

XEFS Planning Meeting – 20 August 2009

Attendees: Rob Hartman, Kevin Werner, Julie Demargne, Chris Dietz, DJ Seo, Limin Wu, Edwin Welles, Hank Herr, Satish Regonda, and Mark Fresch

HMOS

Satish and DJ provided a briefing with slides on the enhancements to HMOS for XEFS. The results have been discussed with ABRFC. However, the sample size for the performance of the enhancements is small, since ABRFC mainly uses HMOS for flood forecasting. HEP hasn't started their evaluation of the enhancements using CNRFC data.

It was agreed that the delivery of the HMOS prototype enhancements from HSMB to HSEB will include an executable, parameters, an example forecast for regression test comparison (QPF data and expected results), and documentation of the output (units and format). Since HMOS has a random number generator, for the regression test results, the random number generator should be re-run with a known seed value.

EnsPost

DJ provided a briefing with slides on the enhancements to EnsPost for XEFS. DJ is deferring implementation of multi-scale probability matching to a later build. The enhancements affect 4 programs, but changes haven't yet been made to the prototype source code. The source is expected to be done within a week and will need help from Gautam or Hank.

Evaluations have been completed for MARFC (years ago), CNRFC, and CBRFC. A conference call to discuss with CBRFC is scheduled Aug. 28. DJ said the results for CBRFC are not as clear cut, presumably due to regulations, longer-memory hydrologic processes. As part of the conference call, Kevin would like to have DJ explain the different post ensemble run adjustments.

The delivery of EnsPost prototype enhancements should include the same things as the HMOS delivery.

EPP3 Field Testing

Rob H reported he ran the latest executable with questionable results, specifically CFS precipitation forecasts 3-4 times the expected amounts. The problem appears to be that the off-line EPP3 is no longer accessing fs5 files. Mark will follow up with John to see if the off-line (i.e. non-CHPS) version of EPP3 is still viable.

EPP3 Model Adapters and Integration Testing

Mark reported that Xuning has made some progress on the model adapters with help from Limin. However, the remaining problems are getting the different versions of the data, EPP3, CHPS, and model adapters running together. To

limit the variables, Mark asked Xuning to not test with any new EPP3 executables. To help the integration test move along, Mark asked Hank to help.

Frozen GFS netCDF grids from NCEP

DJ reported Scott Handel (NCEP) wrote an RC to getting the files distributed operationally via the SBN. Scott wanted to know the required operational support for the frozen GFS runs, including whether the current ftp access to the grids is good enough. Rob said access has been “solid” at CNRFC, but eventually CNRFC will need access via the SBN. Kevin W said access has been less reliable at CBRFC. Rob said CNRFC needs the 00Z run by 15Z but eventually will need the 00Z and 12Z runs; Rob characterized the need for twice a day runs as “important but not super-critical”. DJ will check if the frozen GFS is run twice a day. Rob H will ask John if EPP3 will run with an old model run. DJ will provide this feedback to Scott H.

Graphics Generator

[The status of the Graphics Generator was quickly changing on the day of the meeting. As a result, this paragraph will be the status as of the end of the day (Thursday, August 20th).]

Deltares had delivered an update to their IFD-Graphics Generator API earlier in the week. There is still a significant issue - the IFD-Graphics Generator API won't allow display of a non-time dependent x-axis or multiple y-axes. Originally, we believed that Deltares would provide changes to the API to allow that functionality. However, Deltares has been told that IFD changes are a higher priority. As a result, it is clear that OHD will need to expend significantly more time to work around this limitation and this will likely delay Phase 1 of the Graphics Generator.

To get around the limitation, Deltares (Andre) suggests that OHD use the FEWS code as a starting point to create our own JFreeChart tool for the Graphics Generator. This will ensure that Graphics Generator charts will have the same look and feel as IFD charts. Edwin said he believes it is possible for OHD to get a copy of the FEWS code and modify it for this purpose. Mark will have Edwin check.

Also, with the different JFreeChart Tool, OHD will need to provide connectivity between the IFD and Graphics Generator with the thumbnail display. Deltares provided two possibilities. The first option is to tie into the existing IFD time series dialogue. This option is technically difficult as IFD's current thumbnail panel design only accounts for displaying thumbnails of charts created by Deltares software. The other option is for OHD to create our own panel for the Graphics Generator which displays the thumbnails. This has the advantage of lessening the dependency between the IFD and Graphics Generator, but may not be well received by users, as it will require looking in two places to see all thumbnails for charts during forecasting.

Mark Fresch