

Shopping for Solar Data with VSO



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VSO Update

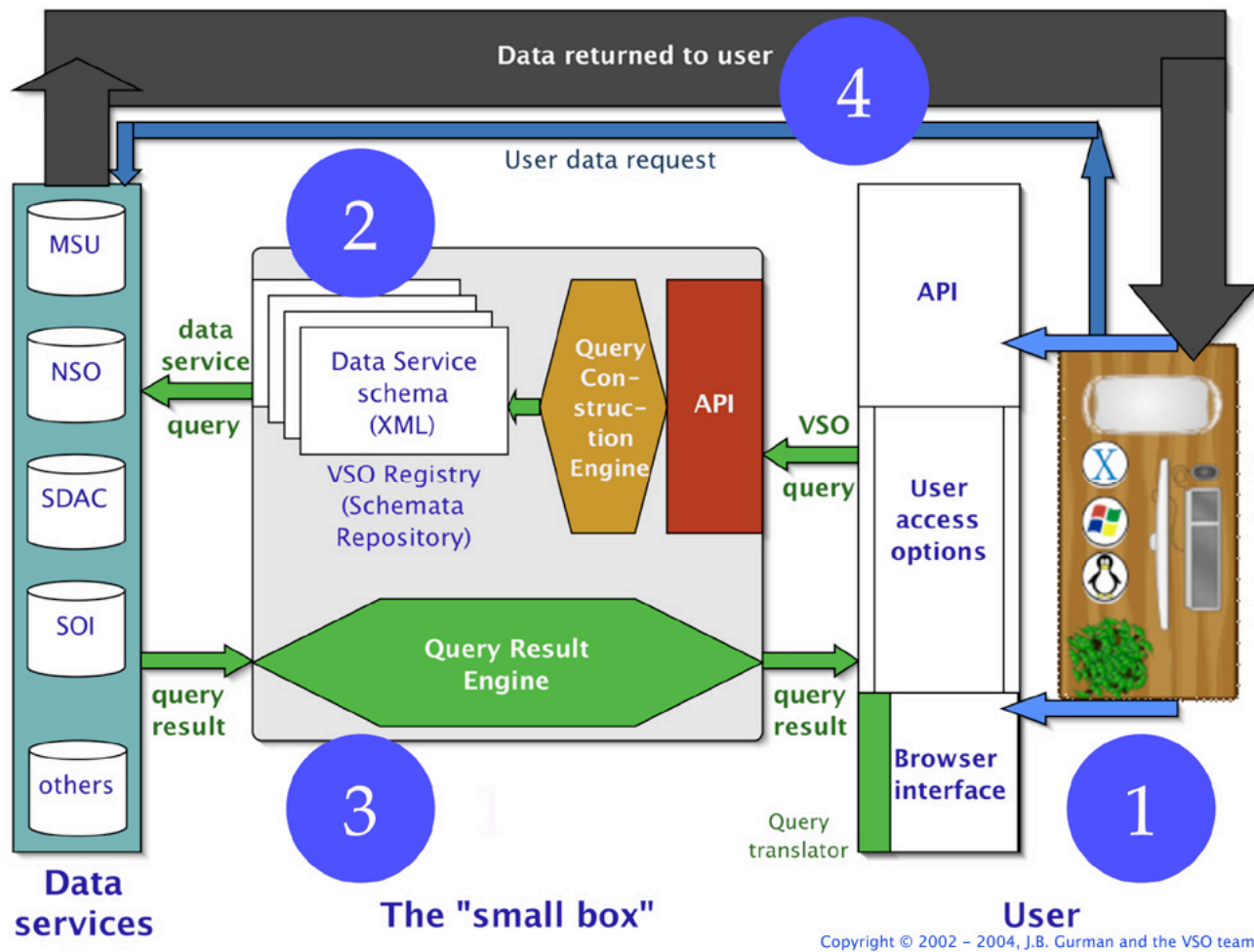
The VSO team presented its first working model at the AGU meeting in San Francisco, in December 2003. Since then development has continued in a number of areas.

We have been working towards including data providers from outside of the main VSO developers' institutes. To do this in a coherent fashion, we have developed a data model that describes the various types of solar physics data currently available. A standard way of classifying data is important for building a consistent interface with which to search the data. We have also included common terms by which various datasets are known so that users may search using familiar keywords. With the data model in place, we intend to include two new data providers before the SPD meeting in June, serving dataset types not currently available via the VSO.

We have been working to improve the search interface in several areas. This has included expanding the search terms to provide more comprehensive and more detailed search capabilities. We have also focused on feedback concerning the downloading of datasets returned by the queries. This has included construction of a shopping cart type interface to the VSO. The ultimate aim is to provide one-click access to request multiple datasets from multiple providers.

We are also working on defining the API for the VSO. This will allow people to construct their own interfaces to the core VSO functionality and allow integration with other web services, particularly CoSEC.

As always we see and encourage community users to try the VSO interface and report back with suggestions and comments.



The VSO Picture

The most important part of the data model is classifying the various types of observations. As well as these physical descriptions we will include nicknames where appropriate so users may search the data providers with terms with which they are familiar, such as “dopplergram” or “soft x-ray image”.

5. Observable	Physical_Observable PHYS_OBS	<i>string or menu</i> An identification of the physical observable(s) represented by the data set. Current allowed values: “LOS_velocity”, “vector_velocity”, “LOS_magnetic_field”, “vector_magnetic_field”, “intensity”, “equivalent_width”, “wave_power”, “wave_phase”, “oscillation_mode_parameters”, “polarization_vector”, “number_density”, “particle_flux”, “particle_velocity”, “thermal_velocity”, “composition”
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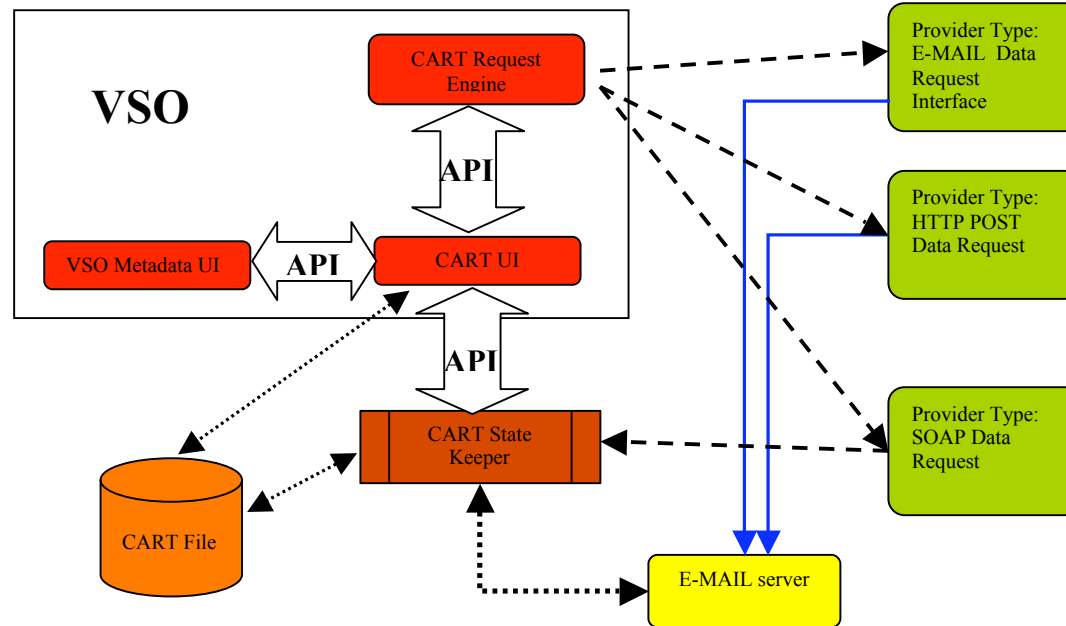
The VSO Shopping Cart

The VSO CART is an extension of the current VSO search engine. The VSO CART main purpose is to provide a single one-stop data request interface, giving also to the user flexibility and control on the data selected.

Highlights:

- Single user interface
- Bundle up VSO data requests
- Reuse of providers existing data requests APIs
- Keeps and maintains several VSO searches
- Basic Cart contents manipulation
- Portability

Shopping VSO Style!



Component Description:

_VSO Metadata UI:	Current VSO metadata search engine user interface.
_CART Request Engine:	PERL Module in charge of sending asynchronous requests to the providers
_CART UI:	Generic functionality CART module
_CART State Keeper:	Separate process that pools a VSO e-mail account for incoming file data provider responses.
_Provider:	Data holder.
_E-MAIL server:	Used by the CART to allow asynchronous requests.

To Do:

Improve CART GUI.

Modify the CART State Keeper to listen for incoming SOAP Responses from provider.

Create an external API for interaction with other virtual observatories..

Allow requerying of “out-of-date” VSO searches.

Smarter CART File contents manipulation.

VSO Time/Observable Search - Terra Conexión

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media Refresh Print Mail Stop

Address <http://vso.stanford.edu/search/bytime.obs.inst.html> Go

<input type="checkbox"/>	All from Provider	All from	Source	Instrument	
<input type="checkbox"/>	MSU		YOHKOH	SXT	2000.01.01 – 2001.12.14
<input type="checkbox"/>	NSO	<input type="checkbox"/>	Evans	Spectroheliograph	1996.02.05 – 1999.05.28
		<input type="checkbox"/>	KPVT	<input type="checkbox"/> Spectromagnetograph	1992.04.19 →
				<input type="checkbox"/> 512-channel Magnetograph	1974.01.07 – 1993.04.10
		<input type="checkbox"/>	McMath	Solar FTS Spectrometer	<i>none</i>
<input type="checkbox"/>	SDAC		SOHO	<input type="checkbox"/> CDS <input type="checkbox"/> LASCO	1995.12.02 →
				<input type="checkbox"/> CELIAS <input type="checkbox"/> MDI	
				<input type="checkbox"/> COSTEP <input type="checkbox"/> SUMER	
				<input type="checkbox"/> EIT <input type="checkbox"/> SWAN	
				<input type="checkbox"/> ERNE <input type="checkbox"/> UVCS	
				<input type="checkbox"/> GOLF <input type="checkbox"/> VIRGO	
<input type="checkbox"/>	SHA	<input type="checkbox"/>	GONG	<input type="checkbox"/> Big Bear <input type="checkbox"/> Udaipur	2000.05.05 →
				<input type="checkbox"/> Mauna Loa <input type="checkbox"/> El Teide	
				<input type="checkbox"/> Learmonth <input type="checkbox"/> Cerro Tololo	
				<input type="checkbox"/> Tucson	
		<input type="checkbox"/>	MWO	MOF/60	1996.05.01 →
		<input type="checkbox"/>	SOHO	MDI	1996.01.30 →
		<input type="checkbox"/>	TON	<input type="checkbox"/> Big Bear <input type="checkbox"/> Huairou	1996.06.01 →
				<input type="checkbox"/> Uzbekistan <input type="checkbox"/> Tenerife	

Search Clear

Done Internet

What is in the future?

By SPD in June, we will have a second working version of the VSO. This version will feature the following:

- _2 more data providers, serving types of solar data not currently available via the VSO.
- _An improved interface for searching data, fully supporting instrument / observable / time and wavelength searches.
- _One-click data requests for multiple datasets from multiple data providers.

Help Us Improve VSO!



We very much want and need feedback from the community to improve the work that we are doing.

Feedback Page: <http://virtualsolar.org/feedback/>

Survey Page: http://vso.stanford.edu/vso_feedback.html/

Try out the current implementation!

<http://vso.stanford.edu/search/bytime.obs.inst.html>