

NAWIPS Migration Project

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Project Goals

- Full NAWIPS system ported to AWIPS-II
- Software ready for Operational Testing and Evaluation by Q1FY11
- No changes to Forecaster workflow
 - Some visual differences may be unavoidable
- Capitalize on new technology
- Merged NWS (WFO) – NCEP system

Key Takeaways

- NCEP forecast center participation is required for success
- Understanding by all NCEP centers that this is a major, multiyear effort by NCO

Project Background

- AWIPS-II represents a merging of two software systems - NAWIPS and AWIPS
- The combined system will contain components from AWIPS and NAWIPS
 - NMAP, NCEP Product Generation, GEMPAK, Data decoders/encoders, D2D, GFE, Hydro Apps, etc.

Project Background

- N-AWIPS migration will leverage Raytheon baseline functionality wherever possible
 - Some functionality implemented directly
 - Animation, image manipulation
 - Some functionality enhanced
 - NCEP decoders, Grid diagnostics
- No NCEP functionality is going away!
 - No forecaster workflow changes

FY08 Work to Date

- Approx. 2 FTE effort devoted in FY08
 - Learning Raytheon AWIPS-II system
 - Migration Planning
 - Prototypes developed to help level of effort (LOE) estimations
 - Polling of NC's local applications
- Training (Entire NAWIPS Team)
 - JAVA
 - AWIPS-II Service Oriented Architecture

FY09-10 Major Deliverables

- **NMAP**
 - Leverage AWIPS-II tools while keeping look and feel
 - Little user retraining to be required
- **Product Generation (PGEN)**
 - Support all existing products
 - Implementation will allow greater future flexibility

FY09-10 Major Deliverables

- **Grid Diagnostics**
 - Generalized scientific computation package – In Java
 - “Gold Standard” – Raytheon quote
 - Generalize interface
 - No longer tied to GEMPAK data files
- **GEMPAK**
 - All current applications to be available
 - Will no longer require GEMPAK file format
- **Decoders**
 - All current capabilities to be available

FY09-FY10

Staffing Requirements

- Entire SIB NAWIPS team
 - 5.5 FTEs (vice Plummer – Nov 08)
 - 9 contractors (8 developers, 1 tester)
 - Allowances for NAWIPS bug fixes
 - 1 developer
- Estimate 6 additional contractors needed beginning Q3FY09
 - via AWIPS-II transition funding

Funding Sources

- FY09-10
 - Base AWIPS funding
 - AWIPS-II Transition Funds
 - Subject to passage of President's budget
 - Will be used for hardware and contractor requirements
 - Aviation initiative
 - Unclear if this level of support will remain in FY09-10
 - Base Funds

Funding Sources

- FY11-Beyond
 - Reduction of AWIPS base possible
 - APO must demonstrate savings from effort
 - No AWIPS-II Transition funds
 - NCEP may be developing NWS requirements
 - Possible increase of AWIPS base funds?

Risk Management

Project Risks			
Risk	Impact / Probability	Description	Strategies for Mitigation
AWIPS-II Transition Funding	High/ Med	AWIPS-II transition funding for NCEP is new money in the President's budget – A prolonged CR will impact our abilities to bring new contract staff on board	<ul style="list-style-type: none"> • Migration plan already anticipates a delay to Q3FY09 • Apply more base funds • Defer target deployment date • Shift FTE Resources in NCO/SIB
New Labor Contract	High/ Med	Current labor contract with SAIC expires March 2009. Potential for large number of existing staff to leave if a new company wins the re-compete.	<ul style="list-style-type: none"> • Shift FTE resources in NCO/SIB • Defer target deployment date
Shifting Raytheon Baseline	Low/ Med	Raytheon still making major architectural software changes to its baseline. The primarily impacts GEMPAK routines (i.e. non graphical applications)	Defer target deployment date for GEMPAK applications only
NCO, NC, NWS coordination	Med/ Low	There are many moving parts to this project. It is important to keep all the centers and the NWS informed of our activities and progress so that deployment can occur on time	<ul style="list-style-type: none"> • Monthly status meetings with NCO , the NC's and the NWS
NWSEO Concerns	Low/ Low	NWSEO may have some concerns/issues about possible work environment changes	<ul style="list-style-type: none"> • Workflow and appearance changes to a minimum • Keep NWSEO involved through Beta delivery¹³ evaluations

National Centers and Unidata Involvement

- Both National Centers and Unidata
 - Monthly migration telcons
 - IV&V, OT&E (baseline + NAWIPS extensions)
 - Test plans, cases and execution
 - User training (limited) – web based
 - Script and table conversions
 - Some execution and format changes necessary
 - Developers conference scheduled late FY09

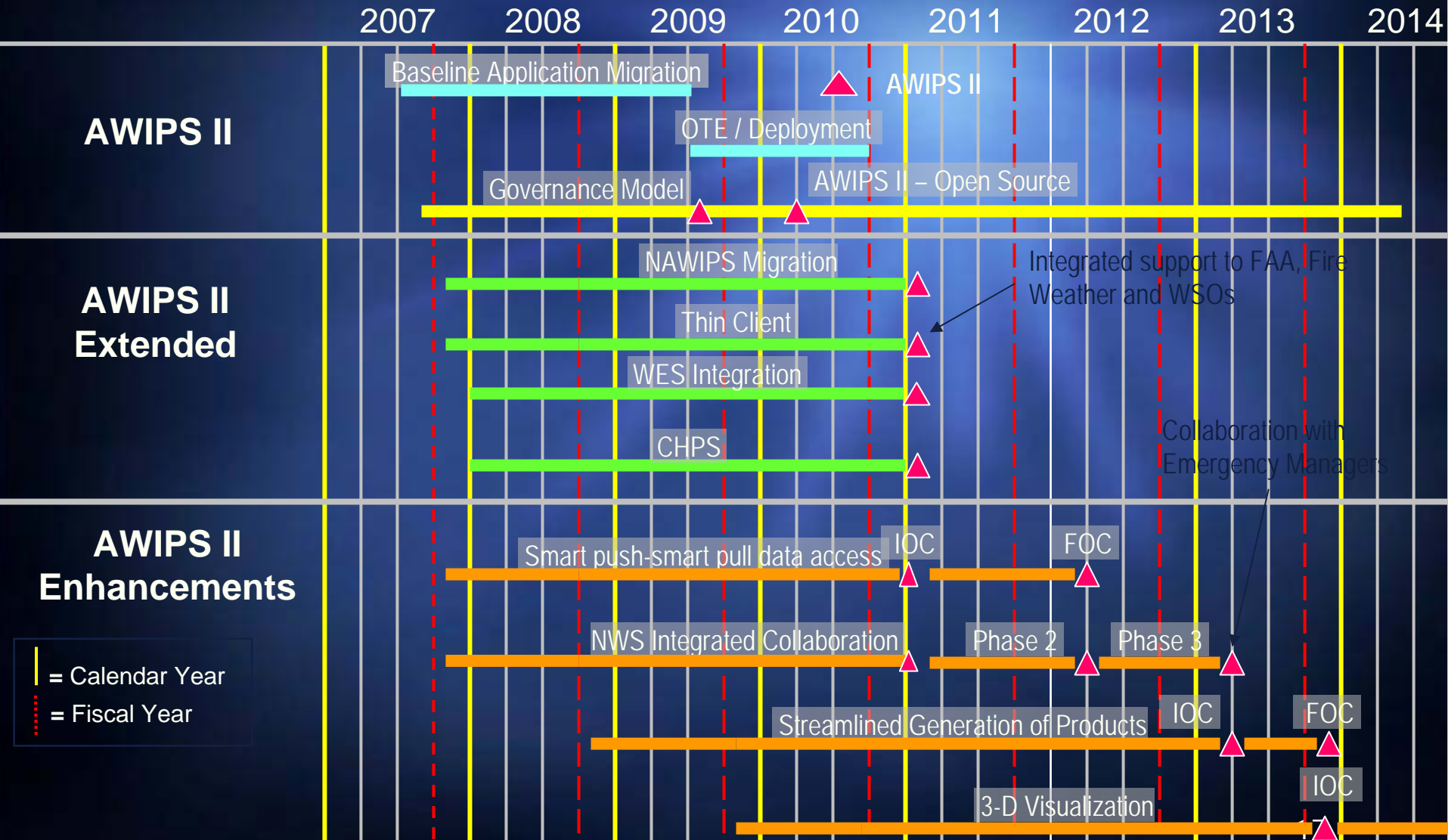
National Centers and Unidata Involvement

- National Centers
 - Training of the trainer activities
 - Hardware/Network – Combine AWIPS and NAWIPS systems (start in FY09)
 - Definition, procurement, installation of National Centers configuration
 - NCEP EA involvement
- Unidata
 - Design and development collaboration
 - Liaison with University community

Schedule

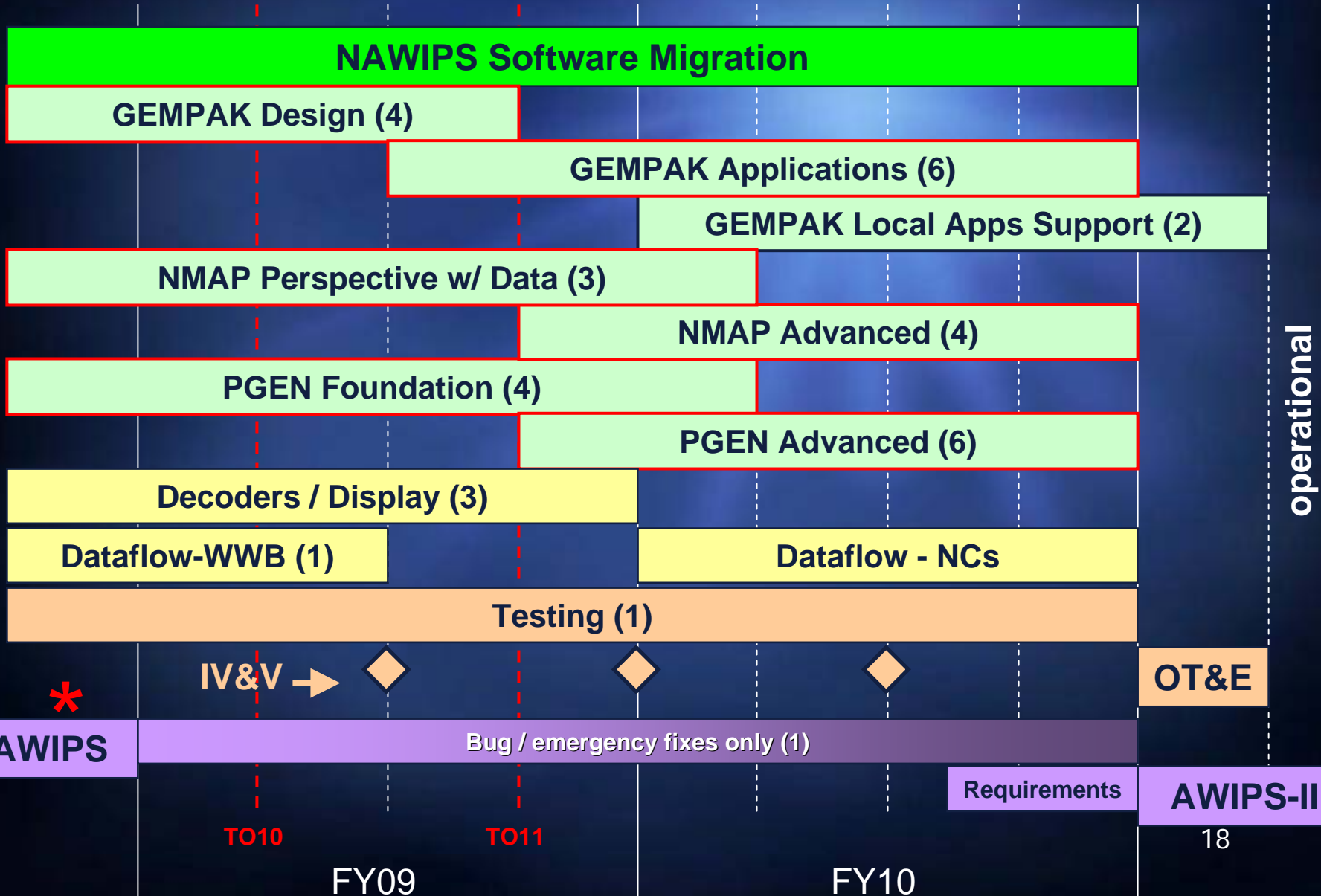
- FY09-FY10 Timeframe
- Three “Beta” releases for Center evaluations
 - Every 6 months
- Approximately 12 months behind the NWS initial deployment schedule
- “Version 1” NCEP AWIPS-II system Q1FY11

AWIPS Technology Infusion Roadmap



N-AWIPS Migration Timeline

(maximum SIB staffing requirements)



operational

Summary

- NAWIPS frozen, bug fixes only
- Transition has started
- Major 2-year project for NCO/SIB
 - Extra staff needed
- No changes to forecaster work flow
- Requirements for success:
 - National Centers' involvement
 - Continued coordination with AWIPS program, Raytheon and Unidata collaboration

Backup

Project Schedule – Q2FY09

- NMAP perspective – 50% complete
- PGEN - basic functionality
- GEMPAK – planning 80% complete
 - Forward compatibility AWIPS-II database access
- Decoders – 80% complete
- Full dataflow established
- NCs IV&V plans and test cases draft

Project Schedule – Q4FY09

- NMAP perspective – 70% complete
- PGEN - intermediate functionality
 - 10% products
- GEMPAK – 30% complete
- Decoders - complete
- NCs IV&V plans and test cases complete
- NCs hardware, network configurations defined

Project Schedule – Q2FY10

- NMAP perspective – 90% complete
- PGEN - advanced functionality
 - 50% products
- GEMPAK – 60% complete
- NCs OT&E plans draft
- NCs servers and dataflow established

Project Schedule – Q4FY10

- All major migration aspects complete
 - Software deliverables
- NCs formulate new requirements
- NCs OT&E plans complete
- NCs servers, AWIPS-II services, dataflow
 - Ready for OT&E