Data Integration Using SOAP in the VSO
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Abstract
The Virtual Solar Observatory (VSO) project has implemented a time interval search for all four participating data archives. The back-end query services are implemented as web services, and are accessible via SOAP. SOAP (Simple Object Access Protocol) defines an RPC (Remote Procedure Call) mechanism that employs HTTP as its transport and encodes the client-server interactions (request and response messages) in XML (eXtensible Markup Language) documents. In addition to its core function of identifying relevant datasets in the local archive, the SOAP server at each data provider acts as a "wrapper" that maps descriptions in an abstract data model to those in the provider-specific data model, and vice versa. It is in this way that VSO integrates heterogeneous data services and allows access to them using a common interface. Our experience with SOAP has been fruitful. It has proven to be a better alternative to traditional web access methods, namely POST and GET, because of its flexibility and interoperability.