

Notes from CAT-II Meeting Tuesday July 28, 2009

Attendee:

| | |
|-------|-------------------------------------|
| APRFC | Scott Lindsey |
| MBRFC | Tom Gurss, for Steve Predmore |
| NCRFC | (none) |
| MARFC | Joe Ostrowski, for Peter Ahnert |
| OHRFC | Craig Hunter |
| LMRFC | Dave Reed |
| SERFC | Judi Bradberry, for John Feldt |
| WGRFC | Frank Bell, for Tom Donaldson |
| CBRFC | Brenda Alcorn, for Michelle Schmidt |

CAT members present:

| | |
|-------|-------------|
| ABRFC | Billy Olsen |
| NERFC | Rob Shedd |

Also present:

Jon Roe, Chief, OHD HSEB
Chris Dietz, OHD HSEB, CHPS Project Manager
Joe Gofus, OHD HSEB

Document reference: none

Agenda:

1. Status of initial configuration data deliveries
 - 3.1. SERFC reported they'll have their data ready within the next few days.

2. CHPS project activities since HIC meeting/early July
 - 2.1. Final buddy visit occurred at NCRFC. New operational requirement surfaced: flood inundation maps from FldWav output will need to be re-written to process HEC-RAS output. LMRFC will be visiting OHD the week of Aug 10 to discuss a proposed project with MSU to do similar task. Another requirement from OHRFC buddy visit is to convert the baseline application sshp_extract which sends model states to WFOs for use in SSHP. Other RFCs use local

applications to accomplish the task. After the NCRFC visit, Deltares also met with NOHRSC, which now has a CHPS running on scientific-Linux.

- 2.2. System Management training for the CAT is occurring at CNRFC this week (not yet begun).
- 2.3. Software performance: significant improvements in the software have been realized recently. Will soon begin to consider other non-software changes. Testing has yet to be done at a CAT site; we don't want to issue any data until we've run tests at a CAT site. We expect to run some tests at CNRFC during the next couple of weeks and will make more information available after that. Know that Java does not run as fast as Fortran applications; also a modular software architecture necessarily yields slower performance. The CAT always understood that most performance improvements would be realized via a more efficient forecasting process. Forecaster (user) training will focus on this in October. Tom Adams requested access to NWSRFS vs. CHPS comparisons when they become available.
- 2.4. BOC-II models are now ready for formal testing; scheduled for September.
- 2.5. CAT migration activities: now at the point where re-running the migration script is a trivial task. More changes to accommodate introduction of ensembles and other performance improvements are expected in the near future. Deltares will be re-configuring the CAT systems for the new IFD. RFCs are expected to re-run the script periodically in order to get the latest model states into CHPS.
- 2.6. Operational support: we are ironing out some coordination wrinkles with Deltares. Randy Rieman is looking into use of an issue tracking tool. One goal is to provide RFCs with ability to access issue status. Joe Ostrowski noted that AWIPS II is considering acquiring Track(?) as its tool; suggest Randy consider the same, for consistency and to leverage existing knowledge/experience. OHD is also looking into a software bug tracking tool for internal use. Deltares uses Jira.
- 2.7. No update on the prototype hardware purchase.
- 2.8. HEFS: Hank held a Graphics Generator demo last week
- 2.9. CHPS wiki page: Chris will be going over details of requirements with OHD's webmaster later this week.
- 2.10. Cees Wesseling (owner of PCRaster) visited OHD last week to present and demo PCRaster capabilities. Representatives from HSMB (Geoff, others) were present at the demo. Geoff recently suspended PCRaster activity for HL-RDHM in light of some fundamental issues which seem to prevent PCRaster from providing a complete solution for HSMB's distributed model in a CHPS environment. PCRaster is now part of the FEWS baseline release and free, but only for Windows users; the arrangement between Deltares and Cees Wesseling for Linux FEWS isn't so well defined and may involve a license fee - it isn't clear yet. Tom Adams asked why Deltares is not using GRASS for FEWS. We speculated that it might be a result of the relationship between Deltares (Delft) and the University of Utrecht. Tom pointed out that GRASS is open source and would be free; it's also already used for Calibration. Rob Shedd pointed out that PCRaster is not embedded within FEWS; there are adapters to invoke PCRaster functions from FEWS; PCRaster can be run independently of FEWS. Deltares and NOHRSC also discussed possible use of PCRaster during the visit referenced in 2.1 above.

3. Upcoming CHPS project activities

3.1. August: CAT RFCs to get some additional site support in preparation for upcoming (October) parallel operations. September: Software Acceptance Testing, followed by 2 back-to-back workshops at the end of the month. The first workshop is for the CAT; the second (October 1-2) is for the CAT-II. Chris will be working on an agenda in the next few weeks. It would be helpful if the CAT-II RFCs would submit to Chris the name of their attendee. Location for CAT-II workshop is in the same building as ABRFC, but one floor below. Mid-October: user training for the CATs. This puts the official start of parallel operations at October 19.

4. Other items

4.1. What is the status of the Forcings team? CHPS-related changes for MPE/DQC are being finalized; should be complete by the end of this month. These changes have been coordinated with NERFC and NWRFC. OHD is attempting to get these into AWIPS OB9.2. An ATAN covers most RFCs – anyone who wants to run the updated version should be able to do so. OHD will begin discussions concerning a potential enhancement to DQC for temperature analysis in August.

5. Next CAT-II conference call: Tuesday August 11 (two weeks).

| Action Number/Item | Who | Notes |
|--|------------------|---|
| C2-03102009-01: Capture changes to BOC-II from this meeting; distribute updated version of BOC-II document | Rob Hartman | Closed (updated version emailed on 3/10/09 to cat_2 infolist) |
| C2-03102009-02: Distribute “matrix” from the OHD (“national”) Forcings Team, which describes CAT strategy/requirements for transition to CHPS in the absence of NWSRFS pre-processors | Harold Opitz | Closed (matrix emailed on 3/10/09 to cat_2 infolist) |
| C2-03102009-03: Each CAT-II RFC to prepare initial version of their entry for the Forcings “matrix” | CAT-II attendees | Closed (all responses received via email by 3/24/09) |
| C2-03102009-04: Get statement from Deltares whether FEWS has capability to identify sensitive/proprietary data that must be excluded from external reports (BOC requirement) | Harold Opitz | Closed (email exchanged on 3/17/09). Update 3/24/09: Chris to send to CAT-IIs the answer from Deltares for this AI |
| C2-03102009-05: Distribute notes from this meeting to the cat_2 infolist | Chris Dietz | Closed (emailed on 3/10/09 to cat_2 infolist) |

| Action Number/Item | Who | Notes |
|--|-----------------------|---|
| C2-03172009-01: Distribute notes from this meeting to the cat_2 infolist | Chris Dietz | Closed (emailed on 3/20/09 to cat_2 infolist) |
| C2-03242009-01: distribute to all of the CAT-IIs instructions (also script?) originally developed by Joe Ostrowski for the purpose of identifying NWSRFS operations in active use | Chris Dietz | Closed (emailed on 3/25/09 to cat_2 infolist) |
| C2-03242009-02: review list of operations to make sure they're accurate; please notify RobH if any critical operations are missing | All CAT-IIs | Closed (emails received) |
| C2-03242009-03: review list of operations in BOC-II doc to make sure it matches the original script output we gathered | Chris Dietz | Closed (emails received) |
| C2-03242009-04: update (correct, complete) the Software Migration Mapping document; distribute the updated version to the cat_2 infolist | Deltares/Edwin Welles | Open. |
| C2-03242009-05: Compile and distribute to the CAT-II a matrix showing every RFC's response for AI # C2-03102009-03 | OHD/TBD | Closed. Sent via email by Mark Glaudemans to cat_2 infolist on 3/27/2009 |
| C2-03242009-06: Time series output from HL-RDHM must ingestible into CHPS; HSMB will define a format (e.g., SHEF) for said HL-RDHM output and change the HL-RDHM software accordingly | OHD/HSMB | Open. |
| C2-03242009-07: For agenda April 7 meeting: report from NERFC on their investigation into a replacement HWG process. | Rob Shedd | Closed. Presented as part of the 4/9/09 monthly briefing. |
| C2-040720090-01: Find out status of Baseflow implementation in OHD (incl MODs) | Chris Dietz | Closed. Now irrelevant, since no RFC uses BASEFLOW. |
| C2-040720090-02: Check to see if cat_2 infolist is working correctly. NCRFC reports not receiving some mailings. | Chris Dietz | Closed per email from Mike DeWeese on 4/22/09. |
| C2-041420090-01: Send out an email on preparing for CHPS prototype hardware IP addresses | Randy Rieman | Open |

| Action Number/Item | Who | Notes |
|--|-------------------------------|--|
| C2-041420090-02: Send out documentation to cat_2 infolist on ER approach/procedures for RFC site backup | George McKillop | Closed by email to cat_2 infolist on 4/20/09. |
| C2-041420090-03: Send list of Techniques used to Chris (including esp) | CAT-II | Closed (OBE). |
| C2-041420090-04: Let Chris know if you use IHABBS and if so, which version | CAT-II | Open. 4/29/09: still waiting for info from ABRFC, NWRFC, CNRFC. |
| C2-04212009-01: Forward to the cat_2 list documentation on DailyQC's algorithm to fill in missing station data. | Mark Glaudemans | Open |
| C2-04212009-02: Come up with an alternative mechanism to define Techniques that are in operational use at all RFCs; solicit results from all RFCs | Deltares/Edwin, Joe Ostrowski | Closed. Report provided at meeting on 4/21/09 |
| C2-04282009-01: Draft a list of Techniques and distribute to CAT-II | Deltares/Edwin | Open. Due date 5/1/09 |
| C2-04282009-02: Review and provide feedback on list of Techniques from AI # C2-04282009-01 | CAT-II | Open. Due date 5/8/09 |
| C2-04282009-03: Determine a single XML format for describing rating tables for ingest into CHPS; send examples using the agreed format to Deltares/Edwin | Harold, Mike DeWeese | Open. |
| C2-04282009-04: Distribute functional requirements document for USGS rating tables retrieval and processing. | Dave Reed | Closed. Forwarded to the cat_2 infolist on 4/28/09 |
| C2-04282009-05: Come up with a proposal for ingesting NOHRSC SMWE data into CHPS to meet OHRFC's requirement | CAT | Open |
| C2-04282009-06: Add to the next CAT call agenda an item to discuss a national approach for alternative to IHABBS as a basin delineation and UHG development tool. | Chris | Open. Due date 4/30/09 |