Minutes from CHPS Meeting Thursday April 16, 2009

Attendees:

ABRFC – Billy Olsen, Eric Jones, Jeff McMurphy
CNRFC – Rob Hartman, Scott Staggs
NERFC – Rob Shedd, Alison Gillis, Tom Econopouly
NWRFC – Harold Opitz, Joe Intermill
NOHRSC – John Halquist
Deltares – Edwin Welles
OCWWS – Randy Rieman
OHD – Pedro Restrepo, Jon Roe, Joe Gofus, Chris Dietz

Pre-reading:

- None

1. CAT migration status

ABRFC – experienced some issues bringing CHPS servers back up after NAS upgrade. They are bringing in most data except FMAPE.

NERFC – no major issues. There's some question about whether ResSngl is the correct version – OHD is investigating. There's also a question about which version is correct for the migration scripts – the latest is on the FTP site. Although there are 2 FEWS/bin directories NE thinks they're using the correct one.

CNRFC – no issues.

NWRFC – no issues.

Action: None.

2. Deltares visits in August?

To date the CAT RFCs have received site visits by Deltares at a mid-point between workshops. Will this occur between June and September (i.e., in August?). We have not scheduled any visits; August is a bad month to schedule visits. However it's vital the CAT RFCs are completely ready to provide site support for their buddy RFCs. We will re-evaluate the need in June.

Edwin agreed to send out the final May site support dates to the chps_migration list. CATs need to plan their travel.

Minneapolis visit: Deltares will visit NOHRSC when they visit CAT-II/NCRFC. The target week is July 13 but the dates have not been fixed yet.

3. Software maintenance for CHPS prototype hardware

For o/s patches – will they be in sync with the AWIPS baseline, or different? Who will install them? Will Harris scans be required? Apparently the NCF conducts Harris scans remotely for AWIPS. CNRFC conducts scans on all its own non-baseline systems. RandyR will speak to Jim Lane and Randy Chambers about piggy-backing CHPS o/s upgrades on those for AWIPS.

Action: RandyR to work with Jim Lane (OS&T) and Randy Chambers (OCIO) to define and publish an approach for CHPS O/S and COTS software maintenance and security scanning (prototype hardware only).

4. Status of gxsets discussions

There was another lengthy discussion about this topic. Some recent lobbying from some CAT-II RFCs has prompted ABRFC to begin looking into GIFTS as an alternative "standard" for BOC. ABRFC now has GIFTS up and running. The group wondered if this is a good/visionary thing?

Some points to consider:
1. GIFTS runs directly off the ihfs_db. In a CHPS environment, RFCs would need to post data via SHEF into the ihfs_db to get it into GIFTS. Does this make sense?
2. GXSETS runs off the ofs database; it would need back-end software changes to make it run off another database. ABRFC has agreed to do this.
3. No RFC can guarantee resource availability to support locally-developed applications (either GXSETS or GIFTS); there would eventually need to be national support.

In the long term it makes better sense to go with a CHPS-friendly solution; the EPG should be our goal, rather than retro-fitting an existing application into CHPS. CHPS will provide a much more flexible approach and doesn't constrain us to support code which was not developed for CHPS. We expect to see the first version of EPG in September but that will only address the ESPADP-equivalent functionality.

Risks associated with GIFTS versus GXSETS include: ABRFC already has CHPS and can test the end-to-end process; ABRFC can't guarantee OHRFC support whenever they need it, whereas ABRFC has full control over their own resources. We concluded that ABRFC's software application represents a lower risk.

Therefore the group agreed to stay the course with GXSETS. ABRFC was asked to fall back to our original plan and not apply any more resources to analysis of GIFTS. GIFTS may have a role to play in the future of CHPS, but it's too soon to force the issue and we recommend that the CAT-II wait and see what CHPS is capable of first. The FEWS APIs will become available later this year; that's clearly the way to go.

5. September events in Tulsa

We need to plan the CAT workshop and the CAT-II workshop; both will be in Tulsa the week of September 28. Billy has agreed to make reservations for a 40-person room to accommodate the CAT-II workshop. The CATs are expected to attend the CAT-II workshop. One possible complication: SAT is scheduled at OHD for the week preceding the workshop; Harold, JoeI, and RonH have attended SAT in the past. We will plan for 3 days for the CAT workshop (Sept 28-30) and 2 days for the CAT-II workshop (Oct 1-2). It will mean weekend travel for most.

Deltares support for on-site visits (usually immediately following the CAT workshops) will be impacted if any Deltares people are expected to participate in both (on-site visits + CAT-II workshop). Edwin will look at the schedules for the Deltares attendees during this timeframe.

6. Other

BOC-II, pre-processors:

The CAT-II call resulted in a request to provide a CHPS version of the NWSRFS pre-processors. The desire is to preserve the methods used to calculate basin values, and not impact the hydrologic output. It was noted that the CAT had similar conversations during various workshops.

Issues associated with "wrapping" or porting NWSRFS pre-processors include:
- the hardest part of re-factoring the pre-processors is all the complicated I/O; the moment you touch source code you introduce risk
- based on a HOSIP project initiated about 3 years ago, it doesn't always make sense to "wrap"; it sometimes makes more sense to completely re-write. This also introduces risk
- the existing pre-processors are an undesirable software maintenance burden due to the need for specialized NWSRFS skills, which OHD wants to lose
- the underlying basis for the MAT pre-processor is known to be flawed
- there are already differences between calibration and operational forecasting results

Edwin summarized the pre-processor functionality as essentially comprised of the following:
1. temporal resolution
2. spatial aggregation
3. missing data fill-in

FEWS already contains some equivalent functionality, except missing data calculations. The western RFCs use Mountain Mapper and GFE to accomplish this. One option might be to introduce extra functionality into FEWS? Even better, perhaps the process should be placed upstream from CHPS – e.g., within Mountain Mapper or GFE.

As the "thought leaders" for CHPS, the CAT originally agreed to focus on grids as forcings, rather than recreate today's way of calculating mean-areals from point data. But we can't go just half way.

The recommended approach will be for the CAT to stay the course, show that the new system is NOT working, and then come up with a plan to address the issue for the CAT and CAT-II.

The group agreed to discuss this topic again with the CAT-II during the next call, to drill down to the core issues behind the request for NWSRFS pre-processors in CHPS.

Buddy visits: Chris will forward to the group the latest (draft) agenda from Edwin. Chris will forward to the group the travel code for buddy visit travel (under NSTEP).

CAT workshop in June: Propose that we meet in Portland (NWRFC) Weds 6/24 – Fri 6/26. This will minimize travel costs for the Deltares trip to APRFC the following week. If anyone has a conflict please let Chris know by noon 4/17.

Action: Add to CAT-II call agenda for 4/21 a discussion of NWSRFS pre-processors in CHPS.
Action: Chris to forward the draft buddy visit agenda to the CAT
Action: Chris to forward the NSTEP account code to the CAT for buddy visits
Action: By noon 4/17/09 let Chris know if there's a conflict with the proposed CAT workshop dates in June.

Next meeting: Thursday 4/23/09 at 11:00 am EDT.