

# **Test Case AvnFPS TAF 2.0**

**for**

**Contract DG133W-05-CQ-1067**

**Advanced Weather Interactive Processing System (AWIPS)  
Operations & Maintenance**

**AWP.TE.SWCTR/TO10-0001**

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## Change History

Revision	Date	Affected Pages	Explanation of Change
Draft	21 Nov. 2008	ALL	Initial Draft
1	13 Jan. 2009	ALL	Result of NWS comments and PDT
2	16 Jan. 2009	ALL	Result of PDT
3	6 Feb. 2009	iii, 3	Result of DT

## Table of Contents

	<i>Page</i>
1.0 SCOPE .....	1
2.0 APPLICABLE DOCUMENTS.....	2
2.1 Source Documents .....	2
2.2 Reference Documents .....	2
3.0 TEST CASE DESCRIPTION .....	3
3.1 Assumptions, Constraints and Preconditions.....	3
3.2 Recommended Hardware .....	3
3.3 Test Inputs .....	3
3.4 Test Outputs .....	3
4.0 TEST SCENARIO.....	4
5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM) .....	9

## **1.0 SCOPE**

See TO10 Software Test Plan.

## **2.0 APPLICABLE DOCUMENTS**

### **2.1 Source Documents**

- TO9 Test Case AvnFPS TAF 1.0

### **2.2 Reference Documents**

- Legacy NWS Test Case: Baseline\_AvnFPS\_TAF\_OB8.1.
- TO10 Software Test Plan for the Advanced Weather Interactive Processing System Project, Contract #DG133W-05-CQ-1067, January 2009.
- The Silver Spring NWS AWIPS I test bed application.
- Rational RequisitePro.

### 3.0 TEST CASE DESCRIPTION

Test case verifies that the 30-Hour TAF functionality works properly with or without the transmit privilege. The requirement for the 30-Hour TAF is tested in the SAO Plug-in test case.

#### 3.1 Assumptions, Constraints and Preconditions

- TO10 software has been installed successfully.
- CAVE and EDEX are running.
- Data has been ingested.
- The Text Workstation has been started.
- This test case is a regression test of capabilities delivered in TO9 with the introduction of the 30-Hour TAF. In TO10, complete steps 1-11, skip 12-21 (redundant steps to be tested when the transmit capabilities are implemented), and continue testing at step 22.
- Actions, Results, and Requirements highlighted in gray 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 TO10 Software Test Plan, Section 2.2.

#### 3.3 Test Inputs

Section 4.0 contains the test procedures for this test case. Sections 2.2 – 2.9 of the TO10 Software Test Plan contain general test inputs applicable to all TO10 test cases. Grayed out test step(s) indicate functionality not yet delivered.

#### 3.4 Test Outputs

The AvnFPS Monitor dialog and configuration files are displayed and the results outlined in section 4.0 are met. The AvnFPS GUIs to be tested include:

- AvnFPS Menu
- AvnFPS Monitor
- AvnFPS TAF Editor
- AvnFPS Loader
- AvnFPS QC
- AvnFPS Transmission Queue
- Directory

**4.0 TEST SCENARIO**

Step #	Action	Result	Pass/Fail
Test User should not be able to transmit a TAF product with xmit_privilege = '0'			
1.	From the CAVE menu bar, Mouse Button (MB) 1 click 'CAVE' -> 'New' -> 'Aviation' -> 'AvnFPS Menu...'	The AvnFPS Menu window appears.	
2.	Verify user 'Test2' is not present.	The user 'Test2' is not present.	
3.	Open a terminal and navigate to the operator's local copy of the aviation configuration file (e.g., cave/etc/aviation).	A terminal opens. The aviation configuration file is present.	
4.	Edit the aviationForecasterConfig.xml file, adding 'Test2' as a new forecaster and setting the transmit privilege to '0'. Save the changes to the configuration file.	The new forecaster and transmit privilege in the aviationForecasterConfig.xml file is saved.	
5.	Close the terminal window.	The terminal closes.	
6.	Close and restart the AvnFPS Menu (refer to step 1).	The AvnFPS Menu window appears.	
7.	Verify user 'Test2' is present.	The user 'Test2' is present.	
8.	Select the user 'Test2'. With 'local' highlighted on the lower list, MB1 click the 'TAFs' button.	The AvnFPS Monitor window opens.	
9.	Verify that the following buttons are enabled: TAF Editor, Climate, Plot, and Backup. Verify the following items are displayed in green color: XMIT-px2f, DATA-px2f, INGEST-px2f and Queue button.	The listed buttons are enabled. The XMIT-px2f, DATA-px2f, INGEST-px2f and Queue button are displayed green.	
10.	Select the TAF Editor button to edit a TAF.	The AvnFPS TAF Editor window displays without loading a TAF forecast (blank screen).	
11.	Verify the Editor recipe tab near the top of the TAF Editor is selected. Verify that there is no 'Send' button in the top row of buttons. Verify that the buttons appear in the following order: 'Load', 'Syntax', 'QC', 'Save', and 'Restore'. Note that for TO10, the 'Send' button appears between the 'QC' and 'Save' buttons.	No 'Send' button is present. The top row of buttons is in the stated order.	
12.	MB1 click the Viewer tab.	The Viewer tab displays in the AvnFPS TAF Editor window.	
13.	Select 'File' -> 'Close' in the AvnFPS TAF Editor. Select 'File' -> 'Quit' in the AvnFPS Monitor. Click on the 'X' in the AvnFPS Menu window.	The AvnFPS TAF Editor, AvnFPS Monitor, and AvnFPS Menu windows close.	

Step #	Action	Result	Pass/Fail
Test User is able to transmit a TAF product with xmit_privilege = '1'			
13.	Open a terminal and navigate to the aviation configuration file (e.g., /cave/etc/aviation).	A terminal opens. The aviation configuration file is present.	
15.	Edit the aviationForecasterConfig.xml file by setting the transmit privilege for user 'Test2' to '1'. Save the changes to the configuration file.	The transmit privilege in the aviationForecasterConfig.xml file is saved.	
16.	On the terminal, select 'File' -> 'Close'.	The terminal closes.	
17.	Restart the AvnFPS Menu by repeating step 1 above.	The AvnFPS Menu window appears.	
18.	Select the user 'Test2'. With 'local' highlighted on the lower list, MB1 click the 'TAFs' button.	The AvnFPS Monitor window opens.	
19.	Verify that the following buttons are enabled: TAF Editor, Climate, Plot, and Backup. Verify that the following items are displayed in green color: XMIT-px2f, DATA-px2f, INGEST-px2f and Queue button.	The listed buttons are enabled. The XMIT-px2f, DATA-px2f, INGEST-px2f and Queue button are displayed green.	
20.	Select the TAF Editor button to edit the TAF.	The AvnFPS TAF Editor window displays without loading forecast (blank screen).	
21.	Verify that the Editor tab near the top of the TAF Editor is selected. Verify that the following appear in the top row of buttons, in the following order: 'Load', 'Syntax', 'QC', 'Send', 'Save', and 'Restore'. Verify the TAF Editor's menu bar contains the 'File', 'Options', 'Edit', and 'Help' pull-down menus.	The top row of buttons is in the stated order	
22.	Select the 'Load' button to load the TAF forecast.	The AvnFPS Loader window displays along with the different products and sites. Verify the Forecast Type 'Routine' radio button is selected.	
23.	From the AvnFPS Loader window, select any combination of products and sites. Then select 'latest' from the 'Initialize from:' drop-down menu and MB1 click the 'OK' button. <i>Note:</i> If you want to select more than one products or sites, either MB1 click and drag the cursor (this works for consecutive items), MB1 click items while pressing down the Ctrl key, or MB1 click one item then MB1 click another item while pressing down the Shift key.	The AvnFPS Loader window closes. The selected product and site data displays and the associated site id displays on the first tab.	

Step #	Action	Result	Pass/Fail
24.	Edit the TAF(s).	The TAF(s) is(are) edited.	
25.	In the 'Tools' text field, use the pull-down menu to select the 'AdjustTimes' tool. Then MB1 click the 'Apply' button to update the TAF start times.	One or more group valid times changed to reflect current hour.	
26.	In the 'Tools' text field, use the pulldown menu to select the 'UseMetarForPrevailing' tool. Then MB1 click the 'Apply' button to update the TAFs.	One or more TAFs changed to reflect the current METAR.	DR #1816
27.	Select the 'Syntax' button to perform the Syntax Quality Control for TAF. If an error is found, continue to step #28. Otherwise continue to step #29.	The system attempts to decode all forecasts and check their syntax. If any errors are found, the whole relevant phrase is highlighted in color according to the type of errors.	DR #1841
28.	To view an explanatory message, MB1 the message display button at the very bottom right corner of the 'AvnFPS TAF Editor' dialog. Verify an explanatory message displays.	An explanatory message displays in the message log.	
29.	To check the Quality Control (QC) of individual TAFs, MB1 click the 'QC' button.	The AvnFPS QC pop-up window displays.	DR #1909
30.	To perform a current weather check, select the Current Wx check box. If Error found, continue to step #31, else continue to step #32.	The system performs a quick check for changing conditions while forecasts are prepared or when a routine issue forecast is prepared well in advance of the transmission window. If there are no invalid entries found during the checking process then the "Wx QC - OK" message displays on the status bar at the bottom of the screen. If current observation and the weather in the first line of the forecast do not match, an explanatory message displays in the message log.	
31.	Note: If you have an error flagged, but are certain that the forecast is correct and either the software or directive is wrong, MB1 'Clear Errors' (located under the 'File' menu) before MB1 clicking 'Send'. To view a message of the highlighted text, MB1 while pointing at the offending text.	The balloon message shows output of the current weather check.	

Step #	Action	Result	Pass/Fail
32.	Note: The forecast must successfully pass QC in order to be sent. Select the 'Send' button.	The AvnFPS Send dialog window displays and verifies the Transmit time.	
33.	Select a forecaster from the list and set the 'Transmit at' time. Then MB1 click the 'OK' button.	The AvnFPS Send dialog closes. The forecast is transmitted to the Queue in the pending section. Record the transmit time. _____	
34.	To view the transmission log file, select 'Open Terminal window' and type in the following: cd /awips/adapt/avnfps/3.4/xmit/pending	Verify that the file is in the pending directory.	
35.	To view the forecast that was transmitted, MB1 click the 'Queue' button on the AvnFPS Monitor GUI.	The AvnFPS Transmission Queue dialog displays with the following buttons are enabled: Close, Refresh, View, Remove, Retransmit, and Help.	
36.	Under the Directory section, select the 'Pending' pop-up button.	The forecast entry transmitted from Step 30 displays on the list of the products waiting for a specific time before they are transmitted.	
37.	Note: The transmission server checks the queue every 15 seconds. When the transmission time recorded in step 31 is reached, the forecast is sent to the NWS gateway. It may take awhile for the product from the pending directory to appear in the sent directory. To verify the forecast entry that was transmitted from Step 31 was sent successfully, select the 'Send' pop-up button under the Directory section.	Verify that the transmitted forecast entry displays on the list of the products that were successfully sent.	
38.	To view the transmission log file, select 'Open Terminal window' and type in the following: cd /awips/adapt/avnfps/3.4/xmit/sent	Verify that the file is in sent directory.	
39.	MB1 click the 'Close' button from the AvnFPS Transmission Queue dialog.	The AvnFPS Transmission Queue dialog closes.	
40.	In the AvnFPS TAF Editor window, MB1 click the 'Save' button to save the current TAF.	The current TAF bulletin is saved into a temporary text database product, 'CCCWRKTAF', where CCC is your node id (provided the Text Workstation has been started from the 'CAVE' -> 'New' menu prior to MB1 clicking the 'Save' button to save the current TAF).	
41.	MB1 click the 'Clear' button.	The current TAF bulletin is removed.	

Step #	Action	Result	Pass/Fail
42.	Select the 'Restore' button to restore the previously saved current TAF bulletin.	The saved current TAF bulletin is restored and displayed on the screen (provided the Text Workstation is started from the 'CAVE' - > 'New' menu prior to clicking the 'Restore' button to restore the previously saved current TAF bulletin from the text database).	
43.	MB1 click the 'Clear' button.	The restored current TAF bulletin is removed.	
44.	Select 'Restore From' under the 'File' menu.	The saved current TAF bulletin is restored and displayed on the screen (provided the Text Workstation is started from the 'CAVE' - > 'New' menu prior to clicking the 'Restore' button to restore the previously saved current TAF bulletin from the text database).	
45.	Select a filename.	The pop-up window displays along with the filename.	
46.	MB1 click the 'OK' button.	The saved current TAF is restored and displays on the screen.	
47.	Close all opened windows and exit the AvnFPS application.	All windows close.	
	End of test.		

**5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)**

Number	Description	Test Step(s)
SYSR2073.40	AvnFPS TAF Monitor Window's File pulldown's Quit selection shall provide the capability to close of AvnFPS TAF Monitor Window.	13
SYSR2073.48	The TAF Editor shall provide forecaster-specific functionality including syntax checking, climate and current weather consistency checks.	27-31
SYSR2073.49	The TAF Editor shall allow the user the capability to invoke the editor in either of two distinct modes: edit mode and view mode.	10-11
SYSR2073.51	The TAF Editor shall allow the user the capability to apply predefined operations to the text in the editor.	22-23
SYSR2073.52	The TAF Editor shall provide the predefined Load capability, which shall invoke the forecast selection dialog.	22
SYSR2073.53	The Forecast Selection Dialog shall provide the user the capability to load a text product based on the parameters of: product identifier, site, initialization option, and forecast type.	23
SYSR2073.54	The TAF Editor shall provide the predefined Syntax Quality Check capability, which shall follow the guidance specified by NWSI 10-813.	27
SYSR2073.55	The TAF Editor shall provide the predefined Weather Check capability, which shall provide an indication of whether the current observation and the weather in the first line of the forecast are consistent.	30
SYSR2073.56	If inconsistent, Weather Check shall highlight the first line of the forecast.	30
SYSR2073.57	The TAF Editor shall provide the predefined Climate Quality Check capability, which shall follow the prescribed algorithm cited in Appendix C of Aviation Forecast Preparation System: System and User Guide, V3.5, 15 June 2007.	29
SYSR2073.60	The TAF Editor shall provide the predefined Save capability to save the current TAF bulletin as a temporary file.	40, 44-46
SYSR2073.61	The TAF Editor shall provide the predefined Restore capability to restore a TAF bulletin previously stored as a temporary file.	42
SYSR2073.62	The TAF Editor shall provide the predefined Send capability to send a TAF bulletin.	32-33
SYSR2073.64	The TAF Editor shall provide the predefined Clear capability to clear the current TAF bulletin from the text editor.	41
SYSR2073.65	The TAF Editor shall allow the user the capability to apply user-defined operations to the text in the editor.	23-26
SYSR2073.70	The TAF Editor's Menu Bar shall provide the user three distinct pulldown menus: File, Options, and Edit.	21
SYSR2073.77	The TAF Editor's File pulldown's Close selection shall shut down the TAF Editor.	13
SYSR2073.157	The aviation plug-in shall provide the operator the capability to configure the names of the forecasters.	2-7
SYSR2937	The AWIPS System shall create the TAF product as produced by the Aviation Services AVNFPS Application.	ALL