GEMPAK-AWIPS II Discussion

Unidata Policy Committee Meeting

12 May 2008
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
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