

Test Case GFE SE Edit Area (st 001-006)

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

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Revision History

Revision	Date	Affected Pages	Explanation of Change
1.0	26 July 2008	ALL	Initial Draft
2.0	8 August 2008	6-21	Redlines per PDT
3.0	4 September 2008	ALL	Redlines per DT

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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).....	23

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Contract DG133W-05-CQ-1067; Test Case GFE SE Edit Area (st001-006)

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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: st001 – st006.
- 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 area 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
- Grids are available for both the home WFO and surrounding ISC sites. The user can see if there is data available from other sites by clicking on the 'Show ISC Grid'  toolbar button, and [MB1 clicking](#) on various grids in the Grid Manager. If ISC data is available from other sites, then the user will see the data appear for the adjacent site's areas of responsibility (CWA plus marine areas). If ISC data is not available, then the user will only see data that covers the user's area of responsibility.

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
st001 – Assign Value			
1.	In CAVE, Mouse Button (MB) 1 click on the Perspectives icon  and select 'GFE'. Then go to step #3. If 'GFE' is not in the dropdown list, select 'Other' and continue to step #2..	The Open Perspective dialog appears. The GFE Perspective loads in CAVE. The Open Perspective dialog closes. The Open Perspective dialog appears.	
2.	MB1 click 'GFE'. Then MB1 click 'OK'.	The Open Perspective dialog closes. The GFE Perspective loads in CAVE.	
3.	Select Union (' ') from the Edit Area Mode on the toolbar . 	The Union (' ') item is selected.	
4.	Clear the edit area using the  toolbar button.	The edit area in the Spatial Editor (SE) is removed.	
5.	Using the Draw Edit Area tool  , MB1 drag a closed figure whose start, end, and path is completely contained within the SE drawing area. MB1 drag a second closed figure whose start, end, and path is completely contained within the SE drawing area but doesn't overlap the first area.	Two discontinuous areas appear on the SE.	
6.	MB1 click on a 'QPF' grid in the Grid Manager to make it visible and editable.	The QPF image appears.	
7.	MB1 click on the  toolbar button to bring up the Edit Actions dialog . MB1 click 'PickUp...' on the dialog to bring up the Pickup Value dialog .	The Edit Actions dialog appears. The Pickup Value dialog appears.	
SCALAR			
8.	MB1 click or MB1 drag on the dialog to select a new value from the Pickup Value dialog . MB1 click 'AssignValue'.	Both areas on the grid change to the new value.	DR #1404

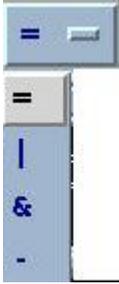
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Step #	Action	Result	Pass/Fail
9.	Enter a value (e.g., 2.00) into the Pickup Value dialog entry field and press the Enter key. Then MB1 click 'AssignValue'.	Both areas on the grid change to the new value.	DR #1404
10.	Close the PickUp Value dialog.	The PickUp Value dialog closes.	
VECTOR			
11.	MB1 click on a 'Wind' grid in the Grid Manager to make it visible and editable.	The wind field appears. The Pickup Value dialog reflects the vector active element.	
12.	MB1 click 'PickUp...' on the Edit Actions dialog to bring up the Pickup Value dialog .	The Pickup Value dialog appears.	
13.	MB1 click the 'Magnitude Only' button. MB1 drag on the dialog to set a different magnitude for the wind. MB1 click 'AssignValue'.	Both areas on the grid change to the new value. Only the magnitude component of the wind has changed.	
14.	Using the Draw Edit Area tool  , MB1 drag a third closed figure whose start, end, and path is completely contained within the SE drawing area and doesn't overlap the first two areas.	A third discontinuous area appears on the SE.	
15.	MB1 click the 'Direction Only' button. MB1 drag on the dialog to set a different direction for the wind. MB1 click 'AssignValue'.	Both areas on the grid change to the new value. Only the direction component of the wind has changed.	
16.	MB1 click the 'Both' button. MB1 drag on the dialog to set different magnitude and direction values for the wind. MB1 click 'AssignValue'.	All three areas on the grid change to the new value. Both the magnitude and direction components change.	
17.	Close the PickUp Value dialog.	The PickUp Value dialog closes.	
WEATHER			
18.	MB1 click on a 'Wx' grid in the Grid Manager to make it visible and editable. Find a 'Wx' grid that has different types of weather on it and where the edit areas contain various weather types.	The Wx field appears. The Pickup Value dialog reflects the weather active element.	
19.	MB1 click 'PickUp...' on the Edit Actions dialog to bring up the Pickup Value dialog .	The Pickup Value dialog appears.	

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Step #	Action	Result	Pass/Fail
20.	Set the 'Combine' button to on. Select a new weather type, coverage/probability, and intensity from the Pickup Value dialog. MB1 click 'AssignValue'.	All three areas on the grid change by combining the existing values in the area to the new value. For example, if there was an existing area of S, and the dialogs were set to R, the result will be combined R and S (rain and snow).	DR #1371
21.	Set the 'Combine' button to off. Select a new weather type, coverage/probability, and intensity from the Pickup Value dialog . MB1 click 'AssignValue'.	All three areas on the grid change to the new value.	
22.	Close the PickUp Value dialog.	The PickUp Value dialog closes.	
DISCRETE			
23.	MB1 click on a 'Hazards' grid in the Grid Manager to make it visible and editable. Find a 'Hazards' grid that has different types on it and where the edit areas contain various types.	The discrete field appears. The Pickup Value dialog reflects the discrete active element.	
24.	MB1 click 'PickUp...' on the Edit Actions dialog to bring up the Pickup Value dialog .	The Pickup Value dialog appears.	
25.	Set the 'Combine' button to on. Select a headline type from the Pickup Value dialog. MB1 click 'AssignValue'.	All three areas on the grid change by combining the existing values in the area to the new value. For example, if there was an existing area of WS.A and the dialogs were set to BZ.W, the result will be combined WS.A and BZ.W.	DR #1371
26.	Set the 'Combine' button to off. Select a new headline type from the Pickup Value Dialog . Click AssignValue.	All three areas on the grid are changed to that new value.	DR #1401
27.	Close the PickUp Value dialog.	The PickUp Value dialog closes.	
st002 – Adjust Up / Adjust Down			
28.	Select Union (' ') from the Edit Area Mode  on the toolbar .	The Union (' ') item is selected.	
29.	Clear the edit area using the  toolbar button.	The edit areas are removed from the display.	

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Step #	Action	Result	Pass/Fail
30.	Using the Draw Edit Area tool  , MB1 drag a closed figure whose start, end, and path is completely contained within the SE drawing area. MB1 drag a second closed figure whose start, end, and path is completely contained within the SE drawing area but doesn't overlap the first area.	Two discontinuous areas appear on the SE.	
31.	Using the Sample Tool  , anchor several samples in the SE using MB1 clicks .	Samples appear in the SE.	
32.	MB1 click on a 'T' grid in the Grid Manager to make it visible and editable.	The temperature grid appears in the SE.	
33.	From the Edit Actions dialog , MB1 click 'Delta' to bring up the Delta Value dialog .	The Delta Value dialog displays.	
SCALAR			
34.	MB1 drag the slider to pick a new value from the Delta Value dialog . MB1 click 'Adjust Up'.	Both areas on the grid are incremented the same amount.	
35.	Continue to MB1 click 'Adjust Up' until the data finally reaches the maximum allowable value. Further 'Adjust Ups' will have no effect.	The values of the data are maximized.	
36.	Enter a value into the Delta Value dialog entry field and press the Enter key. Then continue to click 'Adjust Down' until the data values reach their minimum allowable value. Further 'Adjust Downs' will no effect.	The values of the data are minimized.	
37.	Dismiss the Delta Value dialog .	The Delta Value dialog closes.	
VECTOR			
38.	MB1 click on a 'Wind' grid in the Grid Manager to make it visible and editable.	The wind grid appears in the SE.	
39.	MB1 click 'GFE' -> ' Editing Preferences ' -> ' Vector Edit Mode ' -> ' Magnitude Only '.	The Magnitude Only selection is set.	
40.	From the Edit Actions dialog , MB1 click 'Delta' to bring up the Delta Value dialog .	The Delta Value dialog displays.	
41.	MB1 drag the slider to pick a new value from the Delta Value dialog . MB1 click 'Adjust Up'.	Both areas on the grid are incremented the same amount. Only the magnitude component is affected.	

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Step #	Action	Result	Pass/Fail
42.	Enter a value into the Delta Value dialog entry field and press the Enter key. Then MB1 click 'Adjust Down'. Then close the Delta Value dialog.	Both areas on the grid are incremented the same amount. Only the magnitude component is affected. The Delta Value dialog closes.	
43.	MB1 click ' GFE ' -> ' Editing Preferences ' -> ' Vector Edit Mode ' -> ' Direction Only '. From the Edit Actions dialog , MB1 click 'Delta' to bring up the Delta Value dialog .	The Direction Only selection is set. The Delta Value dialog displays.	
44.	MB1 drag the slider to pick a new value from the Delta Value dialog . MB1 click 'Adjust Up'.	Both areas on the grid have their wind directions incremented by the same amount, and that amount is fixed to 10 degrees regardless of what the Delta Value dialog is set to (except for 0). Only the direction component is affected.	DR #1406
45.	Enter a value into the Delta Value dialog entry field and press the Enter key. Then MB1 click 'Adjust Down'. Then close the Delta Value dialog.	Both areas on the grid have their wind directions decremented by the same amount, and that amount is fixed to 10 degrees regardless of what the Delta Value dialog is set to (except for 0). Only the direction component is affected. The Delta Value dialog closes.	DR #1406
46.	MB1 click ' GFE ' -> ' Editing Preferences ' -> ' Vector Edit Mode ' -> ' Both '. From the Edit Actions dialog , MB1 click 'Delta' to bring up the Delta Value dialog .	The Both selection is set. The Delta Value dialog displays.	
47.	MB1 drag the slider to pick a new value from the Delta Value dialog . MB1 click 'Adjust Up'.	Both areas on the grid are incremented the same amount. Only the magnitude component is affected, even though the Vector Edit Mode is set to Both.	
48.	Enter a value into the Delta Value dialog entry field and press the Enter key. Then MB1 click 'Adjust Down'.	Only the magnitude component is affected, even though the Vector Edit Mode is set to Both.	
49.	Dismiss the Delta Value dialog .	The Delta Value dialog closes.	
WEATHER			
50.	MB1 click on a 'Wx' grid in the Grid Manager to make it visible and editable.	The Wx grid appears in the SE.	
51.	MB1 click the Edit Actions button in the toolbar. Examine the Edit Actions dialog . Verify the 'Delta...' button is dimmed. Dismiss the Edit Actions dialog.	The Edit Actions dialog opens. The 'Delta...' button is dimmed since the data type does not support delta edits. The Edit Actions dialog closes.	DR #1407

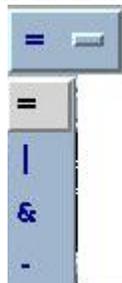
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Step #	Action	Result	Pass/Fail
DISCRETE			
52.	MB1 click on a 'Hazards' grid in the Grid Manager to make it visible and editable.	The Hazards grid appears in the SE.	
53.	MB1 click the Edit Actions button in the toolbar. Examine the Edit Actions dialog . Verify the 'Delta...' button is dimmed. Dismiss the Edit Actions dialog.	The Edit Actions dialog opens. The 'Delta...' value is dimmed since the data type does not support delta edits. The Edit Actions dialog closes.	DR #1407
st003 – Smoothing			
54.	Select Union (' ') from the Edit Area Mode  on the toolbar .	The Union (' ') item is selected.	
55.	Clear the edit area using the  toolbar button.	The edit areas are removed from the SE.	
56.	Using the Draw Edit Area tool  , MB1 drag a closed figure whose start, end, and path is completely contained within the SE drawing area. MB1 drag a second closed figure whose start, end, and path is completely contained within the SE drawing area but doesn't overlap the first area.	Two discontinuous areas appear on the SE.	
57.	MB1 click on a 'T' grid in the Grid Manager to make it visible and editable.	The temperature grid appears in the SE.	
SCALAR			
58.	MB1 click on the Edit Actions button in the toolbar. From the Edit Actions dialog, MB1 click several times on the Smooth entry in the Edit Actions dialog .	The Edit Actions dialog opens. The data is smoothed in the two edit areas.	
VECTOR			
59.	MB1 click on a 'Wind' grid in the Grid Manager to make it visible and editable.	The wind grid appears in the SE.	
60.	MB1 click ' GFE ' -> ' Editing Preferences ' -> ' Vector Edit Mode ' -> ' Magnitude Only '.	The Magnitude Only selection is set.	
61.	MB1 click several times on the Smooth entry in the Edit Actions dialog .	The data is smoothed in the two edit areas. Only the magnitude component is affected.	

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Step #	Action	Result	Pass/Fail
62.	MB1 click 'GFE' -> 'Editing Preferences' -> 'Vector Edit Mode' -> 'Direction Only'.	The Direction Only selection is set.	
63.	MB1 click several times on the Smooth entry in the Edit Actions dialog .	The data is smoothed in the two edit areas. Only the direction component is affected.	
64.	MB1 click 'GFE' -> 'Editing Preferences' -> 'Vector Edit Mode' -> 'Both'.	The Both selection is set.	
65.	MB1 click several times on the Smooth entry in the Edit Actions dialog .	The data is smoothed in the two edit areas. Both components are affected.	
WEATHER			
66.	MB1 click on a 'Wx' grid in the Grid Manager to make it visible and editable. Find a 'Wx' grid that has different types of weather on it and where the edit areas contain various weather types. The noisier (very small areas of different weather) the better for the test.	The Wx grid appears in the SE.	
67.	MB1 click several times on the Smooth entry in the Edit Actions dialog .	The data is smoothed in the two edit areas, having the effect of eliminating single grid cells of differing weather types.	DR #1408
DISCRETE			
68.	MB1 click on a 'Hazards' grid in the Grid Manager to make it visible and editable. Find a 'Hazards' grid that has different hazards on it and where the edit areas contain various hazards. The noisier (very small areas of different hazards) the grid, the better for the test.	The Hazards grid appears in the SE.	
69.	MB1 click several times on the Smooth entry in the Edit Actions dialog .	The data is smoothed in the two edit areas, having the effect of eliminating single grid cells of differing hazards.	DR #1408
st004 – Move/Copy Tool			
70.	Select Union (' ') from the Edit Area Mode  on the toolbar button.	The Union (' ') item is selected.	

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Step #	Action	Result	Pass/Fail
71.	Clear the edit area using the  toolbar button.	The edit areas are removed from the SE.	
72.	Using the Draw Edit Area tool  , MB1 drag a small closed figure whose start, end, and path is completely contained within the SE drawing area. MB1 drag a second small closed figure whose start, end, and path is completely contained within the SE drawing area but doesn't overlap the first area.	Two discontinuous areas appear on the SE.	
73.	Select the Move/Copy  Tool from the toolbar.	The Move/Copy tool is activated.	
SCALAR			
74.	MB1 click on a 'T' grid in the Grid Manager to make it visible and editable.	The temperature grid appears in the SE.	
75.	MB2 drag from outside one of the edit areas across the screen.	Nothing happens since the Move/Copy tool requires the user to identify the source edit area by being inside of the edit area when the user starts the operation.	
76.	MB2 drag from one edit area to another area of the screen that doesn't have any edit areas defined.	An outline of the edit area being moved appears. The data is copied from the source edit area and placed in the destination. The original area is filled in from the surrounding data points (this effect is particularly easy to see in areas of widely differing terrain and has the effect of smoothing out the terrain). Only the data from the one edit area is moved.	
77.	MB1 click the  toolbar button to undo the edit.	The modification to the grid is undone.	
78.	MB1 drag from one edit area to another area of the screen that doesn't have any edit areas defined.	An outline of the edit area being moved appears. The data is copied from the source edit area and placed in the destination. The original area is left unchanged. Only the data from the one edit area is copied.	
79.	MB1 click the  toolbar button to undo the edit.	The modification to the grid is undone.	

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Step #	Action	Result	Pass/Fail
VECTOR			
80.	MB1 click on a 'Wind' grid in the Grid Manager to make it visible and editable.	The wind grid appears in the SE.	
81.	MB1 click ' GFE ' -> ' Editing Preferences ' -> ' Vector Edit Mode ' -> ' Direction Only '.	The Direction Only selection is set.	
82.	MB2 drag from one edit area to another area of the screen that doesn't have any edit areas defined.	An outline of the edit area being moved appears. The data is copied from the source edit area and placed in the destination. The original area is filled in from the surrounding data points (this effect is particularly easy to see in areas of widely differing terrain and has the effect of smoothing out the terrain). Only the data from the one edit area is moved. Both components (direction and magnitude) are moved and the fill-in algorithm ignores the direction only mode and affects both direction and magnitude.	
83.	MB1 click the  toolbar button to undo the edit.	The modification to the grid is undone.	
84.	MB1 click ' GFE ' -> ' Editing Preferences ' -> ' Vector Edit Mode ' -> ' Magnitude Only '.	The Magnitude Only selection is set.	
85.	MB2 drag from one edit area to another area of the screen that doesn't have any edit areas defined.	An outline of the edit area being moved appears. The data is copied from the source edit area and placed in the destination. The original area is filled in from the surrounding data points (this effect is particularly easy to see in areas of widely differing terrain and has the effect of smoothing out the terrain). Only the data from the one edit area is moved. Both components (direction and magnitude) are moved and the fill-in algorithm ignores the magnitude only mode and affects both direction and magnitude.	
86.	MB1 click the  toolbar button to undo the edit.	The modification to the grid is undone.	
87.	MB1 click ' GFE ' -> ' Editing Preferences ' -> ' Vector Edit Mode ' -> ' Both '.	The Both selection is set.	

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Step #	Action	Result	Pass/Fail
88.	MB2 drag from one edit area to another area of the screen that doesn't have any edit areas defined.	An outline of the edit area being moved appears. The data is copied from the source edit area and placed in the destination. The original area is filled in from the surrounding data points (this effect is particularly easy to see in areas of widely differing terrain and has the effect of smoothing out the terrain). Only the data from the one edit area is moved. Both components (direction and magnitude) are moved and the fill-in algorithm ignores the both mode and affects both direction and magnitude.	
89.	MB1 click the U toolbar button to undo the edit.	The modification to the grid is undone.	
90.	MB1 drag from one edit area to another area of the screen that doesn't have any edit areas defined.	An outline of the edit area being moved appears. The data is copied from the source edit area and placed in the destination. The original area is left unchanged. Only the data from the one edit area is copied. The current Vector Edit Mode does not influence the copy source or destination gridpoints.	
91.	MB1 click the U toolbar button to undo the edit.	The modification to the grid is undone.	
WEATHER			
92.	MB1 click on a 'Wx' grid in the Grid Manager to make it visible and editable.	The Wx grid appears in the SE.	
93.	MB2 drag from one edit area to another area of the screen that doesn't have any edit areas defined.	An outline of the edit area being moved appears. The data is copied from the source edit area and placed in the destination. The original area is filled in from the surrounding data points (this effect is particularly easy to see in areas of widely differing weather types and has the effect of smoothing out the variability). Only the data from the one edit area is moved.	DR #1408
94.	MB1 click the U toolbar button to undo the edit.	The modification to the grid is undone.	DR #1399

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Step #	Action	Result	Pass/Fail
95.	MB1 drag from one edit area to another area of the screen that doesn't have any edit areas defined.	An outline of the edit area being moved appears. The data is copied from the source edit area and placed in the destination. The original area is left unchanged. Only the data from the one edit area is copied.	
96.	MB1 click the U toolbar button to undo the edit.	The modification to the grid is undone.	DR #1399
DISCRETE			
97.	MB1 click on a 'Hazards' grid in the Grid Manager to make it visible and editable.	The Hazards grid appears in the SE.	
98.	MB2 drag from one edit area to another area of the screen that doesn't have any edit areas defined.	An outline of the edit area being moved appears. The data is copied from the source edit area and placed in the destination. The original area is filled in from the surrounding data points (this effect is particularly easy to see in areas of widely differing types and has the effect of smoothing out the variability). Only the data from the one edit area is moved.	DR #1408
99.	MB1 click the U toolbar button to undo the edit.	The modification to the grid is undone.	DR #1399
100.	MB1 drag from one edit area to another area of the screen that doesn't have any edit areas defined.	An outline of the edit area being moved appears. The data is copied from the source edit area and placed in the destination. The original area is left unchanged. Only the data from the one edit area is copied.	
101.	MB1 click the U toolbar button to undo the edit.	The modification to the grid is undone.	DR #1399
st005 – Assign Value, Adjust Up/Down, and Smooth tool actions apply to entire grid when no edit area selected			
102.	Clear the edit area using the C toolbar button. Ensure that ' GFE ' -> ' Show Warnings ' -> ' Show Empty Edit Area Warning ' is 'on'.	The edit areas are removed from the SE. The 'Show Empty Edit Area Warning' selection is 'on'.	
103.	MB1 click on a 'T' grid in the Grid Manager to make it visible and editable.	The temperature grid appears in the SE.	

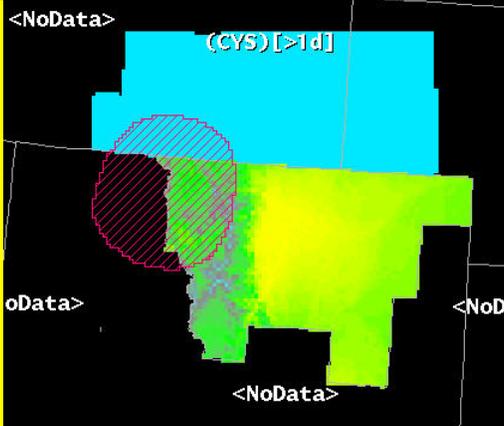
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Step #	Action	Result	Pass/Fail
104.	MB1 click in a value in the colorbar to set a value. Then MB3 popup over the main area of the SE and select 'Assign_Value'.	A dialog appears with the warning 'EMPTY EDIT AREA. EDIT ACTION WILL BE APPLIED OVER THE ENTIRE GRID!'.	DR #1409
105.	Toggle the 'Do not show this message again' state to on. MB1 click 'Yes' on the dialog.	The assign value operation affects the entire grid.	
106.	MB1 click the  toolbar button to undo the edit.	The modification to the grid is undone.	
107.	MB3 popup over the main area of the SE and select AdjustValue_Down.	The adjust value down tool operation affects the entire grid.	
108.	MB1 click the  toolbar button to undo the edit.	The modification to the grid is undone.	
109.	MB3 popup over the main area of the SE and select Smooth.	The smooth tool operation affects the entire grid.	
110.	MB1 click the  toolbar button to undo the edit.	The modification to the grid is undone.	
st006 – Assign Value, AdjustValue_Up, Smooth, Move/Copy with ISC mode on.			
111.	Toggle on the 'Show ISC Grid'  toolbar button.	The 'Show ISC Grid' button is toggled on.	
112.	MB1 click on a 'T' grid in the Grid Manager to make it visible and editable. Find a 'T' grid that has data within the CWA and outside the CWA from an adjacent site.	The temperature grid appears in the SE. Data is shown in the CWA from the Fcst database and for the adjacent CWAs from the composite received ISC data.	

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Step #	Action	Result	Pass/Fail
ASSIGN_VALUE			
113.	Using the Draw Edit Area tool  , MB1 drag a closed figure which spans across the CWA, the adjacent site's ISC data, and an area that contains <NoData> from a third ISC site, such as shown below:	The edit area is drawn on the SE.	
			
114.	MB1 click on the color bar to set the pickup value.	The Pickup Value is selected.	
115.	MB3 popup on the SE main area and select 'Assign_Value'.	Values are set for all gridpoints in the edit area to the pickup value. The user may not see this on the display, since Show ISC Mode is enabled.	
116.	Toggle off on the 'Show ISC Grid' mode using the  toolbar button.	When the mode is off, the user will see the full effect of what has been edited, which is your entire edit area. When the mode is on, the user will only see those gridpoints within the CWA that have been edited.	
117.	MB1 click the U toolbar button to undo the edit.	The modification to the grid is undone.	
ADJUST_UP			
118.	Toggle on the 'Show ISC Grid'  toolbar button.	The 'Show ISC Grid' button is toggled on.	
119.	MB3 popup on the SE main area and select 'AdjustValue_Up'.	Values are adjusted for all gridpoints in the edit area to the pickup value. The user may not see this on the display since Show ISC Mode is enabled.	

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Step #	Action	Result	Pass/Fail
120.	Toggle off on the 'Show ISC Grid' mode using the  toolbar button.	When the mode is off, the user will see the full effect of what has been edited, which is your entire edit area. When the mode is on, the user will only see those gridpoints within the CWA that has been edited. The adjust up/down algorithm will add/subtract values from the composite grid (which comprises the Fcst grid within the CWA and the ISC grid outside the CWA), and thus the operation will add/subtract several degrees in the ISC grid and assign those to the Fcst grid.	
121.	MB1 click the  toolbar button to undo the edit.	The modification to the grid is undone.	
SMOOTH			
122.	Toggle on the 'Show ISC Grid'  toolbar button.	The 'Show ISC Grid' button is toggled on.	
123.	MB3 popup on the SE main area and select 'Smooth'.	Values are smoothed for all gridpoints in the edit area to the pickup value. The user may not see this on the display, since Show ISC Mode is enabled.	
124.	Toggle off, then on the 'Show ISC Grid' mode using the  toolbar button.	When the mode is off, the user will see the full effect of what has been edited, which is the entire edit area. When the mode is on, the user will only see those gridpoints within the CWA that have been edited. The smooth algorithm uses the composite grid (which comprises the Fcst grid within the CWA and the ISC grid outside the CWA), and thus the smooth operation will take widely differing values in the ISC portion of the grid, smooth them, and place them into the Fcst grid.	
125.	MB1 click the  toolbar button to undo the edit.	The modification to the grid is undone.	
MOVE/COPY			
126.	Toggle on the 'Show ISC Grid'  toolbar button.	The 'Show ISC Grid' button is toggled on.	

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Contract DG133W-05-CQ-1067; Test Case GFE SE Edit Area (st001-006)
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Step #	Action	Result	Pass/Fail
127.	<p>MB2 drag from the edit area to another area of the screen that doesn't have any edit areas defined.</p>	<p>An outline of the edit area being moved appears, and that outline only covers the portion of the data that is valid (ISC and Fcst) as shown by the white outline to the lower-right of the actual edit area in the example below. The data is copied from the source edit area and placed in the destination. The original area is filled in from the surrounding data points (this effect is particularly easy to see in areas of widely differing terrain and has the effect of smoothing out the terrain). Only the data from the one edit area is moved. The user may not see this on the display, since Show ISC Mode is enabled.</p>	
			
128.	<p>Toggle off, then on the 'Show ISC Grid' mode using the  toolbar button.</p>	<p>When the mode is off, the user will see the full effect of what has been edited, which is the entire edit area. When the mode is on, the user will only see those gridpoints within the CWA that have been edited.</p>	
129.	<p>MB1 click the  toolbar button to undo the edit.</p>	<p>The modification to the grid is undone.</p>	
130.	<p>Toggle on the 'Show ISC Grid'  toolbar button.</p>	<p>The 'Show ISC Grid' button is toggled on.</p>	

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Step #	Action	Result	Pass/Fail
131.	MB1 drag from one edit area to another area of the screen that doesn't have any edit areas defined.	An outline of the edit area being moved appears. The data is copied from the source edit area and placed in the destination. The original area is left unchanged. Only the data from the one edit area is copied. The user may not see this on the display, since Show ISC Mode is enabled.	
132.	Toggle off, then on the 'Show ISC Grid' mode using the  toolbar button.	When the mode is off, the user will see the full effect of what has been edited, which is the entire edit area. When the mode is on, the user will only see those gridpoints within the CWA that has been edited.	
133.	MB1 click the  toolbar button to undo the edit.	The modification to the grid is undone.	
	End of test.		

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5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

Number	Description	Test Step(s)
SYSR2591	The AWIPS GFESuite shall implement Assign Value.	1-27
SYSR2592	The AWIPS GFESuite shall implement Adjust Up / Adjust Down.	28-53
SYSR2593	The AWIPS GFESuite shall implement Smoothing.	54-69
SYSR2594	The AWIPS GFESuite shall implement Move/Copy Tool.	70-101
SYSR2595	The AWIPS GFESuite shall implement Assign Value, Adjust Up/Down, and Smooth tool actions apply to entire grid when no edit area selected.	102-110
SYSR2596	The AWIPS GFESuite shall implement Assign Value, AdjustValue_Up, Smooth, Move/Copy with ISC mode on.	111-133

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