Test Case Volume_Browser_1.0

for the

AWIPS

Contract

DG133W-05-CQ-1067

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Revision History

Revision	Date	Affected Pages	Explanation of Change
1.0	5 December 07	ALL	Initial Release
2.0	17 January 08	7-12	PDT Redlines/NWS Comments
3.0	29 January 08	ALL	DT Redlines

Table of Contents

1.0 SCOPE

See Software Test Plan.

2.0 APPLICABLE DOCUMENTS

2.1 Source Documents

- None

2.2 Reference Documents

- Software Test Plan for the Advanced Weather Information Processing System Project, Contract #DG133W-05-CQ-1067, 4 December 2007
- Section 3 of the AWIPS D-2D User's Manual Build 8.1
- Existing AWIPS 1 test procedures:
    - D2D_Prod_Load_1.4.1.22
    - Baseline_D2D_VB_Plan_1.4.1.2
    - Baseline_D2D_VB_Time_1.4.1.9_V2
    - Baseline_D2D_VB_T-Z_1.4.1.6
    - D2D_VB_XvsZ_1.4.1.7
    - D2D_VB_Xsect_1.4.1.4
    - Baseline_D2D_VB_Sound_1.4.1.8_V2
    - ECMWF Medium Range_DCS3377-OB8.1
- The VPN connection to the Silver Spring NWS AWIPS 1 test bed
- Release OB8.1 of the Weather Event Simulator (WES)

3.0 TEST CASE DESCRIPTION

This test case demonstrates the capability of CAVE to display a representative sample of plan view, time series, time-height, variable versus height, cross section and sounding model products from available numerical models.

3.1 Assumptions, Constraints and Preconditions

- TO8 software has been installed successfully
- CAVE, EDEX and pgAdmin III are running
- Test data has been ingested

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 TO8 test cases.

3.4 Test Outputs

The images and data will be displayed in CAVE.

4.0 TEST SCENARIO

Step	Action	Result	Pass/Fail
Plan View			
1.	Start CAVE.	CAVE starts.	
2.	From the Volume menu, select ‘Browser’.	The Volume Browser window opens.	
3.	In the Volume Browser select ‘Plan view’ from the pull-down menu if not already selected.	The options within the Volume Browser change when ‘Plan view’ is selected.	
4.	Using ‘Time’ (in the menu bar of the Volume Browser), select an available grid product under the ‘Sources’ and ‘Fields’ sections. Under the ‘Planes’ section, select ‘Surface’. Then click the ‘Load’ button.	The gridded data appears displaying the contours of the gridded product.	
5.	Verify the full model run is displayed by increasing the frame count to 64 and looping the gridded data.	The data loops chronologically through the model run.	
6.	Clear the CAVE display.	The display in CAVE clears.	
Cross Section			
7.	From the Volume Browser ‘Tools’ menu, select ‘Baselines’.	The Interactive Baselines appear.	
8.	Choose a baseline that is to be used to make the cross section and edit the baseline accordingly (if desired). Record the line ID letter ____	Line and/or vertex moves to desired location.	
9.	From the Volume menu, select ‘Browser’ if the Volume Browser is not already open.	The Volume Browser window opens.	
10.	In the Volume Browser select ‘Cross-section’ from the pull-down menu labeled ‘Plan View’.	The options within the Volume Browser change.	
11.	Using ‘Time’ and ‘Log 1050-150’ (in the menu bar of the Volume Browser), select an available grid product under the ‘Sources’ and ‘Fields’ sections. Under the ‘Planes’ section, select the chosen baseline. Then click the ‘Load’ button.	The cross section appears displaying the contours of the gridded product.	DR #811 DR #866

12.	Verify the full model run is displayed by increasing the frame count to 64 and looping the gridded data.	The data loops chronologically through the model run.	
13.	Stop the loop.	The loop stops.	
14.	Zoom into the cross section.	The user is able to zoom into the cross section.	
15.	Close the Cross Section tab.	The Cross Section tab closes. CAVE returns to the map within the 'Maps' tab with the baselines displayed.	
16.	In the Volume Browser, using 'Space' and 'Log 1050-150' (in the menu bar of the Volume Browser), select an available grid product under the 'Sources' and 'Fields' sections. Under the 'Planes' section, select 'All Lat' under the 'Lat' menu. Then click the 'Load' button.	The cross section appears displaying the contours of the gridded product.	To be tested in a future TO. DR #688
17.	Verify the full model run is displayed by looping the gridded data.	The data loops chronologically through space.	
18.	Close the Cross Section tab. Then clear the CAVE display.	The Cross Section tab closes. CAVE displays a blank map within the 'Map' tab.	
Time Height			
19.	From the Volume Browser 'Tools' menu, select 'Points'.	The Interactive Points appear.	
20.	Choose a point that is to be used to make the Time height plot. Edit the point if necessary. Record the point's ID letter: ___	Point moves to desired location.	
21.	In the Volume Browser, select 'Time height' from the pull-down menu.	The options within the Volume Browser change.	
22.	In the Volume Browser, using 'left' and 'Log 1050-150' (in the menu bar of the Volume Browser), select an available grid product under the 'Sources' and 'Fields' sections. Under the 'Planes' section, select the chosen point. Then click the 'Load' button.	The Time height product appears displaying the variable with respect to time. CAVE displays the data with the initialized model time (0HR) on the right and the latest valid time on the left.	DR #811 DR #866

23.	Close the Time Height tab.	The Time Height tab closes. CAVE returns to the map within the 'Map' tab with the Points displayed.	
24.	In the Volume Browser, using 'right' and 'Log 1050-150' (in the menu bar of the Volume Browser), select an available grid product under the 'Sources' and 'Fields' sections. Under the 'Planes' section, select the chosen point. Then click the 'Load' button.	The Time height product appears displaying the variable with respect to time. CAVE displays the data with the initialized model time (0HR) on the left and the latest valid time on the right.	DR #811 DR #866 DR #867
25.	Close the Time Height tab. Clear the display within CAVE.	The Time Height tab closes. CAVE displays a blank map within the 'Map' tab.	
Variable vs. Height			
26.	On the CAVE toolbar select the Points button.	The Interactive Points appear.	
27.	Choose a point that is to be used to make the variable versus height plot. Edit the point if necessary. Record the point's ID letter: ___	Point moves to desired location.	DR #810
28.	In the Volume Browser, select 'Var vs Hgt' from the pull-down menu.	The options within the Volume Browser change.	
29.	In the Volume Browser, using 'Log 1050-150' (in the menu bar of the Volume Browser), select an available grid product under the 'Sources' and 'Fields' sections. Under the 'Planes' section, select the chosen point. Then click the 'Load' button.	The Variable vs. Height product appears displaying a graph of the variable with respect to height.	DR #811 DR #866
30.	View all the frames (model forecast times) by using the arrow keys on the keyboard or toolbar.	The variable will display as a line increasing or decreasing with height.	
31.	Close the Var vs Hgt tab. Clear the display within CAVE.	The Var vs Hgt tab closes. CAVE displays a blank map within the 'Map' tab.	
Sounding			
32.	On the CAVE toolbar select the Points button.	The Interactive Points appear.	
33.	Choose a point that is to be used to make the sounding plot. Edit the point if necessary.	Point moves to desired location.	

	Record the point's ID letter: ___		
34.	In the Volume Browser, select 'Sounding' from the pull-down menu.	The options within the Volume Browser change.	
35.	In the Volume Browser, select an available grid product under the 'Sources' section. Select 'Sounding' in the 'Fields' section under the 'Thermo' dropdown menu. Under the 'Planes' section, select the chosen point. Then click the 'Load' button.	The Sounding product appears displaying a Skew-T for the selected point.	DR #866
36.	View all the frames (model forecast times) by using the arrow keys on the keyboard or toolbar.	Each Sounding displays.	DR #826
37.	Close the Skew-T tab. Clear the display within CAVE.	The Skew-T tab closes. CAVE displays a blank map within the 'Map' tab.	
Time Series			
38.	On the CAVE toolbar select the Points button.	The Interactive Points appear.	
39.	Choose a point that is to be used to make the Time height plot. Edit the point if necessary. Record the point's ID letter: ___	Point moves to desired location.	
40.	In the Volume Browser, select 'Time series' from the pull-down menu.	The options within the Volume Browser change.	
41.	In the Volume Browser, using the selected point, select an available grid product under the 'Sources' and 'Fields' sections. Under the 'Planes' section, select 'Surface' from the 'Misc' dropdown menu. Then click the 'Load' button.	The Time series product appears displaying the variable with respect to time. CAVE displays the data with the initialized model time (0HR) on the left and the latest valid time on the right.	DR #866 DR #867
42.	Close the Time Series tab. Clear the display within CAVE.	The Time Series tab closes. CAVE displays a blank map within the 'Map' tab.	
	End of test.		

5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

Number	Description	Test Step(s)
CAVE_TO8_002	CAVE shall contain a Volume Browser with the look and feel, and functionality of the current AWIPS 1 Volume Browser	ALL
CAVE_TO8_002.10	The Volume Browser shall allow the user to select items displayed within the Volume Browser	4
CAVE_TO8_002.12	The Volume Browser shall allow the user to display Baselines in CAVE using MB1	7
CAVE_TO8_002.13	The Volume Browser shall allow the user to display Points in CAVE using MB1	19
CAVE_TO8_002.15	The Volume Browser shall allow the user to select settings	3,10,21,28,34,40
CAVE_TO8_002.15.1	The Volume Browser shall allow the user to select the Plan view option using MB1	3
CAVE_TO8_002.15.2	The Volume Browser shall allow the user to select the Cross Section option using MB1	10
CAVE_TO8_002.15.3	The Volume Browser shall allow the user to select the Time height option using MB1	21
CAVE_TO8_002.15.4	The Volume Browser shall allow the user to select the Var vs Hgt option using MB1	28
CAVE_TO8_002.15.5	The Volume Browser shall allow the user to select the Sounding option using MB1	34
CAVE_TO8_002.15.6	The Volume Browser shall allow the user to select the Time series option using MB1	40
CAVE_TO8_002.16	The Volume Browser shall allow the user to display data within the Volume Browser	4,11,22,24,29,35,41
CAVE_TO8_002.16.1	The Volume Browser shall display data in the Plan View setting with reference to Time	4
CAVE_TO8_002.16.3	The Volume Browser shall display data in the Cross Section setting with reference to Time	11
CAVE_TO8_002.16.4	The Volume Browser shall display data in the Cross Section setting with reference to Space	16
CAVE_TO8_002.16.6	The Volume Browser shall display data in the Time Height setting	22,24
CAVE_TO8_002.16.8	The Volume Browser shall display Time Series data	41
CAVE_TO8_002.16.10	The Volume Browser shall display Sounding data	35
CAVE_TO8_002.16.11	The Volume Browser shall display Variable vs Height data	29
CAVE_TO8_002.17	The Volume Browser shall allow the user to display data in CAVE	4,11,22,24,29,35,41
CAVE_TO8_002.17.1	CAVE shall display Plan View data with reference to	4

	Time as requested through the Volume Browser	
CAVE_TO8_002.17.3	CAVE shall display data in Cross Sections with reference to Time as requested through the Volume Browser	11
CAVE_TO8_002.17.4	CAVE shall display data in Cross Sections with reference to Space as requested through the Volume Browser	16
CAVE_TO8_002.17.5	CAVE shall display Time Height data chronologically from right to left as requested through the Volume Browser	22
CAVE_TO8_002.17.6	CAVE shall display Time Height data chronologically from left to right as requested through the Volume Browser	24
CAVE_TO8_002.17.7	CAVE shall display Time Series data as requested through the Volume Browser	41
CAVE_TO8_002.17.8	CAVE shall display Sounding data as requested through the Volume Browser	35
CAVE_TO8_002.17.9	CAVE shall display Variable vs. Height data as requested through the Volume Browser	29
CAVE_TO8_002.23	The Volume Browser window shall have the capability to remain open after the selected products in the Product Selection List are loaded	4,11,22,24,29,35,41
CAVE_TO8_006	CAVE shall provide the capability to display cross-sections	11
CAVE_TO8_006.1	Cross-sections shall be accessible through the volume browser, Plan View default tab	10
CAVE_TO8_006.2	Cross-section shall allow the user to view gridded data as vertical slices along specific baselines	11
CAVE_TO8_006.6	Cross-sections shall display gridded model data	11
CAVE_TO8_006.7	The user shall be able to view a time-height cross section of a full run of gridded model data for a specific location	22
CAVE_TO8_006.7.1	Generation of Time-height cross-section displays shall be available through the Points submenu	22
CAVE_TO8_006.8	The user shall be able to zoom into the cross section	14