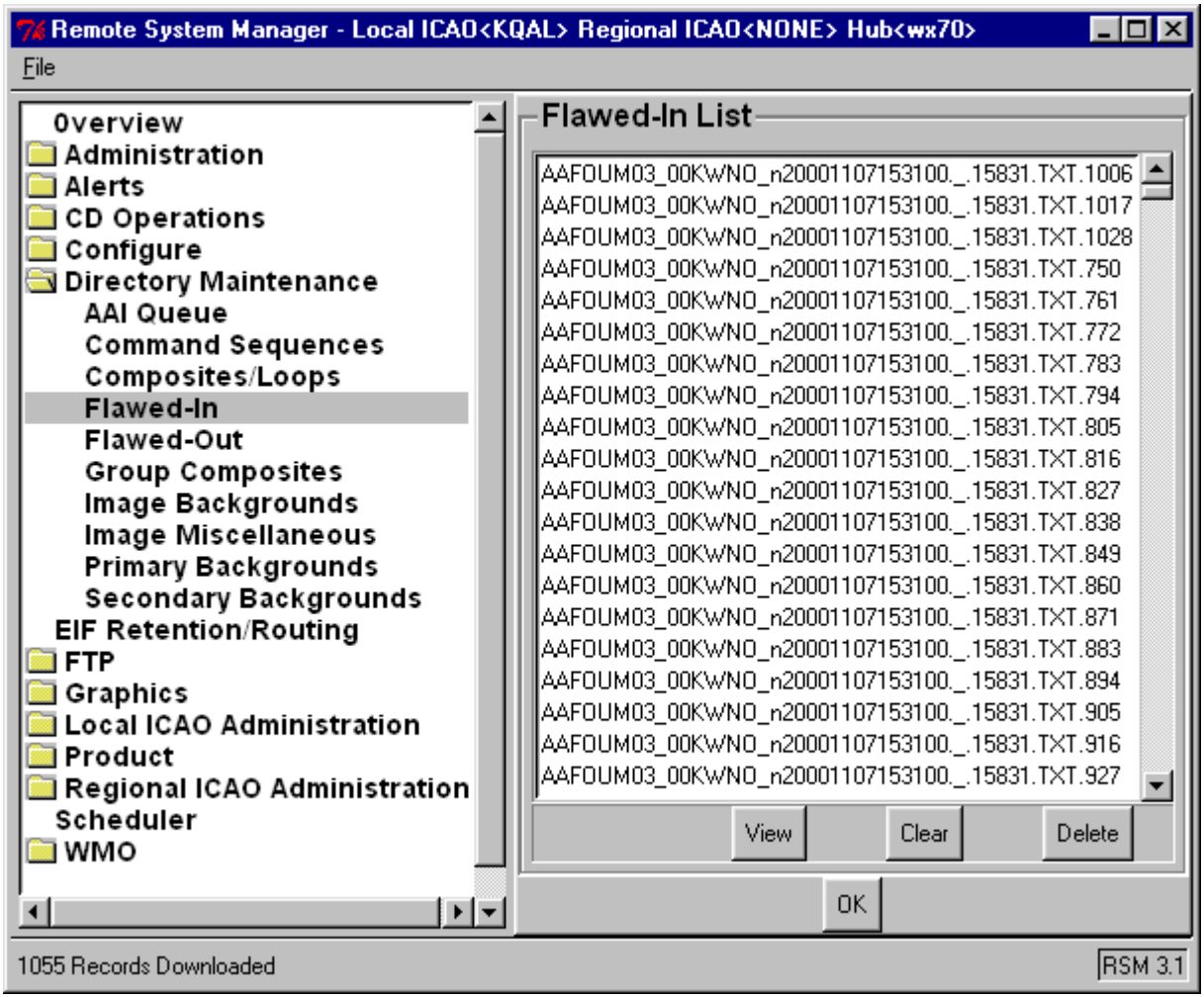
The Flawed_in directory contains flawed products received from external sources. The System Manager can view and delete such products.

To access the Flawed-In directory, do the following:

1 Select the **Directory Maintenance** folder, and select **Flawed-In**.

A listing of the Flawed-In directory appears (see Figure 6.54).

Figure 6.54 Flawed-In



To delete Flawed-In file(s) from the Flawed-In directory, do the following:

1 In the **Flawed-In List** window, select a file name by clicking it.

2 Optionally, to select multiple files, do one of the following:

- To select multiple non-adjacent files, in the **Flawed-In List** window, hold down the **Ctrl** key and then click each file name you want to select.
- To select multiple adjacent files, in the **Flawed-In List** window, click at the start of the selection, scroll to the end of the selection, and then hold down the **Shift** key and click.

3 Optionally, to remove file names from selection, select **Clear**.

4 Select **Delete**.

*The file name(s) disappear from the **Flawed-In List** window.*

WARNING *There is no confirmation message associated with **Delete**. Once **Delete** is selected, the file is no longer accessible on disk.*

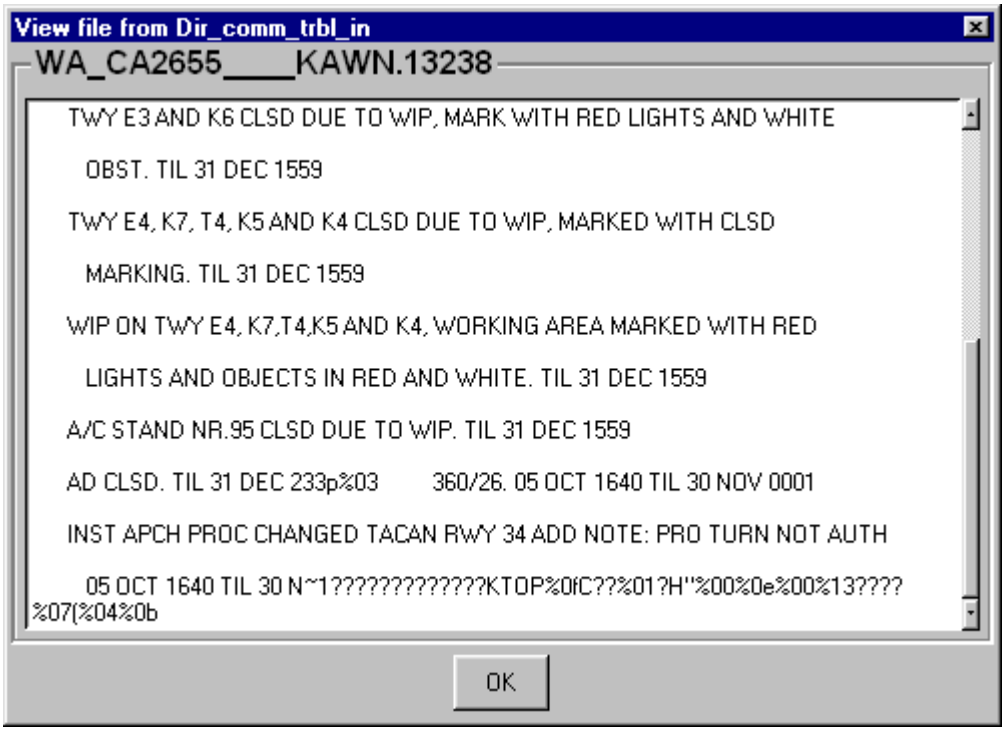
To view a flawed-in file, do the following:

1 In the **Flawed-In List** window, select a file name by clicking it.

2 Select **View**.

A display of the flawed-in file pops up (see Figure 6.55). The directory name and flawed-in file name are also displayed.

Figure 6.55 Flawed-In View



3 To exit the Flawed-In view display, select **OK**.

To exit the Flawed-In directory display, do the following:

1 Select **OK**.

Flawed-Out

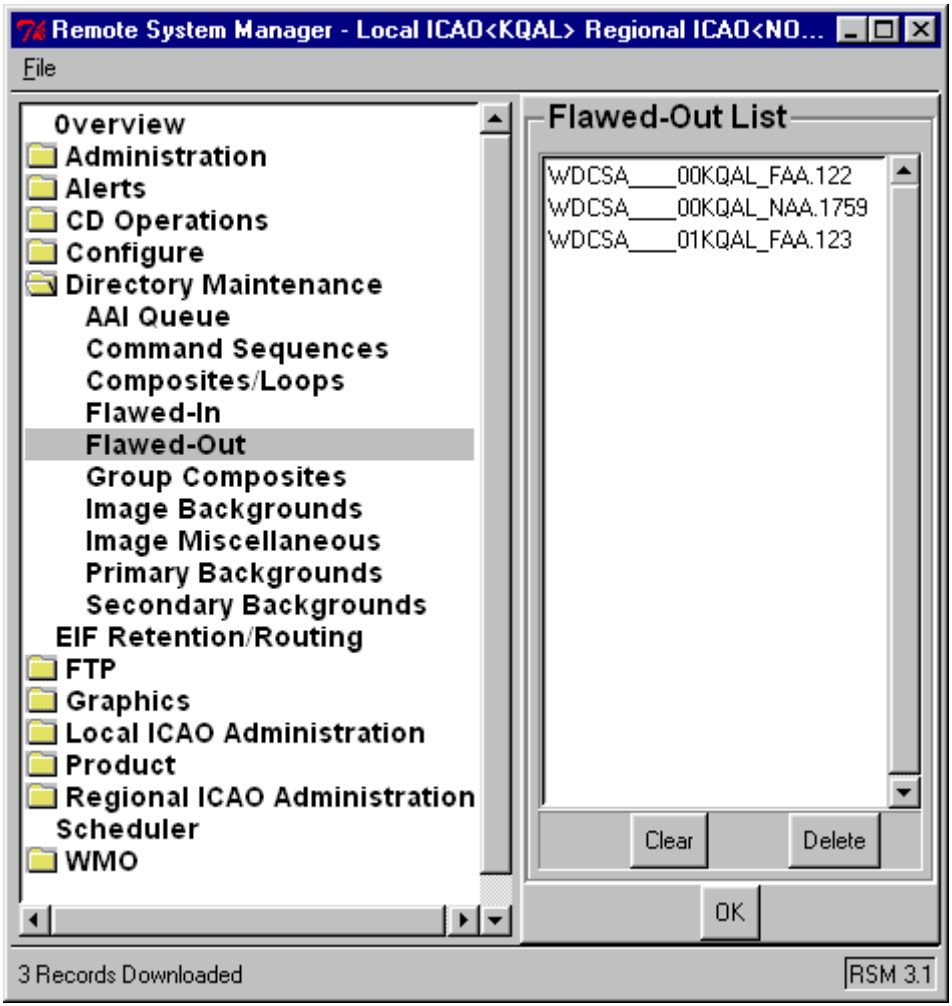
The Flawed-Out directory contains products that failed transmission out of the system. The System Manager can delete such products.

To access the Flawed-Out directory, do the following:

1 Select the **Directory Maintenance** folder, and select **Flawed-Out**.

A listing of the Flawed-Out directory appears (see Figure 6.56).

Figure 6.56 Flawed-Out



To delete Flawed-Out file(s) from the Flawed-Out directory, do the following:

1 In the **Flawed-Out List** window, select a file name by clicking it.

2 Optionally, to select multiple files, do one of the following:

- To select multiple non-adjacent files, in the **Flawed-Out List** window, hold down the **Ctrl** key and then click each file name you want to select.
- To select multiple adjacent files, in the **Flawed-Out List** window, click at the start of the selection, scroll to the end of the selection, and then hold down the **Shift** key and click.

3 Optionally, to remove file names from selection, select **Clear**.

4 Select **Delete**.

*The file name(s) disappear from the **Flawed-Out List** window.*

WARNING *There is no confirmation message associated with **Delete**. Once **Delete** is selected, the file is no longer accessible on disk.*

5 To exit the Flawed-In directory display, select **OK**.

Group Composites

The Group Composites directory contains Group Composite files. The System Manager can delete such files.

To access the Group Composites directory, do the following:

1 Select the **Directory Maintenance** folder, and select **Group Composites**.

A listing of the Group Composites directory appears (see Figure 6.57).

Figure 6.57 Group Composites

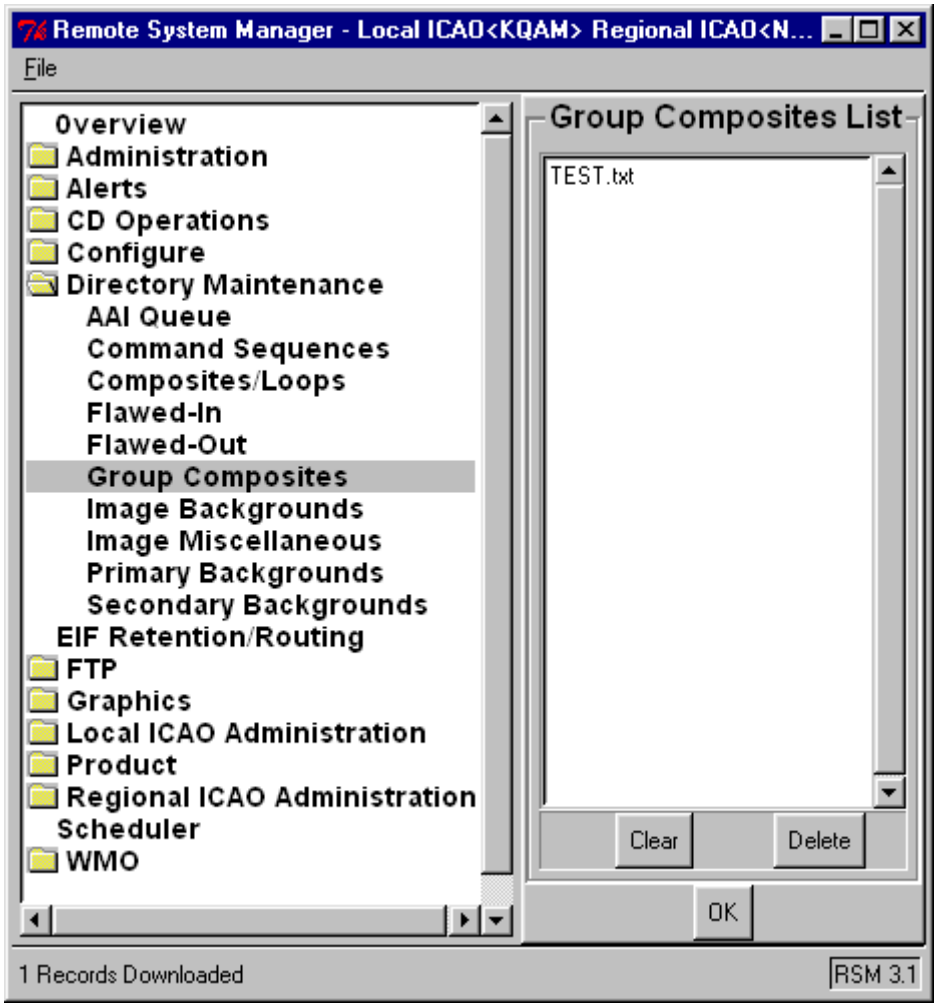


Image Backgrounds

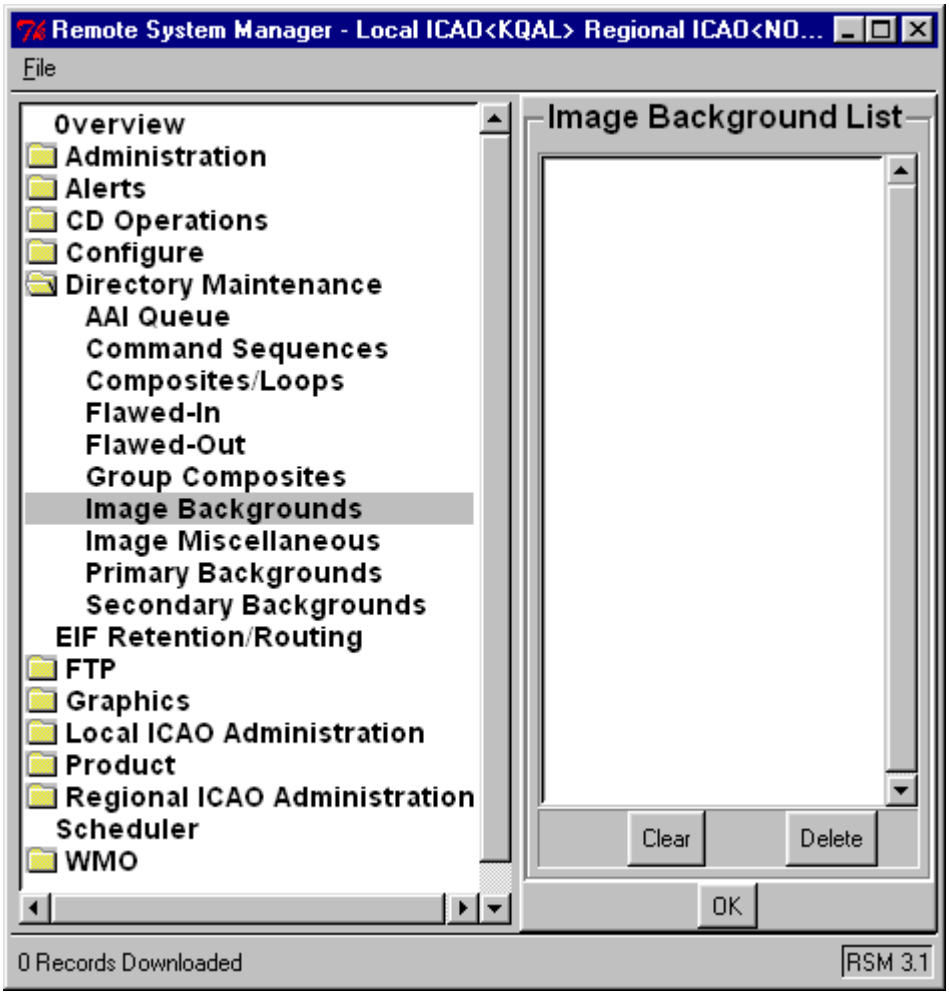
The Image Background directory contains image background files. The System Manager can delete such files.

To access the Image Backgrounds directory, do the following:

1 Select the **Directory Maintenance** folder, and select **Image Backgrounds**.

A listing of the Image Backgrounds directory appears (see Figure 6.58).

Figure 6.58 Image Backgrounds



To delete Image Background file(s) from the Image Background directory, do the following:

1 In the **Image Background List** window, select a file name by clicking it.

2 Optionally, to select multiple files, do one of the following:

- To select multiple non-adjacent files, in the **Image Background List** window, hold down the **Ctrl** key and then click each file name you want to select.
- To select multiple adjacent files, in the **Image Background List** window, click at the start of the selection, scroll to the end of the selection, and then hold down the **Shift** key and click.

3 Optionally, to remove file names from selection, select **Clear**.

4 Select **Delete**.

*The file name(s) disappear from the **Image Background List** window.*

WARNING *There is no confirmation message associated with **Delete**. Once **Delete** is selected, the file is no longer accessible on disk.*

5 To exit the **Image Background** directory display, select **OK**.

Image Miscellaneous

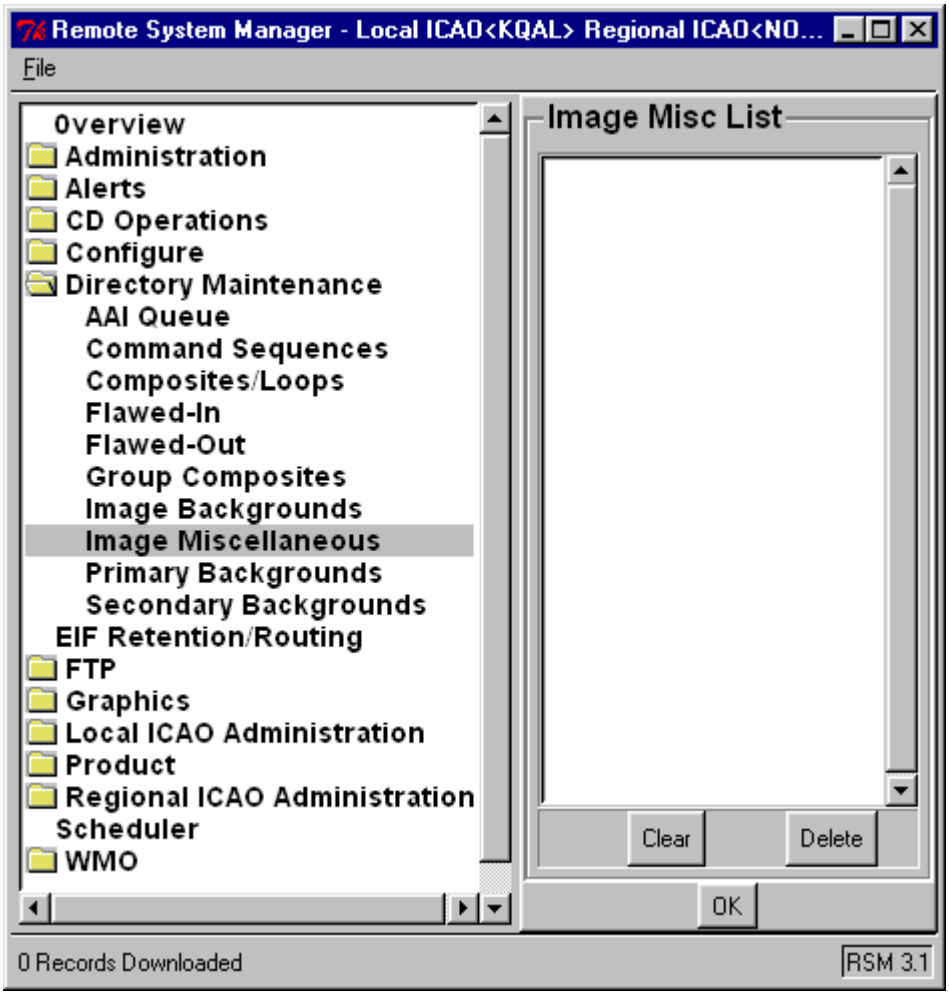
The Image Miscellaneous directory contains miscellaneous image files. The System Manager can delete such files.

To access the Image Miscellaneous directory, do the following:

1 Select the **Directory Maintenance** folder, and select **Image Miscellaneous**.

A listing of the Image Miscellaneous directory appears (see Figure 6.59).

Figure 6.59 Image Miscellaneous



To delete Image Miscellaneous file(s) from the Image Miscellaneous directory, do the following:

1 In the **Image Misc List** window, select a file name by clicking it.

2 Optionally, to select multiple files, do one of the following:

- To select multiple non-adjacent files, in the **Image Misc List** window, hold down the **Ctrl** key and then click each file name you want to select.
- To select multiple adjacent files, in the **Image Misc List** window, click at the start of the selection, scroll to the end of the selection, and then hold down the **Shift** key and click.

3 Optionally, to remove file names from selection, select **Clear**.

4 Select **Delete**.

*The file name(s) disappear from the **Image Misc List** window.*

WARNING *There is no confirmation message associated with **Delete**. Once **Delete** is selected, the file is no longer accessible on disk.*

5 To exit the **Image Misc** directory display, select **OK**.

Primary Backgrounds

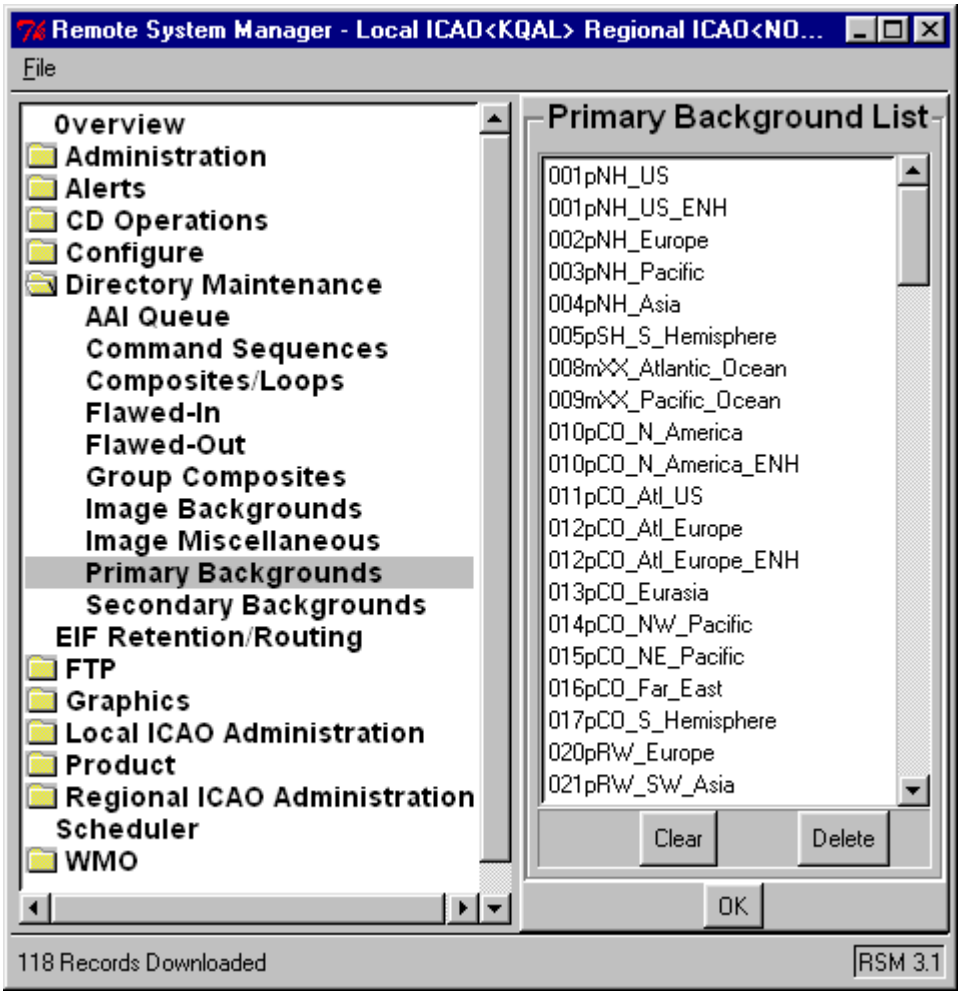
The Primary Backgrounds directory contains primary background files and user-defined Area-of-Interest (AOI) map files. The System Manager can delete such files.

To access the Primary Backgrounds directory, do the following:

1 Select the **Directory Maintenance** folder, and select **Primary Backgrounds**.

A listing of the Primary Backgrounds directory appears (see Figure 6.60).

Figure 6.60 Primary Backgrounds



To delete Primary Background file(s) from the Primary Backgrounds directory, do the following:

1 In the **Primary Background List** window, select a file name by clicking it.

2 Optionally, to select multiple files, do one of the following:

- To select multiple non-adjacent files, in the **Primary Background List** window, hold down the **Ctrl** key and then click each file name you want to select.
- To select multiple adjacent files, in the **Primary Background List** window, click at the start of the selection, scroll to the end of the selection, and then hold down the **Shift** key and click.

3 Optionally, to remove file names from selection, select **Clear**.

4 Select **Delete**.

*The file name(s) disappear from the **Primary Background List** window.*

WARNING *There is no confirmation message associated with **Delete**. Once **Delete** is selected, the file is no longer accessible on disk.*

5 To exit the **Primary Background** directory display, select **OK**.

Secondary Backgrounds

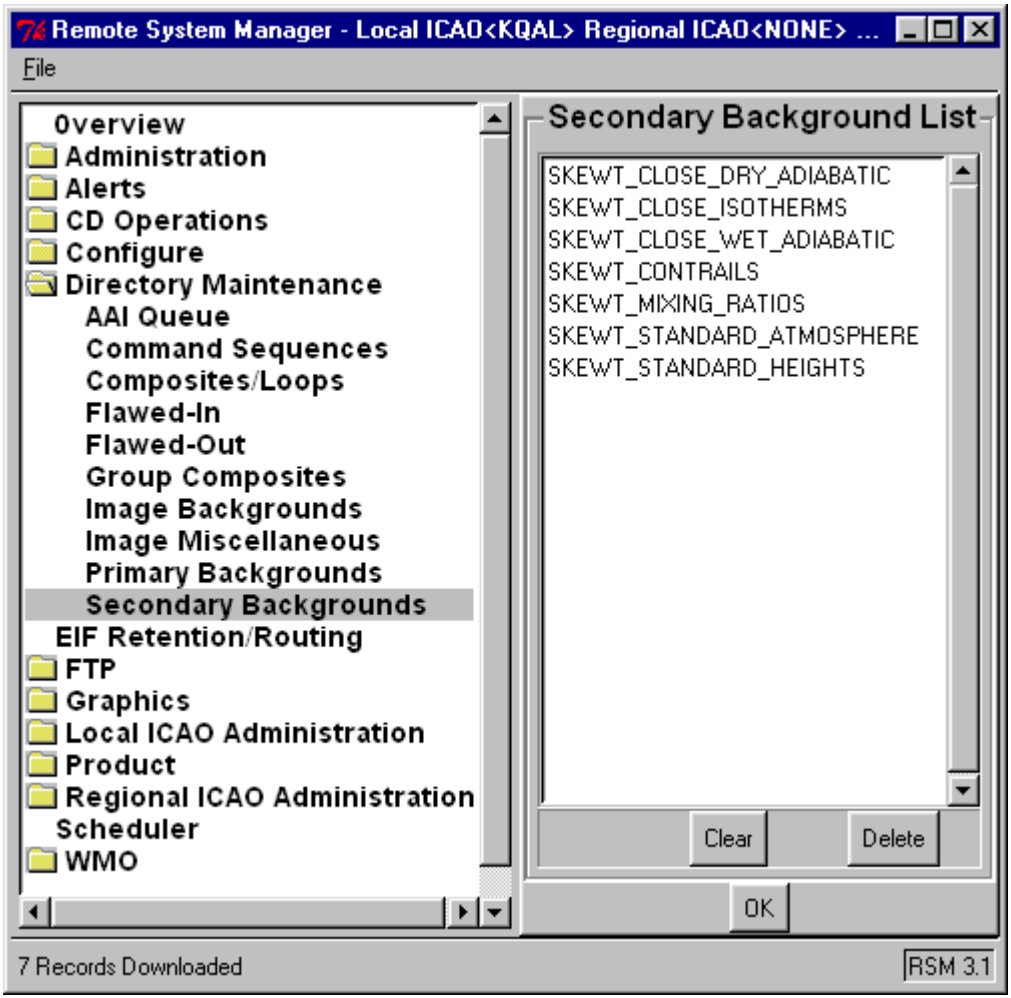
The Secondary Background directory contains secondary background files. The System Manager can delete such files.

To access the Secondary Backgrounds directory, do the following:

1 Select the **Directory Maintenance** folder, and select **Secondary Backgrounds**.

A listing of the Secondary Backgrounds directory appears (see Figure 6.61).

Figure 6.61 Secondary Backgrounds



To delete Secondary Background file(s) from the Secondary Backgrounds directory, do the following:

1 In the **Secondary Background List** window, select a file name by clicking it.

2 Optionally, to select multiple files, do one of the following:

- To select multiple non-adjacent files, in the **Secondary Background List** window, hold down the **Ctrl** key and then click each file name you want to select.

- To select multiple adjacent files, in the **Secondary Background List** window, click at the start of the selection, scroll to the end of the selection, and then hold down the **Shift** key and click.

3 Optionally, to remove file names from selection, select **Clear**.

4 Select **Delete**.

*The file name(s) disappear from the **Secondary Background List** window.*

WARNING *There is no confirmation message associated with **Delete**. Once **Delete** is selected, the file is no longer accessible on disk.*

5 To exit the **Secondary Background** directory display, select **OK**.

EIF Retention/Routing

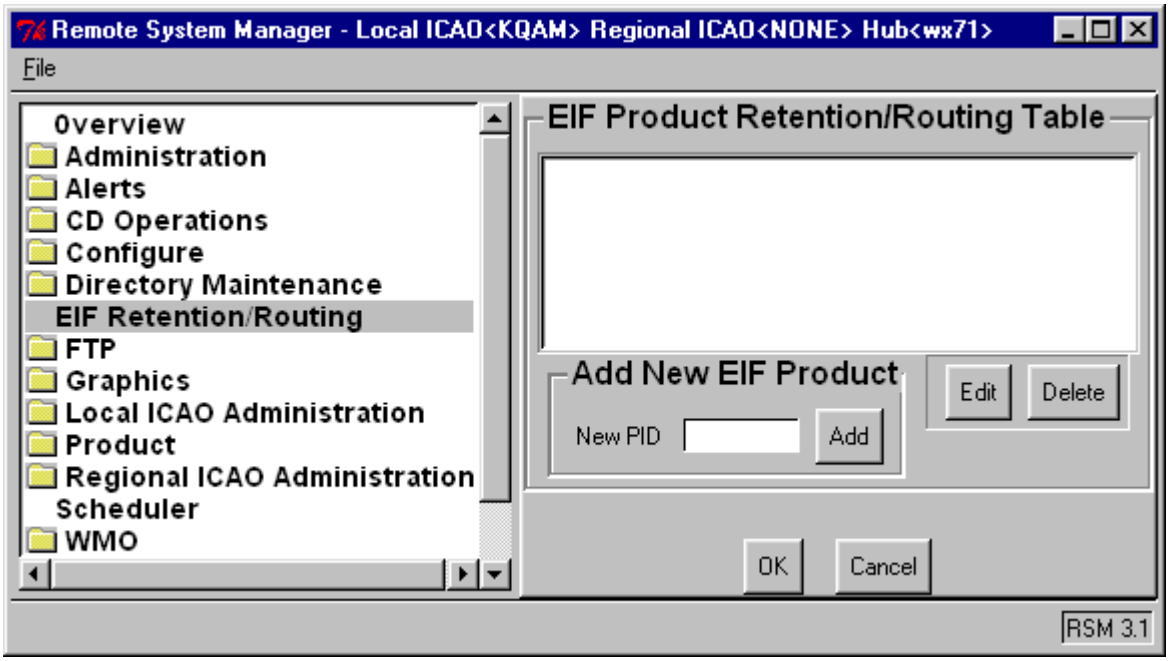
The EIF Retention/Routing table enables the System Manager to specify EIF products to be retained and routed to specified C^2 sites. For additional information, see "PPC Software Overview" on page 1-6.

To access the EIF Retention/Routing table, do the following:

1 From the RSM folder list, select **EIF Retention/Routing**.

The EIF Product Retention/Routing table appears (see Figure 6.62).

Figure 6.62 EIF Product Retention/Routing Table



To add a PID, do the following:

1 At **New PID**, enter PID.

PID format is described in Appendix II, "File Naming Conventions". Two types of PIDs are valid input to this table:

- *AFWA/AWN Full External PIDs—these are the same PIDs that are entered into the Product Retention table (for example, AA2336 (AWN) or GVAFUS4943 (AFWA)).*
- *Wildcarded PIDs—these are shortened versions of the above described PIDs. For example, to route all AFWA Miscellaneous Analysis Vector Graphic products, input GVAX into the table to route all products whose PIDs begin with GVAX.*

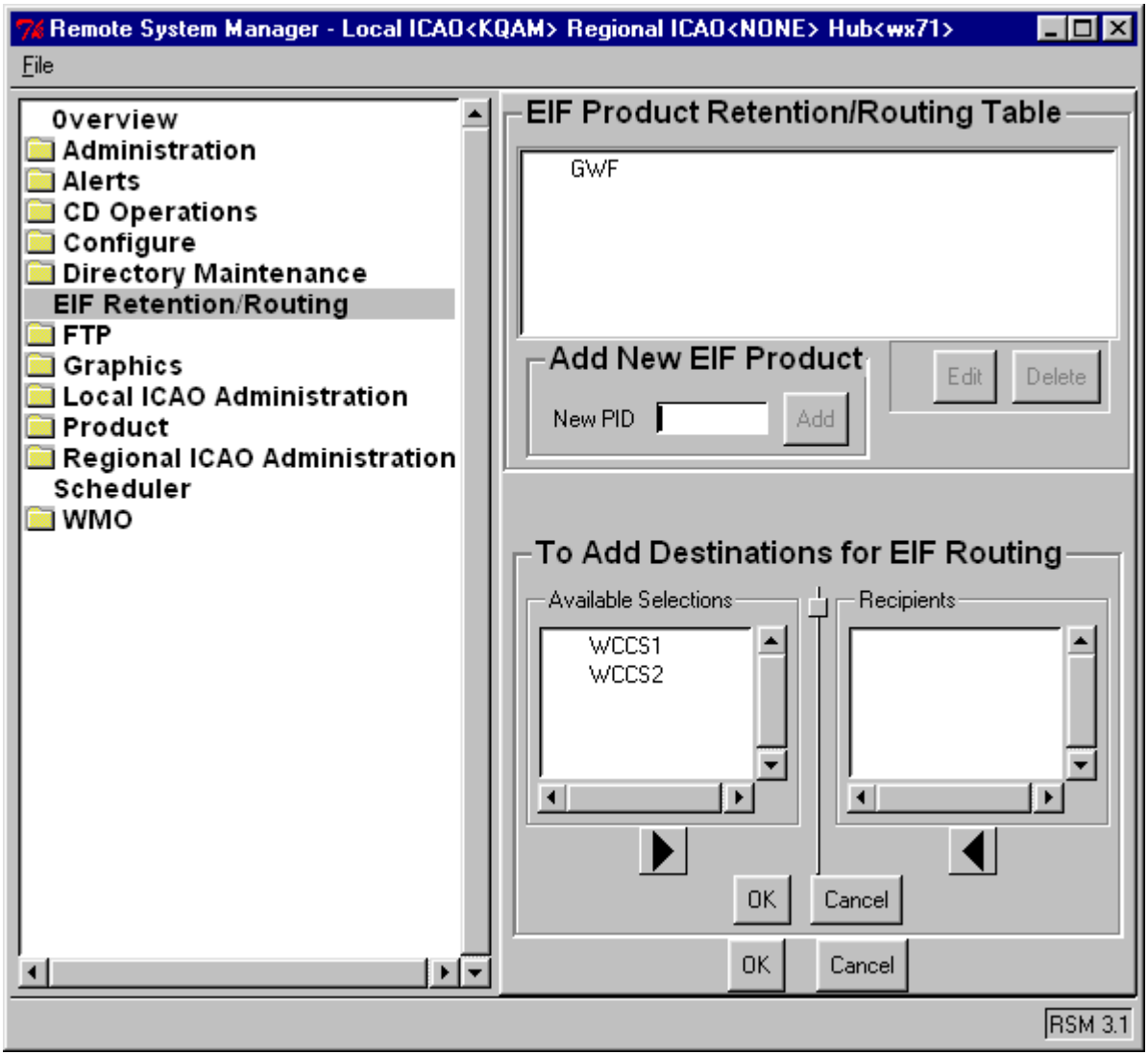
PIDs are case sensitive. Enter the PIDs exactly as they are issued by the respective agency (for example, IVAHNA rather than ivahna).

2 Select **Add**.

The new PID is listed in the top window.

The Add Recipients panel appears (see Figure 6.63).

Figure 6.63 EIF Retention/Routing Add Recipients Panel



3 The selections listed under **Available Selections** are the candidate recipients. The entries ultimately listed under **Recipients** are the actual recipients. To adjust the **Available Selections** and/or **Recipients** list, do one of the following:

- To move an entry from one list to the other, double click the entry.
- To move an entry from the **Available Selections** list to the **Recipients** list, highlight the entry and select the right arrow button ▶.

- To move an entry from the **Recipients** list to the **Available Selections** list, highlight the entry and select the left arrow button .

4 Do one of the following:

- To exit the **To Add Recipients** function and save any changes, select **OK**.
- To exit the **To Add Recipients** function without saving any changes, select **Cancel**.

To modify an existing entry, do the following:

1 At the top window, select the PID of the entry to modify.

2 Select **Edit**.

*The **To Add Recipients** panel will appear.*

3 Adjust the **Recipients** list as desired (see step 3, above).

4 Do one of the following:

- To exit the **To Add Recipients** function and save any changes, select **OK**.
- To exit the **To Add Recipients** function without saving any changes, select **Cancel**.

To delete an existing entry, do the following:

1 At the top window, select the PID of the entry to delete.

2 Select **Delete**.

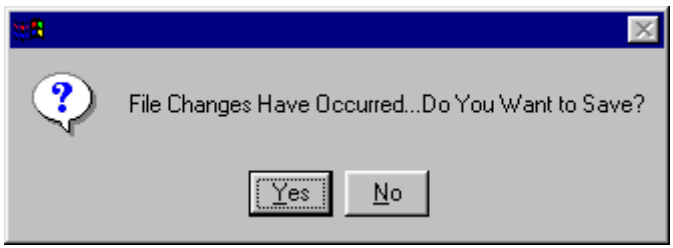
The PID disappears from the top window.

To exit the table, do the following:

1 To exit while saving any changes, select **OK**.

2 To exit while not saving changes, select **Cancel**.

If modifications have been made, a Cancel Dialog appears.



Do one of the following:

- *To save changes, select **Yes**.*
- *To not save changes, select **No**.*

FTP

AMIS, via FTP, has the ability to ingest a variety of products from several sources. AMIS makes use of certain system information in it's various FTP tables, allowing it to fetch data from external sources. These tables specify information such as ingest locations and VSAT and WPMDS configuration information. Additionally, AMIS allows external systems to establish FTP connection with it based on information in the Ingest Authorization table.

Ingest Authorizations

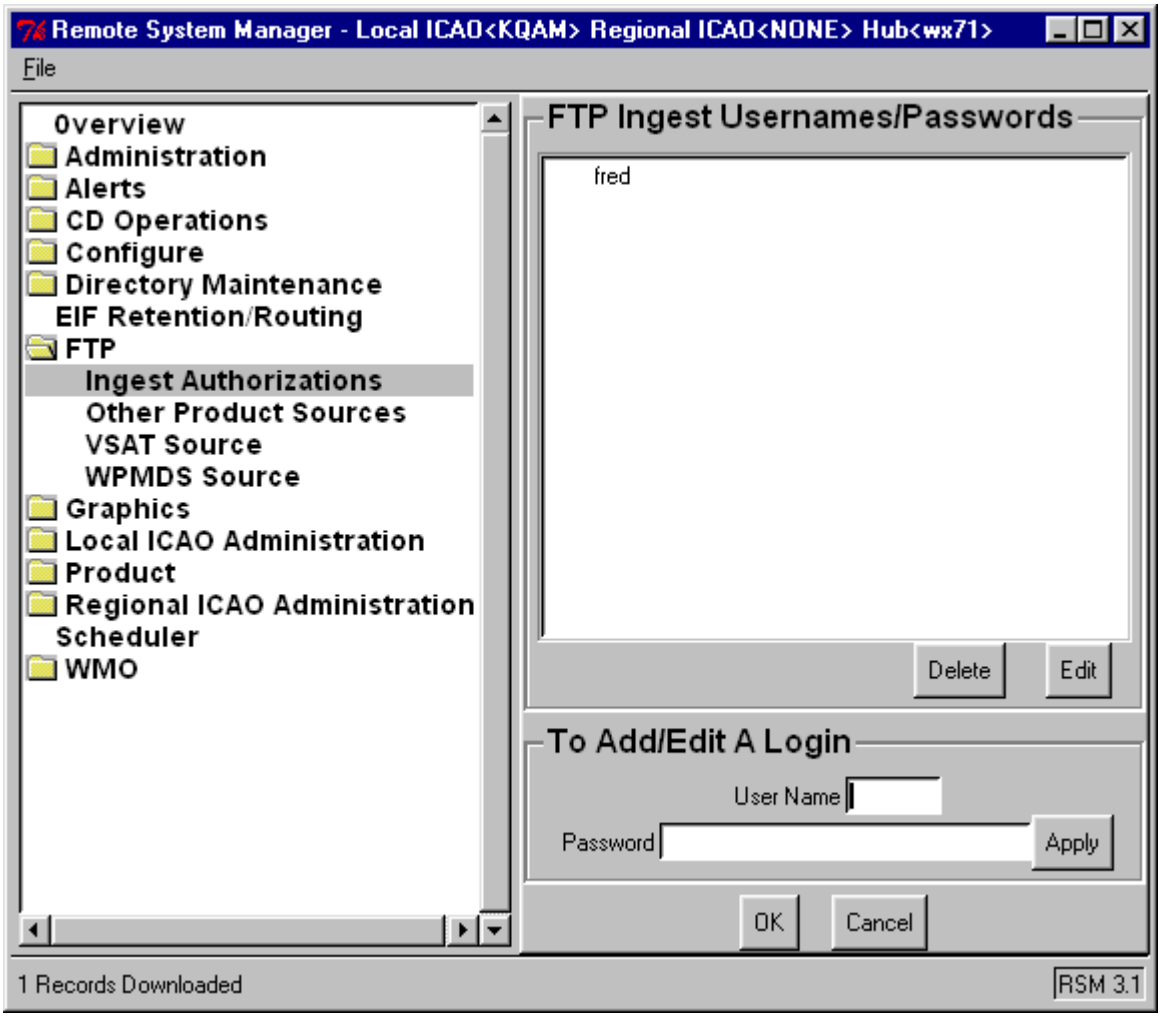
The **Ingest Authorizations** table enables the System Manager to configure a user name and password for use by an external system to establish an FTP connection with AMIS. Once the N-TFS Server validates the user name/ password, the external system can transfer files into a selected N-TFS Server directory.

To access the Ingest Authorizations table, do the following:

1 Select the **FTP** folder and select **Ingest Authorizations**.

The Ingest Authorizations table appears (see Figure 6.64).

Figure 6.64 FTP Ingest Authorizations Table



To add a user name and password for use by the external system, do the following:

1 At **User Name**, enter the user name.

2 At **Password**, enter the password.

3 Select **Apply**.

*The user name is listed in the window at **FTP Ingest Usernames/ Passwords.***

To modify an existing user name or password, do the following:

1 At **FTP Ingest Usernames/Passwords**, select the entry to be modified.

2 Select **Edit**.

*The **User Name** and **Password** windows are populated with the respective user name and password.*

3 Make changes to either or both user name and password entries.

4 To save changes, select **Apply**.

To delete an existing user name and password, do the following:

1 At **FTP Ingest Usernames/Passwords**, select the entry to be deleted.

2 Select **Delete**.

*The respective user name is removed from the window at **FTP Ingest Usernames/Passwords.***

To exit the table, do one of the following:

- To exit and save changes, select **OK**.
- To exit without saving changes, select **Cancel**.

Other Product Sources

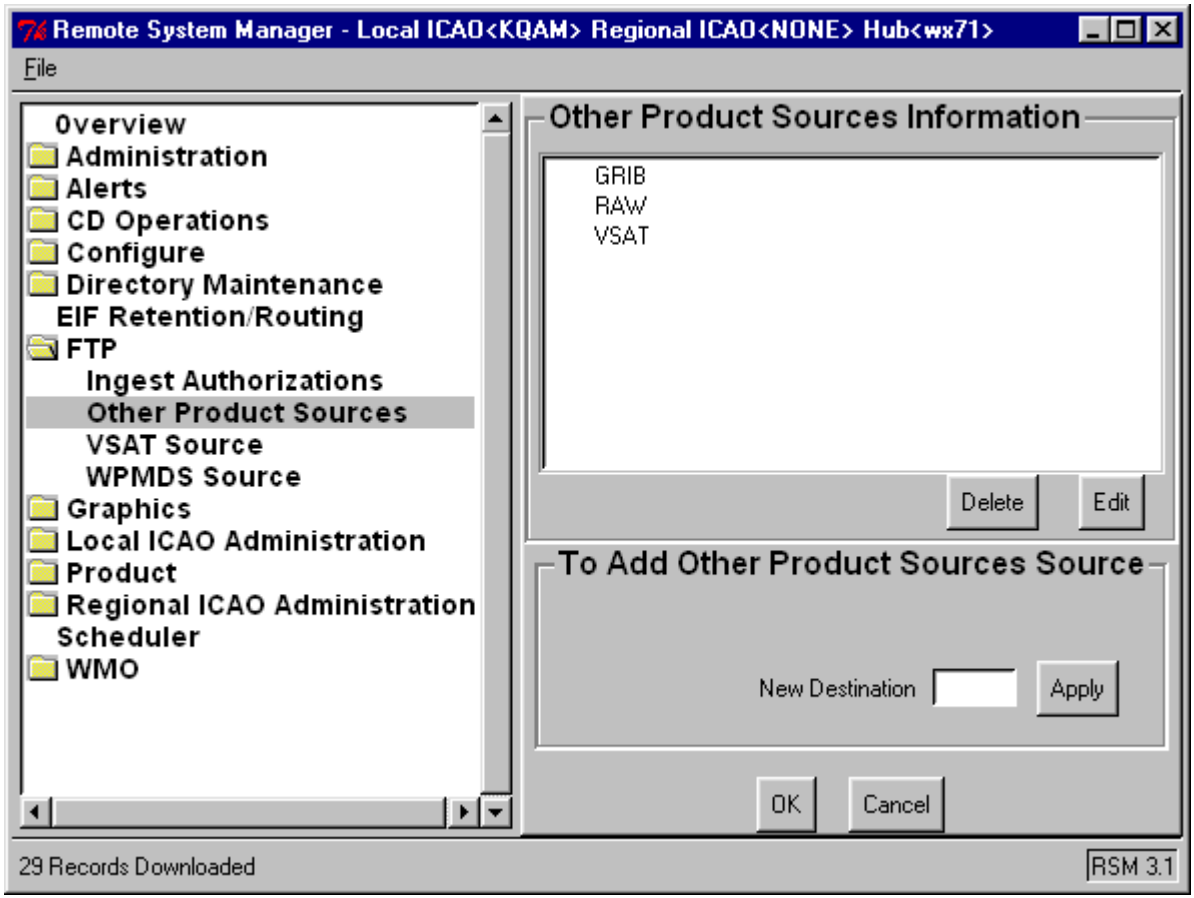
The Other Product Sources table enables the System Manager to specify FTP connection information for an external data source. This information forms the basis for AMIS to establish an FTP connection to ingest products into the AMIS database. For AMIS to successfully store products, the data types of the products must be supported by the AMIS database. On the basis of the information in this table, at specified times, AMIS establishes an FTP session with the external system and gets the product files from the specified directory on the external system.

To access the Other Product Sources table, do the following:

1 Select the **FTP** folder and select **Other Product Sources**.

The Other Product Sources table appears (see Figure 6.65).

Figure 6.65 FTP Other Product Sources Table



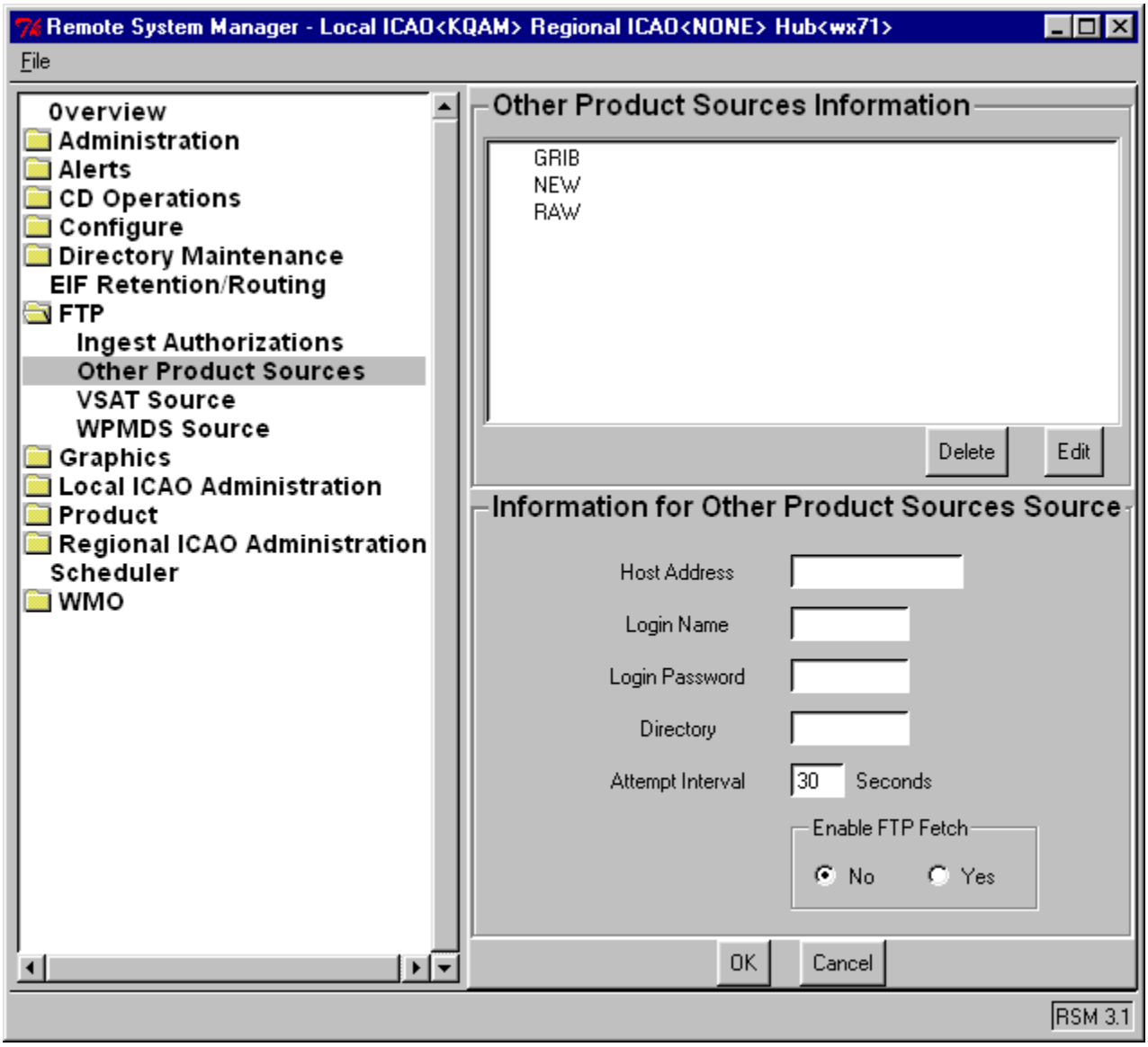
To add a new ingest source (non-VSAT, non-WPMDS), do the following:

1 At **New Destination**, enter a name for the external source system.

2 Select **Apply**.

*The new ingest source name is listed in the **Other Product Sources Information** window and a information panel appears (see Figure 6.66).*

Figure 6.66 Adding FTP Ingest Source Information Panel



3 At **Host Address**, enter the IP address of the new ingest source.

You may need to contact the System Administrator for this information.

4 At **Login Name**, enter the login name for the FTP account on the external source system.

The System Administrator of the new ingest source system must set up an account on that system for this purpose. You may need to contact the System Administrator for this login name and password.

5 At **Login Password**, enter the password for the account on the external source system.

The System Administrator of the new ingest source system must set up an account on that system for this purpose. You may need to contact the System Administrator for this login name and password.

6 At **Directory**, enter the full pathname of the directory on the external source system from which the products will be retrieved.

7 At **Attempt Interval**, enter a time interval (in seconds). AMIS initiates FTP connection with the external source system in accordance with this time interval.

8 At **Enable FTP Fetch**, do one of the following:

- Select **Yes** to enable the product ingest activity.
- Select **No** to disable the product ingest activity.

9 To exit the table, do one of the following:

- Select **OK** exit and save changes.
- Select **Cancel** to exit without saving changes.

To modify information for an existing ingest source, do the following:

1 In the **Other Product Sources Information** window, select the ingest source name.

2 Select **Edit**.

The information panel appears, with the information fields populated with the corresponding data for the ingest source.

3 At the populated information fields, make any desired changes.

4 Do one of the following:

- Select **OK** to exit and save changes.
- Select **Cancel** to exit without saving changes.

To delete an existing ingest source, do the following:

1 In the **Other Product Sources Information** window, select the ingest source name.

2 Select **Delete**.

*The name is removed from the list in the **Other Product Sources Information**.*

VSAT Source

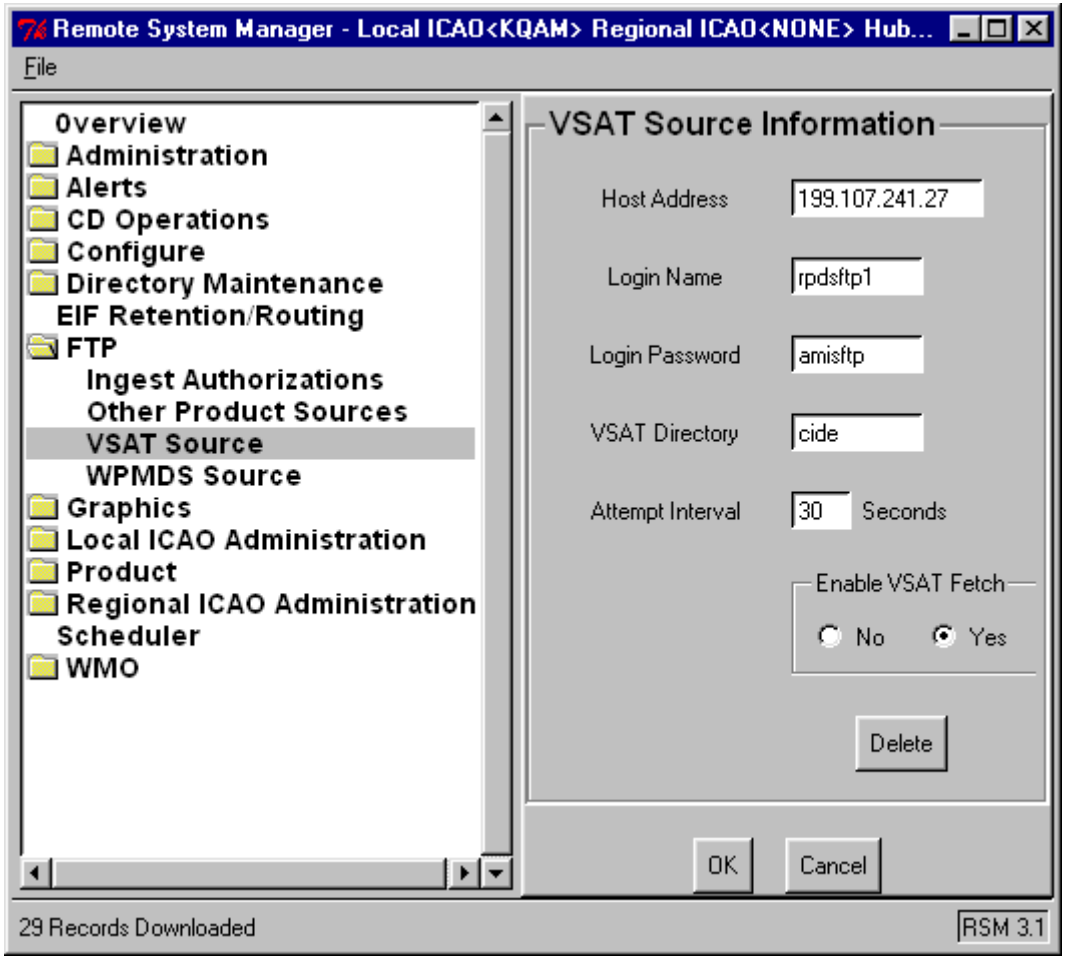
The VSAT Source table enables the System Manager to specify FTP connection information for one VSAT source. This information forms the basis for AMIS to establish an FTP connection to ingest product files from the specified directory on the VSAT system into the AMIS database.

To access the VSAT Source table, do the following:

1 Select the **FTP** folder and select **VSAT Source**.

The FTP VSAT Source table appears (see Figure 6.67).

Figure 6.67 FTP VSAT Source Table



To specify for the first time, or to edit the VSAT source information, do the following:

1 At **Host Address**, enter the IP address of the VSAT source.

You may need to contact the System Administrator for this information.

2 At **Login Name**, enter the login name for the FTP account on the VSAT source system.

The System Administrator of the VSAT source system must set up an account on that system for this purpose. You may need to contact the System Administrator for this login name and password.

3 At **Login Password**, enter the password for the account on the VSAT source system.

The System Administrator of the VSAT source system must set up an account on that system for this purpose. You may need to contact the System Administrator for this login name and password.

4 At **VSAT Directory**, enter the full pathname of the directory on the VSAT source system from which the products will be retrieved.

5 At **Attempt Interval**, enter a time interval (in seconds). AMIS initiates FTP connection with the VSAT source system in accordance with this time interval.

6 At **Enable VSAT Fetch**, do one of the following:

- Select **Yes** to enable this VSAT fetch activity.
- Select **No** to disable this VSAT fetch activity.

7 To exit the table, do one of the following:

- Select **OK** exit and save changes.
- Select **Cancel** to exit without saving changes.

To delete the VSAT source, or to clear all information fields, do the following:

1 Select **Delete**.

2 To exit the table, do one of the following:

- Select **OK** exit and save changes.
- Select **Cancel** to exit without saving changes.

WPMDS Source

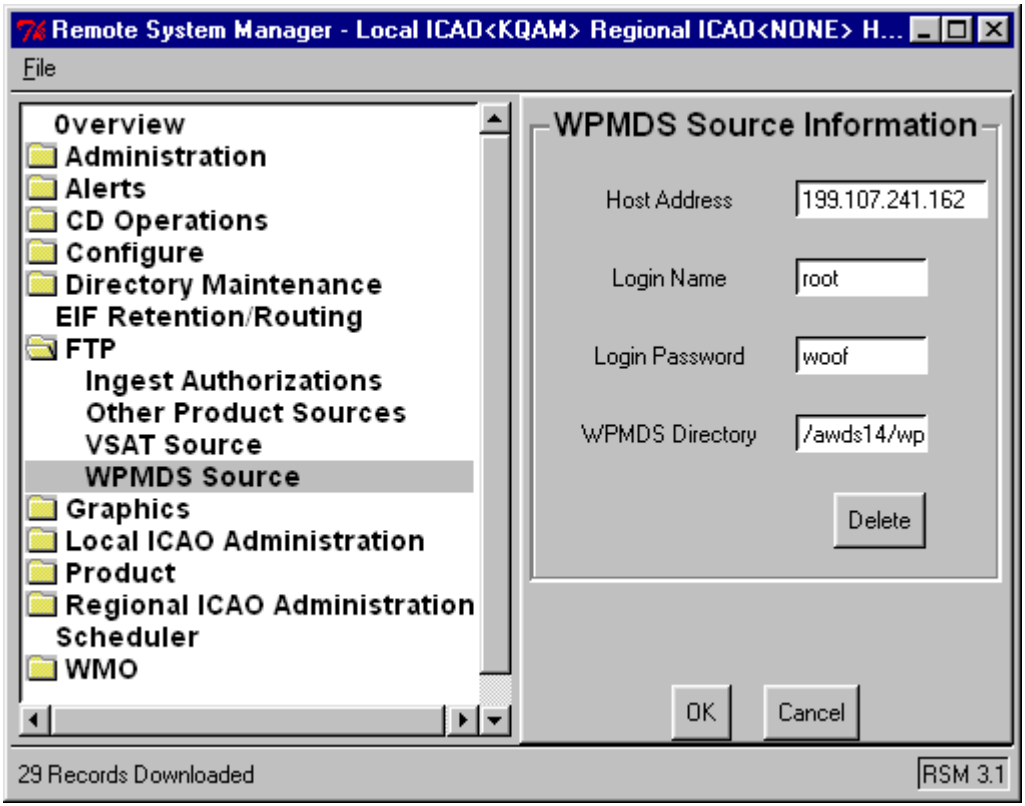
The WPMDS Source table enables the System Manager to specify FTP connection information for one WPMDS system. This information forms the basis for AMIS to establish an FTP connection to transfer product files to the specified directory on the WPMDS system.

To access the WPMDS Source table, do the following:

1 Select the **FTP** folder and select **WPMDS Source**.

The FTP WPMDS Source table appears (see Figure 6.68).

Figure 6.68 FTP WPMDS Source Screen



To specify for the first time, or to edit the WPMDS system information, do the following:

1 At **Host Address**, enter the IP address of the WPMDS system.

You may need to contact the System Administrator of the WPMDS system for this information.

2 At **Login Name**, enter the login name for the FTP account on the WPMDS system.

The System Administrator of the WPMDS system must set up an account on that system for this purpose.

You may need to contact the System Administrator of the WPMDS system for this information.

3 At **Login Password**, enter the password for the account on the WPMDS system.

The System Administrator of the WPMDS system must set up an account on that system for this purpose.

You may need to contact the System Administrator of the WPMDS system for this information.

4 At **WPMDS Directory**, enter the full pathname of the directory on the WPMDS system to which the product files will be transferred.

You may need to contact the System Administrator of the WPMDS system for this information.

*Some systems do not require that you specify a directory to FTP into. For these cases, at **WPMDS Directory**, enter an "*" character to indicate that that no "change directory (cd)" is required.*

5 To exit the table, do one of the following:

- Select **OK** exit and save changes.
- Select **Cancel** to exit without saving changes.

To delete the WPMDS system, or to clear all information fields, do the following:

1 Select **Delete**.

To exit the table, do one of the following:

- Select **OK** exit and save changes.
- Select **Cancel** to exit without saving changes.

Graphics

The Graphics functions enable the System Manager to administer and maintain the AMIS MET generation isopleth and Skew-T settings. Additionally, the System Manager can download Government approved composites and macros from General Dynamics.

Download Composites

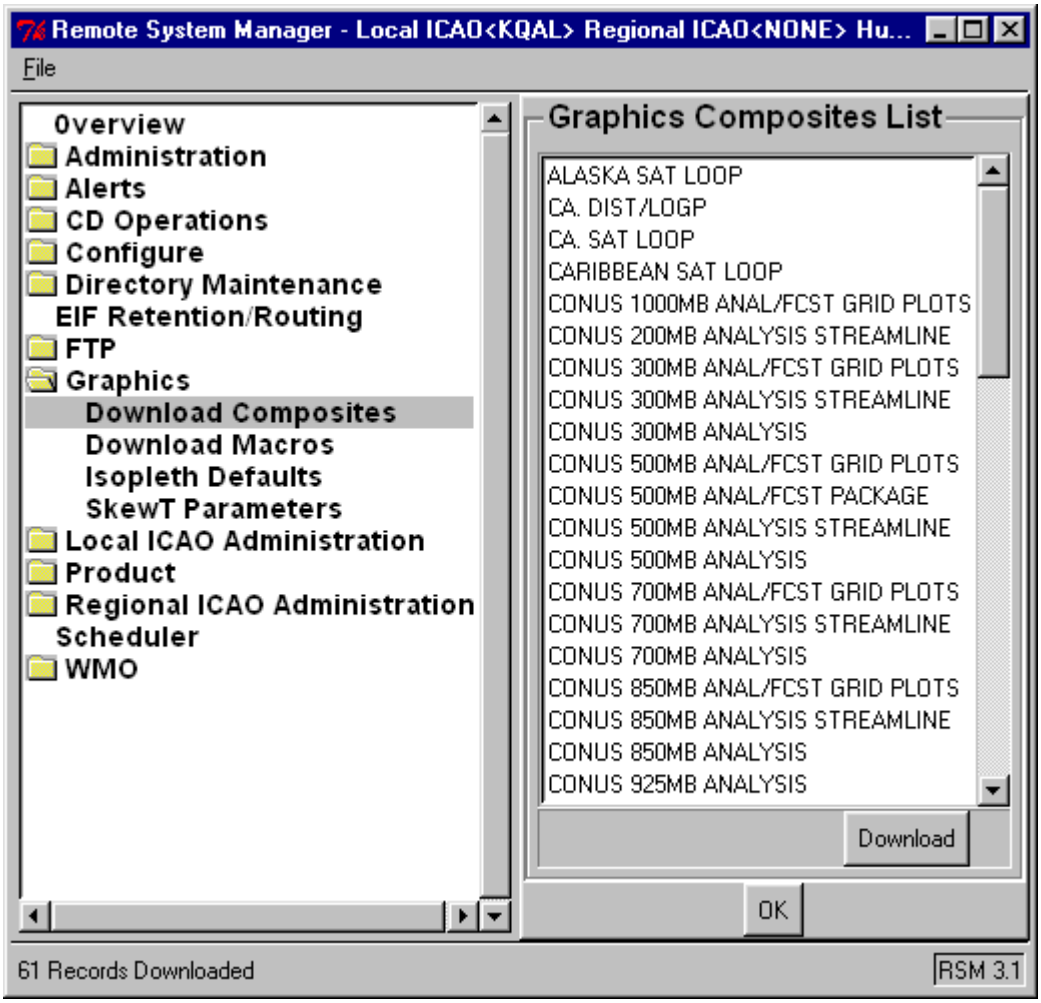
The Download Composites table enables the System Manager to access Government approved composites from the General Dynamics facility.

To access the Download Composites table, do the following:

1 Select the **Graphics** folder, and select **Download Composites**.

The Download Composites table appears (see Figure 6.69).

Figure 6.69 Download Composites Table



To download a composite from the list, do the following:

1 From the **Graphics Composites List** window, select a composite by clicking.

2 Select the **Download** button.

The compositie is downloaded to your AMIS system and a confirmation dialog appears.

3 At the confirmation dialog, select **OK**.

4 Optionally, to download additional composites, repeat steps 1-3.

To exit the Download Composites table, do the following:

1 Select the **OK** button located beneath the **Graphics Composites List** window.

Download Macros

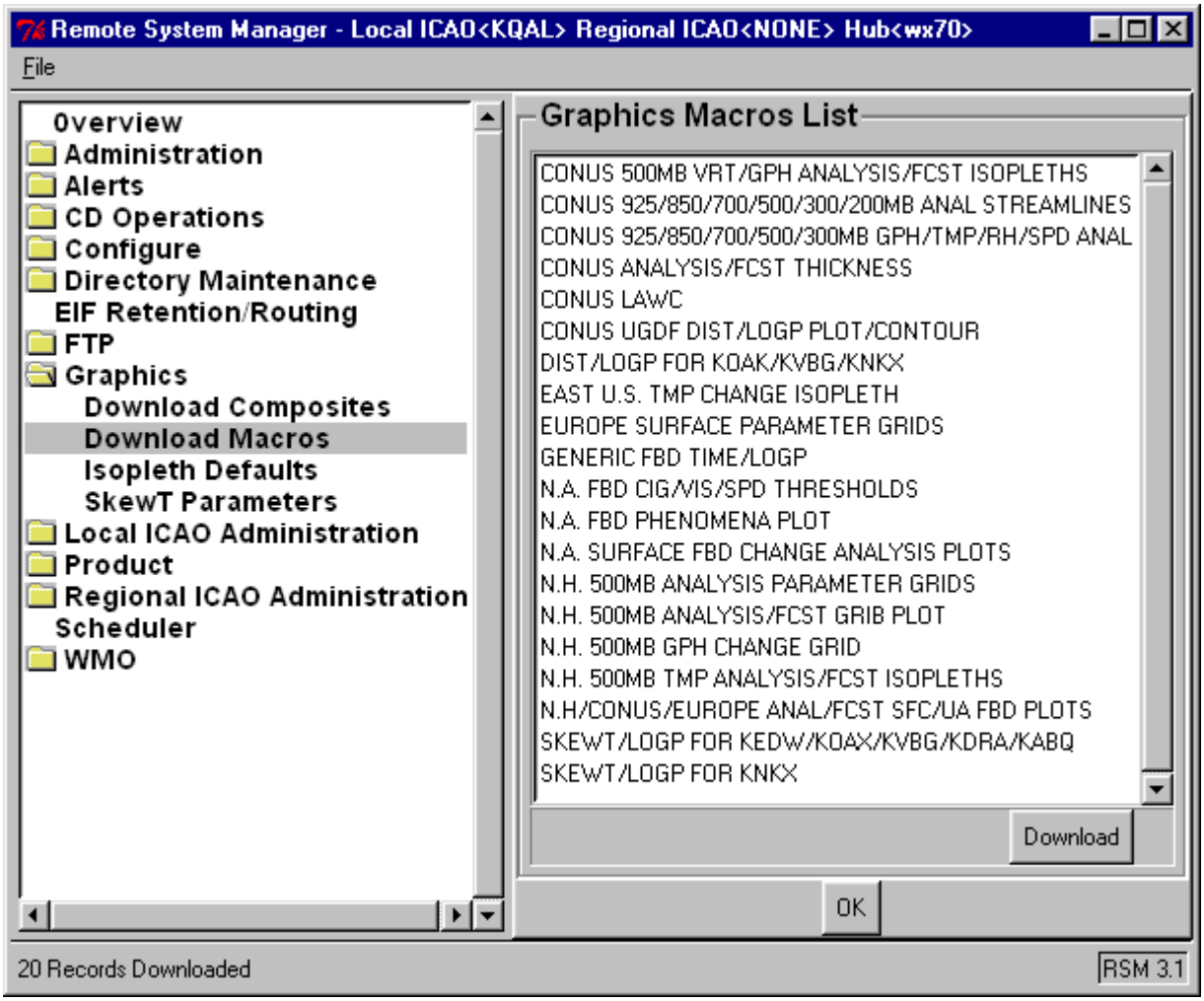
The Download Macros table enables the System Manager to access Government approved macros from the General Dynamics facility.

To access the Download Macros table, do the following:

1 Select the **Graphics** folder, and select **Download Macros**.

The Download Macros table appears (see Figure 6.70).

Figure 6.70 Download Macros Table



To download a macro from the list, do the following:

1 From the **Graphics Macros List** window, select a macro by clicking.

2 Select the **Download** button.

The macro is downloaded to your AMIS system and a confirmation dialog appears.

3 At the confirmation dialog, select **OK**.

4 Optionally, to download additional macros, repeat steps1-3.

To exit the Download Composites table, do the following:

1 Select the **OK** button located beneath the **Graphics Macros List** window.

Isopleth Defaults

The Isopleth Defaults table enables the System Manager to establish the base values and increments for locally generated isopleths. For example, isopleths of surface pressure normally have a base value of 1,000 mb and an increment of four mb. These values can be changed to suitable values. A typical change is to increase the number of isopleths on a graphics product by decreasing the pressure increment to two mb. This doubles the number of displayed isopleths over the original setting. Isopleths are identified by type and pressure level. The base values and increments can be set to tenths of a unit (e.g., 0.1 mb, 0.1°C).

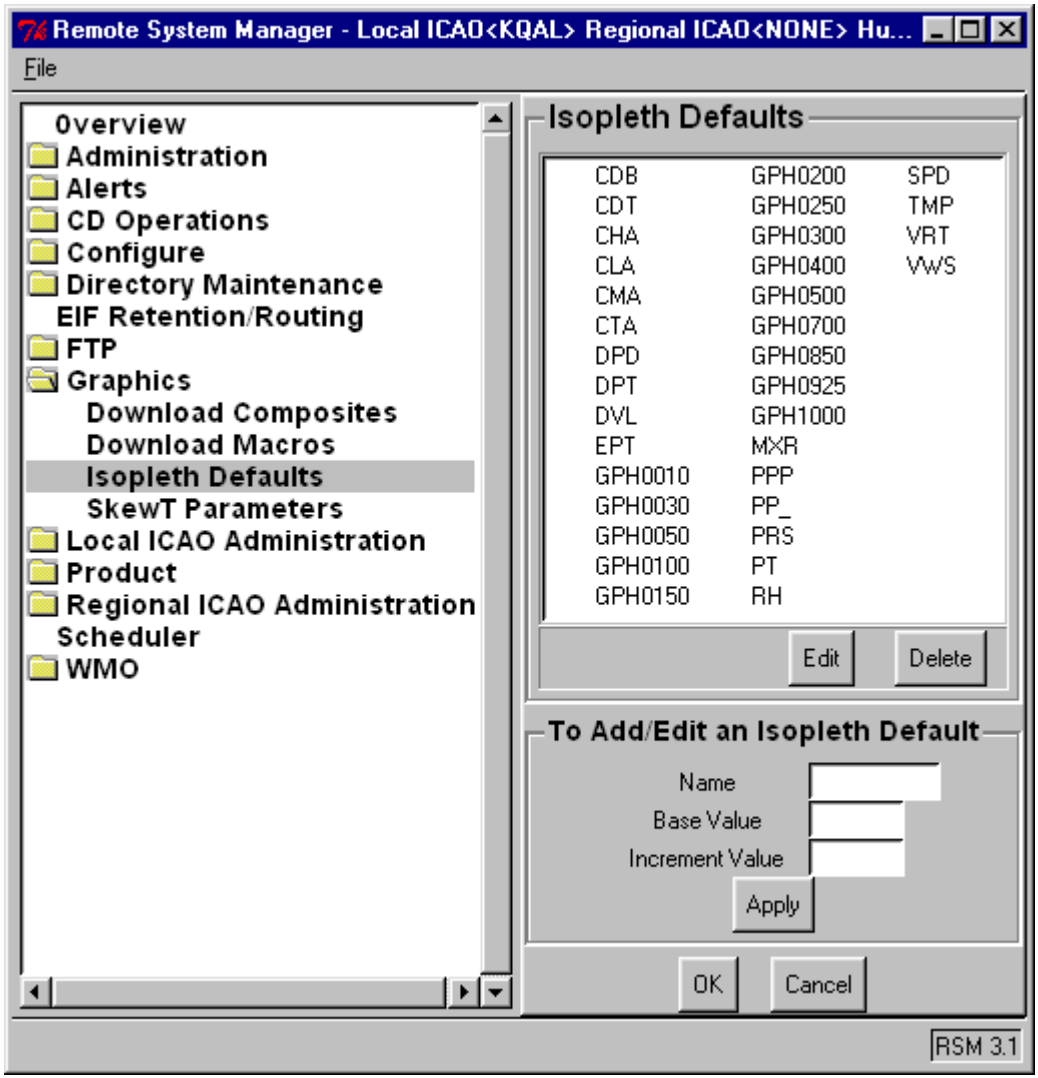
To access the Isopleth Defaults table, do the following:

1 Select the **Graphics** folder, and select **Isopleth Defaults**.

The Isopleth Defaults table appears (see Figure 6.71).

The table items represent weather parameter identifiers and pressure levels for isopleth graphic products.

Figure 6.71 Isopleth Defaults Table



To add an isopleth to the table, do the following:

1 At **Name**, enter the isopleth name.

The first three characters of the name are the parameter identifier. For parameter identifiers that are only two characters, insert a underscore character as the third character (for example, PP_).

The last four characters, if present, are the pressure level. If the last four pressure level characters are not present, the parameter is valid for all pressure levels.

2 At **Base Value**, enter the isopleth base value in up to seven decimal digits.

3 At **Increment Value**, enter the increment value in up to seven decimal digits.

Increment value is the value by which the base changes between displayed isopleths.

4 Select **Apply**.

The isopleth name is listed in the top window.

To modify an isopleth entry from the table, do the following:

1 From the list in the top window, select the desired isopleth name.

2 Select **Edit**.

*The **Name**, **Base Value**, and **Increment Value** windows are populated with their respective values.*

3 Modify the values as appropriate.

4 Select **Apply**.

To delete an isopleth from the table, do the following:

1 From the list in the top window, select the desired isopleth name.

2 Select **Delete**.

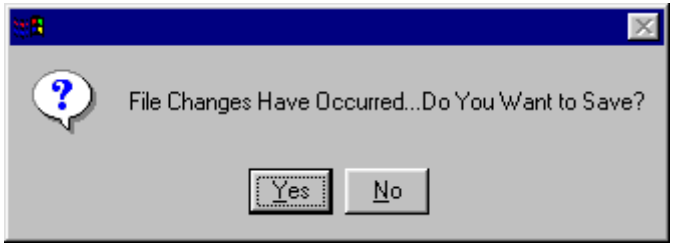
The isopleth name is removed from the list in the top window.

To leave the table, do one of the following:

1 To exit while saving any changes, select **OK**.

2 To exit while not saving changes, select **Cancel**.

If modifications have been made, a Cancel Dialog appears.



Do one of the following:

- *To save changes, select **Yes**.*
- *To not save changes, select **No**.*

Skew-T Parameters

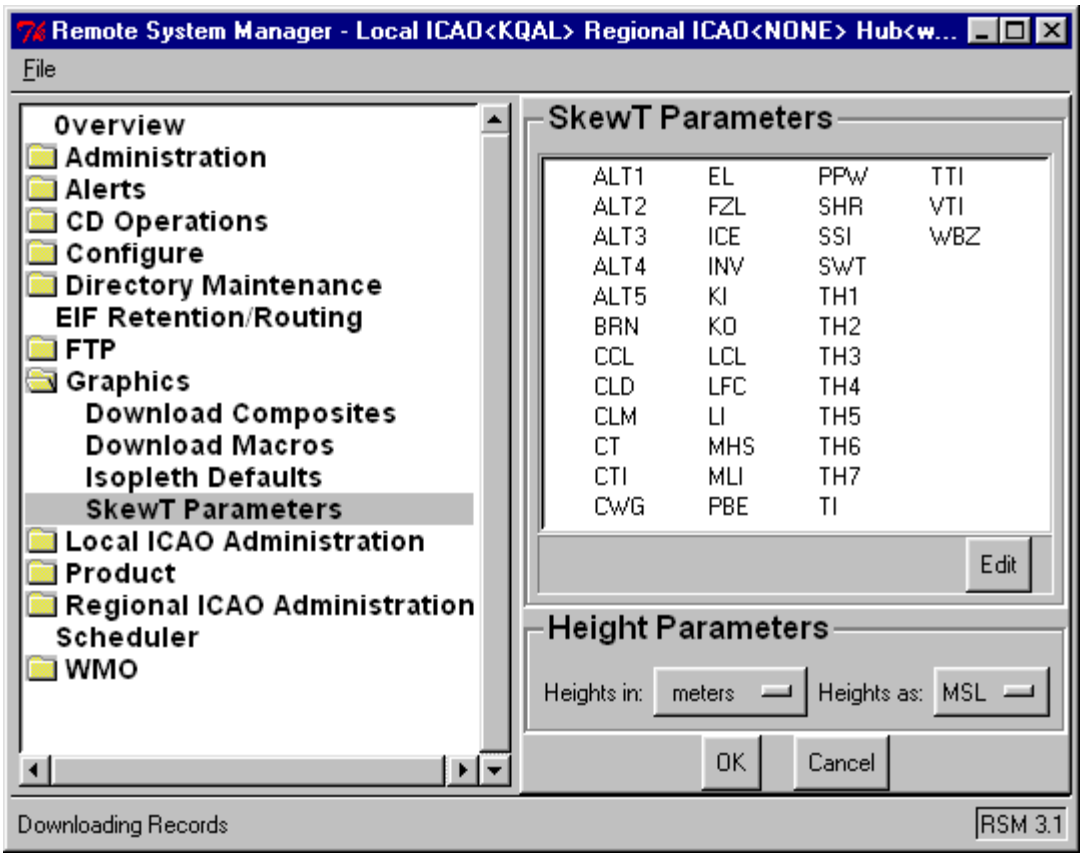
The Skew-T Parameters table enables the System Manager to set certain Skew-T defaults. The default unit of measure for heights can be specified as feet or meters. The default point of reference for heights can be specified as Mean Sea Level (MSL) or Above Ground Level (AGL). Additionally, the System Manager can specify the color mnemonic, and the color threshold against a specified range of values.

To access the Skew-T Parameters table, do the following:

1 Select the **Graphics** folder, and select **SkewT**.

The Skew-T Parameters table appears (see Figure 6.72).

Figure 6.72 Skew-T Parameters Table



To specify the default unit of measure for heights, do the following:

1 Select the selection button at **Heights in** and choose one of **feet** or **meters**.

To specify the point of reference for heights, do the following:

1 Select the selection button at **Heights as** and choose one of **MSL** or **AGL**.

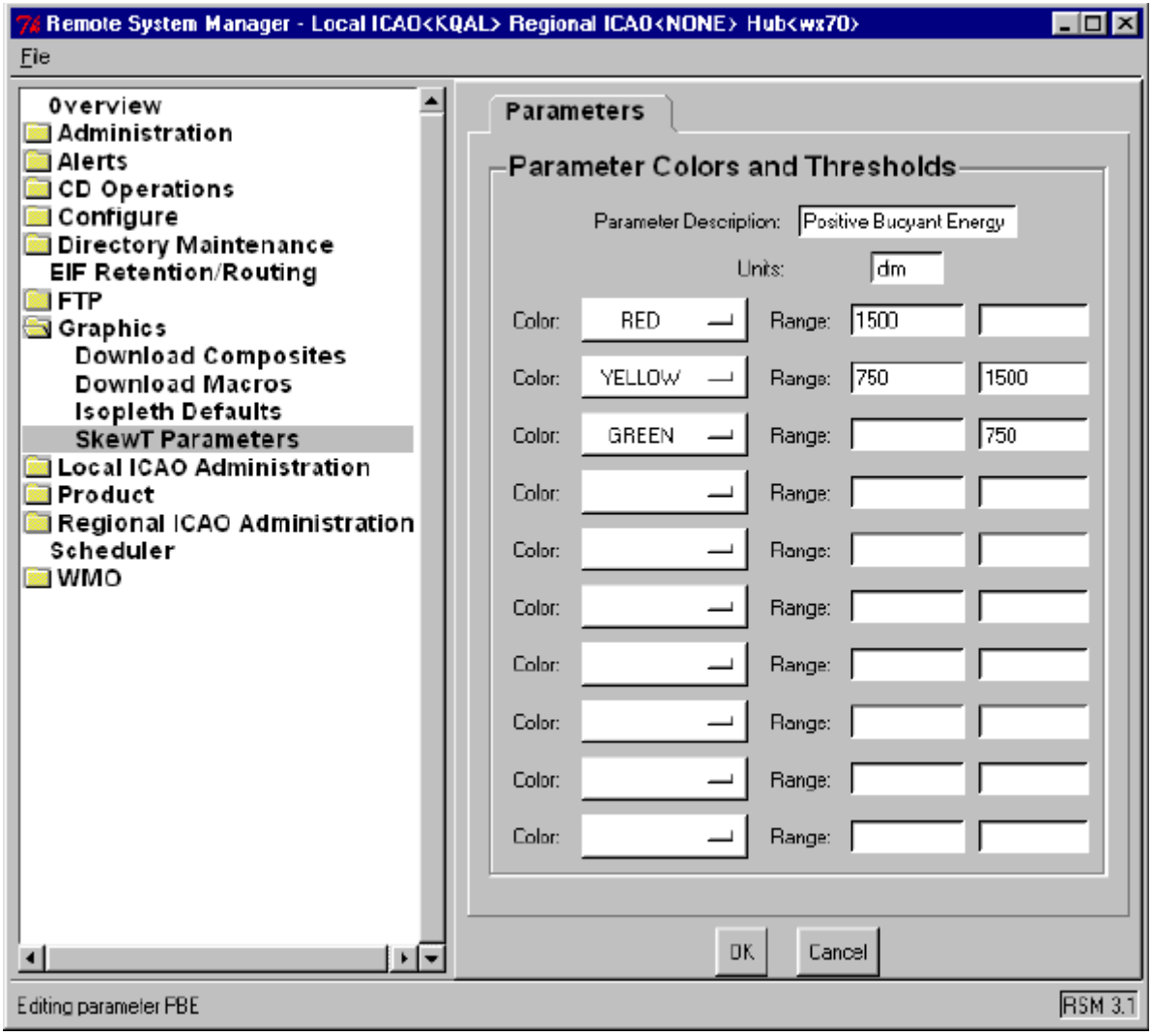
To modify the parameter colors and thresholds, do the following:

1 From the list in the top window, select a parameter to modify.

2 Select **Edit**.

The Parameter Colors and Thresholds screen appears (see Figure 6.73).

Figure 6.73 Skew-T Parameter Colors and Thresholds Screen



3 At various **Range** windows, enter ranges to color threshold.

4 Select **Color** selector button, slide highlight to desired color and release.

The selected color displays on the button.

Note that specification of invalid ranges can cause problems with Skew-T processing. For example, failure to take into account all possible values in the threshold range definitions can cause the Skew-T processing to cease before completion.

ICE (icing) is the only parameter not to use numeric threshold ranges values. Valid icing categories are TRACE, LIGHT, and MODERATE.

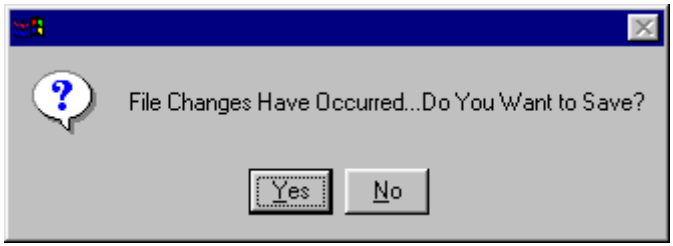
The following parameters are not supported by the color thresholding process and are always displayed white: CCL, CLD, CLM, CT, EL, FZL, INV, LCL, LFC, and TH1-TH7.

To leave the table, do one of the following:

1 To exit while saving any changes, select **OK**.

2 To exit while not saving changes, select **Cancel**.

If modifications have been made, a Cancel Dialog appears.



Do one of the following:

- *To save changes, select **Yes**.*
- *To not save changes, select **No**.*

Local ICAO Administration

The Local ICAO Administration functions enable the System Manager to set up and maintain multiple ICAOs and accompanying parameters. When creating local alphanumeric products, AMIS performs calculations, dissemination, and purging functions that require knowledge of this information. Based on this information, AMIS can manipulate multiple local alphanumeric product databases using different ICAOs, as well as maintain the default ICAO table set for the station.

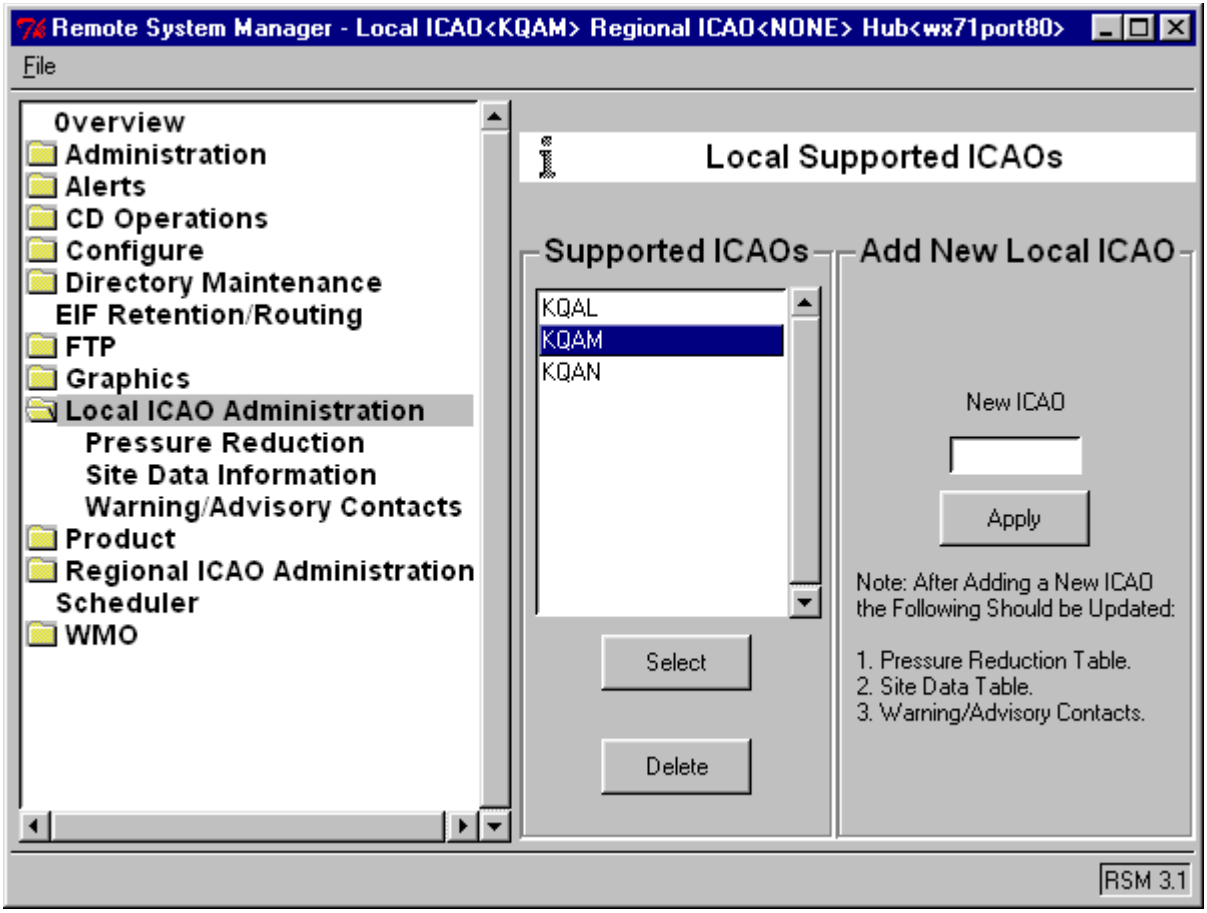
By default, when the AMIS software is loaded, your ICAO tables should be configured from either an archive or as part of a system upgrade procedure. The default tables for your ICAO should remain fairly static. The most common change you will need to make will probably be in maintaining settings for multiple and regional ICAOs that are located remotely from your site. The ICAO lists must be set up, and then each ICAO will need to be selected from that list to access it's particular tables. This section covers local default and non-default ICAO administration setup.

To access the Local ICAO Station Data table, do the following:

1 Select the **Local ICAO Administration** folder.

The Local ICAO Station Data table appears (see Figure 6.74).

Figure 6.74 Local ICAO Station Data Table



To add an ICAO, do the following:

1 In the window at **New ICAO**, enter the ICAO to be added.

2 Select **Apply**.

The new ICAO appears in the list of supported ICAOs.

Note: after adding a local ICAO, you must update the following tables for that ICAO: Pressure Reduction table, Site Data table, and Warning/ Advisory contacts.

To delete an ICAO from the list of supported ICAOs, do the following:

1 From the list of supported ICAOs, highlight the ICAO to be deleted by clicking on it.

2 Select **Delete**.

The ICAO disappears from the list of supported ICAOs.

Note that you cannot delete the default primary ICAO.

To select an ICAO for administration, do the following:

1 From the list of supported ICAOs, highlight the desired ICAO by clicking on it.

2 Select **Select**.

The message along the top of the display identifies the selected Local ICAO.

Pressure Reduction

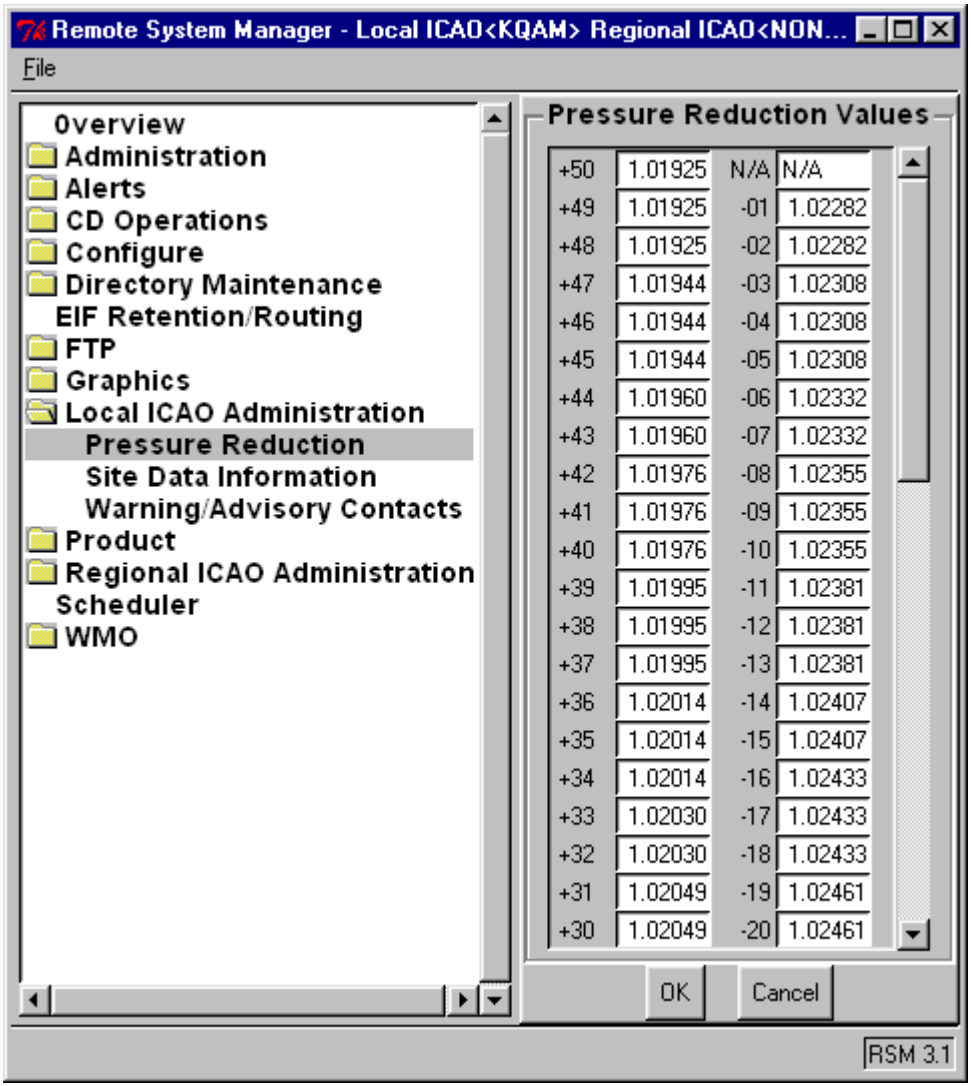
The Pressure Reduction table enables the System Manager to specify constants that are used in the calculation of sea level pressure based on a 12-hour average temperature in the Weather Observation form (see "Weather Observation" on page 3-7). These values are based on elevation. Consequently they vary from site to site.

To access the Pressure Reduction table, do the following:

1 Select the **Local ICAO Administration** folder, and select **Pressure Reduction**.

The Pressure Reduction table appears (see Figure 6.75).

Figure 6.75 Pressure Reduction Table



To add or modify a pressure reduction value, do the following:

1 In the window to the right of a temperature value, enter (or modify) the corresponding pressure reduction value.

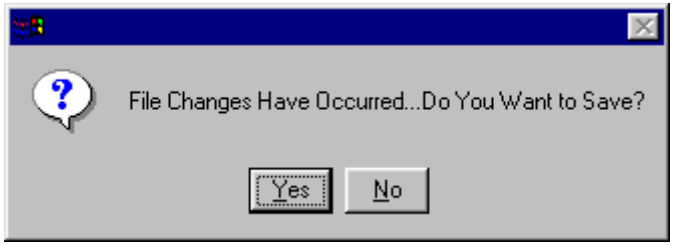
2 Repeat step 1 as appropriate.

3 To leave the table, do one of the following:

- To exit while saving any changes, select **OK**.

- To exit while not saving changes, select **Cancel**.

  If modifications have been made, a cancel dialog appears.



  Do one of the following:

  - *To save changes, select **Yes**.*
  - *To not save changes, select **No**.*

Site Data Information

The Site Data table enables the System Manager to specify and maintain local ICAO parameters used for calculations, dissemination, and purging functions performed on alphanumeric products created at your site.

Table 6.3 and Table 6.4 list the site data parameters maintained for local default and non-default ICAOs and the Site Data table display tabs this information is located under.

Table 6.3 Local Default ICAO Site Data Information

Identification Tab	Location Tab	Defaults Tab	Units Tab	Misc. Tab	AN Options Tab
ICAO	Latitude	SFC OBS default purge time	Units for local Temp/Dpt display	ARQ address	List of products transmitted longline
Name	Longitude	TAF default purge time	Units for local visibility display	AWN address	Density altitude local display
Alternate ICAO	Elevation	Unformatted Message default purge time	Units for longline visibility		Unformatted Message in LWDS
WMO	Geographic ID		Units for longline RVR		
Radar Type	Magnetic Declination				
	UTC Offset				
	Daylight Savings Time				

Table 6.4 Local Non-Default ICAO Site Data Information

Identification Tab	Location Tab	Units Tab	AN Options Tab
ICAO	Latitude	Units for local Temp/Dpt display	Density altitude local display
Name	Longitude	Units for local visibility display	Unformatted Message in LWDS
Alternate ICAO	Elevation	Units for longline visibility	
WMO	Geographic ID	Units for longline RVR	
Radar Type	Magnetic Declination		
	UTC Offset		
	Daylight Savings Time		

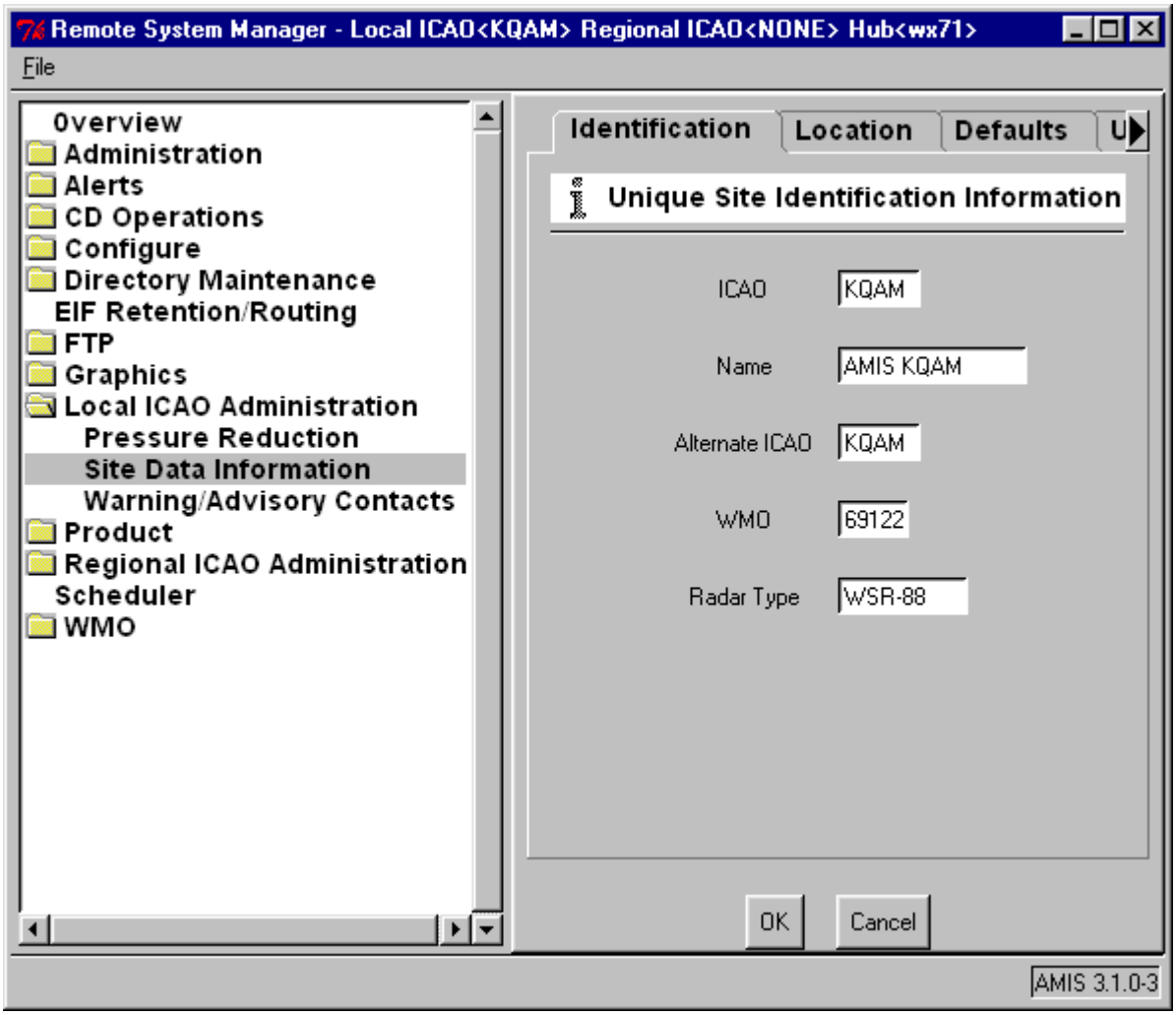
To display/modify the Site Data Information table, do the following:

1 Select the **Local ICAO Administration** folder, and select **Site Data Information**.

The Local ICAO Site Data table appears (see Figure 6.76) with the Identification tab selected.

Data for the selected ICAO is displayed.

Figure 6.76 Local ICAO Site Data Table Identification Tab



To modify displayed data, do the following:

1 At **ICAO**, enter station ICAO.

2 At **Name**, enter station name.

3 At **Alternate ICAO**, enter station alternate ICAO.

4 At **WMO**, enter station WMO number.

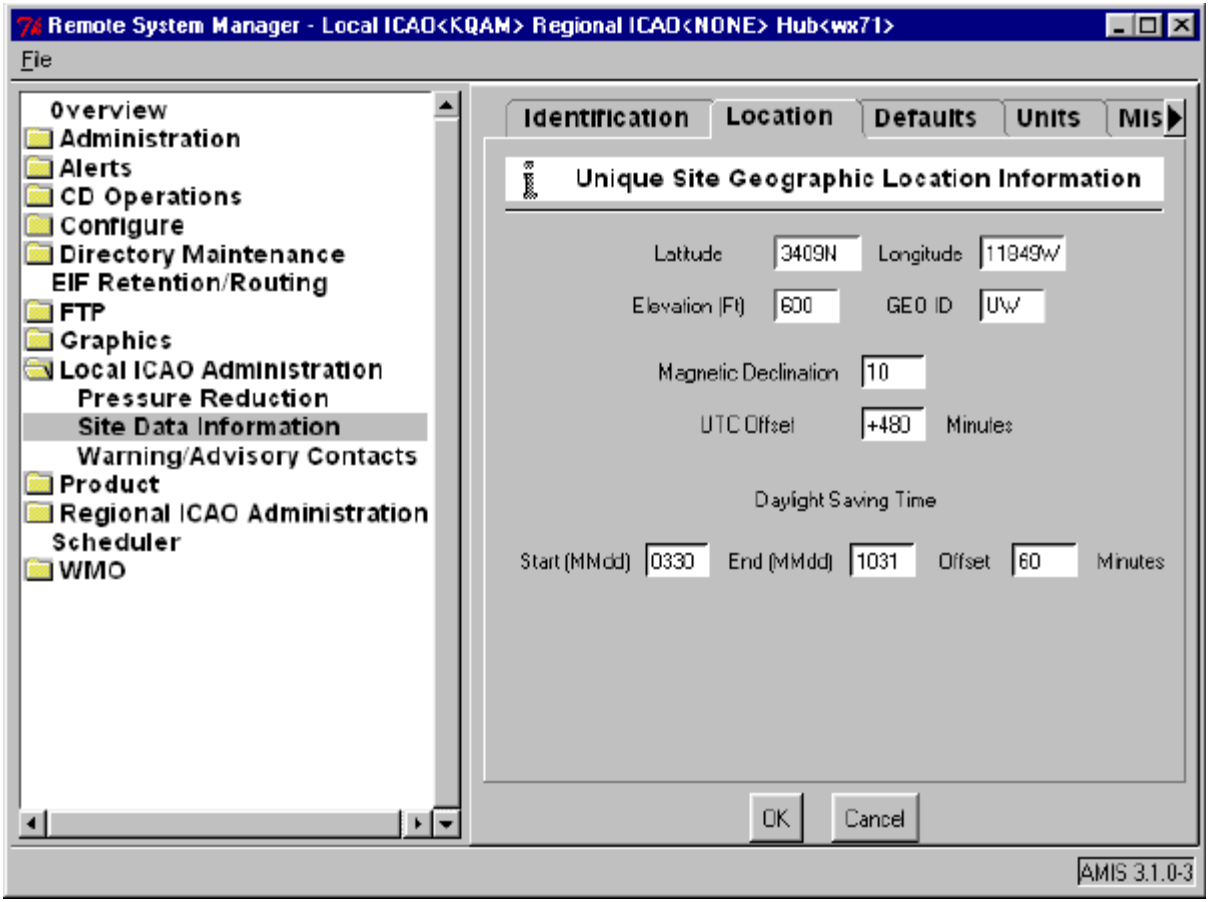
5 At **Radar Type**, enter type of meteorological radar in use.

To display/modfy the geographic location parameters, do the following:

1 Along the top of the display, select the **Location** tab.

The geographic location information appears (see Figure 6.77).

Figure 6.77 Local ICAO Site Data Table Location Tab



To modify displayed information, do the following:

1 At **Latitude**, enter the station latitude.

2 At **Longitude**, enter the station longitude.

3 At **Elevation (Ft)**, enter the station elevation in feet.

4 At **GEO ID**, enter station geographic identifier.

5 At **Magnetic Declination**, enter station magnetic declination.

6 At **UTC Offset**, enter station offset time from local standard to UTC.

Note that this entry should not be adjusted for Daylight Savings Time.

7 At **Start (MMdd)**, enter the starting date for Daylight Savings Time.

8 At **End (MMdd)**, enter the ending date for Daylight Savings Time.

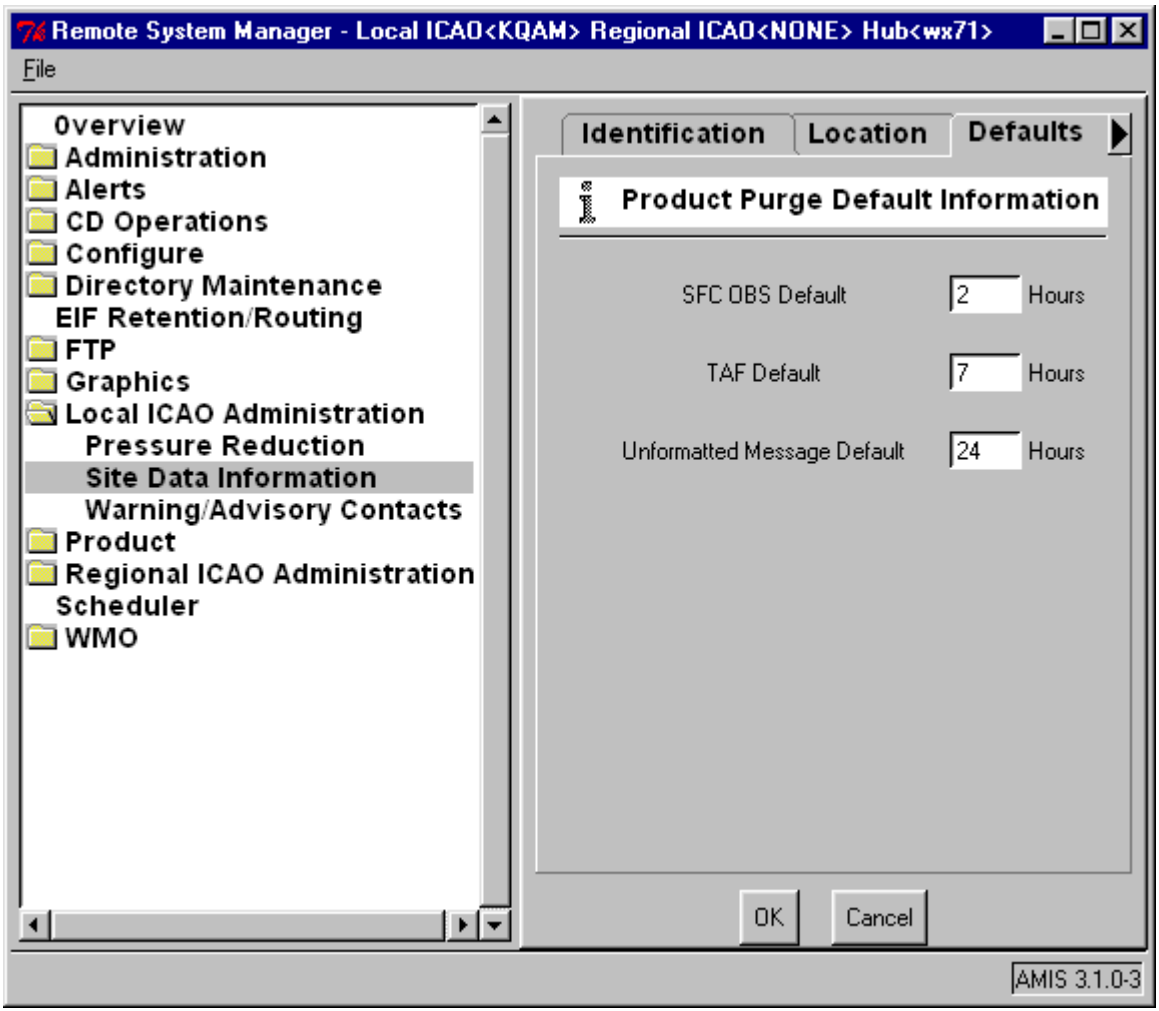
9 At **Offset**, enter the offset for Daylight Savings Time in minutes.

To display/modfy the product purge default parameters, do the following:

1 Along the top of the display, select the **Defaults** tab.

The product purge default information appears (see Figure 6.78).

Figure 6.78 Local ICAO Site Data Table Defaults Tab



To modify displayed information, do the following:

1 At **SFC OBS Default**, enter time in hours from file time to purge local and alternate ICAO Surface Observations from the FCF displays.

2 At **TAF Default**, enter time in hours from file time to purge local and alternate ICAO TAFs from the FCF displays.

3 At **Unformatted Message Default**, enter time in hours from file time to purge local ICAO Unformatted Message from the FCF and LWDS displays.

WARNING *Each FCF has its own independent purge cycle which starts upon bootup. Therefore, FCF displays may be different. Products will expire within 30 minutes of the purge time. The purge timer resets for each new product.*

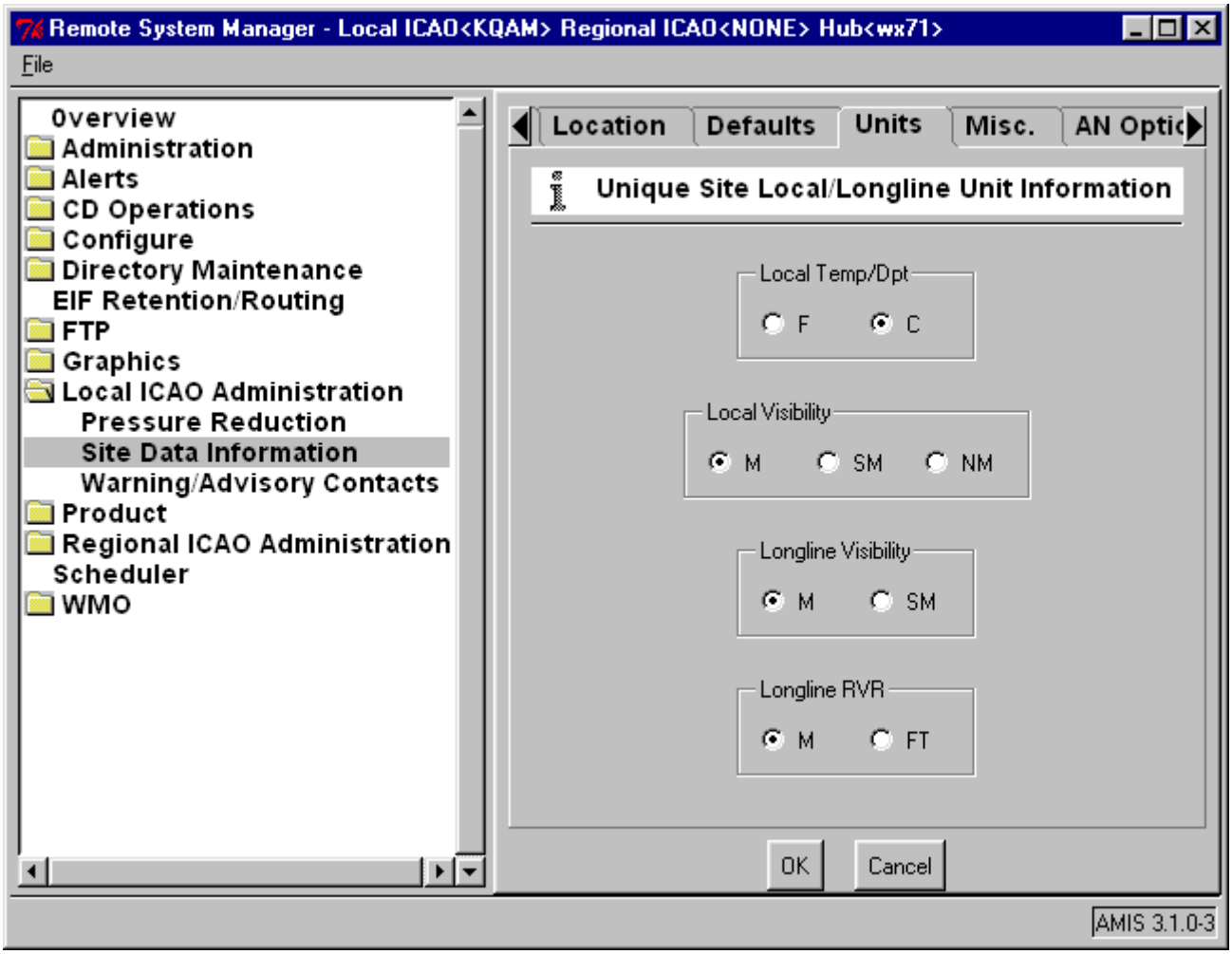
The local observation (METAR, SPECI, LOCAL-MISHAP, or AWO) with the earliest purge time will cause the removal of all the observations within the FCF observation dataset on each FCF. The other observations will not be marked as purged in the database and will still be displayed if the PC is rebooted.

To display/modfy the local/longline unit parameters, do the following:

1 Along the top of the display, select the **Units** tab.

The local/longline unit information appears (see Figure 6.79).

Figure 6.79 Local ICAO Site Data Table Units Tab



To modify displayed information, do the following:

1 At **Local Temp/Dpt**, set the units for local temperature and dewpoint by doing one of the following:

- For Fahrenheit, select radio button **F**.
- For Celsius, select radio button **C**.

2 At **Local Visibility**, set the units for local visiblility by doing one of the following

- For meters, select radio button **M**.

- For statute miles, select radio button **SM**.
- For nautical miles, select radio button **NM**.

3 At **Longline Visibility**, set the units for longline visiblility by doing one of the following

- For meters, select radio button **M**.
- For statute miles, select radio button **SM**.

4 At **Longline RVR**, set the units for longline RVR by doing one of the following

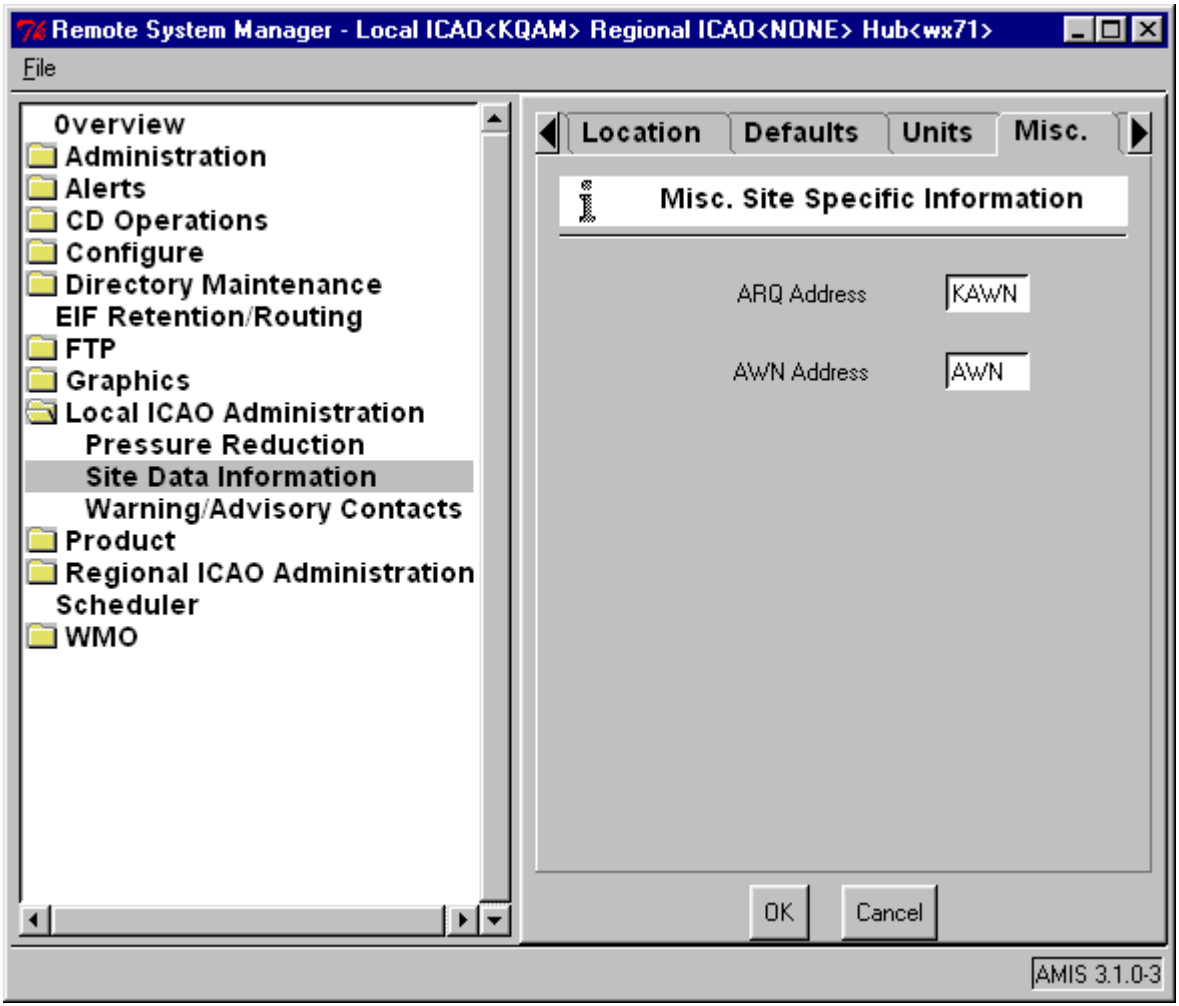
- For meters, select radio button **M**.
- For feet, select radio button **FT**.

To display/modfy the miscellaneous parameters, do the following:

1 Along the top of the display, select the **Misc.** tab.

The miscellaneous information appears (see Figure 6.80).

Figure 6.80 Local ICAO Site Data Table Misc. Tab



To modify displayed information, do the following:

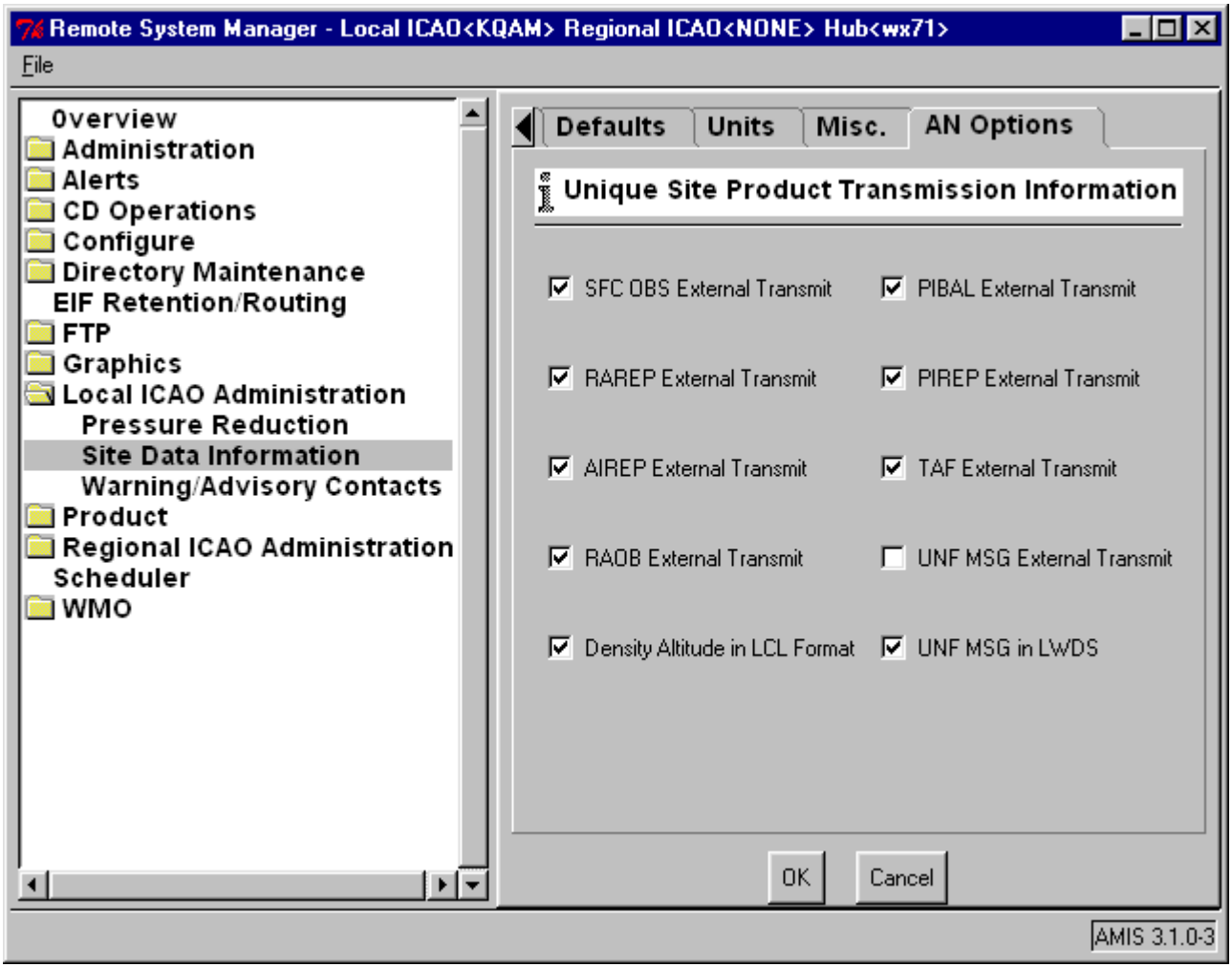
1 At **ARQ Address**, enter an ICAO.

2 At **AWN Address**, enter the station default administration address.

To display/modfy the product transmission parameters, do the following:

1 Along the top of the display, select the **AN Options** tab.
The product transmission information appears (see Figure 6.81).

Figure 6.81 Local ICAO Site Data Table AN Options Tab



To modify displayed information, do the following:

1 To indicate longline default routing of the respective product, check (select the associated checkmark box) the following:

- **SFC OBS External Transmit** (Surface Observations).
- **PIBAL External Transmit** (Pilot Balloon Soundings).
- **RAREP External Transmit** (Radar Reports).
- **PIREP External Transmit** (Pilot Reports).
- **AIREP External Transmit** (Aircraft Reports).

- **TAF External Transmit** (Terminal Aerodrome Forecasts).
- **RAOB External Transmit** (Rawinsonde Observations).
- **UNF MSG External Transmit** (Unformatted Messages).

2 To include density altitude in observations, check **Density Atlitude in LCL Format**.

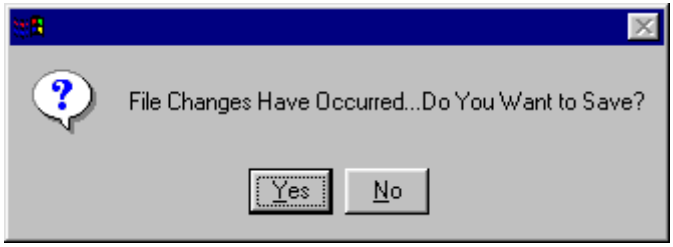
3 To include Unformatted Message in LWDS, check **UNF MSG in LWDS**.

To exit the Site Data table, do the following:

1 Do one of the following:

- To save changes and exit, select **OK**.
- To exit without saving changes, select **Cancel**.

If you made changes, a confirmation dialog appears as you exit.



2 At the confirmation dialog, do one of the following:

- To save changes and exit, select **Yes**.
- To exit without saving changes, select **No**.

Warning/Advisory Contacts

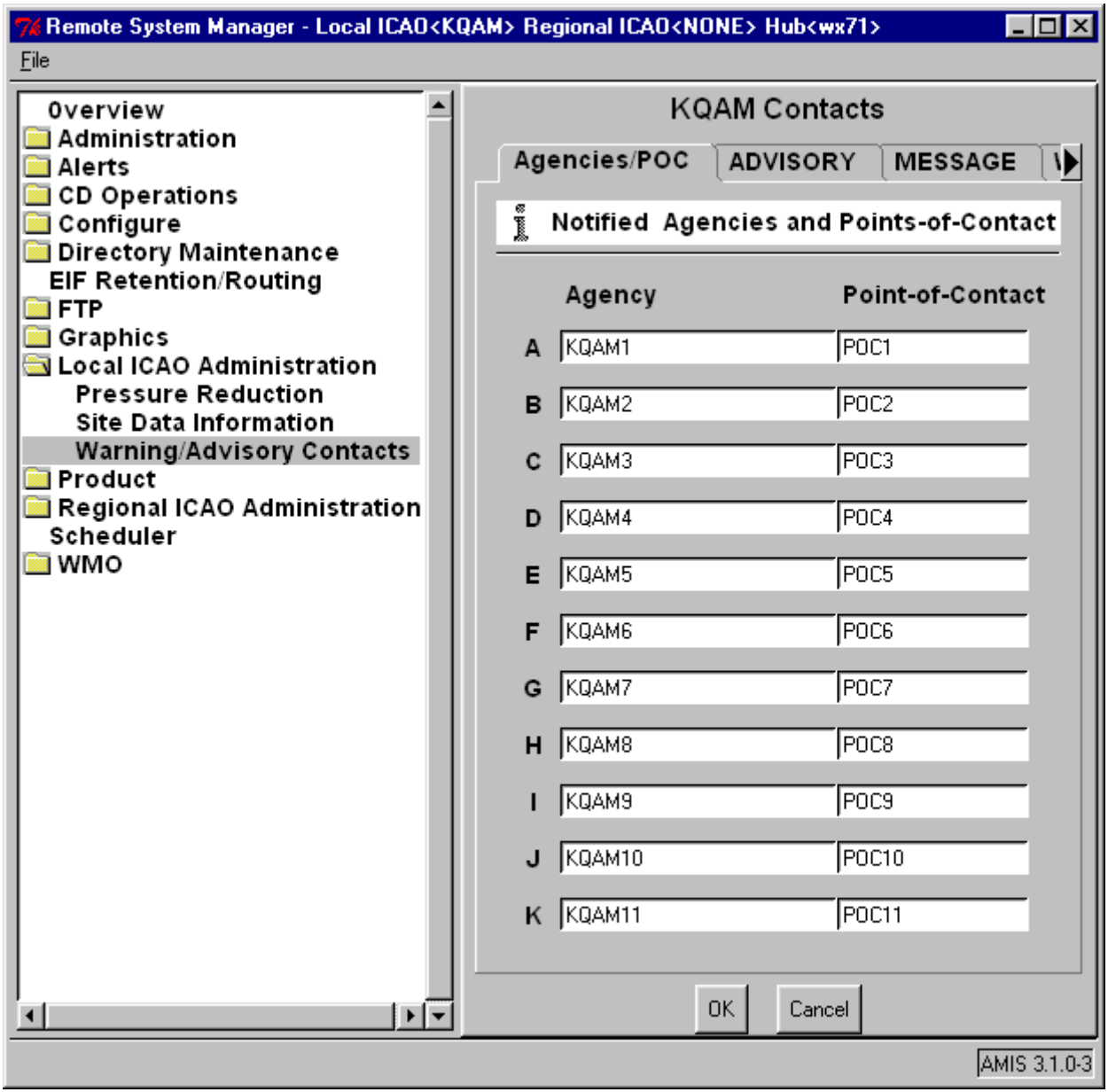
The Warning/Advisory Contacts table enables the System Manager to specify contact information that will automatically prefill in the form for Weather Warnings, etc. issued by the site for various ICAOs.

To display/modify the Warning/Advisory Contacts table, do the following:

1 Select the **Local ICAO Administration** folder, and select **Warning/ Advisory Contacts**.

The Warning/Advisory Contacts table appears (see Figure 6.82) with the Agencies/POC tab selected.

Figure 6.82 Local ICAO Warrning/Advisory Contacts Table



To modify/enter information, do the following:

1 At **Agency** windows, enter the agency name.

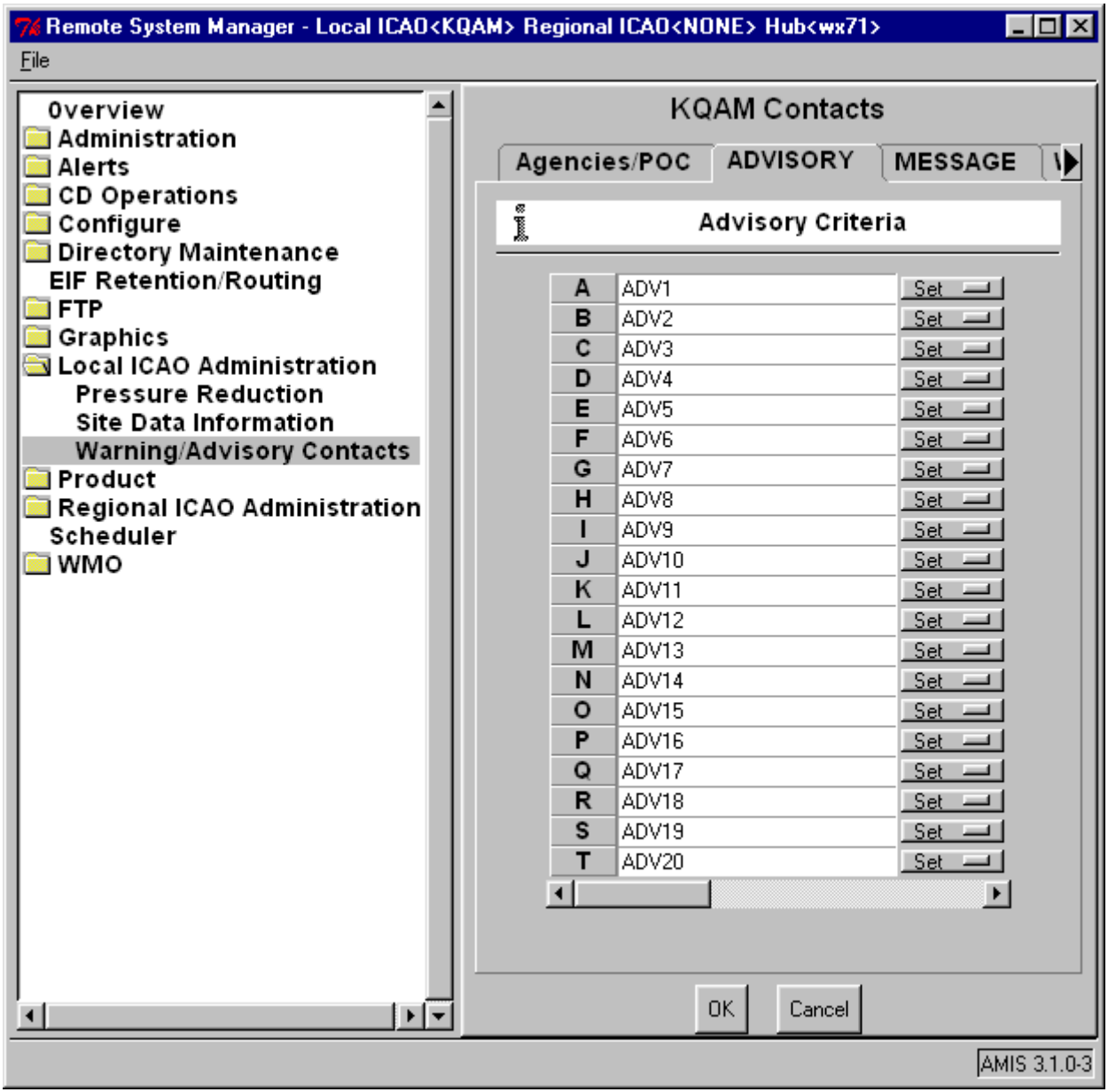
2 At **Point-of-Contact** windows, enter the name of the POC.

3 To set the notify block, along the top of the display, select the appropriate tab (**Advisory**, **Message**, **Warning**, **Watch**).

*Upon selecting the **Advisory** tab, the Advisory criteria appears (see Figure 6.83). The prefilled entries are defined in the Warning/Advisory Criteria table (see "Warning/Advisory Criteria" on page 6-81).*

*The displays for **Message**, **Warning**, and **Watch** are analagous to the **Advisory** display.*

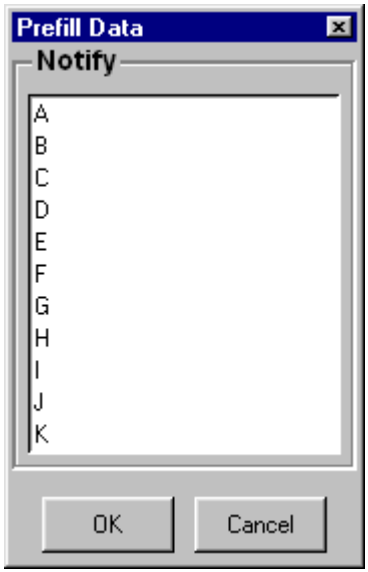
Figure 6.83 Local ICAO Warning/Advisory Contacts Table Advisory Tab



4 Select the **Set** pull-down menu and select **Notify**.

The Prefill Data Notify panel appears (see Figure 6.84).

Figure 6.84 Prefill Data Notify Panel



5 From the agency list, select/deselect the agencies to contact.

   Ctrl click *selects multiple non-contiguous entries.*

   Shift click *selects multiple contiguous entries.*

   These are the entries that appear in the respective weather product Prefill Edits panel, Agencies and POCs selection panel, on the Weather Warning/ Watch Agency and Contact fields, and on the Weather Advisory/Message Agency fields.

6 Select **OK** to return and save selections, **Cancel** to return without saving selections.

7 A confirmation screen appears, select **Yes** to save changes, **No** to not save changes.

To print the displayed form, do the following:

1 from the menubar at the top of the RSM application, select **File** > **Print**.

2 A print dialog appears, select **OK** to print or **Cancel** to not print.

Product

The Product folder contains functionality that enables the System Manager to configure AMIS to receive and route products, prefill form headers, Metwatch Surface Observations, and control product purging.

Bulletin MANOP

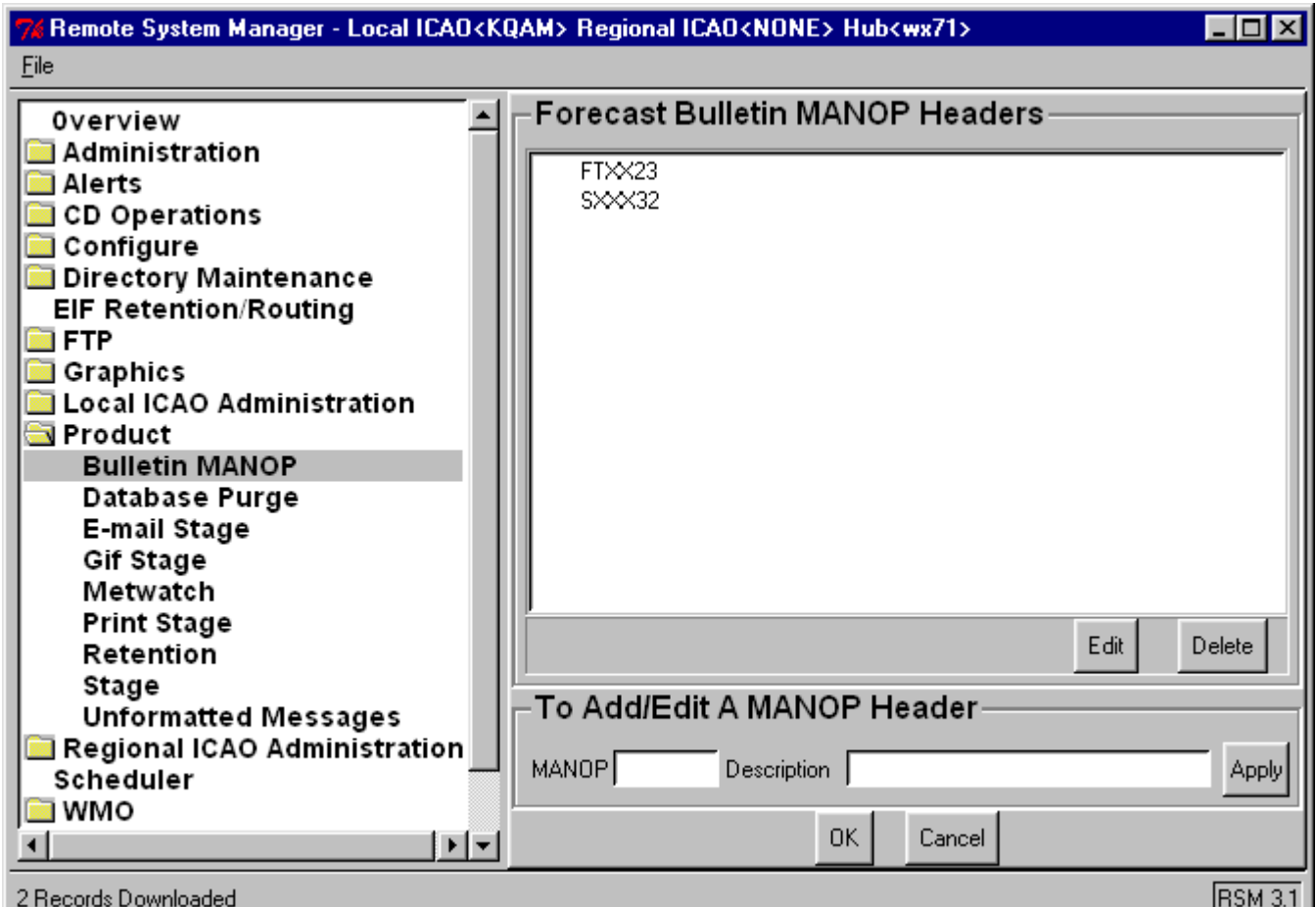
The Bulletin MANOP table enables the System Manager to set up pre-defined MANOP headers to be used in the Forecast Bulletin alphanumeric form. These MANOP headers are available to the alphanumeric forms user from a pull-down menu.

To access the Bulletin MANOP table, do the following:

1 Select the **Product** folder, and select **Bulletin MANOP**.

The Bulletin MANOP table appears (see Figure 6.85).

Figure 6.85 Bulletin MANOP Table



To add a MANOP header, do the following:

1 At **MANOP**, enter the MANOP Bulletin header.

2 At **Description**, enter the corresponding description, for example, FORECAST DISCUSSION.

3 Select **Apply**.

*The added MANOP header is listed in the **Forecast Bulletin MANOP Headers** window.*

To modify an existing MANOP header definition, do the following:

1 At the **Forecast Bulletin MANOP Headers** window, select the MANOP header to be modified.

2 Select **Edit**.

*The **MANOP** and **Description** windows are populated with the entry being edited.*

3 Make modifications as desired.

4 Select **Apply**.

To delete an existing MANOP header definition, do the following:

1 At the **Forecast Bulletin MANOP Headers** window, select the MANOP header to be deleted.

2 Select **Delete**.

*The **MANOP** Bulletin header disappears from the* **Forecast Bulletin MANOP Headers** window.

To exit the MANOP Bulletin table, do one of the following:

- To exit while saving any changes made, select **OK**.
- To exit without saving any changes made, select **Cancel**.

Database Purge

The Database Purge table enables the System Manager to view or set, for Product database purge categories, the default purge time (hours), the number of products to retain, and the maximum disk usage. For further information, see the description of product purging found in "Administration" on page 6-3.

The purge categories are identified as shown in the following Table 6.5.

Table 6.5 Purge Category Identification

00	Miscellaneous
01	Large External A/N

Table 6.5 Purge Category Identification

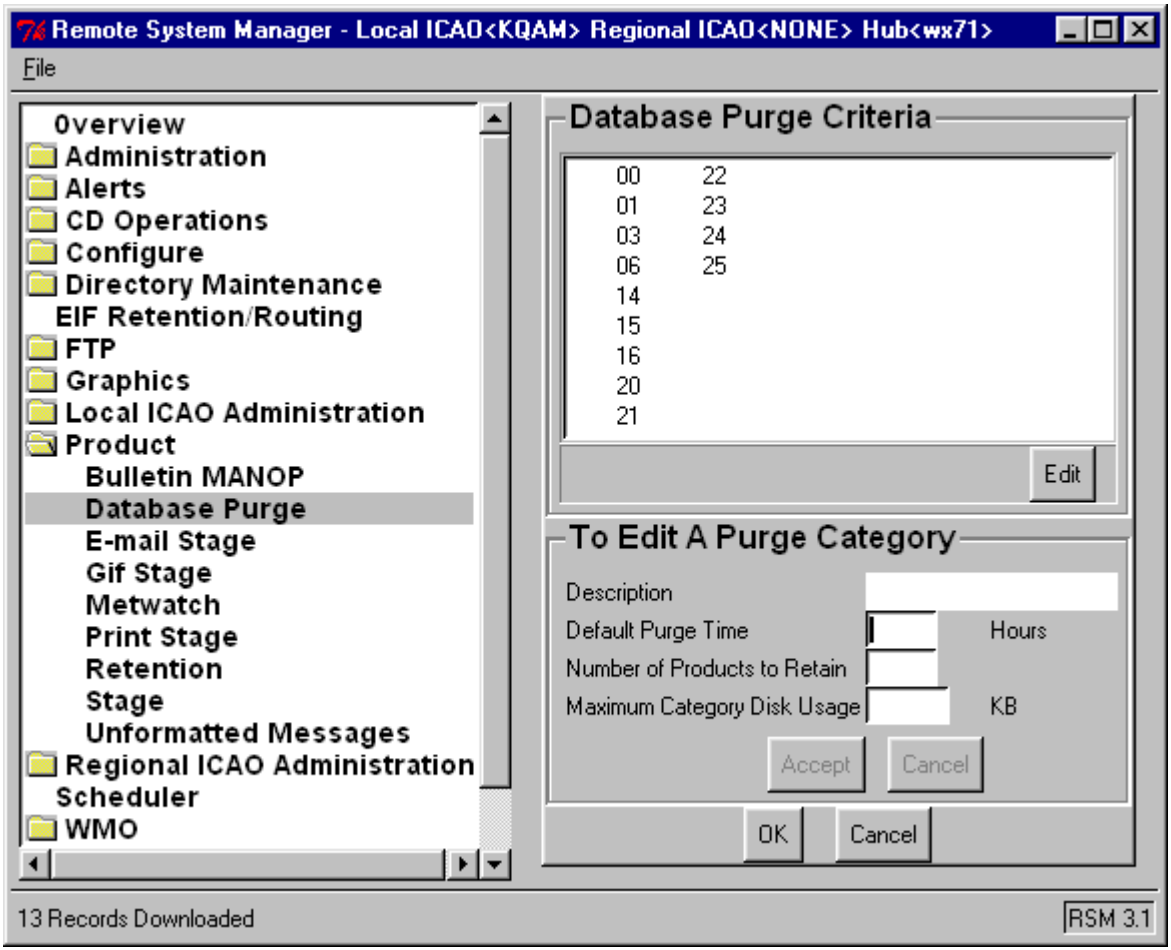
03	Local Alphanumeric
06	WW/WA/MW & Msgs
14	External Vector Graphic
15	Local Vector Graphic
16	Pixel Products
20	UGDF Eighth Mesh
21	Locally Generated Grid Half Mesh
22	UGDF Half Mesh
23	Locally Generated Grid Half Mesh
24	UGDF Whole Mesh
25	Locally Generated Grid Whole Mesh

To access the Database Purge table, do the following:

1 Select the **Product** folder, and select **Database Purge**.

The Database Purge table appears (see Figure 6.86).

Figure 6.86 Database Purge Table



To modify a purge category, do the following:

1 At the **Database Purge Criteria** window, select the purge category to modify.

2 Select **Edit**.

*The **Description, Default Purge Time, Number of Products to Retain,** and **Maximum Category Disk Usage** windows are populated with the respective purge category setting.*

3 Modify any of the following values as appropriate:

- **Default Purge Time** specifies the default for the number of hours products are to be retained in the system for this category. Enter up to five digits.

- **Number of Products to Retain** specifies the default for the number of products retained in this category after a purge. Enter up to five digits.
- **Maximum Category Disk Usage** specifies the default for the maximum amount of disk storage (kilobytes) to allocate to this category. For categories 15 and 24, enter up to four digits. For category 14, the maximum is 20,000 KB. For all other categories, enter up to five digits.

4 Do one of the following:

- To apply any changes, select **Accept**.
- To discard any changes, select **Cancel**.

To leave the Database Purge table, do one of the following:

1 Select **OK** or **Cancel**.

E-mail Stage

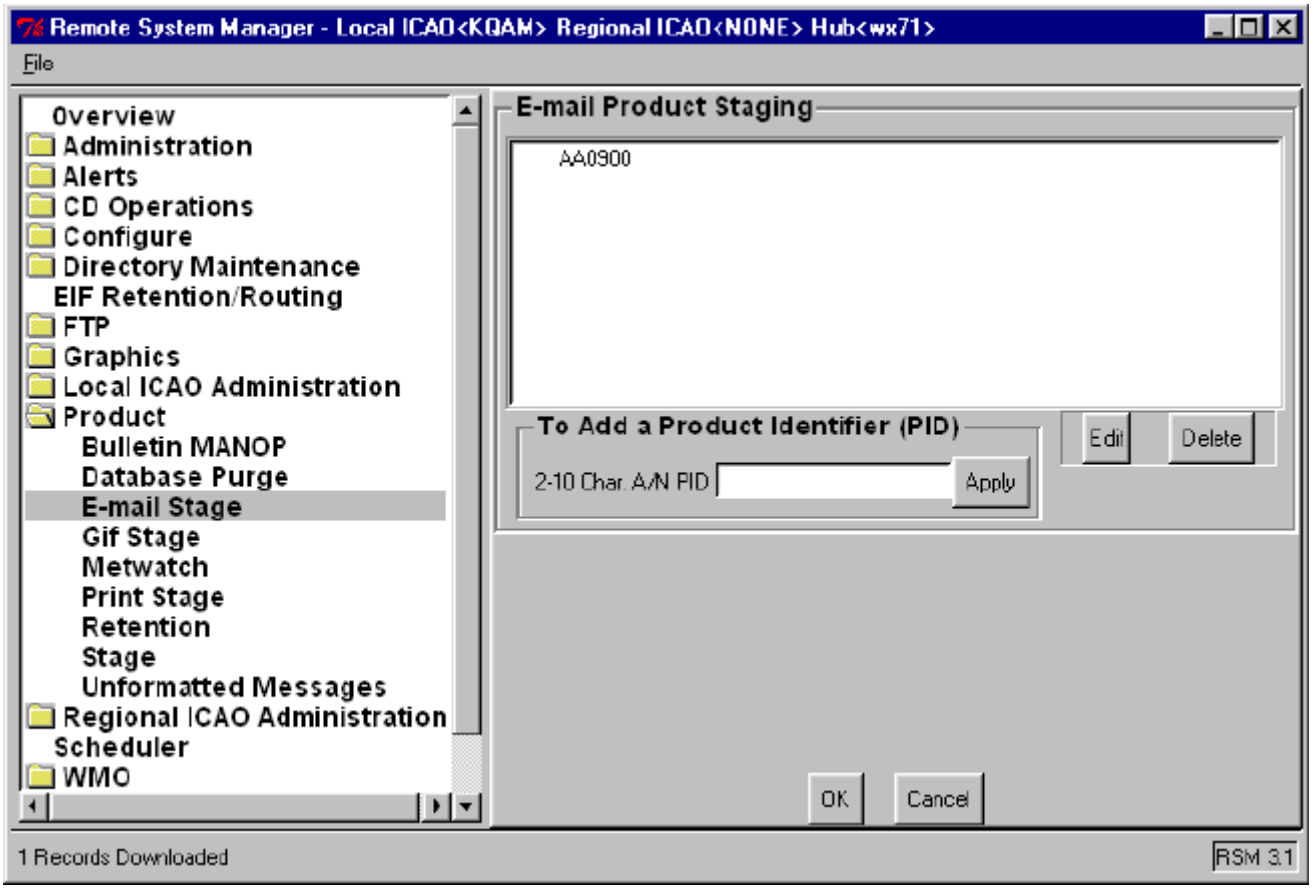
The E-mail Stage table is used by the System Manager in conjunction with the Configure > E-mail Addresses table (see "E-mail Addresses" on page 6-69) to configure and maintain a list of E-mail addresses for the staging of alphanumeric products upon their arrival to the database. The E-mail Stage table enables the System Manager to add, edit, or delete E-mail addresses and/or the PIDs associated with them for this staging (that is, default routing).

To access the E-mail Stage table, do the following:

1 Select the **Product** folder, and select **E-mail Stage**.

The E-mail Stage table appears (see Figure 6.87).

Figure 6.87 E-mail Stage Table



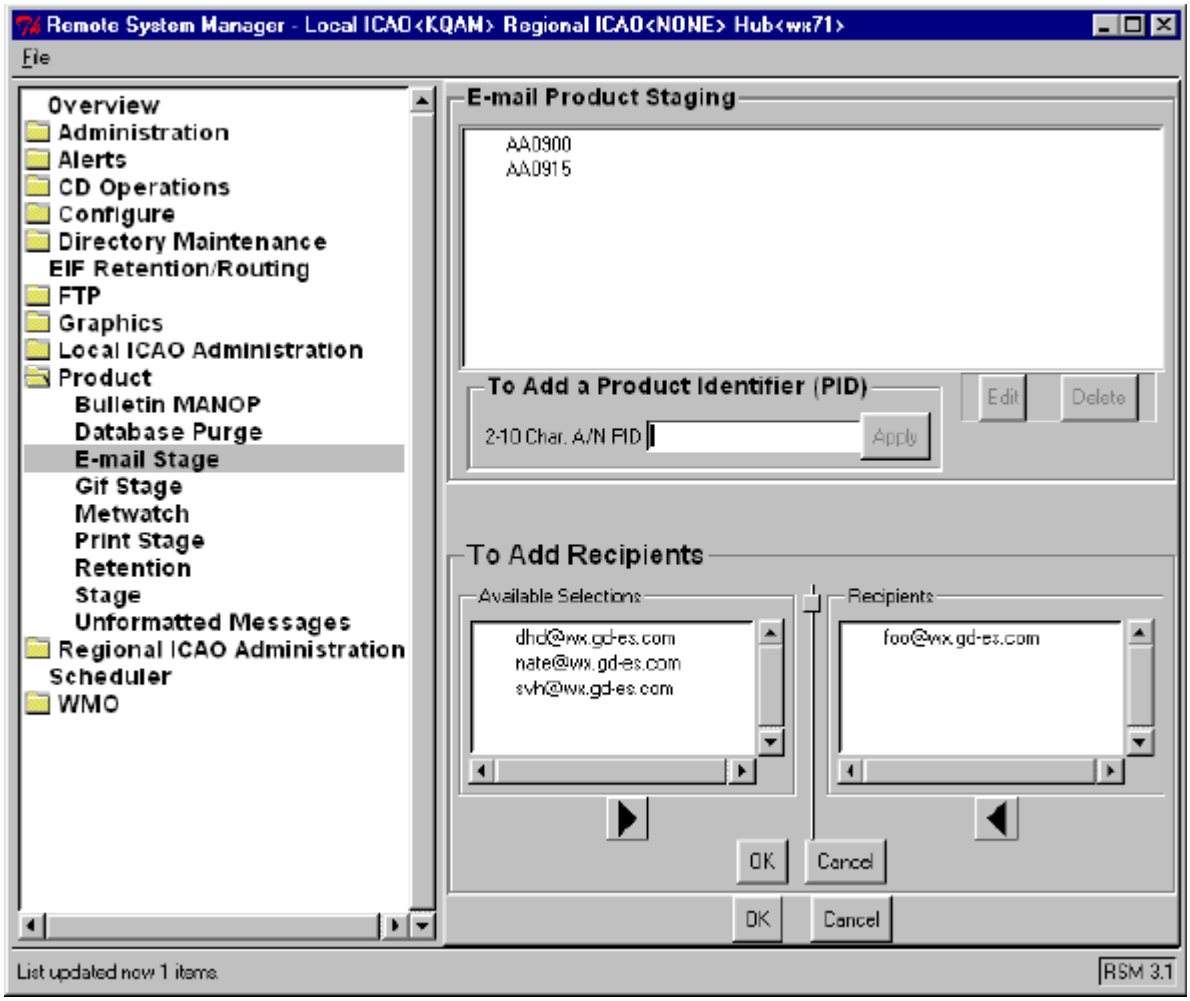
To add a PID for E-mail staging, do the following:

1 At **2-10 Char A/N PID**, enter a 2-10 character alphanumeric PID (wildcards are accepted).

2 Select **Apply**.

*The **To Add Recipients** panel appears (see Figure 6.88).*

Figure 6.88 E-mail Stage—To Add Recipients Panel



3 The E-mail addresses listed under **Available Selections** are the candidate recipients. The E-mail addresses ultimately listed under **Recipients** are the actual recipients. To adjust the **Available Selections** and/or **Recipients** list, do one of the following:

- To move an entry from one list to the other, double click the entry.
- To move an entry from the **Available Selections** list to the **Recipients** list, highlight the entry and select the right arrow button ▶.
- To move an entry from the **Recipients** list to the **Available Selections** list, highlight the entry and select the left arrow button ◀.

4 Do one of the following:

- To exit the **To Add Recipients** function and save any changes, select **OK**.
- To exit the **To Add Recipients** function without saving any changes, select **Cancel**.

To modify an existing E-mail Stage entry, do the following:

1 At the **E-mail Product Staging** window, select the PID of the entry to modify.

2 Select **Edit**.

*The **To Add Recipients** panel will appear.*

3 Adjust the **Recipients** list as desired (see step 3, above).

4 Do one of the following:

- To exit the **To Add Recipients** function and save any changes, select **OK**.
- To exit the **To Add Recipients** function without saving any changes, select **Cancel**.

To delete an existing E-mail Stage entry, do the following:

1 At the **E-mail Product Staging** window, select the PID of the entry to delete.

2 Select **Delete**.

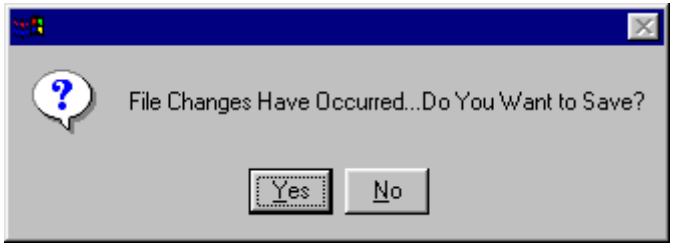
*The PID will disappear from the **E-mail Product Staging** window.*

To exit the E-mail Stage table, do the following:

1 To exit while saving any changes, select **OK**.

2 To exit while not saving changes, select **Cancel**.

If modifications have been made, a Cancel Dialog appears.



Do one of the following:

- *To save changes, select **Yes**.*
- *To not save changes, select **No**.*

Gif Stage

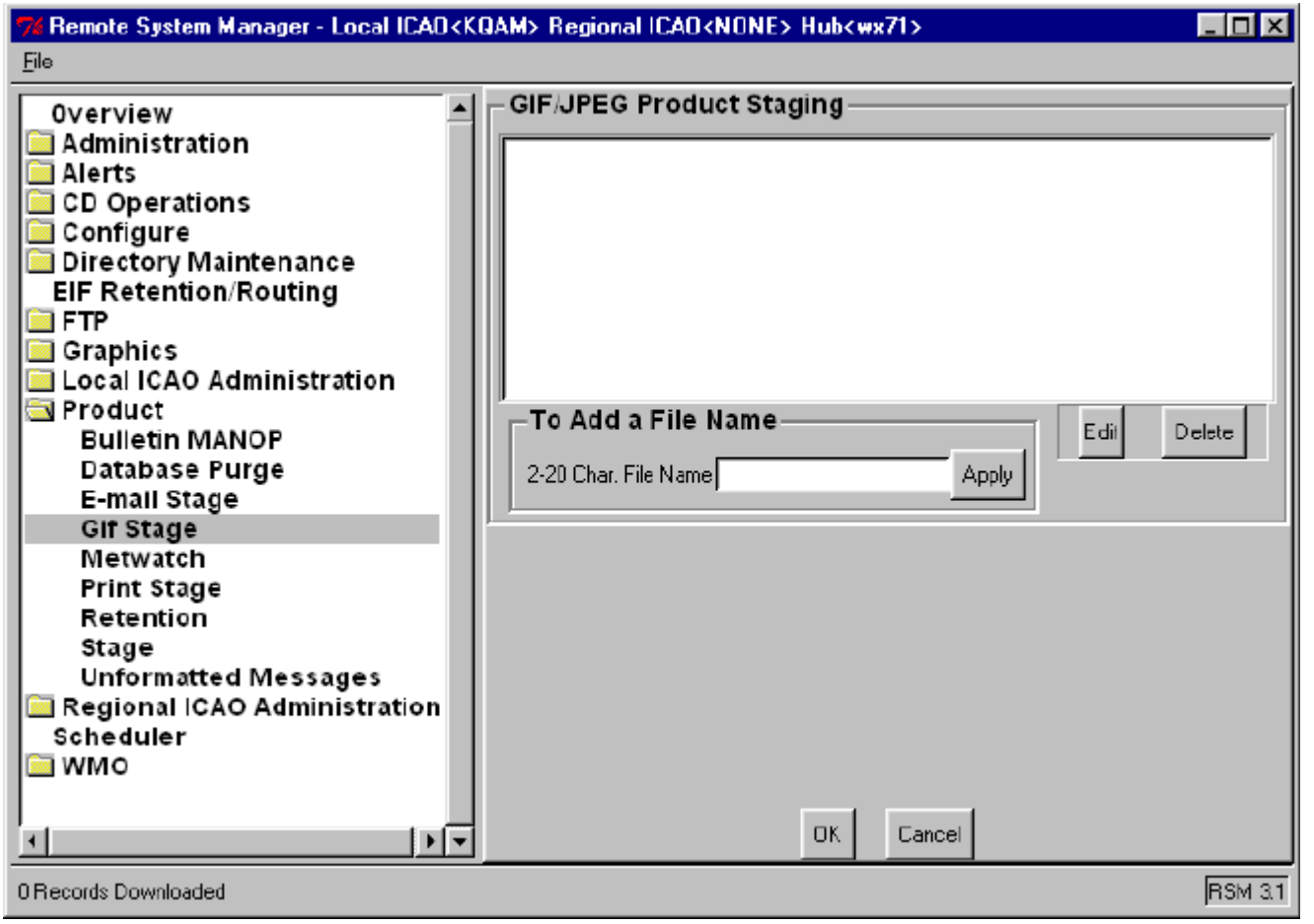
The System Manager uses the Gif Stage table in conjunction with the Configure > Destinations table (see “Destinations” on page 6-44) to configure and maintain a list of external sites to which GIF/JPEG products are transmitted by default (that is, staged). The Gif Stage table enables the System Manager to add, edit, or delete GIF/JPEG product filenames and/or staging destinations for those products.

To access the Gif Stage table, do the following:

1 Select the **Product** folder, and select **Gif Stage**.

The Gif Stage table appears (see Figure 6.89).

Figure 6.89 Gif Stage Table



To add a PID for staging, do the following:

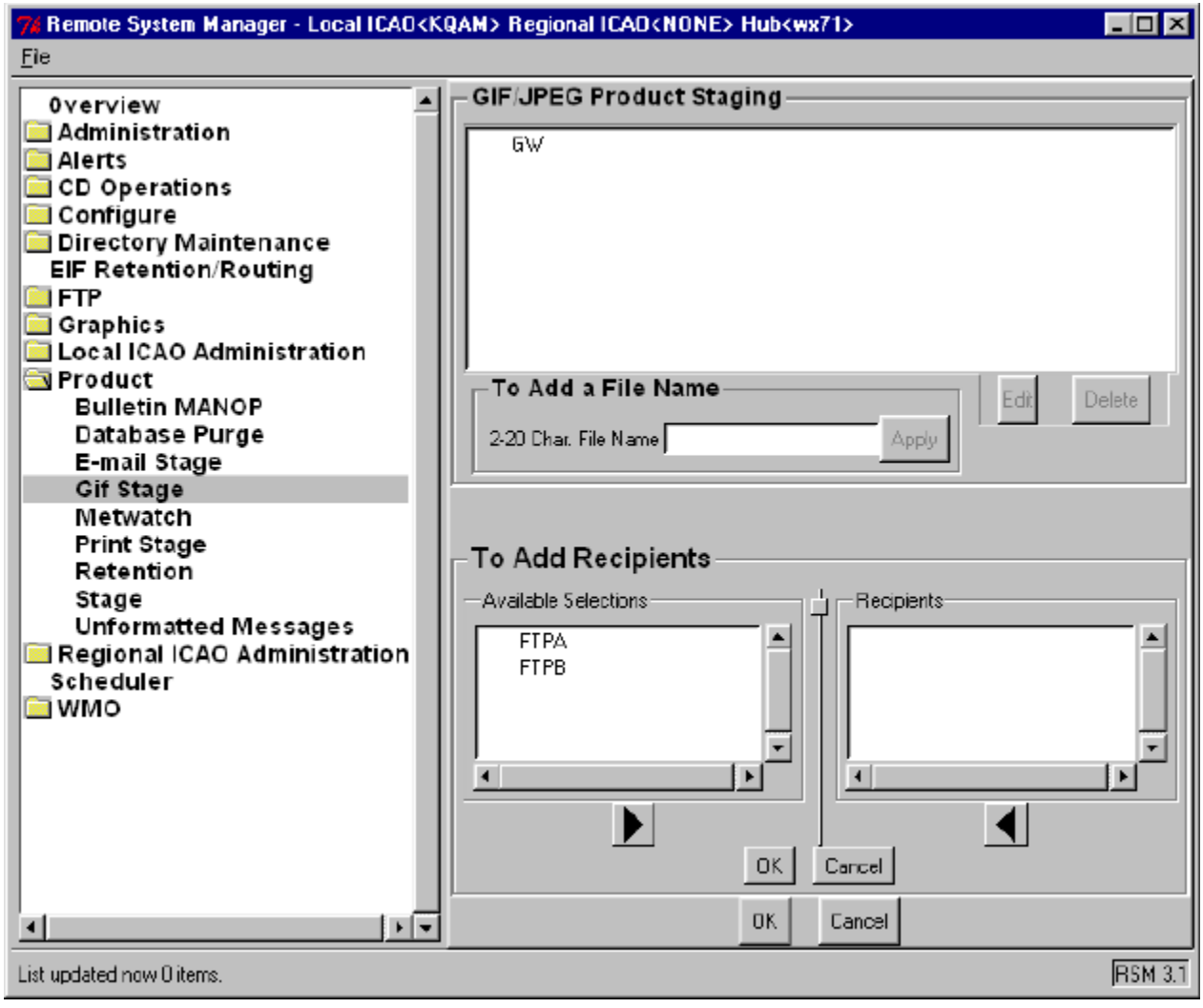
1 At **2-20 Char. File Name**, enter a 2-20 character GIF/JPEG product filename.

2 Select **Apply**.

*The PID is listed in the **GIF/JPEG Product Staging** window.*

*The **To Add Recipients** panel appears (see Figure 6.90).*

Figure 6.90 Gif Stage Table Add Recipients Panel



3 The destinations listed under **Available Selections** are the candidate staging destinations. The destinations ultimately listed under **Recipients**

are the actual staging destinations. To adjust the **Available Selections** and/or **Recipients** list, do one of the following:

- To move an entry from one list to the other, double click the entry.
- To move an entry from the **Available Selections** list to the **Recipients** list, highlight the entry and select the right arrow button .
- To move an entry from the **Recipients** list to the **Available Selections** list, highlight the entry and select the left arrow button .

4 Do one of the following:

- To exit the **To Add Recipients** function and save any changes, select **OK**.
- To exit the **To Add Recipients** function without saving any changes, select **Cancel**.

To modify an existing Gif Stage entry, do the following:

1 At the **GIF/JPEG Product Staging** window, select the PID of the entry to modify.

2 Select **Edit**.

*The **To Add Recipients** panel appears.*

3 Adjust the **Recipients** list as desired (see step 3, above).

4 Do one of the following:

- To exit the **To Add Recipients** function and save any changes, select **OK**.
- To exit the **To Add Recipients** function without saving any changes, select **Cancel**.

To delete an existing Gif Stage entry, do the following:

1 At the **GIF/JPEG Product Staging** window, select the PID of the entry to delete.

2 Select **Delete**.

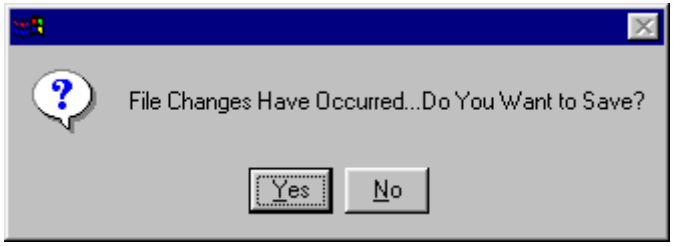
*The PID disappears from the **GIF/JPEG Product Staging** window.*

To exit the Gif Stage table, do the following:

1 To exit while saving any changes, select **OK**.

2 To exit while not saving changes, select **Cancel**.

If modifications have been made, a Cancel Dialog appears.



Do one of the following:

- *To save changes, select **Yes**.*
- *To not save changes, select **No**.*

Metwatch

The Metwatch Criteria table enables the System Manager to view, add, edit, or delete up to 200 ICAOs and/or associated Metwatch criteria for Metwatch alerting. The alerting phenomenon which can be specified are present weather change; threshold values for temperature, wind speed, wind gusts, visibility, and ceiling; wind direction change (with wind speed threshold); and altimeter setting change over time.

The following table describes the four Metwatch alerts.

Table 6.6 Metwatch Alert Types

Metwatch Alert Type	Description
Present weather change alert	AMIS considers the present weather code in the previously received FBD and the currently received FBD for the station. If the present weather code change leaves or enters a specified range, or changes within a single specified range, AMIS generates an alert. For example, say the Metwatch criteria for KDEN defines two present weather code ranges as 65 to 72 and 73 to 80. If the previously received FBD for KDEN reported a present weather code of 71 (light snow) and the currently received FBD reports a present weather code of 75 (heavy snow), AMIS generates two alerts: one for leaving the lower numbered range, and one for entering the higher numbered range.
Parameter value alert	AMIS detects crosses of thresholds for specified values of temperature, wind speed, wind gusts, visibility, and ceiling. AMIS considers the currently received observation data and the previously received observation data for the surface station. If the specified parameter value lies within the range between the previously reported and currently reported values, AMIS generates an alert. For example, say a temperature value of 32°C is specified in the Metwatch Criteria for KDEN. If the previously received FBD for KDEN reported a temperature of 35°C, and the currently received FBD reports a temperature of 31°C, AMIS generates an alert.

Table 6.6 Metwatch Alert Types

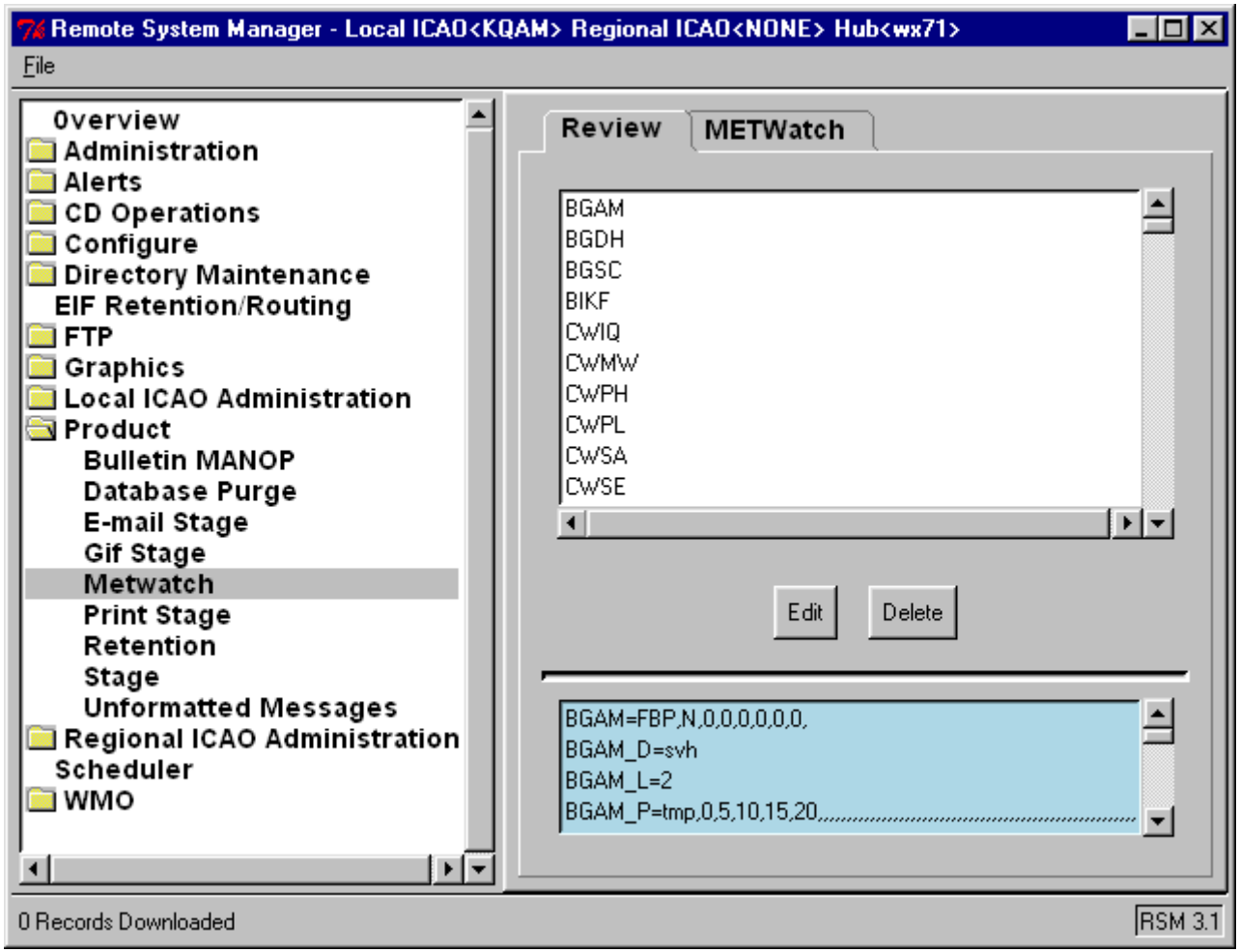
Metwatch Alert Type	Description
Wind direction change with wind speed threshold alert	AMIS detects changes in wind direction at specified wind speeds for the station. When the wind speed is greater than the specified threshold, AMIS tests the currently reported wind direction against the previously reported wind direction. If the wind direction has changed, AMIS generates an alert. For example, say the Metwatch criteria for KDEN specifies a wind direction between 320 and 020 degrees and a threshold speed of greater than 24 knots. If KDEN reports speeds of 24 knots or greater, and the winds are between the specified directions, AMIS generates an alert.
Altimeter change over time alert	AMIS detects changes in the altimeter setting over a specified time interval for the station. AMIS tests the reported altimeter setting in the current observation against all previously reported observations within the specified time interval against the specified change value. If the altimeter setting changes as much as or more than the specified change value within the specified time interval, AMIS generates an alert. For example, say the Metwatch criteria for KDEN specify a change value of .06 and an interval of two hours. AMIS compares the currently reported altimeter setting against all previously received FBD whose observation time is within two hours of the currently received FBD observation time. If the current (1200) altimeter setting is 29.00 and the most recent (that is, 1100) was 29.03, AMIS does not generate an alert. However, if the next most recent (that is, 1000) was 29.07, AMIS generates an alert.

To access the Metwatch Criteria table, do the following:

1 Select the **Product** folder, and select **Metwatch**.

The Metwatch Criteria table appears (see Figure 6.91).

Figure 6.91 Metwatch Criteria Table



To view the ICAOs and/or associated Metwatch criteria, do the following:

1 Select the **Review** tab and view ICAOs and/or associated Metwatch criteria in the two scrollable windows (see Figure 6.91, above).

To delete a station, do the following:

1 Select the **Review** tab.

2 In the top window, select the ICAO of the station to delete.

3 Select **Delete**.

The ICAO is removed from the ICAO list.

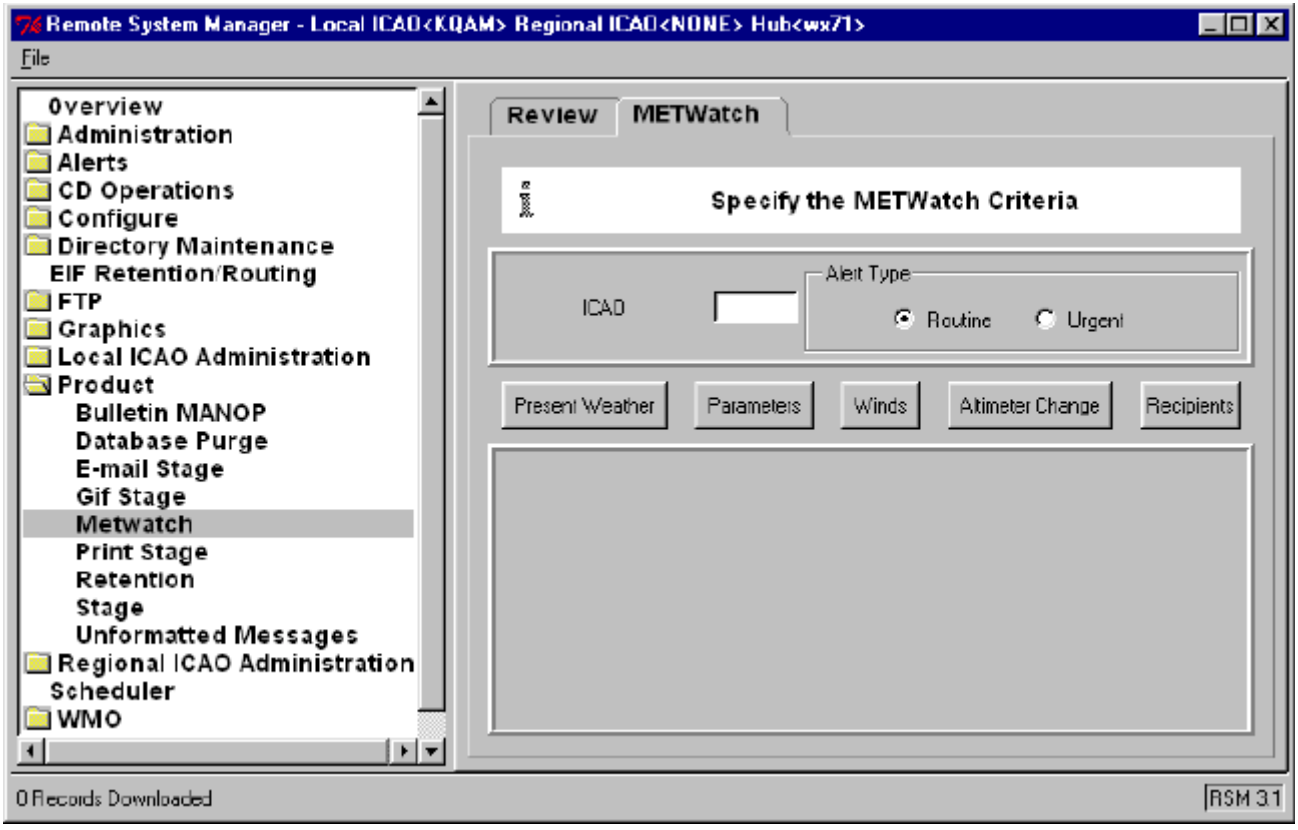
To modify the Metwatch criteria for a station, do the following:

1 At the **Review** tab, in the top window, select the ICAO of the station to modify.

2 Select **Edit**.

The Specify Metwatch Criteria panel appears (see Figure 6.92).

Figure 6.92 Specify Metwatch Criteria Panel

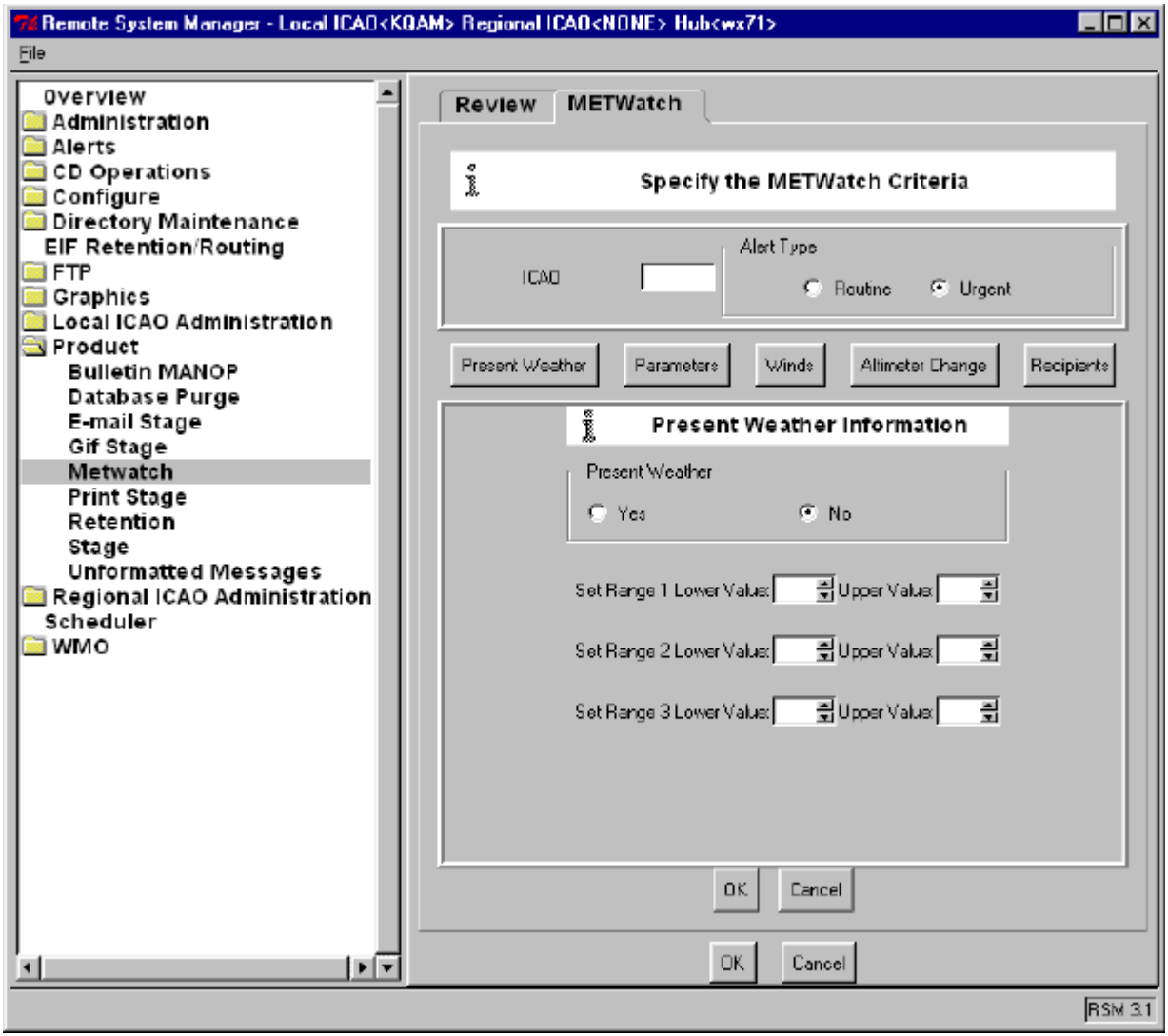


3 At **Alert Type**, select one of **Routine** or **Urgent**.

4 Select **Present Weather**.

The Present Weather Information panel appears (see Figure 6.93).

Figure 6.93 Present Weather Information Panel



5 At **Present Weather**, select one of **Yes** or **No**.

6 At **Set Range 1 Lower Value**, select a lower value for the range by using the spinners on the window, or type the value using up to two digits.

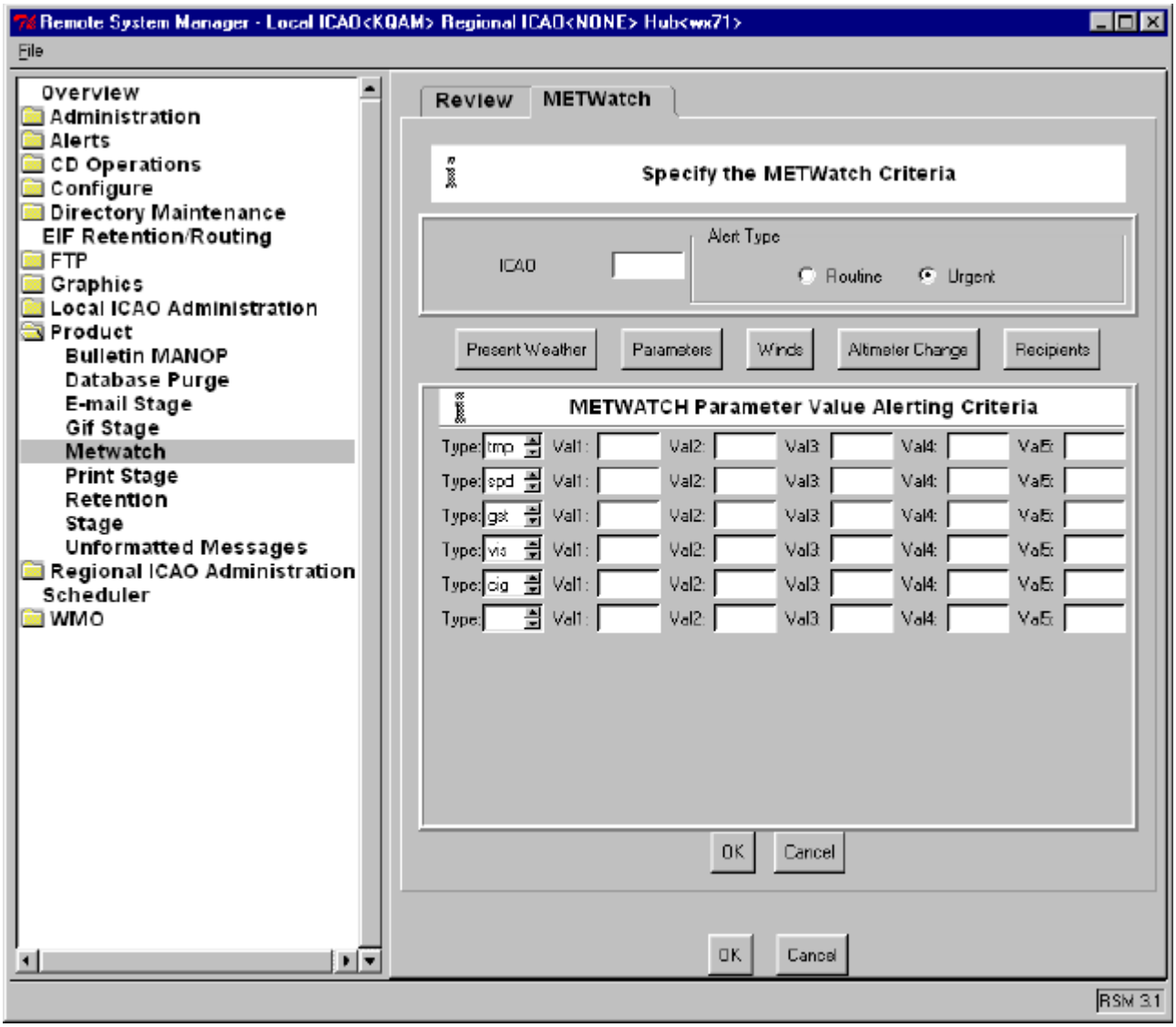
7 At **Upper Value** (for Range 1), select a upper value for the range by using the spinners on the window, or type the value using up to two digits.

8 Optionally, specify the lower and upper values for Ranges 2 and 3.

9 Select **Parameters**.

The Parameter Value Alerting Criteria Panel appears (see Figure 6.94).

Figure 6.94 Parameter Value Alerting Criteria Panel



10 At the **Type** windows, select up to five parameter types by using the spinners on the window, or type the parameter types using three characters, as follows:

- tmp–temperature (Celsius)
- spd–wind speed (knots)

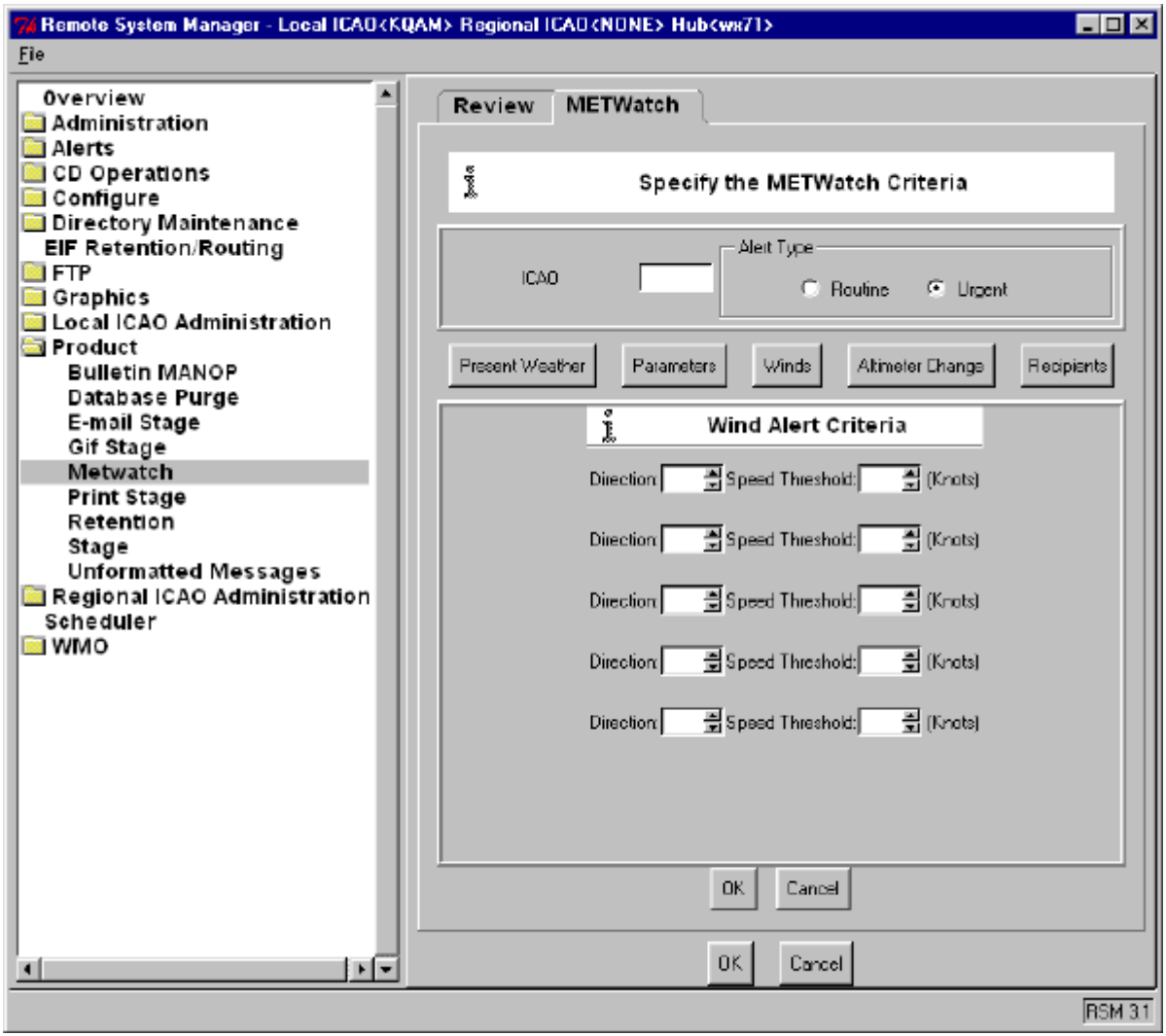
- gst–wind gusts (knots)
- vis–visibility (nautical miles)
- cig–ceiling (feet)

11 At the **Val** windows for each parameter, enter up to five threshold values (the respective units of measure are listed in step 10 above).

12 Select **Winds.**

The Wind Alert Criteria panel displays (see Figure 6.95).

Figure 6.95 Wind Alert Criteria Panel



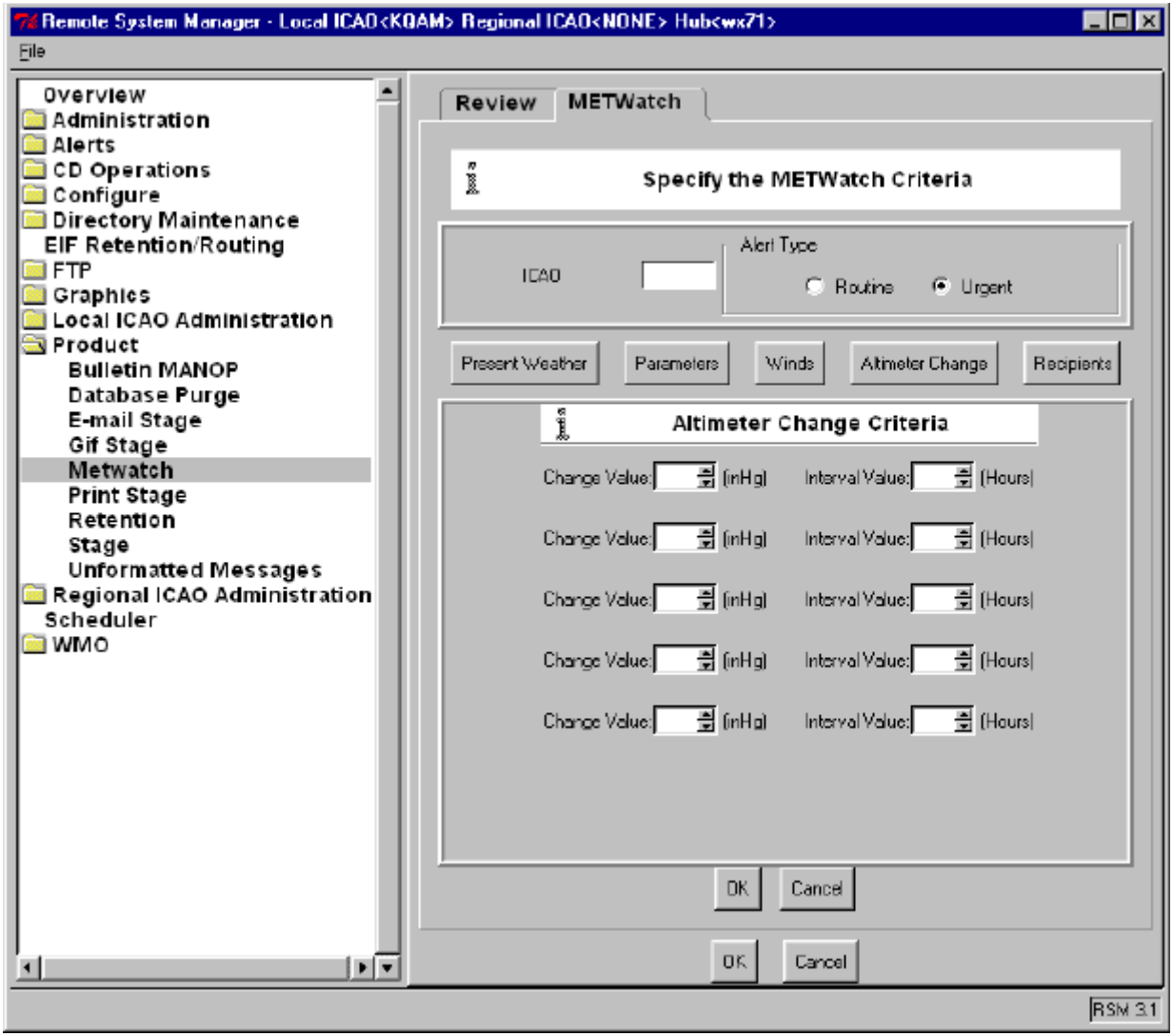
13 At the **Direction** windows, select a wind direction (in degrees) by using the spinners on the window, or type the value in the window.

14 At the **Speed Threshold** windows, select a wind speed threshold (in knots) by using the spinners on the window, or type the value in the window.

15 Select **Altimeter Change**.

The Altimeter Change Criteria panel displays (see Figure 6.96).

Figure 6.96 Altimeter Change Criteria Panel



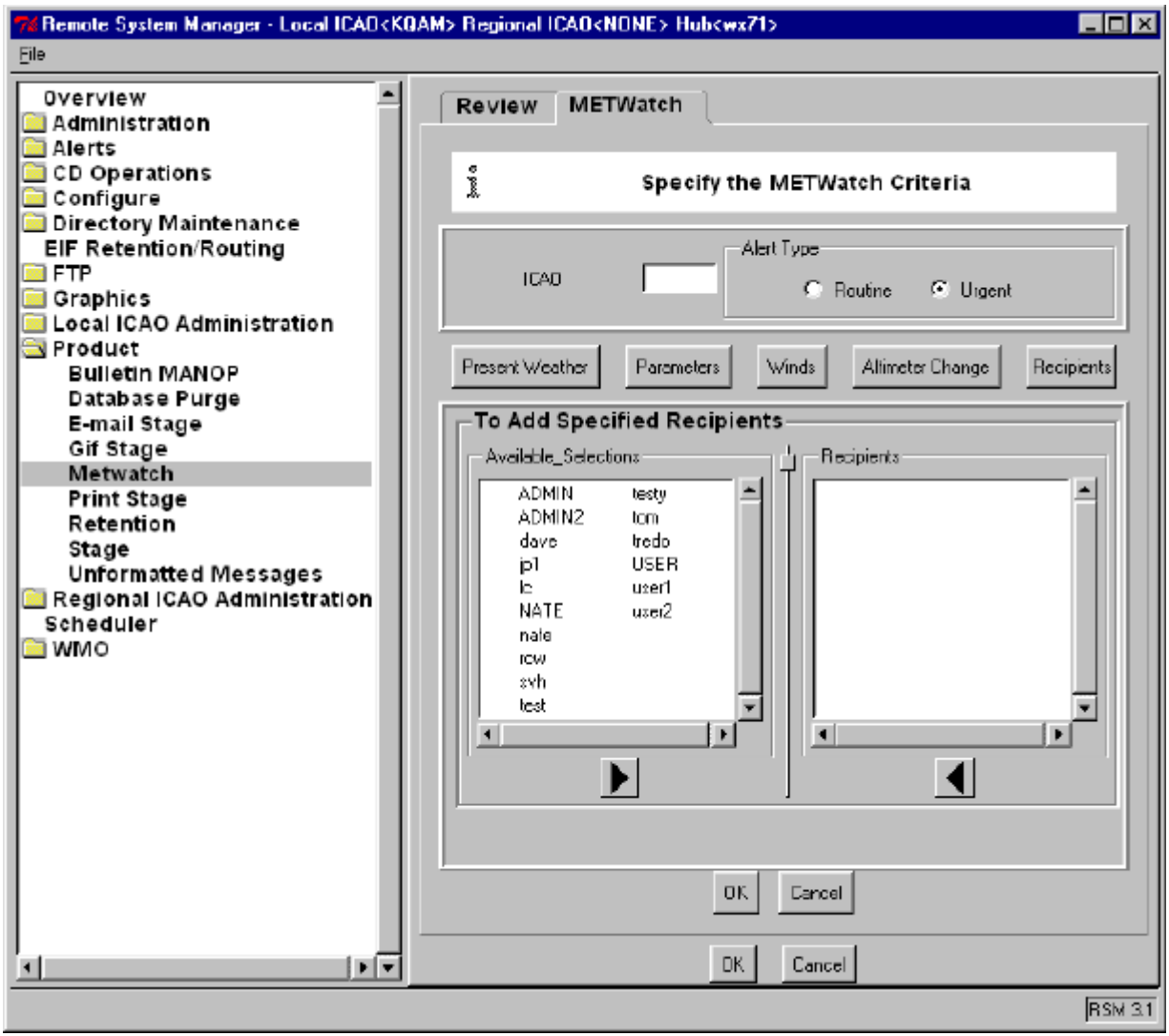
16 At the **Change Value** windows, enter the altimeter change value (in inches of Mercury) by using the spinners on the window, or type the value in the window.

17 At the **Interval Value** windows, enter the respective time interval (in hours) by using the spinners on the window, or type the value in the window.

18 Select **Recipients**.

The To Add Specified Recipients panel appears (see Figure 6.97).

Figure 6.97 Metwatch Criteria Add Specified Recipients



19 The destinations listed under **Available Selections** are the candidate Metwatch alert destinations. The destinations ultimately listed under **Recipients** are the actual Metwatch alert destinations. To adjust the **Available Selections** and/or **Recipients** list, do one of the following:

- To move an entry from one list to the other, double click the entry.
- To move an entry from the **Available Selections** list to the **Recipients** list, highlight the entry and select the right arrow button .
- To move an entry from the **Recipients** list to the **Available Selections** list, highlight the entry and select the left arrow button .

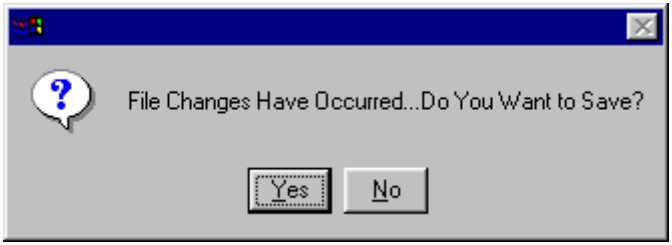
20 To exit the METWatch criteria specification and return to the **Review** tab, do the following:

- To save changes, select (upper) **OK**.
- To not save changes, select (upper) **Cancel**.

21 To exit the Metwatch Criteria table, do one of the following:

- To exit and save changes, select (lower) **OK**.
- To exit without saving changes, select (lower) **Cancel**.

If modifications have been made, a Cancel Dialog appears.



Do one of the following:

- *To save changes, select **Yes**.*
- *To not save changes, select **No**.*

Print Stage

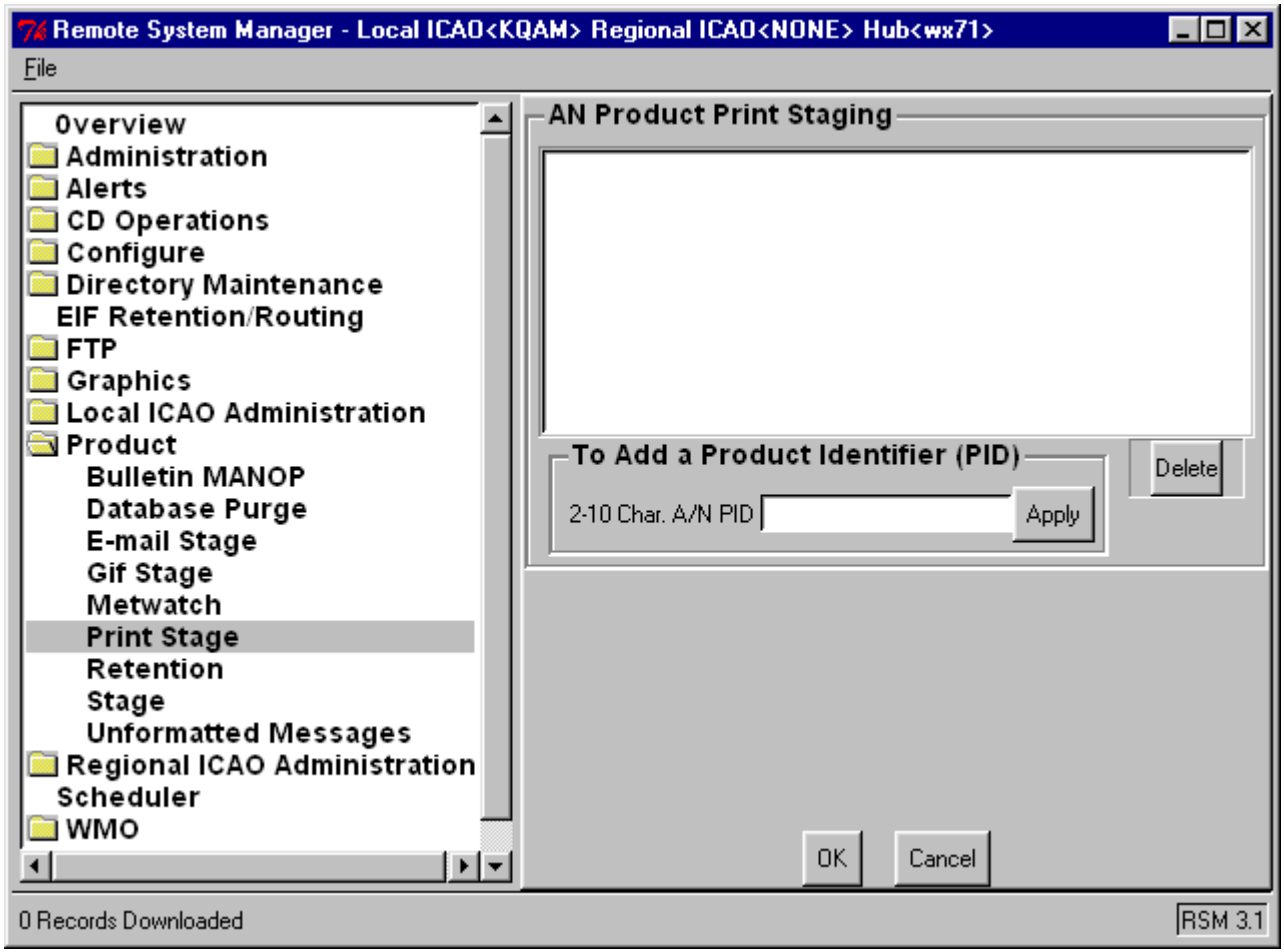
The Print Stage table enables the System Manager to add or delete alphanumeric PIDs for print staging of the respective products.The printer staged to is the N-TFS Server default printer (to configure the printer, see "N-TFS Server Configuration and Monitoring" on page 6-221).

To access the Print Stage table, do the following:

1 Select the **Product** folder, and select **Print Stage**.

The Print Stage table appears (see Figure 6.98).

Figure 6.98 Print Stage Table



To add a PID for print staging of the associated alphanumeric product, do the following:

1 At the **2-10 Char. A/N PID** window, enter a 2-10 character alphanumeric PID (wildcards are accepted).

2 Select **Apply**.

*The PID is listed in the **AN Product Print Staging** window.*

To delete a PID for print staging, do the following:

1 At the **AN Product Print Staging** window, select the desired PID.

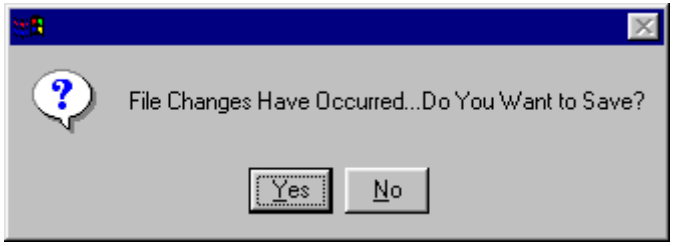
2 Select **Delete**.

*The PID is removed from the **AN Product Print Staging** window.*

To exit the Print Stage table, do one of the following:

- To exit and save any changes, select **OK**.
- To exit without saving changes, select **Cancel**.

  If modifications have been made, a Cancel Dialog appears.



Do one of the following:

- *To save changes, select **Yes**.*
- *To not save changes, select **No**.*

Retention

The External Product Retention table enables the System Manager to specify which externally generated products are to be retained by AMIS.

The External Product Retention table does not apply to FBD products. FBD products are retained in the WMO table (see "WMO" on page 6-198).

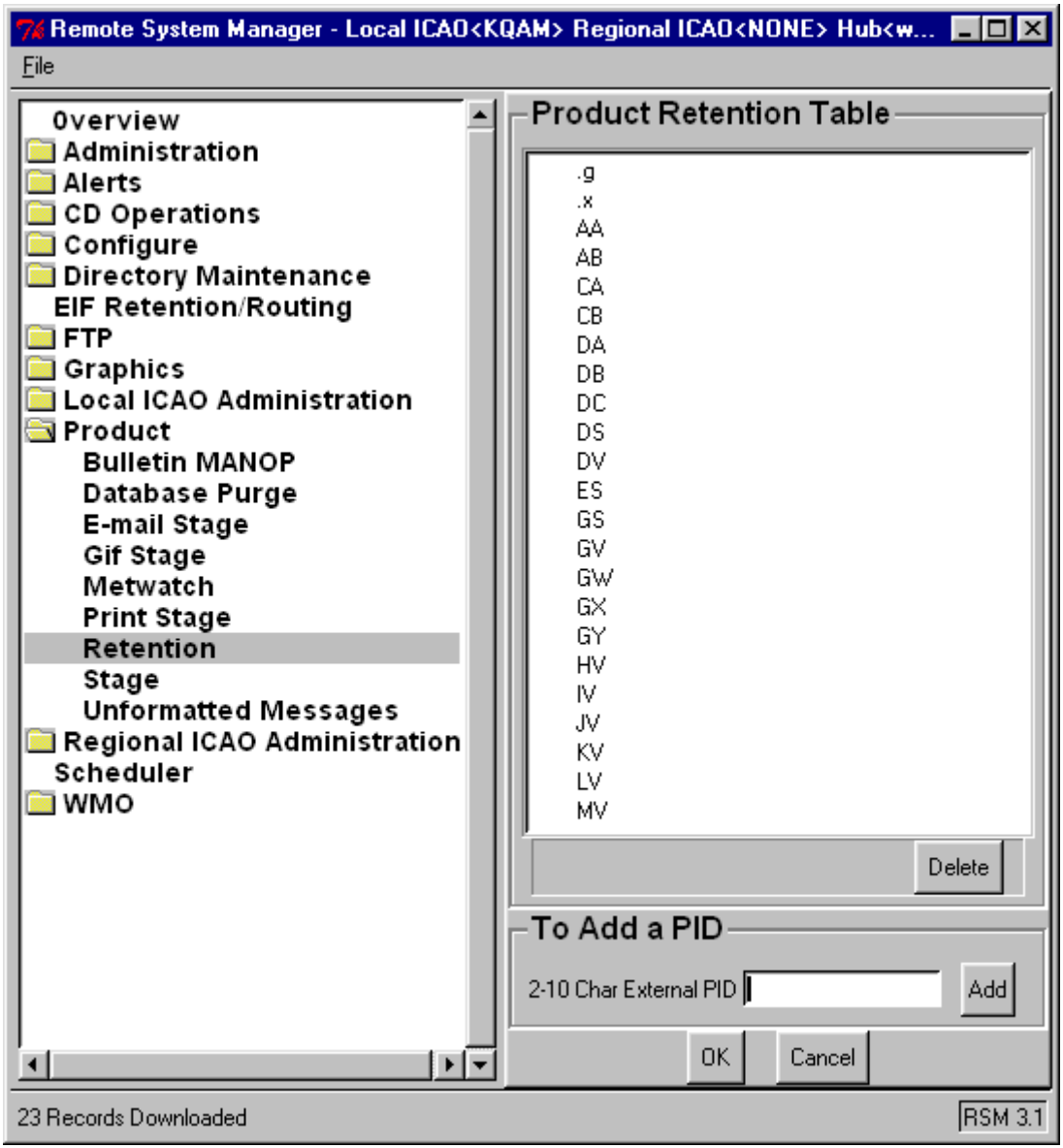
Changes made to this table can effect several functions, particularly product alert routing; E-mail, print, and product staging; and product scheduling.

To access the Product Retention table, do the following:

1 Select the **Product** folder, and select **Retention**.

The Product Retention table appears (see Figure 6.99).

Figure 6.99 Product Retention Table



To add a PID for product retention, do the following:

1 At **2-10 Char External PID**, enter a 2-10 character PID for external product(s).

PIDs are case sensitive. Enter PIDs exactly as issued by the appropriate agency.

Wildcarded PIDs may be entered. For example, to retain all AFWA Miscellaneous Analysis Vector Graphic products, enter GVAX as the PID.

The maximum number of PIDs that may be entered into the External Product Retention table is 3000.

2 Select **Add**.

*The PID is listed in the **Product Retention Table** window.*

To delete a PID for product retention, do the following:

1 At the **Product Retention Table** window, select the desired PID.

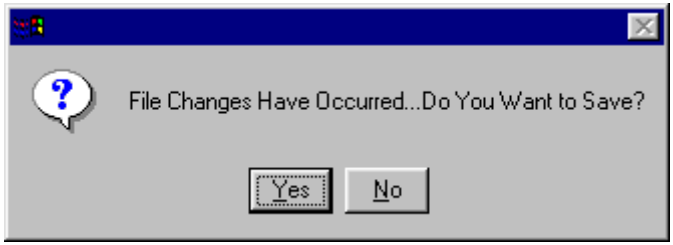
2 Select **Delete**.

*The PID is removed from the list in the **Product Retention Table** window*

To exit the Product Retention table, do one of the following:

- To exit and save any changes, select **OK**.
- To exit without saving changes, select **Cancel**.

If modifications have been made, a Cancel Dialog appears.



Do one of the following:

- *To save changes, select **Yes**.*
- *To not save changes, select **No**.*

Stage

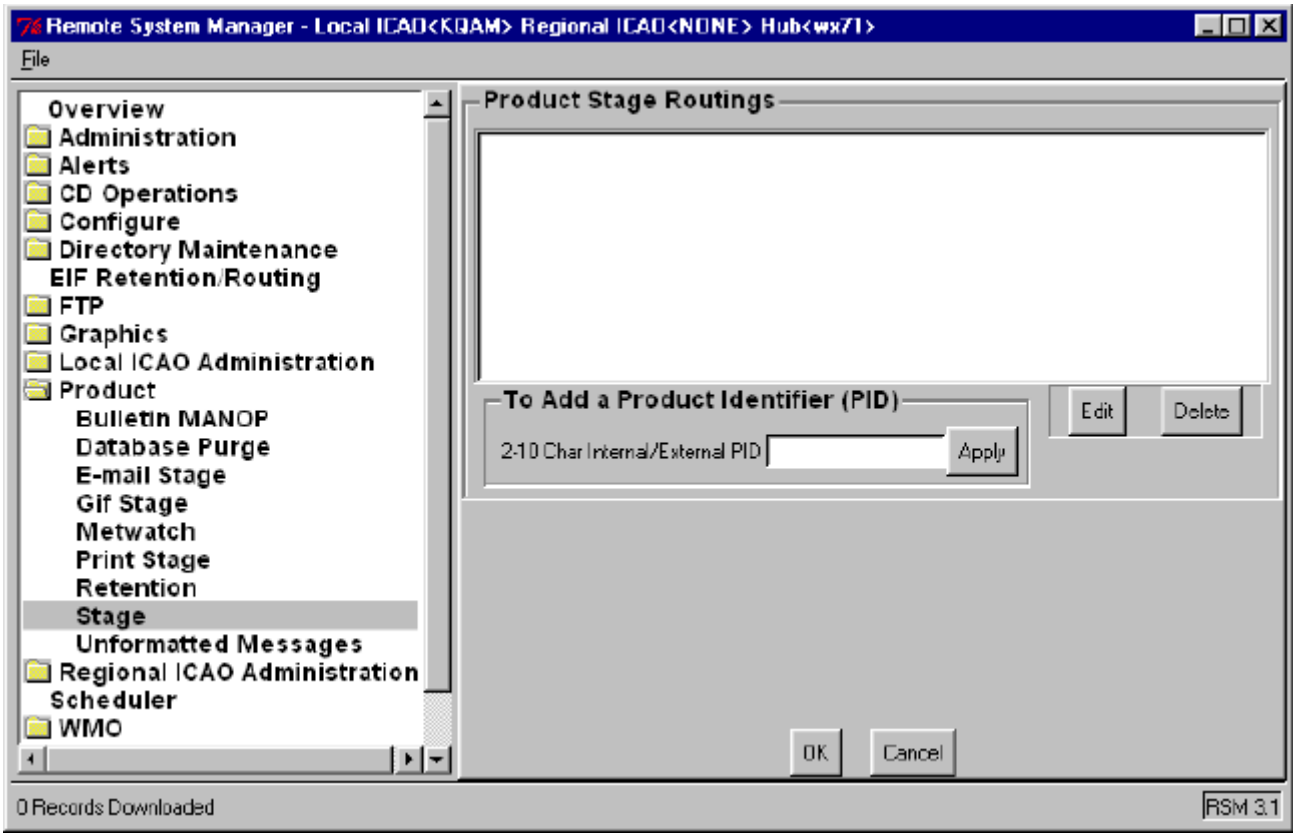
The System Manager uses the Product Staging table in conjunction with the **Configure** > **Destinations** table (see “Destinations” on page 6-44) to configure and maintain a list of external sites to which specific products are transmitted by default (that is, staged). The Product Staging table enables the System Manager to add, edit, or delete PIDs and/or their associated product staging destinations.

To access the Product Stage table, do the following:

1 Select the **Product** folder, and select **Stage**.

The Product Stage table appears (see Figure 6.100).

Figure 6.100 Product Stage Table



To add a PID for product staging of the associated product, do the following:

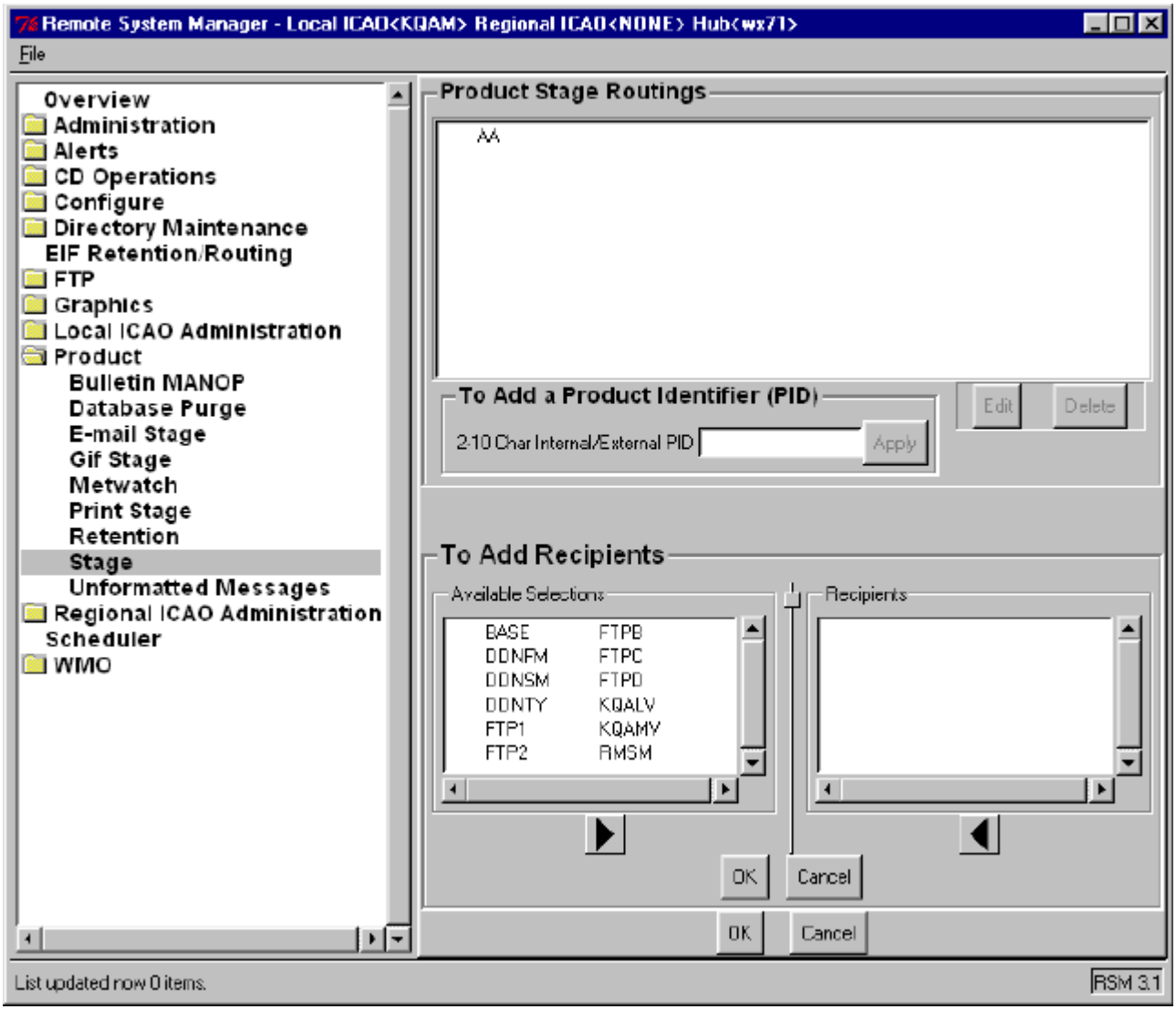
1 At the **2-10 Char. Internal/External PID** window, enter a 2-10 character internal/external PID (wildcards are accepted).

2 Select **Apply**.

*The PID is listed in the **Product Stage Routings** window.*

The Add Recipients panel appears (see Figure 6.101).

Figure 6.101 Product Stage Add Recipients Panel



3 The destinations listed under **Available Selections** are the candidate staging destinations. The destinations ultimately listed under **Recipients** are the actual staging destinations. To adjust the **Available Selections** and/or **Recipients** list, do one of the following:

- To move an entry from one list to the other, double click the entry.
- To move an entry from the **Available Selections** list to the **Recipients** list, highlight the entry and select the right arrow button ▶.

- To move an entry from the **Recipients** list to the **Available Selections** list, highlight the entry and select the left arrow button .

4 Do one of the following:

- To exit the **To Add Recipients** function and save any changes, select **OK**.
- To exit the **To Add Recipients** function without saving any changes, select **Cancel**.

To modify an existing staging entry, do the following:

1 At the **Product Stage Routings** window, select the PID of the entry to modify.

2 Select **Edit**.

*The **To Add Recipients** panel appears.*

3 Adjust the **Recipients** list as desired (see step 3, above).

4 Do one of the following:

- To exit the **To Add Recipients** function and save any changes, select **OK**.
- To exit the **To Add Recipients** function without saving any changes, select **Cancel**.

To delete an existing staging entry, do the following:

1 At the **Product Stage Routings** window, select the PID of the entry to delete.

2 Select **Delete**.

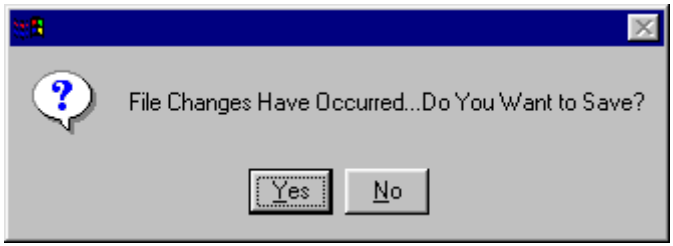
*The PID is removed from the **Product Stage Routings** window.*

To exit the table, do the following:

1 To exit while saving any changes, select **OK**.

2 To exit while not saving changes, select **Cancel**.

If modifications have been made, a Cancel Dialog appears.



Do one of the following:

- *To save changes, select **Yes**.*
- *To not save changes, select **No**.*

Unformatted Messages

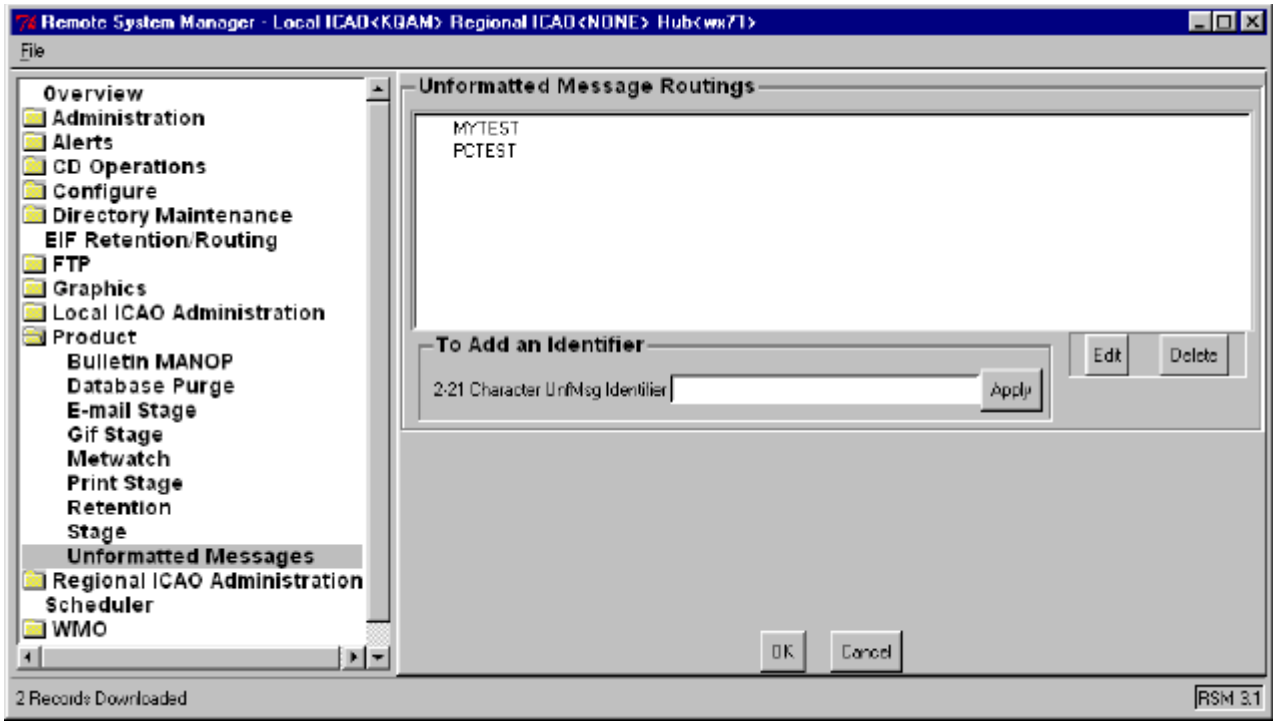
The Unformatted Message Route-by-Name table enables the System Manager to add, edit, or delete Unformatted Message identifiers and/or their associated local workstation routing destinations.

To access the Unformatted Message Route-by-Name table, do the following:

1 Select the **Product** folder, and select **Unformatted Messages**.

The Unformatted Message Route-by-Name table appears (see Figure 6.102).

Figure 6.102 Unformatted Message Route-by-Name Table



To add a product name, do the following:

1 At **2-21 Character UnfMsg Identifier**, enter a 2-21 character unformatted message product name.

*The product must be entered in upper case alphanumeric characters, with no spaces or special characters, except *.*

*The * is used to indicate a wildcarded name. See the following example of its use:*

If the Unformatted Message Route-by-Name table is configured as follows:

2UNFMSG* for all ATCs.

2UNFMS* for all FOs.

Then actual routing results will be:

2UNFMSGGW will be routed to all FOs and ATCs.

2UNFMS will be routed to all FOs.

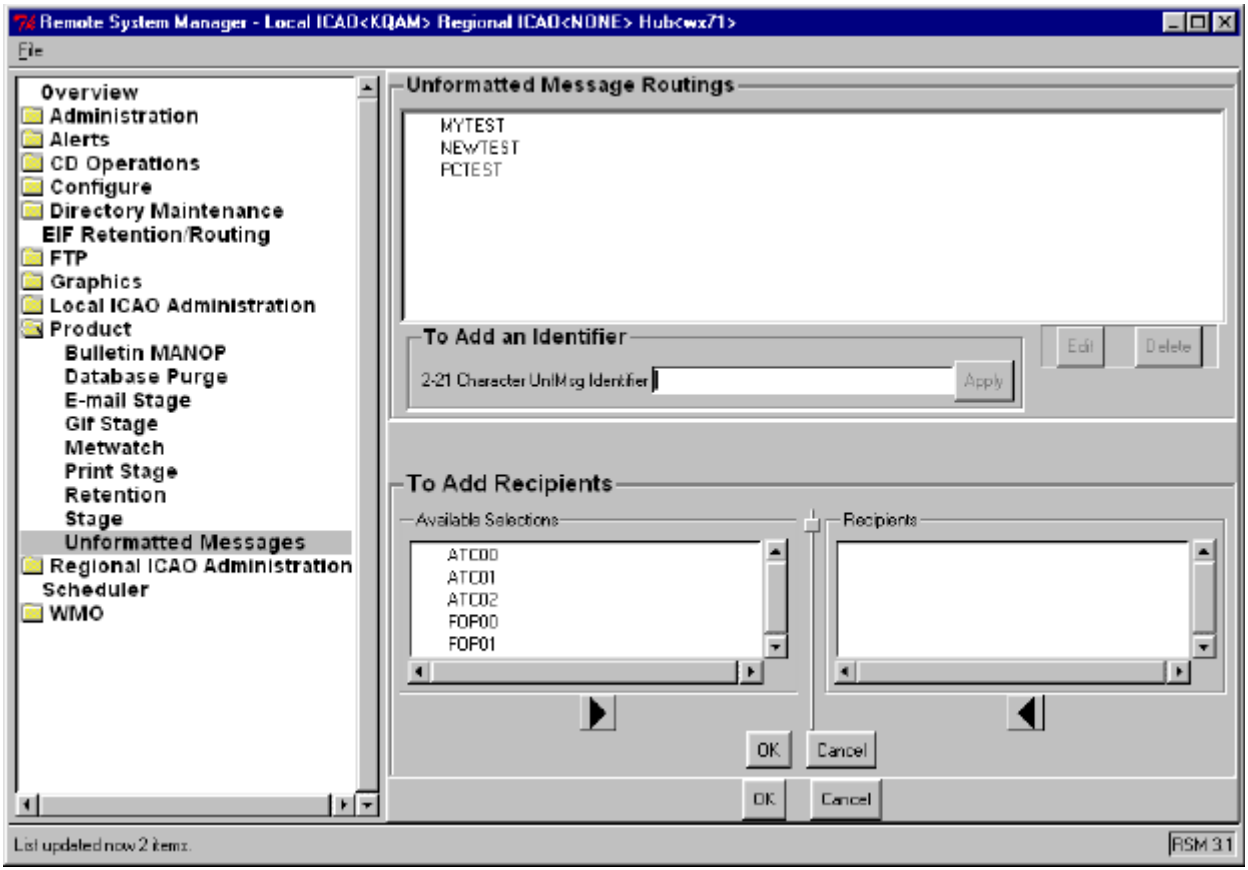
CAUTION *Use caution when using the wildcard in the Unformatted Message Route-by-Name table and when assigning names to Unformatted Message products. An inadvertent match will result in routing to unintended destinations.*

2 Select **Apply**.

*The product name is listed in the **Unformatted Message Routings** window.*

*The T**o Add Recipients** panel appears (see Figure 6.103).*

Figure 6.103 Unformatted Messages Add Recipients Panel



3 The local workstations listed under **Available Selections** are the candidate routing destinations. The destinations ultimately listed under **Recipients** are the actual routing destinations. To adjust the **Available Selections** and/or **Recipients** list, do one of the following:

- To move an entry from one list to the other, double click the entry.
- To move an entry from the **Available Selections** list to the **Recipients** list, highlight the entry and select the right arrow button ▶.
- To move an entry from the **Recipients** list to the **Available Selections** list, highlight the entry and select the left arrow button ◀.

4 Do one of the following:

- To exit the **To Add Recipients** function and save any changes, select **OK**.
- To exit the **To Add Recipients** function without saving any changes, select **Cancel**.

To modify an existing routing entry, do the following:

1 At the **Unformatted Message Routings** window, select the product name to modify.

2 Select **Edit**.

*The **To Add Recipients** panel appears.*

3 Adjust the **Recipients** list as desired (see step 3, above).

4 Do one of the following:

- To exit the **To Add Recipients** function and save any changes, select **OK**.
- To exit the **To Add Recipients** function without saving any changes, select **Cancel**.

To delete an existing routing entry, do the following:

1 At the **Unformatted Message Routings** window, select the product name to delete.

2 Select **Delete**.

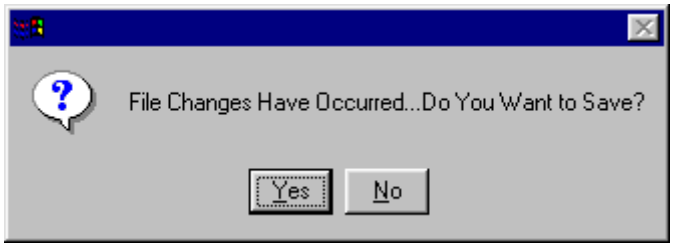
*The product name is removed from the **Unformatted Message Routings** window.*

To exit the table, do the following:

1 To exit while saving any changes, select **OK**.

2 To exit while not saving changes, select **Cancel**.

If modifications have been made, a Cancel Dialog appears.



Do one of the following:

- *To save changes, select **Yes**.*
- *To not save changes, select **No**.*

Regional ICAO Administration

The Regional ICAO Administration function enables the System Manager to maintain a list of ICAO tables specifically for issuing TAF and Warning/ Advisory products for multiple sites simultaneously.

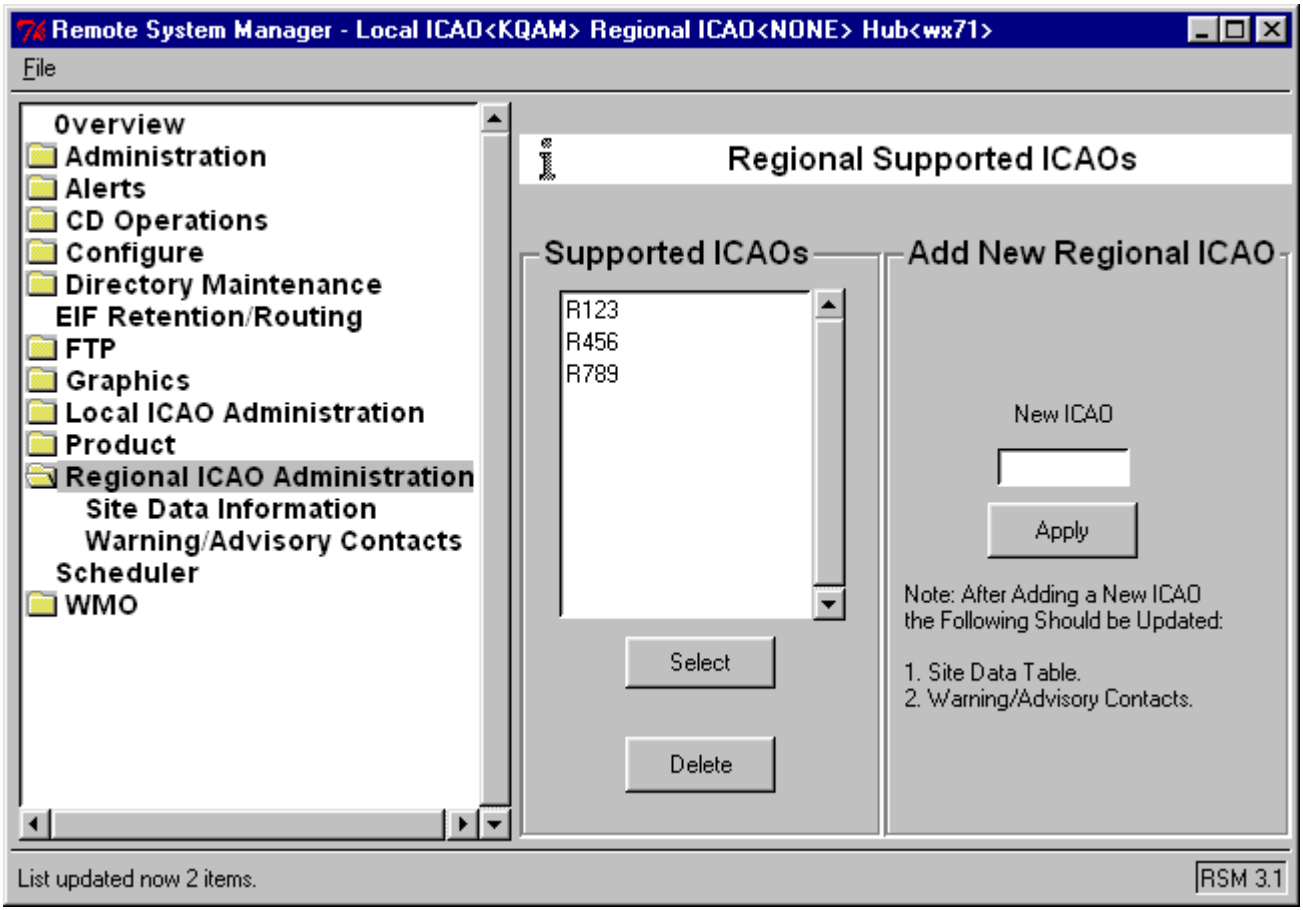
By default, when the AMIS software is loaded, your ICAO tables should be configured from either an archive or as part of a system upgrade procedure. The default tables for your ICAO should remain fairly static. The most common change you will need to make will probably be in maintaining settings for multiple and regional ICAOs that are located remotely from your site. The ICAO lists must be set up, and then each ICAO will need to be selected from that list to access it's particular tables. This section covers regional ICAO administration setup.

To access the Regional ICAO Station Data table, do the following:

1 Select the **Regional ICAO Administration** folder.

The Regional ICAO Station Data table appears (see Figure 6.104).

Figure 6.104 Regional ICAO Station Data Table



To add an ICAO, do the following:

1 In the window at **New ICAO**, enter the ICAO to be added.

2 Select **Apply**.

The new ICAO appears in the list of supported ICAOs.

Note: after adding a regional ICAO, you must update the Site Data table and the Warning/Advisory contacts for that ICAO.

To delete an ICAO from the list of supported ICAOs, do the following:

1 From the list of supported ICAOs, highlight the ICAO to be deleted by clicking on it.

2 Select **Delete**.

The ICAO disappears from the list of supported ICAOs.

To select an ICAO for administration, do the following:

1 From the list of supported ICAOs, highlight the desired ICAO by clicking on it.

2 Select **Select**.

The message along the top of the display identifies the selected Regional ICAO.

Site Data Information

The Site Data table enables the System Manager to specify and maintain regional ICAO parameters used for calculations, dissemination, and purging functions performed on regional alphanumeric products created at your site.

Table 6.7 lists the site data parameters maintained for regional ICAOs and the Site Data table display tabs under which this information is located.

Table 6.7 Regional ICAO Site Data Information

Identification Tab	Location Tab	Units Tab	Network Tab
ICAO	Latitude	Units for local visibility display	Primary and alternate addresses
Name	Longitude		
Alternate ICAO	Elevation		
WMO	Geographic ID		
	Magnetic Declination		
	UTC Offset		
	Daylight Savings Time		

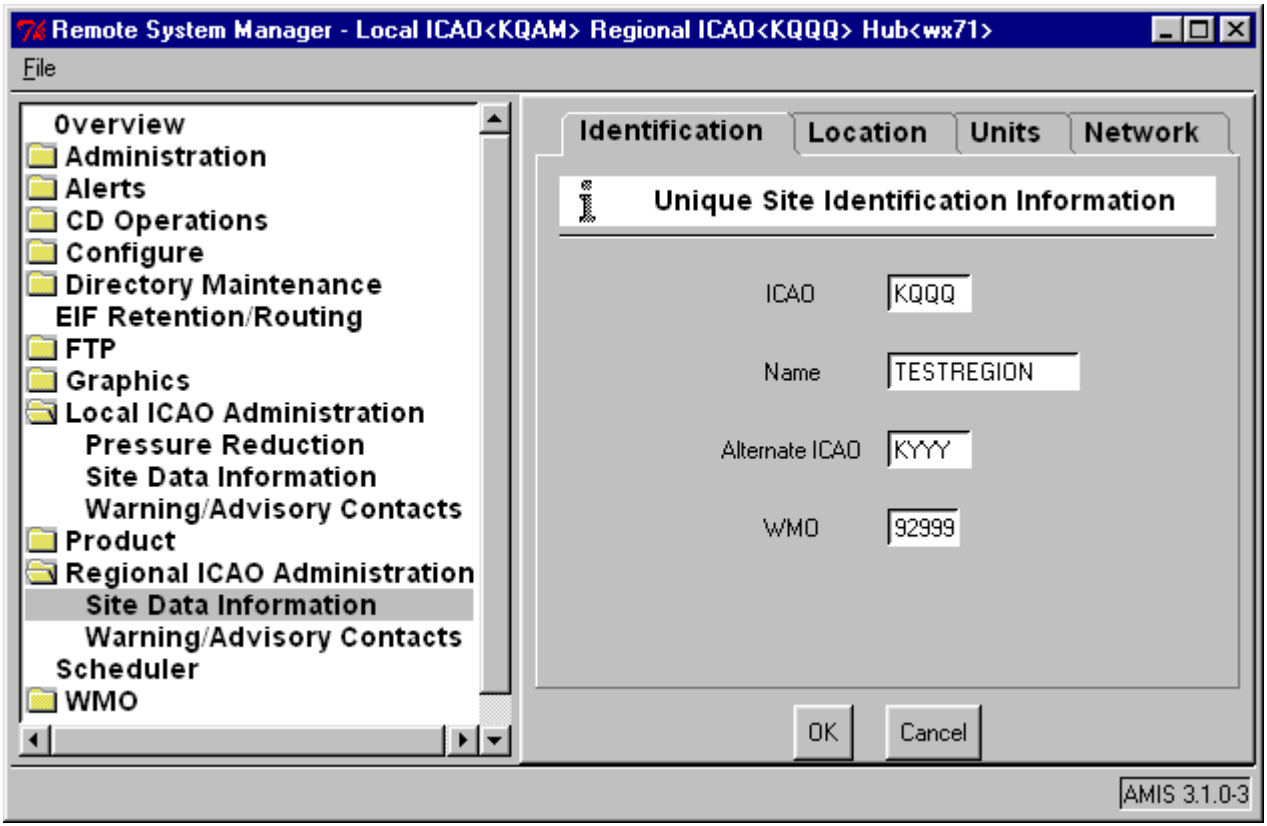
To display/modify the Site Data Information table, do the following:

1 Select the **Regional ICAO Administration** folder, and select **Site Data Information**.

The Site Data table appears (see Figure 6.105) with the Identification tab selected.

Data for the selected ICAO is displayed.

Figure 6.105 Regional ICAO Site Data Table Identification Tab



To modify displayed data, do the following:

1 At **ICAO**, enter station ICAO.

2 At **Name**, enter station name.

3 At **Alternate ICAO**, enter station alternate ICAO.

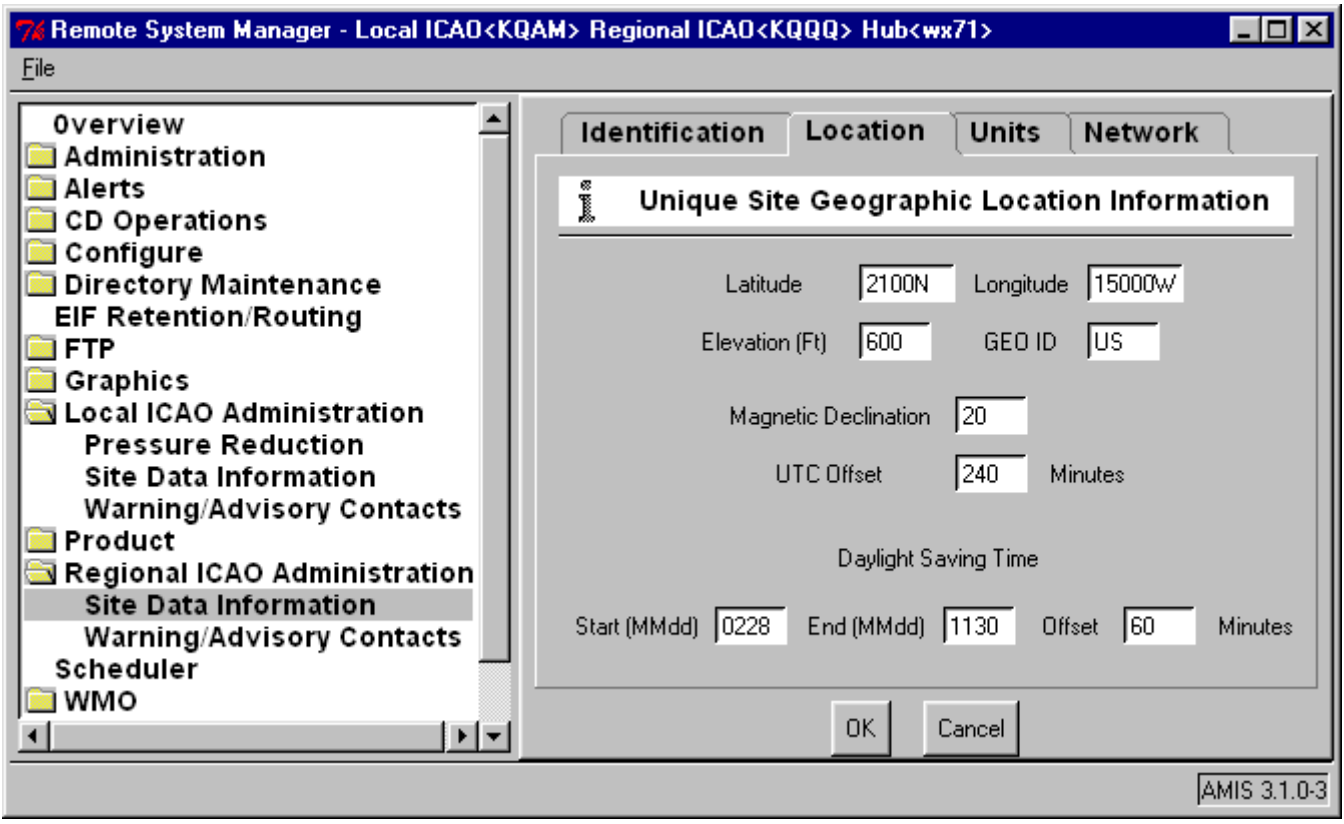
4 At **WMO**, enter station WMO number.

To display/modfy the geographic location parameters, do the following:

1 Along the top of the display, select the **Location** tab.

The geographic location information appears (see Figure 6.106).

Figure 6.106 Regional ICAO Site Data Table Location Tab



To modify displayed information, do the following:

1 At **Latitude**, enter the station latitude.

2 At **Longitude**, enter the station longitude.

3 At **Elevation (Ft)**, enter the station elevation in feet.

4 At **GEO ID**, enter station geographic identifier.

5 At **Magnetic Declination**, enter station magnetic declination.

6 At **UTC Offset**, enter station offset time from local standard to UTC.
Note that this entry should not be adjusted for Daylight Savings Time.

7 At **Start (MMdd)**, enter the starting date for Daylight Savings Time.

8 At **End (MMdd)**, enter the ending date for Daylight Savings Time.

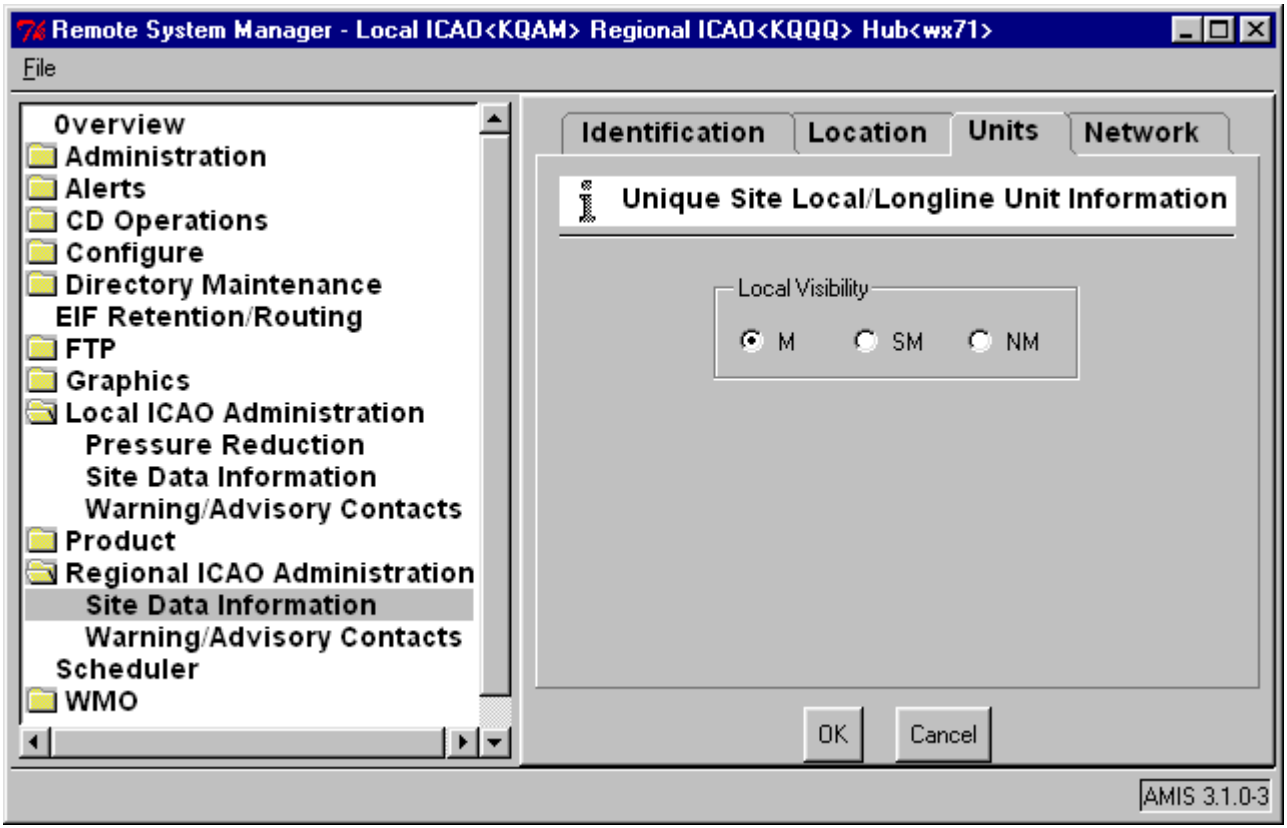
9 At **Offset**, enter the offset for Daylight Savings Time in minutes.

To display/modfy the **Units** parameters, do the following:

1 Along the top of the display, select the **Units** tab.

The units information for local visibility appears (see Figure 6.107).

Figure 6.107 Regional ICAO Site Data Table Units Tab



To modify displayed information, do the following:

1 At **Local Visibility**, set the units for local visiblility by doing one of the following

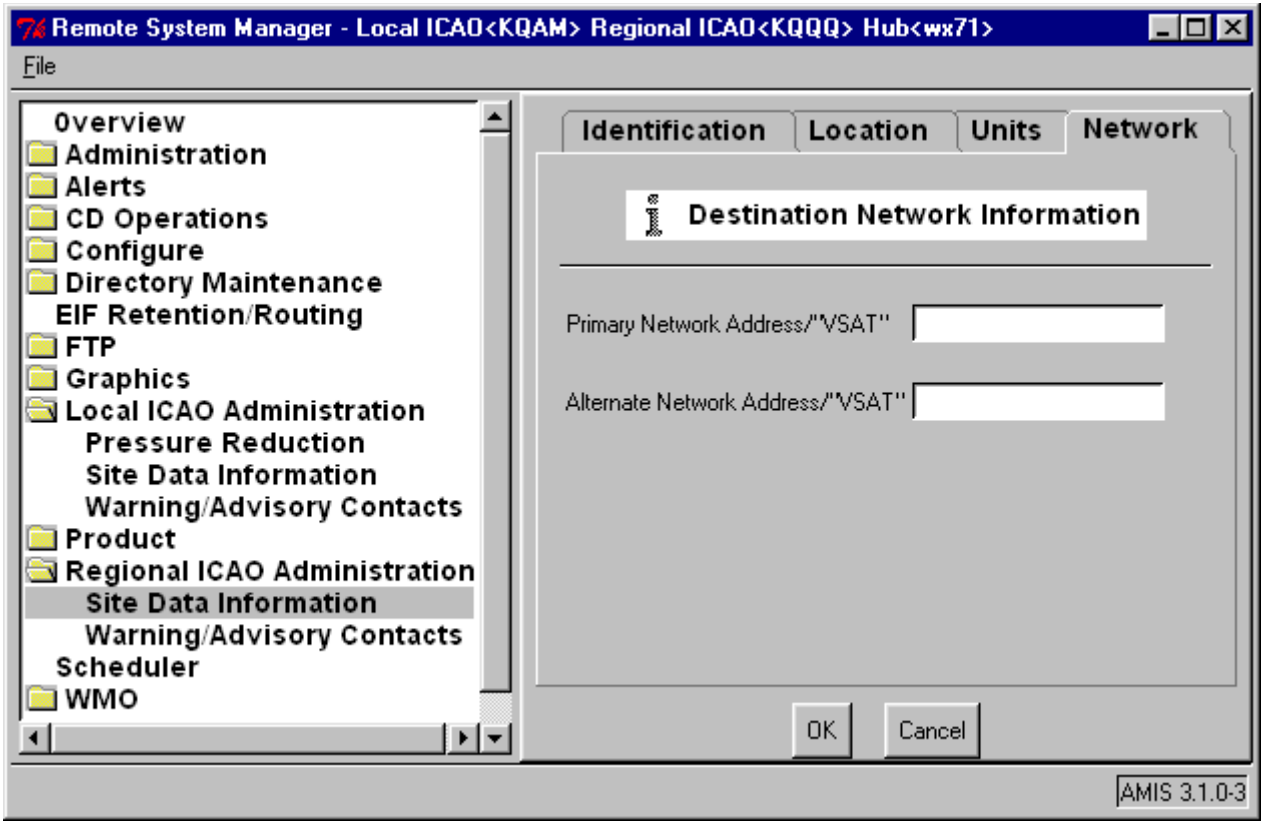
- For meters, select radio button **M**.
- For statute miles, select radio button **SM**.
- For nautical miles, select radio button **NM**.

To display/modfy the **Network** parameters, do the following:

1 Along the top of the display, select the **Network** tab.

The network information appears (see Figure 6.108).

Figure 6.108 Regional ICAO Site Data Table Network Tab



To enter information, do the following:

1 At **Primary Network Address/"VSAT"**, enter the DDN network address (IP address) or "VSAT" to indicate routing by VSAT.

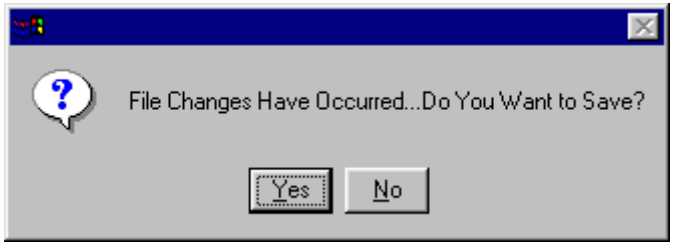
2 At **Alternate Network Address/"VSAT"**, enter the DDN network address (IP address) or "VSAT" to indicate routing by VSAT.

To exit the Site Data table, do the following:

1 Do one of the following:

- To save changes and exit, select **OK**.
- To exit without saving changes, select **Cancel**.

If you made changes, a confirmation dialog appears as you exit.



2 At the confirmation dialog, do one of the following:

- To save changes and exit, select **Yes**.
- To exit without saving changes, select **No**.

Warning/Advisory Contacts

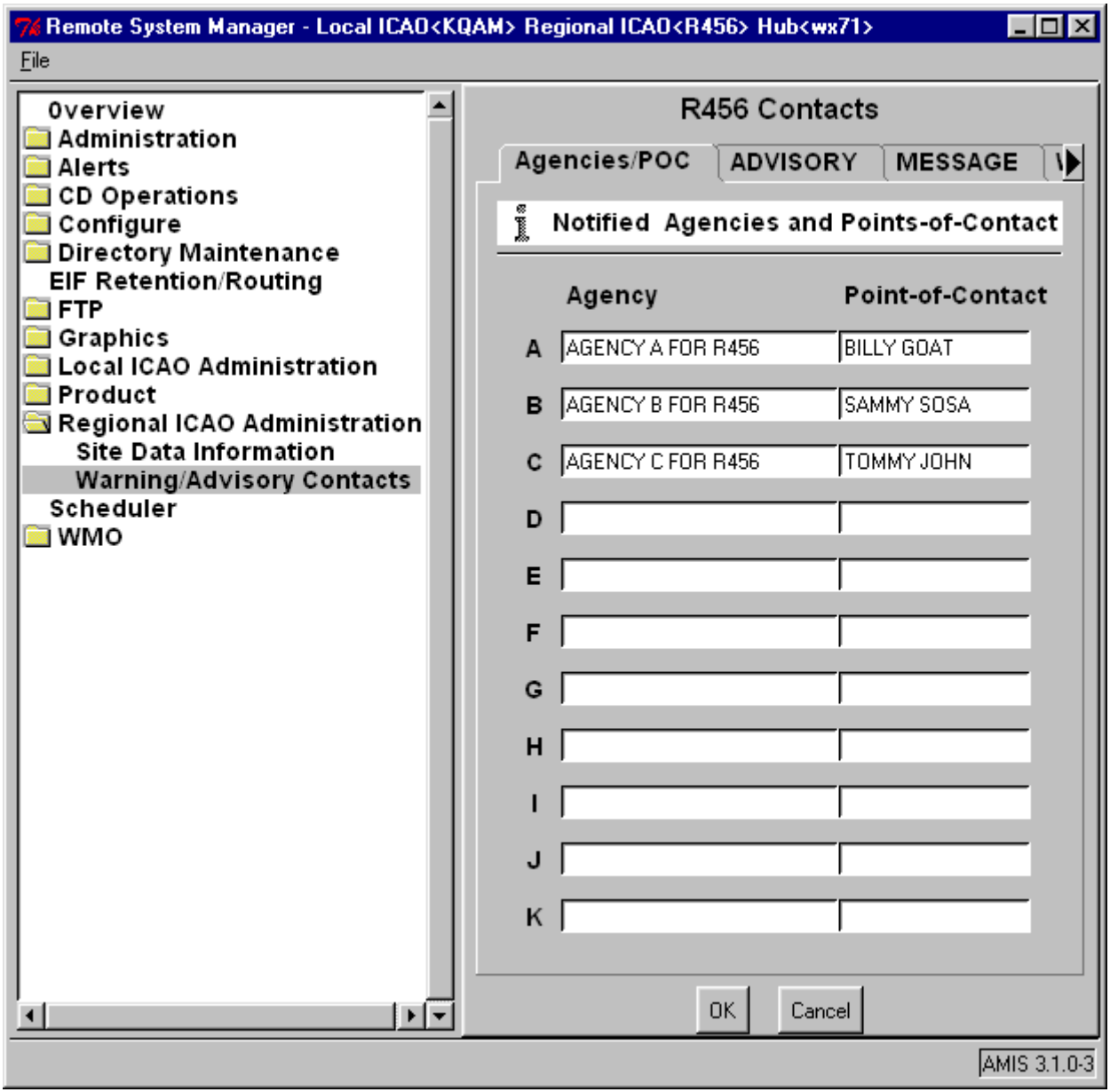
The Warning/Advisory Contacts table enables the System Manager to specify contact information that will automatically prefill in the form for Weather Warnings, etc. issued by the site for various ICAOs.

To display/modify the Warning/Advisory Contacts table, do the following:

1 Select the **Regional ICAO Administration** folder, and select **Warning/ Advisory Contacts**.

The Warning/Advisory Contacts table appears (see Figure 6.109) with the Agencies/POC tab selected.

Figure 6.109 Regional ICAO Warning/Advisory Contacts Table



To modify/enter information, do the following:

1 At **Agency** windows, enter the agency name.

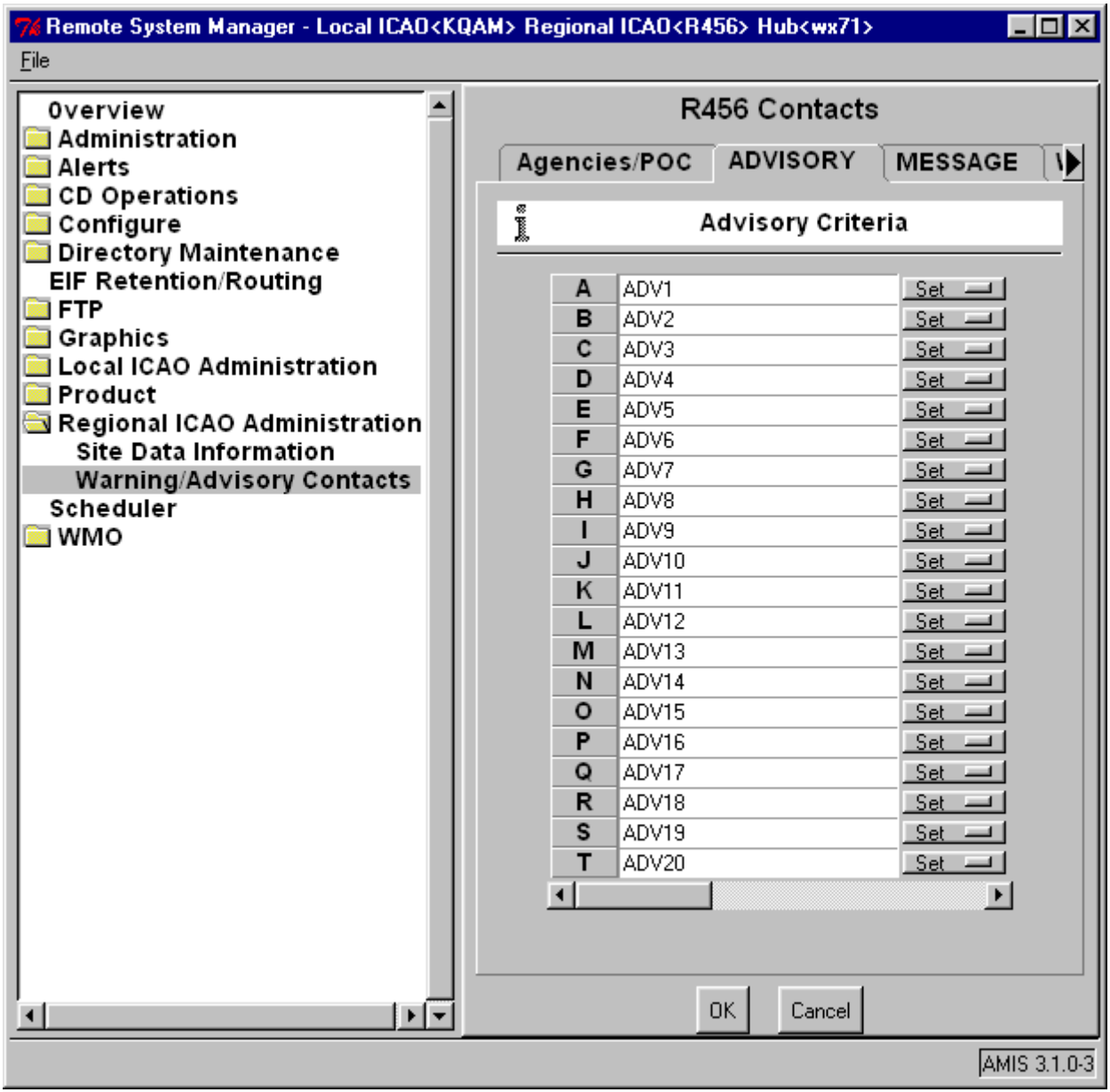
2 At **Point-of-Contact** windows, enter the name of the POC.

3 To set the notify block, along the top of the display, select the appropriate tab (**Advisory**, **Message**, **Warning**, **Watch**).

*Upon selecting the **Advisory** tab, the Advisory criteria appears (see Figure 6.110). The prefilled entries are defined in the Warning/Advisory Criteria table (see "Warning/Advisory Criteria" on page 6-81).*

*The displays for **Message**, **Warning**, and **Watch** are analagous to the **Advisory** display.*

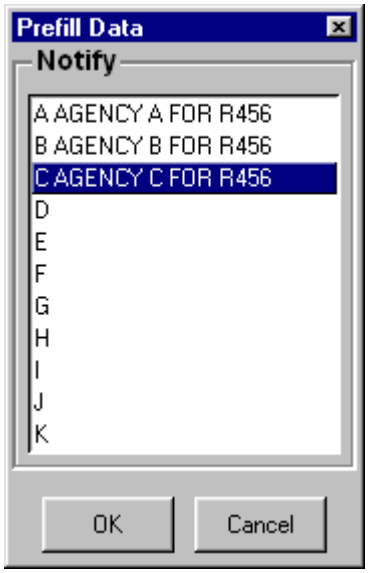
Figure 6.110 Regional ICAO Warning/Advisory Contacts Table Advisory Tab



4 Select the **Set** pull-down menu and select **Notify**.

The Prefill Data Notify panel appears (see Figure 6.111).

Figure 6.111 Prefill Data Notify Panel



5 From the agency list, select/deselect the agencies to contact.

Ctrl click selects multiple non-contiguous entries.

Shift click selects multiple contiguous entries.

These are the entries that appear in the respective weather product Prefill Edits panel, Agencies and POCs selection panel, on the Weather Warning/ Watch Agency and Contact fields, and on the Weather Advisory/Message Agency fields.

6 Select **OK** to return and save selections, **Cancel** to return without saving selections.

7 A confirmation screen appears, select **Yes** to save changes, **No** to not save changes.

To print the displayed form, do the following:

1 from the menubar at the top of the RSM application, select **File** > **Print**.

2 A print dialog appears, select **OK** to print or **Cancel** to not print.

Scheduler

The Event/Time Scheduler table enables the System Manager to specify tasks to be automatically initiated based on one of three events as follows: product arrival event, timer event, and Metwatch event. The automatically

initiated tasks can be sending an alert, initiating a macro, or routing a product to various destinations. AMIS tests for particular conditions each time a product arrives. If a condition is true, the scheduler takes the assigned actions. The maximum number of scheduler entries is 20.

For a METWatch initiated event, the System Manager can establish METWatch cirteria for surface station ICAOs. When the criteria is met using locally generated surface observations or external surface formatted binary data, the specified products are sent to the designated external system, or alerts/macros are executed at client workstations.

For a timer initiated event, when the specified time is reached, the Scheduler sends the current version of the designated product. In addition, “By System Time” can repeat the same action at specified time intervals.

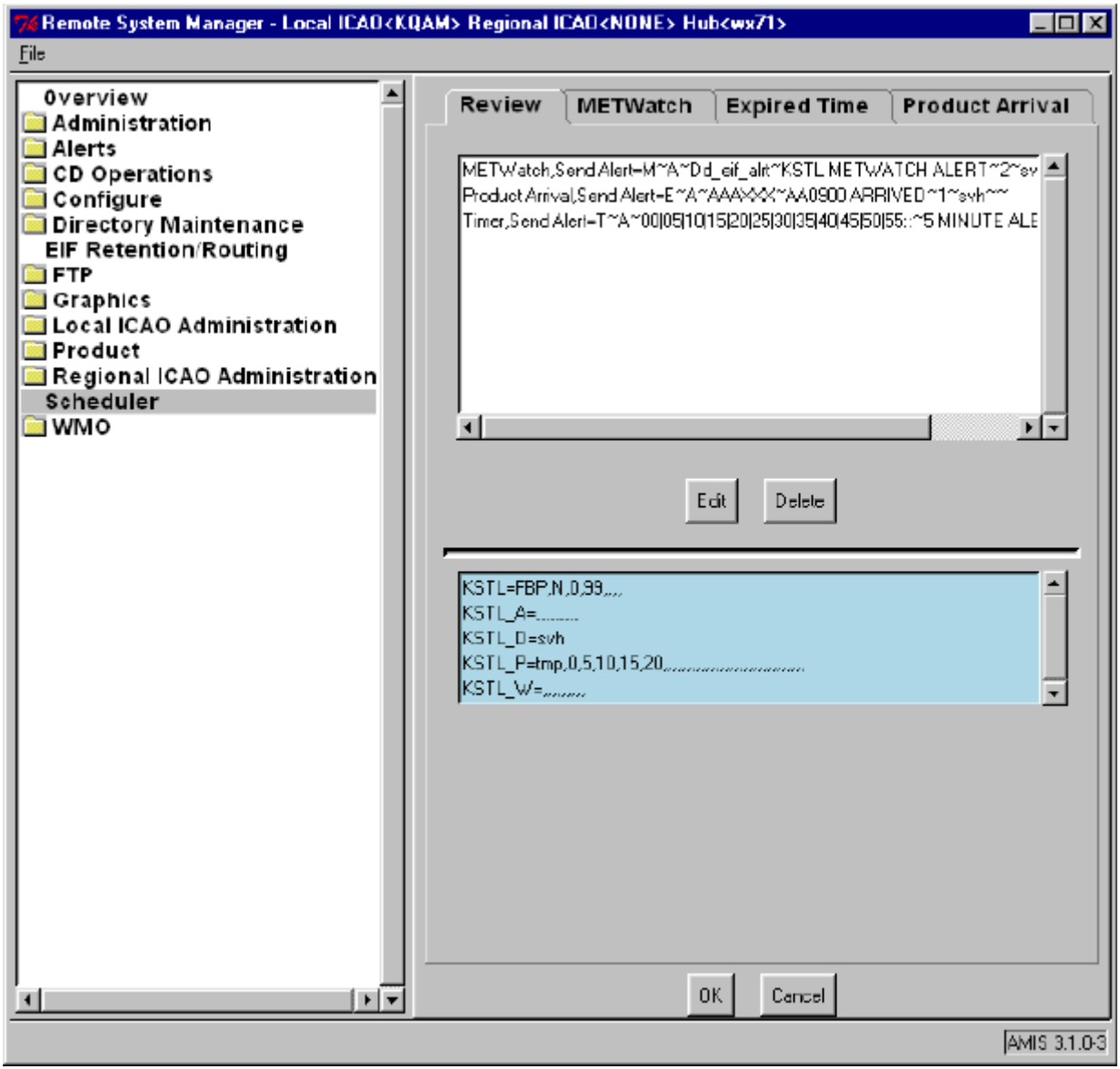
For a product arrival event, when the specified product arrives or is created, the product is automatically sent to the designated external system.

To access the Scheduler table, do the following:

1 From the RSM folder list, select **Scheduler**.

The Scheduler table appears with the Review tab selected (see Figure 6.112).

Figure 6.112 Scheduler Table

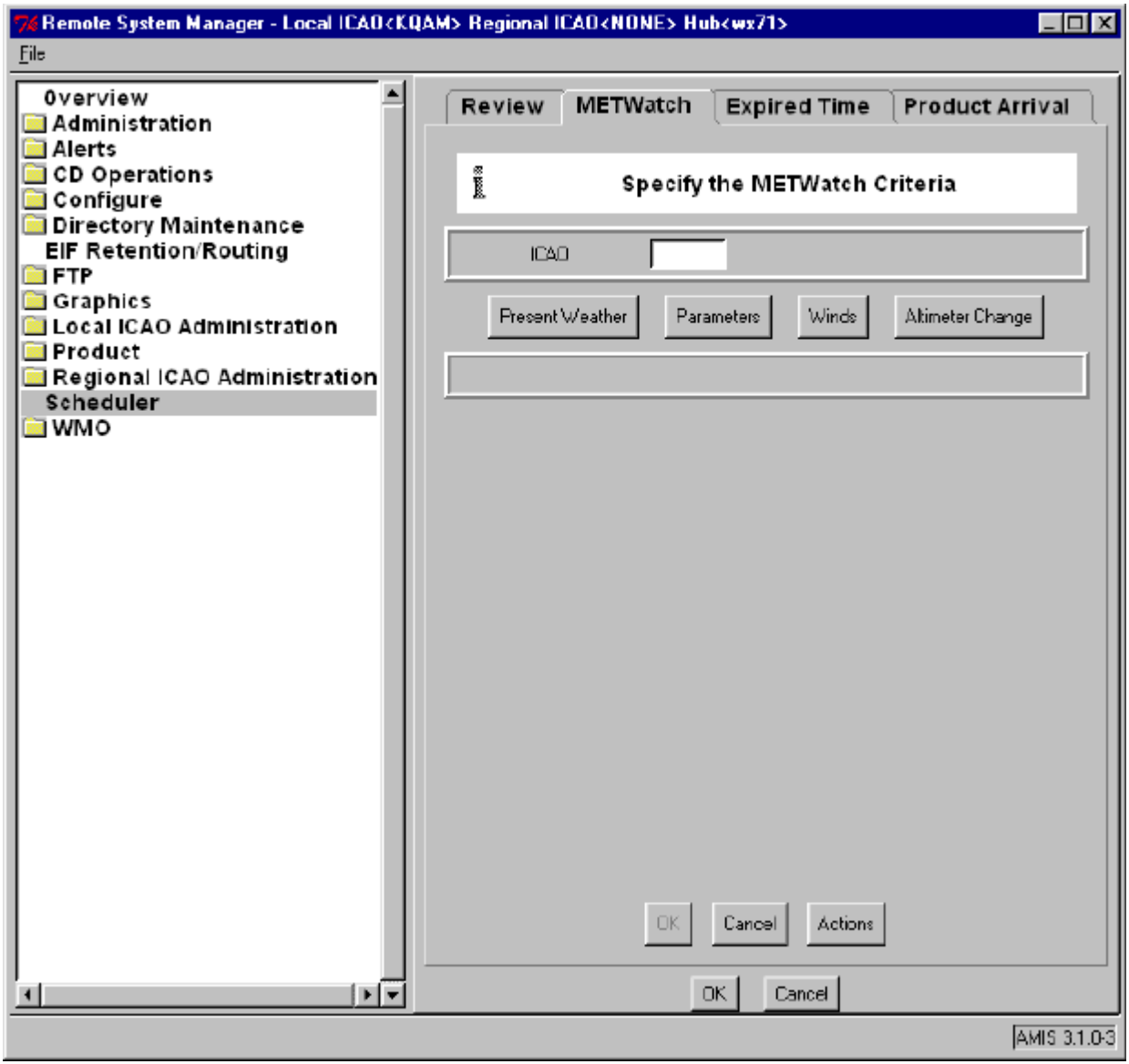


To add a METWatch initiated event, do the following:

1 From the tabs along the top of the Scheduler table, select the METWatch tab.

The METWatch Scheduler appears (see Figure 6.113).

Figure 6.113 METWatch Scheduler



2 To add an ICAO, at **ICAO** window, enter ICAO.

Note: all METWatch criteria (present weather, parameters, winds , and altimeter change) are configured as in the METWatch table under Product configuration (see "Metwatch" on page 6-157).

3 Select **Actions** and select the action to be performed (**Generate Alert**, **Execute Macro**, or **Route Product**) when the METWatch ciriteria have been met.

4 Select/enter parameter fields based on action selected in step 3:

- At **Defer Until**, to defer action, enter a defer time.
- To add specified recipients, select terminal assignments/user accounts and groups. Double click or use arrow buttons to move the Available Selections entries to the Recipients list.
- At **Alert Message**, enter alert message text to be displayed for specified user or group accounts.
- At **Name of Macro to Initiate**, enter the name of the macro to be executed at the N-TFS Server.

  The client alerts selected user or group accounts of macro completion.

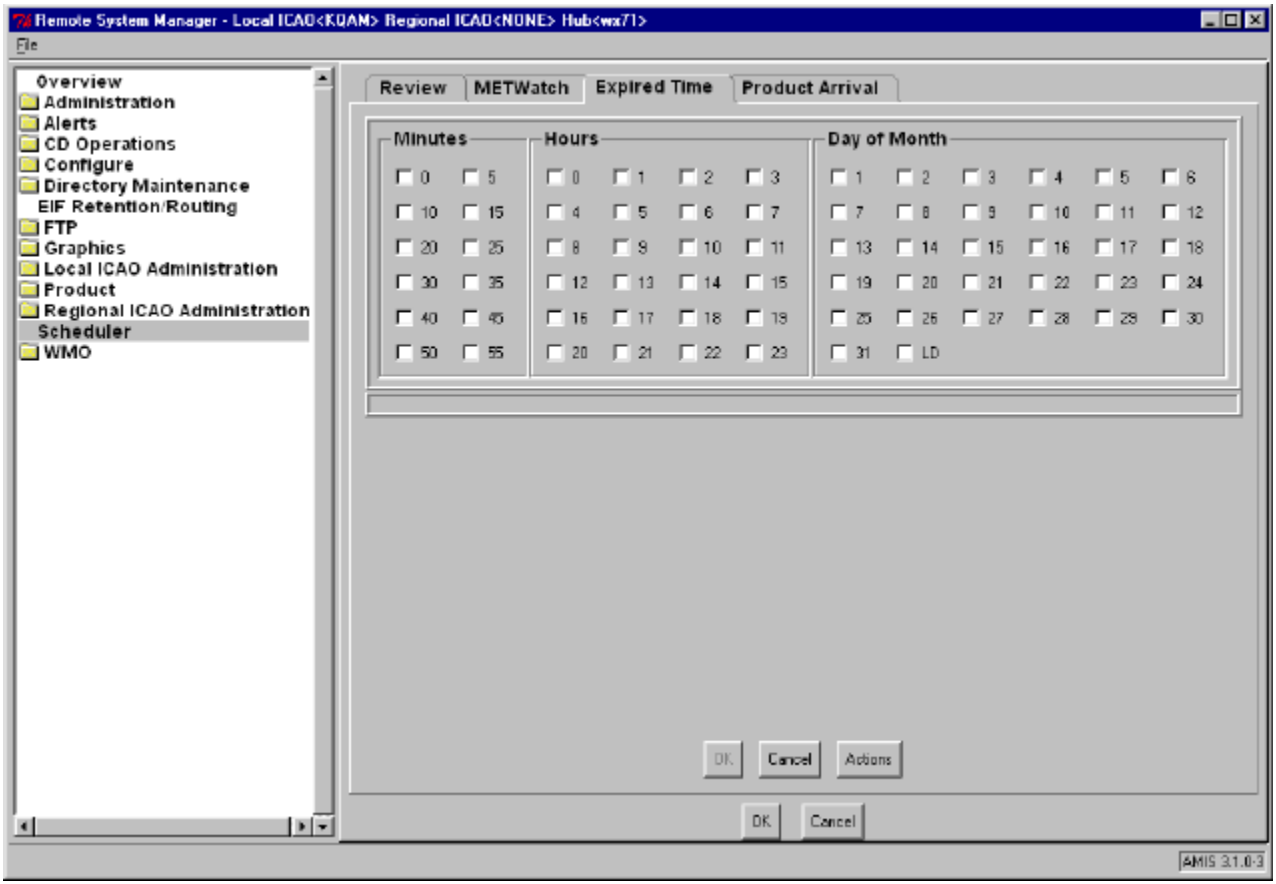
  The macro must be resident on the N-TFS Server.
- At **Internal PID of Product**, enter the internal product identifier of the product to be routed.
- At **Alert Type**, select **Routine** or **Urgent**.
- Select **OK** to exit and save changes or **Cancel** to exit without saving changes.

To add a timer initiated event, do the following:

1 From the tabs along the top of the Scheduler table, select the **Expired Time** tab.

  The Timer Scheduler appears (see Figure 6.114).

Figure 6.114 Timer Scheduler



2 At **Minutes**, select checkboxes (0-55, five minute intervals) for timed event to occur.

*Selecting only the **Minutes** checkboxes will wildcard all hours and days of month. That is, the event will occur on every hour and every day of the month.*

De-select checkboxes by clicking on checked boxes.

3 At **Hours**, select checkboxes (0-23, one hour intervals) for timed event to occur.

*Selecting only the **Hours** checkboxes will wildcard all minutes and days of month. That is, the event will occur at all five minute intervals of the selected hour/hours, and every day of the month.*

De-select checkboxes by clicking on checked boxes.

4 At **Day of Month**, select checkboxes (0-31, and last day (LD)) for timed event to occur.

*Selecting only the **Day of Month** checkboxes will wildcard all minutes and hours. That is, the event will occur at all five minute intervals of each hour on the day/days of the month selected.*

De-select checkboxes by clicking on checked boxes.

5 Select **Actions** and select the action to be performed (**Generate Alert**, **Execute Macro**, or **Route Product**) when the specified time intervals have expired.

6 Select/enter parameter fields based on action selected in step 5:

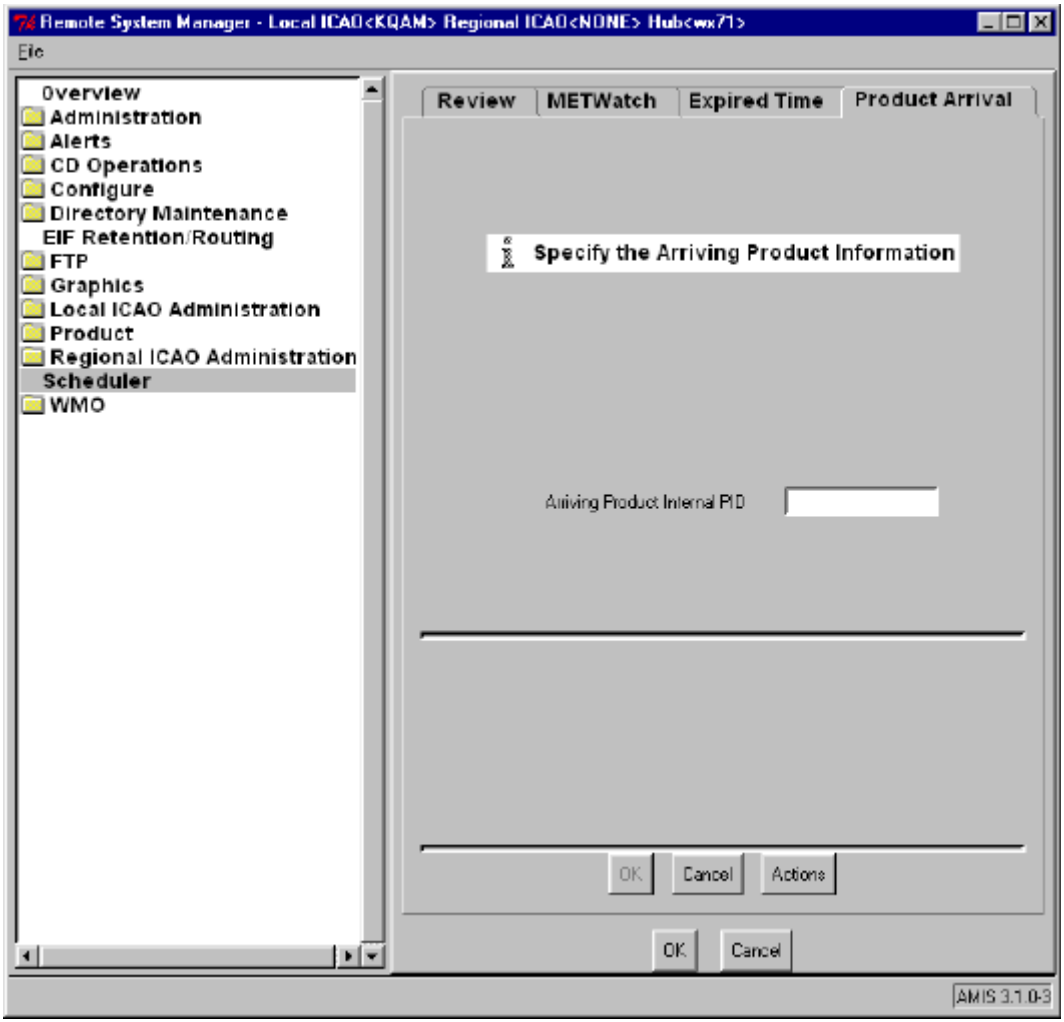
- At **Defer Until**, to defer action, enter a defer time.
- To add specified recipients, select terminal assignments/user accounts and groups. Double click or use arrow buttons to move the Available Selections entries to the Recipients list.
- At **Alert Message**, enter alert message text to be displayed for specified user or group accounts.
- At **Name of Macro to Initiate**, enter the name of the macro to be executed at the client workstation via selected user or group accounts.
- At **Internal PID of Product**, enter the internal product identifier of the product to be routed.
- At **Alert Type**, select **Routine** or **Urgent**.
- Select **OK** to exit and save changes or **Cancel** to exit without saving changes.

To add a product arrival event that generates an alert, do the following:

1 From the tabs along the top of the Scheduler table, select **Product Arrival**.

The Product Arrival Scheduler appears (see Figure 6.115).

Figure 6.115 Product Arrival Scheduler



2 At **Arriving Product Internal PID**, enter the arriving internal product identifier.

3 Select **Actions** and select the action to be performed (**Generate Alert**, **Execute Macro**, or **Route Product**) when the METWatch ciriteria have been met.

4 Select/enter parameter fields based on action selected in step 3:

- At **Defer Until**, to defer action, enter a defer time.

- To add specified recipients, select terminal assignments/user accounts and groups. Double click or use arrow buttons to move the Available Selections entries to the Recipients list.
- At **Alert Message**, enter alert message text to be displayed for specified user or group accounts.
- At **Name of Macro to Initiate**, enter the name of the macro to be executed at the client workstation via selected user or group accounts.
- At **Internal PID of Product**, enter the internal product identifier of the product to be routed.
- At **Alert Type**, select **Routine** or **Urgent**.
- Select **OK** to exit and save changes or **Cancel** to exit without saving changes.

WMO

Priority Report

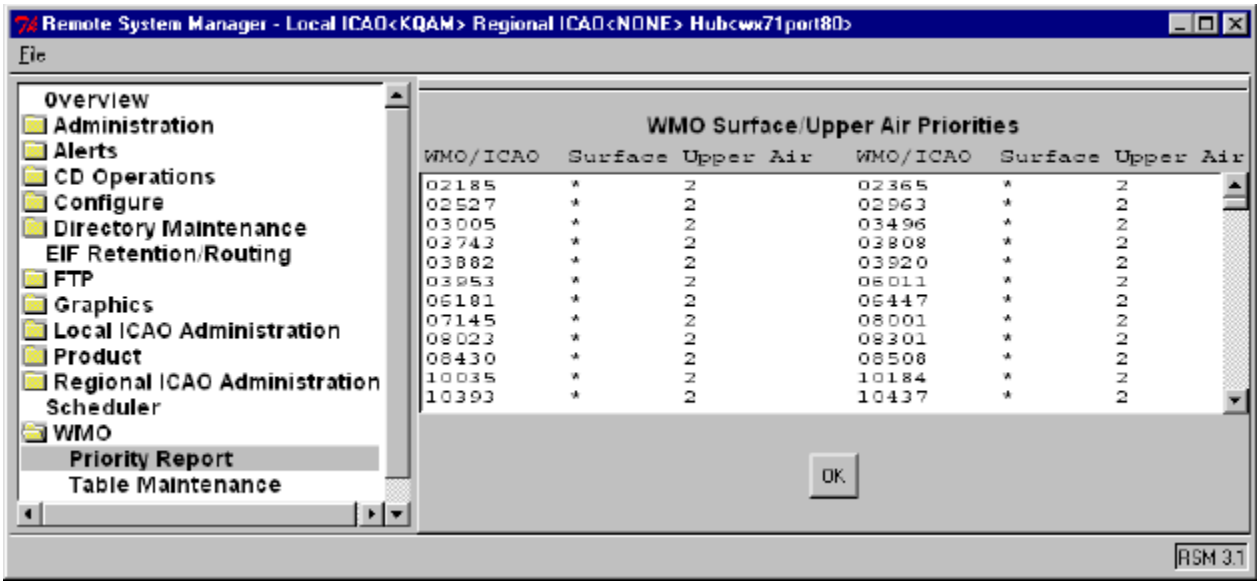
The WMO Priority Report table is a summary of the WMO/ICAO entries in the WMO Maintenance table, with their corresponding display priorities.

To access the WMO Priority Report table, do the following:

1 Select the **WMO** folder, and select **Priority Report**.

The WMO Priority Report table appears (see Figure 6.116).

Figure 6.116 WMO Priority Report Table



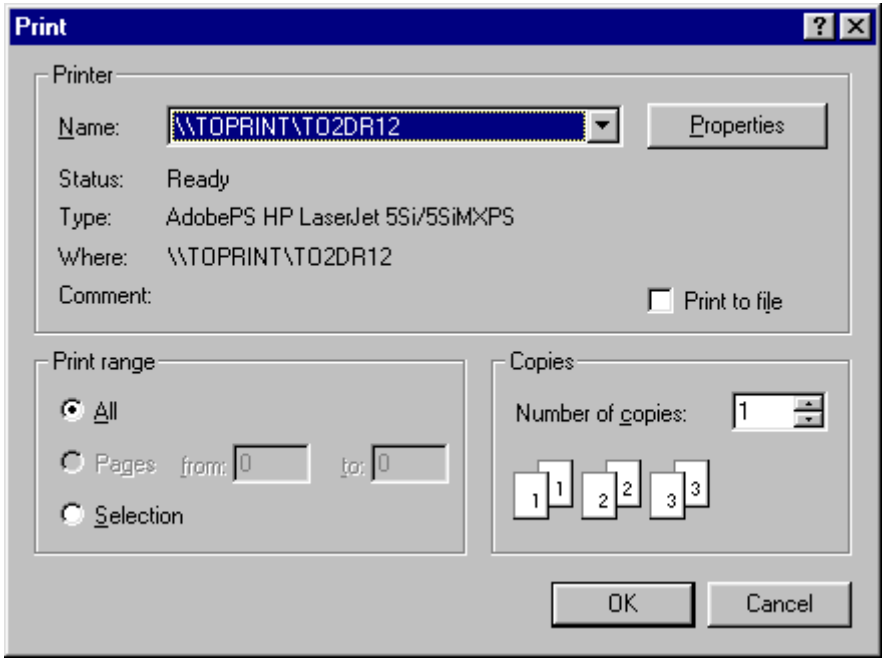
WMO/ICAO	Surface	Upper Air	WMO/ICAO	Surface	Upper Air
02185	*	2	02365	*	2
02527	*	2	02963	*	2
03005	*	2	03496	*	2
03743	*	2	03808	*	2
03882	*	2	03920	*	2
03953	*	2	06011	*	2
06181	*	2	06447	*	2
07145	*	2	08001	*	2
08023	*	2	08301	*	2
08430	*	2	08508	*	2
10035	*	2	10184	*	2
10393	*	2	10437	*	2

The WMO/ICAO identifiers appear in the left most and center columns. The corresponding display values appear in the two columns to the right of each WMO/ICAO column.

To print the WMO Priority Report table, do the following:

1 From the display menubar, select **File** > **Print Table**.

A print dialog appears.



2 Do one of the following:

- To print the table, select **OK**.
- To dismiss the dialog without printing, select **Cancel**.

To exit the WMO Priority Table, do the following:

1 Near the bottom of the table display, select **OK**.

Table Maintenance

The WMO Table Maintenance function enables the System Manager to establish and maintain a table for each station supported by AMIS. Typically, this table is completed by the AMIS software contractor at system installation time. The need for subsequent table modification is rare; the exception being modification of the plotting station display priorities.

Table 6.8 lists the WMO Table Maintenance parameters and the table display tab under which each parameter can be located..

Table 6.8 WMO Table Maintenance Parameters

Identification Tab	Location Tab	Units Tab
Station Name	Surface/Upper Air Priorities	Synoptic Reporting Units
WMO	Surface/Upper Air Latitude	Hourly Reporting Units
ICAO	Surface/Upper Air Longitude	
Country Code	Surface/Upper Air Elevation	
State/Providence	Runway Heading	
	NavAid Information	
	Magnetic Declination	

The WMO Table Maintenance function also establishes the 2000 surface stations and 500 upper air stations from which FBD data is retained. Stations can be added, deleted, and station parameters and display priority values updated. To accommodate various zoom levels, a Station Display Priority is set and maintained to prevent overlapping plots when small-scale zoom levels are displayed. Each station retained by AMIS is assigned a zoom level (1 through 17 or 99) for plotting. At any particular zoom level, only stations which are tagged for plotting at that or lower zoom levels are plotted. If a station is tagged with 99, it is not plotted at any zoom level.

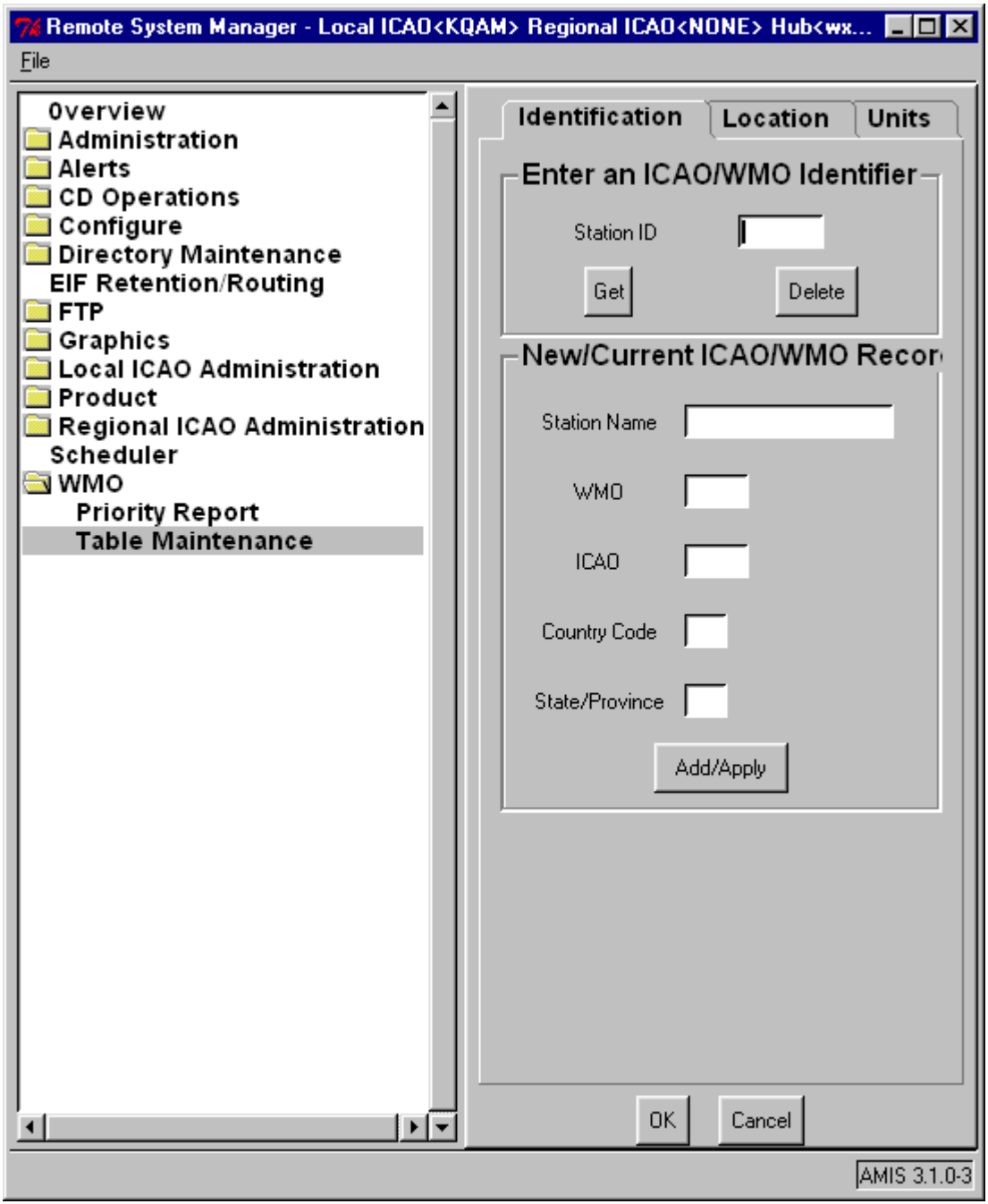
WARNING *Take extreme care when modifying this table. Erroneous entries can result in MET generation failures.*

To access WMO Table Maintenance, do the following:

1 Select the **WMO** folder, and select **Table Maintenance**.

The WMO Table Maintenance display appears (see Figure 6.117).

Figure 6.117 WMO Table Maintenance Display



To access the data on file for a particular station, do the following:

1 At **Station ID**, enter WMO or ICAO.

2 Select **Get**.

*If data for the selected station is not on file, a "No Such Record" popup appears (see below). Select **OK** and enter a new station identifier.*

If data is on file, the New/Current ICAO /WMO Record fields are displayed with the respective data filled in.

To add a new station, do the following:

1 Exit current table by selecting OK or Cancel.

2 Select the **WMO** folder, and select **Table Maintenance**.

3 Enter WMO information fields. Select desired items and add/edit information.

4 Select **Add/Apply**.

To modify an existing station after performing a **Get**, do the following:

1 With the station information displayed for the station, select item to change and make required change.

2 Select **Add/Apply**.

To delete an existing station after performing a **Get**, do the following:

1 With the station information displayed for the station, select **Delete**.

2 Select **Add/Apply**.

To edit **Identification** tab entries, do the following

1 From the horizontal tabs, select **Identification**.

The WMO Table Maintenance Identification tab display appears (see Figure 6.117).

2 At **Station Name**, enter station name in up to 22 characters.

3 At **WMO**, enter WMO of station in five digits. If unknown, enter five periods (that is, ...).

4 At **ICAO**, enter ICAO of station in four characters. If unknown, enter four periods (that is, ...).

5 At **Country Code**, enter country code in two digits.

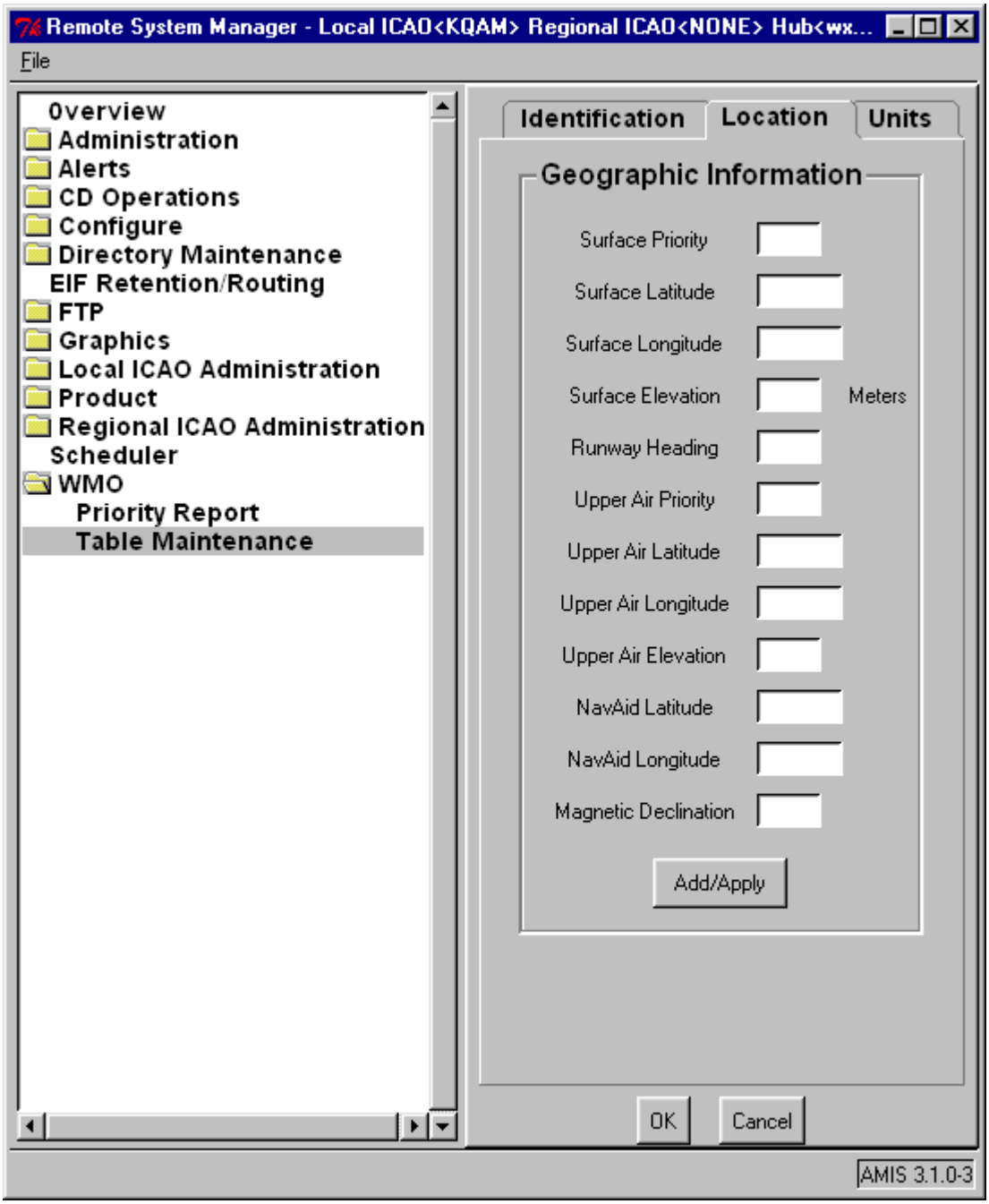
6 At **State/Province**, enter state/province in two digits.

To edit **Location** tab entries, do the following:

1 From the horizontal tabs, select **Location**.

The WMO Table Maintenance Location tab display appears (see Figure 6.118).

Figure 6.118 WMO Table Maintenance Location Tab Display



2 At **Surface Priority**, enter the zoom level for displaying the station in up to two digits up to 99.

A priority level entry of 99 means that the associated ICAO plot is not displayed on the selected PI -Set at any zoom level, but the data for that ICAO is used in generating local grids.

To prevent the overcrowding of station plots on plotted products, AMIS automatically determines the zoom level at which the station is displayed. This zoom level determination is based on the Display Priority Level and the PI Set background of the plotted product. The value of the display priority level, as entered into the select table, is relative to the Regional-sized PI-Sets (e.g., 40, 45). Each station entered in the station select table retains this relative priority value for each PI-Set that the station is geographically located. This means that by setting a station priority value equal to 2, the station is plotted on a Regional-sized PI-Set at zoom level 2. However, by plotting the same station and level on a Continental PI-Set (e.g., 10, 12), the station is plotted at zoom level 3 since the PI-Set encompasses a larger area and can display more data. Generally, whatever Display Priority Level is set for a station, that station is plotted at a greater-than-or-equal zoom level for Continental and Hemispheric (e.g., 1, 2) PI-Sets, and at a less- than-or-equal zoom level for Sub-Window PI-Sets (e.g., 72, 76). The following table (Table 6.9) shows the relationship between the Display Priority Level value and the zoom level that the station appears on a given type of PI- Set (through Display Priority Level 10).

Table 6.9 Zoom Levels

Display Priority Level	Sub-Window	Regional	Continental	Hemispheric
1	2	2	2	3
2	2	2	3	6
3	2	3	4	9
4	2	4	6	12
5	3	5	7	16
6	3	6	9	20
7	4	7	10	24
8	4	8	12	24
9	4	9	14	28
10	5	10	16	32

3 At **Surface Latitude**, enter latitude in up to seven digits with "-" denoting Southern Hemispheric entries.

4 At **Surface Longitude**, enter longitude in up to seven digits with "-" denoting Western Hemispheric entries.

5 At **Surface Elevation**, enter station elevation in meters in up to five digits.

6 At **Runway Heading**, enter runway heading in up to five digits.

7 At **Upper Air Priority**, enter the zoom level for displaying the station in up to two digits up to 99 (see above notes regarding zoom level).

8 At **Upper Air Latitude**, enter latitude in up to seven digits with "-" denoting Southern Hemispheric entries.

9 At **Upper Air Longitude**, enter longitude in up to seven digits with "-" denoting Western Hemispheric entries.

10 At **Upper Air Elevation**, enter station elevation in meters in up to five digits.

11 At **NavAid Latitude**, enter latitude in up to seven digits with "-" denoting Southern Hemispheric entries.

12 At **NavAid Longitude**, enter longitude in up to seven digits with "-" denoting Western Hemispheric entries.

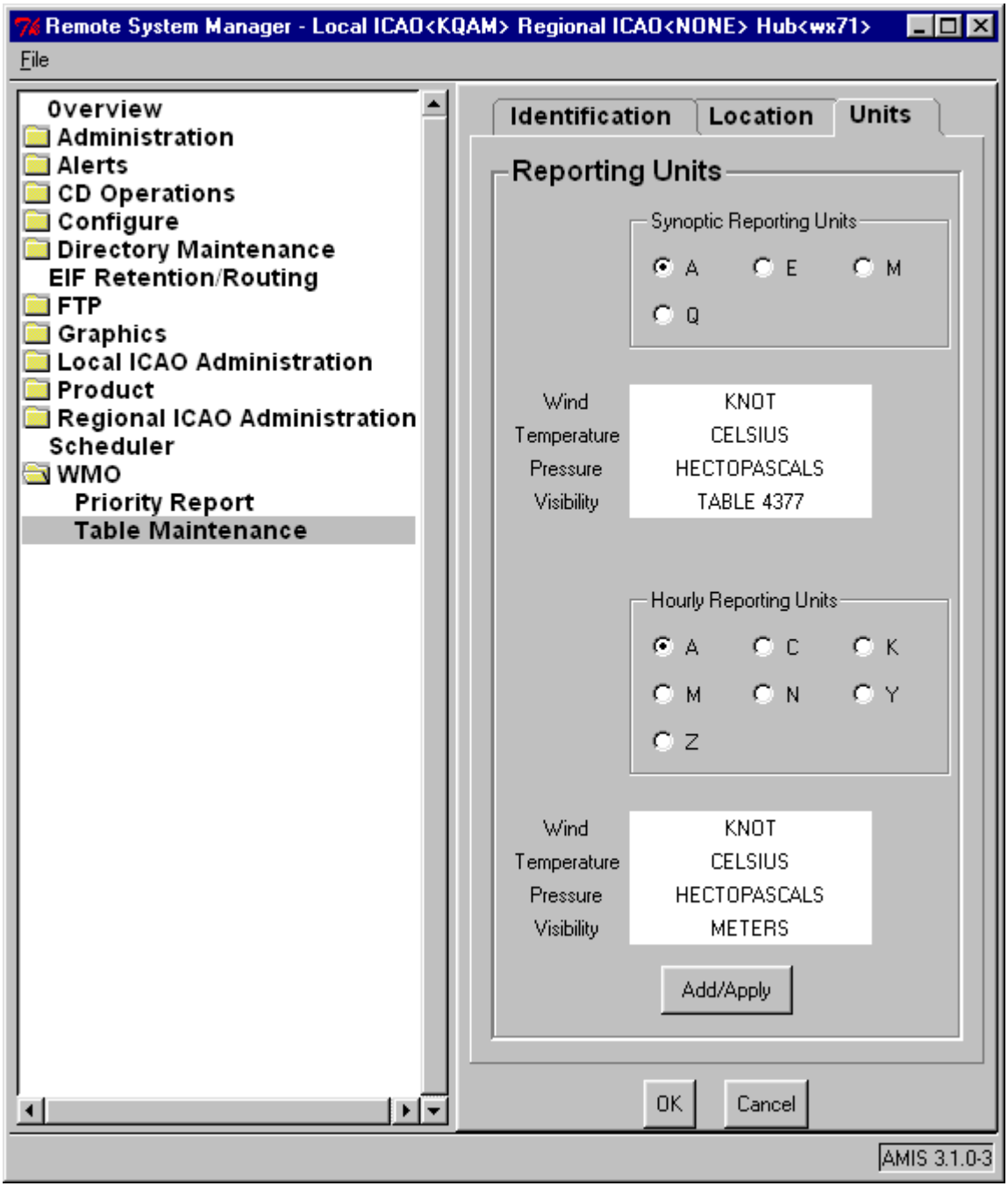
13 At **Magnetic Declination**, enter magnetic declination in up to five digits with negative values preceeded by "-".

To edit the **Units** tab entries, do the following:

1 From the horizontal tabs, select **Units**.

The WMO Table Maintenance Units tab display appears (see Figure 6.119).

Figure 6.119 WMO Table Maintenance Units Tab Display



2 At **Synoptic Reporting Units**, select one of **A**, **E**, **M**, **Q** (see Table 6.10).

Table 6.10 Synoptic Reporting Units

	A	E	M	Q
Wind	knots	knots	m/sec	m/sec
Temperature	Celsius	Celsius	Celsius	Celsius
Pressure	Hpas	GPM	Hpas	GPM
Visibility	4377	4377	4377	4377

3 At **Hourly Reporting Units**, select one of **A**, **C**, **K**, **M**, **N**, **Y**, **Z** (see Table 6.11).

Table 6.11 Hourly Reporting Units

	A	C	K	M	N	Y	Z
Wind	knots	knots	km/hr	m/sec	m/sec	knots	knots
Temperature	Celsius	Celsius	Celsius	Celsius	Celsius	Celsius	Fahrenheit
Pressure	Hpas	Hg	Hpas	Hpas	Hpas	both	both
Visibility	meters	meters	meters	meters	statute miles	statute miles	statute miles

4 When finished making changes, select **Add/Apply**.

The changes are saved.

To exit WMO Table Maintenance, do the following:

1 To exit and save changes, select **OK**.

2 To exit without saving changes, select **Cancel**.

CSSO Activities

In the N-TFS, the CSSO/System Administrator role is the most privileged role. The CSSO/System Administrator is a site official with *CSSO Access* (see "Profiles/authorizations" on page 2-1) associated with his/her N-TFS user account.

The CSSO/System Administrator functionality resides exclusively at the N-TFS Server as part of the Remote System Manager application. The CSSO functionality, by default, encompasses all functionality of the other profiles (these additional profiles may be de-selected on an individual basis by the CSSO/System Administrator). The N-TFS user interface restricts the following functionality exclusively to the administrative user with *CSSO Access*:

- Display list of active users.
- Kill active login (system forces user logout, user must log in again).
- Enable/disable external access to the N-TFS Server.
- Allow/disallow web access to the Product Viewer application by .mil/.gov domains without use of N-TFS username/password.
- Set IP address for sensor data source.
- Create/modify/delete N-TFS user accounts.
- Display/delete web audit log.
- Access UNIX operating system commands via a *xterm* window.

To access the CSSO/System Administrator functionality, do the following:

1 Display the AMIS Main Workspace menu by doing the following:

2 At the N-TFS Server, after logging in to AMIS, right-click anywhere in the main workspace, outside of any window.

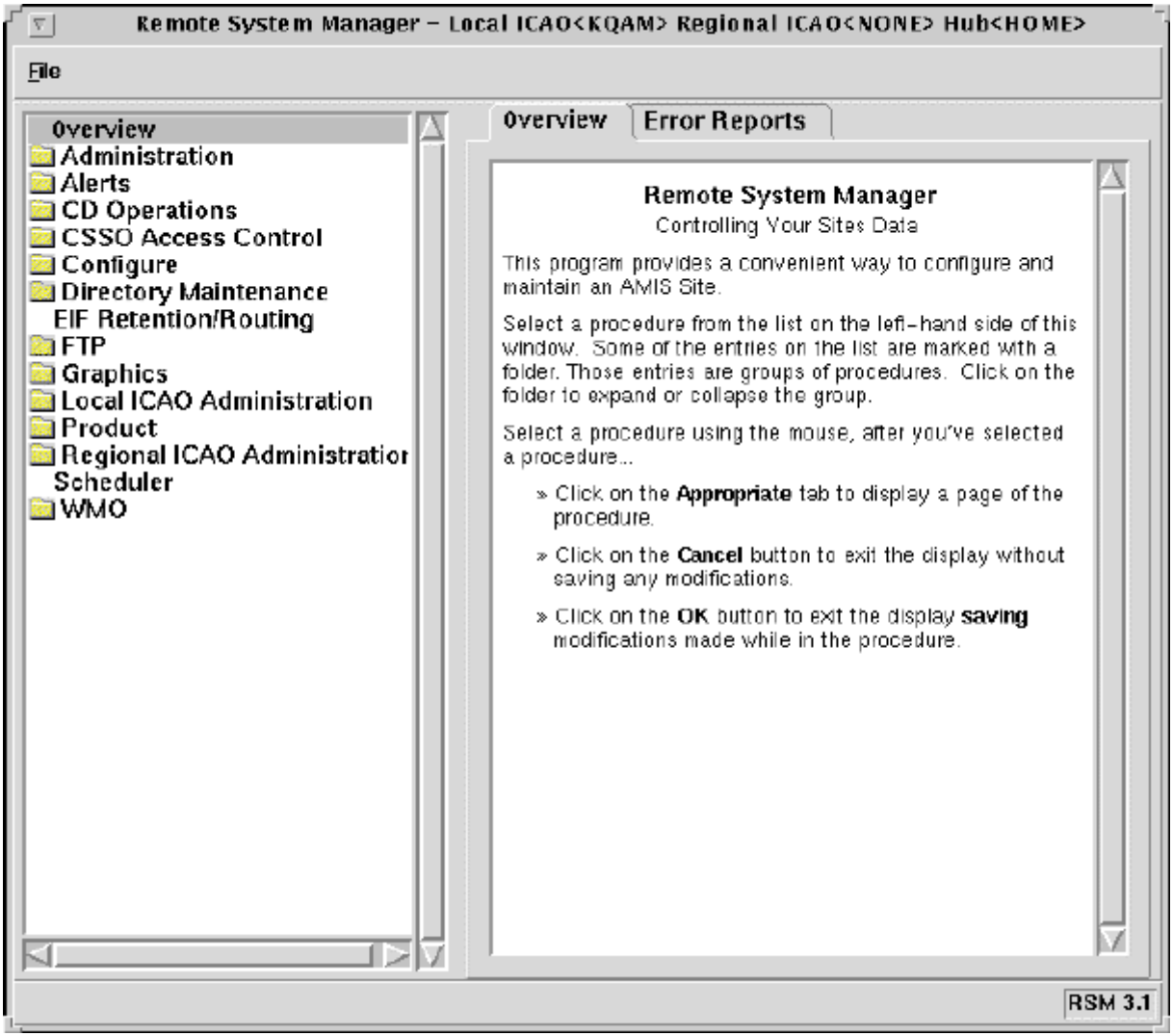
The AMIS Main Workspace menu appears (see Figure 6.120).

Figure 6.120 AMIS Main Workspace Menu

3 At the AMIS Main Workspace menu, select **Remote System Manager**.

The initial screen for the Remote System Manager application appears (see Figure 6.121).

Figure 6.121 N-TFS Server Remote System Manager Screen



4 Select the **CSSO Access Control** folder.

The folder expands to reveal the CSSO functionality as follows: AOS Configure, Active Remote Users, Server Access Control, Users, and Web Server Audit.

Active Remote Users

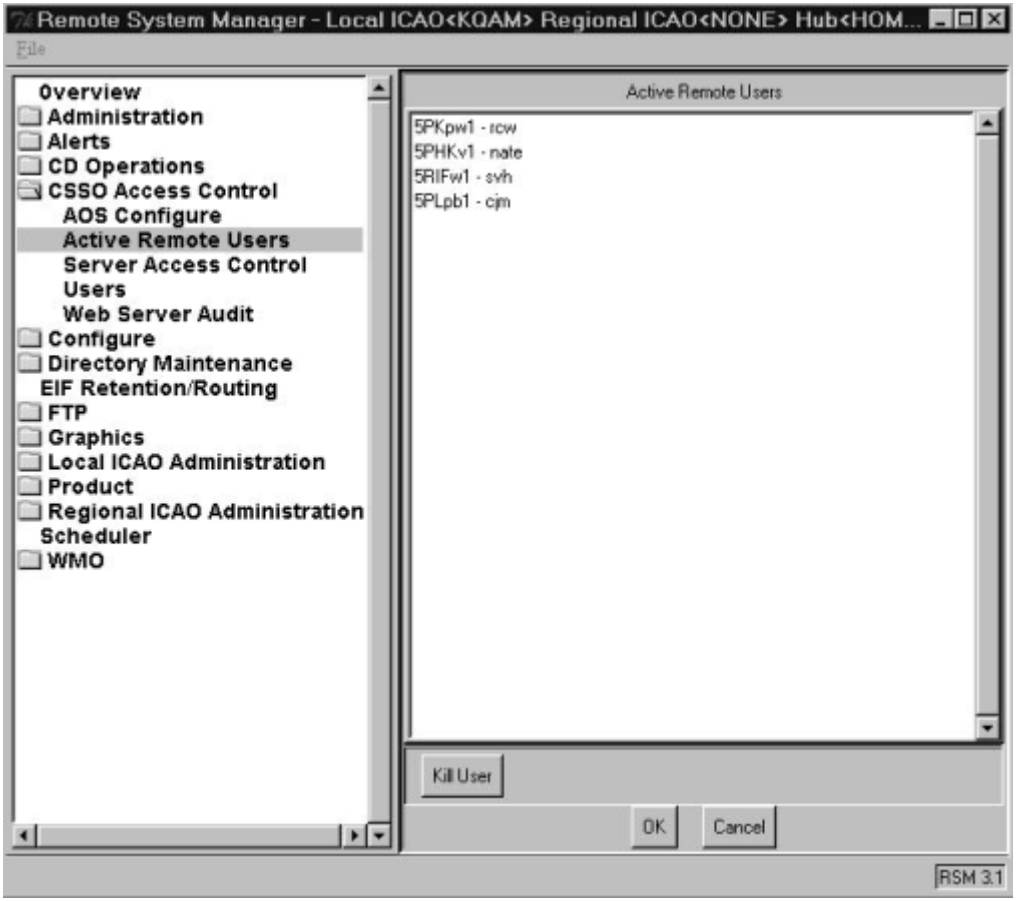
The Active Remote Users function enables the CSSO/System Administrator to monitor who is logged in to AMIS. Any of these active logins may also be killed by the CSSO/System Administrator. Killing an active login results in the system automatically logging the associated user off the system. Subsequently, to access the system, the user must login again.

To access the Active Remote Users function, do the following:

1 Select the **CSSO Access Control** folder, and select **Active Remote Users**.

A list of Active Remote Users appears (see Figure 6.122).

Figure 6.122 Active Remote Users Screen



To kill an active login, do the following:

1 Select desired user from active remote users list, and select **Kill User**.

The user entry is removed from the list of active remote users.

2 Select **OK** or **Cancel** to exit.

Server Access Control

The Server Access Control functionality enables the CSSO/System Administrator to configure system access and security settings.

To access the Server Access Control function, do the following:

1 Select the **CSSO Access Control** folder, and select **Service Access Control**.

The following display appears (see Figure 6.123).

Figure 6.123 Server Access Control Screen

To enable/disable external access to the server, do the following:

1 To enable external access, at **Server External Access**, select the **Normal** radio button.

2 To disable external access, at **Server External Access**, select the **Disabled** radio button.

*If a user tries to connect to the server when the external access is set to **Disabled**, a message informs the user that the CSSO has disabled access to the server.*

To require all users to enter a user name and password to access the AMIS home page, do the following:

1 At **Product Viewer Access**, select the **Require User Login and Password** radio button.

A login screen displays to all users (see

To permit .mil/.gov domains access to the AMIS home page without logging in, do the following:

1 At **Product Viewer Access**, select the **Permit /mil/.gov Network Access** radio button.

The login screen will not display for the .mil/.gov domain user.

To permit all users access to the AMIS home page without logging in, do the following:

1 At **Product Viewer Access**, select the **Permit Unlimited Network Access** radio button.

The login screen will not display for any user.

To set the server port number used for user connections, do the following:

1 At **Socket Security Policy**, at the **Port Number** window, enter the port number.

The default port number is 80.

WARNING *For any change to the port number to take effect, the server must be restarted. Press **Restart Server with new Security settings** button.*

To leave **Server Access Control** at any time, do one of the following:

- To exit and save any changes, select **OK**.
- To exit without saving changes, select **Cancel**.

Users

The Users function enables the CSSO/System Administrator to create and maintain user accounts.

To access the Users function, do the following:

1 Select the **CSSO Access Control** folder, and select **Users**.

The following display appears (see Figure 6.124).

Figure 6.124 Authorized System Users Screen

To add a user account, do the following:

1 At **Login Name**, enter the login name for the account.

The login name must be at least two characters in length.

2 At **Password**, enter the initial password for the account.

The user should change this password with his/her first use of the account.

The password must be eight characters in length and must include at least one uppercase character, at least one special character (for example, $,#, or &) and at least one number.

3 Optionally, at **User Name**, enter the user's actual name in plain text.

4 Optionally, at **User Function**, enter the user's function in plain text.

5 Optionally, at **Notes**, enter any notes in plain text.

6 At **User Authorizations**, select one or more authorizations from among the following:

- System Manager Access.

  Allows access to RSM from the client launchpad.

  Allows access to RSM, Web HTML Administration, Set Time, Set Time Zone, and Set Network Parameter functions on the N-TFS Server.

- CSSO Access.

  Allows CSSO Access on the N-TFS Server (through RSM).

  Automatically selects all other authorizations.

- UNIX Access.

  Allows N-TFS Server login from AMIS login screen.

- AOS Sensor Access.

  Allows access to the AOS sensor client software.

- AN Forms Access.

  Allows Weather A/N Forms access from client launchpad.

- Weather Graphics Write Access.

  Allows Weather Graphics write access from the client launchpad.

  Allows saving of Composites/Loops, and other products.

  Allows access to MET Generation.

- AIRAD Form Access.

  Allows AIRAD Forms access via the browser.

  Note: the default authorizations (any or no authorizations selected) allow Product Viewer/Browser AOS access, access to Weather A/N View from the client launchpad, and access to read-only Weather Graphics.

  Note: user authorizations are set in accordance with a user's job/duty assignment. A user should be given the minimum authorizations necessary to perform his/her job/duty. All authorizations other than

System Manager Access and *CSSO Access* can apply to the typical weather application user.

WARNING *System Manager Access* and *CSSO Access* should be assigned with particular discretion. These authorizations apply only to particular site officials with particular system administrative duties.

7 At **User Password Expires After**, enter a number.

This number is the age of a password (in days) after which the user is forced by the system to change his password.

The system default is 90 days.

8 At **Max Login Retries**, enter a number.

This number represents the maximum number of times the user can attempt login before the system locks him out.

The system default is 3.

9 At **Locked-Out For**, enter a number.

This number represents the number of minutes the user is locked out from logging in after exceeding ***Max Login Retries****.*

The system default is 60 minutes.

10 At **Token Expires if Idle**, enter a number.

This number represents the number of minutes the user's workstation can be idle, after which time the system automatically logs the user out.

The system default is 45 minutes.

11 Select **Add/Apply**.

The login name of the new account is listed in the ***Authorized System Users*** *window.*

To modify an existing user account, do the following:

1 At the ***Authorized System Users*** window, select the login name of the user account to be modified.

2 Select **Edit**.

All user account entry fields are populated with the respective user account settings.

3 Modify settings as desired.

4 Select **Add/Apply**.

To delete an existing user account, do the following:

1 At the ***Authorized System Users*** window, select the Login Name of the user account to be deleted.

2 Select **Delete**.

The login name for the deleted account is removed from the list in the ***Authorized System Users*** *window.*

To clear all entry fields at any time, do the following:

1 Select **Clear**.

To leave the Users function at any time, do one of the following:

- To exit and save any changes, select **OK**.
- To exit without saving changes in process (those for which **Add/Apply** has not been selected), select **Cancel**.

Web Server Audit

The Web Server Audit function enables the CSSO/System Administrator to view/delete N-TFS Server resident AMIS log files and to filter viewing of the log files by time or by query string. Additionally, the function enables the CSSO/System Administrator to access a *xterm* window.

The AMIS log files record individual user actions by user. Each log file covers 24 hours; the respective date is included in the audit log file name (for example, audit file name *audit_00.08.25* is the audit log for August 25).

An example audit log entry is as follows:

*03/04/99 00:01 5401O1,svh@192.26.147.221,T,G,S,Dd_icao_list

Each entry is formatted as follows (format elements are separated by space or comma):

- Date.
- Time.
- Token.
- Login Name@IP address.
- Function code.
- Action code.
- Result code.
- Miscellaneous.

The function codes, action codes, and result codes are interpreted as follows:

Table 6.12 Audit Log Function Codes

Function Code	Interpretation
A	Alerts
C	Command
E	External access
F	File
N	A/N access
P	Profile
R	RMSM
S	Security
T	Table
W	WMO

Table 6.13 Audit Log Action Codes

Action Code	Interpretation
A	Active users list
c	Command
C	change user password
D	Delete
G	Get
I	Invalid command
K	Kill active user
l	User logoff
L	User logon
N	New user and profile
o	Off
O	On
p	Ping
P	Put
Q	Query
s	Status
S	Set
U	Update user profile
Y	Delete user and profile
z	UNIX user list
Z	Web user list

Table 6.14 Audit Log Result Codes

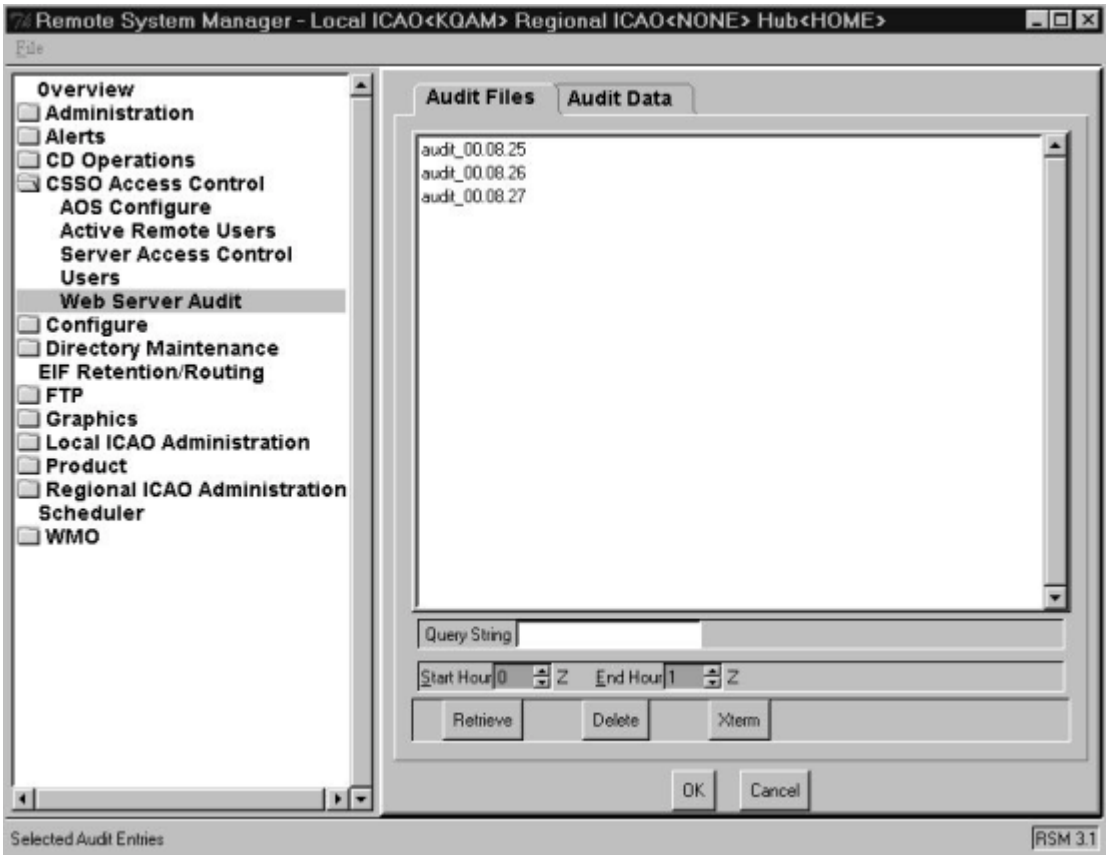
Result Code	Interpretation
S	Successful
F	Unsuccessful

To access the Web Server Audit function, do the following:

1 Select the **CSSO Access Control** folder, and select **Web Server Audit**.

The following display appears (see Figure 6.125).

Figure 6.125 Web Server Audit Screen



To view an audit file, do one of the following:

- With the **Audit Files** tab selected, from the list of audit file names in the top window, double click an audit file name.

Double clicking the file name displays the audit file with the default filter settings.

*The audit data displays with the **Audit Data** tab automatically selected.*

- With the **Audit Files** tab selected, from the list of audit file names in the top window, select an audit file name and do the following:
  - Optionally, at **Query String**, enter a one-word query string (for example *user1* (for references to a particular user name) or *table* (to find references to a table update).
  - Optionally, at **Start Hour** and **End Hour**, enter a start and end time (in Z) or use the spinners on the windows to indicate a number of hours.
  - Select **Retrieve**.

  *The audit data displays with the **Audit Data** tab automatically selected.*

To delete an audit file, do the following:

1. With the **Audit Files** tab selected, from the list of audit file names in the top window, select an audit file name.
2. Select **Delete**.

   *Under the **Audit Files** tab, the file name of the audit file is removed from the list of audit files.*

WARNING *There is no confirmation message. Upon selecting **Delete**, the audit file is no longer available on disk.*

To bring up an *xterm* window, do the following:

1. With the **Audit Files** tab selected, select **Xterm**.

To leave the Web Server Audit function, do the following:

1. Select **OK** or **Cancel**.

N-TFS Server Configuration and Monitoring

The N-TFS Server can run as a stand-alone communications pipe, or instead with the C/DM acting as the communications handler for the system.

WARNING *No AMIS troubleshooting should occur without first consulting this material. The startup, shutdown, and recovery procedures must be*

explicitly followed to ensure the system can be recovered in the case of major failure.

N-TFS Server Normal Startup

For a normal startup of the N-TFS Server, do the following:

1 Confirm the computer, monitor, and hard drive are plugged in.

2 Power ON the equipment in the following order:

- External hard disk drive.
- Monitor.
- Computer.

A series of system messages display. When the system has finished booting, the N-TFS applications are already running in the background and require no operator interaction.

The AMIS login screen appears.

3 At **Please enter your user name**, enter your user name.

4 At **Please enter your password**, enter your password.

The Solaris logo appears, followed by the Main Workspace with a console window icon and two clocks (UTC and local) located in the upper left corner of the display. A DOD warning banner also appears and then automatically disappears after 60 seconds.

N-TFS Server Abnormal Boot

If the system fails to perform a file system check on boot-up, it stops the boot process and displays several lines of status messages followed by the # prompt. Do the following:

1 Turn the power switch OFF on the N-TFS Server computer and wait several seconds.

2 Turn the power switch ON on the N-TFS Server computer.

If the re-boot fails again, the file structure is seriously corrupted. STOP. Leave the computer as it is and notify the System Manager and/or maintenance personnel.

N-TFS Server Recovery

Recovery actions may be required after an application crash, lock-up, or hard failure.

If stray UNIX system messages are outside the console window, refresh the screen display by doing the following:

1 At the AMIS Main Workspace menu, select **Utilities** > **Refresh**.

The entire display area is re-displayed.

If an application window quits unexpectedly, do the following:

1 At the AMIS Main Workspace menu, select the application that quit.

The application starts in a new window. Unsaved information from the application's former window is lost.

If a window stops accepting input from the keyboard, do the following:

1 At the AMIS Main Workspace menu, select **Utilities** > **Reset Input**.

Window manager functions are recovered.

2 Optionally, if the above reset actions fails to resolve the problem, completely restart the window manager by doing the following:

- At the AMIS Main Workspace menu, select **Exit**.

  An exit confirmation window appears.

- Ay the exit confirmation window, to confirm the window manager exit, press **Exit**.

  The AMIS login screen appears.

AMIS Main Workspace Menu

On the N-TFS Server, the AMIS Main Workspace menu is the launchpad for AMIS applications.

To display the AMIS Main Workspace menu, do the following:

1 At the N-TFS Server, after logging in to AMIS, right-click anywhere in the workspace, outside of any window.

The AMIS Main Workspace menu appears (see Figure 6.126).

Selecting the Tack in the upper left corner of the display keeps the window displayed. To un-tack the display, select the Tack again.

Figure 6.126 AMIS Main Workspace Menu

Remote System Manager

The Remote System Manager selection of the AMIS Main Workspace menu is described in "System Manager Activities" on page 6-1 and "CSSO Activities" on page 6-209.

System Status

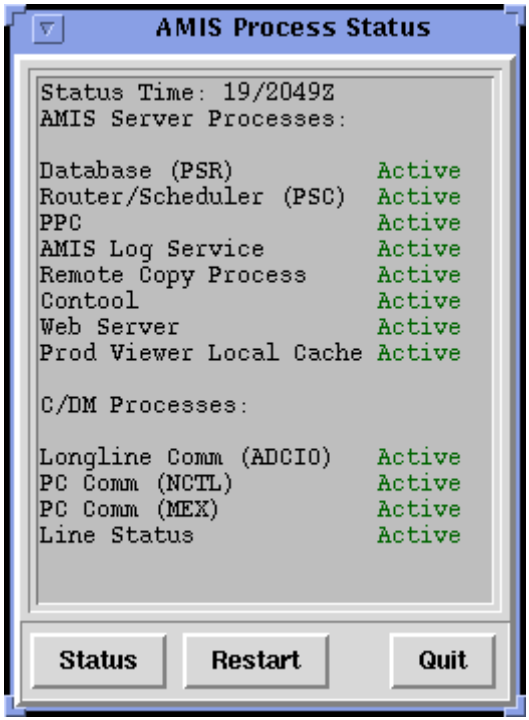
The System Status function displays the system status of the various AMIS processes as either Active (in green) or Inactive (in red).

To access the System Status function, do the following:

1 At the AMIS Main Workspace menu, select **System Status**.

The AMIS Process Status screen appears (see Figure 6.127).

Figure 6.127 AMIS Process Status Screen



To update the status display, do the following:

1 Select **Status**.

To restart an inactive process, do the following:

1 Select **Restart**.

The AMIS Restart Menu appears (see "Restart" on page 6-231).

To exit the AMIS Process Status screen, do the following:

1 Select **Quit**.

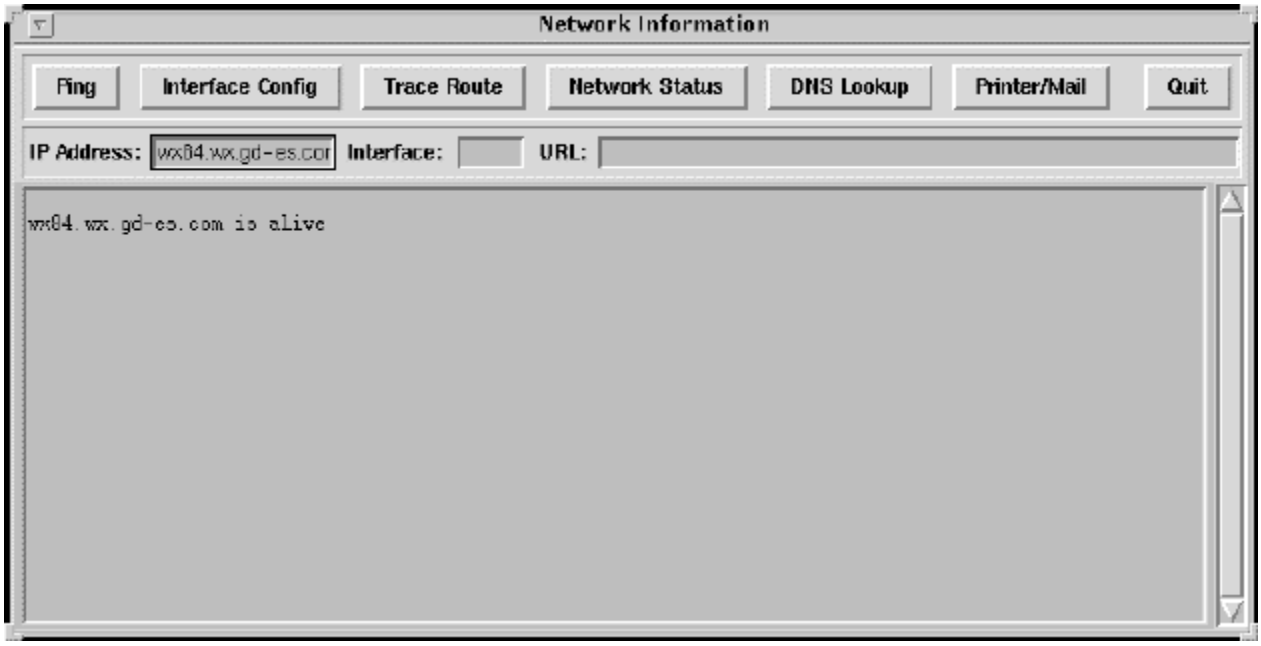
Network Status

To access the Network Status function, do the following:

1 At the AMIS Main Workspace menu, select **Network Status**.

The Network Information screen appears (see Figure 6.128).

Figure 6.128 Network Information Screen



To test the network connection to a specific location, do the following:

1 At **IP Address**, enter the IP address of the location to test.

2 Select **Ping**.

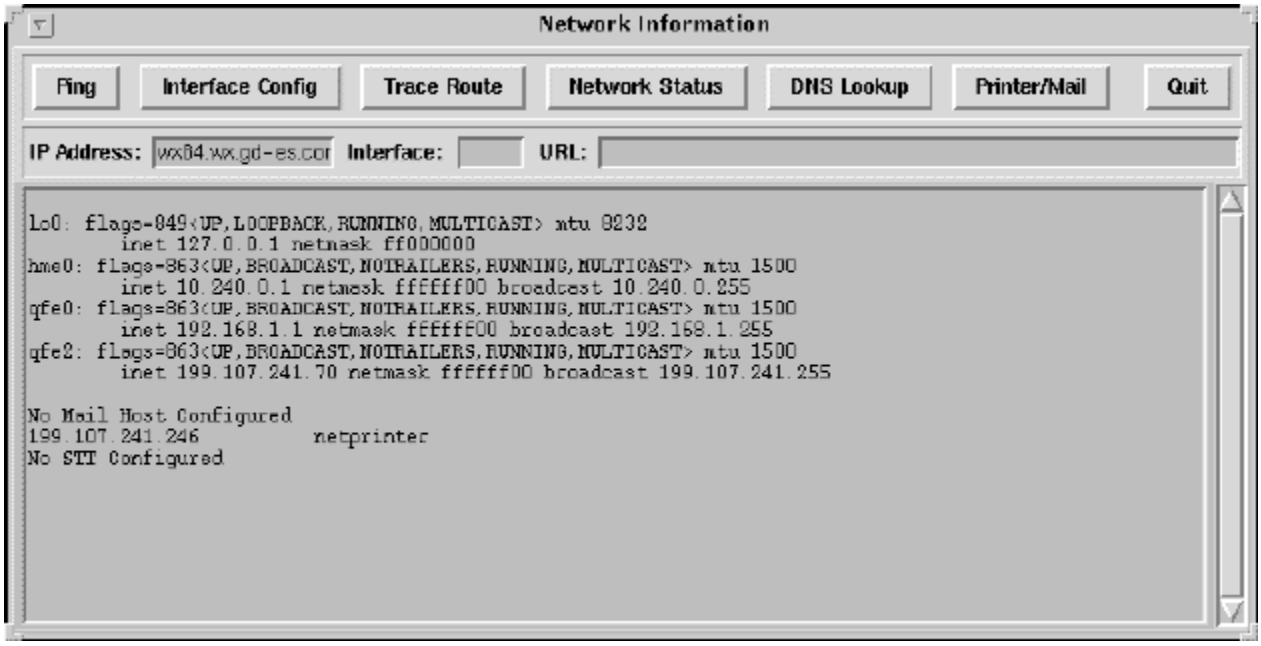
If successful, the information window of the Network Information screen will indicate "(IP address) is alive" (see Figure 6.128).

To view the current network interface configuration information, do the following:

1 Select **Interface Config**.

The interface configuration information is displayed in the information window of the Network Information screen (see Figure 6.129).

Figure 6.129 Network Status Interface Configuration Information



To display trace route information to an external address, do the following:

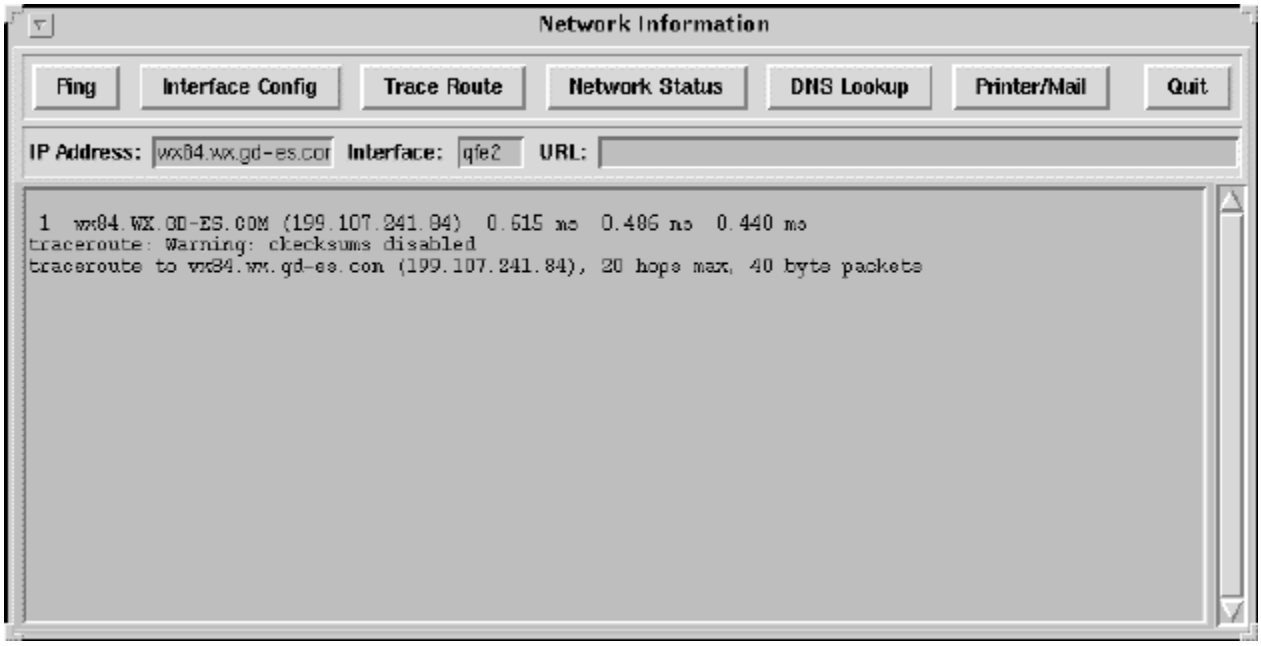
1 At **IP Address**, enter the IP address of the location

2 At **Interface**, enter interface designator (for example, qfe2).

3 Select **Trace Route**.

The trace route information is displayed in the information window of the Network Information screen (see Figure 6.130).

Figure 6.130 Network Status Trace Route Information

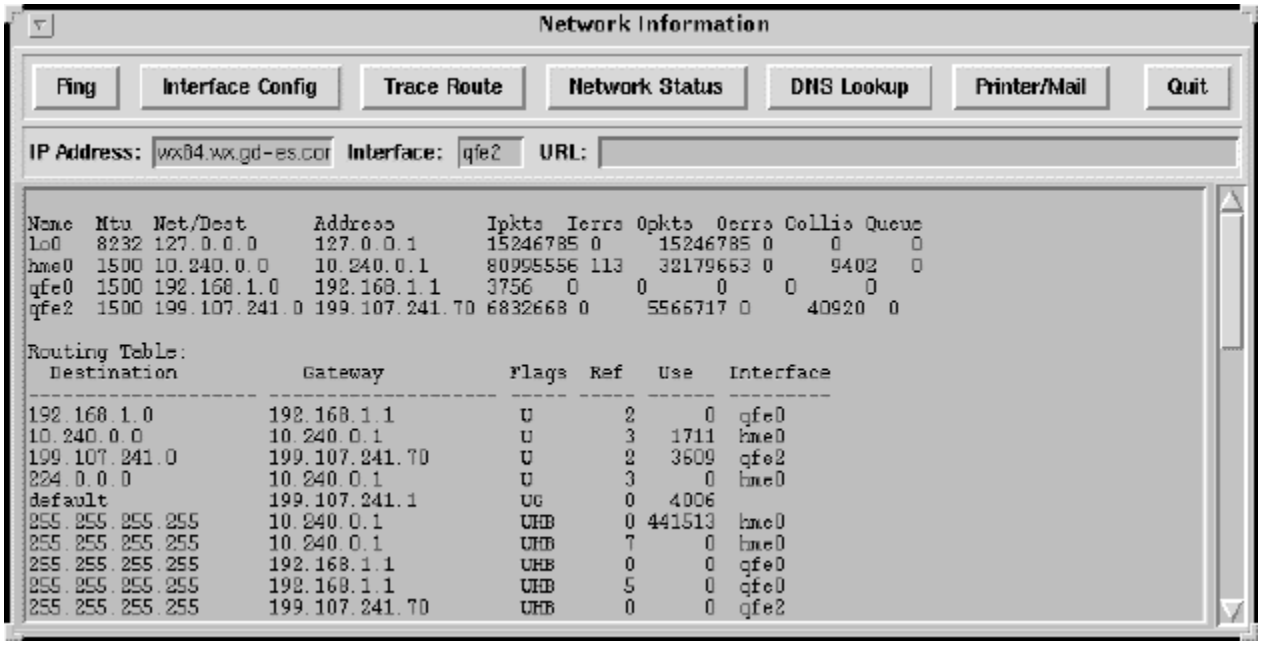


To display the network status and routing tables, do the following:

1 Select **Network Status**.

The netowrk status and routing table information is displayed in the information window of the Network Information screen (see Figure 6.131).

Figure 6.131 Network Status Information



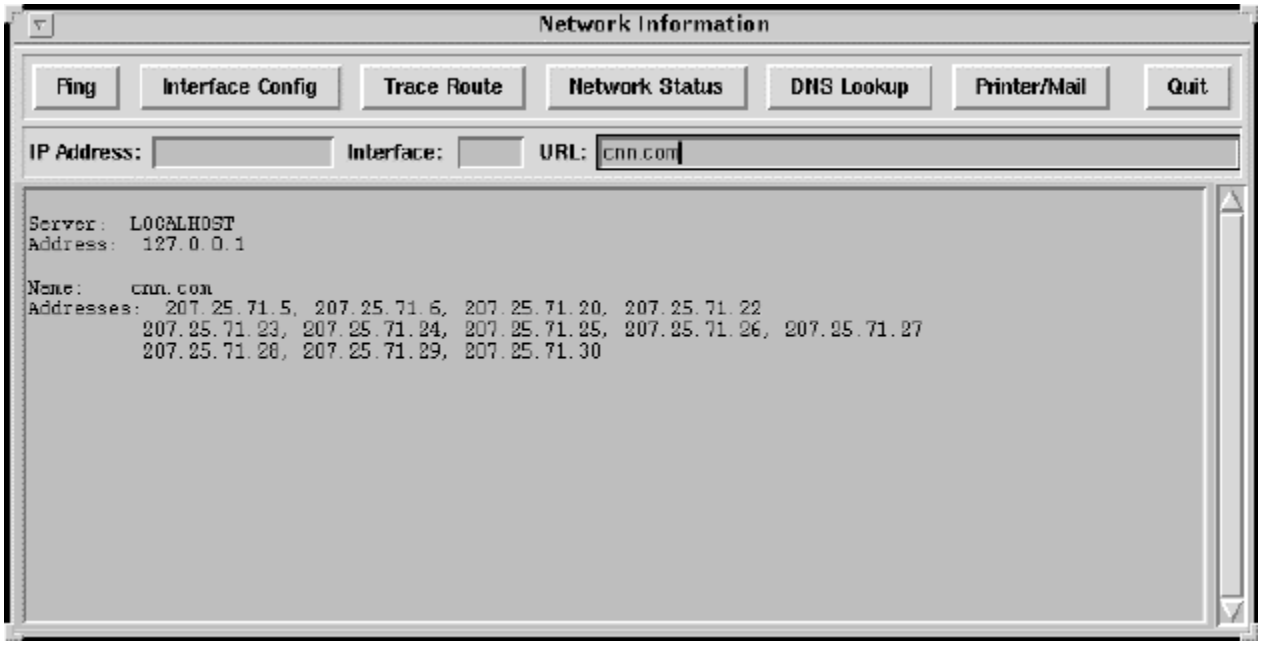
To resolve a domain name to a IP address(es), do the following:

1 AT **URL**, enter the URL (for example, cnn.com).

2 Select **DNS Lookup**.

The address information is displayed in the information window of the Network Information screen (see Figure 6.132).

Figure 6.132 Network Status DNS Lookup

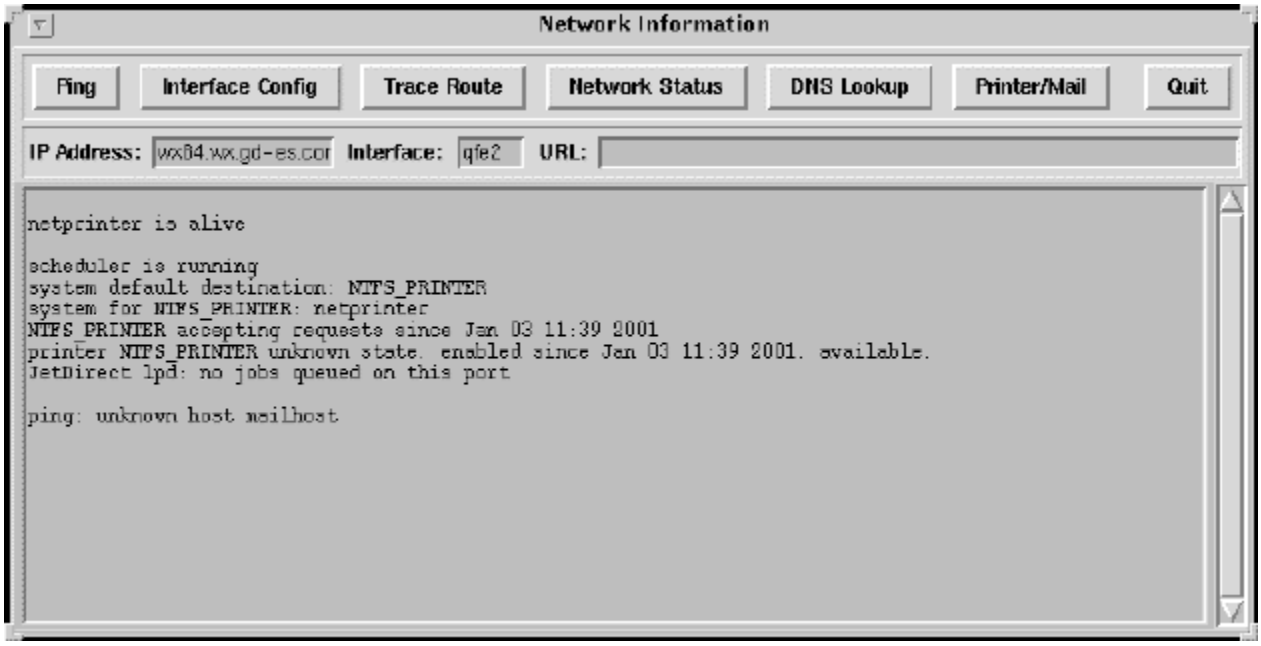


To display network printer/mail information, do the following:

1 Select **Printer/Mail**.

The host/domain information is displayed in the information window of the Network Information screen (see Figure 6.133).

Figure 6.133 Network Status Printer/Mail Information



To exit the Network Information screen, do the following:

1 Select **Quit**.

You are returned to the AMIS main workspace.

Restart

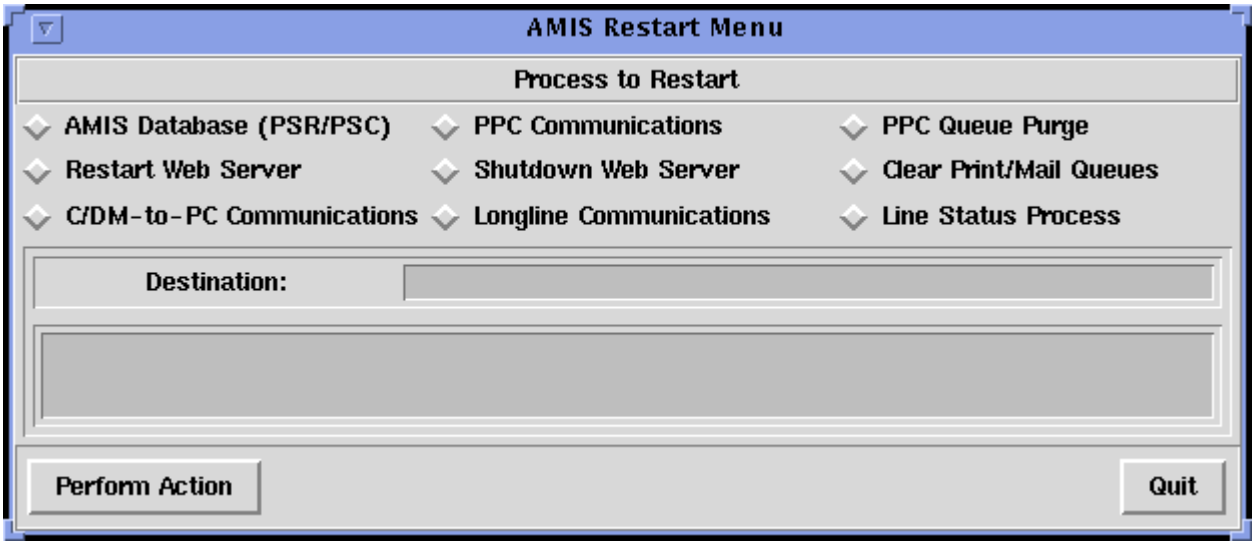
The Restart function helps you work through exceptional system conditions and catastrophic failures (such as communications failures and database corruption). However, most AMIS problems are due to incorrectly configured tables or incorrectly followed procedures. All restart actions should only occur after significant system monitoring/troubleshooting by a qualified System Administrator. Ensure that you troubleshoot system tables before you use Restart.

To access the Restart function, do one of the following:

- At the AMIS Main Workspace menu, select **Restart**.
- At the AMIS Process Status screen, select **Restart** (see “System Status” on page 6-224).

  The AMIS Restart Menu appears (see Figure 6.134).

Figure 6.134 AMIS Restart Menu



To restart the AMIS database software, do the following:

1 From the AMIS Restart Menu, select **AMIS Database (PSR/PSC)**.

This action might be performed in the case of a PSR or PSC failure. A PSR or PSC failure is indicated by the inability to retrieve a requested listing of known products from the server database. An alert indicating PSR or PSC failure will be generated at the N-TFS client making the request.

2 Select **Perform Action**.

Short, informational messages appear in the message window indicating that the software is being restarted, and when the restart complete.

To restart the N-TFS Server resident communication and encoding software for transmitting and receiving to external sites *(ppc)*, do the following:

1 From the AMIS Restart Menu, select **PPC Communications**.

This action might be performed when communications to external sites have failed. This action does not affect adcio, the longline communications process.

Additionally, note that the receiving software on the external system may need to be started.

2 Select **Perform Action**.

Short, informational messages appear in the message window indicating that the software is being restarted, and when the restart complete.

To purge the PPC queue for a specific destination, and to restart *ppc* when the purge is complete, do the following:

1 From the AMIS Restart Menu, select **PPC Queue Purge**.

2 At **Destination** window, enter the name of the destination.

3 Select **Perform Action**.

Short, informational messages appear in the message window indicating that the software is being restarted, and when the restart complete.

To effectively restart the N-TFS Server resident web server software, do the following:

1 From the AMIS Restart Menu, select **Restart Web Server**.

This action might be performed when the HTTP process has stopped functioning for some reason. This may be indicated by difficulty with logging into the web server. (A message at the AMIS client launchpad, or the RSM interface on the server, indicating that a connection to the server cannot be made, is usually indicative of a web server problem).

2 Select **Perform Action**.

Short, informational messages appear in the message window indicating that the software is being restarted, and when the restart complete.

To halt the N-TFS Server resident web server software, do the following:

1 From the AMIS Restart Menu, select **Shutdown Web Server**.

This action might be performed when making configuration changes to prevent users from logging on and accessing the various functions being changed.

Additionally, this action might be performed in the case when maintenance personnel want to prevent user access to the N-TFS Server they are troubleshooting.

2 Select **Perform Action**.

Short, informational messages appear in the message window indicating that the software is being restarted, and when the restart complete.

To purge the printer and E-mail queues, do the following:

1 From the AMIS Restart Menu, select **Clear Print/Mail Queues**.

This action might be performed when the printer and mail queues are full of unneeded products.

2 Select **Perform Action**.

Short, informational messages appear in the message window indicating that the software is being restarted, and when the restart complete.

To restart the software controlling the communications between the C/DM and alphanumeric workstations (i.e. FCF/FO, and FCF/ATC), do the following:

1 From the AMIS Restart Menu, select **C/DM-to-PC Communications**.

This action might be performed when there is an asynchronous communications failure between the C/DM and an alphanumeric workstation. An asynchronous communications failure is indicated by any of the following:

- *The Station Lines Condition Display indicates that CTL is down.*
- *All alphanumeric workstations on one asynchronous communications controller board are down.*
- *All alphanumeric workstations are down.*

2 Select **Perform Action**.

Short, informational messages appear in the message window indicating that the software is being restarted, and when the restart complete.

To restart the software controlling the communications between the C/DM and the AWN and AFWA, do the following:

1 From the AMIS Restart Menu, select **Longline Communications**.

This action might be performed when external communications to either, and/or both, AFWA and AWN have failed. An external communications failure is detected when a check of the System Status indicates that ADCIO is down.

2 Select **Perform Action**.

Short, informational messages appear in the message window indicating that the software is being restarted, and when the restart complete.

To restart the line status display software, do the following:

1 From the AMIS Restart Menu, select **Line Status Process**.

This action might be performed when nothing is displayed after trying to access the RSM Station Lines Condition Display or when noting the line status process as being in a inactive state.

2 Select **Perform Action**.

Short, informational messages appear in the message window indicating that the software is being restarted, and when the restart complete.

To exit the Restart function at any time, do the following:

1 Press **Quit**.

WARNING *To recognize certain table changes made via RSM, AMIS may require a reboot of affected systems or a restart of affected applications. These table changes and the necessary restarts are as follows:*

- *Configure Local/External Destinations (Configure > Destinations).*

  *Perform **C/DM-to-PC Communications** restart, followed by a reboot of the affected PC. If the change was to a PPC destination, perform **PPC Communications** restart.*

- *Configure Longline Destinations (Configure > Longline Parameters).*

  *Perform **Longline Communications** restart.*

- *FCF Dataset Assignments (Configure > Destinations)*

  Perform a ***C/DM-to-PC Communications*** restart. Additionally reboot the affected FCF workstations.

- *Product Purge Criteria (Product > Database Purge)*

  *Perform **AMIS Database (PSR/PSC)** restart.*

- *After reading AMIS checkpoint (CD Operations > Checkpoint)*

  *Perform **C/DM-to-PC Communications**, **Longline Communications**, and **AMIS Database (PSR/PSC)** restarts. Additionally, reboot the affected PC workstations.*

Unit Converter

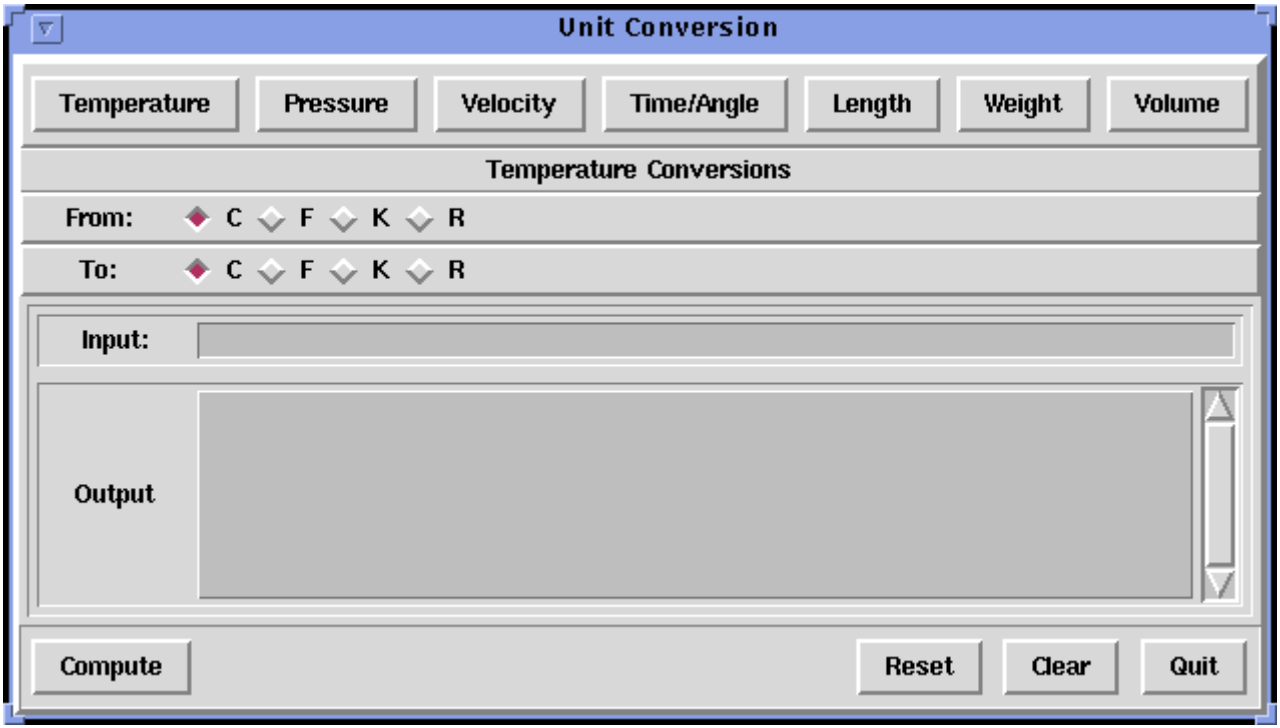
The Unit Converter is an utility that computes conversion between various untis of temperature, pressure, velocity, time/angle, length, weight, and volume.

To access the Unit Converter, do the following:

1 At the AMIS Main Workspace menu, select **Unit Converter**.

The Unit Conversion dialog appears (see Figure 6.135).

Figure 6.135 Unit Conversion Dialog



Wx Calculator

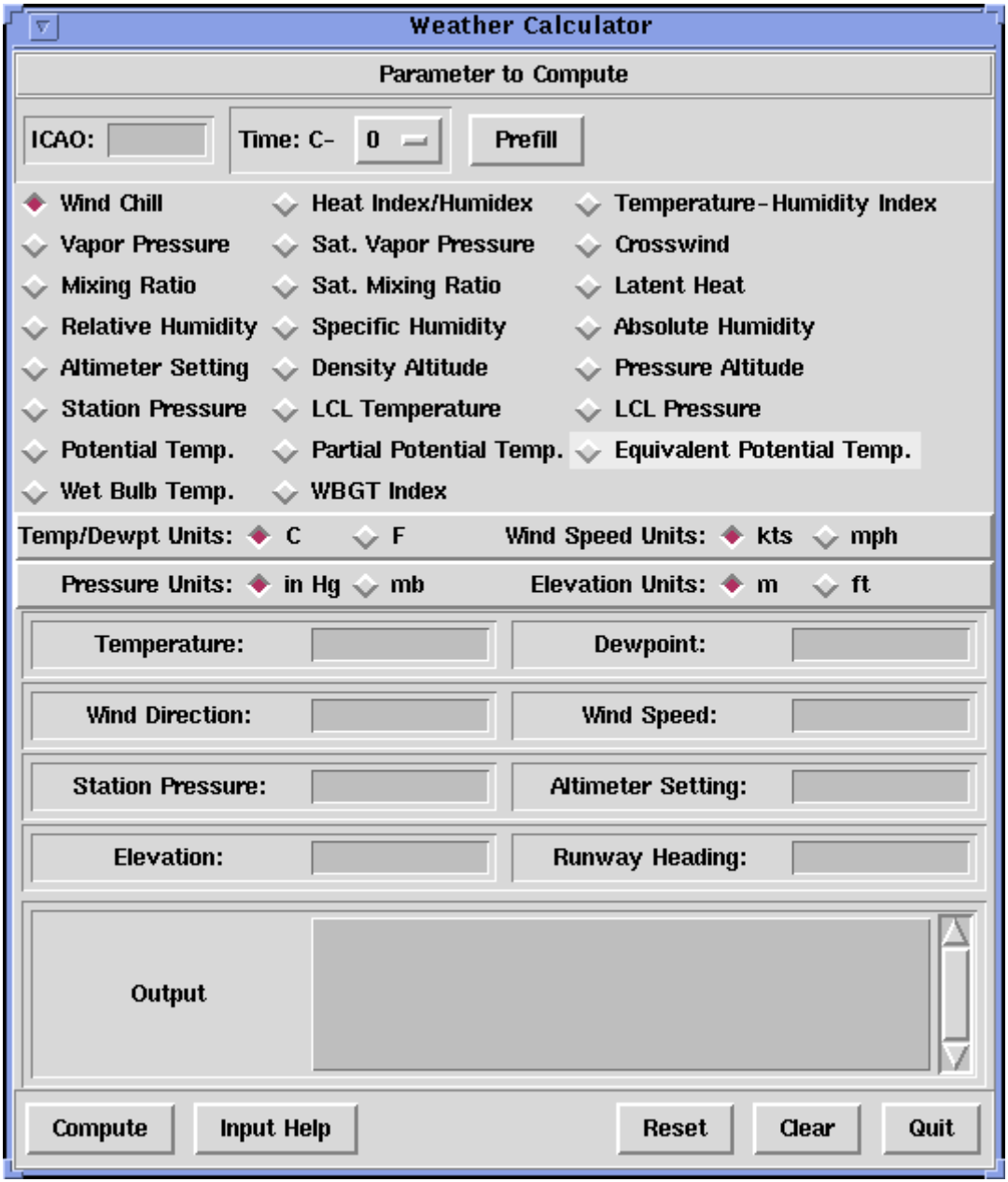
The Weather Calculator is an utility that computes various weather parameters (for example, wind chill, latent heat, relative humidity, and pressure altitude) based on your input.

To access the Weather Calculator, do the following:

1 At the AMIS Main Workspace menu, select **Wx Calculator**.

The Weather Calculator dialog appears (see Figure 6.136).

Figure 6.136 Weather Calculator Dialog



Severe Wx

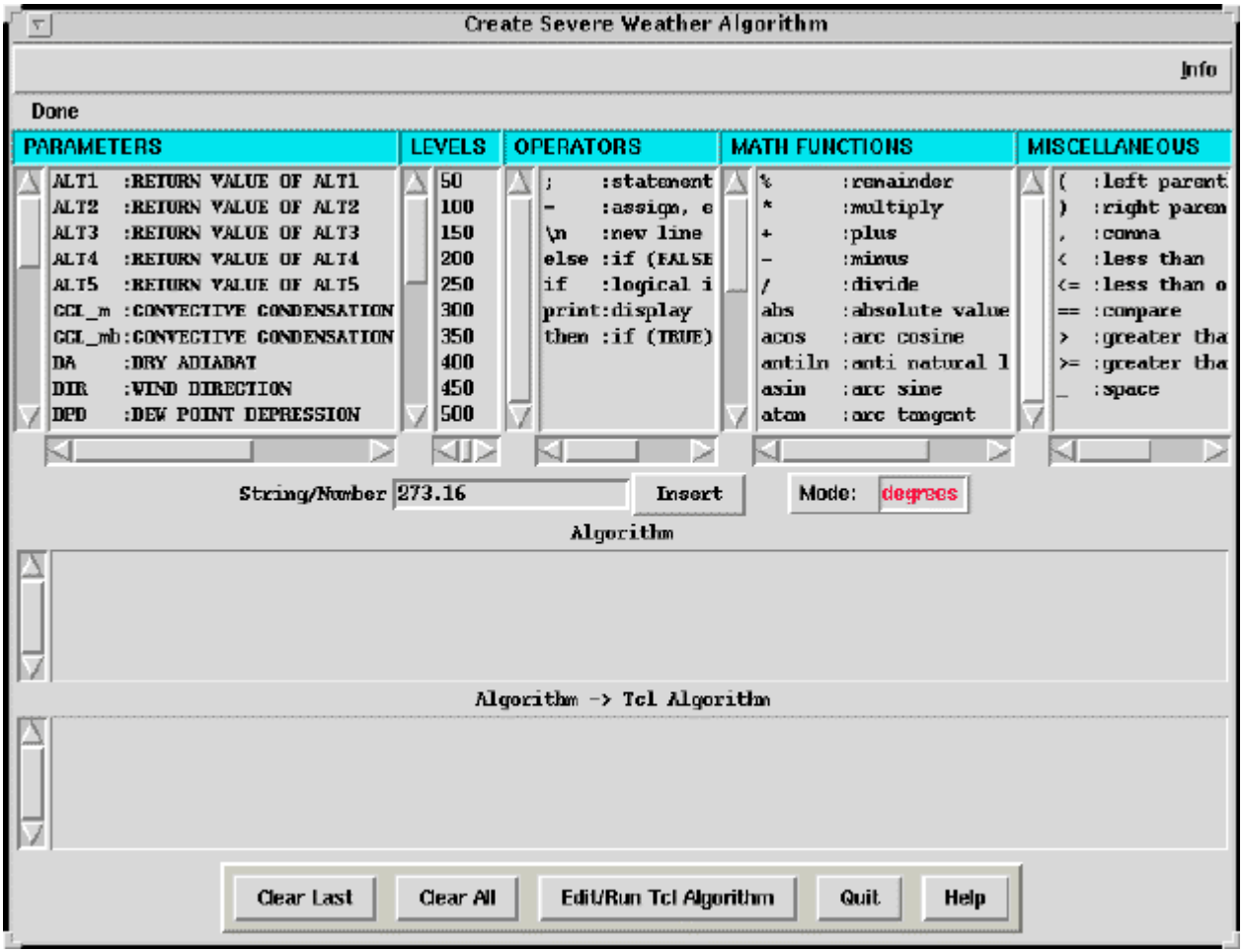
The Severe Weather Algorithm Tool (SWAT) is a general purpose algorithm builder. You can use it to generate an algorithm, dynamically run the algorithm on a desired station, and to save the algorithm for use with the MET Skew-T function.

To access the Severe Wx tool, do the following:

1 At the AMIS Main Workspace menu, select **Severe Wx**.

The Create Algorithm screen appears (see Figure 6.137).

Figure 6.137 Create Algorithm Screen



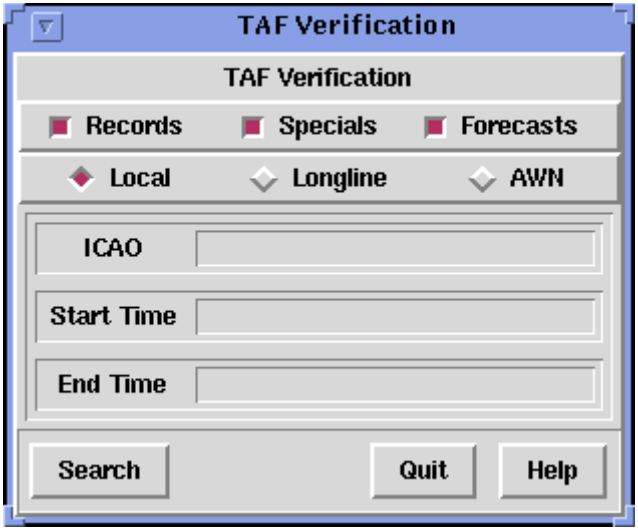
TAF Verification

To access TAF Verification, do the following:

1 At the AMIS Main Workspace menu, select **TAF Verification**.

The TAF Verification screen appears (see Figure 6.138).

Figure 6.138 TAF Verification Screen



Web HTML Admin

To access the Web HTML Administration function, do the following:

1 At the AMIS Main Workspace menu, select **Web HTML Admin**.

The Web HTML Manager screen appears (see Figure 6.139).

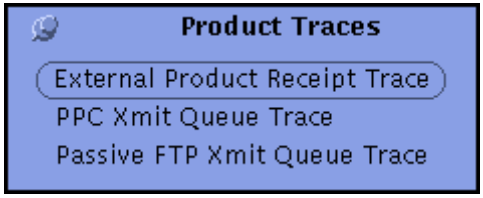
Figure 6.139 Web HTML Manager Screen

Product Traces

Product traces display the receipt or transmit traces of various AMIS system communication processes.

The Product Traces menu consists of three selections: External Product Receipt Trace, PPC Xmit Queue Trace, and Passive FTP Xmit Queue Trace (see Figure 6.140).

Figure 6.140 Product Traces Menu



External Product Receipt Trace

The External Product Receipt Trace function displays a trace of incoming external products.

To view a trace of incoming external products, do the following:

1 At the AMIS Main Workspace menu, select **Product Traces** > **External Product Receipt Trace**.

The External Product Receipt Trace screen appears (see Figure 6.141).

To exit the trace window, do the following:

1 Ay the keyboard, enter **Control-C**.

Alternatively, the trace window automatically exits after five minutes.

Figure 6.141 External Product Receipt Trace Screen

```
External Product Receipt Trace
Ec: pepr_wde: <AASPUS11_00KAWN_n20010103172800._.26829.A30> pid <AESPUS11  KAWNA > B13HU0
Ec: pepr_wde: <AASAEU_00KAWN_n20010103172800.RRR.26832.A30> pid <AESAEU    KAWNA > B13HU0
Ec: pepr_wde: <AASPFE_00KAWN_n20010103172900._.26853.A30> pid <AESPFE    KAWNA > B13HU0
Ec: pepr_wde: <AASAEN_00KAWN_n20010103172900.RRE.26845.A30> pid <AESAEN    KAWNA > B13HU0
Ec: pepr_wde: <AASAAS_00KAWN_n20010103172900.RRF.26873.A30> pid <AESAAS    KAWNA > B13HU0
Ec: pepr_wde: <AAUAUS21_00KAWN_n20010103172800.RTD02.26805.A30> pid <AEUAUS21  KAWNA > B13HU0
Ec: pepr_wde: <AAFTAK70_00KAWN_n20010103173000.RRA.26921.A30> pid <AEFTAK70  KAWNA > B13HV0
Ec: pepr_wde: <AAUAUS77_00KAWN_n20010103172900.RTD.26892.A30> pid <AEUAUS77  KAWNA > B13HV0
Ec: pepr_wde: <AAUANA11_00KAWN_n20010103172900.RTD.26889.A30> pid <AEUANA11  KAWNA > B13HV0
Ec: pepr_wde: <AAFXUS66_00KSGX_n20010103173000._.26905.A30> pid <AEFXUS66  KAWNA > B13HV0
Ec: pepr_wde: <AASAUK_00KAWN_n20010103172900.RRE.26894.A30> pid <AESAUK    KAWNA > B13HV0
Ec: pepr_wde: <AASAEU_00KAWN_n20010103172900.RRS.26900.A30> pid <AESAEU    KAWNA > B13HV0
Ec: pepr_wde: <AAUAUS68_00KAWN_n20010103172900.RTD.26890.A30> pid <AEUAUS68  KAWNA > B13HV0
Ec: pepr_wde: <AASPUS13_00KAWN_n20010103172900._.26876.A30> pid <AESPUS13  KAWNA > B13HV0
Ec: pepr_wde: <AAAXXX71_00PHFF_n20010103173000._.26908.A30> pid <AEAXXX71  KAWNA > B13HV0
Ec: pepr_wde: <AAFPUS63_00KMPX_n20010103173000._.26911.A30> pid <AEFPUS63  KAWNA > B13HV0
Ec: pepr_wde: <AAFTRA_00KAWN_n20010103173000.RRC.26927.A30> pid <AEFTRA    KAWNA > B13HV0
Ec: pepr_wde: <AAFTXX39_00KAWN_n20010103173000.RRB.26925.A30> pid <AEFTXX39  KAWNA > B13HV0
Ec: pepr_wde: <AAAXXX30_00KAWN_n20010103173000._.26907.A30> pid <AEAXXX30  KAWNA > B13HV0
Ec: pepr_wde: <AAAXXX40_00KAWN_n20010103173000._.26906.A30> pid <AEAXXX40  KAWNA > B13HV0
Ec: pepr_wde: <AAFTNA31_00KAWN_n20010103173000.RRB.26924.A30> pid <AEFTNA31  KAWNA > B13HV0
Ec: pepr_wde: <AASNFK88_00KAWN_n20010103172800.RRX.26814.A30> pid <AESNFK88  KAWNA > B13HT0
Ec: pepr_wde: <AASNFK88_00KAWN_n20010103172800.RRX.26816.A30> pid <AESNFK88  KAWNA > B13HT0
Ec: pepr_wde: <AASMUK03_00KAWN_n20010103172900.RRJ.26896.A30> pid <AESMUK03  KAWNA > B13HV0
Ec: pepr_wde: <AASNEE14_00KAWN_n20010103172900._.26897.A30> pid <AESNEE14  KAWNA > B13HV0
Ec: pepr_an: <GWFDID039C> pid <0A              > B13HW3
*: st_bad_data: Product </opt/aw/dbm/comm_trbl_in/AGWFDID039C.18> written
*: pepr_ftp(ftp-vsat): Product <GWFDID039D> too large (> 2000000 bytes
```

PPC Xmit Queue Trace

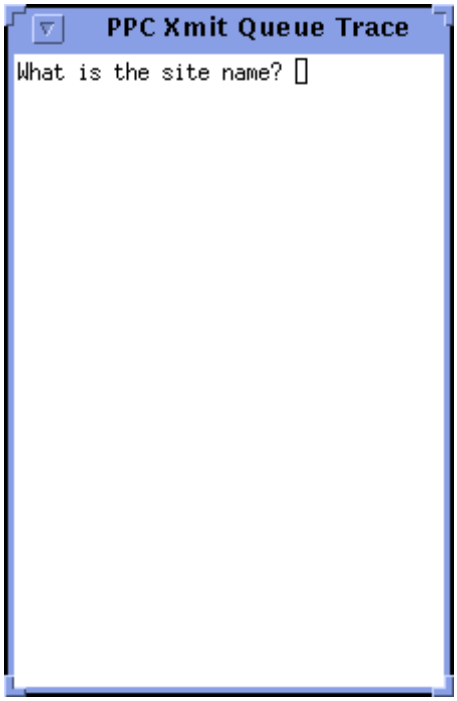
The PPC Xmit Queue Trace function displays a trace of the transmission of products through the PPC process.

To view a trace of the transmission of products through the PPC process, do the following:

1 At the AMIS Main Workspace menu, select **Product Traces > PPC Xmit Queue Trace**.

The PPC Xmit Queue Trace screen appears (see Figure 6.142).

Figure 6.142 PPC Xmit Queue Trace



2 At **What is the site name**, enter the designator for the destination queue to trace.

To exit the trace window, do the following:

1 Ay the keyboard, enter **Control-C**.

Alternatively, the trace window automatically exits after five minutes.

Passive FTP Xmit Queue Trace

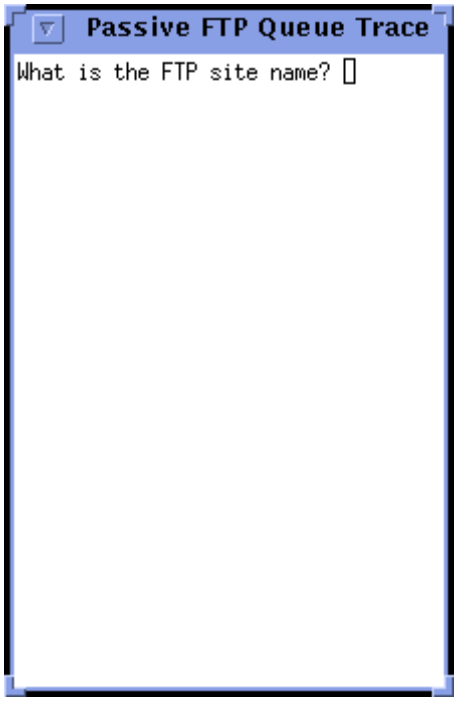
The Passive FTP Xmit Queue Trace function displays a trace of the transmission of products through the passive FTP process.

To view a trace of the transmission of products through the passive FTP process, do the following:

1 At the AMIS Main Workspace menu, select **Product Traces** > **Passive FTP Xmit Queue Trace**.

The Passive FTP Xmit Queue Trace screen appears (see Figure 6.143).

Figure 6.143 Passive FTP Xmit Queue Trace



2 At **What is the site name**, enter the designator for the destination queue to trace.

To exit the trace window, do the following:

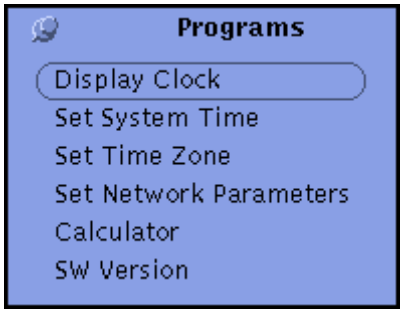
1 Ay the keyboard, enter **Control-C**.

Alternatively, the trace window automatically exits after five minutes.

Programs

The Programs menu consists of six selections: Display Clock, Set System Time, Set Time Zone, Set Network Parameters, Calculator, and SW Version (see Figure 6.144).

Figure 6.144 Programs Menu



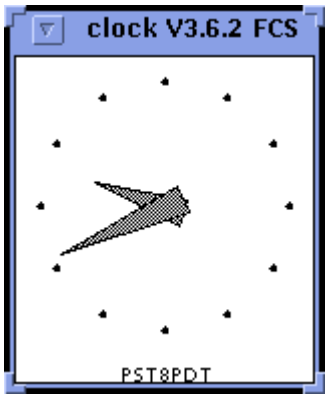
Display Clock

To display the system clock, do the following:

1 At the AMIS Main Workspace menu, select **Programs** > **Display Clock**.

The system clock appears (see Figure 6.145).

Figure 6.145 System Clock



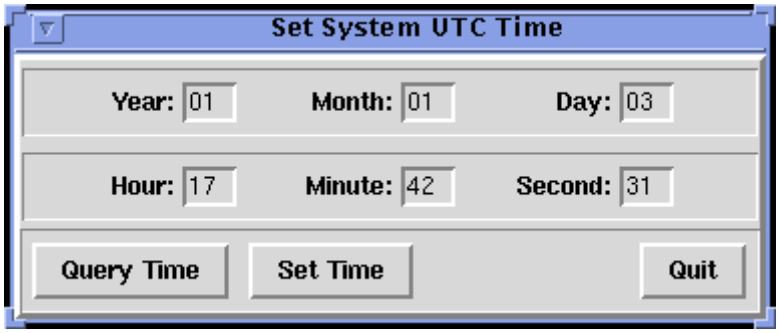
Set System Time

To access the Set System Time function, do the following:

1 At the AMIS Main Workspace menu, select **Programs** > **Set System Time**.

The Set System UTC Time screen appears (see Figure 6.146).

Figure 6.146 Set System UTC Time Screen



To set the system UTC time, do the following:

1 At **Year**, enter two-digit year.

2 At **Month**, enter two-digit month.

3 At **Day**, enter two-digit day.

4 At **Hour**, enter two-digit hour.

5 At **Minute**, enter two-digit minute.

6 At **Second**, enter two-digit second.

7 Select **Set Time**.

You must re-boot the server to effect the change.

To update the display with the current set time, do the following:

1 Select **Query Time**.

To exit the display, do the following:

1 Select **Quit**.

Set Time Zone

The N-TFS Server must be set with the correct time zone in which you are located to apply GMT and local time conversions to data. Your time zone should be configured correctly as a result of installation and should remain static. An incorrect setting causes system problems, and therefore only the System Manager or CSSO should access this function when the time zone is incorrectly configured.

To access the Set Time Zone function, do the following:

1 At the AMIS Main Workspace menu, select **Programs** > **Set Time Zone**.

The Set Time Zone screen appears (see Figure 6.147).

Figure 6.147 Set Time Zone Screen

```
Set Time Zone

Name(s) of known timezones:

Australia/   GB          GMT+7       GMT-8       MST7MDT     UCT
Brazil/      GB-Eire     GMT+8       GMT-9       Mexico/     US/
CET          GMT         GMT+9       Greenwich   Mideast/    UTC
CST6CDT      GMT+0       GMT-0       HST         NZ          Universal
Canada/      GMT+1       GMT-1       Hongkong    NZ-CHAT     W-SU
Chile/       GMT+10      GMT-10      Iceland     Navajo      WET
Cuba         GMT+11      GMT-11      Iran        PRC         Zulu
EET          GMT+12      GMT-12      Israel      PST8PDT     posixrules@
EST          GMT+13      GMT-2       Jamaica     Poland      src/
EST5EDT      GMT+2       GMT-3       Japan       Portugal
Egypt        GMT+3       GMT-4       Kwajalein   ROC
Eire         GMT+4       GMT-5       Libya       ROK
Etc/         GMT+5       GMT-6       MET         Singapore
Factory      GMT+6       GMT-7       MST         Turkey
Which timezone (reboot server after changing)?
```

To set the time zone, do the following:

1 At **Which timezone**, enter the time zone, formatted identically to the displayed time zone names.

You must re-boot the server to effect the change.

To exit, do the following:

1 At the keyboard, enter **Control-C**.

Set Network Parameters

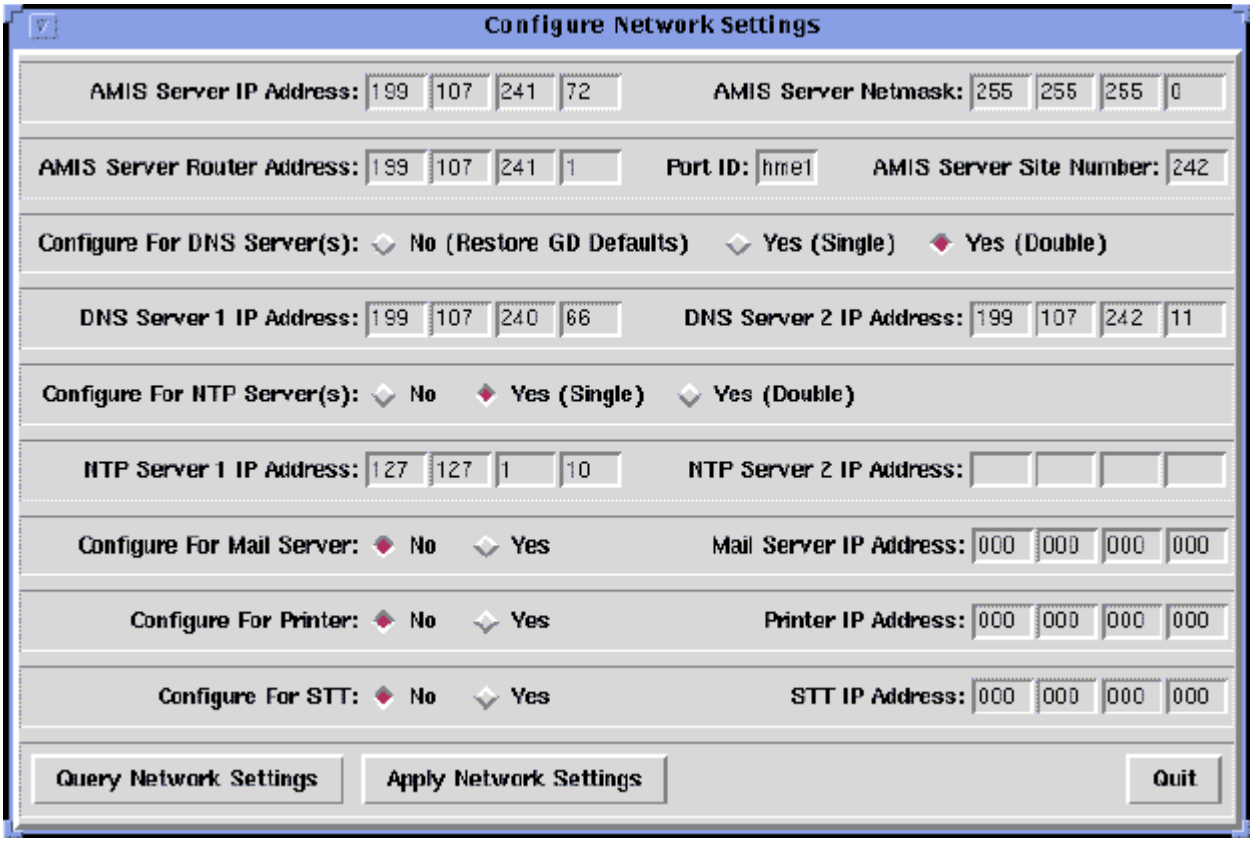
The Set Network Parameters function enables the configuration of various network settings used to identify the N-TFS Server to the LAN and the Internet. These settings enable the N-TFS Server to communicate over the LAN and the Internet. Additionally, other configuration options present are: Domain Name Service (DNS), Network Time Protocol (NTP) Server, Small Tactical Terminal (STT), mail server, and printer.

To access the Set Network Parameters function, do the following:

1 At the AMIS Main Workspace menu, select **Programs > Set Network Parameters.**

The Configure Network Settings display appears (see Figure 6.148).

Figure 6.148 Configure Network Settings Display



To configure the network settings, do the following:

You may need to contact BNCC for IP addresses, etc. for the following entries.

1 At **AMIS Server IP Address**, enter the IP address of the N-TFS Server.

2 At **AMIS Server Netmask**, enter the netmask of the N-TFS Server.

3 At **AMIS Server Router Address**, enter the IP address of the default router.

4 At **Port ID**, verify proper AMIS network interface port (*qfe2* or *le2*).

This value should already be present.

5 At **AMIS Server Site Number**, the value is in a protected field and hence cannot be modified.

6 At **Configure for DNS Server(s)**, do one of the following:

- To disable DNS, select **No (Restore GD Defaults)**.
- To enable DNS from a single server, select **Yes (Single)**.
- To enable DNS from two servers, select **Yes (Double)**.

Domain Name Service (DNS) is a host name resolution function provided by dedicated servers that contain a list of host names and associated IP addresses. DNS allows a user to access a remote system by use of a host name in the browser rather than by use of an actual IP address.

7 Optionally, if single or double DNS is selected, at **DNS Server 1 IP Address**, enter the IP address of the first or only DNS server.

8 Optionally, if double DNS is selected, at **DNS Server 2 IP Address**, enter the IP address of the second DNS server.

9 At **Configure for NTP Server(s)**, do one of the following:

- To disable NTP, select **No**.
- To enable NTP from a single server, select **Yes (Single)**.
- To enable NTP from two servers, select **Yes (Double)**.

The Network Time Protocol (NTP) is used to synchronize the time of a computer client or server to another server or reference time source, such as a radio or satellite receiver or a modem. NTP provides client accuracies typically within a millisecond on LANs, and up to a few tens of milliseconds on WANs relative, for example, to a primary server synchronized to Coordinated Universal Time (UTC) via a Global Positioning Service (GPS) receiver. To achieve high accuracy and reliability, NTP configurations typically use multiple redundant servers and diverse network paths.

10 Optionally, if single or double NTP is selected, at **NTP Server 1 IP Address**, enter the IP address of the first or only DNS server.

11 Optionally, if double NTP is selected, at **NTP Server 2 IP Address**, enter the IP address of the second DNS server.

12 At **Configure for Mail Server**, do one of the following:

- To disable mail server configuration, select **No**.
- To enable mail server configuration, select **Yes**.

*Mail servers are typically dedicated servers that facilitate forwarding and storage of E-mail messages to valid E-mail accounts. The **Configure for Mail Server** selection enables the N-TFS Server to communicate with a specified mail server for sending AMIS alerts via E-mail.*

13 Optionally, if mail server configuraion is enabled, at **Mail Server IP Address**, enter the IP address of the mail server.

14 At **Configure for Printer**, do one of the following:

- To disable network printer configuration, select **No**.
- To enable network printer configuration, select **Yes**.

*The **Configure for Printer** selection enables use of a network printer by the N-TFS Server.*

15 Optionally, if network printer configuraion is enabled, at **Printer IP Address**, enter the IP address of the network printer server.

16 At **Configure for STT**, do one of the following:

- To disable STT configuration, select **No**.
- To enable STT configuration, select **Yes**.

The Small Tactical Terminal (STT) is a satellite ingest terminal used in a tactical environment to retrieve real-time satellite data. The data can then be fed to the N-TFS Server.

17 Optionally, if STT configuraion is enabled, at **STT IP Address**, enter the IP address of the STT.

18 To query current network settings, select **Query Network Settings**.

19 To apply any changes to the system, select **Apply Network Settings**.

The N-TFS Server must be re-booted to effect these changes.

20 To exit, select **Quit**.

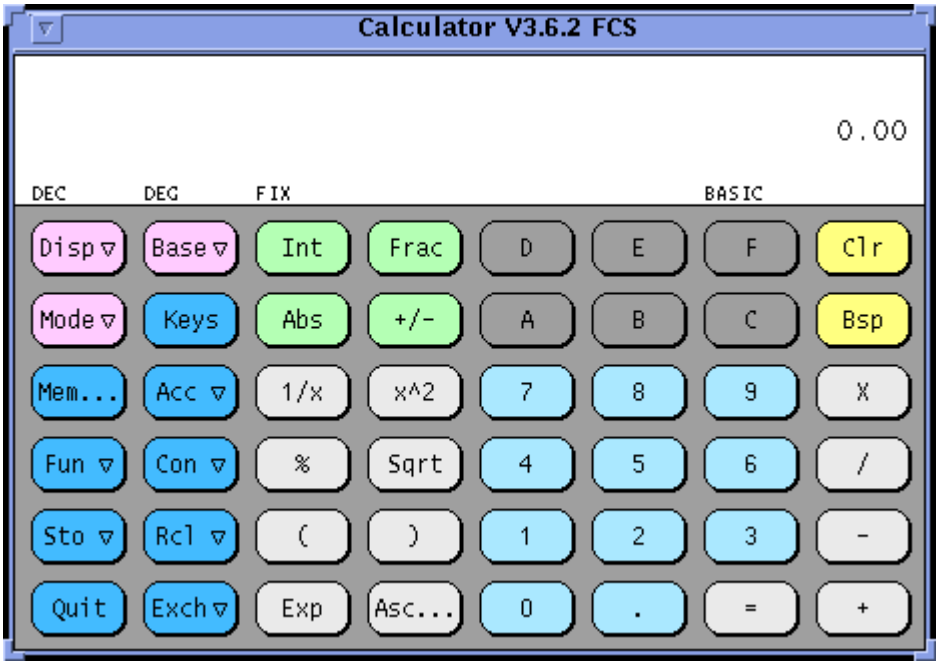
Calculator

To access the calculator function, do the following:

1 At the AMIS Main Workspace menu, select **Programs > Calculator**.

The Calculator screen appears (see Figure 6.149).

Figure 6.149 Calculator Screen



SW Version

The AMIS Software Version function displays version identification information for the C/DM *(cdm)* and N-TFS Server *(eif)* software. When applicable, an additional message indicates when a generic disk was installed.

To access the AMIS Software Version function, do the following:

1 At the AMIS Main Workspace menu, select **Programs > SW Version**.

The following display appears (see Figure 6.150).

Figure 6.150 AMIS Software Version Screen

```
SW Version

Version of cdm
                          ****************************
                          *   AWDS 3.4.0-3 Release   *
                          *   1998/03/31 22:20 UT    *
                          *                          *
                          *      Release: J-27       *
                          ****************************


Version of eif
                        ********************************
                        *          AMIS 3.1.0-2        *
                        *                              *
                        *         Build: E-1           *
                        *          2000/10/12          *
                        ********************************


<Ctrl-C> to exit...
```

To exit the AMIS Software Version display, do the following:

1 Press **Ctrl-C** on the keyboard.

Utilities

The Utilities menu consists of five selections: Refresh, Reset Input, Window Controls, Lock Screen, and Console (see Figure 6.151).

Figure 6.151 Utilities Menu

Refresh

To refresh the screen display, for example if stray UNIX system messages are outside the console window, do the following:

1 At the AMIS Main Workspace menu, select **Utilities** > **Refresh**.

The entire display area is re-displayed.

Reset Input

If a window stops accepting input from the keyboard, do the following:

1 At the AMIS Main Workspace menu, select **Utilities** > **Reset Input**.

The window manager functions are recovered.

2 Optionally, if the above reset actions fails to resolve the problem, completely restart the window manager by doing the following:

- At the AMIS Main Workspace menu, select **Exit**.

  An exit confirmation window appears.

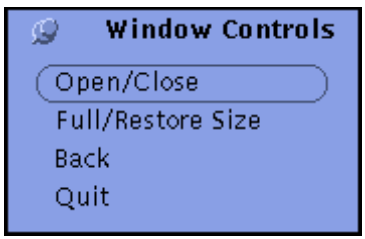
- At the confirmation window, to confirm the window manager exit, press **Exit**.

  The AMIS login screen appears.

Window Controls

The Utilities Window Controls menu enables you to access various standard Windows window controls. The Window Controls menu consists of selections for four common window operations: Open/Close, Full/Restore Size, Back, and Quit (see Figure 6.152).

Figure 6.152 UtilitiesWindow Controls Menu



Lock Screen

To lock the N-TFS Server screen, do the following:

1 At the AMIS Main Workspace menu, select **Utilities** > **Lock Screen**.

Console

To display a system console window, do the following:

1 At the AMIS Main Workspace menu, select **Utilities > Console...**.

A system console window appears (see Figure 6.153).

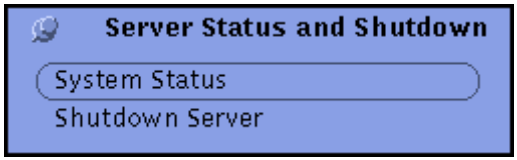
Figure 6.153 System Console Window

```
Console
"package require tls"
    (file "/opt/aw/WWW/lib/sslhttpd.tcl" line 6)
    invoked from within
"source /opt/aw/WWW/lib/sslhttpd.tcl"
    ("package ifneeded" script)
    invoked from within
"package require sslhttpd        "
    (file "/opt/aw/WWW/bin/httpd.tcl" line 90)
```

Shutdown Server

The Shutdown Server menu consists of two selections: System Status and Shutdown Server (see Figure 6.154).

Figure 6.154 Shutdown Server Menu



System Status

To access the System Status function of the Shutdown Server menu, do the following:

1 At the AMIS Main Workspace menu, select **Shutdown Server > System Status**.

The AMIS Process Status screen displays (see "AMIS Process Status Screen" on page 6-225).

For information about the AMIS Process Status screen, see "System Status" on page 6-224.

Shutdown Server

To shutdown the N-TFS Server, do the following:

CAUTION *The N-TFS Server should be shut down only by the System Manager or by qualified maintenance personnel. Incorrect shutdown can result in destroyed files and an inoperative AMIS.*

1 At the AMIS Main Workspace menu, select **Shutdown Server > Shutdown Server**.

A message is displayed indicating that the server is shutting down.

2 After a short time, the OpenWindows environment exits and messages similar to the following are displayed:

```
....syncing file systems....
Program Terminated....
OK ■
```

It takes about two minutes to reach the boot prompt (OK ■).

3 Complete the shutdown by turning power switches **OFF** on the monitor, computer, and external hard disk drive.

Exit

To exit the window manager, do the following:

1 At the AMIS Main Workspace menu, select **Exit**.

An exit confirmation window appears.

2 To confirm the window manager exit, at the exit confirmation window, press **Exit**.

The AMIS login screen appears.

Legacy Operations

The Communications/Data Management (C/DM) and Flight Control Facilities (FCF) Air Traffic Control (ATC) and Flight Operations (FO) workstations are legacy AWDS hardware and software (AWDS 3.4.0).

C/DM

The legacy C/DM routes incoming Air Force Weather Agency (AFWA) weather products and incoming and outgoing Automated Weather Network (AWN) weather products to the N-TFS Server where the product database resides. Additionally, the C/DM routes products to the FCF workstations via long haul and short haul modems.

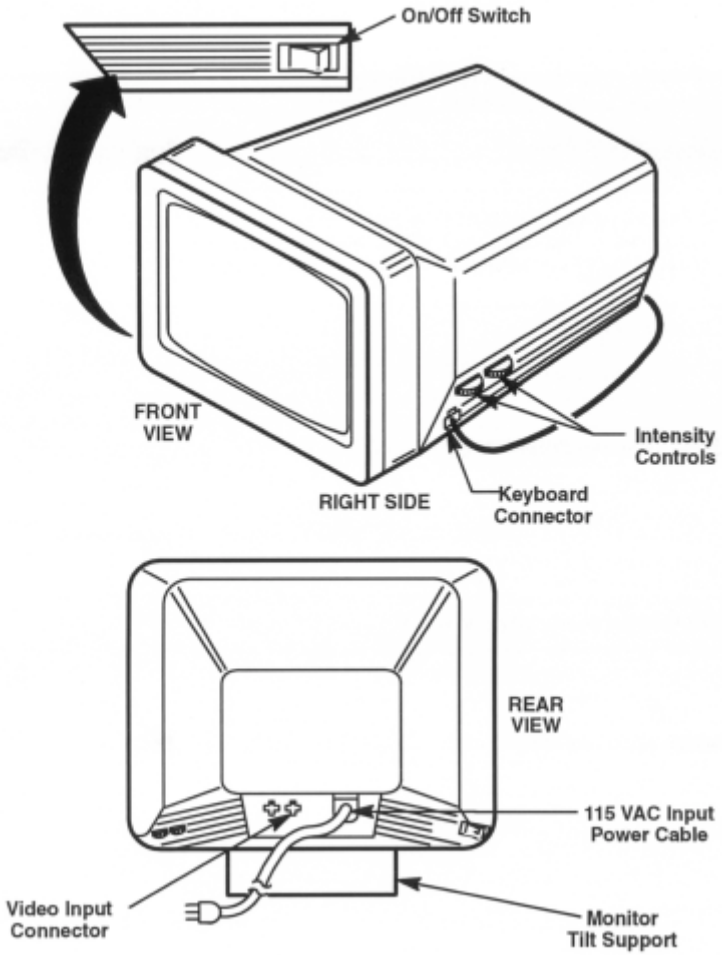
C/DM Normal Startup

For a normal startup of the legacy C/DM, do the following:

1 Turn the C/DM monitor to **ON** position by doing one of the following:

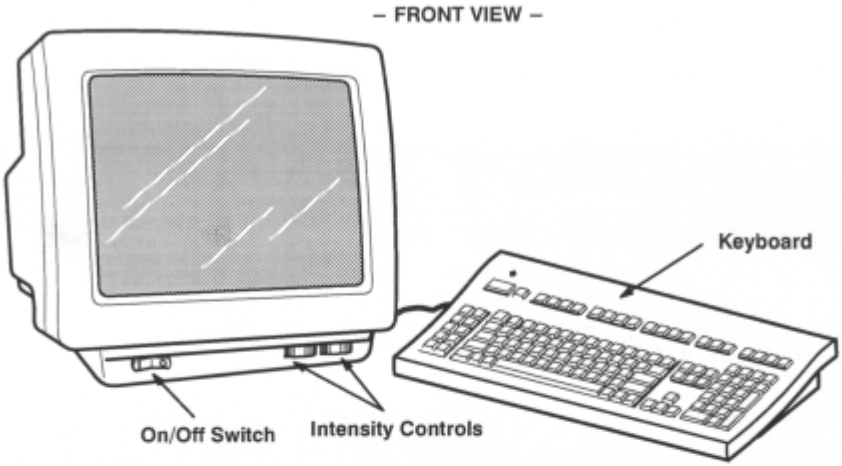
- If your C/DM monitor is a VT320, locate power switch as shown in Figure 6.155.

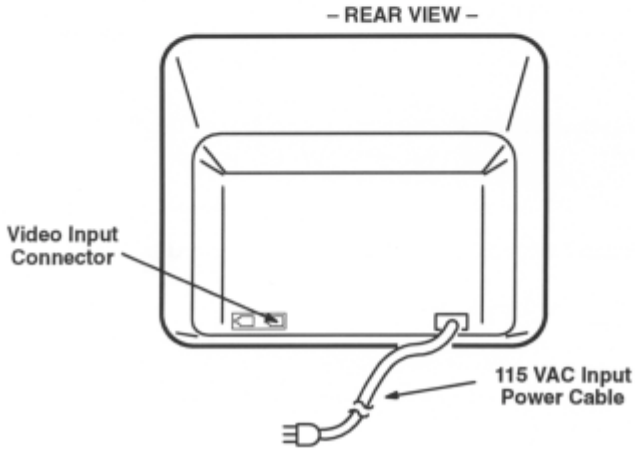
Figure 6.155 C/DM Monitor, Model VT320



- If your C/DM monitor is a VT420, locate power switch as shown in Figure 6.156.

Figure 6.156 C/DM Monitor, Model VT420





2 Turn Uninterruptible Power Supply (UPS) power switch to **ON** position (see Figure 6.157).

Figure 6.157 UPS, 110 Volt (one per system)

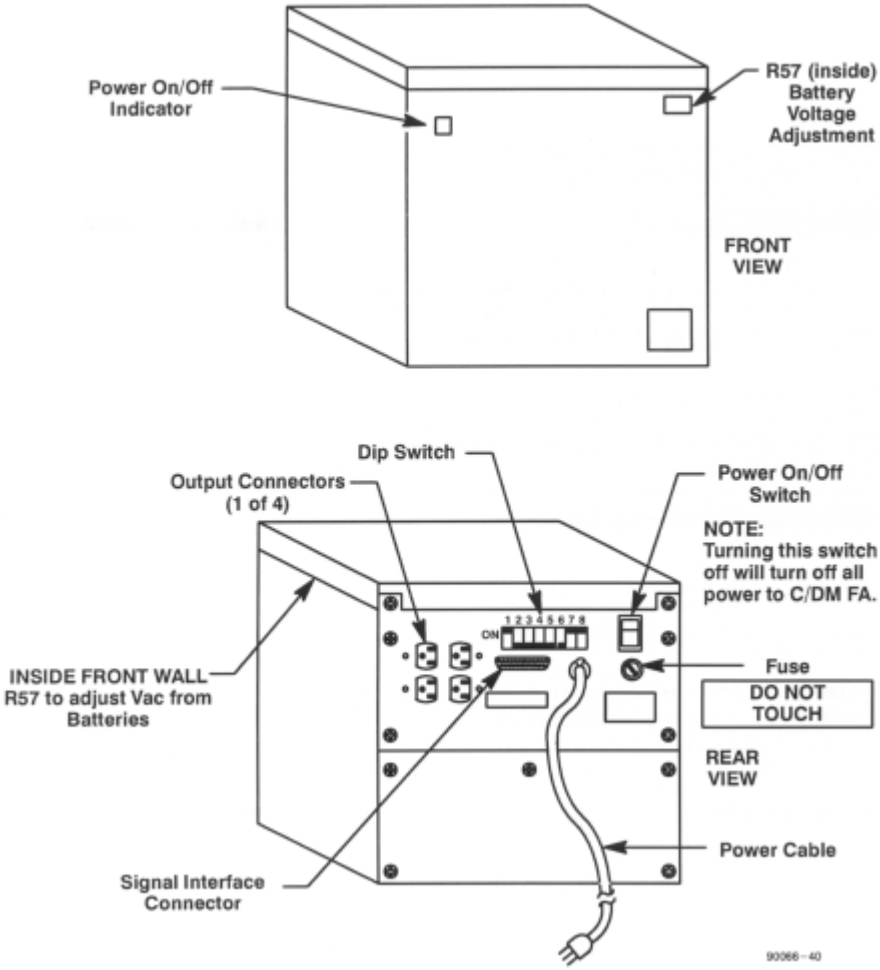
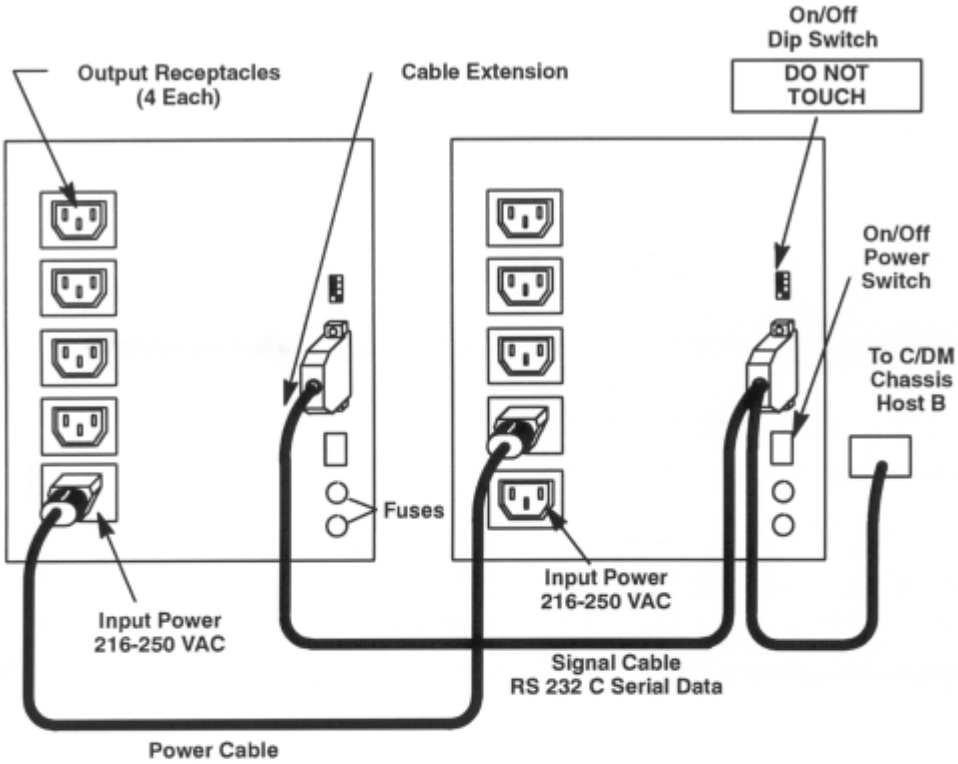


Figure 6.158 UPS, 220 Volt (three per system which includes one for the N-TFS Server)



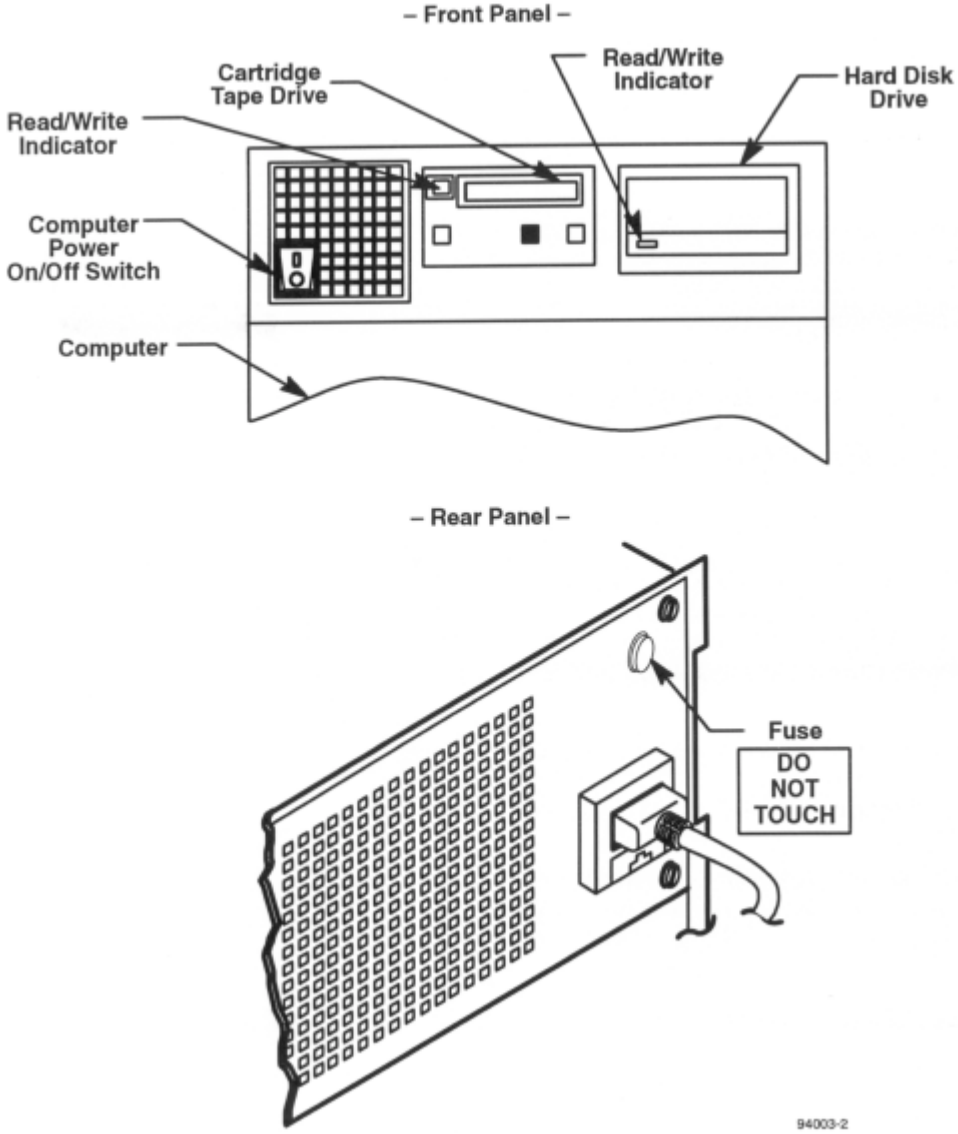
DIP Switch Functions:

Factory Default Switch Settings: 2, 3, 4 = On (Left); 1 = Off (Right		
Switch #	ON/OFF	Function
4†	ON OFF	IPS/A.I. Expects to Receive RS-232C Serial Data on J2 PIN 6 IPS/A.I. Expects to Receive Inverter Shutdown Command on J2 PIN 10
3†	ON OFF	AC Fail Relay is Normally Open. Closes to Indicate Utility Power Loss AC Fail Relay is Normally Closed. Opens to Indicate Utility Power Loss.
2	ON* OFF	IPS/A.I. Accepts RS-232C Serial Data on J2 PIN 6 IPS/A.I. Ignores J2 PIN 6
1	ON* OFF	IPS/A.I. Accepts Inverter Shutdown Command on J2 PIN 10 IPS/A.I. Ignores J2 PIN 10
* DO NOT TURN ON BOTH SWITCHES 1 and 2 † SWITCHES ARE READ ONLY WHEN IPS/A.I. IS FIRST TURNED ON		

3 Turn C/DM computer power switch to **ON** position (see Figure 6.159).

The system automatically boots and starts the legacy AWDS software. The process will end with a login prompt. No login is necessary. The C/DM is now operationally ready.

Figure 6.159 C/DM Computer Status Panel



Abnormal Boot

If the system fails to perform a file system check, it will stop the boot process and display several lines of status messages following the # prompt. The status messages advises you to perform a file system check (*fsck*). If this is the case, the last part of the messages will contain the following:

```
Reboot failed...help!
```

For this case, do the following:

1 At the C/DM keyboard, enter **fsck -y**, followed by the **Enter** or **Return** key.

The system continues the boot process, displaying messages reflecting file system checking. Observe the messages being displayed during the check.

CAUTION *If more than 20 questions are asked by **fsck**, the file structure is seriously corrupted. **STOP**. Immediately notify your maintenance technician or System Manager.*

When the file system check completes successfully, the # prompt is again displayed.

2 At the C/DM keyboard, enter **reboot**, followed by the **Enter** or **Return** key.

If the files system has been repaired, the system boot will continue to the login prompt. No login is necessary. The C/DM is now operationally ready.

CAUTION *If the reboot fails a second time, repeat steps 1 and 2 one additional time.*

CAUTION *If the reboot fails a third time, the file structure is seriously corrupted. **STOP.** Immediately notify your maintenance technician or System Manager.*

C/DM Shutdown

In normal operations, the C/DM is left running in its operationally ready state.

The C/DM should be shut down only by a qualified maintenance technician or System Manager.

Incorrect shutdown can result in destroyed files and an inoperative AMIS.

To shutdown the C/DM, do the following:

1 At the C/DM login prompt, enter **shutdown**, followed by the **Enter** or **Return** key.

The system will immediately begin displaying messages similar to the following:

```
Last login: Thur Jun 08 12:45:49 on console
SunOS Release 4.1.3 #164:Mon Aug 20 14:19:17 PDT 1993

stopping psr
Msg to<PSR>:
   T=S
stopping psc
Msg to<CTL-->:
   T=z
checking for active nctl_svc
checking for active mex
killing adcio.........
shutdown at 08:23 (in 0 minutes) [PID 2778]

CDM login:
                    System shutdown time has arrived

Jun 18 08:23:06 CDM shutdown: halt by shutdown

Jun 18 08:23:08 CDM syslogd: going down on signal 15
CDM login:      syncing file systems... done
Halted

>
```

2 Complete the shutdown by turning power switches **OFF** on the C/DM computer and monitor.

FCF/ATC

The FCF/ATC is an alphanumerics workstation that provides current weather information for the local and five other pre-selected alternate airfields to air traffic controllers.

Startup

The FCF/ATC is started up with the FCF/ATC diskette. This diskette contains all startup routines, menus, and tools need for operating the ATC.

To startup the ATC, do the following:

1 Turn monitor **ON**.

Depending on the ATC configuration at your site, the monitor may be up to 100 feet from the base unit and possibly on another level of the ATC tower. Under such circumstances, the startup procedure may be expedited by the use of two people, one at the monitor and the other at the base unit.

2 Check that diskette is in base unit disk drive.

3 Turn base unit power **ON**.

Startup is completed in about six minutes.

Recovery

To restart the ATC after a failure, do the following:

1 At the base unit, turn power **OFF** and then **ON**.

ATC should re-boot. If ATC fails to re-boot, notify the AMIS System Manager.

Shutdown

Shutdown of the ATC is done from the keypad. Under normal operating conditions, the ATC is not shutdown.

To shutdown the ATC do the following:

1 With the Product Display screen displayed, press the keypad **Esc** key.

"Are you sure you want to shutdown the ATC ?" appears.

*Note that shutdown **must** be done from the Product Display screen.*

2 Press the keypad down arrow to select **HALT SYSTEM**.

*To subsequently select **ABORT HALT**, press the keypad up arrow.*

3 Press keypad **Esc**.

*ATC shuts down. **STATION SHUTDOWN** appears.*

Note that ATC can not be re-booted from the keypad.

4 At monitor, turn power **OFF**.

5 At base unit, turn power **OFF**.

Leave diskette in base unit, unless it is to be replaced by another diskette.

NOTE *If the power is not turned off, the ATC re-boots after a timeout. If you receive the message "**SYSTEM TABLES CHANGED. REBOOT TERMINAL TO UPDATE**", press **Esc**. Then wait for the re-boot of the ATC and again perform the shutdown procedure.*

FCF/FO

The FCF/FO is an alphanumerics workstation that provides airfield information for the local and five other pre-selected alternate airfields.

Startup

The FCF/FO is started up with the FCF/FO diskette. This diskette contains all startup routines, menus, and tools need for operating the FO.

To startup the FO, do the following:

1 At the front of monitor, push the power switch **ON**.

A green or yellow LED power indicator comes on.

2 Insert the diskette into the base unit disk drive.

3 Push base unit power switch **ON**.

Green LEDs above the numeric keypad flash.

The FCF/FO boots in about 2.5 minutes. When the boot is completed the main menu appears and the workstation is operationally ready.

Recovery

To restart the FO after a failure, do the following:

1 At the base unit, turn power **OFF** and then **ON**.

FO should re-boot. If FO fails to re-boot, notify the AMIS System Manager.

Shutdown

To shutdown the FO do the following:

1 From the main menu, move the cursor to **Halt system**.

2 Press keyboard **Enter**.

STATION SHUTDOWN *message appears with "**ARE YOU SURE YOU WANT TO SHUTDOWN FOP..?**".*

3 Press the keypad down arrow to move cursor to **HALT SYSTEM**.

*To subsequently select **ABORT HALT**, press the keypad up arrow or **Home**.*

4 To confirm the selection, press the spacebar.

*A check mark appears next to **HALT SYSTEM**.*

5 Press **Enter**.

*FO shuts down. **STATION SHUTDOWN** message appears.*

6 At monitor, turn power **OFF**.

7 At base unit, turn power **OFF**.

Power indicator LEDs turn off.

NOTE *If the power is not turned off, the FO re-boots after a timeout.*
Leave diskette in base unit, unless it is to be replaced by another diskette.

CHAPTER

7

Operational Concepts

Functional Descriptions

AMIS Weather Operations Activities

The AMIS software encompasses a broad spectrum of alphanumeric and graphics software tools to aid in every aspect of the production and manipulation of weather data in everyday operations. The activities performed using these tools consist of analysis, prognosis, performing briefings, creating and disseminating weather products (graphics and alphanumerics), metwatching and monitoring incoming products. Other activities also include verification of products, and periodical statistical analysis of data. The Graphics interfaces provide access to horizontal and vertical graphics products such as streamlines, constant pressure charts, Skew-T/Log-P charts, and many other graphics products. This includes the ability to create and transmit custom graphics products which can also be used in support of operational activities. The alphanumeric applications aid in production and transmission (longline and local) of weather alphanumeric observations, bulletins, and forecast products. Monitoring the receipt of data, metwatching, and accessing the alphanumeric database, are also provided for through the alphanumeric applications.

Alerts

AMIS can identify site-specified alerting information and provide positive indication of such occurrence to operators. When the AMIS determines that newly received information matches established criteria, it generates an alert. You will be given an indication of the occurrence of an alert through an alarm that is generated at your N-TFS Client. The System Manager establishes the criteria for generating an alert, routing the alert, and determining the type of alarm that is generated.

Types of Alarms

Alerts generate two types of alarms. These alarms have visual and audible characteristics that are user specified, allowing you to easily distinguish between the two.

Types of Alerts

Types of alerts include METWATCH alerts, product alerts, and communications alerts.

Communications Alerts

A communications alert indicates that a significant communications-related event has occurred. Specific events that trigger a communication alert are:

- Communications between the C/DM and N-TFS Server have been interrupted.
- The C/DM has failed to successfully transmit an out-bound product.

Local Product Alerts

When locally disseminating a product, the Forecaster or Observer can specify that all N-TFS Clients receiving the product produce either an Urgent or Routine alarm.

METWATCH Alerts

The METWATCH alert tells you whenever significant changes in weather are reported. The METWATCH Alert function checks weather information contained in local observations and FBD from up to 30 site-specified surface stations against several selectable alerting criteria, and generates an alert when matches are made. There are four categories of alerting criteria from

which to establish METWATCH alert criteria. These are Parameter Value Alert, Present Weather Change Alert, Altimeter Setting Change Over Time, and Wind Direction Change with Wind Speed Threshold. For each of the selected surface stations, criteria may be established for any combination of the four categories (including none and all). The selected criteria are maintained in the METWATCH Criteria Table, which is stored on the N-TFS Server. METWATCH alerts will generate a Type 1 alarm by default. The System Manager can change it to a Type 2 alarm.

Product Alerts

A product alert indicates that a specific product has been received at the N-TFS Server from the AWN or AFWA. Products are pre-specified in a product alert list, which is a list of product identifiers. The AMIS tests all incoming external products that are marked for retention. If the incoming product is on the product alert list, an alert will be generated and routed to your N-TFS Client. By default, the alert will cause a Type 1 alarm. However, the System Manager can change the type of alarm to a Type 2. The product alert list is maintained as part of the Product Alert Routing Table.

Product Database Storage

Products can be saved in the database for later interaction. After a product is created or modified, it is released to the database by storing it. Storing is accomplished by labeling (assigning a name) the product. After the operator types in the label, the workstation sends the product to the database to be stored. That product is now permanently stored and can be accessed by any N-TFS Client that has the capability to access it. Products that are locally generated (such as Skew-T/Log-P vertical analysis or streamlines) have the option of being automatically stored in the database when they are generated. Products originally generated by AFWA are never lost. AMIS creates a duplicate copy of the original AFWA data. Regardless of the modifications made to the original, it will be available in the database in its original form (until purged). Modified products are always stored with a label different from the original; only the most recent modification of each product is stored.

Alphanumeric Product Processing

You will prepare all alphanumeric products for longline transmission and/or local dissemination using data entry screens under the A/N Forms menu

pick on the AMIS Launch Pad. These screens are designed to emulate the official forms that are used to record the product. Data entry fields are distributed through one or more data entry screens. Each screen corresponds to a major topic on the official form. As you enter the data into the data entry screen, it is automatically formatted for longline transmission and/or local dissemination if appropriate to the form. You can either view the product in the longline transmission format, where applicable, as you enter the data, or in its local dissemination format, where applicable, after you have completed data entry. When you recall the form for product generation, the data from the last product that was generated will be cleared. You have the option of recalling previously transmitted or saved data or starting from scratch. You can complete the fields in the data entry screens in any order. As you generate the product, you can retrieve and display the previously generated product in the View Screen. *Protected* fields are fields that cannot be modified by the operator; while *restricted* fields are modifiable. When you transmit or disseminate the product, it will automatically be stored in the database.

Data and Product Types

METAR Surface Observation

The METAR Observation data entry screen for the 1996 METAR surface observation code allows you to record, print, and transmit surface observations. Observation types that can be constructed are listed in Table 7.1. METAR observations are transmitted longline and disseminated locally. These observations will be used to fill columns 1 through 21 on the printed surface observation form.

Table 7.1 METAR Surface Observation Types

Observation Type	Local Identifier	Longline Identifier
Record	METAR	METAR
Special	SPECI	SPECI
Local	LOCAL	NOT SENT LL
Local (Aircraft Mishap)	LOCAL-MISHAP	NOT SENT LL

Alert Weather Observation

The alert weather observation product can be generated at the N-TFS Client. The product is the local observation containing wind, temperature, altimeter setting, and PA. The fields are pre-filled using data from the last surface observation transmitted. This speeds data entry since only the fields

that have changed since the last transmitted observation need to be updated.

Terminal Aerodrome Forecast (TAF)

The TAF product generation function allows you to generate a TAF with an initial line followed by up to eleven change groups on the data entry screen. When you send the TAF, it will be disseminated locally and longline.

Flight Weather Briefing

The Flight Weather Briefing product generation function display screen simulates the four sections of Form 175-1. Flight Weather Briefings are only disseminated locally and, unless disseminated, are overwritten and lost when the next Flight Weather Briefing is prepared.

Weather Advisories/Message

The Weather Advisory/Message product generation function allows you to create and disseminate Weather Advisories (WA) and Weather Messages. The WA/Weather Message can be modified to suit local operations. WAs and Weather Messages are only disseminated locally. The fields of the form that can be modified are *Location*, *Criteria*, *Valid-Time*, and *Text*. These fields can be overprinted with site-specific data that appears whenever the form is brought up for product generation.

Weather Watches/Warning

The Weather Watch/Warning display screen allows you to record and transmit Weather Watches/Warnings. The display screen contains two sections. Weather Watches/Warnings are only disseminated locally. The Weather Watch/Warning form can be modified to suit local operations. The fields of the form that can be modified are *Location*, *Criteria*, *Valid-Time*, and *Text*. These fields can be overprinted with site-specific data that appears whenever the form is brought up for product generation.

Radar Report (RAREP)

The RAREP product generation function allows you to record and transmit RAREPs. Three types of RAREPs can be sent: SD, USD, and SIGWX.

Pilot Report (PIREP)

The PIREP display screen allows you to record and transmit PIREPs. Two types of PIREPs can be constructed: UA (normal) and UUA (severe). The screen encodes the formatted local and longline transmission version of the PIREP. You have the option of disseminating each PIREP locally, transmitting it longline, or both.

Aircraft Report (AIREP)

The AIREP product generation function allows you to record and transmit AIREPs. Two types of AIREPs can be sent ARS and ARP.

Pilot Balloon (PIBAL) Observation

The PIBAL display screen allows you to record and transmit PIBALs.

Rawindsonde Observation (RAOB)

The RAOB display screen allows you to record and transmit RAOBs.

Station Statistics

Station Statistics are product counts for the products listed in Table 7.2. You can produce a running total of activities for a specified period, after resetting the totals to zero.

Table 7.2 Products for Station Statistics

Surface Observations
Pilot Reports (PIREPs)
Rawinsonde Observations (RAOBs)
Radar Reports (RAREPs)
Terminal Aerodrome Forecasts (TAFs)
Weather Warning/Watch
Weather Advisories and Messages
Flight Weather Briefings
ARQ Requests

Synoptic Data

The Synoptic Data entry screen allows you to record and save synoptic and summary information data. The information recorded from this data entry screen will be used to fill columns 41 through 90 on the printed surface observation form.

Monthly Summary

Upon operator request, AMIS maintains a running total of monthly summary information (to date) from the daily Observation Summary of the Day data, which are available for:

- Temperature (average daily maximum, average daily minimum, maximum and minimum for the month)
- Precipitation (total amount and cumulative total for the year)
- Wind (speed and direction of the maximum wind).

In addition, at the end of the month, the above items are retained as a monthly summary for up to two months.

Aircraft Accident Investigation (AAI)

Products listed in Table 7.3 are saved to meet the requirements set forth for Aircraft Accident Investigations. You can list, retrieve, write to RMSM, and print these products.

Table 7.3 AAI Record Products

Graphics	
	Analysis (all)
	Forecast (multi-level, 850, 700, 500, 300-200 mb)
	Surface Summaries (all)
	Surface Warnings (all)
	Local (all)
Alphanumerics	
	Weather Advisories/Messages (local)
	Weather Warnings/Watches (local)
	Surface Observations (SA bulletins, local)
	SIGMETs (WS bulletins)
	RAREPs (local, SD bulletins)
	TAFs (local FT bulletins)
	Flight Weather Briefings (local)
	PIREPs and AIREPs (local, UA bulletins)
	RAOBs (local, UJ bulletins)
	Unformatted Messages (local)

Product Retrieval and Display

There are three ways that the database can be queried to retrieve and display alphanumeric products:

- by requesting the local weather data set
- by requesting products for a group of up to ten stations
- by selecting a product by specifying one or more selection criteria. Each method filters the database to quickly locate and retrieve the product that has been requested

Automatic Response to Query (ARQ)

The AMIS automatically formats an ARQ for specified data types (e.g., SA, UA, SD, and FT) when no data for the requested ICAO and data type are available. An ARQ message is also formatted when the file time of available data is older than allowable expiration time values. Operator notification is displayed on the screen to indicate that the missing information has been requested. Upon receipt of an ARQ reply, an alert is generated at the originating N-TFS Client, indicating whether the requested product is available for the specified ICAO designator.

Product Selection by Criteria

You can select products for a single ICAO by specifying the criteria listed in Table 7.4. The value that you enter into a field will create a database filter which narrows the database search. If you elect to leave a criteria field blank, the filter will have the default setting listed in the table. For example, if you enter nothing in any of the fields, then all of the default values will be used as selection criteria. In this case, you will receive all of the current MANOP products. You can select a range of index indicators to indicate that you want a product displayed for multiple times (e.g., the past six surface observations). If you specify a 6-character product identifier, it will override all other field values, including the default values.

Table 7.4 Product Selection Criteria

Criteria	Effect	Default
Product Type	specifies product type	all MANOP products
IACO	specifies a reporting station	all ICAOs
File Time	specifies a product file time	all file times
Valid Time	specifies a product valid time	all valid times
Geographic Designator	specifies a product geographic designator	all areas
Current	specifies a current indicator	all times
Product Identifier	retrieves by ten characters	all products
Manoped Identifier	retrieves by six characters	all products

Product Selection by Station

You can select one of the products listed in Table 7.5 for up to ten stations. Stations can be chosen by ICAO or WMO number as appropriate. When the product requested is not in the database, the system will automatically generate an Automatic Response to Query (ARQ) message for your review and disposition. The TW and TR function allows you to enter TW or TR in the place of a product type. If TW or TR is entered, you will receive all of the products listed in the table for each requested ICAO or WMO number.

Table 7.5 Products Selectable by ICAO or WMO Number

Product Type Identifier	Product Type
SA/SP	All Surface Observations including specials (LL and LCL)
UA	PIREPs (LCL)
SD	Radar Observations (LL and LCL)
FT/FC	Terminal Forecasts (LL and LCL)
TW	Total Weather (SA, SP, FT, FC)
TR	Total Weather plus Radar

Table 7.6 lists automatic ARQ product time expirations. If no reply is received within five minutes, the requesting workstation is alerted.

Table 7.6 Automatic ARQ Product Time Expirations

Data Type	File Time
SA/SP	70 minutes
UA	16 hours
SD	70 minutes
FT/FC	7 hours
TW	as required
TR	as required

Product Selection by LWDS

The local weather data set is a display that includes operationally significant products for your site. The products in the local weather data set are listed in Table 7.7. You may retrieve and display the local weather data set from the retrieval menu.

Table 7.7 Local Weather Data Set

All Special and Local Observations - since most recent Record Observation
Record Observation - most recent displayed in local format

Table 7.7 Local Weather Data Set

TAF - most recent displayed in local format
All Weather Warnings/Watches - current Weather Warnings/Watches in effect
All Weather Advisories/Messages - current Weather Advisories/Messages in effect
All locally disseminated PIREPs - local format
All current AIRADs - local format
Unformatted Messages - most recent displayed in local format

Product Communications

All alphanumeric products are automatically formatted for local dissemination and/or longline transmission. Table 7.8 lists products by their communications format. Alphanumeric products that are requested and not in the database automatically generate an ARQ message.

Table 7.8 Communication Formats of Locally Produced Products

Product Name	Format
Surface Observation	local/longline
PIBAL	longline
RAOB	longline
PIREP	local/longline
AIREP	longline
RAREP	longline
TAF	local/longline
Weather Warning/Watch	local
Weather Advisory/Message	local
Flight Weather Briefing	local
AIRAD	local
ARQ	longline
Unformatted Message	local/longline

Printing a Product

Alphanumeric products may be printed in several ways from the form. Print View produces a hard copy of the currently loaded product in either local or longline format. Complete form mode prints a complete form with all format lines and symbols.

Graphics Products Processing

Graphics products can be displayed, generated, and manipulated at an N-TFS Client. You can retrieve and display products resident in the database and you can generate graphics products from FBD and gridded data fields resident in the database. After the graphics are displayed or generated, you can manipulate them in several ways. You can zoom and roam on them, combine multiple products in one display, display them in timed and arbitrary sequences, and manually edit their content. This section describes what retrieval, generation, and manipulation functions are available to you. A discussion of product data type and features is presented to help you understand what functions you can perform.

Data and Product Types

Graphics displays are created using four types of products that are either received from AFWA, VSAT, or produced locally. These product types are vector graphics, raster scan imagery, FBD, and gridded data fields. Each type is discussed below.

Vector Graphics

Vector graphics are products such as standard weather charts, plots of weather data, topography, and map backgrounds. Vector graphics products are received from AFWA in displayable form. The types of vector graphics products that are displayable at the N-TFS Client are listed in Table 7.9. The meteorological symbols and line types used to display vector graphics are specified in Appendix III. In addition, locally generated graphics are produced by AMIS using FBD and gridded data fields received from AFWA or AWN.

Table 7.9 Types of Vector Graphics Products

Type	Orientation	Source
Map Backgrounds	horizontal	AFWA
Plots	horizontal	AFWA and local
Isopleths	horizontal	AFWA and local
Streamlines	horizontal	AFWA and local
Continuity Work Charts[1]	horizontal	local
Local Backgrounds	horizontal or vertical	local
Skew-T/Log-P and Backgrounds	vertical	local

Table 7.9 Types of Vector Graphics Products

Type	Orientation	Source
Distance vs. Log-P	vertical	local
Time vs. Log-P	vertical	local

1. Continuity Work Charts are blank charts matched to PI sets.

Raster Scan Imagery

There are several types of raster products available, including satellite images and other pixel-based, facsimile-like products. There are two types of AFWA Satellite Global Data Base (SGDB) satellite products available: infrared and visible. The SGDB images are displayed in eight shades of gray. From VSAT, satellite images are available in visible, infrared, microwave and water vapor types. Also available from VSAT are NEXRAD images. These images are displayed in up to 256 colors, including gray-shades, and are mapped into polar stereographic and Mercator projections. Pixel-based products include rasterized facsimile charts similar to vector graphic products.

Formatted Binary Data (FBD)

FBD is composed of surface and upper air observations that have been formatted for rapid processing in the system's software algorithms. FBD differs from the alphanumeric observation products in that all the freely formatted information, such as remarks, has been removed. FBD is used locally to produce plots, isopleths, streamlines, alerts, and any vertical products. AMIS uses FBD to alert operators of special weather conditions at selected reporting stations.

Gridded Data Fields

Gridded data fields are data that have been processed by meteorological algorithms and distributed over an evenly spaced grid. Grids are described in terms of their mesh size. Whole-mesh grids are spaced approximately 380 km apart, while half-mesh, eighth-mesh, and sixty-fourth-mesh grids are approximately 190 km, 48 km, and 6 km apart, respectively. Observations that have been taken at unevenly spaced observation sites are processed and mathematically averaged over the array of grid points. When values are assigned to the grid points, they are called gridded data fields. There are two types of gridded data fields in AMIS: uniform gridded data fields (UGDF) and locally generated gridded (LGG) fields. UGDF are received from AFWA. LGG fields are produced by AMIS from FBD or other grids. Gridded fields

are used to produce plots, isopleths, streamlines, and distance versus log-P cross sections.

Mercator Projections

Mercator projections are centered on the equator and are correct at 22.5 degrees north and south latitude. There are two scales of Mercator projection map backgrounds: regional and tropical continental/ocean. Since all longitude lines are vertical in Mercator projections, these do not have reference longitudes.

PI Set Map Backgrounds

The map backgrounds used with graphics product displays are based on map projection, orientation, and scale. These are identified by backgrounds having numbers ranging from 1 to 255. The specific PI set map backgrounds to be defined are determined by the site System Manager and are stored in the database. In addition to those PI set codes listed in Appendix I, “Projection Indicator (PI) Set Codes”, the operator can coordinate with AFWA to define and obtain a set of Local Area Work Chart (LAWC) or other map backgrounds. Available map projections are either polar stereographic or Mercator.

Polar Stereographic Projections

Polar stereographic projections are correct at 60 degrees north and 60 degrees south latitude. There are four scales of polar stereographic map background: hemisphere, continental/ocean, regional, and regional subwindow. For all scales, polar stereographic projections have orientations with either 80 degrees west, 10 degrees east, 170 degrees west, or 100 degrees east.

Product retrieval and display

You can retrieve and display satellite images, station data parameters, the vector graphics products listed in Table 7.9 and pixel-based products. You can rapidly identify and display an existing product from a database containing thousands of graphics products by using categories that filter (pare down) the database contents into manageable lists. Five filters that you can apply (in any combination) to manage product list size are time, PI set, product type, product identifier, and keywords.

- Time. You can filter products by entering a base date/time group, current indicator, time range, or relative indicator.
- PI Set. You can select one PI set from a list of all PI sets available at your site.
- Product Type. For vector graphics, UGDFs, and pixel-based data, you can select atmospheric levels, atmospheric parameters, and product subtypes. Selections for product subtypes and levels are shown in Table 7.10. For satellite images, you can select parameters and product subtypes.

Table 7.10 Graphics Data Product Types

Atmospheric Level	Product Subtypes
< 200 mb	Analysis
200 - 300 mb	Forecasts
Tropopause	Radar Summary
400 - 500 mb	Workcharts
600 - 700 mb	Graphic Forms
850 mb	Plots
925 mb	METSAT
1000 mb	NEXRAD
Surface	SGDB
Multi-level	

There are several ways that you can retrieve a product by time. The time conventions used are base time, forecast hours, current time, time ranges, and relative time indicator. When applicable, these time conventions are located in product lists.

Base Time

The base time of a product reflects the collection time of the data from which the product is produced. For example, surface record observations have base times of each hour of the day (0000, 0100 ... 2300 UTC). For forecast products, base time refers to the time of the observations that are used to produce them. For example, upper air prognostic products that are produced from model outputs may have base times of 0000 and 1200 UTC.

Forecast Hours

For product retrieval purposes, forecast hours are defined as the number of hours a forecast extends in time. For observations, forecast hours are always zero. In the TIME icon on the control panel and in text-entry windows,

forecast hours are always entered as +GG where GG is number of hours (leading zero is optional).

Current Time

The current indicator allows you to select products relative to the currency of products in the database. A product is defined as current (i.e., **c**) if it is the most recent version of the product. A product is defined as "current-1" (**c-1**) if it is the next most recent, "current-2" (**c-2**) if it is the second most recent, and so on. The earliest relative time permissible is **c-7**. The current time is based on the product database.

Time Ranges

The time range capability allows you to select FBD data for analysis from a range of dates and times (e.g., 28/0015-28/0045).

Product Generation

Two classes of graphics products can be generated by the system in the N-TFS Client graphics environment: horizontal products and vertical products. Horizontal and vertical products are generated from FBD and gridded data fields.

Horizontal Products

Locally generated horizontal products are divided into three broad categories: isopleths, plots, and streamlines. These products are based on the concept of fixed geographical regions and scales (PI sets). You must select a PI set prior to generating a horizontal product. Most of the horizontal products can be generated for several layers of the atmosphere. Consequently, you can choose products to be generated for surface and upper atmospheric levels.

Plot Products

Plot models are the familiar data entries around a station circle or grid point. A variety of plot products can be generated from FBD stations and gridded data fields. There are standard plot models and tailored "select" plot models that provide numerous ways to display the plotted data. Select plot models are made from FBD surface station data and gridded data fields. Plots that are produced locally are selected for a specific time, time range, PI set, pressure level, and atmospheric parameters.

Station Plot Fields. A station plot field is a display of a set of reporting stations on a PI set map background. A plot of atmospheric parameters around a station circle represents each station. When you generate a station plot field, you can choose the plot model and the stations to be displayed, and you can modify the station's atmospheric parameters. Station plot fields are generated from either surface or upper air station FBD.

Plot Models. There are three types of station plot models from which to make a selection: surface standard plot, upper air standard plot, and select plot. Station plot parameters applicable to each type are listed in Table 7.11. Select plot models display from one to nine of those parameters listed in the right-hand column of the table. In addition to the two standard plot models, you can select from up to 27 other select plot models that may be operator defined.

Table 7.11 Station Plot Parameters

Parameter	Surface Standard Plot	Upper Air Standard Plot	Select Plot
Temperature	X	X	X
Dewpoint Temperature	X		X
Dewpoint Depression		X	X
Height above MSL		X	X
Sea Level Pressure	X		X
Barometric Tendency/Char	X		X
Wind Direction	X	X	X
Wind Speed	X	X	X
Cloud Amount Total	X		X
Present Weather	X		X
Visibility	X		X
Past Weather			X
Wind Gust			X
Cloud Height			X
Cloud Type			X
Precipitation			X
Ceiling Height			X
Station Identification			X
Ship Direction			X
Ship Speed			X
Sea Surface Temperature			X
Altimeter Setting			X
Rain			X
Snow			X

Table 7.11 Station Plot Parameters

Parameter	Surface Standard Plot	Upper Air Standard Plot	Select Plot
Cloud Amount			X
Relative Humidity			X
Mixing Ratio			X
Pressure Altitude			X
Density Altitude			X
Equivalent Potential Temperature			X

Station Selection. To generate your station plot field, you can select stations by specifying time, PI set, and atmospheric plot selection criteria. Plot selection criteria are parameter threshold, atmospheric phenomena occurrence, and parameter change.

For threshold criteria, you can select a plot for surface or upper air stations in one of three ways from parameters listed in Table 7.12:

- One parameter passes through a threshold (e.g., temperature falls below 0°C)
- Two parameters pass through thresholds (e.g., stations with ceilings less than 500 feet and visibility less than 1 nautical mile)
- Either of two parameters meets threshold criteria (e.g., stations with ceilings less than 500 feet or visibility less than 1 nautical mile).

Table 7.12 Station Plot Threshold Parameters

Parameter	Surface Stations	Upper Air Stations
Temperature	X	X
Dewpoint Temperature	X	
Dewpoint Depression		X
Barometric Tendency	X	
Wind Direction	X	X
Wind Speed	X	X
Ceiling Height	X	
Visibility	X	

For phenomena criteria, you can select a surface station plot from FBD through a present weather code. Permissible code numbers are 04 through 96 (codes used in METAR). For example, FBD data code 71 is light snow. The range of FBD data codes 68 through 75 includes all forms of continuous snow.

To generate surface and upper air plots for stations whose parameters meet your selected change criteria, you must specify a minimum change value and a beginning and ending file time for the parameters listed in Table 7.13. For example, a temperature increase of 5°C between 1200 and 1300 UTC.

Table 7.13 Station Plot Change Parameters

Parameter	Surface Stations	Upper Air Stations
Temperature	X	X
Dewpoint Temperature	X	
Dewpoint Depression		X
Wind Direction	X	X
Wind Speed	X	X
Ceiling Height	X	
Visibility	X	

Data Override. Data that is input for plot generation may be modified prior to plot generation by selecting the Use Override Data toggle icon. Data override is a temporary condition that does not change the data in the database. Once data is overridden, the display contains a modified version of the plot. You can always return to the original data by selecting the Use Original Data toggle icon.

Non-Standard Data. FBD data that has been manually created can be used by selecting the Use Non-Standard Data toggle icon. Non-Standard data is used when a report is generated that has never existed before (i.e., new stations or times are created, or data is totally removed and replaced with new values). Creating non-standard data does not change the data in the database. You can always return to original FBD by selecting the Use Original Data toggle icon.

Grid Plots. A gridded plot is a display of atmospheric parameters at grid points on a PI set map background. A plot of atmospheric parameters around the point represents each grid point. Gridded plots are generated from either UGDF or LGG fields, and Any, Whole, Half, or 1/8 mesh. When you generate a UGDF plot, you can choose the plot model and/or modify the atmospheric parameter data. You may select from a combination of the wind direction and wind speed and up to five additional parameters chosen from the UGDF mnemonic column of Appendix IV, Table 40-1. For time, you must select either a specific base time, base time + forecast time, or a current indicator.

Horizontal Gridded Fields. Horizontal gridded fields form the basis of many of the products used to produce graphics for analyses and briefings. Using

locally and externally produced grids, you can develop plots, isopleths, and streamlines. It is also possible to combine gridded fields to produce analysis of derived fields and to add and subtract grids (e.g., at different levels or times) to produce values for parameters such as thickness, wind shear, or height-change information. You can also produce gridded fields for local parameters, such as relative humidity, listed in Appendix IV, Table 40-1. LGGs can be generated using either the nearest neighbor or other techniques.

Isopleths

Isopleth products are produced locally from gridded data fields, from FBD or UGDF data from AFWA, or from FBD. When generating an isopleth, you select the PI set map background and time. Default isopleth base values and increments, as initialized at system delivery, are listed in Table 7.14. Isopleths are generated by either the Quick Method or Barnes Analysis Scheme.

Table 7.14 Default Isopleth Base Values and Increments

Parameter Value Value (+/-)	Atmospheric Level (mb)	Base Isopleth	Isopleth Increment
Height	1000	0 decameter	6 decameters
Height	925	75 decameters	6 decameters
Height	850	150 decameters	6 decameters
Height	700	300 decameters	6 decameters
Height	500	558 decameters	6 decameters
Height	400	720 decameters	6 decameters
Height	300	912 decameters	12 decameters
Height	250	1032 decameters	12 decameters
Height	200	1176 decameters	12 decameters
Height	150	1368 decameters	6 decameters
Height	100	1620 decameters	6 decameters
Height	50	2052 decameters	6 decameters
Height	30	2388 decameters	6 decameters
Height	10	3108 decameters	6 decameters
Pressure	Surface	1000 mb	4 mb
Pressure Tendency	Surface	0 mb	0.5 mb
Dewpoint Temperature	Surface	0 Celsius	5 Celsius
Wind Speed	All levels	0 knot	10 knots
Temperature	All levels	0 Celsius	5 Celsius
Dewpoint Depression	All levels	3 Celsius	auto

Streamlines

This horizontal product is produced locally from gridded data fields of u and v wind components. The gridded data used as input to a streamline can be UGDF from AFWA, or LGG fields of u and v wind components from FBD observation data. When requesting a streamline product, you must specify an area (PI set) and a time. For time, you can select either a specific valid time, or the current indicator which will allow the specification of the current time, i.e., current -1, ... , current -7. If the streamlined product is produced directly from FBD data, the term current will apply to the most current time when the data from 200 surface stations or 40 upper air stations have been received. For streamline products produced from UGDF data, the term current is not dependent upon the amount of data received, but instead refers to the most recently available product base time.

Continuity Work Charts

You can create a continuity work chart by selecting a blank background and adding features in an edit session.

Differential Products

Two products may be added or subtracted to produce a new product. The two products may have the same valid time, producing a chart of differences between two parameters or one parameter at two levels. The two products may also be of different valid times, producing a chart of parameter change with respect to time.

Advection Products

A parameter (excluding wind parameters) may be advected over a selected time period. Advection is performed using the wind field valid at the start of the advection and assumes no change to the wind field during the period of advection.

Gradient

The gradient is the Laplacian of any continuous scalar field (the acceleration).

Vertical Analysis Products

There are three types of vertical analysis products: Skew-T/Log-P, Distance vs. Log-P, and Time vs. Log-P. The Skew-T/Log-P and Time vs. Log-P products are generated for a single station, while the Distance vs. Log-P

product is derived from the soundings of up to seven separate Rawinsonde stations or from UGDF data.

Skew-T/Log-P

You can generate a standard Skew-T/Log-P display and a severe weather Skew-T/Log-P display by specifying a station, a time, and options for the display. These products contain color-coded background and analysis displays. AMIS Skew-T/Log-P algorithms calculate, display, and threshold color the parameters listed in Table 7.15. You may override the FBD, which allows you to either modify a parameter or ignore it. Once this has been done, the display is plotted from the modified version of the data. Additionally, AMIS will recompute all calculated indexes and parameters based on your modifications to the temperature/dew point temperature curves and/or the wind barbs.

Table 7.15 Skew-T/Log-P Indexes and Parameters

Index/Level	Unit
Showalter Index	not applicable
Lifted Index	not applicable
K-Index	not applicable
Vertical Totals Index	not applicable
Cross Totals Index	not applicable
Total Totals Index	not applicable
Lifting Condensation Level	millibars and feet or meters
Convection Condensation Level	millibars and feet or meters
Level of Free Convection	millibars and feet or meters
Thompson Index	not applicable
Climb Winds	degrees and knots
Maximum Wind Level	decameters
Freezing Levels	feet or meters
Icing Layers	feet or meters
Wind Shear Layers	feet or meters
Inversion Layers	feet or meters
Cloud Layers	feet or meters
Thickness Layers	feet or meters
Modified Lifted Index	not applicable
KO-Index	not applicable
Sweat Index	not applicable
Bulk Richardson Number	not applicable
Wet-Bulb-Zero Height	feet or meters

Table 7.15 Skew-T/Log-P Indexes and Parameters

Index/Level	Unit
Convective Temperature	Celsius
Maximum Convective Wind Gusts	knots
Maximum Hail Size	inches
Tropopause Height	millibars
Precipitable Water	inches
Equilibrium Level	feet and meters
Alternate Severe Weather Variables	variable
Positive Buoyant Energy	not applicable

Distance vs. Log-P Cross Sections

Distance vs. Log-P cross sections are produced from FBD observations and UGDF data. A list of analyzed parameters and plotted data, and the units for which they are presented, is given in Table 7.16. If you request a Distance vs. Log-P to be generated from FBD, you must select up to seven reporting stations that will form the data set from which the cross section will be derived. If UGDF data is used, you must locate the start and end points and up to seven intermediate points graphically by picking points on the displayed map background.

Table 7.16 Cross Section Types

Parameters	Default Units
Temperature	degrees Centigrade
Potential Temperature	degrees Kelvin
Equivalent Potential Temperature	degrees Kelvin
Dewpoint Depression	degrees Centigrade
D-Values	feet
Vertical Wind Shear	meters per second
Relative Humidity	percent
Mixing Ratio	gm/kg
Wind Speed	knots

Time vs. Log-P Cross Sections

Time vs. Log-P cross sections are produced from FBD observations. A list of analyzed parameters and plotted data, and the units for which they are presented, is given in Table 7.16. You can request a Time vs. Log-P for the current Rawinsonde and up to three previous soundings for any single FBD station.

Compositing

When you combine several different components into one graphics product, it is called a composite. Components are graphics products that are received from AFWA or generated locally (such as a streamline generated from UGDF or a Skew-T/Log-P generated from FBD). Panels A through C show each of the three components; Panel D combines the components. Panel A is a map background (PI Set 040). Panel B is an isopleth product from AFWA. Panel C is an upper level wind plot product from AFWA. After being stored in the database, the composite can be recalled, in its composite form, for display later or at a different N-TFS Client. Composites can consist of one background (vertical analysis or map background), and multiple other graphics components. You cannot combine horizontal and vertical components into one composite.

Creating a Composite

A new composite can be created from stored products or an existing composite. The first step in creating a composite is to load a background product (map background or vertical analysis) through the appropriate action icon on the graphics control panel. With the background displayed, you can then load additional products. Products can be retrieved from the database or generated from compatible raw data (either horizontal or vertical, but not a combination). You are restricted only by the maximum limits of the composite, i.e., one map background, and eleven compatible products. Any component location can be modified to fit the needs of the new composite through procedures described next in “Editing Composite Components”. To build a new composite from an existing one, load a composite from a SELECT PRODUCT list of composites, then add or delete components as described in “Editing Composite Components”.

Editing Composite Components

You can edit components in a composite or the composite itself by deleting, adding, or modifying individual components. When modifying a composite, you can make components visible and invisible, highlight them, or change their color. You can edit the display features (e.g., lines, meteorological symbology, text) of each component. You can retrieve an existing composite, modify its appearance (including editing individual components), and store the modified composite under a new label. Changing the name maintains the original composite in the database as well as the version modified during the edit session. Refer below to “Graphics

Product Editing Function" for additional information on component and composite graphics editors.

Sequencing and Looping Features

You can *loop* your separate composite products via the slide show feature, or *animate* specific composites by specifying multi-time attributes for the individual products in a composite. The overall Composite list ordering can be administered using the Edit Composite list feature. Once the sequencing is setup to your liking, the speed of animation and loops, cyclic animate (looping foreword then back), and any dwell period (pause at the end), can be selected using the Animation pull-down menu. The actual stop and start of animation/looping is controlled using the VCR buttons for each feature on the toolbar. The Animate toolbar is located below the Animate pull-down, and includes stop, start, pause, and manual stepping buttons used to animate individual composite products with multi-time attributes. This feature also includes a slider bar to quickly move the animation forward or back to a particular point quickly. The Composite/Loop buttons are located below the top-level next to the composite selectors (labelled Cps/Loop), and include the ability to stop, start, or pause a loop of composite products. The user can also select a specific composite loop slot by selecting it from the numbered composite buttons located next to the Cps/Loop slideshow buttons (toolbar must be displayed). Products can be updated while animations occur when the user selects auto-update in the update pull-down, but this only works on individual composite products while the Slide-show is not looping. Manual updates can be forced on any displayed composite, again only when products are not looping. The check interval for auto-updating can also be set through the update feature.

Zoom and Roam

You can magnify the display of a graphics product using the zoom function. The roam function allows you to move around and display different portions of a zoomed graphics product. You can roam a full-screen display at zoom levels 1.414 and above.

Zoom Levels (Levels of Magnification)

When using the zoom feature, the selectable levels of magnification (zoom level) range from 1 to 64. Zoom level 1 is the original image and has no magnification. At zoom levels 2 and above, the objects in the image are magnified. Hence, raster objects such as clouds increase in relative size on

the screen quite quickly as you zoom in. You may choose a zoom level from the zoom-in icon.

Zoom Levels on Plots

The number of surface and upper air stations (FBD and UGDF) to be displayed can be increased or decreased through zoom levels. Zoom levels are set for each station. The System Manager sets the default zoom level for a station. A station can be assigned a do-not-display category by giving it a zoom level of 99. Through the editor, you can override the default density of stations when using FBD, increasing or decreasing the assigned level(s).

Graphics Product Editing Function

You can modify the appearance of a product, its position in a sequence of products, or the raw data from which it was created through procedures generally called graphics editing. You can edit any products that you can display while you are creating them or after they have been stored in the database. Table 7.17 lists the edit functions that you can perform on the named display features. These include filling areas defined by lines, adding and deleting labels and isopleths, modifying meteorological symbols and characters, and manipulating Skew-T/Log-P backgrounds and plots to provide more meaningful displays. The tools provided allow you to tailor graphics products to meet various requirements and to establish presentation formats that emphasize features of importance to the user.

Table 7.17 Product Edit Functions

Parameter	Modify	Add	Delete	Relocate	Highlight	Fill
Areas Defined by Lines						X
Center Labels and Values	X	X	X			
Isopleth/Contour	X	X	X	X	X	
Map Background	X				X	
MET Symbols/Characters	X	X	X	X		
Product Titles		X	X	X	X	
Skew-T/Log-P Profiles	X	X	X	X		
Station Plots			X	X	X	
Text Strings	X	X	X	X	X	
Wind Barbs	X	X	X	X		
Lines	X	X	X	X	X	
Image Pixel Values					X	

Editing a Component

The graphics editor allows you to create or modify screen information, change the product identifier (PID) of the current component under system control, and save your current edits temporarily on local disk. Since all data and components are stored and located according to their PIDs, changing a component name under system control ensures that the component name is changed according to a consistent file naming convention.

- Selecting an Area to Edit. To use the graphics editor, select either a feature to edit (text, line, symbol, or wind barb) or a blank area of the screen. If you locate the cursor on an existing line, symbol, text area, or wind barb, left mouse click the feature you have just selected and bring up the appropriate pop-up menu panel for editing when you right click on the mouse.
- Editing an Item. When a graphics feature (text, line, symbol, or wind barb) is selected with the cursor, the graphics editor automatically recognizes and highlights that feature, then right click for a pop-up menu. The pop-up menu displays a list of editing choices. For example, if you choose to edit a line of existing text, you have the options to change the text itself, delete it, move it to a new location, or change its characteristics (color, size, and background). Appropriate pop-up menus are displayed to move, change, and delete lines, symbols, and wind barbs.
- Saving Edits to a Component. Whenever you exit the graphics editor, you can either save or discard the changes you have made during the current editing session. Discarding your changes immediately restores the displayed product to its state when you entered the editor. Saving your product stores it in the database.

Editing Raw Data

You can display and edit raw FBD (upper air and surface) data. If you save edited data, the system modifies the file name (lower case letter(s) for source) so that you know that original data has been changed. Original raw data is never overwritten. Only one version of an edited file, however, is stored in the database. Further changes to modified data overwrite the previous version.

- Selecting FBD to Edit. You can select horizontal and vertical data for display and editing by pressure level, station ICAOs, and time; or combinations of the two. After selecting a pressure level, you filter the data further, if you want to, by station ICAO and time. When you filter raw data by station ICAO(s), up to seven stations, separated by commas, can be specified. Omitted trailing characters in station names act as wildcard filters (for example, **kd** calls up data for all ICAOs beginning

with **KD**). If the station list is blank, the system shows all entries at a selected pressure. You can filter by base time, or current indicator. If the time filter is blank, the system shows all entries for the selected pressure and station list (if specified).

- Modifying Raw Data. For FBD, you can also derive local parameters. To change an FBD data value (or generate a derived parameter for FBD), select the data field that needs to be modified, enter the new value from the keyboard, and press **<RETURN>**. The data value appears on the display and the new derived parameter (if applicable) appears in the appropriate Derived Parameter display icon.
- Graphical Modification of UGDF/LGG Data. UGDF or LGG grids can be modified by loading the product on the display screen and using the graphical editor to selectively change either an individual grid point or an entire region of grid points. You can add, subtract, multiply, or divide a grid point or region, or set a constant value.
- Saving Edits to Raw Data. After raw data has been modified, you have the option to save or discard the changes you have made. If you choose to save modified data, the AMIS makes a copy of the product raw data and changes the source field in the PID of the modified data to lower-case. In this way original product data is never lost. The AMIS keeps a maximum of one copy of modified data. If the modified product data is changed again, the previous copy of modified product data is discarded and only the later modification is stored in the database.

Printing a Graphics Display

To print a graphics display after the desired options are set requires only selecting PRINT on the control panel. When the screen image has been taken, the graphics image is routed to the graphics printer.