The Virtual Solar Observatory: Still a Small Box

Abstract
Two and a half years after a design study began, and a year and a half after development commenced, version 1.0 of the Virtual Solar Observatory (VSO) was released at the 2004 Fall AGU meeting. Although internal elements of the VSO have changed, the basic design has remained the same, reflecting the team’s belief in the importance of a simple, robust mechanism for registering data provider holdings, initiating queries at the appropriate provider sites, aggregating the responses, allowing the user to iterate before making a final selection, and enabling the delivery of data directly from the providers. In order to make the VSO transparent, lightweight, and portable, the developers employed XML for the registry, SOAP for communication between a VSO instance and data services, and HTML for the graphic user interface (GUI’s). We discuss the internal data model, the API, and user responses to various trial GUI’s as typical design issues for any virtual observatory. We also discuss the role of the ”small box” of data search, identification, and delivery services provided by the VSO in the larger, Sun-Solar System Connection virtual observatory (VxO) scheme.

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