

GEMPAK-AWIPS II Discussion

**Unidata Policy Committee
Meeting**

12 May 2008

NAWIPS & AWIPS II

- The NWS is developing the next generation AWIPS, called AWIPS II, to be completed in 2011.
- N-AWIPS/GEMPAK, used within the National Centers, will also be migrated to AWIPS II.
- N-AWIPS will be “frozen” in summer 2008 except for bug fixes and minor updates
- N-AWIPS migration to AWIP II is expected to be completed in 2010.
- All of the N-AWIPS functionality is expected to be preserved.

GEMPAK

- It is Unidata's most widely used analysis and display software [over 300 institutions]
- Unidata has relied heavily on and leveraged the efforts of several developers (4-5) at NCEP
- It is the in meteorology departments due to its many unique capabilities
 - Up-to-date decoders and support for NWS datastreams
 - Publication quality output
 - Comprehensive and robust model output diagnostics, including support for ensemble model output
 - Researchers rely heavily on GEMPAK
- Limitations:
 - Does not run on Windows
 - Cannot directly access data from remote servers
 - Since it is tailored for weather analysis and forecasting, it is difficult to apply to other GEO applications
 - GARP, a GEMPAK GUI, was developed by COMET in the early 1990s. It has not been fundamentally improved in over a decade, as the code is brittle and based on legacy code.

IDV and GEMPAK

- IDV now reads GEMPAK grids; more and more GEMPAK functionalities are being added to IDV
 - UPC working with Users Committee to develop a list of such capabilities
- Currently, there is no publication-quality output capability in the IDV – a key limitation for researchers

Unidata and AWIPS II

- UPC working closely with NWS and tracking AWIPS II development
- UPC staff have signed a non-disclosure agreement with NWS and gained access to code
- UPC staff involved in design discussions and providing input from the academic perspective
- Two UPC staff members currently attending AWIPS II training in Silver Spring, MD [they are the only two non-NWS attendees]
- AWIPS II is a moving target – many issues (technical, licensing, etc.) still remain to be resolved
- There will be interest in the university community in using AWIPS II, so UPC will work with NWS and evaluate the software

Users Committee Discussion

- The Users Committee discussed this issue at its 10 April meeting, passing the following resolutions:
- The Users Committee strongly endorses Unidata's position on future support of GEMPAK and the transition to AWIPS-II:
 - Unidata will stand behind the latest release of GEMPAK at least until the point when alternative packages with the same functionality are available to the community.
 - Unidata will continue to monitor and stay involved with the AWIPS-II efforts in NOAA/NWS, in expectation that this package will be made available to the University community when viable.

Issues for consideration and discussion

- The NWS moratorium on N-AWIPS development expected to impact Unidata community.
- The UPC staff member responsible for GEMPAK development and support (Steve Chiswell) left in January.
 - A search for a replacement is underway – it was reopened in April since the first attempt was not successful in filling the position
- The UPC is planning to provide support for GEMPAK as long as feasible;
- Unidata needs both a short-term and a long-term plan for N-AWIPS – AWIPS II migration
- GEMPAK users in the community have concerns and some have expressed them in several venues
- Unidata needs to allay user concerns and provide reassuring words that the UPC stands behind the final version of GEMPAK from NCEP [this is especially urgent as the 5-year proposal is currently under review]
- Our plan calls for a letter, jointly signed by Mohan, Steven and Gary, to be sent to the GEMPAK community

- It is too early for Unidata to make a definitive commitment to support AWIPS II due to the many unresolved issues and resource considerations;
- We should revisit this topic as we learn more about AWIPS II and evaluate the software and related issues