



Experimental Products Development Team (EPDT)

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NASA MSFC SPoRT



Transitioning unique data and research technologies to operations



Origins of EPDT

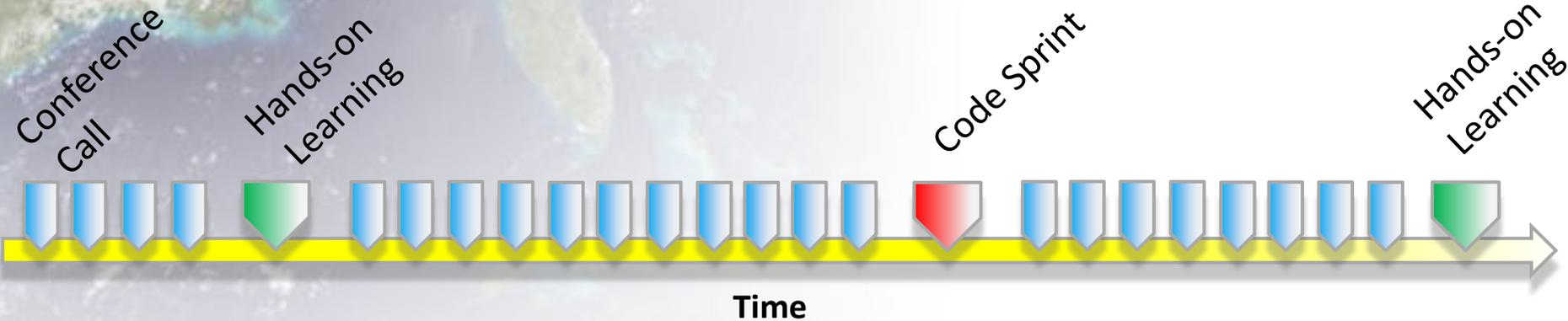
- Originally SPoRT formed EPDT internally to focus on:
 - Creating advanced display capabilities for NASA research data in AWIPS II environment
 - Create training for AWIPS II development
- General need for AWIPS II development training within community
- Expanded EPDT out into the community
- Funded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

GOES-R 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 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
 - 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
- 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)

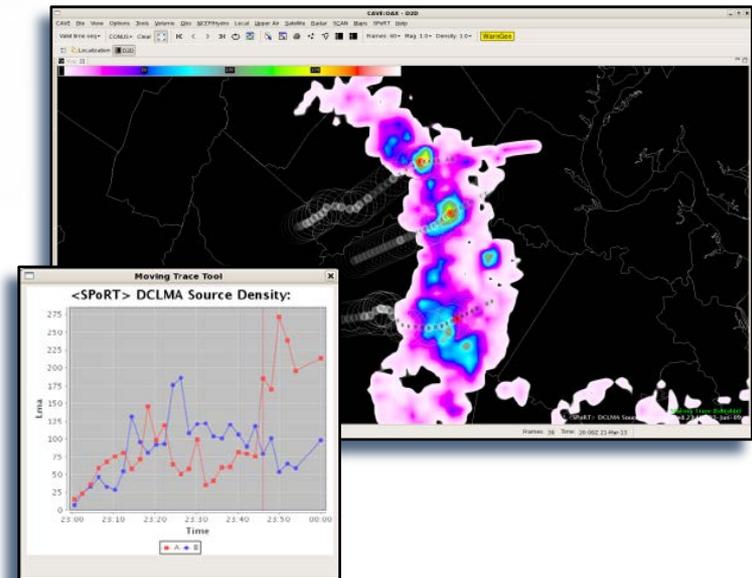
Group A Fall 2013 Code Sprint

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



Tracking Meteogram

- Co-developed by Meteorological Development Laboratory and SPoRT
- Allows sampling of Radar, Satellite, Model, and Total Cloud Lightning products in AWIPS II
 - Cloud-Top Cooling
 - Total Cloud Lightning
- Tested at Operations Proving Ground (OPG) May 2014

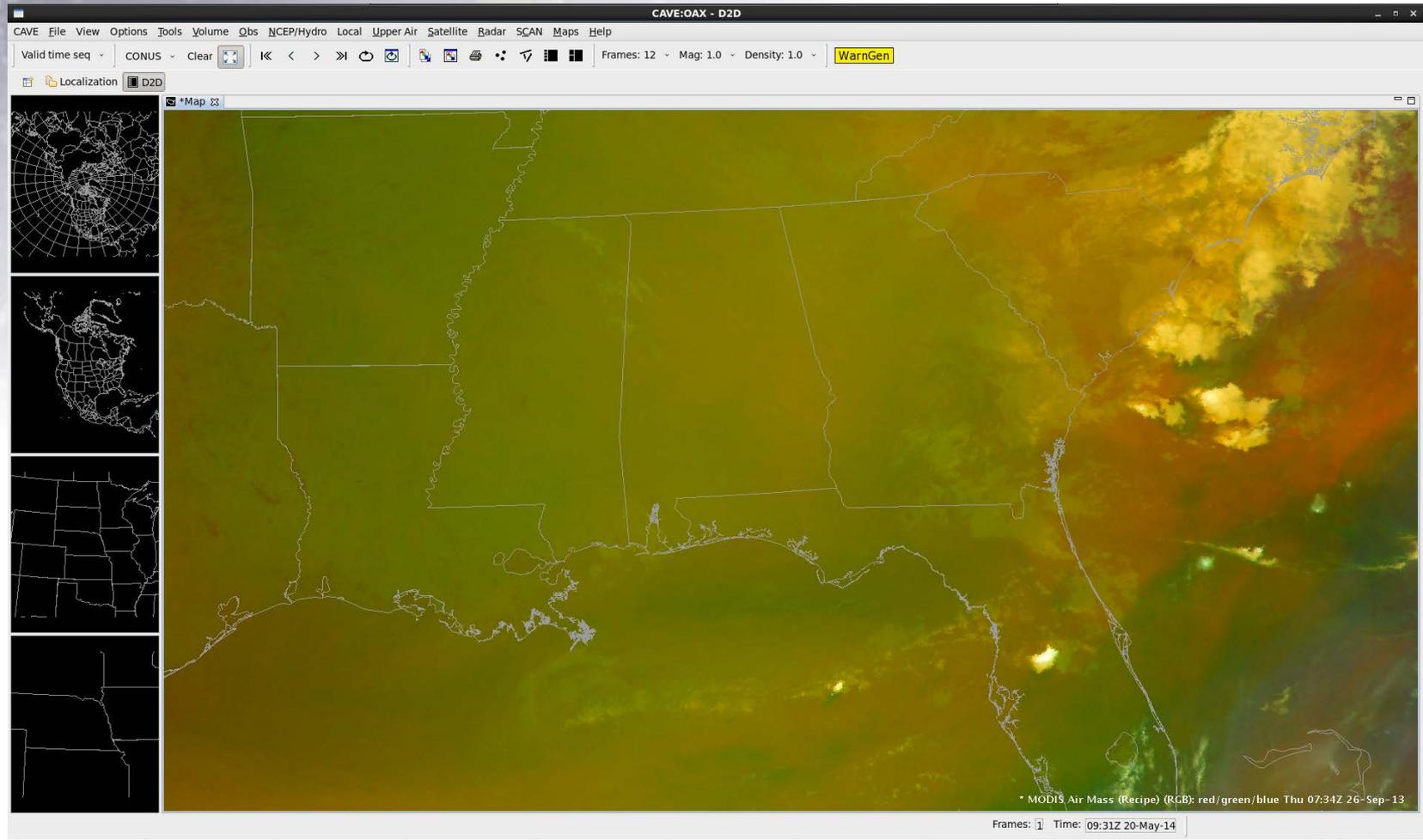


RGB Recipe Project

- Extend true-color capabilities in AWIPS II
- Add recipe combination of data
- Combinations can be saved to XML localization format



Example of RGB Recipe



Group B

- 15 attendees
 - Groups involved include:
 - NWS SEC, NWS OH, NWS MDL, SSEC, CIRA, CIMMS/NSSL, NOAA GSD
- Hands-on Learning April 1-3, 2014
- Code Sprint Scheduled for Fall 2014
- ~30 people have received training through EPDT

Feedback/Improvements

- Collected feedback from Group A
- 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
- Collected feedback in Group B for possible future versions

Future EPDT

- Group B code sprint Fall 2014
- Mixed learning/code sprint Group A Fall 2014
- Merging Group A and Group B conference calls
- Several requests for Group C

Questions

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