Implementing Heliophysics and Planetary Virtual Observatory standards on top of a PDS node

T. King(1), B. Ritschel(2), B. Cecconi (3), V. Genot(4)
(1) Earth, Planetary and Space Science, UCLA, California, USA (tking@igpp.ucla.edu)
(2) GFZ German Research Centre for Geosciences, Potsdam, Germany (rit@gfz-potsdam.de)
(3) LESIA, Observatoire de Paris, Meudon, France (Baptiste.Cecconi@obspm.fr)
(4) CDPP, Centre de Données de Physique des Plasmas, Toulouse, France (vincent.genot@irap.omp.eu)

Abstract

In recent years metadata standards have been developed for many of the science domains. While there have been domain independent efforts like Dublin Core, most of the domain models are independent designs that do not share a common vocabulary. However the domain models typically share common concepts making it possible to describe resources in multiple domains by mapping terms related to common concepts. In some instances mapping is a simple translation, whereas in other instances the mapping is semantic. Two domains where cross registering resources is both important and useful are the domains of Heliophysics and Planetary sciences. In the Heliophysics domain SPASE is the prescribed metadata standard and in the Planetary Sciences the prescribed metadata standard is IPDA/PDS4. We show how using a combination of translations, SKOS representations, and supplemental information can be used to implement virtual observatory metadata standards on top of a PDS node. We also show that when common services such as SAMP and the delivery of data in standard formats like VOTable and CDF enable comparison and analysis of multi-discipline data.