

Chair's Report 4th Meeting of the Big Data Task Force

March 6, 2017
NASA HQ

Membership of the BDTF

Name	Dept./Center	Organization
Charles Holmes - Chair	Retired	Formerly NASA HQ
Reta Beebe	Dept of Astronomy	NMSU
Eric Feigelson	Center for Astrostatistics	Penn State U.
Neal Hurlburt	Solar and Astrophysics Lab.	Lockheed Martin
James Kinter	Center for Ocean-Land-Atmosphere Studies	GMU
Ashok Srivastava (1)	Chief Data Scientist	Verizon Dev. Labs
Clayton Tino (2)	Software Architect	Virtustream / EMC
Raymond Walker	Institute for Geophysics and Planetary Physics	UCLA
Chris Mentzel (3)	Science Program – Data Driven Discovery	Gordon & Betty Moore Foundation
Jerry Smith – Exec. Sec.	SMD	HQ NASA

Chair's report to the BDTF

- Gave the BDTF's 3rd report to the Science Committee via their teleconference on Oct 26.
- Gave the "Interim Report" to SMD leadership on Nov 29, 30.
- Attended 3 data science workshops.
- Visited Dr. David Spergel at the Simons Foundation.
- Prepared for this meeting.

3rd BDTF Report to the Science Committee

The Science Committee held a teleconference on Oct 26 & 27, 2016.

- I made the TF's report via WebEx/telephone on the 27th.
- Well received with some good questions/comments.

The report contained our two findings and recommendation:

Findings: 1. "Observing in the Archives"

2. OCIO & AIST Cloud Computing Initiative

Recommendation: Cloud Computing Demonstration of Exoplanet Pipeline Processing

Heliophysics Subcommittee submitted this recommendation to the Science Committee:

In consideration of the pressing oversubscription difficulties across the SMD, the HPS suggested that a rapid survey should be made on the topic of HEC status and plans at other U.S. Agencies* which also sponsor discovery R&A.

- The survey should describe each Agency's: HEC capability and capacity; numbers of HEC users; expenditure per year (for HEC support personnel and infrastructure, and for new HEC-related hardware); and, the Agency's HEC allocation policy.
- The purpose of the survey would be to summarize what other Agencies are doing to address their researchers' needs for HEC resources, as input to NASA decision-making

*including, e.g., NSF, DOE SC, DOE NNSA, DoD HPCMP

Interim Report of the BDTF

- On Nov 28 and 29 I toured SMD and gave the Interim Report to the AA, Division Chiefs and the program officers for data and computing.
- The report summarized the TF's activities, findings & recommendations, and a look forward to our 2nd year.
- Well received and some good feedback.

Some Trends and Common Themes

- Adopt “data science” approaches.
 - Establish a Data Science Program Officer w/ a research program.
 - Incorporate data science factors into AOs, selections, mission development reviews, etc.
- Employ commercial cloud services:
 - Science Data processing – for some applications.
 - Science Data storage – probably no!
- Start leveraging on national science data communications programs.
- Evolve to “data analytics” architectures.

Goals of this meeting

1. Revisit with HQ Data and Computing Program Officers for updates and Q&A.
2. Hear about DOE's Exascale Computing Program and JPL's Data Science initiatives.
3. Finish up review of NSF Big Data "Hubs" project.
4. Continue work on Study Topics: review research results to date; present outlines of you papers.
5. Generate appropriate findings and recommendations for the BDTF report to the Science Committee (Spring 2017 – tbd date).

Science Committee Reorganization

- The four science subcommittees were elevated to the status of advisory committees under the NAC, each reporting to their respective SMD division directors.
- I still don't know what this means for the status of the Science Committee as well as the BDTF.

Agenda