Status Report July 2004

OB4 shefdecoders testing

The main goal of the RAX shefdecoders rewrite was to fix 3 major problems that were reported last fall. These problems were: 1) false SHEF parsing errors, 2) mysterious crashes, and 3) general slowness of the decoders, which sometimes were unable to keep up with the incoming product file flow. In addition, one enhancement was identified related to how the shefdecoders logged information. Nearly every RFC asked for the log files, daily and message, to be changed to have a "look" similar to the operational shefdecoder's log files.

The focus at both testing RFCs, ABRFC and NWRFC, has been on the raw shefdecoder. Both RFCs had the OB4 version up and running by July 2, 2004.

NWRFC reports that, from their perspective, the 3 problems have been addressed with the OB4 delivery. However, while the enhancement (changing the log file format) is a good start, NWRFC has identified several logging features that still do not exist.

ABRFC reports both good and bad news. The good news is that the false SHEF parsing errors and mysterious crashes have gone away. The bad news is that the 3rd problem, slowness, is still a big concern. ABRFC also agrees that the logging files are a move in the right direction, but that more work needs to be done. No other RFC has reported as severe a slowness issue as ABRFC has reported with the OB1 load and continues to report with the OB4 version of the shefdecoders. The RAXUM team has been aware of the slowness issue with the OB1 load for quite some time and several possible solutions have been discussed, but none seemed to address the problem satisfactorily at ABRFC. Randy Rieman, OCWWS, who is also a member of the RAXUM team, has been tasked to work with ABRFC to resolve their unique slowness problem. Because of this a 3rd RFC will be installing the OB4 shefdecoders shortly to verify NWRFC observations.   As of July 29th, SERFC has the OB4 shefdecoders up and running.

New Team Member

The contractor is now on board… Marty Bennertz. He will be working on the OB5 release of the RAX shefdecoders.

Other Apps for OB5

In late June a request was sent to the RFCs to rank 1 (most important) to 12 (least important) the 12 items currently on the RFC Archive Requests List maintained by the OCWWS/RFC Support Group. The team will then be looking at the top 3 items as possibilities for OB5. The top 3 items from this survey are:

1st choice: ER-8
2nd choice: ER-6

3rd choice: ER-4

Descriptions of these 3 enhancements/requests follow.

ER-8 Description: DATVIEW enhancements
Proposed enhancements are:
✦ Allow both observed and forecast time series to be plotted on the same plot for the selected station.
✦ Allow up to 3 stations with compatible PE data to be plotted
✦ Allow multiple compatible PE's from a single station to be plotted. Example: a river reach of locks and dams with hinge-point control: user wishes to plot the downstream control (HP), the control point (HG), and the upstream inflow (HT). Another example is plotting QR from the control point and QT from the upstream and downstream projects. A third example is plotting both HP and HT from the lock and dam site.
✦ Implement option to interactively apply the zero datum(s) to all or some of the specified lid/PE pairs, to convert displayed or output data to a common datum (MSL-1912, NGVD 1929, NAVD-88, etc.). Note that at some projects, the HP and HT have different datums, such as HP in MSL while HT is referenced to an arbitrary datum. Thus a single "apply zero datum" toggle to apply zero datums to all lid/PE pairs displayed would be undesirable.

ER-6 Description: Areal Plotting Capabilities:
✦ Areal display of data allowing point or areal averaged values displayed for same time period or window of time. Provide color-coding based on thresholds similar to XNAV.
✦ The whole display capability should be similar to XNAV but have capability to plot parameters other than height in a time series and have more capability in the plots to adjust scales and display more than one plot at a time either on the same plot or in separate plots.

ER-4 Description: Time series plotting capabilities with the following general features:
✦ User-selectable locations/areas/parameters.
✦ Easy capability to adjust time scale to shorten or expand time frame in window.
✦ Capable of adjusting y axis scale so as to provide opportunity to ignore extreme data values.
✦ Capable of plotting multiple time series on same plot as long as they are same parameter or same type of units.
✦ Capable of displaying multiple plot windows at a time so that comparisons can be made between plots of different IDs, or plots of the same parameter and ID but of different time frame.
✦ Capable of plotting accumulation of values for a window of time such as precip or snow.

In addition, a couple RFCs have identified a handful of support scripts that slipped through the cracks for the OB4 delivery last spring, and will need to updated and be included in the OB5 delivery this fall.

Proposed Database changes for OB5

The 2nd request sent to RFCs, was to provide feedback on a proposed database change that is being considered. Feedback has been received from several RFCs, but has not yet been reviewed by the team. A decision on whether or not to make these changes will be made sometime in August, so that support programmers for any applications that may be impacted will have adequate time to make changes.