SPASE: Current Uses, Tools, and Plans

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The Space Physics Archive Search and Extract (SPASE) project is an international collaboration among Heliophysics (solar and space physics) groups concerned with data acquisition and archiving. Within this community there are a variety of old and new data centers, resident archives, "virtual observatories", etc. acquiring, holding, and distributing data.   The main product of the SPASE group is an XML-based SPASE Data Model now in operational use to enable searches for and ultimate acquisition of data of interest to a researcher. The SPASE Data Model defines the content of resource descriptions (metadata). The intent is to describe all scientifically usable Heliophysics data sets using the Data Model.

Another product of the SPASE group, in collaboration with NASA's Virtual Observatories, is a set of tools and services which work with SPASE metadata. This includes Registry Services which can retrieve and render metadata using resource identifiers and facilitate the downloading of the data referenced by the metadata. The SPASE Data Model has also been used as a vocabulary in specialized data models. One example is the Heliophysics Event List Manager (HELM) model.

The SPASE Data Model is also being expanded to provide the means for more detailed description of data sets with the aim of enabling more automated ingestion and use of the data through detailed format descriptions. The evolution is based on a number of lessons learned and feedback from our community. Some of the lessons learned are unique to Heliophysics, and some are common to the various data disciplines. We will discuss the present state of SPASE usage, the role the SPASE Data Model can play in specialized data models and how we foresee the development direction in the future.