

Test Case AvnFPS Cig/Vis Distribution

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	6-8	Redlines per PDT
3.0	4 September 2008	8	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 Test Case: Baseline_AvnFPS_CeilingVisDist_OB8.1.
- 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.
- Rational RequisitePro.

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3.0 TEST CASE DESCRIPTION

This test case verifies that the climatology tool (Ceiling and Visibility Distribution – CigVis Dist), launched through the AvnFPS function, displays distributions of visibility and ceiling by month and hour in a form of histogram. Climatology data dependent functionality will mainly consist of GUI testing.

3.1 Assumptions, Constraints and Preconditions

- TO9 software has been installed successfully
- CAVE, EDEX and pgAdmin III are running
- Pre-populated sample test data is used (versus actual climatology data)
- 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 AvnFPS Ceiling and Visibility Distribution dialog is displayed and the results outlined in section 4.0 are met. The AvnFPS GUIs tested include:

- AvnFPS Menu
- AvnFPS Monitor
- AvnFPS Climate Menu
- Ceiling and Visibility Distribution
- Save As
- Print

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4.0 TEST SCENARIO

Step #	Action	Result	Pass/Fail
Launches CigVis Dist from AWIPS popup menu			
1.	With CAVE in the D2D Perspective, Mouse Button (MB) 1 click on the workstation (blue screen).	The pop-up menu displays.	
2.	Select the AWIPS start-up menu.	The AWIPS pop-up menu displays.	
3.	MB1 click 'CigVis Dist'.	The Ceiling/Visibility Distribution GUI opens.	
4.	From the Ceiling/Visibility Distribution window, under the 'File' pull down menu, select 'Quit'.	The Ceiling/Visibility Distribution window closes.	
Launches CigVis Dist from AvnMenu			
5.	From the menu bar, MB1 click 'CAVE' -> 'New' -> 'Aviation' -> 'AvnFPS Menu...'. Then, from the AvnFPS Menu window, select a forecaster's name and MB1 click on the 'Climate' button.	The AvnFPS Menu window appears. The AvnFPS Climate Menu window displays.	
6.	Select the 'CigVis Dist' button.	The Ceiling/Visibility Distribution GUI opens. Note: It contains pre-populated sample data only, not actual climatology data.	
7.	From the Ceiling/Visibility Distribution window, under the 'File' pull down menu select 'Quit'.	The Ceiling/Visibility Distribution window closes.	
8.	From the AvnFPS Climate Menu dialog, select 'File' -> 'Quit'.	The AvnFPS Climate Menu GUI closes.	
Launches CigVis Dist from AvnWatch GUI			
9.	From the AvnFPS Menu, select forecaster name and MB1 click on the 'TAFs' button.	The AvnFPS Monitor displays.	
10.	MB1 click on the 'Climate' button	The AvnFPS Climate Menu window displays.	
11.	Select the 'CigVis Dist' button. MB1 click on the 'Show Legend' check box if the check box is selected.	The Ceiling/Visibility Distribution GUI opens. The Legend is visible on the display, but can be hidden by unselecting the 'Show Legend' checkbox at the top right of the dialog. Note: It contains pre-populated sample data only, not actual climatology data.	
Step #	Action	Result	Pass/Fail

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12.	MB1 click on the ‘Show Legend’ check box. Then, in the Sites column select any site.	The Legend appears on the display. The Site and Auto Redraw are selected.	
13.	MB1 click the ‘Draw’ button. Note: The Ceiling & Visibility Distribution data are available from 1973 – 2004 for most of the sites.	A message “Retrieving data for XXXX (site id), will take a while” displays on the status bar. The monthly frequency of visibility categories for the current hour is displayed in the Right Hand Side (RHS) panel.	
14.	Select the ‘Ceiling’ radio button under the Element section. MB1 click ‘Draw’.	The Ceiling radio button is selected and the RHS panel immediately updates to show monthly frequency of ceiling categories for the current hour.	
15.	Select the Hour and Num Hours by MB1 clicking the up and down arrows. Verify the following ranges: Hour: 0-23 Num Hours: 1-24	The Hour and Num Hours values change. The graphical of the selected hour and num hours display accordingly. The Hour range extends from 0-23. The Num Hours range extends from 1-24.	
16.	Select the ‘By Hour’ tab and MB1 click ‘Draw’.	The RHS panel updates to show temporal distribution of ceiling categories by the hour. Note: It contains pre-populated sample data only, not actual climatology data.	
17.	Select the ‘Visibility’ radio button under the Element section and MB1 click the ‘Draw’ button.	The Visibility radio button is selected. The RHS panel updates to show temporal distribution of visibility categories by the hour.	
18.	Select the Month and Num Months by MB1 clicking the up and down arrows. Verify the following ranges: Month: 1-12 Num Months: 1-12	The Month and Num Months values change. The graphical data of the selected month and num months display accordingly. The Month range extends from 1-12. The Num Months range extends from 1-12.	
19.	MB1 click the ‘By Wind Dir’ tab, select the ‘Joint’ radio button and MB1 click the ‘Draw’ button.	The Flight Category displays on the RHS. Note: It contains pre-populated sample data only, not actual climatology data.	

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Step #	Action	Result	Pass/Fail
20.	Select the Month, Num Months, Hour, and Num Hours by MB1 clicking the up and down arrows. Verify the following ranges: Hour: 0-23 Num Hours: 1-24 Month: 1-12 Num Months: 1-12	The Month, Num Months, Hour, and Num Hours values change. The graphical data of the selected month, num months, hour, and num hours display accordingly. The Hour range extends from 0-23. The Num Hours range extends from 1-24. The Month range extends from 1-12. The Num Months range extends from 1-12.	
21.	To save displayed data to a file as text, select 'Save Stats' under the 'File' pull down menu.	The Save As popup window displays.	
22.	Enter the file name with .txt extension (e.g., ceivisdist2.txt) then MB1 click the 'Save' button.	The file is saved in the specified directory and the save as pop-up window closes.	
23.	To save displayed data to a file as graphic (image), select 'Save Image' under the 'File' pull down menu.	The Save As popup window displays.	
24.	Enter the file name with one of the extension: .bmp, .jpg, .png (e.g., imageceivisdist2.png) then MB1 click the 'Save' button.	The file is saved in the specified directory and the save as popup window closes.	
25.	To print a text file or image, select 'File' -> 'Print Image'.	The Print pop-up window opens and contains the Palette option of 'gray' and 'color'.	
26.	Select either the 'gray' or 'color' radio button. Then MB1 click 'OK'.	A text file or image is printed on 'lp1' (if 'gray' radio button is selected) or 'lp2' (if 'color' radio button is selected).	
27.	From the Ceiling/Visibility Distribution window, under the 'File' pull down menu select 'Quit'.	The Ceiling/Visibility Distribution window closes.	
28.	From the AvnFPS Climate Menu dialog, select 'File' -> 'Quit'.	The AvnFPS Climate Menu GUI closes.	
29.	To verify the saved files from step 22 & 24, open a Terminal and navigate to the specified directory.	The files saved from steps 22 & 24 display on the list.	
30.	MB1 click on files to verify that they contain the information that was saved.	The files contain the correct information.	

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Step #	Action	Result	Pass/Fail
31.	Exit the Terminal, and close the AvnFPS Monitor and AvnFPS Menu windows.	The Terminal closes. The AvnFPS Monitor and AvnFPS Menu windows close.	
	End of test.		

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5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

Number	Description	Test Step(s)
SYSR2073.101	AvnFPS shall provide Climatology Viewing capability via the AvnFPS Menu's Climate Button or via the TAF Monitor's Climate Button.	5-6, 10-11
SYSR2073.102	The Climate Button shall allow the user the capability to start any of three distinct climatology GUIs: Wind Rose, Ceiling and Visibility Distribution, and Ceiling and Visibility Trend.	6, 11
SYSR2073.112	The Ceiling and Visibility Distribution Dialog shall allow the user the capability to display a distribution of visibility and ceiling as a histogram by any one of three distinct criteria: by month, by hour, or by wind direction.	11-20
SYSR2073.113	The Ceiling and Visibility Distribution Dialog shall allow the user the capability to display a histogram for a selected month and duration (in months) or for a selected hour and duration in (hours) or for both measures depending upon the criteria selected: either by month, by hour, or by wind direction, respectively.	11-20
SYSR2073.114	The Ceiling and Visibility Distribution Dialog shall allow the user the capability to further refine the histogram by selecting a weather element or flight category.	11-20
SYSR2073.115	The Ceiling and Visibility Distribution Dialog shall allow the user the capability to select the location of interest, e.g.	12
SYSR2073.116	The Ceiling and Visibility Distribution Dialog shall allow the user the capability to draw the histogram via the Draw button on the Ceiling and Visibility Distribution Dialog.	13, 14, 16, 17, 19
SYSR2073.117	The Ceiling and Visibility Distribution Dialog shall allow the user the capability to force re-draw of the histogram via a button on the Ceiling and Visibility Distribution Dialog that is effective when the user selects a toggle or changes hour/month on the dialog.	12
SYSR2073.118	The Ceiling and Visibility Distribution Dialog's File Menu's Save Stats selection shall allow the user the capability to save statistics to a file.	21-22
SYSR2073.119	The Ceiling and Visibility Distribution Dialog's File Menu's Save Image selection shall allow the user the capability to save an image to a file.	23-24
SYSR2073.120	The Ceiling and Visibility Distribution Dialog's File Menu's Print Image selection shall allow the user the capability to print an image.	25-26
SYSR2073.121	The Ceiling and Visibility Distribution Dialog's File Menu's Quit selection shall allow the user the capability to exit the ceiling and visibility distribution climatology.	7, 27

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