

# **Test Case GFE Edit Pref (001-009)**

**for the  
AWIPS  
Contract  
DG133W-05-CQ-1067**

Prepared for:

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Submitted By:

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## Revision History

Revision	Date	Affected Pages	Explanation of Change
1.0	27 July 2008	ALL	Initial Draft
2.0	8 August 2008	6-16	Redlines per PDT
3.0	4 September 2008	ALL	Redlines per DT

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*Contract DG133W-05-CQ-1067; Test Case GFE Edit Pref (001-009)*

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## Table of Contents

1.0	SCOPE .....	4
2.0	APPLICABLE DOCUMENTS .....	5
2.1	Source Documents.....	5
2.2	Reference Documents.....	5
3.0	TEST CASE DESCRIPTION .....	6
3.1	Assumptions, Constraints and Preconditions .....	6
3.2	Recommended Hardware .....	6
3.3	Test Inputs .....	6
3.4	Test Outputs.....	6
3.4.1	GFE GUIs Tested.....	6
4.0	TEST SCENARIO .....	7
5.0	REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM).....	18

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*Contract DG133W-05-CQ-1067; Test Case GFE Edit Pref (001-009)*

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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 Numbers: ep001 – ep009.
- 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 verifies that the Edit Preferences NWS test cases.

#### **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
- 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.

#### **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 results outlined in section 4.0 are met.

##### **3.4.1 GFE GUIs Tested**

- TBD

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#### 4.0 TEST SCENARIO

Step #	Action	Result	Pass/Fail
<b>ep001 – <a href="#">Contour Analyzer and Internal SIRS Server</a></b>			
1.	From the CAVE window, Mouse Button (MB) 1 click the ‘Open Perspective’ icon and select ‘GFE’ from the dropdown menu.	The GFE perspective displays in CAVE.	
2.	MB1 click <a href="#">‘GFE’ -&gt; ‘Editing Preferences’ -&gt; ‘Contour Server Selection’</a> and set the selection to ‘Contour Analyzer’.	The ‘Contour Analyzer’ option is selected.	
3.	MB1 click a SCALAR grid (e.g., ‘PoP’) on the Grid Manager (GM).	A SCALAR grid displays in the SE.	
4.	Select the Contour tool  in the <a href="#">toolbar</a> .	The contour tool is activated. Contours display in the Spatial Editor (SE).	
5.	MB3 popup over the SE and select <a href="#">‘Delete All Contours’</a> .	All contours are removed from the SE.	
6.	MB1 click the colorbar to pick up a contour value. Then MB1 drag to draw a new contour in the SE.	A Pickup Value is selected. A new contour displays on the grid in the SE.	
7.	MB3 popup in the SE and select ‘Calculate New Grid’.	The display of data in the SE changes to reflect the contour adjustments.	
8.	MB1 click <a href="#">‘GFE’ -&gt; ‘Editing Preferences’ -&gt; ‘Contour Server Selection’</a> . Set the selection to ‘Internal SIRS Server’.	The ‘Internal SIRS Server’ option is selected.	
9.	MB1 click a SCALAR grid (e.g., ‘PoP’) on the GM.	A SCALAR grid image and contours display in the SE.	
10.	MB3 popup over the SE and select <a href="#">‘Delete All Contours’</a> .	All contours are removed from the SE.	
11.	MB1 click the <a href="#">color bar</a> to pick up a contour value. Then MB1 drag to draw a new contour in the SE.	A Pickup Value is selected. A new contour displays on the grid in the SE.	
12.	MB3 popup in the SE and select ‘Calculate New Grid’.	The display of data in the SE changes to reflect the contour adjustments.	
<b>ep002 – <a href="#">Smoothing Algorithm</a></b>			
13.	MB1 click <a href="#">‘GFE’ -&gt; ‘Editing Preferences’ -&gt; ‘Smoothing Algorithm’</a> . Then set the selection to 3x3.	The Smoothing Algorithm is set to 3x3.	
14.	MB1 click a SCALAR grid (e.g., ‘PoP’) on the GM.	The SCALAR grid displays in the SE.	
15.	Using the <a href="#">Draw Edit Area tool</a>  , MB1 draw a small closed edit area.	The edit area appears in the SE.	

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Step #	Action	Result	Pass/Fail
16.	<a href="#">MB3 popup</a> on the SE and select 'Smooth'.	The data within the edit area is smoothed. Notice closely the change when completing the next step.	
17.	MB1 click the Undo  button on the toolbar.	The last edit was undone.	
18.	MB1 click ' <a href="#">GFE</a> ' -> ' <a href="#">Editing Preferences</a> ' -> ' <a href="#">Smoothing Algorithm</a> '. Set the selection to 9x9.	The Smoothing Algorithm is set to 9x9.	DR #1510
19.	<a href="#">MB3 popup</a> on the SE and select 'Smooth'. Verify that the smooth algorithm is different and the larger 9x9 results in a smoother appearance.	The data within the edit area is smoothed. Verified. Notice closely the change when you do the next step.	
20.	MB1 click the Undo  button on the toolbar.	The last edit was undone.	
<b>ep003 – <a href="#">Temporal Editor Mode - Relative</a></b>			
21.	MB1 click ' <a href="#">GFE</a> ' -> ' <a href="#">Editing Preferences</a> ' -> ' <a href="#">Temporal Editor Mode: Relative</a> '. Set the selection to on.	The Temporal Editor Mode: Relative is set to on.	
22.	<a href="#">MB1 click</a> a SCALAR grid (e.g., 'PoP') on the GM.	The SCALAR grid displays in the SE.	
23.	Using the <a href="#">Draw Edit Area tool</a>  , <a href="#">MB1 draw</a> a small closed edit area in an area of non-homogenous data.	The edit area appears in the SE.	
24.	Switch the GFE to the Temporal Editor mode using the  button in the <a href="#">toolbar</a> .	GFE switches to the Temporal Editor mode.	
25.	Locate the grid that you clicked on in step #22 in the temporal editor. It should have a vertical yellow line in it.	The grid has a vertical yellow line through it.	
26.	<a href="#">MB1 click</a> above or below the data value to change the data.	The temporal editor shows the change. The SE shows the edit which results in a relative addition or subtraction, thus the gradient is preserved.	
27.	MB1 click ' <a href="#">GFE</a> ' -> ' <a href="#">Editing Preferences</a> ' -> ' <a href="#">Temporal Editor Mode: Relative</a> '. Set the selection to off.	The Temporal Editor Mode: Relative is set to off.	
28.	<a href="#">MB1 click</a> above or below the same data value to change the data.	The temporal editor shows the change. The SE shows the edit which is applied to all points in the edit area, thus the gradient is no longer present, i.e., each data point in the edit area now has the same value.	

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Step #	Action	Result	Pass/Fail
<b>ep004 – Vector Edit Mode</b>			
29.	MB1 click ‘GFE’ -> ‘Editing Preferences’ -> ‘Vector Edit Mode’ -> ‘Magnitude Only’.	The Magnitude Only selection is set.	
30.	MB1 click a VECTOR grid (e.g., ‘Wind’) on the GM.	The VECTOR grid displays in the SE.	
31.	Using the <a href="#">Draw Edit Area tool</a>  , MB1 draw a small closed edit area in an area of non-homogenous data.	The edit area appears in the SE.	
32.	Using the <a href="#">Sample Tool</a> , anchor several samples using MB1 clicks of differing values in the edit area for monitoring changes to the WE.	Several samples appear.	
33.	MB3 popup menu over the color bar and select ‘Set Pickup Value’.	The <a href="#">Vector Pickup Value dialog</a> appears and the Mode is set to Magnitude Only.	
34.	Using the <a href="#">Vector Pickup Value dialog</a> , set the value to some value distinguishable from those shown in the samples. MB1 click ‘Assign Value’. Close the Pickup Value dialog.	The values displayed for the samples in the edit area have changed for magnitude only (last two or three digits of sample display). The Pickup Value dialog closes.	DR #1400
35.	Use the <a href="#">Undo U button</a> to undo the edit.	The data is restored.	
36.	MB1 click ‘GFE’ -> ‘Editing Preferences’ -> ‘Vector Edit Mode’ Set the selection to Direction only.	The Direction Only selection is set.	
37.	MB3 click on the colorbar and select ‘Set Pickup Value...’. Using the <a href="#">Vector Pickup Value dialog</a> , set the value to some value distinguishable from those shown in the samples. MB1 click ‘Assign Value’.	The Pickup Value dialog opens. The values displayed for the samples in the edit area have changed for direction only (first two digits of sample display).	
38.	Use the <a href="#">Undo U button</a> to undo the edit.	The data is restored.	
39.	Using the <a href="#">Vector Pickup Value dialog</a> , set the mode to ‘Both’. MB1 click ‘GFE’ -> ‘Editing Preferences’ -> ‘Vector Edit Mode’.	The mode is set to ‘Both’ on the menus.	
40.	Using the <a href="#">Vector Pickup Value dialog</a> , set the value to some value distinguishable from those shown in the samples. MB1 click ‘Assign Value’.	The values displayed for the samples in the edit area have changed for both magnitude and direction.	
41.	Close the Pickup Value dialog.	The Pickup Value dialog closes.	

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Step #	Action	Result	Pass/Fail
<b>ep005</b> – <a href="#">Wx/Discrete Combine Mode</a>			
42.	MB1 click <a href="#">‘GFE’ -&gt; ‘Editing Preferences’ -&gt; ‘Wx/Discrete: Combine’</a> Set the selection off.	The ‘Wx/Discrete: Combine’ selection is set to off.	
43.	<a href="#">MB1 click</a> a WEATHER grid (e.g., ‘Wx’) on the GM.	A WEATHER grid displays in the SE.	
44.	Using the <a href="#">Draw Edit Area tool</a>  , <a href="#">MB1 draw</a> a small closed edit area in an area of non-homogenous data.	The edit area appears in the SE.	
45.	<a href="#">Using the Sample Tool, anchor several samples using MB1 clicks</a> of differing values in the edit area for monitoring changes to this WE.	Several samples appear in the SE.	
46.	<a href="#">MB3 popup menu</a> over the colorbar and select <a href="#">‘Set Pickup Value’</a> .	The <a href="#">Weather Pickup Value dialog</a> appears and the Combine push-button is set off.	
47.	Using the <a href="#">Weather Pickup Value dialog</a> , set the value to some value distinguishable from those shown in the samples. MB1 click ‘Assign Value’. Close the Pickup Value dialog.	The values displayed for the samples in the edit area have been changed to reflect the new value set in the dialog. The Pickup Value dialog closes.	
48.	Use the <a href="#">Undo  button</a> to undo the edit.	The data is restored.	<b>DR</b> <b>#1399</b>
49.	MB1 click <a href="#">‘GFE’ -&gt; ‘Editing Preferences’ -&gt; ‘Wx/Discrete: Combine’</a> . Set the selection on.	The ‘Wx/Discrete: Combine’ selection is set to on.	
50.	<a href="#">MB3 popup menu</a> over the colorbar and select <a href="#">‘Set Pickup Value’</a> .	The <a href="#">Weather Pickup Value dialog</a> appears and the Combine push-button is set off.	
51.	Using the <a href="#">Weather Pickup Value dialog</a> , set the value to some value distinguishable from those shown in the samples. MB1 click ‘Assign Value’.	The values displayed for the samples in the edit area have been changed to reflect the new value set in the dialog, combined with the old values.	DR #1371 DR #1401
52.	Use the <a href="#">Undo  button</a> to undo the edit.	The data is restored	
53.	MB1 click off the ‘Combine’ button on the <a href="#">Weather Pickup Value dialog</a> . Then MB1 click <a href="#">‘GFE’ -&gt; ‘Editing Preferences’ -&gt; ‘Wx/Discrete: Combine’</a> .	The combine button is off on the menu.	
54.	MB1 click on the ‘Combine’ button on the <a href="#">Weather Pickup Value dialog</a> . Then MB1 click <a href="#">‘GFE’ -&gt; ‘Editing Preferences’ -&gt; ‘Wx/Discrete: Combine’</a> .	The menu indicates combine button is on.	

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Step #	Action	Result	Pass/Fail
55.	MB1 click ' <a href="#">GFE</a> ' -> ' <a href="#">Editing Preferences</a> ' -> ' <a href="#">Wx/Discrete: Combine</a> '. Set the selection off.	The 'Wx/Discrete: Combine' selection is set to off.	
56.	Close the PickUp Value dialog.	The PickUp Value dialog closes.	
57.	<a href="#">MB1 click</a> a DISCRETE grid (e.g., 'Hazards') on the GM.	A DISCRETE grid displays in the SE.	
58.	<a href="#">MB3 popup menu</a> over the color bar and select ' <a href="#">Set Pickup Value</a> '.	The PickUp Value dialog appears.	
59.	Using the <a href="#">Draw Edit Area tool</a>  , <a href="#">MB1 draw</a> a small closed edit area in an area of non-homogenous data.	The edit area appears in the SE.	
60.	Using the <a href="#">Discrete Pickup Value dialog</a> , set the value to some value distinguishable from those shown in the samples. MB1 click 'Assign Value' to edit the data.	The values displayed for the samples in the edit area should have been changed to reflect the new value set in the dialog.	
61.	MB1 click the <a href="#">Undo</a>  button to undo the edit.	The data is restored.	DR #1399
62.	MB1 click ' <a href="#">GFE</a> ' -> ' <a href="#">Editing Preferences</a> ' -> ' <a href="#">Wx/Discrete: Combine</a> '. Set the selection on.	The 'Wx/Discrete: Combine' selection is set to on.	
63.	Using the <a href="#">Discrete Pickup Value dialog</a> , set the value to some value distinguishable from those shown in the samples. MB1 click 'Assign Value' to edit the data.	The values displayed for the samples in the edit area change to reflect the new value set in the dialog combined with the previous values.	
64.	MB1 click off the 'Combine' button on the <a href="#">Discrete Pickup Value dialog</a> . MB1 click ' <a href="#">GFE</a> ' -> ' <a href="#">Editing Preferences</a> ' -> ' <a href="#">Wx/Discrete: Combine</a> '. Verify the 'Wx/Discrete: Combine' selection is set to off in the menu.	The 'Wx/Discrete: Combine' selection is set to off.	DR #1401
65.	MB1 click on the 'Combine' button on the <a href="#">Discrete Pickup Value dialog</a> . MB1 click ' <a href="#">GFE</a> ' -> ' <a href="#">Editing Preferences</a> ' -> ' <a href="#">Wx/Discrete: Combine</a> ' menu. Verify the 'Wx/Discrete: Combine' selection is set to on in the menu. Close the PickUp Value dialog.	The 'Wx/Discrete: Combine' selection is set to on. The PickUp Value dialog closes.	
<b>ep006</b>			
66.	MB1 click ' <a href="#">GFE</a> ' -> ' <a href="#">Editing Preferences</a> ' -> ' <a href="#">Select Grids With Stepping</a> '. Set the state to off.	The 'Select Grids With Stepping' selection is set to off.	

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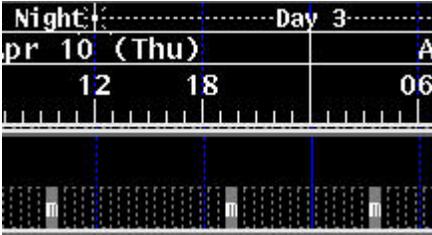
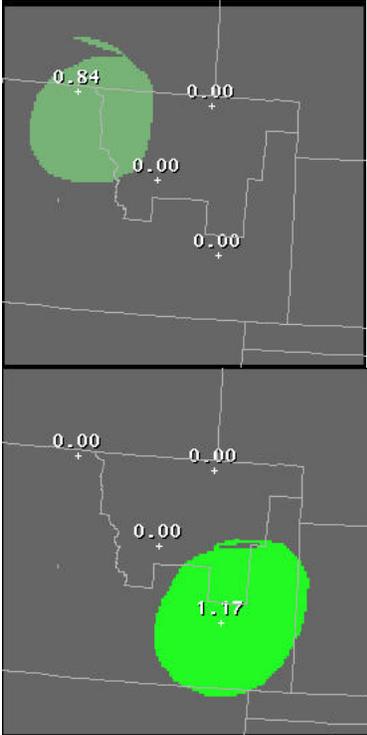
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Step #	Action	Result	Pass/Fail
67.	<a href="#">MB1 click</a> on a 'T' grid in the GM. Use the <a href="#">right arrow key</a> to step to the next 'T' grid.	The selected time period from the MB1 click does not move; only the SE time (represented by a yellow line) moves.	
68.	MB1 click ' <a href="#">GFE</a> ' -> ' <a href="#">Editing Preferences</a> ' -> ' <a href="#">Select Grids With Stepping</a> '. Set the state to on.	The 'Select Grids With Stepping' selection is set to on.	
69.	<a href="#">MB1 click</a> on a 'T' grid in the GM. Use the <a href="#">right arrow key</a> to step to the next 'T' grid.	The selected time period from the MB1 click moves in sync with the SE time.	DR #1402
<b>ep007</b>			
70.	MB1 click ' <a href="#">GFE</a> ' -> ' <a href="#">Editing Preferences</a> ' -> ' <a href="#">Auto Save</a> '.	The <a href="#">Auto Save Interval dialog</a> opens.	
71.	Set the slider to 3 minutes and ensure the radio button is set to On. Then dismiss the dialog.	The time is set to 3 minutes. The radio button is set to On. The Auto Save Interval dialog closes.	
72.	MB3 popup on a grid in the GM and select ' <a href="#">Create From Scratch</a> ' to create a grid. Repeat several times on various weather elements and times in the GM.	<a href="#">Green locks</a> are created for each grid that was created from scratch.	
73.	Wait several minutes (< 3).	The changes have been saved (locks for changes no longer exist). The <a href="#">green locks</a> in the GM are removed.	
74.	MB1 click ' <a href="#">GFE</a> ' -> ' <a href="#">Editing Preferences</a> ' -> ' <a href="#">Auto Save</a> '.	The <a href="#">Auto Save Interval dialog</a> opens.	
75.	Set the slider to 1 minute and ensure the radio button is set to On. Then dismiss the dialog.	The time is set to 1 minute. The radio button is set to On. The Auto Save Interval dialog closes.	
76.	Select the Pencil Tool from the  button on the toolbar. <a href="#">MB1 click</a> on a grid in the GM to make it active. <a href="#">MB1 draw a line</a> on the SE to force an edit of the grid.	The grid is edited. A <a href="#">green lock</a> is created for the grid.	
77.	Wait no more than a minute.	The changes have been saved (locks for changes no longer exist). The <a href="#">green locks</a> in the GM are removed.	
78.	MB1 click ' <a href="#">GFE</a> ' -> ' <a href="#">Editing Preferences</a> ' -> ' <a href="#">Auto Save</a> ' to invoke the <a href="#">Auto Save Interval dialog</a> . Set the radio button to Off. Then dismiss the dialog.	The Auto Save Interval dialog opens. The radio button is set to Off. The Auto Save Interval dialog closes.	
79.	<a href="#">MB1 click</a> on a grid in the GM to make it active. <a href="#">MB1 draw a line</a> on the SE with the pencil tool to force an edit of the grid.	The grid is edited and a <a href="#">green lock</a> was created for the grid.	

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80.	Wait several minutes.	Green locks remain in the GM. The auto save is disabled and the grids must be manually saved.	DR #1403
<b>ep008</b>			
81.	<p><a href="#">Create from scratch</a> three QPF grids about 12 hours apart, ensuring there are no grids between the three created grids. <a href="#">MB1 click</a> on the first created QPF grid in the GM. <a href="#">Edit the grid</a> putting in an area of QPF. Edit the second grid and put in another area of QPF in a different location. Repeat for the third grid, simulating the progression of an area of QPF through time. In order to really determine whether cubic is working or not, the grid areas should have non-linear values. For example, draw 0.50' for the first grid, 1.00' for the second grid, and 2.00' for the third grid.</p>	<p>The grid inventory should look similar to this, and the two grids of QPF like:</p>  <p>Three QPF grids about 12 hours apart. Examples of two of the grids:</p> 	
82.	Bring up the <a href="#">Interpolation Algorithm dialog</a> by MB1 clicking ' <a href="#">GFE</a> ' -> ' <a href="#">Editing Preferences</a> ' -> ' <a href="#">Interpolate Algorithm</a> '.	The Set Interpolation Algorithm dialog displays.	

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83.	MB1 click 'QPF' and 'Linear/NoAdvection'. Then MB1 click 'Dismiss'.	The selections are made. The Set Interpolation Algorithm dialog is dismissed.	
84.	<a href="#">Select the time period</a> from the first QPF grid to the second QPF grid. MB1 click 'Grids' -> 'Interpolate' to bring up the <a href="#">Interpolation dialog</a> . MB1 click 'OK' to perform the interpolation.	The interpolation is performed.	
85.	Step through each of the interpolated frames using the  and  buttons on the toolbar.	The areas do not advect; they simply fade away and the new area fades in.	
86.	MB1 draw an edit area over one of the areas of QPF. Switch the GM to the Temporal Editor mode using the  button. Observe the hourly interpolation of QPF. Verify it appears linear in nature.	The edit area is drawn. GFE is set in Temporal Editor mode. Verified.	
87.	Switch the Temporal Editor to GM mode.	GFE is set in GM mode.	
88.	Bring up the <a href="#">Interpolation Algorithm dialog</a> by MB1 clicking 'GFE' -> 'Editing Preferences' -> 'Interpolate Algorithm'.	The Set Interpolation Algorithm dialog displays.	
89.	MB1 click 'QPF' and 'Cubic/NoAdvection'. Then MB1 click 'Dismiss'.	The Set Interpolation Algorithm dialog is dismissed.	
90.	With the grids highlighted between and including the first and second grid, MB1 click 'Grids' -> 'Interpolate' to bring up the <a href="#">Interpolation dialog</a> . MB1 click on 'Based on Edited Data'. MB1 click 'OK' to perform the interpolation.	Interpolation is performed and replaces the previously interpolated grids.	
91.	Step through each of the interpolated frames using the  and  buttons on the toolbar.	The areas do not advect; they simply fade away and the new area fades.	
92.	MB1 draw an edit area over one of the areas of QPF. Switch the GM to the Temporal Editor mode using the  button. Observe the hourly interpolation of QPF. Verify it appears cubic in nature.	The edit area is drawn. GFE is set in Temporal Editor mode. Verified.	

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93.	Bring up the <a href="#">Interpolation Algorithm dialog</a> by MB1 clicking 'GFE' -> 'Editing Preferences' -> 'Interpolate Algorithm'. MB1 click 'QPF' and 'Linear/Advection'. Then MB1 click 'Dismiss'.	The Set Interpolation Algorithm dialog opens. The selections are made. The Set Interpolation Algorithm dialog closes.	
94.	MB1 click 'Grids' -> 'Interpolate' to bring up the <a href="#">Interpolation dialog</a> . MB1 click on 'Based on Edited Data'. MB1 click 'OK' to perform the interpolation.	Interpolation is performed and replaces the previously interpolated grids.	
95.	Step through each of the interpolated frames using the  and  buttons on the toolbar.	The area advects and has linear values.	
96.	Bring up the <a href="#">Interpolation Algorithm dialog</a> by MB1 clicking 'GFE' -> 'Editing Preferences' -> 'Interpolate Algorithm'. MB1 click 'QPF' and 'Cubic/Advection'. Then MB1 click 'Dismiss'.	The Set Interpolation Algorithm dialog opens. The selections are made. The Set Interpolation Algorithm dialog closes.	
97.	MB1 click 'Grids' -> 'Interpolate' to bring up the <a href="#">Interpolation Dialog</a> . MB1 click on 'Based on Edited Data'. MB1 click 'OK' to perform the interpolation.	Interpolation is performed and replaces the previously interpolated grids.	
98.	Step through each of the interpolated frames using the  and  buttons on the toolbar.	The area advects and uses the cubic interpolation algorithm. Note: It will be difficult to determine whether a cubic or linear interpolation was performed using the Temporal Editor since the area is moving and the Temporal Editor only depicts a fixed area.	
99.	Return to the Grid Manager view.	The GM displays.	
ep009			
100.	<a href="#">Create a smart tool</a> called 'ep009' that edits T. The contents of the smart tool execute function is:  <pre> def execute(self, Td, T):     'TestTool'      # Determine new value     T = Td     # Return the new value     return T </pre>	The smart tool is created.	

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Step #	Action	Result	Pass/Fail
101.	<p>Edit the T and Td fields such that for some times, both a T and Td grid exist, and other times, just T grids exist, such as shown below. Save the data using the  button.</p> 	<p>The T and Td fields are modified accordingly. The grid modifications are saved.</p>	
102.	<p>MB1 click <a href="#">‘GFE’ -&gt; ‘Editing Preferences’ -&gt; ‘Missing Data Mode’</a>. Set the value to ‘Stop’.</p>	<p>The Missing Data Mode is set to ‘Stop’.</p>	
103.	<p><a href="#">Run your ‘ep009’ smart tool</a> on the range of T grids as shown above by calling up the <a href="#">Edit Actions dialog</a> through the  toolbar button.</p>	<p>An error message occurs fairly quickly indicating that there are no corresponding grids for Td, but the first grid the only grid that was successfully edited. You can tell if the T grids were edited since they now will contain the same exact data as the corresponding Td data. A ‘green lock’ appears for the grid that was edited (only the first one).</p>	<p>DR #1413</p>
104.	<p>Save the data using the  button.</p>	<p>The grids are saved.</p>	
105.	<p>MB1 click <a href="#">‘GFE’ -&gt; ‘Editing Preferences’ -&gt; ‘Missing Data Mode’</a>. Select ‘Skip’.</p>	<p>The Missing Data Mode is set to ‘Skip’.</p>	<p>DR #1413</p>
106.	<p><a href="#">Run the ‘ep009’ smart tool</a> on the range of T grids as shown above by calling up the <a href="#">Edit Actions dialog</a> through the  toolbar button.</p>	<p>A message appears indicating that some grids were skipped due to missing Td grids, but the first grid and last grid were successfully edited. It is evident the T grids were edited because the grids contain the same exact data as the corresponding Td data.</p>	<p>DR #1413</p>
107.	<p>MB1 click <a href="#">‘GFE’ -&gt; ‘Editing Preferences’ -&gt; ‘Missing Data Mode’</a>. Select ‘Create’.</p>	<p>The Missing Data Mode is set to ‘Create’.</p>	

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Step #	Action	Result	Pass/Fail
108.	<p><a href="#">Run the 'ep009' smart tool</a> on the range of T grids as shown above by calling up the Edit Actions dialog through the  toolbar button.</p>	<p>Interpolation occurs in the Td weather element, and all T grids are modified. It is evident the T grids were edited because the grids contain the same exact data as the corresponding Td data. There should be the same number of Td grids as T grids. Several of the Td grids will have an 'I' on them indicating that they were interpolated as shown:</p> 	DR #1413
109.	<p><a href="#">Delete the created smart tool.</a></p>	The smart tool is deleted.	
110.	Close the GFE Perspective.	GFE closes.	
	End of test.		

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## 5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

Number	Description	Test Step(s)
SYSR2345	The AWIPS GFESuite shall implement Contour Analyzer and Internal SIRS Server.	1-12
SYSR2346	The AWIPS GFESuite shall implement Smoothing Algorithm.	13-20
SYSR2347	The AWIPS GFESuite shall implement Temporal Editor Mode – Relative.	21-28
SYSR2348	The AWIPS GFESuite shall implement Vector Edit Mode.	29-41
SYSR2349	The AWIPS GFESuite shall implement Wx/Discrete Combine Mode.	42-65
SYSR2350	The AWIPS GFESuite shall implement Select Grids With Stepping setting.	66-69
SYSR2351	The AWIPS GFESuite shall implement AutoSave setting.	70-80
SYSR2352	The AWIPS GFESuite shall implement Interpolate Algorithm setting.	81-99
SYSR2353	The AWIPS GFESuite shall implement Missing Data Mode setting.	100-110

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