Minutes

Scoping Meeting: 2011-11-02 09:00 to 10:30 PDT

Attendance:

Stuart Hamilton (SH)       Aquatic Informatics

Laura De Cicco   (LD)        USGS

Nate Booth         (NB)       USGS

Alex Joseph        (AJ)        Cybera/Water and Environmental Hub

John Halquist     (JH)        NOAA

Lingling Liu          (LL)         WSC

Jeff Woodward (JW)       SWA

Dave Sibley         (DS)       USGS

Bob Harrison      (BH)       MWS

Absent:

IJC

**JH:** provided a brief history leading to the present IE. The objectives for NOAA are to have observational data and reservoir operation data integrated into their forecast modeling system. Forecasts are used to update control of structures - impacting on regulation schedules, which in turn impact on forecasts. Structural regulation data and rating curves should be accessible using WaterML2.0.

**LD:**  USGS is interested in testing performance of WaterML2.0. Bandwidth is a concern.

**NB:** NWIS currently serves unit and daily value streamflow in WaterML 1.1. There is interest in evolving those services to the new OGC standard WaterML2.0.

OGC Interoperability Experiments to date have tested the WaterML2 standard's ability to represent all needed metadata that supports USGS needs. Beyond the research mode demonstrated in the IEs, there will be a move to operationalize these services.

One important aspect to interoperability of stream observations across organizations is by linking to common hydrological networks. This could be one focus of the Forecasting IE.

Also, the work of the Surface Water IE can be found here:

<http://nwisvaws02.er.usgs.gov/ogc-swie/>

**AJ:** Water and Environmental Hub (<http://www.waterenvironmentalhub.ca>) has a downstream interest in the serving of data in WaterML2.0 format. The Cybera API can use the data to develop custom applications for end-users of the data.

**LL:** WSC has a high level of interest in open standard and its development process. Data can be made available in XML format but not for the entire network at this time.

**SH:** Aquatic Informatics can provide the semantic mapping and syntax translation from the AQUARIUS database (used by WSC, SWA and MWS) to the WaterML2.0 format. This will enable WSC (and MWS and SWA) to push data outside of the firewall in WaterML2.0 for both this project and the Alberta and New Brunswick projects which will also demonstrate interoperability between the two major vendors (Kisters and AQUARIUS). One of the concerns raised by WSC is the adequacy of WaterML2.0 for user-level permissions to use data. The focus therefore is not just on the needs of end-users but also in limiting the liability of data providers by enforcing acceptance of risk and also of qualifying data with flags, grades, notes, approval levels etc.

**JW:** SWA operates about 150 stations and is a partner with WSC in the operation of another 150 stations. SWA has a vested interested in multi jurisdictional data sharing. Specifically, North Dakota, Montana, Alberta and Manitoba. SWA would like to see WSC focus on providing data as opposed to providing a service for access of data. Updating of shifts and rating curves in real-time is a major concern. The source of the data and any disclaimers or quality notifications are concerns. There are a lot of questions about how sharing of forecasts will work.

**JH:** This IE project will uncover several unknowns. Whereas NOAA has a strong interest in resolving inter-jurisdictional data sharing problems, there is no expectation of an immediate payback. This is a start of a long process.

**LL:** Would climate data be served in WaterML2.0?

**JH:** No, existing climate and met data standards work quite well. The biggest challenge has been stream gauging and associated data. There will need to be an IE sometime in the future for gridded data such as Doppler Radar and also for gridded hydrological model ouput.

**BH:** MWS is really reliant on other organizations for both gauge data and forecasts. The flow from Manitoba is to the ocean so there are really no downstream users who could benefit from MWS forecasts in WaterML2.0. There are already data access systems in place but there is room for improvement. MWS would be a beneficiary of improved data and forecast sharing.

**All:** discussion on geographic scoping of the project. Consensus across the board that the Souris River would be a good focus. All parties are interested in participating and there are no data assets that needed to be excluded from inclusion in the experiment. Water Level, Discharge, Forecasts, Snow and Reservoir Operations data were discussed.

**AJ:** Cybera would be very interested in developing the API to demonstrate the seamless integration of all of this data.

**All:** All participants of this call agreed to participate on the steering committee for this project. The next meeting will be at 09:00 PDT Thursday, November 17. A representative from IJC should also be part of the steering committee. The focus of the next meeting will be to identify actions and time-lines. There will be a need for a recurring scheduled meeting to keep the project moving forward.

**JH/NB:** This is one of four or five projects under this IE. Alberta, New Brunswick, one entirely in US to work with USACE, and one in Spain. The OGC wiki will be used to keep track of all of these projects.

Call in details for next meeting please schedule in your calendar: