Planetary GIS and EuroPlanet-RI H2020

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Geographic Information System (GIS) practice and applications within Planetary Science became in the last decade a major component for studying solid surfaces of Solar System bodies [e.g. 1,2,3]: from earlier mainly Mars-focused efforts limited to few datasets, the availability of high-quality spatial data grew enormously and its accessibility is also enhanced by the use of OGC web standards.

Higher-level, calibrated georeferenced datasets are the prime target for geologic and related thematic mapping [e.g. 4], although the communities potentially benefiting from a GIS-based approach are beyond and they include most closely Atmospheric science, as well as Magnetospheric and Plasma Physics, to quote only few.

In the upcoming EuroPlanet-RI H2020 project Planetary GIS efforts are embedded within the VESPA activity [5] and they allow for a tight integration of OGC and VO-based tools and interfaces [6].

Nowadays GIS-based analyses are used for carrying out research tasks and systematic mapping on planetary bodies, but also for a wide range of analyses related [e.g. 7] to landing site selection, ranging from scientific merit to safety [e.g.8]

Community building is a key part of VESPA [5], but also independently followed by other actors like ESA PSA [9]. Recently a workshop on Planetary GIS in broad sense and with particular reference to ESA data archives has been organized [10]. Such workshop has been strongly supported by ESA and the broad planetary community, both directly and through its official channel for Planetary Science archive science access and exploitation-related needs, the PSA User Group [11]. Its outcomes, also in terms of use case development, might be instrumental to VESPA GIS/VO future activities.

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