

# Emerging Technologies Collaboration



## Project Scope

The Emerging Technologies Working Group is exploring tools, technologies and systems that impact upon the CSS community. These include cloud technologies, big data, visualizations and statistics. Some of these are focused upon Clinical interests while others are of interest to the non-Clinical field as well.

There is a need to engage with that group to A) bring a non-Clinical perspective to that group and B) inform the non-Clinical group of technologies that can have a positive impact if implemented now or in the near future.

## Accomplishments

Implementation Guide Search Tool

### Need

The SEND and SDTM implementation guides (IGs) are fact-dense documents which can be difficult and time consuming to navigate, and intimidating to novices. A web site is needed to allow rapid browsing and searching of the IG domains. The resultant tool will serve the dual purpose of being immediately useful to SEND and SDTM implementers and also as a practical example of the use of RDFs.

### Methods

The PHUSE/CSS Emerging Trends & Technologies Working Group created a Semantic data model/Resource Description Framework (RDF) of the IGs and their underlying data models. These are available in OWL and TTL format from: <https://github.com/phuse-org/rdf.cdisc.org>.

CDSIC together with NCI make available the CDISC SEND and CDISC SDTM Controlled Terminology in RDF OWL format from: <http://evs.nci.nih.gov/ftp1/CDISC/SEND/>.

These OWL and TTL files could be read using the Java libraries of the JENA project for RDF and use SPARQL calls to query the models (<https://jena.apache.org/>).

A Java servlet based program could combine these into a publicly accessible web site for ease of use.

### Results

The web site <http://igquery-bjf.rhcloud.com/StartUp.html> was relatively easy to create, taking advantage of standard libraries that read the RDF data in OWL and TTL format.

This web site allows SEND and SDTM implementers a quick way of finding needed information in the standards. This is just one example of usage of these models.

The benefit of the implementation guides and controlled terminologies being available in RDF format is that they open these standards to a wide potential of software tools.

## Project Members

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