

## **CUAHSI Hydrologic Information System Observations Data Model Open for Comment until January 31, 2007**

The document "CUAHSI Community Observations Data Model Working Design Specifications Document – Version 4 " (<http://www.cuahsi.org/his/docs/ODM4-20061026.pdf>), gives the current design for the integrated observations database that is proposed for the CUAHSI Hydrologic Information System (HIS). We seek your comments and suggestions on this design so that the Observations Data Model (ODM) can fulfill the needs of the community.

There is much commonality among the data needs of National Science Foundation "observatory" initiatives, such as:

- Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUAHSI)
- Collaborative Large-scale Engineering Analysis Network for Environmental Research (CLEANER)
- WATer and Environmental Research Systems network (WATERS)
- National Ecological Observatory Network (NEON)
- Ocean Observatory Initiative (OOI)
- Critical Zone Exploration Network (CZEN)

Although the ODM was developed with hydrologic observatories in mind we feel that aspects of ODM may extend to other NSF observatory initiatives and are interested in exploring opportunities for sharing and maintaining consistency across observatory initiatives as we advance ODM. We therefore welcome comments from all perspectives. We appreciate you taking the time to help with this.

In commenting on the ODM it would be most helpful if you addressed the question as to whether this model is sufficient for the representation and storage of observations of interest to the NSF observatory initiative that you are most familiar with. In reviewing this document, please focus on the ODM schema in figure 2 that give the substance of the model, with specifics in the tables in appendix A. The following questions are provided to guide your comments, but please do not feel constrained or limited by these questions. We are interested in your thoughts or opinions however you choose to express them on any aspects of the model on which you wish to comment.

1. Is the ODM capable of storing all observation data that you think this database should contain? If not, please indicate the data that does not fit this data structure, explaining why and providing suggestions regarding a data structure that could accommodate this data.
2. Is the ODM an efficient way to store all the observation data that you think this database should contain? If not, please indicate the data and situations for which this structure is inefficient and provide suggestions for making the data more efficient.
3. Is the structure of the ODM efficient for the querying and analysis of observation data? If not, please explain the shortcomings and indicate how they might be overcome.
4. Is the ODM sufficient and optimal as a basis for the data catalog to underlie a Map Server to provide for browser map based data discovery in the CUAHSI Hydrologic Data Access System.
5. Are you aware of other data systems that fulfill similar goals? If so, please indicate:
  - a) What this (or these) systems are?
  - b) Are there features, capabilities, functionalities of other systems that the ODM does not have that are needed? What are they?

- c) Other similar systems that we are aware of are HarmoniRib (<http://www.harmonirib.com/>), and Kisters WISKI System (<http://www.kisters.com/>). If you are familiar with either of these systems, can you comment on functionalities or capabilities that these have that might be applied to the ODM?
6. In your opinion, will ODM help in facilitating data sharing or comparison across projects/test-beds/observatories?
7. If you are associated with a WATERS network observatory test bed:
  - a) After reviewing ODM are you willing to use it?
  - b) If you don't use ODM, why not?
  - c) If you don't use ODM what will you use or how will you manage your observations data?
  - d) If you aren't willing to use ODM at this time, are there conditions under which you might change your mind (e.g., the existence of supporting software, data analysis, or modeling tools based on ODM)
8. If you are associated with a non CUAHSI/WATERS observatory initiative:
  - a) Does ODM appear to be useful to the initiative (i.e. NEON, CLEANER, OOI, CZEN) that you are most associated with?
  - b) Which aspects of the ODM might be transferable to the initiative (i.e. NEON, CLEANER, OOI, CZEN) that you are most associated with?
  - c) Recognizing that the ODM was designed with hydrologic observatories in mind are there specific design decisions that: (1) make the model useful to you, or (2) limit or preclude you or your community from using ODM.
9. Are you interested in, or are you currently planning on developing software tools that use ODM as an underlying data source?
10. Please provide any additional comments or suggestions.

Please provide your review comments to David Tarboton ([dtarb@cc.usu.edu](mailto:dtarb@cc.usu.edu)) by January 31, 2007.