Mapping and Planetary Spatial Infrastructure Team

INTRODUCTION
Jani Radebaugh – MAPSIT Chair
Planetary Science Subcommittee Meeting
DC, 29-30 September 2016
Mosaics, geologic maps, derived regional and global data products and associated geospatial infrastructure are integral to the success of the planetary science enterprise.
The Mapping and Planetary Spatial Infrastructure Team Motivation

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  - Influence all phases of the mission lifecycle for science investigations and operations
  - Strategic needs must be anticipated and prioritized by the community

- PSS recommended a “Cartography Research and Analysis Group” [CRAG] in Fall 2014.
  - A team fulfilling this role now exists in the form of MAPSIT
  - MAPSIT succeeds former Planetary Cartography and Geologic Mapping Working Group (PCGMWG) and assumes strategic planning role

- We represent the planetary science community
  - Help evaluate, prioritize and advocate for data, mapping, infrastructure needs
  - Another Analysis Group – Sarah Noble our POC
MAPSIT Steering Committee

- Jani Radebaugh, Brigham Young University [Chair]
- Samuel Lawrence, Arizona State University [Chair Emeritus]
- Brad Thomson, University of Tennessee Knoxville [Vice Chair]
- Justin Hagerty, United States Geological Survey
- Lisa Gaddis, United States Geological Survey
- James Skinner, United States Geological Survey
- Sarah Sutton, University of Arizona
- Trent Hare, United States Geological Survey
- Daniella DellaGiustina, University of Arizona
- Erwan Mazarico, NASA Goddard Space Flight Center
- David Williams, Arizona State University
- Brent Archinal, United States Geological Survey
- Robin Fergason, United States Geological Survey
- Jay Laura, United States Geological Survey
- Shane Byrne, University of Arizona

Representing a Diverse Community:
- Domain geoscience specialists
  - Moon, Mercury, Small Bodies, Outer Planets, Mars...
- Photogrammetry and Geodesy
  - SOCET-SET, SOCET-GXP
- Geologic Mappers
- Mission participation
  - LRO, MRO, OSIRIS-Rex, MESSENGER, Cassini, Galileo
- Cartographic Software expertise
  - e.g. ISIS, ArcMAP, QGis, Lunaserv
- Data Archival and Dissemination
- Human Exploration
  - SKG and ISRU expertise

9/30/16
MAPSIT Activities

• Town Hall at LPSC 46, 47
• “Planetary Spatial Infrastructure: At the Intersection of GIScience and Planetary Science”, LPSC 47, very well received (To be incorporated into LPSC topics for all meetings)
• 2nd Data User’s Workshop
  – 115 attendees in 2015
• Geological Mapper’s Meeting:
  – Flagstaff, June 13-15, 2016, 50 attendees
• Steering Committee Meeting June 16, 2016
  – Shoemaker Center, Flagstaff, AZ
• Synthesizing 2017-2022 Planetary Geospatial Strategic Plan [PGSP]
  – Undertaking comprehensive community stakeholder input process
  – Nominal delivery by mid 2017
• MAPSIT webpage now up
  – http://www.lpi.usra.edu/mapsit
MAPSIT R&A Concerns

• Presented in part to National Academies Space Studies Board committee on R&A restructure 5/16:
  • PDART (Planetary Data Archiving, Restoration and Tools) is a strong addition
    – Recognition that producing data products useable by the community is valued by NASA
    – Concern that program is oversubscribed and underfunded to support the backlog of needed products
• How is geologic mapping faring under R&A?
  – PG&G (Planetary Geology and Geophysics) was home for mapping, seen a downturn in mapping since demise and some retirements
  – Can be funded if proposers understand how to propose – science if a DAP or SSW, PDART if not – and if their standalone (no additional modeling, e.g.) value for doing science is recognized.
  – Educate community what is possible under PDART and other programs.
  – How do we deal with the long time periods (4 years) required to create a map, especially a summative one (global Mercury)?
• Can DAP programs be used to create data products and software, or just PDART?
MAPSIT Goals

- Reach out to community, determine key needs
  - Products for all users and stakeholders
  - Standards for software/instruments? Level-1 data?
  - Basically, make sure **data is as easy to use as possible**
- Maintain communication with NASA HQ to inform both ways
- Determine how to interface with RPIFs (not “facilities”...) and the PDS (link through Lisa Gaddis)
- Communicate with international partners
- Roll out 2017-2022 Planetary Geospatial Strategic Plan [PGSP]
  - Full community input
  - **Goal is a concise document to inform decision-making**
- Contribute to NASA Strategic Knowledge Gaps (SKGs)
MAPSIT Upcoming

- Planetary mapping session at GSA Denver 9/16 (went well! Great contributions, good interest)
- **New committee members solicited by community announcement** - vote and decide on them Oct 2016
- Town Halls ahead of Planetary Geospatial Strategic Plan
- First MAPSIT community meeting June 2017 Flagstaff, in conjunction with data users/mappers meeting