



AWIPS-II Overview

Part 1: Edward Mandel



Outline



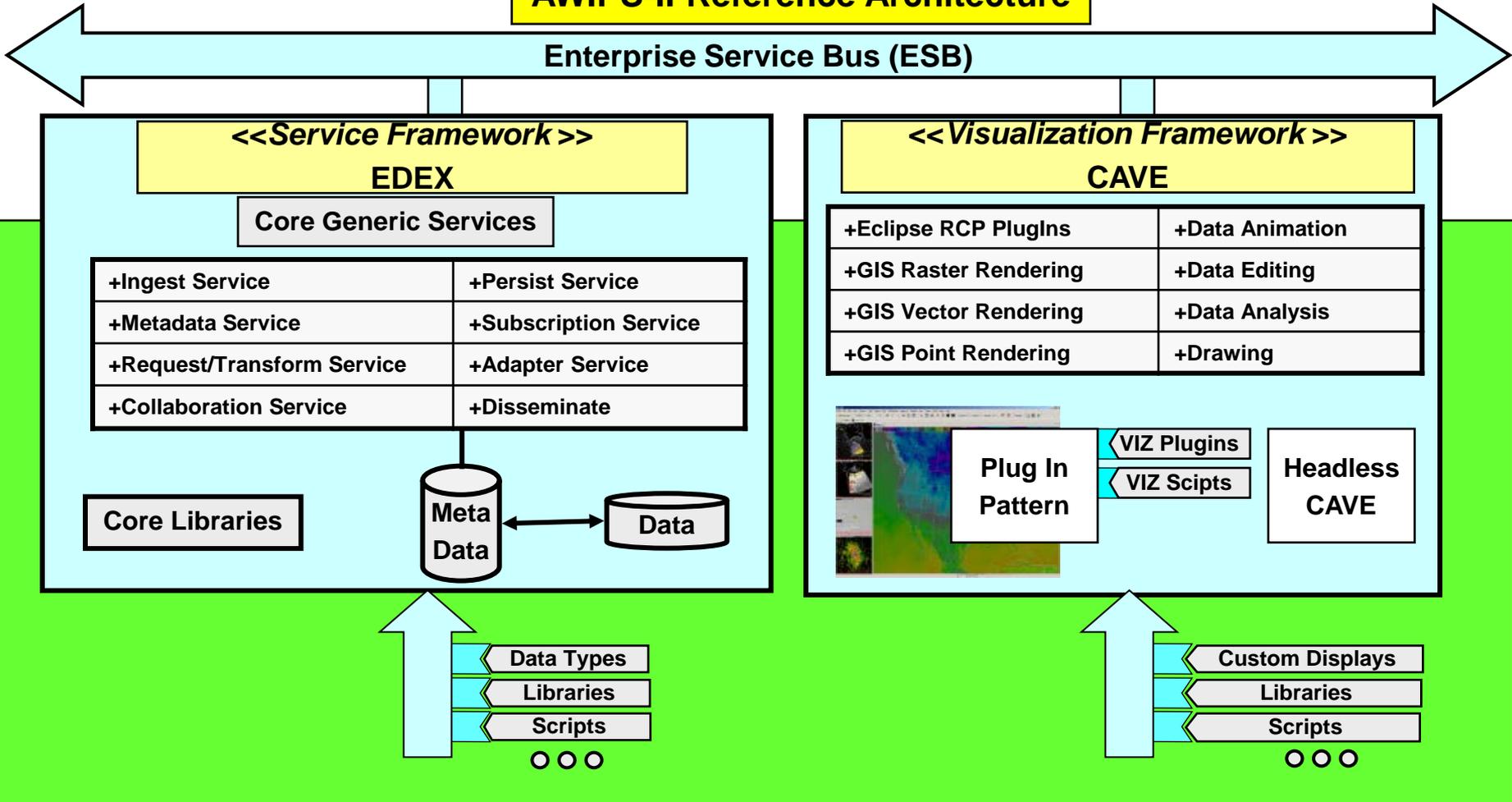
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- Deployment Status
 - Major Program Developments
 - Virtual Lab
 - Development Community
 - AWIPS-II Community Development Governance
 - Community Developer Training
 - Satellite Proving Ground Perspective



AWIPS-II

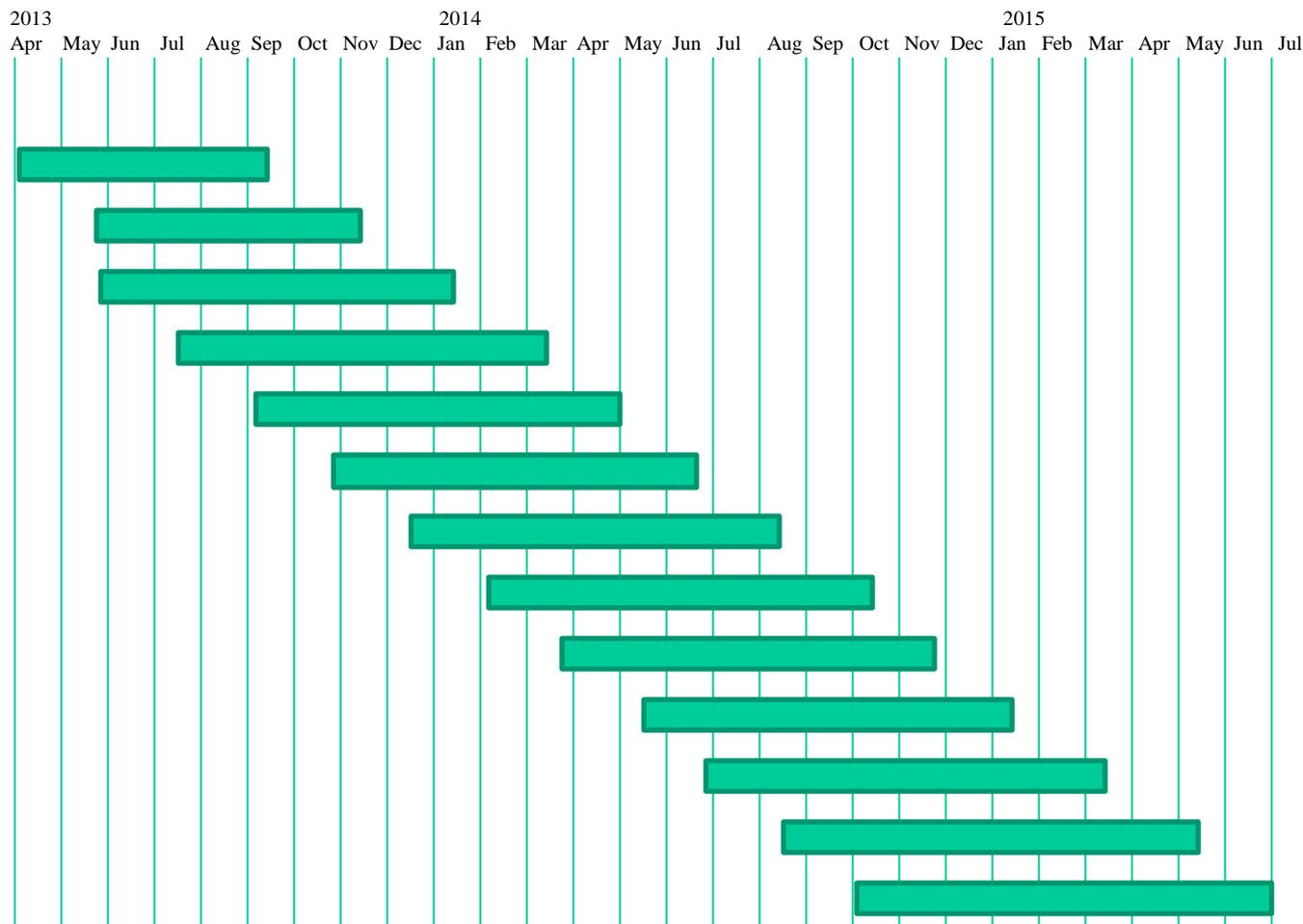


AWIPS-II Reference Architecture





Deployment Schedule



Grouping and Schedule subject to change

Schedule Bands represent “Early Start to Late Finish”



Major Program Developments



Title	Description	2012		2013				2014				2015			
		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Thin Client	Allows remote AWIPS access to be used by CWSUs, impact-based decision support services, and COOP scenarios at NCs and RFCs	IOC		FOC											
NAWIPS	Integrate capabilities between field and national offices leading to more efficient services and consolidation of hardware/software					IOC		FOC							
Data Delivery	Develop operational robust infrastructure to support "intelligent" access to non-local data provider datasets, and provides mitigation to bandwidth issues						IOC								FOC
Collaboration	Provide the ability to communicate NWS forecasts to our customers and partners more efficiently so that the appropriate response is generated	IOC													FOC
Hazard Services	Integration of Warngen, GHG and Riverpro and extension of capabilities to more efficient information accessibility in support of Impact-based Decision Support Services (IDSS)							IOC						FOC	
CRS2AWIPS	Migrate NOAA Weather Radio (NWR) functionality to existing AWIPS II infrastructure and mitigate risk of legacy NWR system failure (due to obsolete parts)														IOC



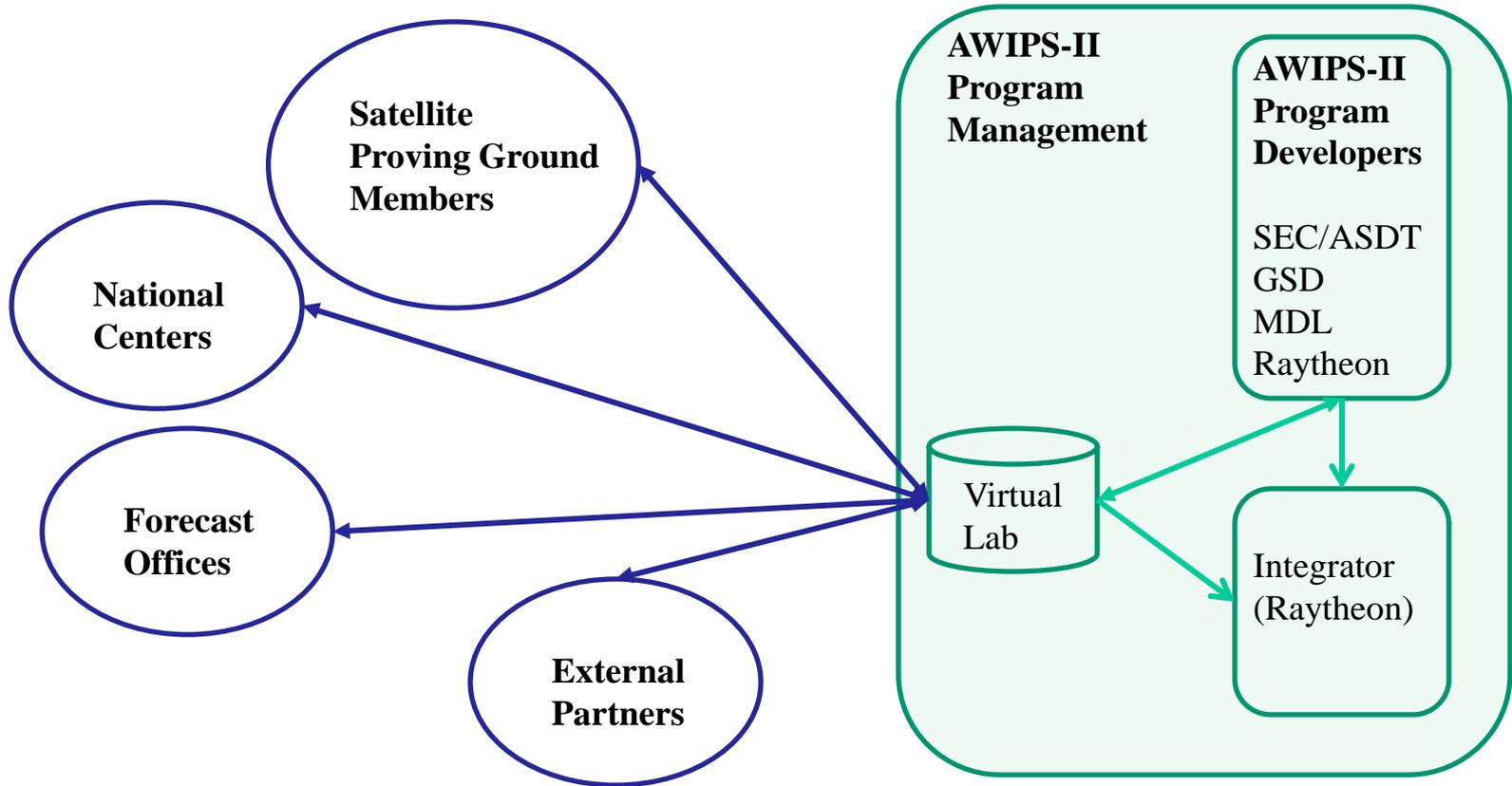
The Virtual Lab



- Comprehensive Project Management and Collaboration Website
- Managed by Steve Smith, NOAA/NWS/OS&T/MDL
- Tools for Communities and Projects include:
 - File management
 - Wikis
 - Blogs
 - Discussion Forums
 - Workflow Management
 - Issue Tracking
 - Software Revision Control
 - Software Integration Management (Code Review and Continuous Integration)
 - Search Engine
- Web services available for integration with other network-aware applications
- Authentication via NOAA LDAP
- Visit at <https://nws.weather.gov/innovate/>

New “Home” for AWIPS-II Development Community

AWIPS Development Community



Process Orientation

Bottom-Up

Top-Down



Governance

AWIPS-II Community Developed Capabilities

Focus is on the “Bottoms-Up” Community

Key assumption is that work does not originate as part of a “Systems Engineering” process
Expects development via a mission-responsive Rapid Response or Experimental Prototyping

Objectives – For Developers

Do not require development of documentation until it is clear that the content will be needed
Make the process clear, straightforward, affordable, and optimizable

Objectives – For AWIPS Program Office

Promote good practices that optimize the integration process
Promote community collaboration
Promote effective community resource utilization
Minimize incorporation cost and schedule
Minimize Operational Risk due to Feature Insertion



Governance

AWIPS-II Community Developed Capabilities

The VLab “makes the market”

All transactions and status will be conducted and stored using the Vlab AWIPS Community
All integration artifacts are expected to be managed with Vlab Projects

Two Governance Phases

Part 1 - Prototyping and Development

Emphasis on collaboration, creative solutions
Encourages quality practices to minimize Baseline Integration cost/schedule
Facilitates Operational and Performance Testing

Part 2 - Baseline Integration

Process for formal integration and deployment
Engineering Process to manage Cost/Schedule/Risk

Details are forthcoming via the AWIPS Community on the VLAB



AWIPS-II Developer Training



Goal: Diverse community with broad expertise

Enabled by Open-Source system basis

Range of required technologies is a challenge

Use of VLab as the institutional knowledge base

Training materials

Access to community and contractor experts

Training Effort must be organic –

By and For the development community

EPDT has begun the process



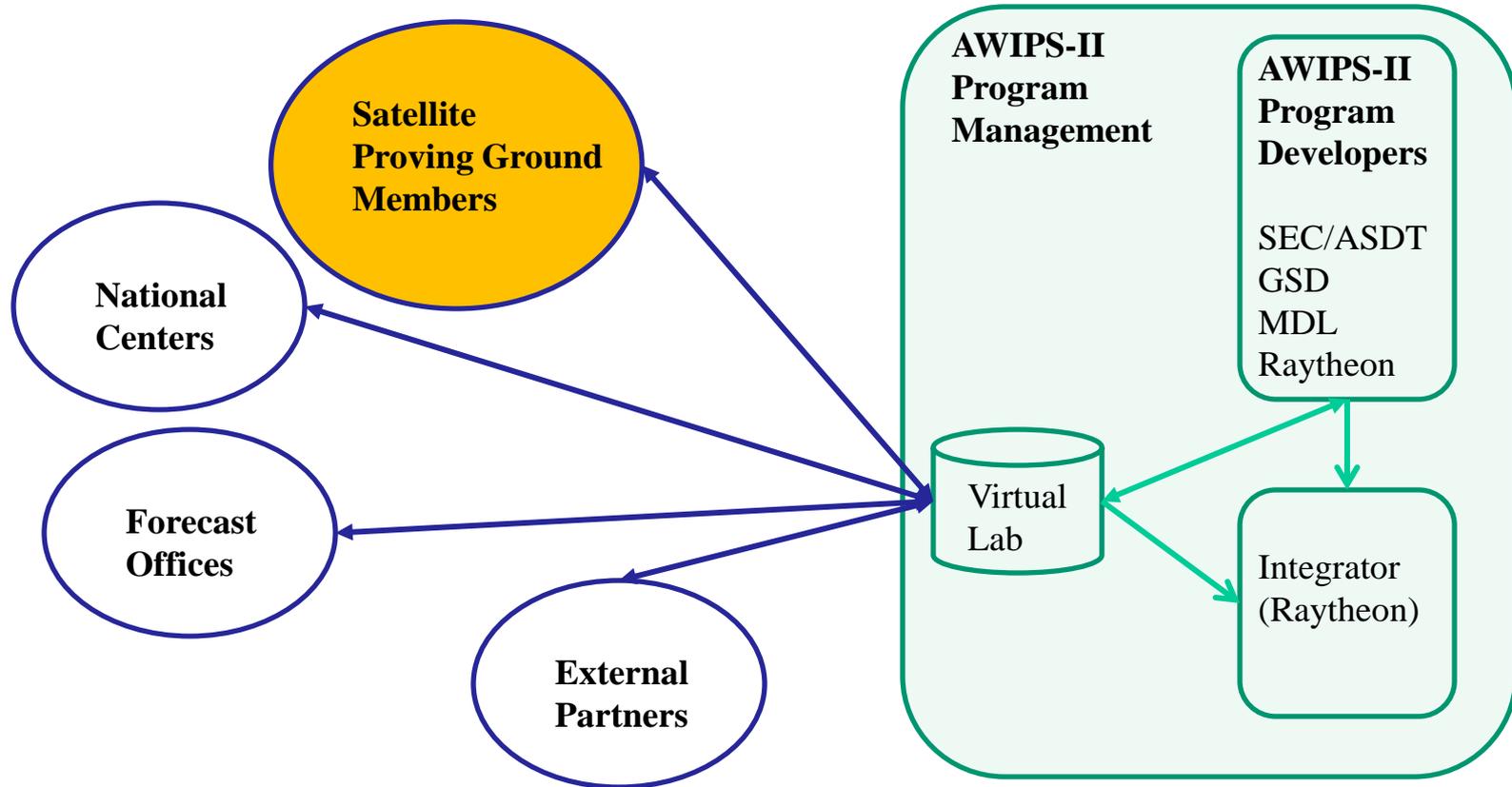
AWIPS-II

Proving Ground Perspective

Part 2: Mike Johnson



Satellite Proving Ground in the Community



Process Orientation

Bottom-Up

Top-Down



Moving Beyond Product Demonstration



- Establish an Efficient Migration Path from Proven Prototype to AWIPS-II Operational Capability
- Create new opportunities to exploit Satellite Observations through AWIPS-II Visualization
 - RGB
 - Multi-sensor fusion
- Integrate Satellite data more fully into forecast and warning operations
- ***Explore potential for fusion processing within the AWIPS system.***



Proving Ground Supporting Roles



VLab Support Team

Chaired by Steve Smith

Creating and evolving the Portal to support a Robust AWIPS-II Development Community

PG AWIPS-II Dev Coordinator

Joe Zajic

Facilitate the Prototype to Operational Capability Migration Path.

NOAT & SDEB

Guidance and Direction

EPDT - Led by SPoRT

Seeding the development community with expertise





The Virtual Lab and You



We expect that the Virtual Lab will be our Community Center
Repository for our AWIPS software products and results
Means for inter-team collaboration
Coordination of Application Testing
Facilitates the Migration Path to Operations
Organizes Training and Reference Material

<https://nws.weather.gov/innovate>