

# Weather Event Simulator WES 8.1 Overview Training

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Warning Decision Training Branch  
July 2007

## **Presentation Details:**

**Slides:** 17

**Duration:** 00:09:56

**Filename:** C:\Data\DeckerOther\WES\WES81\Overview\WES81.ppt

## **Presenter Details:**

**Name:**

**Title:**

**Email:**

**Bio:**

## Slide 1

### WES8.1 Overview Training

Duration: 00:00:31

Advance mode: By user

### Weather Event Simulator WES 8.1 Overview Training

Warning Decision Training Branch  
July 2007

#### Notes:

Welcome to the WES 8.1 Overview Training. I am Timm Decker, a member of the WES team at WDTB. In this short module I will go over the WES 8.1 installation as well as provide an overview of what is new in this version of the Weather Event Simulator. This training is intended for all WES Installation Focal Points and the WES Training Focal Points, not general forecasters.

Note that WES 8.1 is a necessary requirement for anyone wishing to complete the second Distance Learning Aviation Course and Storm-Based Warnings training.

## Slide 2

### WES 8.1 Installation Keys

Duration: 00:00:57

Advance mode: By user

### WES 8.1 Installation Keys

- DVD Shipped
  - Jul. 23, 2007
- Shipping problems?
  - [timothy.b.decker@noaa.gov](mailto:timothy.b.decker@noaa.gov)
- [INSTALL\\_WES81.pdf](#)
- Install problems?
  - [wes@infoлист.nws.noaa.gov](mailto:wes@infoлист.nws.noaa.gov)



#### Notes:

WES 8.1 was shipped to all NOAA affiliates on July 23, 2007. If you have not received your DVD by July 30 please e-mail me at [timothy.b.decker@noaa.gov](mailto:timothy.b.decker@noaa.gov).

WES 8.1 is a typical WES release containing AWIPS OB8.1 and WES 8.1. It is a stand-alone release so a previous WES version is not necessary for installation. However we strongly recommend using the WES box on which the WES 7.1 disk image was installed. Using this machine will limit installation problems

Step by step installation instructions are provided on the DVD or the WES home page. You can click on the pdf link to view them. If you should run into any installation problems, please e-mail the WES info list at [wes@infoлист.nws.noaa.gov](mailto:wes@infoлист.nws.noaa.gov).

Now I will go over some of the new features in AWIPS OB8.1 and WES 8.1.

### Slide 3

#### SBW Capabilities in WarnGen

Duration: 00:00:26

Advance mode: By user

#### Storm Based Warning Capabilities in WarnGen



#### Notes:

New with AWIPS OB8.1 and WES 8.1 is Storm Based Warning capabilities in WarnGen.

WES 8.1 is required to complete jobsheets as part of the Storm-Based Warnings training which should be completed by 1 October 2007.

With this new capability it is very important to always start a new D2D session with each new simulation. This will help to avoid inheriting local warning display polygons from previous simulations.

### Slide 4

#### Updated National Files

Duration: 00:00:11

Advance mode: By user

#### Updated National Files



#### Notes:

The shapefiles used for interstates and cities have been updated. WES 8.1 also contains updated RAOB configuration files.

## Slide 5

### Point Data Display and Processing

Duration: 00:00:33

Advance mode: By user

#### Point Data Display and Processing

- D2D Observation Display
  - Old: D2D displays observations at the beginning of an hour
    - METAR / maritime
  - New: Reveals observations at the end of an hour
    - No future data
    - 5 minute METAR/maritime processing
- New “Batch Mode Point Data Conversion” Tool



#### Notes:

In previous WES versions, D2D would show observations for a given hour at the beginning of the hour, thus revealing an hours worth of future data.

Now the full hours worth of data will not be revealed until the end of the hour, so no future data is visible. METAR and Maritime point observations are now processed on a five minute basis, but the data will not consistently display and update at these sub-hourly resolutions.

The next slide will discuss a tool used when preparing point data for this new method of processing.

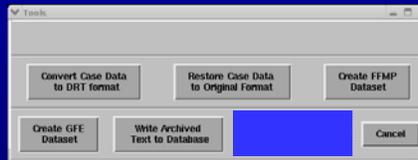
## Slide 6

### “Batch Mode Point Data Conversion”

Duration: 00:00:34

Advance mode: By user

#### Fix Existing DRT Format Cases Using “Batch Mode Point Data Conversion”



- Fixes point data in all DRT format cases in /data/awips
- Designed to run overnight

#### Notes:

Each time you convert a case to DRT format with the new WES, the point data will be prepared for the new method of point processing. If you have existing DRT format cases, you must fix these cases for them to work with the new WES point data processing.

The start\_simulator application will automatically detect this and ask to fix it for you when a case is accessed.

To save you time on fixing multiple cases, we created a “Batch Mode Point Data Conversion” tool. This tool will allow you to fix all DRT format cases in /data/awips overnight and thus take care of all fixes in one batch.

## Slide 7

### Version 9 of Adobe Flash Player

Duration: 00:00:17

Advance mode: By user

### Version 9 of Adobe Flash Player



### Notes:

WES 8.1 contains an updated version of the Adobe Flash player for Linux. This is important for WESSL scripts which use Articulate and other Flash presentations launched in a web browser. This update needs to be manually installed as detailed in the installation instructions.

## Slide 8

### Steps for Running AvnFPS

Duration: 00:01:04

Advance mode: By user

### AvnFPS in WES 8.1

- Supports [DLAC2](#)

- /data/awips/case/point
- Initial TAFs
- Climate data

- 1) Configure AvnFPS
- 2) Convert case data to DRT format
- 3) Copy initial TAFs into a directory unique to a particular case
- 4) Run a simulation
- 5) Launch AvnFPS
- 6) Use AvnFPS during simulation
- 7) Stop simulation



### Notes:

A major addition to WES 8.1 is the inclusion of AvnFPS functionality and AvnFPS data processing during simulations. The AvnFPS functionality is included in support of the 2<sup>nd</sup> version of the Distance Learning Aviation Course (DLAC2).

AvnFPS is driven on a minute-by-minute basis by the hourly METAR files in a standard AWIPS archive. It also requires climate data and a set of TAF's to initialize correctly.

Once your case has these data, there are a few simple steps required to run AvnFPS with WES for a particular case.

- 1) Configure AvnFPS
- 2) Convert case data to DRT format
- 3) Copy initial TAFs into a directory unique to a particular case
- 4) Run a simulation
- 5) Launch AvnFPS
- 6) Use AvnFPS during simulation
- 7) Stop simulation

The next series of slides will go into more detail

on each of these steps.

**Slide 9**

**Step 1: Configure AvnFPS**

Duration: 00:00:23  
Advance mode: By user

**Step 1: Configure AvnFPS**

- Manually configure AvnFPS for a case
  - Modify configuration files
  - Obtain climate data and archived TAF's
  - Change CWAs → reconfigure

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**Notes:**

It is necessary to configure AvnFPS for a particular case by following the instructions within Section 14 of the installation instructions. This configuration consists of modifying several configuration files and obtaining climate data as well as archived TAF's. If you switch to a case from a different CWA, you will need to follow Section 14 to reconfigure AvnFPS.

**Slide 10**

**Step 2: Convert to DRT Format**

Duration: 00:00:34  
Advance mode: By user

**Step 2: Convert to DRT Format**

- Chop standard 1 hour METAR / maritime point files into:
  - Individual observation files for AvnFPS sites
  - 5 minute netcdf files for D2D\*

AvnFPS                      D2D

**Notes:**

Once the AvnFPS configuration is complete, convert the case to DRT format. This chops the 1 hour AWIPS METAR/maritime point files into:

- 1 minute text files for AvnFPS, and
- 5 minute netCDF files for display in D2D

You should note while METAR and Maritime point observations are now processed on a five minute basis, D2D will not consistently display and update at these sub-hourly resolutions. Future WES builds will target improving the handling of point data for D2D, including other point data types.

## Slide 11

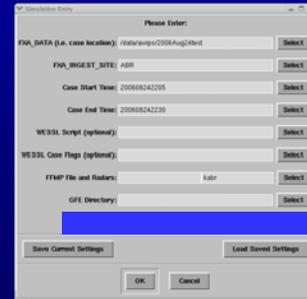
### Step 3: Copy Archived TAFs

Duration: 00:00:39

Advance mode: By user

### Step 3: Copy Archived TAFs into a Unique TAF Initialization Directory

- In <case>/avnfps/archived\_TAFs



### Notes:

The next major step is to copy archived TAFs into your case. You will need to make a subdirectory in your <case>/avnfps/archived\_TAFs directory that will hold your archived TAFs.

When setting your simulation in the WES Simulation Entry window, this subdirectory will be selected in the new "TAFs Directory" section.

In this example the unique subdirectory is called "test" and it will contain TAFs like OUNTAFOKC.

Note: the WES documentation contains information on obtaining archived TAFs from NCDC for use in simulations.

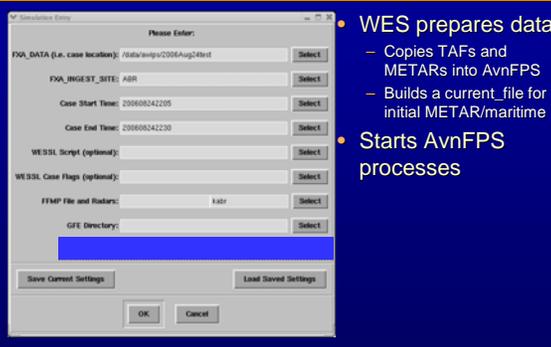
## Slide 12

### Step 4: Run a Simulation

Duration: 00:00:34

Advance mode: By user

### Step 4: Run a Simulation



- WES prepares data
  - Copies TAFs and METARs into AvnFPS
  - Builds a current\_file for initial METAR/maritime
- Starts AvnFPS processes

### Notes:

The next major step is to run a simulation. Don't forget to select the TAF directory because specifying the directory turns on background AvnFPS processing within the WES. Otherwise AvnFPS will not work in the simulation.

As part of the simulation start-up process, the WES prepares the data to be used by AvnFPS. This includes copying TAFs and METARs into AvnFPS and building a current\_file for the initial METAR / maritime data.

Also, vital AvnFPS processes are started during simulation start-up.



## Slide 15

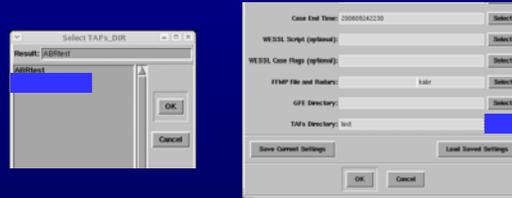
### Step 7: Stop Simulation

Duration: 00:00:45

Advance mode: By user

#### Step 7: Stop Simulation

- <case>/saved\_tafs
  - All TAFs from the simulation
- <case>/avnfps/archived\_TAFs/previous\_simulation
  - Last valid TAF from each taf site



#### Notes:

Once you decide to stop your simulation, WES saves all TAFs created or edited during the simulation to a directory labeled with the current date and time. This directory is then stored in the <case>/saved\_tafs directory.

We also store the latest valid TAF from the simulation in a directory labeled previous\_simulation which is located in the <case>/avnfps/archived\_TAFs directory. If you wanted to start a new simulation and start where you just left off, all you have to do is select previous\_simulation as your TAFs Directory in the WES Simulation Entry window. This ensures that the initial TAF ingested into AvnFPS is the same as the last TAF issued in the previous simulation.

## Slide 16

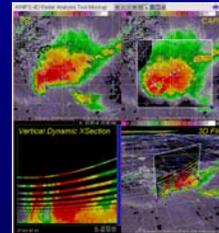
### Future WES Builds

Duration: 00:00:60

Advance mode: By user

#### Future WES Builds

- WES 8.2 (January 2008)
  - OB8.2, FSI, Super Resolution 88D base products, and more!
- WES 8.3 (May 2008)
  - OB8.3, FFMP Advanced, EMPE and more
- WES 9.0 (2008-2009)
  - OB9.0
- WES2 (2009)
  - AWIPS2

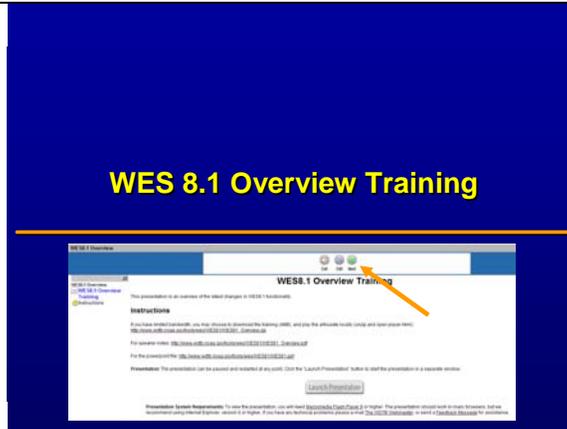


#### Notes:

WES 8.2 with AWIPS OB8.2 is currently planned for release in January of 2008. Included in this build are the Four Dimensional Storm Cell Investigator, Super Res 88D base products and more. WES 8.3 with AWIPS OB8.3 is currently planned for release in May of 2008. Included in this build are FFMP Advanced, Enhanced Multi-Sensor Precipitation Estimation and more. WES 9.0 with AWIPS OB9.0 is currently planned for release in the 2008-2009 timeframe.

OB9.0 is the last AWIPS build before the transition to the next generation AWIPS build, AWIPS2, which is currently scheduled to be released in 2009. The current plan is for WDTB to develop a new Weather Event Simulator for AWIPS2 to coincide with the AWIPS2 release. This interim WES will prototype a training capability for integration into AWIPS2 after the initial release.

**Slide 17**   
**WES 8.1 Overview Training**  
Duration: 00:00:23  
Advance mode: By user



**Notes:**

This concludes the presentation of the WES 8.1 Overview Training. For information regarding running WES 8.1 for the DLAC2 course, please refer to the simulation guide shipped to your local office.

For any WES related questions, please use the WES info list.

Please be sure to navigate completely through the course by clicking the green next arrow in the LMS.

Thank you for your time.