Experimental Products Development Team (EPDT)

Jason Burks

NASA MSFC SPoRT

Origins of EPDT

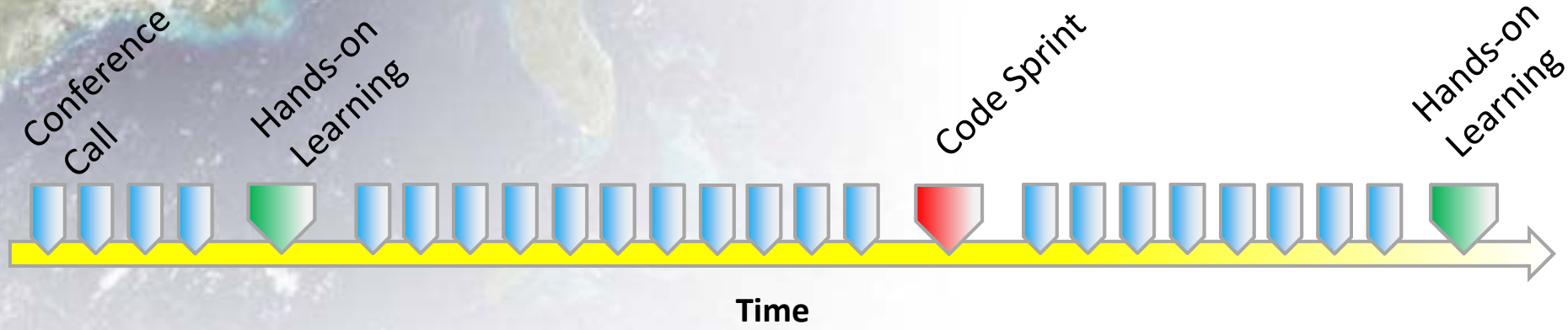
- Originally SPoRT formed EPDT internally to focus on:
  - Creating advanced display capabilities for NASA research data in AWIPS II environment
  - Create training for AWIPS II development
- General need for AWIPS II development training within community
- Expanded EPDT out into the community
- Funded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

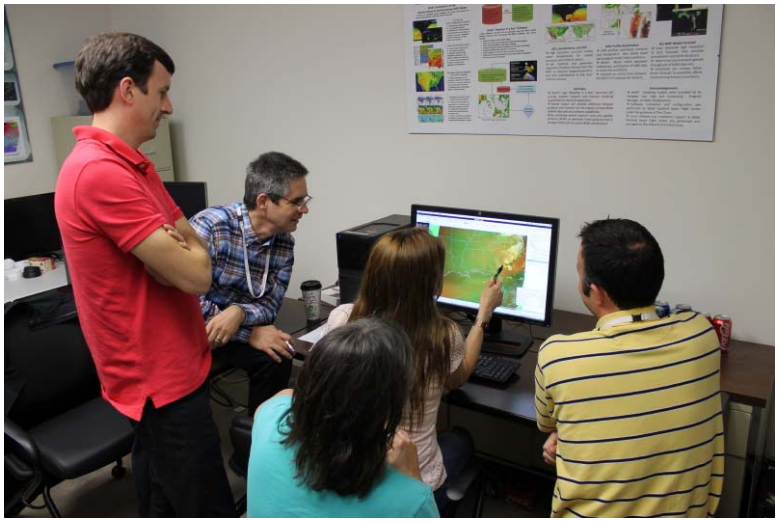
- Limit size to facilitate group learning and development activities
- Participants are nominated by organizational leaders
- One representative from:
  - NWS Regions
  - Each NOAA Cooperative Institute (and SPoRT)
  - MDL and GSD
  - Raytheon
  - NWS SEC
  - GOES-R PG AWIPS II developer
- **Team Lead/Instructor:**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

Group A Fall 2013 Code Sprint

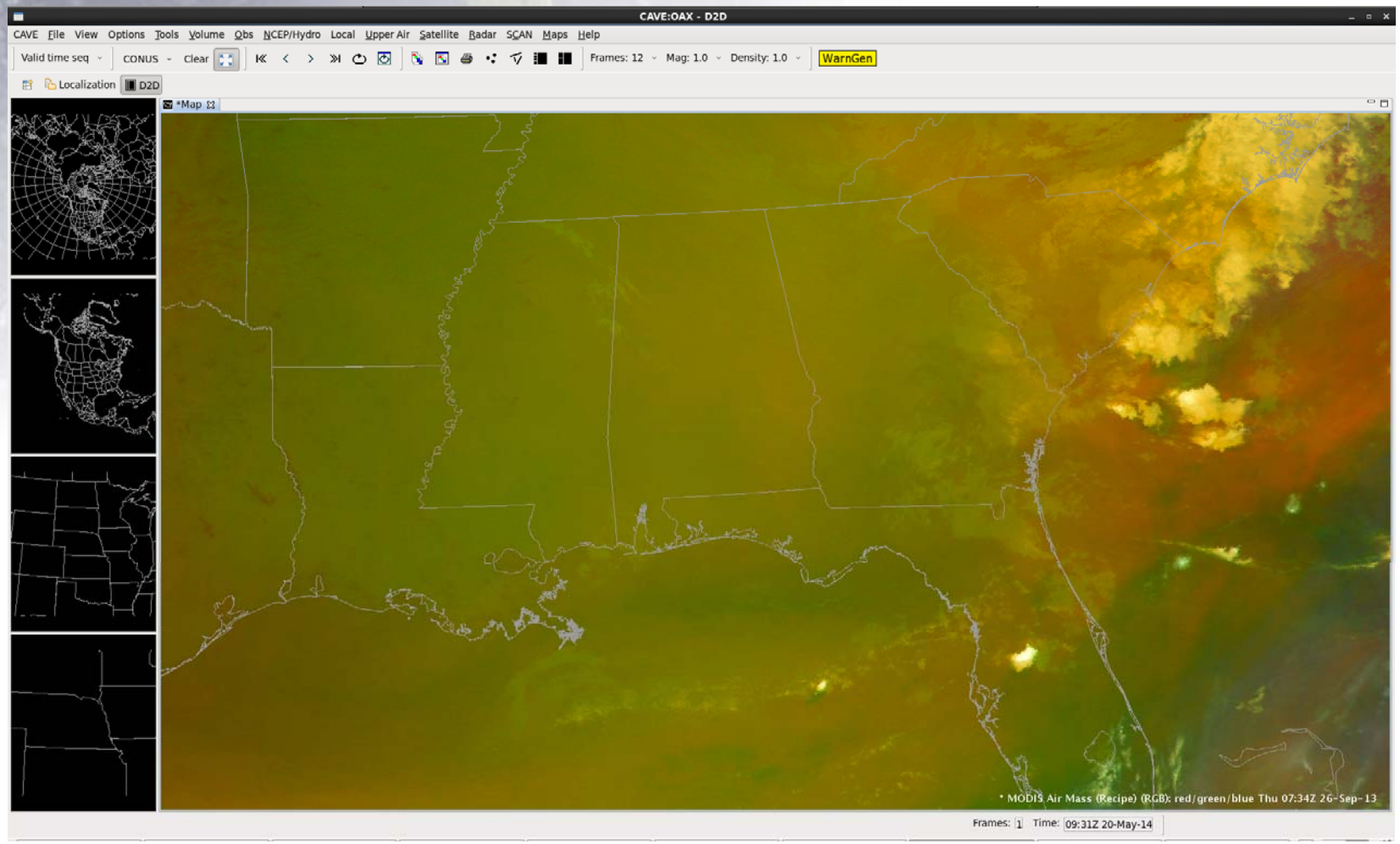
- Sept 24 - 26, 2013
- EPDT subgroups worked on projects
  - Tracking Meteogram
  - RGB Recipe
  - mPing ingest and display
  - Mini-EDEX
- Significant progress and furthered learning

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

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

Jason.E.Burks@nasa.gov