Earth System Documentation (ES-DOC) Preparations for CMIP6

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The Earth System Documentation (ES-DOC) is a multi-national, multi-institutional collaboration that supplies services in support of earth system documentation creation, analysis & dissemination. The ES-DOC project has been preparing for CMIP6 by enhancing existing documentation standards & tools, and by ensuring that a rich eco-system is in place so as to streamline document creation. Users will in due course be able to access CMIP6 documentation via the ES-DOC search, view & compare online tools.

1. WGCM Requirements

High-level requirements expressed at WGCM meeting

- Standardisation of model forcings
- Simplification of model components
- Streamlining of model documentation
- Automation of cimulation documentation
- Closer coordination with modelling groups
- Adopting a narrative based approach

2. Documentation Standard Upgraded (CIM v2)

Enchancement of model forcings & process definitions

```
def activity():
    """An abstract class used as the parent of MeasurementCampaigns, Projects, Experiments, and Numeric

    """
    return {
        'type': 'class',
        'base': None,
        'is_abstract': True,
        'properties': [
            ('funding_sources', 'str', '0.N'),
            ('projects', 'activity.project_type', '0.N'),
            ('rationales', 'str', '0.N'),
            ('responsible_parties', 'shared.responsible_party', '0.N'),
        ],
        'doc_strings': {
            'funding_sources': 'The entities that funded this activity.',
            'projects': 'The project(s) that this activity is associated with (ie: CMIP5, AMIP, etc).',
            'rationales': 'For what purpose is this activity being performed?',
            'responsible_parties': 'The point of contact(s) for this activity.This includes, among othe
        },
        'decodings': [
            ('funding_sources', 'child::cim:fundingSource'),
            ('projects', 'child::cim:project/@value'),
            ('rationales', 'child::cim:rationale'),
            ('responsible_parties', 'child::cim:responsibleParty'),
        ]
    }
```

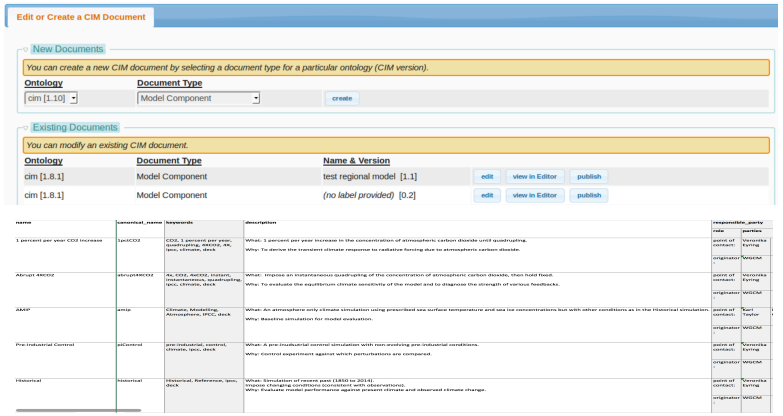
3. Controlled Vocabularies Upgraded

Model process documentation is standardized around

Atmosphere	Atmospheric Chemistry
Atmospheric Aerosols	Land
Land Ice	Sea Ice
Ocean	Ocean Bio-Geochemistry

4. New Documentation Creation Tools

Spreadsheets and a new online questionniare are available



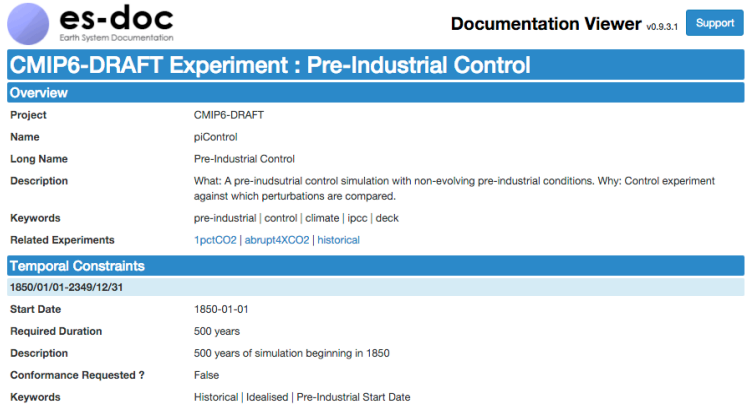
5. Powerful Scripting Library = pyesdoc

Python library simplifies document lifecycle management

- Low level documentation management library
- Integrated into all ES-DOC tools & services
- Supports both CIM v1 & v2 ontologies
- Supports documentation creation, I/O, archival, validation, publishing, search.
- Integrated with controlled vocabularies
- Unit tested, open source & pip installable
- IPSL & MOHC committed to using it internally

6. Experimental Definitions Published

Draft CMIP6 experimental definionts are alrady published



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