

Software sharing for EDDS data retrieval

SPIICE and RPW ground segment teams

Context

- Joined effort between SPICE and RPW teams to develop a common client software for Solar Orbiter EDDS data retrieval
- First draft of a technical specification has been written by SPICE and RPW teams. (See "EDDS_interfec_spec_V5.docx" sent by Chris Watson to the so_sciops-wg mailing list on July 5.)
- Software will be developed by SPICE team at IAS (Orsay, France)
- SPICE and RPW teams are happy to share software with other teams

Specification

As much as possible simple and generic EDDS client

- Requesting TM packet data for a given time range and APID.
(*Storage time* by default and *generation time* in option)
- TM packet data returned by the EDDS API on a target SFTP/FTP server. (*EDDS BINARY* format file by default and *EDDS XML* format file in option)
- Querying auxiliary data shall be also possible: TM/TC-report, TC raw, OOL (TBC)
- Additional options are planned (e.g., removing extra DDS header, filtering by type/subtype, etc.)

Specification

- Run from the terminal as a script or from another program as an imported module
- Logging available (file log and output streams)
- Error handling
- No memory or post-processing ("smart" tasks done by another external program)
- No functionality specific to a given instrument (specific tasks done by another external program)

Proposed implementation

- Python 3 package (setup with *pip*)
- SOAP client (*suds-py* library is envisaged)
- Command line interface (*declic* library is envisaged)
- No database

Road map

- Technical specification consolidation - Sept. 2018
- Software design and implementation - Dec. 2018
- Development - Feb. 2019 (TBC)
- Testing phase - April 2019 (TBC)

Documentation and source code will be available with versioning from a Git public repository.

For more details, please contact SPICE (claudio.mercier@ias.u-psud.fr) and RPW (xavier.bonnin@obsmpm.fr) teams