Experimental Products Development Team (EPDT) Supporting New AWIPS II Capabilities

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Session: "AWIPS II System Update Part II"

Origins of EPDT

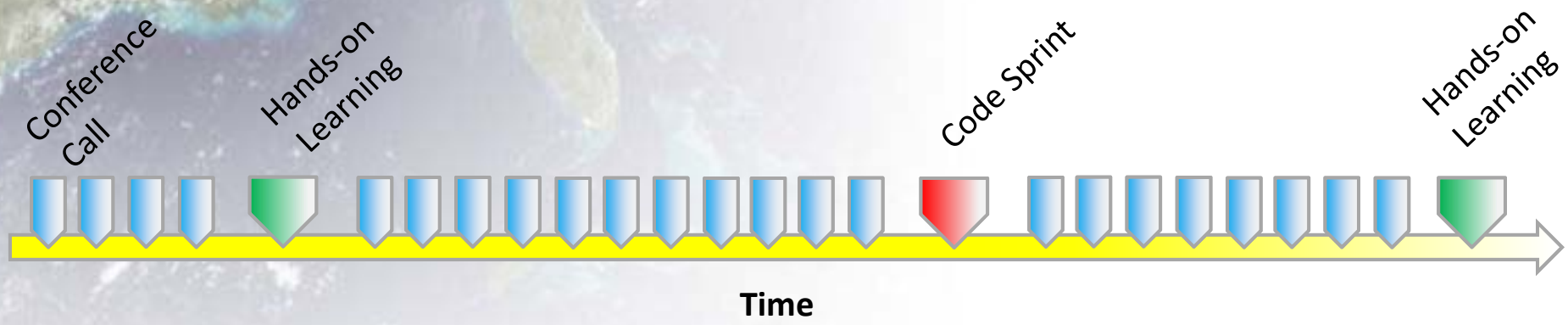
- Originally SPoRT formed EPDT internally to focus on:
  - Creating advanced display capabilities for NASA research data in AWIPS II environment
  - Create training for AWIPS II development
- General need for AWIPS II development training within community
- Expanded EPDT out into the community
- Funded jointly by GOES-R Proving Ground, and NASA SPoRT
- Support from the National Weather Service

GOES-R/JPSS Proving Ground EPDT

Objectives:

- Create a community environment to share AWIPS II development knowledge
- Develop technical expertise of AWIPS II within NASA, NOAA's CIs, and NWS
- Create AWIPS II plug-ins for GOES-R proxy and JPSS data
  - Ingest
  - Analysis
  - Display
- Provide feedback to NWS on:
  - External development process
  - Governance of locally developed AWIPS II software

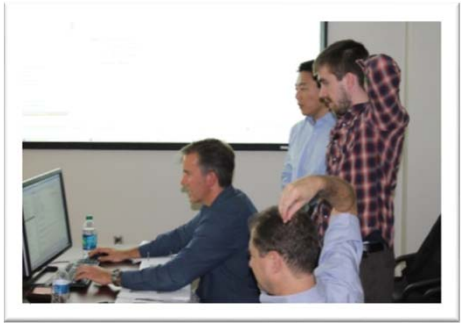
Learning Structure



- Conference Calls
  - Prepare for initial hands-on learning
  - Supplemental topics
- Hands-on Learning
  - Classroom setting learning
  - Learn to develop a plug-in from ingest to display
- Code Sprint
  - Participants pick project and “learn by doing”
  - Work on projects in small groups
  - Groups help each other

Hands-on Learning Training

- Topics covering:
  - Ingest Plug-in EDEX (Day 1)
  - Data Model Plug-in (Day 1)
  - Visualization Plug-in CAVE (Days 2-3)
- Hands-on exercises
- Training was recorded and provided back to NWS



Code Sprint Training

- Team broken into small groups
- Groups actively develop project during sprint
- “Learn by doing” something meaningful
- Produce working AWIPS II feature by end of code sprint
- Continue working on feature after code sprint ends

Group A and Group B

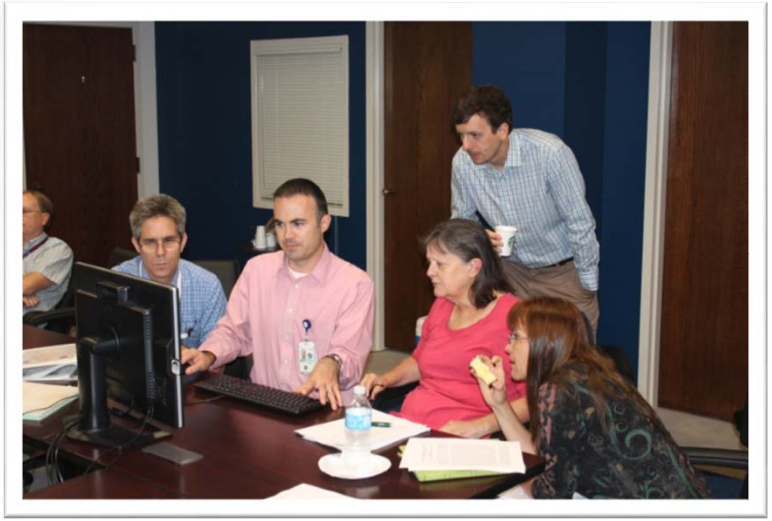
- Group A (14 Participants)
  - Conference calls began Fall 2012
  - Hands-on Learning March 2013
  - Code Sprint Fall 2013
  - Code Sprint Fall 2014
- Group B (14 Participants)
  - Conference Calls began Early Spring 2014
  - Hands-on Learning April 2014
  - Code Sprint Fall 2014

Participant Breakdown

- Limit size to facilitate group learning and development activities
- Participants are nominated by organizational leaders
- One representative from:
  - NWS Regions
  - Each NOAA Cooperative Institute (and SPoRT)
  - MDL and GSD
  - Raytheon
  - NWS SEC
  - GOES-R PG AWIPS II developer
- **Team Lead/Instructor:** Jason Burks (NASA SPoRT)
- **Instructor:** Max Schenkelberg (Raytheon)
- **Advisor:** Ed Mandel (NWS/OST SEC Development Branch Chief)

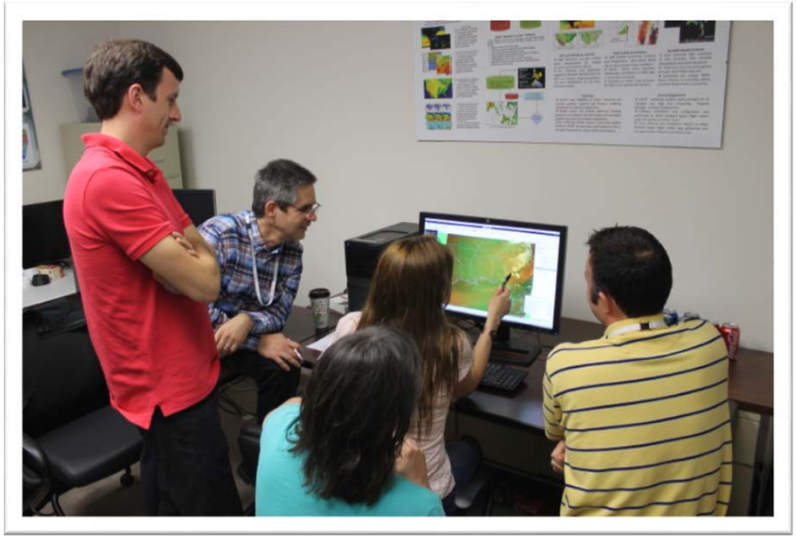
Group A Fall 2013 Code Sprint

- Sept 24 - 26, 2013
- EPDT subgroups worked on projects
  - Tracking Meteogram
  - RGB Recipe
  - mPing ingest and display
  - Mini-EDEX
- Significant progress
- Furthered learning

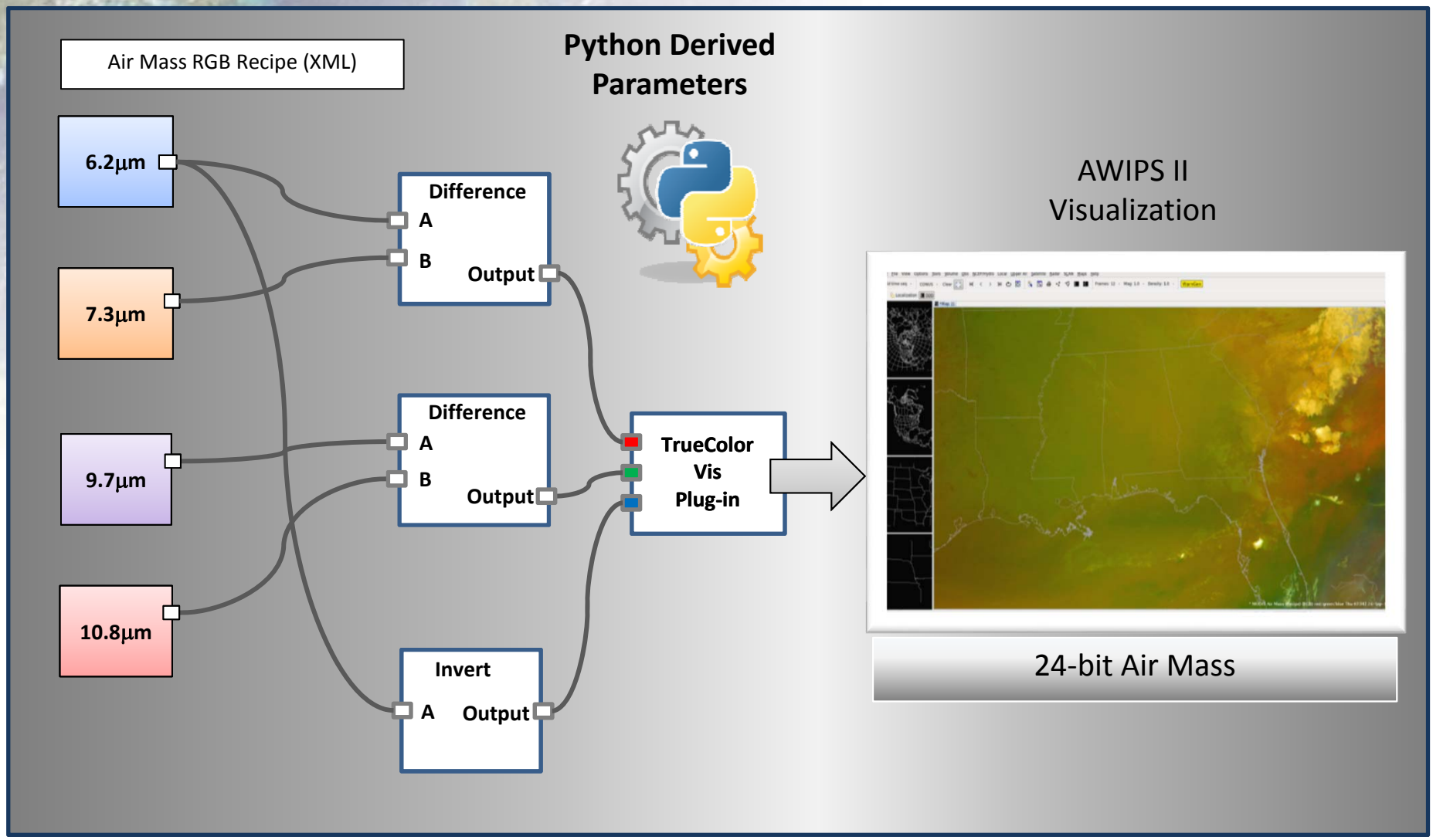


RGB Recipe Project

- Identified current deficiency in AWIPS II true color imagery display
- All EUMETSAT Recipes implemented
  - Air mass (VIIRS/CrIS)
  - Dust
  - Nighttime Microphysics
- RGB Composites
  - Natural Color composite
  - Snow Cloud composite
  - VIS/VIS/IR composite
- Can be used in 14.4.1, only localization needed
- Working on a configuration GUI



Example of RGB Recipe



2014 EPDT Code Sprint Work

- GOES-R derived product ingest
- Phased Array Radar display
- National Centers Perspective (NCP) learning
- RGB Team EUMETSAT recipes

Feedback/Improvements

- Collected feedback from Group A and B
- Adapted training based on feedback to make Group B training better
  - Expanded Visualization plug-in development section
  - Slowed down presentation of Visualization plug-in
  - Adjusted to take into account new features in AWIPS II

Future EPDT

- Group C in Spring/Fall 2015
- Adapt to latest build of AWIPS II available
- Previous EPDT Members continue to work on AWIPS II
- Previous EPDT members have real world experience troubleshooting problems in AWIPS II

Questions