ES-DOC EU Workshop 2015 Day 2 - pyesdoc in-depth

The pyesdoc library is designed to simplify and streamline documentation creation, validation and publishing. It will be made available for modelling groups to document CMIP6 models and simulation. The capabilities of the library were demonstrated in detail:

Archival
Documents can be pulled from remote sources and stored in a local file system archive.

Extensions
Documents are parsed and injected with extra information (extensions) derived from the original document. An example of this is flattened model component hierarchies.

I/O
Documents can be simply written and read from the local file system. This is leveraged by the archival feature.

Ontologies
The relationship to the ES-DOC meta-programming framework was demonstrated. This supports defining ontologies, such as Metaphor CIM v1.x, as a set of python functions. The definitions then act as the inputs to code generators that forward engineer pyesdoc code.

Publishing
ES-DOC hosts a remote web service API. Using pyesdoc an institute can publish to the remote web-service.

Serialisation
The pyesdoc serialiser supports several encodings such as JSON, XML, HTML …etc. The importance of this is that documents are decoupled from from document encodings.

Validation
The pyesdoc validator is flexible and extensible. It ensures that documents are valid according to the rules defined in the meta-programming library.

Actions
1. Controlled vocabulary validation was seen to be a weak spot. This has to be implemented for CMIP6.
2. Need to support PDF documents.
3. The publishing API needs securing at the transport and request levels.
4. Viewer must be extended to handle offline documents.
5. Comparator to handle single component models and simulation forcings.
6. An integrated document search and browse is required.