

Minutes of the Special Meeting of the Board of Directors of the Consortium of Universities for the Advancement of Hydrologic Science, Inc. (Held in the Maybird Room at Snowbird Utah, August 20, 2002)

The following representatives were present.

Participating were Directors David Ahfeld (University of Massachusetts), Michael Barber (Washington State University), Ana Barros (Harvard University), Derek Booth (University of Washington), Thomas Burbey (Virginia Tech University), James Butler (University of Kansas), Martha Conklin (University of Arizona), Chris Duffy (Pennsylvania State University), Efi Foufoula (University of Minnesota), Wendy Graham (University of Florida), Nancy Grimm (Arizona State University), Robyn Hannigan (Arkansas State University), Markus Hilpert (Johns Hopkins University), Robert Holt (University of Mississippi), David Hyndman (Michigan State University), Steve Jennings (University of Colorado, Colorado Springs), William Johnson (University of Utah), Allan Jones (Texas A&M University), Doug Kane (University of Alaska Fairbanks), Lev Kavvas (University of California, Davis), Witek Krajewski (University of Iowa), Chuck Kroll (SUNY-ESF), Praveen Kumar (University of Illinois), Venkat Lakshmi (University of South Carolina), Dan Larsen (University of Memphis), David Maidment (University of Texas Austin), James McNamara (Boise State University), Miguel Medina (Duke University), Thomas Meixner (University of California, Riverside), Larry Murdoch (Clemson University), Fred Ogden (University of Connecticut), Michael Piasecki (Drexel University), Tom Piechota (University of Nevada Las Vegas), Ken Potter (University of Wisconsin), Balaji Rajgopalan (University of Colorado, Boulder), Jorge Ramirez (Colorado State University), Ying Reinfelder (Rutgers University), Frank Schwarz (Ohio State University), Stuart Schwarz (University of North Carolina System), John Selker (Oregon State University), Christine Shoemaker (Cornell University), Laurence Smith (University of California Los Angeles), Jeff Talley (University of Notre Dame), David Tarboton (Utah State University), Laura Toran (Temple University), Baxter Viuex (University of Oklahoma), John Wilson (New Mexico Tech.), Chunmiao Zheng (University of Alabama), Marshall Moss (CUAHSI), and Norm Miller (University of California, Berkeley) were present as observers but did not have a vote.

Roll Call

The meeting was called to order at 8:40 AM Mountain Daylight Time and roll was taken. A total of 48 Directors or their Alternates were present, which satisfied the requirement for a quorum.

Hydrologic Information Systems (HIS)

Efi Foufoula made a presentation on the work of the Hydrologic Information Systems Review Group. (Presentation materials may be seen at the CUAHSI web site). At the end of her presentation, Dr. Foufoula moved that “The review committee recommends approval of the HIS element of the CUAHSI Infrastructure. The proposal is well developed and close to completion. It should address the proposed

concerns/recommendations before it is approved.” Miguel Medina seconded the motion.

There was a broad discussion that followed that included several friendly amendments.

The final motion read:

“The Review Group recommends approval of the HIS element of the CUAHSI Infrastructure. The proposal is well developed and close to completion. It is recommended that it should address the proposed concerns/recommendations.”

At the end of the discussion, Bob Holt called the question. Chungmaio Zheng seconded

The motion to call the question passed unanimously.

The motion as amended passed unanimously by acclamation.

Synthesis Center

David Tarboton presented the work of the Synthesis Center Review Group (Presentation materials may be seen at the CUAHSI web site). At the end of his presentation, Dr. Tarboton moved, “the Board of Directors resolve to support the concept of a synthesis center as outlined in the draft white paper with the provision that the structure and location of the synthesis center be selected through an open, peer-reviewed process.” Mike Barber seconded the motion.

Discussion followed.

Praveen Kumar called the question.

The motion to call the question passed unanimously by acclamation.

Dr. Tarboton’s motion passed unanimously by general acclamation.

Dr. Tarboton made a second motion, “Resolve that the synthesis center serve as a physical base for the activities of the following types:

- Meetings and workshops

- Working groups

- Visitors, including postdoctoral fellows, sabbatarians, and teachers in residence

- Educational and outreach functions

- Research applications

- Components of CUAHSI hydrologic information systems initiative that involve science and analysis (rather than information technology)

And that the document be revised to address the recommendations in the Review Group’s report.”

Praveen Kumar seconded the motion.

Through friendly amendment, the motion was changed to read:
“It is recommended that the final white paper should address the recommendations and proposed revisions of the Review Group.”

Mike Barber called the question.

Motion to call the question passed unanimously by acclamation.

Dr. Tarboton’s second motion as amended passed unanimously by acclamation.

Research Applications

Stu Schwarz made a presentation on the activities of the Research Applications review group (available separately on the CUAHSI web site). When finished he made the following motion, “to adopt this conceptual structure for the Research Applications program element. The Committee recommends this concept plan be adopted as the overall structure for the Research Applications program element, to be developed in detail by the committee with oversight and approval of the Executive Committee.”

There were a number of friendly amendments, all of which were accepted, that led to the following revised motion, “We recommend the consideration of the reported conceptual structure for the Research Applications program element. We further recommend this conceptual plan be adopted as the overall structure for the Research Applications program element, to be developed in detail by the Standing Committee on Research Applications with oversight and approval of the Executive Committee.” Dan Larsen seconded the motion.

Motion passed unanimously by acclamation.

[There was a break from 10:20 to 10:40 AM Mountain Daylight time.]

Measurement Technology

Frank Schwarz presented the work of the Measurement Technology Review Group. He then moved that “the Board of Directors accept the general concept of an instrumentation facility that emphasizes service and research important to hydrologic observatories. It is recommended that the synthesis and white paper address the other proposed concerns and recommendations of the Review Group.” Venkat Lakshmi seconded.

Vigorous discussion followed.

Dave Tarboton moved to amend the motion by deleting from “that” onward in the first sentence.

After debate of the proposed amendment, the question was called by ???? and seconded by ??????. The called question passed with 43 ayes and 3 nays. The motion to amend was defeated with 19 ayes, 22 nays, and 3 abstentions.

Further discussion followed.

Chunmiao Zheng moved to amend the motion as follows: “replace emphasizes with provides and adds and the hydrologic science community at the end of the first sentence.” Wendy Graham seconded.

Vote was conducted by raised hands - 32 ayes, 10 nays, 1 abstention.
Amendment passed.

Final motion reads: “The Board of Directors moves to accept the general concept of an instrumentation facility that provides service and research important to hydrologic observatories and the hydrologic science community. It is recommended that the synthesis and white paper address the other proposed concerns and recommendations of the Review Group.”

The amended motion passed by acclamation.

Education and Outreach

Martha Conklin presented the work of the Education and Outreach Review Group. She then moved that “Education, Learning and Outreach activities be built into the Hydrologic Observatories, Measurement Technology Facilities, Hydrologic Information Systems Facilities, and the Synthesis Center.” David Ahlfeld seconded the motion.

Bob Holt called the question.

The call passed.

Motion passed unanimously by general acclamation.

Martha Conklin made second motion, “that The Education and Outreach Standing Committee should develop an outcomes based education, learning and outreach plan including these 5 main areas – K-12 education, university education, researchers,

practitioners, and outreach.”
David Ahlfeld seconded

The motion passed unanimously by general acclamation.

Hydrologic Observatories

Fred Ogden moved that the following resolutions be adopted (with friendly amendments as noted)-

“The Board of Directors (David Tarboton instead of review committee) recommends that the Observatory Committee incorporate the following startup plan and timetable (all dates are recommendations)

1. A hypothetical observatory prototype should be designed and budgeted through an interdisciplinary scientific working group (bill Johnson not workshop) (as soon as possible).
2. Preproposal RFP should be issued (~September 2003 – Due January 2004); each proposal should be a multi-university effort
3. Successful preproposals should be given 6 month planning grants (~April 2004); {Full proposals due based on prototype design (~October 2004)} .
4. Selection of proposals should be by an independent committee (February 2005, possibly by a NSF panel)
5. First set of observatories should be initiated (~June 2005)
6. Initial data should be online (~2006)
7. Startup should be coordinated with HIS, Measurement Technology synthesis center, and education and outreach (Meixner education and outreach added).”

Dan Larsen seconded.

The motion passed unanimously by general acclamation.

Fred Ogden made a second motion, “that the Science Committee and Observatory Committee should incorporate key science questions to justify hydrologic observatories. Example questions could include:

1. How will natural and anthropogenic environmental changes (e.g., land use and climate changes) affect water quality and quantity, and sustainability of ecosystems and human population?
2. How will long-term high-resolution hydrologic data improve management of engineered and natural systems?
3. How can we improve measurements and predictions of water, mass, and energy balances over a range of scales?
4. What are the dominant processes at hydrologic interfaces?
5. What interactions among hydrologic and biological systems affect ecosystem and biogeochemical patterns and hydrologic processes?

6. How can we transfer hydrologic measurements, model parameters and system behavior across wide ranges of scales?

7. How have documented land use/cover changes influenced hydrologic and geochemical fluxes -- impact and feedback?

8. How can we improve the prediction of hydrologic extremes (droughts and floods) at various time and space scales?"

Thomas Burbey seconded the motion.

The motion was tabled by acclamation.

Dr. Ogden made a third and final motion, "that the Board of Directors recommend that the hydrologic observatory white paper include the following:

- A preamble that clearly elucidates the scientific need for a system (array) of linked observatories.
- A section in the introduction on the current state of the science.
- Statements that clearly map core measurements from the observatories to the science questions
- A discussion of other 'units of observation' (besides watersheds) that relate more naturally to continental scale issues and to groundwater issues (continental drought, water supply)."

David Ahlfeld seconded the motion.

The question was called, and the call of the question was passed unanimously.

The motion passed by acclamation.

Science Drivers

Derek Booth moved that "the Board of Directors recommends the following phrase be used to articulate the over-arching questions of the Science Objectives White Paper: 'What is the scientific framework required to adapt successfully to changes and uncertainties in freshwater resources and to integrate with other earth processes?' and 'How will environmental changes natural and anthropogenic cause changes in earth's hydrologic systems?'"

Ana Barros seconded

After some discussion, Venkat Lakshmi moved to table the motion, and Christine Shoemaker seconded the tabling motion. The move to table was defeated by a vote (hand count) of 16 ayes, 20 nays, and 7 abstentions.

Venkat Lakshmi called for quorum. The quorum call failed by one vote. All ensuing discussion to be treated as information items.

The meeting adjourned 11:54 AM

