The CoSEC 1.0 architecture will
- Scale to SDO data rates, multi-spacecraft LWS missions and non-LWS data sources and users
- Leverage existing software frameworks, standards and datasets
- Forge collaborative ventures between the LWS community: data analysts, modelers, and downstream users
- Present integrated views of LWS data to all researchers.
- Intelligently fuse and assimilate data from distributed heterogeneous sources.

The technologies which underpin CoSEC:
- **Exploit Sensorweb Architecture:** We use our current sensorweb architecture to incorporate data assimilation, task-driven dynamic integration and collaborative coordination of multiple PMs, multiple instruments
- **Incorporate Advanced SolarSoft Services:** Ongoing development of SolarSoft data analysis tools will be folded into the CoSEC system.
- **Expand to non-SolarSoft services:** Living with a Star science needs access to heterogeneous data sources. We are re-architecting the PSELWS prototype to support emerging web-service standards.
- **Integrate with related solar efforts - EGSO, VSO:** We work closely with the EGO team on security and resource control issues, and the VSO team on data descriptions for collaboration.
- **Develop "market" approach to LWS software and data services:** We will jumpstart the CoSEC system by developing a base set of distributed services and by designing LWS-specific services for use and modification by the LWS community.

The Details:

**CoSEC Service Registration**
We define a service and datatype ontology to help in defining and coordinating services. Currently these are relevant primarily to SolarSoft, but others can easily be added. Here are the steps to registering a service:
1. Define CoSEC name
2. Identify service URL
3. Provide description for user
4. Select CoSEC service type from Service Ontology
5. Define Input & Output names, and default values
6. Select CoSEC data types from Data Ontology
7. Select constraints
8. View completed service

The CoSEC 1.0 Architecture

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New Services for 2004
- FTS to CDF
- CDF to FITS
- CDF to ASCII
- CDFWeb data (coming soon)
- Space Craft Services (courtesy SDOWeb)

STATUS
- Stable prototype CoSEC 0.9
- Expanding number and variety of basic CoSEC services
- Completing draft CoSEC 0.1 users/providers guide
- Drafting schema for CoSEC service providers
- Interoperate with CDAWeb at LWS Science Meeting
- CoSEC as client to Translator services
- Prepare demonstration with VSO/EGSO
- EGSO as client to VSO & EGSO
- EGSO as client to VSO & EGSO
- VSO to simple SSW servers

CoSEC Workflow