Mapping and Planetary Spatial Infrastructure Team (MAPSIT)

Report to Planetary Advisory Committee (PAC)
Feb 15, 2022 Meeting

Updates to MAPSIT Steering Committee

Brad Thomson (Univ. Tenn.), *Chair*

Julie Stopar (LPI), *Vice Chair*

Brent Archinal (USGS)

Ross Beyer (SETI/NASA Ames)

Dani DellaGiustina (Univ. Arizona)

Sander Goossens (NASA Goddard)

Justin Hagerty (USGS), *Ex Officio*

Trent Hare (USGS)

Jay Laura (USGS)

Sam Lawrence (JSC), HEOMD rep, *Ex Officio*

Myriam Lemelin (Université de Sherbrooke, Canada)

Jeannette Luna (Tennessee Tech Univ.)

Becky McCauley Rench (NASA HQ), *Ex Officio*

*Moses Milazzo (Other Orb), *Ex Officio*

Pete Mouginis-Mark (Univ. Hawaii)

Andrea Naß (DLR, Germany)

Jani Radebaugh (Brigham Young Univ.), *past Chair*

David Williams (Arizona State Univ.)

* = new SC members

MAPSIT Findings (1/3)

MAPSIT welcomes the appointment of Dr. Moses Milazzo, the first Chief Scientist for the Planetary Data Ecosystem

- This position is an outgrowth of Independent Review Board's (IRB) report for the Planetary Data Ecosystem (PDE).
- This newly created role provides an independent link between the larger PDE community, the Planetary Data System (PDS) and NASA Headquarters, and also refines and represents the PDE to NASA.
- Previously, the PDS Chief Scientist was an Ex Officio member of MAPSIT

Source: https://www.nasa.gov/feature/nasa-selects-first-chief-scientist-for-the-planetary-data-ecosystem

MAPSIT Findings (2/3)

MAPSIT endorses the final report of the Lunar Critical Data Product Special Action Team (LCDP-SAT), a joint LEAG-MAPSIT committee headed by Drs. Julie Stopar and Angela Stickle

Final report published on MAPSIT website:
https://www.lpi.usra.edu/mapsit/reports/
https://www.lpi.usra.edu/mapsit/reports/leag_mapsit_report_2022-01-11.pdf

MAPSIT Findings (2/3)

LCDP-SAT outcomes include specific findings in the following areas:

- Lunar Coordinate Systems and Frames
- Critical New Foundational Data Products for the South Pole
- Critical New Derived Data Products for Near-Future Missions to the South Pole
- New Mission-Enabling Data and Products for Further Lunar Exploration
- Lunar Data and Tools
- Realize a Lunar Spatial Data Infrastructure (SDI)

- Next steps under consideration include establishing a lunar SDI Working Group (WG)

MAPSIT Findings (3/3): SPD-41, Scientific Information policy for the Science Mission Directorate

Positive elements:

III A. All SMD-funded publications, that is publications funded by SMD or reporting on SMD-funded research, shall be made publicly accessible.

a. *As-accepted, peer reviewed manuscripts shall be deposited in NASA's PubSpace repository and made publicly available no-later than 12-months after their publication date*

MAPSIT finding: This is in accordance with current best practices and aligns with FAIR data principals (i.e., to make data Findable, Accessible, Interoperable, and Reusable).

Source: https://science.nasa.gov/researchers/science-data/science-information-policy

MAPSIT Findings (3/3): SPD-41, Scientific Information policy for the Science Mission Directorate

Elements of concern:

- Although the goal of SPD-41 is laudable, some of the language remains vague. Multiple footnoted documents are lengthy; can be difficult to find all items relevant to a given topic.
  - For instance: Examples of acceptable repositories for software (§III.C) and for disability accessibility (§III.E) are not specified
- Multiple standards likely without additional funding. New data for extended missions are mandated to be in PDS4 format. Large, computationally-intensive data sets may be expensive to convert from PDS3 format. Historically, overguide options (as proposed in the Planetary Mission Senior Review for PDS3 archive conversion) are rarely funded.

Source: https://science.nasa.gov/researchers/science-data/science-information-policy

Upcoming activities

- Two poster sessions at the Lunar and Planetary Science Conference (LPSC), Mon March 7 and Wed March 9 on “Planetary Data and Infrastructure: Build it and They Will Come”
- Planetary Geology Mappers’ Meeting will be held June 2022 in Flagstaff, AZ, hybrid format