Prototyping the future Web Map Interface for ESA's Planetary Science Archive

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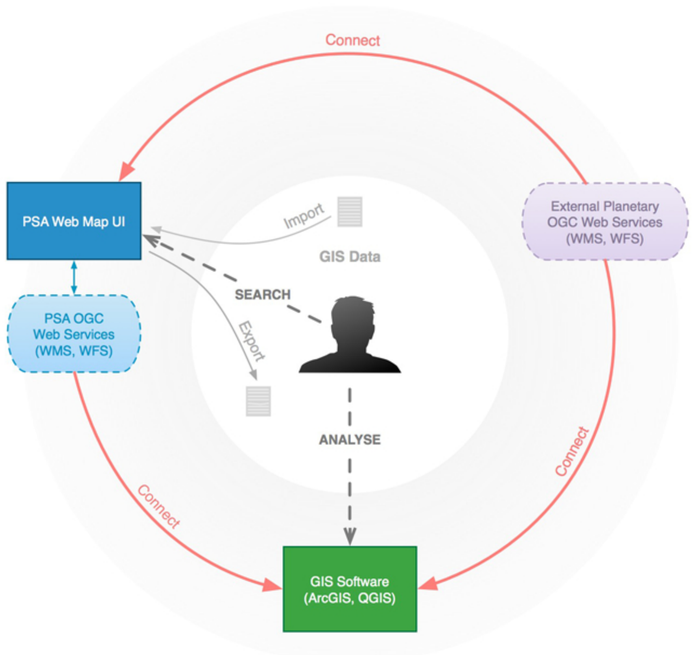
Abstract

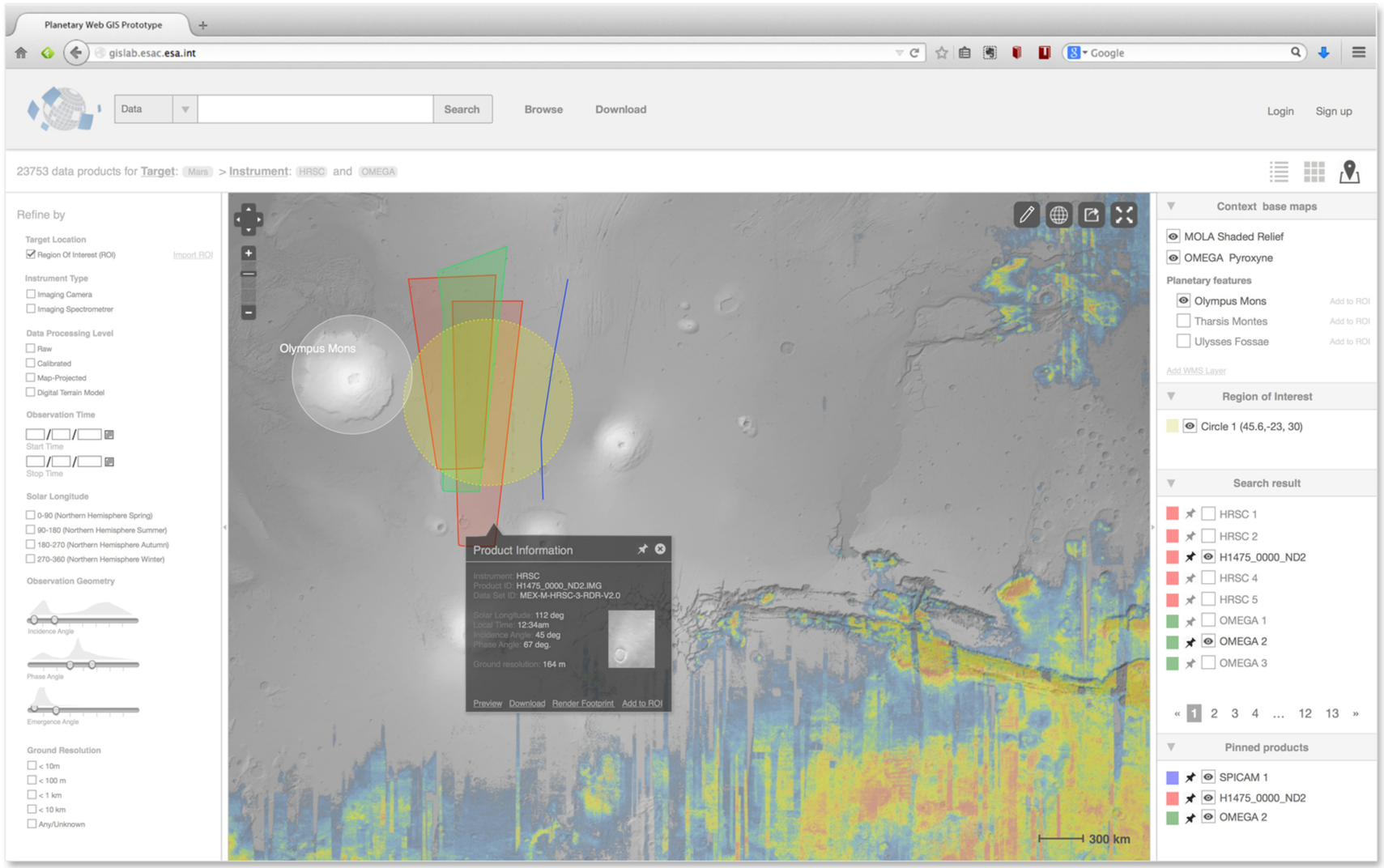
The ESA's Planetary Science Archive (PSA) has recently established a GIS Working Group to prototype a Web Map Interface that will serve as a proof-of-concept and design for the future ESA's fully web-based PSA User Interface.

This prototyping activity will allow PSA requirements to be captured and then consolidated through scientific inputs from the community. An Open GIS computer framework has been setup and initial concepts and requirements are presented here.

Initial Concepts and Requirements

The PSA Web Map Inteface interface will provide access to the full geospatial content of the PSA, including *Observation Geometry Footprints* of remote sensing instruments, and geo-referenced *Cartographic Products*, such as HRSC map-projected data or OMEGA global maps from Mars Express. The figure below illustrates how the interface and services will fit into a typical Planetary GIS user workflow.





GIS and OGC Friendly

Users will be able to import and export data in commonly used GIS formats. It will serve all PSA geospatial data through OGC Web Services so that they can be captured, visualised and analysed directly from GIS software, along with data from other sources

Intuitive Navigation

The interface will provide an intuitive and guided navigation using a faceted-based search mechanism allowing users to drill down the PSA archive content by applying successive filters.

Built-in Context Maps

A comprehensive set of built-in base maps, such as MOLA topography, TES infrared maps or planetary surface nomenclature, will provide users with contextual search capability. All maps will be available in both simple cylindrical and polar stereographic projection