

A Registry for Planetary Data Tools and Services. S. Hardman¹, M. Cayan¹, J.S. Hughes¹, R. Joyner¹, D. Crichton¹, E. Law¹, ¹Jet Propulsion Laboratory, California Institute of Technology, 4800 Oak Grove Dr, Pasadena, CA 91109, Sean.Hardman@jpl.nasa.gov, John.S.Hughes@jpl.nasa.gov, Ronald.Joyner@jpl.nasa.gov, Daniel.J.Crichton@jpl.nasa.gov, Emily.S.Law@jpl.nasa.gov.

Introduction: During the 2015 Planetary Data Workshop, the PDS Engineering Node team presented a plan [1] for taking the prototype Tool Registry developed by the International Planetary Data Alliance (IPDA) and upgrading it by increasing the visibility and enhancing its functionality along with incorporating the registered tools into PDS data search results. This work has been completed with the application deployed into operations by the PDS Engineering Node [2]. Figure 1 below, is a screenshot of the front page of the Tool Registry.

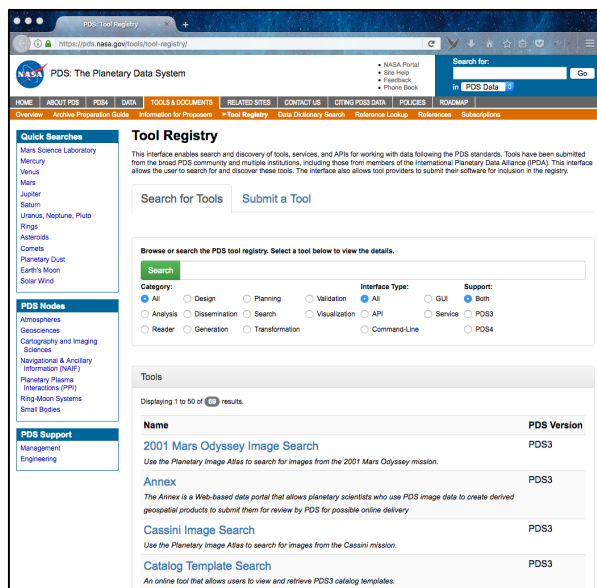


Figure 1: Tool Registry Screenshot

The application enables search and discovery of tools, services, and APIs for working with data following the PDS standards. Tools have been submitted from the broad PDS community and multiple institutions, including those from members of the International Planetary Data Alliance (IPDA). This interface allows the user to search for and discover these tools. The interface also allows tool providers to submit their software for inclusion in the registry.

Along with introducing the planetary data community to the Tool Registry, this presentation will describe and demonstrate how users interact with the application. For those users interested in the details, we will also take a brief dive into the architecture and design behind the application which is built on PDS4 software and the

PDS4 information model [3]. The information model provides the framework for capturing metadata that describes the tools and services and the software provides the framework for making this information accessible in the PDS4 data system. Figure 2 below, details the architecture of the PDS4 software utilized to support the Tool Registry.

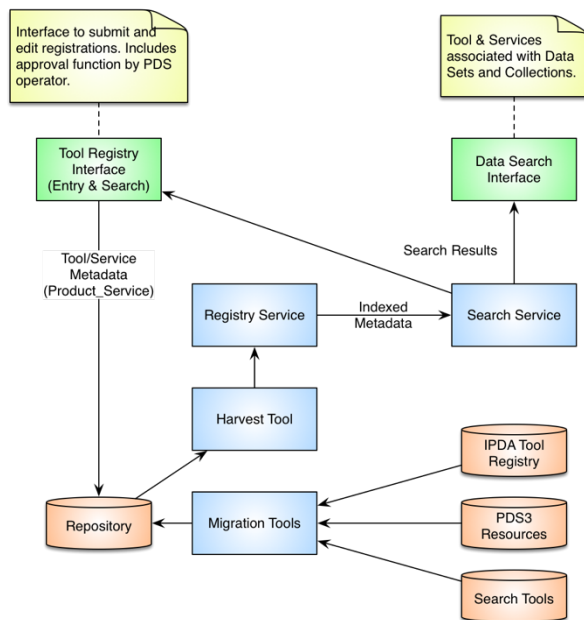


Figure 2: Tool Registry Architecture

References: [1] Hardman S., Hughes J.S., Joyner R., Crichton D., Law E., *Deploying a Planetary Data Tool Registry*, In Proceedings of the 2nd Planetary Data Workshop. Flagstaff, Arizona. June 8-11, 2015. [2] PDS Tool Registry, <https://pds.nasa.gov/tools/tool-registry/>. [3] PDS4 Information Model <https://pds.nasa.gov/pds4/doc/im/current/>.