THE SPASE METADATA MODEL FOR HELIOPHYSICS DATA AND MODELS

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COSPAR 2018

PSW.4-0001-18

What is SPASE

SPASE

Space Physics Archive Search and Extract

Community developed metadata standard

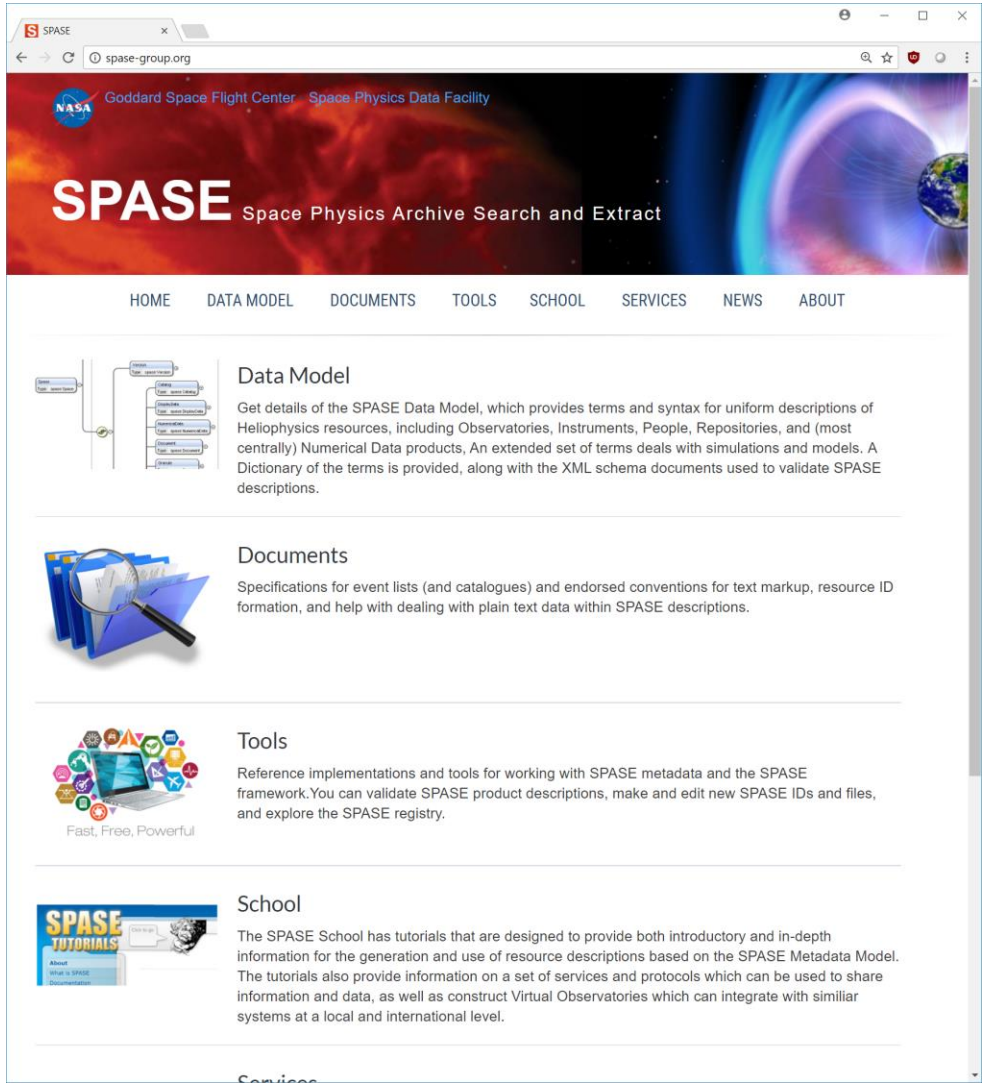
Used by the NASA-funded space and solar physics community

Used by the international community

and by other U.S. agencies (NOAA)

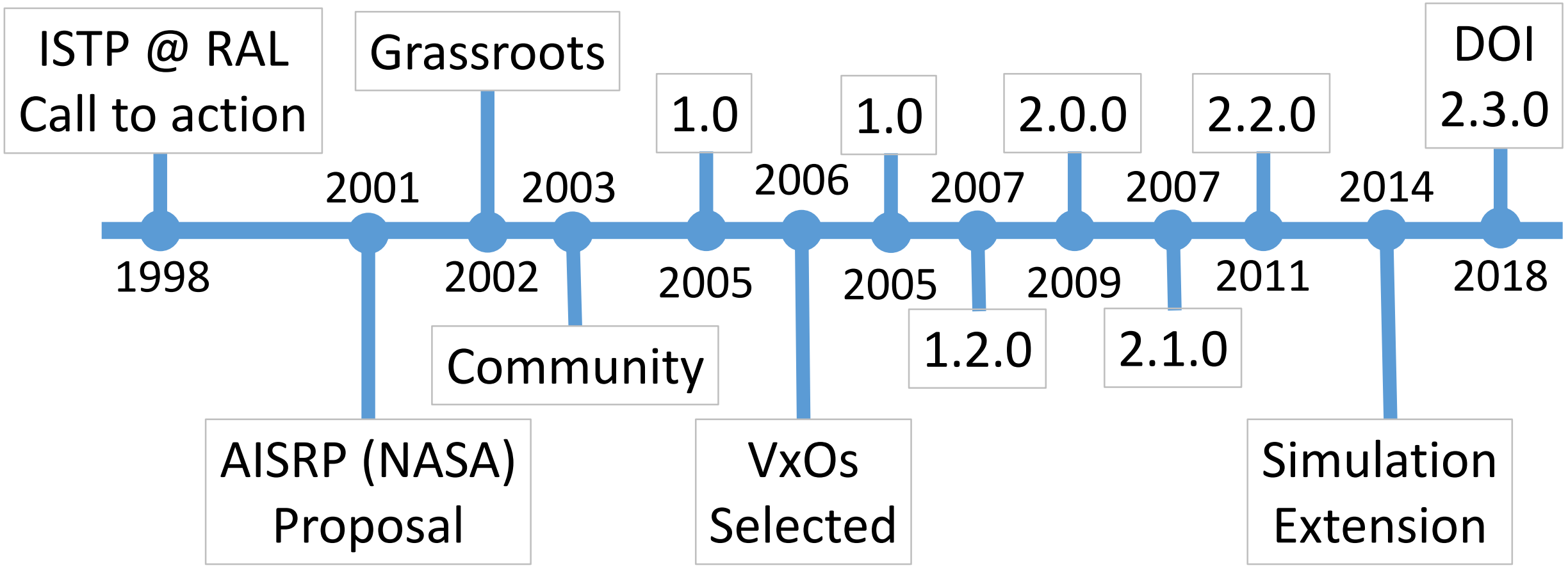
The SPASE Design Principles

- Pleasantly Parallel
  - Metadata and Data generation are created independently
- Scalable to Big Data
  - Storage of metadata and data are seperate - Data is referenced by URL
- Designed for Discovery
  - Metadata is contextually rich (and scientifically useful)



http://spase-group.org

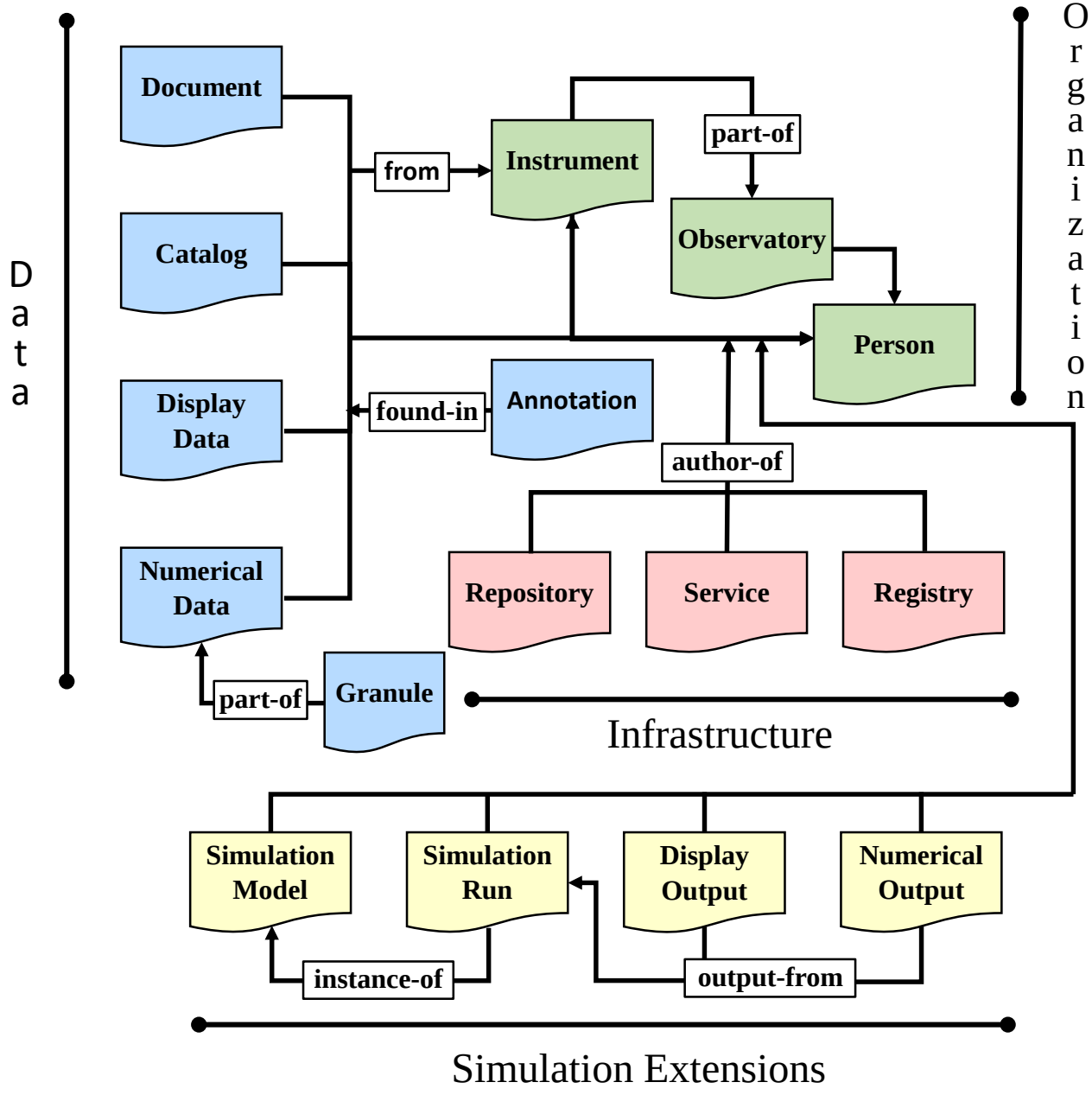
A Brief Time Line



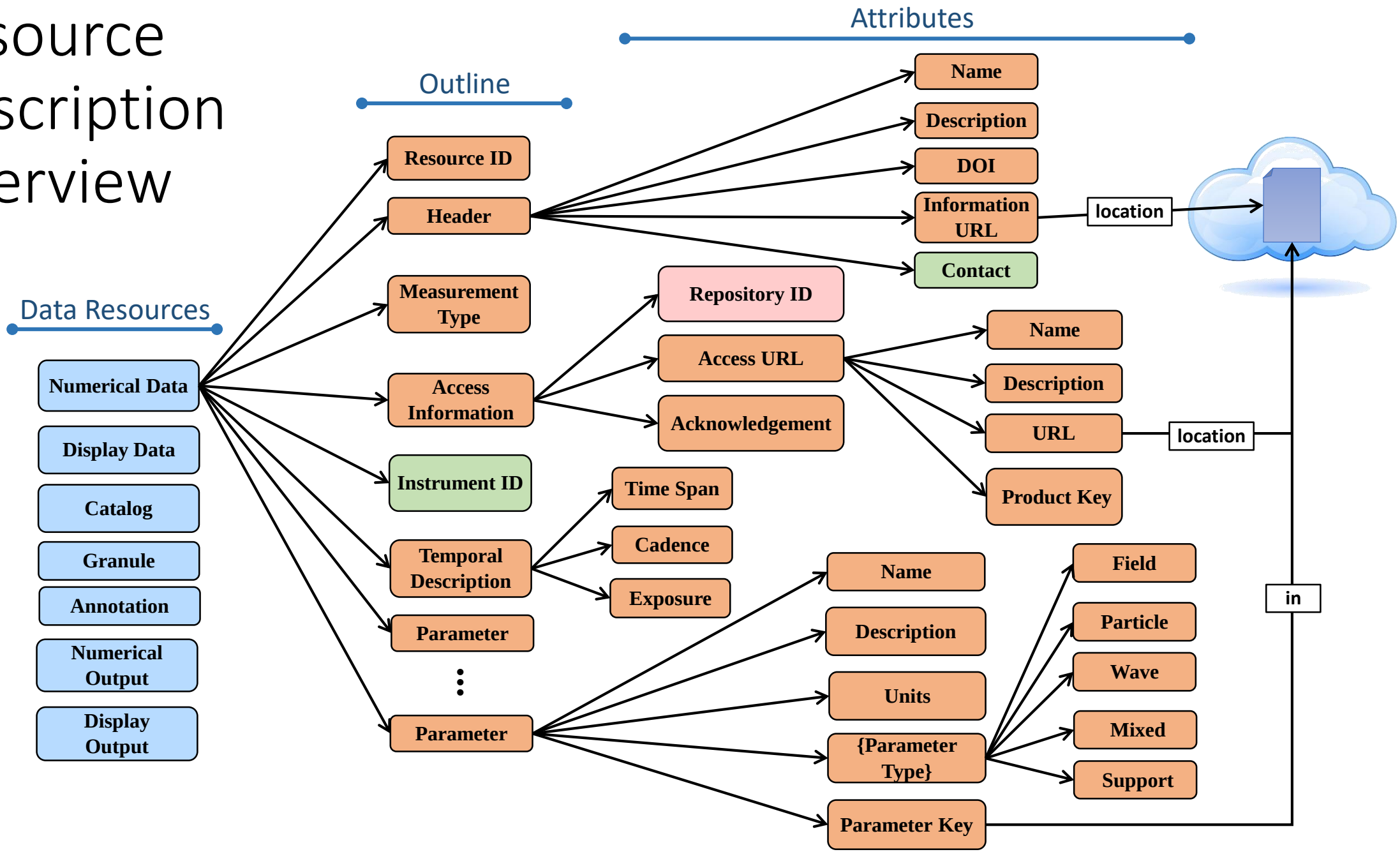
SPASE Metadata Model

Base Model
12 Resource Types

Simulation Extensions
4 Resource Types



Resource Description Overview



Simulation Extensions

- Based on the work done by the EU's Framework 7 Integrated Medium for Planetary Exploration (IMPEx) project.

- Extensions have been adopted by the multi-agency Coordinated Community Modeling Center (CCMC) to describe supported models and run results.

- Planned use to describe results from simulation research.

Tools and Services

Registry Services

A web app that includes resolver, search, render and download services for SPASE XML resource descriptions.

http://spase-group.org/tools/registry/

Resource Tools

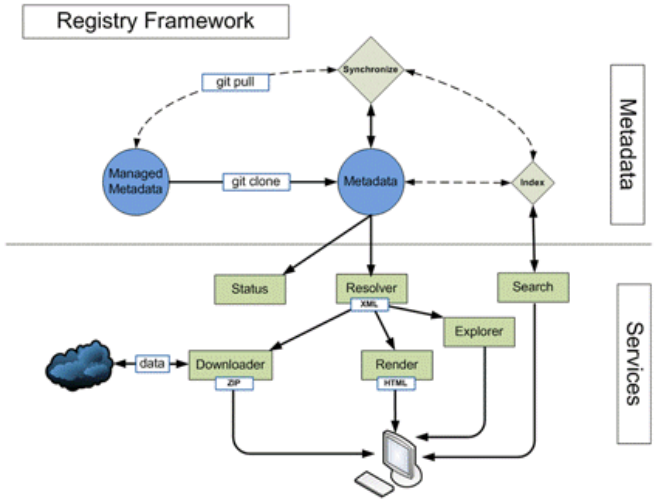
A set of command-line applications which can be used to generate, validate, referentially check, use and organize resource descriptions written in SPASE XML.

http://spase-group.org/tools/registry/

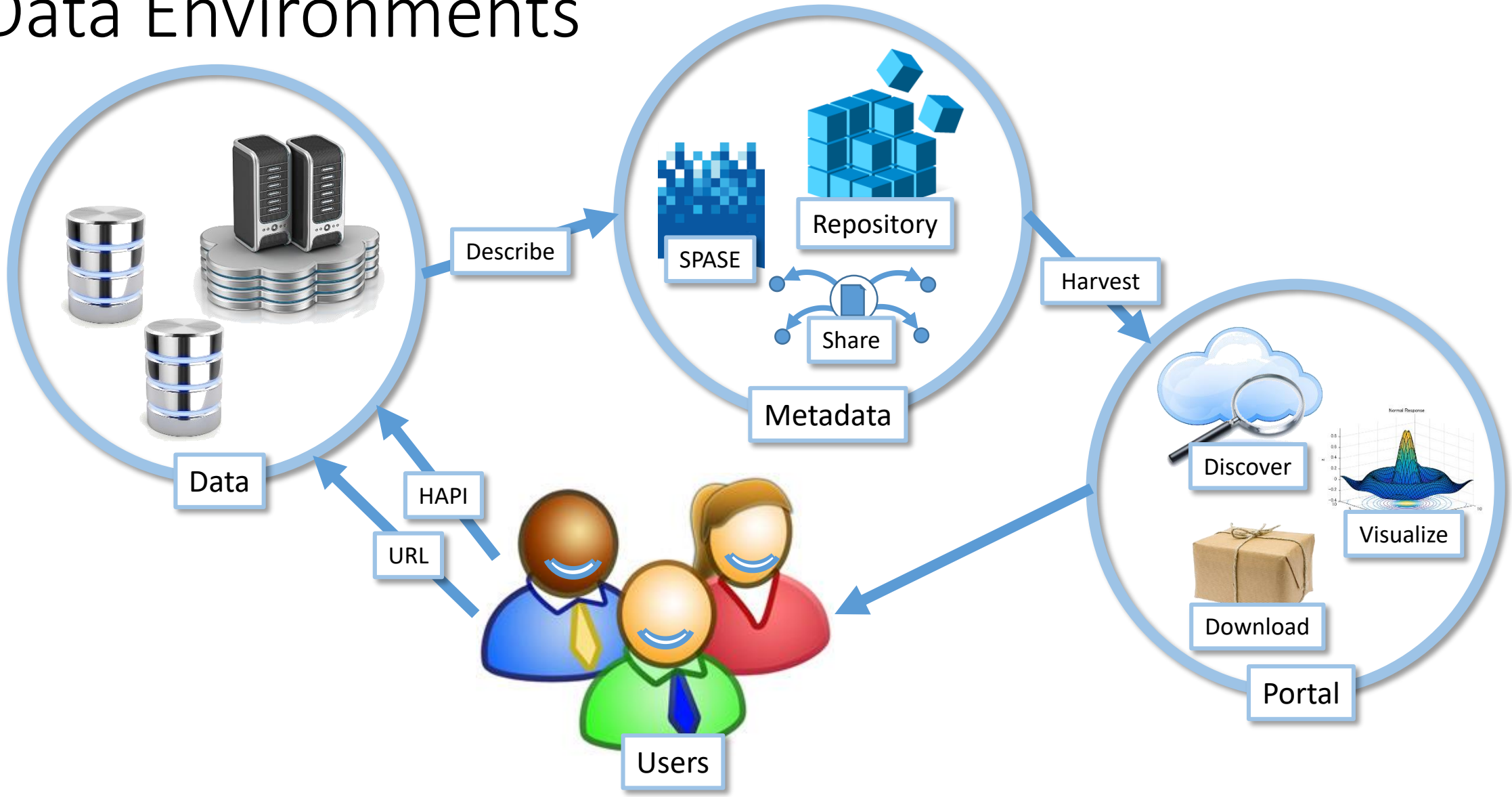
npm install -g spase-resource-tools

On-line Validator and Editor

http://spase-group.org/tools



Data Environments



Digital Object Identifier (DOI) Integration

DOI for data = Citable data

- DOI assign by a registration authority (SPASE Group can do this)
- Required DOI information (title, authors, publisher, etc.) can be extracted from SPASE descriptions.
- Assigned DOI can be included in SPASE description.
- Landing page provided by registry (http://spase.info)
- Data access provided through AccessURL (and portals)

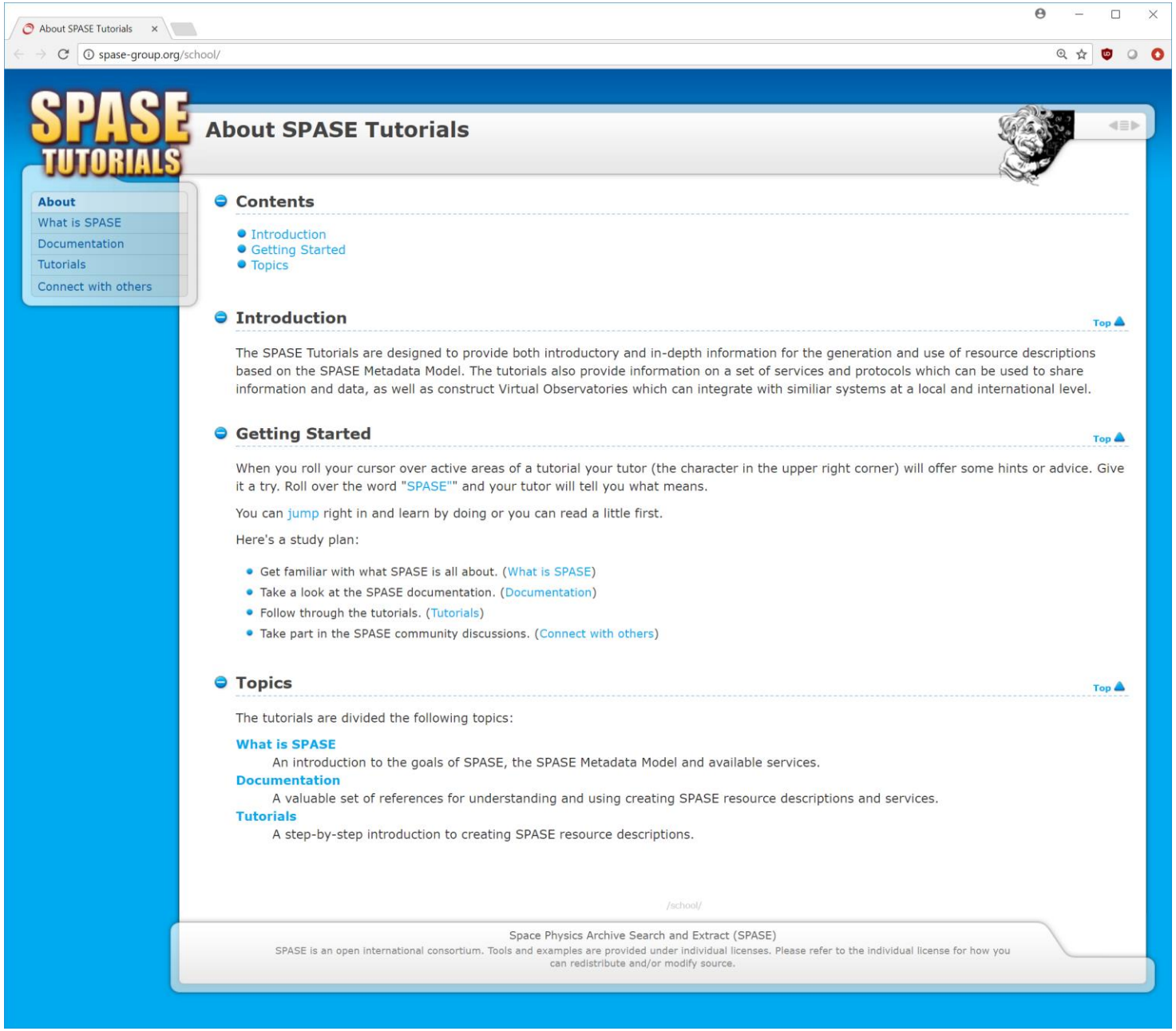
More publications for researchers.

SPASE School

- Tutorials
- Examples

… and more

http://spase-group.org/school



A few Stats

11 Repositories (all on https://github.com/hpde)

ASWS, CCMC, CSSDP, ESA, GBO, ISWI, JAXA, NOAA, NSF, SMWG, VSPO

SMWG (Organization and Infrastructure resources)

1,885 Observatories

2,268 Instruments

4,904 Persons

147 Repositories

15 Services

A Few More Stats

Described Resources

ASWS :	150
CCMC :	7
ESA :	185
GBO :	1,222
JAXA :	56
VSPO :	2,446
	=======
	4,066

Happenings

- Improvements to web site and services
- Continuous additions of SPASE descriptions
  (lead by Spase Metadata Working Team - SMWT)
- New Web based editor
- HAPI time series data access
- International Heliophysics Data Environment (IHDE)

Summary

Overall SPASE metadata is capable of providing the infrastructure to connect data, documents, people, software, services and published works.

… and when SPASE metadata is harvested by a portal it can enable rich discoverability.

… and we're constantly improving and enhancing the metadata model and services to meet the needs of the community.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谢谢
dakujem vám
ngiyabonga
dziękuję
ありがとう
merci
suksema
danke
thank
you
baie dankie
धन्यवाद
molte grazie
gracias
takk
obrigada
dank u
tạ ơn ediræ
mahalo
obrigado
gràcies
teşekkür ederim
شكرا
tänan
tack så mycket

Abstract

The Space Physics Archive Search and Extract (SPASE) Metadata standard is a community developed standard that is being supported and used by the NASA-funded space and solar physics community. It is also in use by the international community and by other U.S. agencies (NOAA). SPASE metadata has long been used to describe experimental data, software, documents and more. The most recent additions to the SPASE information model are extensions to support describing a simulation or model and the results generated from a run. These extensions are based on the work done by the EU's Framework 7 Integrated Medium for Planetary Exploration (IMPEx) project. In addition to IMPEx, these extensions have been adopted by the multi-agency Coordinated Community Modeling Center (CCMC) to describe supported models and run results. These extensions, along with the core SPASE metadata, enable the discovery of related observational and theoretical data resources through search portals such as NASA's Heliophysics Data Portal. In addition, SPASE provides a variety of tools and services related to generating and validating resource descriptions. One new service is that SPASE now provides support for issuing Digital Object Identifiers (DOI) for resources that are described with SPASE. The SPASE Metadata Working Team (SMWT) will work with data producers who lack other avenues for producing DOI so that their registered data may be referenced in publications. SPASE also provides generated landing pages based on the content of SPASE resource descriptions which can be used for any DOI. Overall SPASE metadata is capable of providing the infrastructure to connect data, documents, people, software, services and published works. And when SPASE metadata is harvested by a portal an ability to have rich discoverability.