

## **GIS-based realization of symbolization standards for planetary geological mapping.**

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**Abstract:** Planetary evolution and the geological context of life are main research topics within the Helmholtz Alliance [1] and the European Planetary Network [2]. This contains questions like “Are there habitable zones on Mars?” or “Where are possible landing sites on Mars?” To answer these questions geological maps, analysis of fluvial features and morphometric measurements have to be performed and a strategy how to manage and archive highly inhomogeneous datasets and derived information for the utilisation by different operators has to be developed.

To enable a consistent representation of all the different mapping results we currently work at a GIS-based realization of symbolization standards developed for planetary geological mapping [3]. Thus the user will sustain the possibility to access the pre-built signatures and apply them scale-dependent to individual components. This serves the simplification of mapping procedure as well as the comparability of different map results.

Further we presently work at an improvement of the traceability of the derived data on network level. Therefore the user will be asked for a detailed data description after using the pre-build symbologies. This is essential for understanding the individual geological interpretation of the surface. This description enables the economic storage on a local server and the utilisation of interpreted data and further a representation on a mapserver structure.

### **References:**

- [1] <http://www.dlr.de/pf/desktopdefault.aspx/tabid-4843/>, [2] <http://www.europlanet-eu.org/demo/> [3] FGDC - Federal Geographic Data Committee (2006): Digital Cartographic Standard for Geologic Map Symbolization, FGDC Document Number FGDC-STD-013 2006.

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