

Test Case Spatial Editor Legends

for the

AWIPS

Contract

DG133W-05-CQ-1067

Prepared for:

U.S. Department of Commerce
NOAA/NWS Acquisition Management Division
SSMC2, Room 11220
1325 East-West Highway
Silver Spring, MD 20910

Prepared by:

Raytheon Company
STC Office
6825 Pine Street
Omaha, NE 68106

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Submitted By:

Test Engineer

Date

Approved By:

Program Manager

Date

Mission Assurance Quality

Date

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Revision History

Revision	Date	Affected Pages	Explanation of Change
1.0	27 June 2008	ALL	Initial Draft
2.0	8 August 2008	iii, 8-11, 13, 14	Redlines per PDT
3.0	4 September 2008	ALL	Redlines per DT

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1.0 SCOPE

See Software Test Plan.

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2.0 APPLICABLE DOCUMENTS

2.1 Source Documents

- None

2.2 Reference Documents

- Legacy NWS GFE Acceptance Test Case ID Number: ac004
- Legacy NWS GFE Test Cases for Test Areas AC – VP
- Section 3.1.3 of the AWIPS D-2D User's Manual Build 8.1
- Software Test Plan for the Advanced Weather Information Processing System Project, Contract #DG133W-05-CQ-1067, August 2008
- The Silver Spring NWS AWIPS 1 test bed application
- Release OB8.1 and OB8.2 of the Weather Event Simulator (WES)
- Rational RequisitePro

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3.0 TEST CASE DESCRIPTION

This test case exercises and demonstrates the capabilities of the Spatial Editor Legends.

3.1 Assumptions, Constraints and Preconditions

- Several weather elements are loaded
- There are multiple grids available for the weather elements (at minimum T, Td, Wind, Wx, and Hazards weather elements)
- TO9 software has been installed successfully
- CAVE, EDEX and pgAdmin III are running
- Data has been ingested
- The GFE Perspective is displayed
- Actions, Results, and Requirements highlighted in yellow indicate requirements and/or capabilities to be included in the scope of future task orders. They are included here for purposes of continuity and traceability with the original AWIPS I test case documents. Items highlighted in blue are capabilities added and/or Deficiency Reports (DRs) corrected since the Delivery Test.

3.2 Recommended Hardware

See Software Test Plan.

3.3 Test Inputs

Section 4.0 below contains the test procedures for this test case. Sections 2.2 – 2.9 of the Software Test Plan contain general test inputs applicable to all TO9 test cases.

3.4 Test Outputs

The GFE Spatial Editor will be displayed and the results outlined in section 4.0 are met. The GFE GUIs to be tested include:

- Set Color Table Brightness for <the selected weather element>
- Color Table Editor
- Save Color Table
- Delete Color Table
- Item Delete
- Color Chooser
- Contour Interval for T SFC Fcst (<WFO>)
- Grid Information

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- Weather Element Browser
- Display Attributes Dialog

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4.0 TEST SCENARIO

Step	Action	Result	Pass/Fail
1.	MB1 click on a grid in the Grid Manager.	The grid is displayed in the Spatial Editor as an image, the Spatial Editor legend indicates the entry is active and editable as a white legend with an '(edit)' indicator. The grid in the Grid Manager becomes yellow.	
2.	MB1 click on the Spatial Editor legend that indicates it is displayed.	The legend dims indicating that the grid is no longer visible, and the Spatial Editor no longer shows the grid. The grid in the Grid Manager becomes gray (outlined in yellow).	DR #1315
3.	MB1 click on the same Spatial Editor legend.	The legend becomes "white" indicating that the grid is displayed as an image, and the grid is displayed in the Spatial Editor. The grid in the Grid Manager becomes yellow.	
4.	MB2 click on the same Spatial Editor legend.	The '(edit)' indicator is turned off. The grid is uneditable.	
5.	MB2 click on the same Spatial Editor legend.	The '(edit)' indicator is turned back on. The grid becomes editable.	
6.	From the same Spatial Editor legend, MB3 popup and select 'Change Colormap...'. From the Colormap dialog, select a colormap.	The Colormap dialog opens. Both the image and color bar change to a new color table enhancement.	
7.	From the same Spatial Editor legend, MB3 popup and select 'Change Colormap'. Then close the Colormap dialog.	The Colormap dialog opens. Note that the Colormap window indicates that the current color table is the one you set in step #6 (highlighted).	

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Step	Action	Result	Pass/Fail
8.	<p>MB3 popup on the same Spatial Editor legend and select 'Activate Resource'. Then, while holding the Shift key, scroll MB2 wheel backward and forward to adjust the Brightness.</p> <p>From the cascade menu, select 'More' -> 'Brightness...'. From the displayed Set Colormap Brightness for <the selected weather element> dialog, change the position of the slider.</p>	The brightness of the image changes within the Spatial Editor.	DR #1358
9.	<p>Dismiss the Set Color Table Brightness for <the selected weather element> dialog.</p> <p>From the same Spatial Editor legend, MB3 popup and select 'Edit Colors...'. </p>	The Color Table Editor dialog displays.	
10.	Try different controls within the Color Table Editor dialog, such as Fill, and change the color enhancement.	The changes are applied to the image and the color bar.	
11.	MB1 click 'Save As...' in the Color Table Editor. In the Save Color Table dialog, enter 'TESTGFE1' in the Save Color Table dialog and click MB1 on 'OK'. Then dismiss the Color Table Editor dialog.	The Save Color Table dialog opens. The edits to the color bar are saved. The Save Color Table and Color Table Editor dialogs close.	
12.	From the same Spatial Editor legend in step #8, MB3 popup and select 'Change Colormap'. Then select another colormap. Then from the same Spatial Editor legend, MB3 popup and select 'Change Colormap' -> 'TESTGFE1'. MB1 click 'OK'.	The color table changes to the specified color table, then back to the one that was edited and saved. The Colormap dialog closes.	
13.	MB3 popup over the same product legend and select 'Edit Colors'. From the Color Table Editor dialog, select 'Delete'. From the Confirm Delete Color Table dialog, MB1 click the 'OK' button.	The Color Table Editor dialog opens. The displayed image in the Spatial Editor changes back to the original Linear color table. The Confirm Delete Color Table dialog closes.	
14.	Dismiss the Color Table Editor dialog.	The Color Table Editor dialog closes.	

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Step	Action	Result	Pass/Fail
15.	MB3 popup and select 'Change Colormap'. Verify the 'TESTGFE1' colormap is not available in the Colormap dialog.	The Colormap dialog opens. 'TESTGFE1' is not within the list of colormaps.	
16.	From the same Spatial Editor legend in step #8, MB3 popup and select 'Display as Graphic'.	The image is replaced with the graphic (contoured) representation.	
17.	From the same Spatial Editor legend, MB3 popup and select 'Change Color' and select a new color. Note: In the color dropdown, the color used to initially display the graphic indicates it is 'SELECTED'.	The legend and the graphic changes to the selected color. The dropdown color menu closes.	DR #1359 DR #1360
18.	From the same Spatial Editor legend, MB3 popup and select 'Change Color -> Choose Color'. The Color Chooser dialog displays. Change the color and MB1 click 'OK'.	The legend and the graphic changes to the selected color. The Color Chooser dialog closes.	
19.	MB1 click on a T grid in the Grid Manager. Then over its corresponding spatial legend, MB3 popup and select 'Display as Graphic'.	The T grid is shown as contours.	
20.	From the same Spatial Editor legend, MB3 popup and select 'Line Width' -> <your choice>.	The graphic line width changes.	
21.	From the same Spatial Editor legend, MB3 popup and select 'Line Style' -> <your choice>.	The graphic line style changes.	
22.	From the same Spatial Editor legend, MB3 popup and select 'Set Contour Values...'. Enter a new interval into the Contour Interval for T SFC Fcst (<WFO>) dialog and click MB1 on 'OK'.	The contour interval changes.	
23.	From the same Spatial Editor legend, MB3 popup and select 'Density' -> <your choice>.	The number of contours (contour density) changes.	
24.	From the same Spatial Editor legend, MB3 popup and select 'Magnification' -> <your choice>.	The size of the font changes on the contour labels.	
25.	MB1 click on a Wind grid in the Grid Manager.	A Wind grid displays in the Spatial Editor.	

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26.	From the Wind Spatial Editor legend, MB3 popup and select 'Display as Graphic'. From the same legend, MB3 popup and select 'Line Width' -> <your choice>.	The gridded image is removed from the display, leaving only the wind barbs and contours. The wind barb width changes.	DR #1361
27.	From the same Spatial Editor legend, MB3 popup and select 'Line Style' -> <your choice>.	The graphic line style changes.	
28.	From the same Spatial Editor legend, MB3 popup and select 'Density' -> <your choice>.	The number of wind barbs changes.	
29.	From the same Spatial Editor legend, MB3 popup and select 'Magnification' -> <your choice>.	The size of each wind barb changes.	
30.	MB1 click on a Wx grid in the Grid Manager.	The Wx grid appears in the Spatial Editor.	
31.	From the Wx Spatial Editor legend, MB3 popup and select 'Display as Graphic'. From the same legend, MB3 popup and select 'Line Width' -> <your choice>.	The borders on the bounded area visualization changes.	
32.	From the same Spatial Editor legend, MB3 popup and select 'Line Style' -> <your choice>.	The graphic line style changes on the borders of the bounded area visualization.	
33.	From the same Spatial Editor legend, MB3 popup and select 'Magnification' -> <your choice>.	The text label size on the display changes.	
34.	MB1 click on a Hazards grid in the Grid Manager.	The Hazards grid displays in the Spatial Editor.	
35.	From the Hazards Spatial Editor legend, MB3 popup and select 'Display as Graphic'. From the same legend, MB3 popup and select 'Line Width' -> <your choice>.	The borders on the bounded area visualization changes.	
36.	From the same Spatial Editor legend, MB3 popup and select 'Line Style' -> <your choice>.	The graphic line style changes on the borders of the bounded area visualization.	
37.	From the same Spatial Editor legend, MB3 popup and select 'Magnification' -> <your choice>.	The text label size on the display changes.	

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Step	Action	Result	Pass/Fail
38.	From any Spatial Editor legend where no grids have been modified, MB3 popup and select 'Unload'.	The weather element is unloaded from the GM and SE legend. If the weather element has been modified, the Unload entry will not appear in the popup menu. When the weather element is unloaded, the Spatial Editor legend will no longer have an entry for the weather element, and if the grid is displayed, it will be removed from the display. The Grid Manager will no longer have an entry for the weather element removed.	
In the next few steps, we will use a single weather element to test out the various GridOps commands; we intersperse another weather element in the middle:			
39.	MB1 click on a grid in the Grid Manager. From the corresponding Spatial Editor legend, MB3 popup and select 'Grid Ops' -> 'Delete Grid'.	The grid is removed from the Spatial Editor, the grid block is no longer present in the Grid Manager, and the Spatial Editor legend indicates '<No Grid>'.	
40.	From the same Spatial Editor legend, MB3 popup and select 'Grid Ops' -> 'Create From Scratch'. Then MB1 click on the color bar to set a value. Then MB3 popup over the Spatial Editor and select 'Assign Value'.	The grid is created and shows up in the Spatial Editor, Spatial Editor legend, and Grid Manager. The later steps assign a value to the grid.	
41.	MB2 click another Spatial Editor legend that indicates a grid is available (doesn't show '<No Grid>') to make it active (i.e., editable).	The grid is displayed and is made editable. The previous grid is still visible and is now displayed as a graphic (indicated by the color of the Spatial Editor legend).	
42.	MB2 click on the Spatial Editor legend from step #39.	The original weather element selected in step #39 is shown as an image.	
43.	From the same Spatial Editor legend from step #39, MB3 popup and select 'Grid Ops' -> 'Copy Grid'. Then MB3 popup and select 'Grid Ops' -> 'Assign xxx'.	The grid values are changed.	
44.	From the same Spatial Editor legend, MB3 popup and select 'Grid Ops' -> 'Paste Grid'.	The grid values are restored.	

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45.	From any Spatial Editor legend, MB3 popup and select 'Grid Ops' -> 'Display Info'.	The Grid Information dialog is displayed.	
46.	Dismiss the Grid Information dialog by clicking MB1 on the 'Cancel' button.	The Grid Information dialog closes.	
47.	MB1 click on a grid in the Grid Manager. MB1 click on the color bar to pick up a value. MB3 popup over the Spatial Editor (not the Spatial Editor legend) and select 'Assign_Value'.	The grid values change to the selected value. Note: You might have to answer a warning dialog about an empty edit area.	
48.	MB3 popup over the Spatial Editor and select 'Undo Grid Edit'.	The grid edit is undone.	
49.	MB1 click 'Edit Areas' -> 'ISC' -> 'ISC_Tool_Area' to set up an edit area.	The edit area is shown.	
50.	MB3 popup over the Spatial Editor and select 'Undo Edit Area'.	The previous edit area is shown, if any.	
51.	MB1 click on 'WeatherElement' -> 'Weather Element Browser...' to bring up the Weather Element Browser dialog. In addition to what is currently loaded, load the ISC database by selecting ISC from the Source pull-down. Select the latest NAM12 database from the Source pull-down. MB1 click 'Load and Dismiss'.	Additional weather elements are loaded into the GFE. These appear in the Grid Manager and the Spatial Editor legends.	
52.	MB3 popup over the Spatial Editor and select 'Legends' -> 'Hide'.	Only the Spatial Editor time is displayed in the legend area.	
53.	MB3 popup over the Spatial Editor and select 'Legends' -> 'Show All Active Weather Elements'.	Only the Spatial Editor legend representing the active weather element is displayed.	
54.	MB3 popup over the Spatial Editor and select 'Legends' -> 'Hide'.	Only the Spatial Editor time is displayed in the legend area.	
55.	MB3 popup over the Spatial Editor and select 'Legends' -> 'Show All Fcst Weather Elements'.	Legends for the Fcst database are shown in the legend area.	
56.	MB3 popup over the Spatial Editor and select 'Legends' -> 'Show All Weather Elements'.	A legend appears for each loaded weather element.	
57.	MB3 popup over the Spatial Editor and select 'Legends' -> 'Show Map'.	Map background legends appear in the legend area.	
58.	MB1 click on the map legends several times.	The maps toggle on and off.	

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Step	Action	Result	Pass/Fail
59.	MB3 popup on one of the map legends and select 'Change Color' and select a new color.	The legend and the map changes to the new color.	DR #1360
60.	From any Spatial Editor legend, MB3 popup and select 'Change Color'. From the Color Chooser dialog, change the color and MB1 click 'OK'. Note: For TO9, select only the map legend.	The Color Chooser dialog displays. The map and the legend changes to the new color.	
61.	From any Spatial Editor legend, MB3 popup and select 'Line Width' -> <your choice>. Note: For TO9, select only the map legend.	The map line width changes.	
62.	From any Spatial Editor legend, MB3 popup and select 'Line Style' -> <your choice>. Note: For TO9, select only the map legend.	The map line style changes.	
63.	From any Spatial Editor legend, MB3 popup and select 'Label' -> <your choice> (but not <NoLabel>).	Labels are displayed (or changed) on the map background.	
64.	From the same Spatial Editor legend, MB3 popup and select 'Magnification' -> <your choice>.	The size of the font changes.	
65.	MB3 popup within the main area of the Spatial Editor, and select 'Legends' -> 'Show Active Weather Element'. MB1 click on a T grid in the Grid Manager. MB3 popup over the Spatial Editor legend for T and select 'Display Attributes'. The Display Attributes Dialog window appears. MB1 click 'Contour', then MB1 click 'Apply'.	Contours are added to the displayed image.	
66.	MB1 click 'Cancel' on the Display Attributes Dialog window.	Contours are removed and the previous setting of image only is used.	
67.	MB1 click on a Wind grid in the Grid Manager. MB3 popup over the Spatial Editor legend for Wind and select 'Display Attributes'. The Display Attributes Dialog window is presented. MB1 click on 'WindArrow' and MB1 click off 'WindBarb'. MB1 click 'OK'.	The Display Attributes Dialog window is removed and the wind barbs switched to wind arrows.	

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68.	MB3 popup over the Wind Spatial Editor legend and select 'Display as Graphic'. Then MB3 popup and select 'Display Attributes'. The Display Attributes Dialog window is presented. MB1 click on both 'WindBarb' and 'WindArrow' and MB1 click 'OK'.	The wind barbs appear first. Then both wind barbs and wind arrows are shown.	
69.	Over the main area of the Spatial Editor, MB3 popup and select 'Zoom' and one of the zoom factors.	The display zooms in to the chosen scale and the window is centered on the mouse location.	
	End of test.		

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5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

Number	Description	Test Step(s)
SYSR2045	The AWIPS system shall implement the GFE edit preferences.	ALL
SYSR2049	The AWIPS system shall implement the Spatial Editor.	ALL
SYSR2051	The AWIPS system shall implement the GFE Edit Areas.	48
SYSR2113	The AWIPS GFESuite shall implement the Spatial Editor Legends.	ALL

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