NAWIPS Migration to AWIPS II
Status Update
Unidata Joint Policy/Users Committee Meeting

NCEP Central Operations
27 October 2011
Topics

• Project Status / National Status
• Activities since last briefing
• Forecaster Integration Training
• Training
• Unidata Involvement and Benefits
• Final Thoughts…
### Current Full AWIPS II Migration Schedule

**Quarters are based on Fiscal Years**

<table>
<thead>
<tr>
<th>2009</th>
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<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
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#### Operational Testing & Evaluation Planning

- NAWIPS MIGRATION
- Centers Evaluate Incremental Migration
- SIB Releases

#### Development Cycle w/ RTS Releases

- Center Application & Script Migration
- Forecaster Integration Testing (FIT) - Phase One
- FIT Phase Three - Takes Place at each Center
- NCEP System OT&E
- NCEP Field OT&E - NAWIPS migration signoff

#### NCEP Training Plan Development

- NCEP Training Plan Execution / Forecaster Training
- Individual NCEP Center Training Plan Execution / Forecaster Training

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You are here
# AWIPS II Schedule Update

<table>
<thead>
<tr>
<th>NWS AWIPS II</th>
<th>Schedule</th>
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<tbody>
<tr>
<td>NCEP System Operational Test and Evaluation</td>
<td>January 2011–March 2012</td>
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<tr>
<td>National Field OTE and Initial Operating Capability Deployment, including NCEP</td>
<td>October 2011 – March 2013</td>
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<tr>
<td>Full National Deployment</td>
<td>April 2013</td>
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<td>Unidata to Receive AWIPS II, via methods defined by OST</td>
<td>Started and will continue</td>
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### NAWIS/AWIPS I to AWIPS II Migration Status – Risks

<table>
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<tr>
<th>Issue or Risk</th>
<th>Mitigation</th>
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<tbody>
<tr>
<td><strong>Issue:</strong> AWIPS I migrated GFE issues for HPC operations</td>
<td>HPC is testing version 11.9.0-1 for acceptable functionality and performance of the 64-bit version of CAVE</td>
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<tr>
<td><strong>Issue:</strong> AWIPS I cannot be removed at NCEP Centers by FY12Q1 due to national schedule slip delaying NCP Field OTE</td>
<td>Start AWIPS I Field OTE at the WWB National Centers no later than November</td>
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<tr>
<td><strong>Risk:</strong> Local script and applications take longer to migrate to AWIPS II</td>
<td>Allocate SIB resources to assist in migration</td>
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<tr>
<td><strong>Risk:</strong> WWB AWIPS II migration can be impacted due to NCWCP move</td>
<td>Extend NAWIPS Field OTE to AWIPS II. NCWCP PM coordinating move closely with NCO AWIPS Migration PM</td>
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</table>
NAWIPS/AWIPS II Activities Since Last Briefing

- Software migration is still progressing
  - Difficult to represent as a percentage complete since SIB has had to re-do some work based on new work by Raytheon
  - Delivered updates to address DRs for NSHARP
  - Next delivery of NC Perspective to RTS in November
- Forecaster Integration Testing (FIT) will restart 14 November 2011
- Establishing automated Data Flow of non-SBN data into AWIPS II
  - Worked with Raytheon/SSMC to use the AWIPS firewall to transfer the data from the NCEP network to AWIPS using SCP
- Worked with the National Centers, Raytheon and OST to get a 64-bit version of CAVE suitable for GFE use
  - Work is beginning on making 64-bit CAVE the standard
  - 64-bit EDEX server will come later
- Conducted Briefings to NCEP Directors and OST Director
- GEMPAK Bug Fixes – v6.5 planned for November
  - http://www.nco.ncep.noaa.gov/sib/nawips/
- Submitted monthly updates for Unidata Newsletter
Forecaster Integration Testing Plan

• Variance training will be presented on the first day of every FIT

• Each Center has created their own testing plan to conduct at either a FIT on NCEP Test Bed or on their own AWIPS II system once installed
  • Testing plans include the following:
    • Text Product and Graphical Product Generation
    • Data display – model, observational data, satellite, radar etc.
    • Dissemination of products
    • Exchange of products within NCEP Centers
    • System Performance

• Created a three-tier approach for testing National Center Perspective
  • **First FIT** — Forecasters/IT Specialists are invited to NCEP Test Bed to get familiar with AWIPS II – receive overview training of variances – display data – test product creation
  • **Second FIT** — Forecasters/IT Specialists are invited to test data display/product creation once automated data flow is set up. Retest fixed DRs and test the performance of the system.
  • **Third FIT** — Forecasters/IT Specialists are invited to give a final test of the system including performance

AWIPS II Migration Unidata – October 2011
Training Plan

• AWIPS II Documentation will be provided by Raytheon

• System Overview Presentation (NCP) by NCO – Complete

• General System Topology (NCP) by NCO - Complete

• NCP/AWIPS II User Interface Introduction – Part 1 Complete
  • Part 2 will be ready in December
  • Variance training will be presented at each FIT

• Open the NCO Test Bed for Unidata Community for training purposes – “train the trainers”
Documentation and Training Materials

- Wiki site developed by SIB
- Includes weekly status updates of NCEP Test Bed.
- Includes minutes and action items from weekly scrum meetings with the Centers
- Includes documentation on the variances between NAWIPS and National Center Perspective (NCP)

Documentation and Training Materials

Training provided by the AWIPS Program Office.

Provides a good overview of the AWIPS II from a system perspective.

Provides overview on how to migrate local apps in AWIPS I environment to AWIPS II.

• The goal is for AWIPS II to be “open source”. But…
  – *Security concerns – source code in wrong hands could lead to*
    • spoofed forecast & watch/warning products
    • network intrusions
  – *Raytheon must support baseline code*
    • baseline changes must be approved by gov’t/Raytheon
• ANYONE who receives software must
  – *sign the AWIPS II Software Distribution Policy*
  – *be responsible for the actions of all users who access their copy*
• AWIPS II redistribution
  – *If a person/group intends to redistribute AWIPS II (e.g. Unidata)*
    • they must make a one-time FOIA request
    • they have the option to receive all “major” releases
      – NWS discretion what defines a “major” release
AWIPS II Software Distribution Policy & Procedures

• Proprietary code
  – *Vaisala binLightning decoder*
    • If recipient has an agreement/contract with Vaisala
      – full AWIPS II package is distributed
    • If recipient has no agreement/contract with Vaisala
      – the NWS will ensure the binLightning decoder is removed before AWIPS II is distributed
  
• AWIPS II typically delivered via DVD(s)
Who currently receives AWIPS II releases

- **NOAA/NWS**
  - NWS Forecast Offices, River Forecast Centers
  - Regional Headquarters
  - Training Divisions, etc.
  - Development Organizations, NCEP

- **Other Government agencies**
  - NASA (Goddard)
  - NASA (SPoRT)
  - Bonneville (OR) Power Administration (BPA)

- **NWS Partnerships**
  - UCAR/COMET
  - NESDIS
  - CIMSS

- **Unidata**

- **Private companies**
  - Iberdrola Renewables
Unidata Involvement

• AWIPS II migration efforts first priority of NWS through FY13

• Weekly Migration Telecons with Centers and Unidata

• SIB is committed to assisting in software configuration and training forecasters and key personnel at Unidata in FY12 and FY13

• As the migration gets closer to full deployment – Unidata will have more involvement with NWS/OST AWIPS Program

• Liaison with the University community

• NCEP continues to view Unidata as a critical partner for NCEP’s total mission

AWIPS II Migration Unidata – October 2011
Benefits for Unidata Users

• Facilitate Research to Operations

• Classroom tool/training
  – *Weather Event Simulator ~ Development 2012 / Delivery 2013*

• One NWS Operational System
  – *National Field OTE & National Deployment*

• Less data processing required

• Run your own EDEX to create database

• Modern development environment/platform
  – *Flexible & expandable architecture*
  – *Object oriented languages such as Java and Python*
Final thoughts…

• AWIPS National Program Field OTE has slipped causing the National Deployment to slip to Oct/Nov 2011
  • Allowed more time for NCO to migrate software into baseline

• NCEP transition remains highly dependent on National AWIPS Program Schedule

• NCO has encountered a few stumbling blocks – Dataflow / Timely software integration by Raytheon
  • However, these blocks have NOT resulted in significant delays in schedule

• Strong partnership will remain between NCEP and Unidata through transition and in the years to follow
Questions ?

“From the Sun to the Sea… Where America’s Climate, Weather, Ocean and Space Weather Services Begin”