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# NAWIPS Migration to AWIPS II Status Update

## Unidata Joint Policy/Users Committee Meeting



NCEP Central Operations  
27 October 2011



# Topics

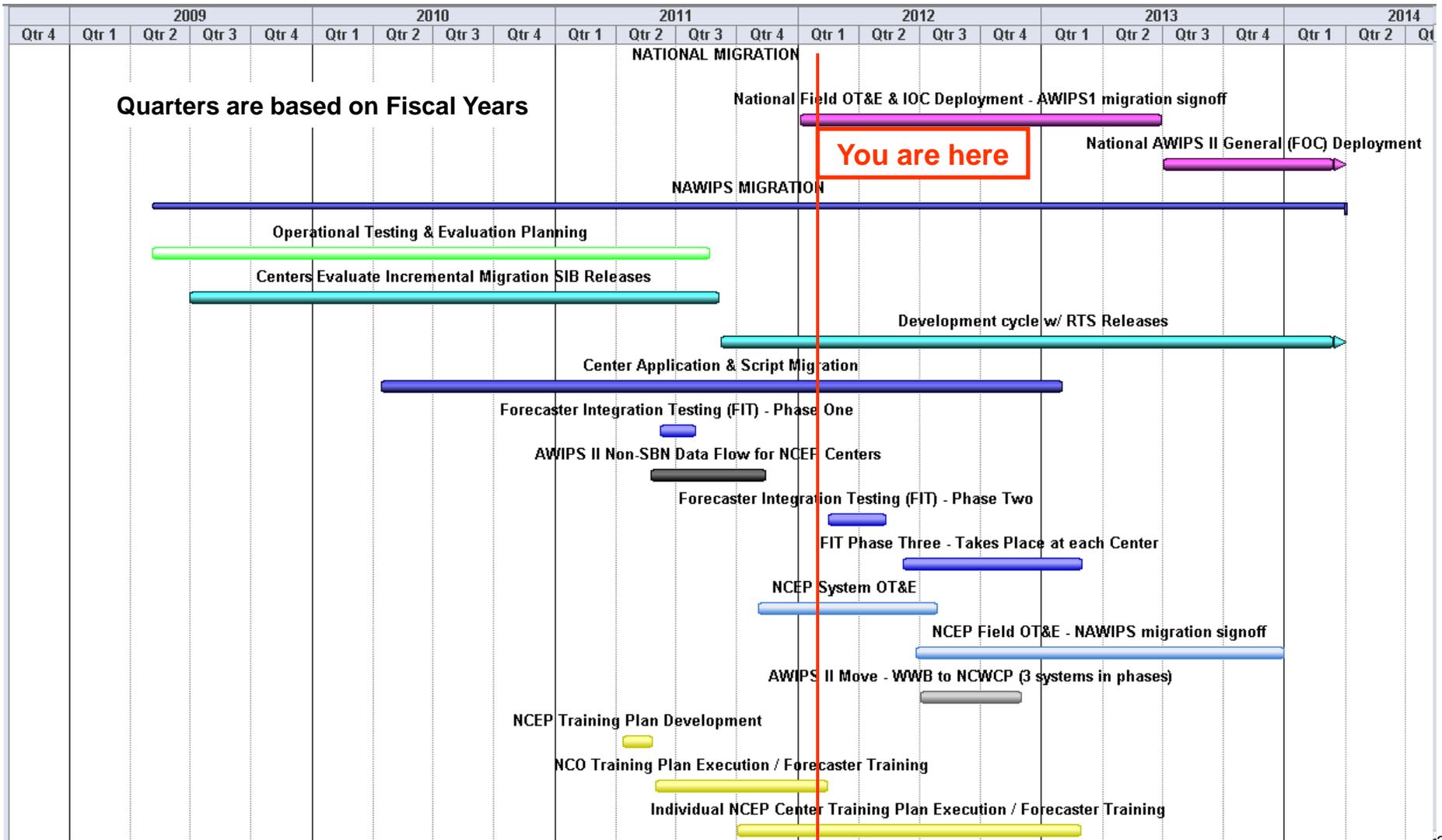


- Project Status / National Status
- Activities since last briefing
- Forecaster Integration Training
- Training
- Unidata Involvement and Benefits
- Final Thoughts...





# Current Full AWIPS II Migration Schedule





# AWIPS II Schedule Update



NWS AWIPS II	Schedule
NCEP System Operational Test and Evaluation	January 2011– March 2012
National Field OTE and Initial Operating Capability Deployment, including NCEP	October 2011 – March 2013
Full National Deployment	April 2013
Unidata to Receive AWIPS II, via methods defined by OST	Started and will continue



# NAWIS/AWIPS I to AWIPS II Migration Status – Risks



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



# 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



# 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



The screenshot shows a wiki page for 'N-AWIPS Migration'. It includes a navigation sidebar on the left with links like 'Main Page', 'Community portal', and 'Recent changes'. The main content area has tabs for 'article', 'discussion', 'edit', and 'history'. Below the title, there is a 'Contents' section with a list of links: '1 Welcome to the AWIPS II Migration Project', '1.1 Project Background and Description', '1.2 Information and support', and '1.3 Functional Areas'. The 'Welcome to the AWIPS II Migration Project' section contains introductory text. The 'Project Background and Description' section explains the software architecture. The 'Information and support' section lists links such as 'NTBN - NCEP AWIPS Testbed', 'FAQs', 'Weekly Scrum Minutes', 'NAWIPS Migration TTR site login', 'join me information and notes', and 'Functionality and Training'. The 'Functional Areas' section lists 'NC - General', 'NC - Data Selection', and 'NC - Data Display'.

- 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)

[http://wiki.ncep.noaa.gov/nco/sib/wiki/index.php/Main\\_Page](http://wiki.ncep.noaa.gov/nco/sib/wiki/index.php/Main_Page)



# Documentation and Training Materials



**National Weather Service**  
www.nws.noaa.gov

**AWIPS Technology Infusion**

Site Map News Organization Search [ ] NWS All NOAA Go

**AWIPS II Local Application Migration Training**

[Schedule and Related Information](#)

**Session I**

[Recording Session Thursday Feb 3, 2011 2:00 EST](#)

[Power Point presentation](#)

[DRAFT Local Application Migration Steps](#)

Instructor: James Calkins, NOAA/NWS, Silver Spring, MD Feb 3, 2011  
Topic: Local Application Migration Training

**Session II**

[Recording Session Wednesday Feb 16, 2011 2:00 EST](#)

Topic: Subversion\_Subscription  
Instructor: John Olsen, NOAA/NWS, Silver Spring, MD Feb 16, 2011

[Recording Session Thursday Feb 17, 2011 2:00 EST](#)

Topic: GFE Smart Tools  
Instructor: John Olsen, NOAA/NWS, Silver Spring, MD Feb 16, 2011

**Session III**  
**Session IV**  
**Session V**

National Weather Service  
Systems Engineering Center  
1325 East-West Hwy.  
Silver Spring, MD 20910  
[Contact Us](#)

Disclaimer Privacy Policy  
Credits About Our Organization  
Glossary Career Opportunities

- 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.

[http://www.nws.noaa.gov/ost/SEC/AE/AWIPSII\\_LA\\_Migration\\_Training.htm](http://www.nws.noaa.gov/ost/SEC/AE/AWIPSII_LA_Migration_Training.htm)



# AWIPS II Software Distribution Policy & Procedures



- 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)



# AWIPS II Software Distribution Policy & Procedures



- 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**



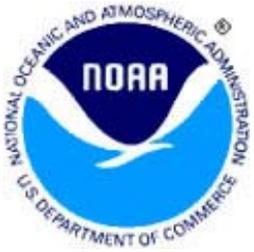


# Benefits for Unidata Users



- 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”*