

Tropical Pacific Testbed Pre-Initial Operating Capacity Meeting

Visitor: Jordan Gerth

Meeting location: Honolulu, HI

Dates: March 5 – 9, 2012

Summary

The objectives of the visit were largely accomplished. The purpose of the meeting was to

- (1) coordinate with Roy and Steve about the vision for the Tropical Pacific Testbed (TPT) and install the Advanced Weather Interactive Processing System (AWIPS) II software and development environment on a temporary system for Roy Huff at U. Hawaii;
- (2) outline a strategy with the NWS partners, from both Pacific Region and the Weather Forecast Office (WFO) in which the testbed is a successful demonstration for the GOES-R Proving Ground (GRPG) interests and valuable to the participating forecasters;
- (3) bring the initial GRPG products into the AWIPS environment at the WFO and discuss AWIPS II issues related to the GRPG at Pacific Region Headquarters (PRH); and
- (4) assure the proper personnel have been identified to coordinate the installation of the L/X-band antenna on the Honolulu Community College (HCC) campus before June.

By Day

On Monday morning, I met with the initial stakeholders for the GRPG and we discussed programmatic issues. From the NWS, Bob Ballard (HNL SOO), Derek Wroe (Forecaster), Gloria Fletcher (HNL ITO), Danny Eum (Contractor), Bill Ward (PRH SSD Chief), and Eric Lau (PRH SSD Met) attended. I provided a lengthy outline of the general interactions that transpire during a GRPG testbed, including the elements of technical implementation, demonstration, and feedback.

During Monday afternoon, I worked with Roy on installing the AWIPS II executables onto a temporary system so he could become more familiar with the systems that he will be working on in the future at the WFO.

On Tuesday, Roy and I visited PRH and worked with Eric Lau on issues related to AWIPS II. We discovered two satellite-related bugs and submitted discrepancy reports: the satellite decoder was unable to decode the AVHRR imagery in the operationally-specified 1 km GINI format, and the highest resolution of the GOES satellite imagery was 14 km in the Common AWIPS Visualization Environment (CAVE). We also discussed some special issues with the AWIPS II software in Pacific Region, namely that



their operational requirements for satellite data are more extensive than over CONUS, and the amount of coverage required is expansive. Pacific Region is bringing a large amount of data into the CAVE via a McIDAS plug-in.

On Wednesday, Roy and I worked with Gloria Fletcher to implement the U. Wisconsin Convective Initiation, Overshooting Top, and Thermal Couplet (UWCI/OTTC) products, Morphed Integrated Microwave Imagery at CIMSS (MIMIC) Total Precipitable Water (TPW), Advanced Very High Resolution Radiometer (AVHRR) imagery, and CIMSS Regional Assimilation System (CRAS) model output on the



servers at the WFO. All of the workstations were updated to allow for the display of these additions the following day. The MIMIC TPW product was added in a new submenu in the "localSat" menu. The AVHRR imagery menu entries were previously created under the Satellite menu as part of the operational build. The CRAS and UWCI/OTTC fields are now available in the Volume Browser, with additional fields under "HFO Stuff".

On Thursday morning, Roy, Eric Lau, and I visited Honolulu Community College (HCC) to evaluate the site of the antenna installation.

We noticed that there was an 18-foot wall to the west of the antenna installation site. There was also concern about the antenna wind load. There are a number of other issues that were identified and Mike Meyer, Director of Information Technology at HCC, is working to address them. We are on track for an early June installation. These photographs were taken on the roof of Building 2 (B2) at HCC. Directional photographs were taken at a height of approximately 6 feet from the roof level, approximately 10 feet from the edge of the weatherproofing: <https://picasaweb.google.com/114813312479906509100/HawaiiAntennaSite?authuser=0&authkey=Gv1sRgCN3JmcnLloemjgE&feat=directlink>

On Thursday afternoon, we talked about the products with Bob Ballard and the potential use for them in operations. He was supportive and excited. Bob Ballard is in the process of developing a SmartInit for the CRAS to use in the Graphical Forecast Editor (GFE).

On Friday, Roy and I visited the WFO and met with Bill Ward and Eric Lau to summarize the week's activities. Bill Ward is excited about the strengths of the CRAS in dealing with subtropical flow and was impressed with the immediate utility of the UWCI/OTTC and MIMIC products. In addition, we discussed the network infrastructure between HCC, U. Hawaii at Manoa, and NWS Honolulu. Unfortunately, due to severe weather, Bob Ballard was unable to participate. The severe weather did allow us to realize an issue with the UWCI/OTTC products. That was not related to the AWIPS configuration and will be addressed at U. Wisconsin. Before I left, I installed the AWIPS Development Environment on Roy's temporary workstation.

Recommendations

For NWS OST

Expedite the operational implementation of the GOES Sounder Derived Product Imagery (DPI) covering Hawaii, especially TPW. This was open request from 2010.

Investigate a pathway for access to an AWIPS VPN (Virtual Private Network) from the Cooperative Institutes. Direct access to the AWIPS VPN would facilitate remote implementation of new and updated GRPG products into AWIPS and AWIPS II. Access has been traditionally restricted to federal employees and Raytheon contractors, so this may not be possible, but would be immensely helpful in supporting all WFOs, but particularly OCONUS, to minimize time troubleshooting. An AWIPS VPN provides direct access to the operational AWIPS systems at the WFOs. This has been requested by ITOs previously.

Hold a GRPG AWIPS II workshop for all liaisons, partners, and participants. Such a workshop would be held in CONUS in coordination with Raytheon. NWS Pacific Region should be in attendance.

For GRPG Providers and Trainers

Introduce examples of to-be-demonstrated products during NWS Honolulu's biweekly weather briefings on Tuesdays and Fridays via Roy Huff.

Ensure a close connection between Roy Huff and the GOES-R focal points at NWS Honolulu (Bob Ballard and Derek Wroe) as the testbed is implemented. Offer remote training (VISIT) to Roy and a few NWS forecaster champions in a pre-demonstration exercise in order to build in-house knowledgebase of satellite meteorology and the GRPG products.

Develop online versions of demonstrated products for American Samoa and the equatorial Pacific. NWS Pago Pago (American Samoa) does not have AWIPS. Send a small contingent of scientists working on the GOES-R Proving Ground to NWS Pago Pago for training exercises on satellite meteorology and the products after products are available online.

Assure all demonstrated products are viewable in AWIPS II by the end of November 2012. NWS Honolulu is expected to transition to AWIPS II in December 2012.

For GRPG Management

Invite forecasters from the NWS Honolulu office to participate in this year's Hazardous Weather Testbed at the Storm Prediction Center to increase their familiarity with the process and convective products.

Postpone the beginning of the GOES-R TPT until after the installation of the antenna, and incorporate MODIS/NPP imagery and products into the testbed, particularly those related to moisture and QPE. Delay rotating scientists from Cooperative Institutes through NWS Pacific Region until the majority of products are available (visits should not depend on one weather scenario).

Develop a strategy to assure adequate nearby parking for GRPG visitors to NWS Honolulu WFO.