

Developing a Testbed Concept for Hydrometeorology in NOAA

Date and location: 20 November 2002, The Churchill Hotel, Washington, DC
Jointly organized by NWS (Rich Fulton of OHD) and OAR (Marty Ralph of ETL)

Background

The testbed concept is gaining momentum within NOAA as a vehicle for accelerating transitions from research to operations and for fostering technology infusion to the National Weather Service. This is evidenced by the inclusion of testbeds as elements in a number of recent NOAA planning documents and programs, such as the NWS Science Technology Infusion Program (STIP). Most of these elements are associated with precipitation, water cycle and hydrology. Thus, the time for implementing a Hydro-Meteorology Testbed (HMT) may be approaching.

In one vision, developed over the last two years at NOAA/ETL, *regional* HMTs would be established with semi-permanent concentrations of advanced ground-based instrumentation, episodic aircraft and ship support, improved numerical models, and satellite products. Unlike traditional research field experiments, however, these HMT's involve heavy and direct participation by NWS and RFC forecasters. A primary goal of the HMT is to develop and provide prototype versions of potential new realtime products tailored to forecaster needs, for their daily use and evaluation. NOAA's successful CALJET and PACJET experiments of the last few winters on the West Coast are a reduced-scale example of this approach.

In addition to appropriate research-oriented performance measures, HMT progress should also be assessed in terms of improved regional performance on the QPF and Flood Forecasting GPRA measures. Influencing these forecast goals requires a strategy that develops, evaluates, and infuses science and technology in the context of the long-successful "man-machine mix" paradigm of operational prediction. An HMT established in one region of the U.S. would move a few years later to a new geographic region where different weather conditions and forecasting challenges prevail. Those new instruments and products that are deemed vital to improved forecasting will remain in place permanently at the original region and will be duplicated in the new region. Elements deemed to be less valuable would be removed.

This is just one HMT vision. Others are percolating within NOAA and at NASA, DOE, and NSF/universities. Multi-agency testbed collaborations are inevitable and desirable. However, it is also desirable that NOAA takes a leadership role rather than being a late-comer and merely joining other agency testbeds in a supporting role.

Invitation

As a NOAA or NOAA-Joint Institute scientist or manager involved in water issues, we invite you to attend a one-day meeting to discuss the testbed concept and to chart a course for encouraging NOAA administrators to develop the idea into a practical tool. We expect that this meeting will air and compare ideas and will be the springboard to initiate a planning process. We anticipate that a larger follow-on workshop in 2003 will also be arranged at this meeting to include key representatives from other agencies involved with related testbed ideas.

Meeting Agenda

The meeting will include very short updates by invited speakers and will reserve considerable time for open discussion of the topics shown here. A more detailed agenda is forthcoming.

Introduction:

Purpose of this meeting (Ralph and Fulton)
The Water Resource Program Concept. (Uhart)

Session 1: STIP and lessons learned from PACJET and JHT

Discussion: What have we learned, what are the next steps in the STIP process?

Session 2: Summarize recommendations from recent reports that point toward the need for HMT-type activities (USWRP, Water Cycle, Weather-Climate Connection, "Arkin" report, etc.)

Discussion: What elements of an HMT are common to these goals

Session 3: Brainstorm on how to shape HMT into an effective tool to achieve NOAA's goals.

Discussion: Identify key operational and research targets, as well as necessary intermediate milestones. Which organizations need to be involved? What are the roles of NOAA's research labs (OAR, NWS, NESDIS)? How to best benefit from University research and USWRP? What are the roles of NCEP, RFCs, and WFOs?

Session 4: Develop a consensus of the programmatic strategy that will become the core of a brief white paper (2-3 pages) drafted and adopted shortly after the meeting.

Discussion: What are the key elements of HMT? What are the next steps? Design a multi-agency, researcher-forecaster-user planning workshop in 2003, aimed at creating a Science Plan and an Operational Transitions Plan.

Meeting Logistics

Date and Time: *Wednesday, 20 November 2002, 9:00 a.m. - 5:00 p.m.*

Location: *The Churchill Hotel, 1914 Connecticut Ave. N.W., Washington, DC*
(near Dupont Circle) phone: 202-797-2000, <http://www.thechurchillhotel.com>

Meeting Co-Chairs:

Rich Fulton, NWS/OHD, Richard.Fulton@noaa.gov, (301-713-0640 x138)
Marty Ralph, OAR/ETL, Marty.Ralph@noaa.gov (303-497-7099)

Registration: Please contact one of the co-chairs by **Tuesday, 5 November**, concerning your attendance.

Local Arrangements Contact Info: Kristen Koch (301-713-2465, x144)
Mike Uhart (301-713-9121, x159)

List of Invited Participants

Gary Carter - NWS/OHD
David Reynolds - NWSFO, Monterey
Rob Hartman - NWS-CNRFC
Peter Gabrielsen - NWS Eastern Region
Andy Edman - NWS Western Region
David Helms - NWS/OST
Mike Uhart - NOAA/OAR
John Gaynor - NOAA/OAR
Russ Callender - NOAA/OAR
Roger Pierce - NOAA/OAR
Kristen Koch-NOAA/OAR
John Bates - NOAA/NCDC
Rick Lawford - NOAA/OGP
Josh Foster - NOAA/OAR
Bob Kuligowski - NOAA/NESDIS
Paul Menzel - NOAA/NESDIS
Kevin Kelleher - NOAA/NSSL
Dave Jorgensen - NOAA/NSSL
Frank Marks - NOAA/AOML
Ed Rappaport - NOAA/NHC/JHT
Glenn Austin-NWS/OCWWS
Bill Neff - NOAA/ETL
Dave Brandon-NWS/CBRFC
John Schaake - NWS/OHD
Paul Hirschberg - NWS/OST
Tom Graziano - NWS/OCWWS/HSD
Stephan Smith - NWS/OST/MDL
Randy Dole - NOAA/CDC
Ken Gage - NOAA/AL
Steve Koch - NOAA/FSL
Al Gasiewski - NOAA/ETL
Brooks Martner - NOAA/ETL
David Kingsmill - CIASTA/DRI
Allen White - CIRES/ETL
Andrea Ray - CIRES/CDC
Jeff Whitaker -CIRES/CDC