EGU 2017 Abstract

Documenting CMIP6 with ES-DOC

Venue	Vienna, Austria
Date	23rd – 28th April 2017
Type	Talk
Session	ESSI2.2 - Metadata, Data Models, and Semantics
Title	The centrality of meta-programming in the ES-DOC eco-system

The Earth System Documentation (ES-DOC) project is an international effort aiming to deliver a robust earth system model inter-comparison project documentation infrastructure. Such infrastructure both simplifies & standardizes the process of documenting (in detail) projects, experiments, models, forcings & simulations.

In support of CMIP6, ES-DOC has upgraded its eco-system of tools, web-services & web-sites. The upgrade consolidates the existing infrastructure (built for CMIP5) and extends it with the introduction of new capabilities. The strategic focus of the upgrade is improvements in the documentation experience and broadening the range of scientific use-cases that the archived documentation may help deliver.

Whether it is highlighting dataset errors, exploring experimental protocols, comparing forcings across ensemble runs, understanding MIP objectives, reviewing citations, exploring component properties of configured models, visualizing inter-model relationships, scientists involved in CMIP6 will find the ES-DOC infrastructure helpful.

This presentation underlines the centrality of meta-programming within the ES-DOC eco-system. We will demonstrate how agility is greatly enhanced by taking a meta-programming approach to representing data models and controlled vocabularies. Such an approach nicely decouples repsentations from encodings.

Meta-models will be presented along with the associated tooling chain that forward engineers artefacts as diverse as: class hierachies, IPython notebooks, mindmaps, configuration files, OWL & SKOS documents, spreadsheets …etc.