

## Minutes from CHPS Meeting Thursday July 8, 2010

### Attendees:

ABRFC – Billy Olsen, Eric Jones, Jeff McMurphy  
CNRFC – Rob Hartman, Pete Fickenscher, Scott Staggs  
NERFC – Ron Horwood, Tom Econopouly, Jeff Ouellet  
NWRFC – Joe Intermill  
NOHRSC – John Halquist  
Deltares – Edwin Welles  
OCWWS HSD – Dave Riley  
OHD – Pedro Restrepo, Chris Dietz

### Pre-reading:

- Support Log distributed via chps\_ops on July 7, 2010

### 1. Health check on Support Log (major issues, show stoppers)

#### CNRFC:

New issue regarding OC performance is a show stopper. This could be due to cache files in the local data store. PeteF to test today; if this is the cause then Deltares will create code to automate the cleanup of cache.

Also yesterday we found that multiple Lag/K operations in the same segment/workflow the second one chokes. This is issue #277, being addressed by Lee's group.

#### ABRFC:

Any more examples of freeze-up occurring? Andre and MikeP are conversing; Andre is waiting for Mike to run a test and report back. ABRFC is in 24-hour ops due to flooding so it may take a while for Mike to get a response to Andre.

Andre sent a response to MikeP on the icons. Upshot is that icons are used in a slightly different way to indicate various statuses.

#### NERFC: Mods item in the log is still a major problem.

Any show stoppers? Many items are fixed in the upcoming patch. The text within Current Action should indicate which ones. RFCs will still need to verify that the log entries can be closed. The ssarreg/overlapping regs is targeted for a future release. NW will test some more and will send out emails in the next few days.

Anyone noticed spontaneous logouts? NW reports none since the June release installed. NERFC reports the last one on June 22 which was after the new release but nothing since then. Believe the bug in JRE was the cause; Andre provided a workaround which seems to work. RFCs recommend closing 236 and 239.

NWRFC: has noticed the FSSs seem to be a little "quirky". They are running ESP overnight; the FSS periodically goes down but then restarts again after the job. Traces never made it to the database. Rick has seen it another time but there isn't enough data on the problem yet. They will gather more info and forward to Deltares. Generally the staff at NW has observed that stability is not as good as prior to the June release. For example, plot overview tabs go away for no apparent reason; the mods window collapses and re-docks on its own. They sometimes see warnings or errors submitting jobs – removing the local data store seems to clean things out, and everything's

ok again for a while. Is it possible there's an accumulation of configuration changes that are incompatible with others? ABRFC has noticed some weird things with plots all along but they've got used to them.

Edwin says without more details Deltares doesn't know what to do. So RFCs must document anything they can. If symptoms can't be reproduced then it must be regarded as a random quirk.

FogBugz status:

- requisition is being pulled together. HSD had to provide justification for selecting one specific package. Length of time to procure is unknown but is expected to be in terms of months. Trial version officially retired recently (after 15 days) but the package is still running.
- We can export from FogBugz to Excel but can't import Excel.
- HSD will provide some training for RFCs, possibly via webinar. The interface is very easy to learn.
- HSD will set up 2 email accounts for each RFC
- RFCs can report an issue by emailing instead of using the interface – the message gets logged as anonymous.
- Priorities are not set up yet. Several alternatives have been suggested
  - Critical, Non-Critical, Inconvenient/Major, Inconvenient/Moderate, Inconvenient/Minor (RobH)
  - Resolve Immediately, Give High Attention, Normal, Low, Defer (AWIPS)
  - Emergency (can't get forecast out), Critical (top priority but can get forecast out), High, Low, Minimal

Doesn't matter what we call them, but top is always can't get the forecast out.

Is NWRFC still on track for July 14? They can't get their ESP out (FSS problem) so they will need to keep an eye on that.

Do we need Fogbugz in order to track time-to-resolve statistics? It will be too hard (and unreliable) to try without. We might be able to migrate to Fogbugz with the trial version; HSD is investigating. Once we move to Fogbugz **all RFCs agreed to resubmit their open issues and add criticality**. HSD can put together a short training seminar in very short order.

Will HSEB drop everything for a critical issue? Yes; but in some cases the issue may need to be assigned differently because of other high priority tasks (e.g. an upcoming release with critical functionality). It will be case by case, but critical problems will be guaranteed attention.

**Action: HSD to get Fogbugz operational as soon as possible; then HSD to provide training via webinar; and RFCs to re-enter all open issues including priority.**

## 2. When will the June release go out to the CAT-II?

How close is the patch? It might be good to distribute both at the same time. Patch (OHD + Deltares) will go out next week. Deltares will aim to distribute the June release to the CAT-II next week.

**Action: none.**

## 3. Deltares proposal for testing the September release (SAT process)

The next major release (Sept) is important as it's the first BOC release. What steps can we take to minimize risk of instability? Last week we discussed the possibility of having Deltares travel to each CAT RFC.

Deltares discussed this idea and concluded it's too inefficient for the following reasons:

- Testing at RFCs reveals problems involving multiple software components (GUIs, MC, database, transformation behavior, etc.), which requires access to a wide range of skills that won't be available at the RFCs; also the time zone difference means the Delft developer won't be available at the time needed.
- Andre would not have access to the source code so he couldn't make instant changes to test potential fixes.

Deltares agrees that more testing must be done at the RFCs. Experience has taught us that the Silver Spring test environment is too unrealistic, plus the software works differently at an RFC. Testing on-site at the RFCs reveals bugs/problems not found in Delft or in Silver Spring. Testing at RFCs also allows all staff to exercise the new release, increasing chances of finding problems.

Testing at RFCs should be extended. We've found that 2-3 days is not enough to conduct RFC testing; we need a couple of weeks.

Deltares concludes that we should schedule the RFC testing on the front end of SAT. But we should make it focused and intensive. It must permit a lot of interaction with the developer. Suggest we have a daily conference call to review progress and capture problem details while the conditions are fresh in a forecaster's mind.

The down side is we have to shave off some development time.

The September schedule would look like this:

Fri August 20: End of development for CHPS-1.0.0 release

Mon Aug 23-Sept 3: 2 weeks testing at Deltares-USA (and OHD if desired)

Tues Sept 7-17: 2 weeks testing at 2 RFCs (NE, NW) (Sep 6<sup>th</sup> is Labor Day) – with daily phone calls and fast-turnaround fixes for re-test

Mon Sept 20 – Oct 1: 2 weeks testing at CN and AB – with daily phone calls and fast-turnaround fixes for re-test

Mon Oct 4-8: final testing in Silver Spring; confirmation from OHD that September release is sound

Tues Oct 12: deliver to CAT-II (Oct 11<sup>th</sup> is Columbus Day)

*[If bugs show up during OHD testing then Deltares would deliver patch to CAT the week of Oct 19.]*

This is 1.5 months of testing.... that's a lot. Are we still on a quarterly release cycle? Yes. But the September build is different - this new test paradigm doesn't need to be standard – we should be able to shorten it in future. What about 1 week at NE/NW plus 1 week at AB/CN? We would still have to build in extra time for installation and allow time for when the right staff isn't available to test certain features, etc. That's why it's 2 weeks.

Where will this testing be done – on the operational system? Yes. The idea is to use the system as in normal operations and pound away on it to highlight the problems. Don't forget we deliberately designed the system with an offline, an online-standby, and an online-duty. If

something really bad goes wrong you revert to the previous software release which is still loaded on the other system(s). Yes but we're not equipped properly; most RFCs don't have a 3<sup>rd</sup> system. Also ABRFC will just have gone operational. Standard (operational FEWS) procedures are to install on the 2<sup>nd</sup> machine, leaving the previous build on the 1<sup>st</sup> machine so you can roll back at any point to something you know is stable. We would lower the risk if we could be assured the build has been tested. Testing will have occurred at Deltares. Plus RFCs don't have to do testing if they think it's too high a risk. When we had NWSRFS we did beta testing at RFCs and no one had a problem – why is this different? Suppose we're running beta software at NW on their 2<sup>nd</sup> system, and they have a hardware failure on the primary system so they can't re-synchronize - then what? They can't roll back. We won't be buying a 3<sup>rd</sup> system for RFCs. We discussed this a couple of years ago when we agreed to only purchase 2 systems; the RFCs would create a 3<sup>rd</sup> system using REPs or other excessed AWIPS equipment or local purchase. CNRFC has a 3<sup>rd</sup> system; could we install and alpha test there? That's an option. But for the September release it's important to get true operational feedback. In February we talked about operational support and long term planning. For HQ to get involved they need to do something with the system every day. Would it be useful to send HSEB developers to RFCs to help test? That's a possibility. If we have the right data feeds in place, could the 3<sup>rd</sup> system be on the NHOR with an OC running remotely at each RFC? It would be an additional burden on HSD staff to set up and maintain.

The “real” testing is at the RFCs. Another suggestion: could we test first at CNRFC then at the other 3? Problem is that one RFC probably won't run the system hard enough. Ideally a couple of RFCs would run their normal operations plus some side-testing. We really need more than one RFC.

Last time we installed Mon & Tues, then let forecasters loose on Weds for 3 days - we called it SAT + hooligan testing. The only change here is to extend the period of testing; also the connection to the Delft developers is much tighter than last time. Except no one was operational before so the risk is higher now. NW and AB should be operational by then. NE won't be operational before the next SAT– they will wait until this build is stabilized.

Going back to our NW example, if they had a backup somewhere they could afford to do development testing on one of the 2 systems in their office. HSD is currently setting up NHOR as a backup for NE and NW. With that in place NW could do testing on their 2<sup>nd</sup> on-site system without risk. We would run 4 MCs on the NHOR – one per CAT RFC. An RFC's primary MC would sync to its on-site secondary and also to NHOR (off-site). So if NW is testing on their 2<sup>nd</sup> system and finds the release to be bad, then additionally has a hardware failure on their 1<sup>st</sup> system, they will still have a 3<sup>rd</sup> system on the NHOR to fall back to. The group agreed that this is sufficient.

The upshot is that the development period is shortened by 4 weeks and the build will go out October 7 [sic] not October 1. *[From Chris: according to the schedule above the build will actually go out on Oct 12 not Oct 7.]*

Edwin agreed to summarize the September release testing proposal and distribute.

Edwin will talk to HSEB about increasing their involvement in testing on NHOR to make software more robust.

CAT RFCs will notify Edwin ASAP if the proposed September testing dates are problematic, so Deltares-NL can adjust staff availability to accommodate.

Action: Edwin to summarize the September release testing proposal and distribute.

Action: Edwin to talk to HSEB about increasing their involvement in testing on NHOR to make software more robust.

Action: CAT RFCs to notify Edwin ASAP if the proposed September testing dates are problematic.

Action: HSD to set up NHOR with 4 MCs (one per CAT RFC) before September release Beta testing.

#### 4. Status of SHEF to PI-XML translator

JohnH said it's finished; he's ready to release a version. Where do RFCs want to run it? On the chps machines or on AWIPS? 32-bit or 64-bit? John used 64-bit so he will need to test it on a 32-bit AWIPS machine. John will also provide documentation regarding some special configuration that's required, related to ID mapping; RFCs should already have this in place anyway. There's a slight complication in that the SHEF parser resolves the PE to full 7 characters so some RFCs might need to make adjustments – this should be easy for them to do. John estimates the documentation will be ready next week. Micha tested and confirmed that FEWS will ingest the output from John's translator; it's not a full test and John will need to run several large products through to check performance. The SHEF ingest written for the original FEWS pilot can be retired once this is working.

Action: John to test the SHEF to PI-XML translator on a 32-bit AWIPS configuration.

#### 5. Other items

- i. AWIPS is planning to go to RedHat 5.5 this Fall. The goal is to eventually move to a 64-bit o/s. They are only looking into 64-bit LXs; they haven't evaluated the other servers. CHPS and NCEP both require 64-bit operations. We're running 32-bit applications in a 64-bit environment. The PostgreS database is 64-bit. Java is still 32-bit. For ResSim we asked for a 64-bit version.
- ii. MarkF has asked a question about the relative priority of Graphics Generator for the September build, and whether or not it presents an increased risk. The question really relates to Deltares resources. The requests for Andre have not been overwhelming so far, but if there are any more requests than have already been submitted then the September build will indeed be at risk.
- iii. We said we would review the Development Registry for September's release. There are generally no changes. The wild card is the ResSim adapter. Deltares is waiting for more information on some existing problems (icons, performance, etc.). Some documentation is required – Edwin isn't sure what extra is needed for the HEC-RAS documentation. We will review the Development Registry again at the end of July.
- iv. HIC agenda now has a 2-hour slot for CHPS (formerly 3 hours). The session should focus on the future of CHPS, where do we go with it? We should also allow some time for questions and any issues. RobH will consider leading the session on CHPS but he wants to get with the others to figure out exactly what to present.

Action: none.

**Next meeting:** Thursday July 15, 2010.