

Minutes from CAT-II CHPS Meeting Tuesday October 26, 2010

Attendees:

CAT RFCs: ABRFC, NERFC (CNRFC and NWRFC absent)  
 CAT-II RFCs: APRFC, CBRFC, LMRFC, MARFC, MBRFC, NCRFC, SERFC, WGRFC  
 (OHRFC absent)  
 NWSTC  
 Southern Region

**Reference:** email from Chris Brunner to all HICs dated 10/21/2010, subject “Urgent Request for CAT-II HICs”. Email contained an attachment (CATII\_Survey.doc) which included a request for CHPS planning information in the form of a milestone table.

This conference call is the first of a series of routine calls requested by the CAT to track CHPS implementation progress at all RFCs, with a goal of getting everyone to operational use of CHPS in 2011. A milestone table (included in the referenced email above) has been developed as a way to track progress; the CAT has requested completion of the entries by November 5. During the call we reviewed the table and answered questions.

In future these progress conference calls will be conducted every 2 weeks. They will focus on management issues, strategy, planning, and status reporting. They will **not** address specific technical problems, for which chps\_ops should be used.

CBRFC and APRFC have already submitted a completed table of milestones; results are captured here:

Milestone	Date APRFC	Date CBRFC
When will you have all of your basins migrated and uploaded to the live system?	Done July 2010	Done
When will you have ESP migrated and uploaded to the live system?	Need to update all historical MATs and MAPs: March 2011	End of November 2010
When will you have FFH/FFG migrated and uploaded to the live system?	NA	Not needed here
When will you have your HEC-RAS models migrated and uploaded to the live system?	NA	Not needed
When will you complete your hydrologic validation?	April 2011	March 2011
When will you enter Parallel Operations (running CHPS regularly and maintaining	April 2011	April/May 2011

states with all of your staff)?		
When will you issue RVFs live from CHPS?	June 2011	Summer 2011
When will you have forcings without OFS pre-processors?	Done April 2010	January/February 2011
When do you anticipate retiring OFS from your operations?	???	October 2011

### Q&As

Q1. In the referenced attachment document, it says “Though the contract will be in place until January 2012, you need to be aware that the contract funding will be exhausted in the summer of 2011.” What if we say we can issue live RVFs from CHPS by summer 2011 but then fail? If we have a particularly active tropical season we might have to delay operations for a whole year.....

A: By summer 2011 Deltares expects to have all software delivered to the RFCs. All they require is that RFCs be able to verify that the software does what it’s required to do. Transitioning to live operations is entirely up to the RFC. If weather is a particular risk for any of your dates, include that info in your transition plan. OHD added that Deltares will not be disappearing into thin air; they will remain around to make sure all RFCs overcome their technical problems as and when they go operational. There are additional contract vehicles in place to access Deltares beyond summer 2011.

Q2. Ref. the table question “When will you complete your hydrologic validation?” Would the CATs please share their approaches?

A: CNRFC’s approach was to conduct retrospective runs and do value-by-value result comparisons. NERFC hasn’t had time to conduct multi-year retrospective runs, but expect to do so later; instead they have run operational data through both CHPS and NWSRFS, and compared the results to make sure model connectivity looked good, and all the correct water was present at each forecast point. ABRFC has run parallel operations with forecasters producing RVFs on both CHPS and NWSRFS then comparing products side by side; their operations also included application of Mods, so they checked that their results were “reasonable”, not exact.

Q3. What about the models - can we be sure they have been thoroughly tested?

A: Deltares, OHD, and the CAT RFCs have been conducting Software Acceptance Testing (SAT) since the end of 2008. This has involved multi-level testing, where software developers ran Level 1 through Level 4 tests – i.e., unit tests, system tests, integration tests (with FEWS), and end-to-end forecast group tests. These used canned data. Ad hoc testing was also done by forecasters. Although the CATs have since tested most of the models in their live environments, there’s still a possibility some bugs will be uncovered by the CAT-IIIs.

Further.... We have just completed a new Beta test paradigm for BOC. Deltares and OHD delivered BOC software to 2 of the 4 CAT RFCs, holding daily Beta test conference calls to

address problems. Two weeks later we added the other 2 CAT RFCs and continued with daily Beta test conference calls until we reached a point where the remaining bugs were small in number and low priority, or were unrelated to BOC functionality. This approach worked well because it put the software developer directly in contact with the users (forecasters), which minimized possibility of misunderstandings, and optimized the problem-to-resolution time. The goal is to repeat this approach for BOC-II. We hope to get specific CAT-II RFCs involved in Beta testing where functionality is unique to one or a small number of RFCs. We also expect that CAT-IIs will identify bugs not yet uncovered by the CAT.

Q4. FFG migration: is it part of the Deltares migration scripts?

A: NERFC has some recent experience with this. Neither Chris nor Rob Shedd could recall if the scripts are separate. NERFC is still working with it, but is experiencing some problems with shape files not being consistent with their FFG definitions. FFG implementation did not require a remigration for NERFC.

Action: Chris to find out if the FFG/FFH migration scripts are separate from main migration scripts.

Q5. How does the water supply functionality get migrated for CHPS?

A: The FFG-Water Supply in NWSRFS was not migrated for CHPS. NERFC is testing a different solution for its NYC water supply configuration. The same solution should work for MARFC; Alison will be visiting MARFC soon and can provide more details.

Q6. When will BOC-II be available?

A: Deltares hopes to begin Beta testing of BOC-II in mid-January. The delta between BOC and BOC-II is fairly small.

Q7. When will we see the Mod Note for CHPS hardware?

A: Randy Rieman has completed the first version and has handed off to AWIPS (OOS) for approval; he estimates about 2 weeks for their review. FYI, RFCs can install the October release without waiting for the 2<sup>nd</sup> set of hardware to be installed.

Q8. Ref. final question in the table - how can we retire RFS without a CHPS calibration solution?

A: The immediate goal is to retire the *operational* forecasting components of NWSRFS. The CAT is validating that there's a system available to replace all of NWSRFS, but it continues to identify which areas still need work; calibration is one of those areas. You will continue to use mcp3 etc. for a while. Meanwhile, for the parameter tuning OHD is about to begin a few experiments on the SA system for demonstration to the CAT – we expect to get fairly close with what we already have (not 100%). For data prep, Deltares is looking into how much can be done in CHPS. Short-term we'll have a solution to get us over the hump, but long-term the RFCs will need to put together a visionary team to look into new and different approaches.

Q9. In the presentation that accompanied the referenced email, it says, "SSHP – hopefully never". What does that mean?

A: SSHP has been implemented for BOC-II by OHD. The comment came from Harold, who believes there are better/more visionary ways to accomplish the same goal. For example, some RFCs are considering having their WFOs run a read-only version of CHPS; it's only a concept and nothing has been explored yet.

Q10. What successes are the CATs having with their RVFs? NCRFC uses a local application called OPIE.

A: OPIE will need to be modified to access the CHPS database instead of fs5files. There is no CHPS-provided solution, since RFCs have always gone their own way. ABRFC is using gxsets; NERFC is using a modified version of gxsets. Several RFCs have successfully used the FEWS pi-service to access the database. It isn't very difficult. We've been told GIFTS has also been converted to work with the CHPS database.

#### Other

- Reminder: In order to meet BOC-II, Deltares needs information about any showstoppers by November 30. It doesn't matter if it's a repeat of information; they just need to make sure nothing falls through the cracks.
- The CAT requests completion of the milestones table by November 5. Whether or not you meet your target milestone dates is not the driver; they simply want your current planning information.
- OHD would also like you to identify what are your risk mitigation strategies. What could you do to reduce your risk of delaying the CHPS implementation at your office? For example one of the CAT RFCs took early steps to create more "depth" in their CHPS expertise by training an extra individual. When one of their CHPS experts subsequently resigned, they were able to continue without much interruption.

**Next meeting:** Tuesday Nov 9, 2010 at 11:00 am EDT/ 10:00 am CDT/ 9:00 am MDT/ 8:00 am PDT/ 7:00 am AKDT (reminder email will be sent).