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

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32nd Environmental Information Processing Technologies Conference / 96th AMS Annual Meeting (2016) in New Orleans, LA
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
Previous Groups

• Group A (14 Participants) 2013
• Group B (14 Participants) 2014
• Group C (15 Participants) 2015
• Group D (??) 2016
  – Hands-on Training Spring 2016
  – Code Sprint Fall 2016
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)
Code Sprints 2016

• GOES-R Code Sprint
  Nov 3-5
  – TOWRDoc Integration for GOES-R products
    • Lee Byerle, Matt Comerford, Matt Ikemayer
  – Loop and missing tile issues
    • Tiffany Meyers, Tom Filiaggi, Ama Ba, Eric Holweg
Code Sprints 2016

• JPSS Code Sprint Dec 1-3
  – VIIRS Active Fires Plugin
    • Darrel Kingfield, Lingyan Xin, Kaba Bah, Jordan Gerth
  – NUCAPS Gridded Planar Display
    • Matt Foster, Aaron Anderson
  – Documentation of pointsetplugin
    • Evan Polster, Nate Smith
  – Integration of JPSS Products
    • Kevin McGrath, Scott Longmore
  – Localization file creation for JPSS products and integration into TOWRDoc
    • Matt Comerford, Lee Byerle, Matt Smith
  – Image and Looping Tools
    • Jason Burks, Deb Molenar
EPDT Code Sprint Products

VIIRS Active Fires

AMSR2 Cloud Liquid Water
Future EPDT

• Group D in Spring/Fall 2016
• 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