CMIP6 Documentation Timeline

Mark A. Greenslade

Institute Pierre Simon Laplace

The ES-DOC Team

IPSL – FR, NCAS – UK, STFC – UK, NOAA – US, GFDL-US, DKRZ – DE

BSC/RDA Spring School on Weather ,climate and air quality

Timeline

Phase 1

Protocols

Q1 2016 - Q2 2017

- MIP
- Experiment
- Numerical Requirement

Spreadsheet, Script

Phase 2

Model Descriptions

Q2 2017 – Q4 2018

- Model
- Realm
- Process

IPython, Questionnaire

Phase 3

Ensembles

Q3 2017– Q1 2019

- Conformance
- Ensemble
- Simulation

Spreadsheet, Script

Phase 4

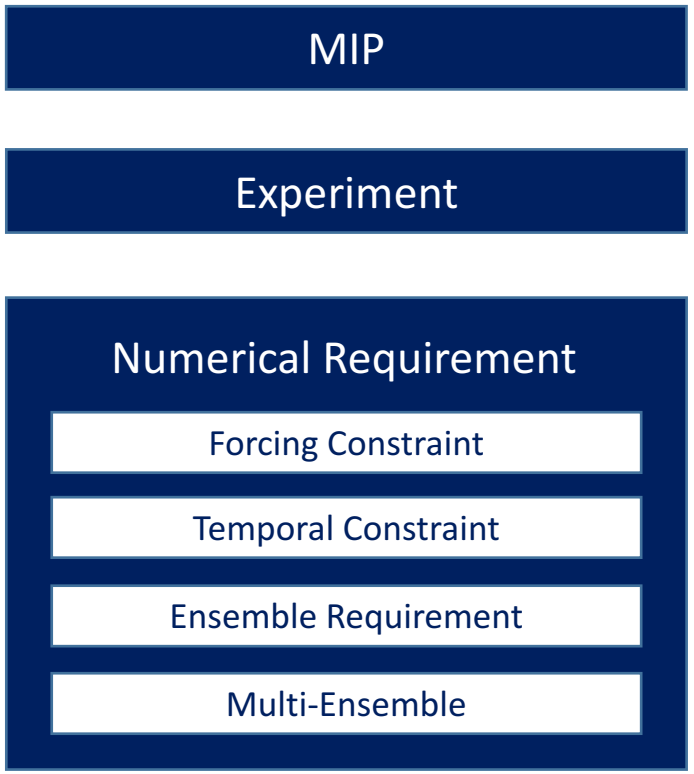
Post-Simulation

Q1 2018 – Q4 2019

- Dataset Errata
- Machine
- Performance

IPython, Script

Protocols



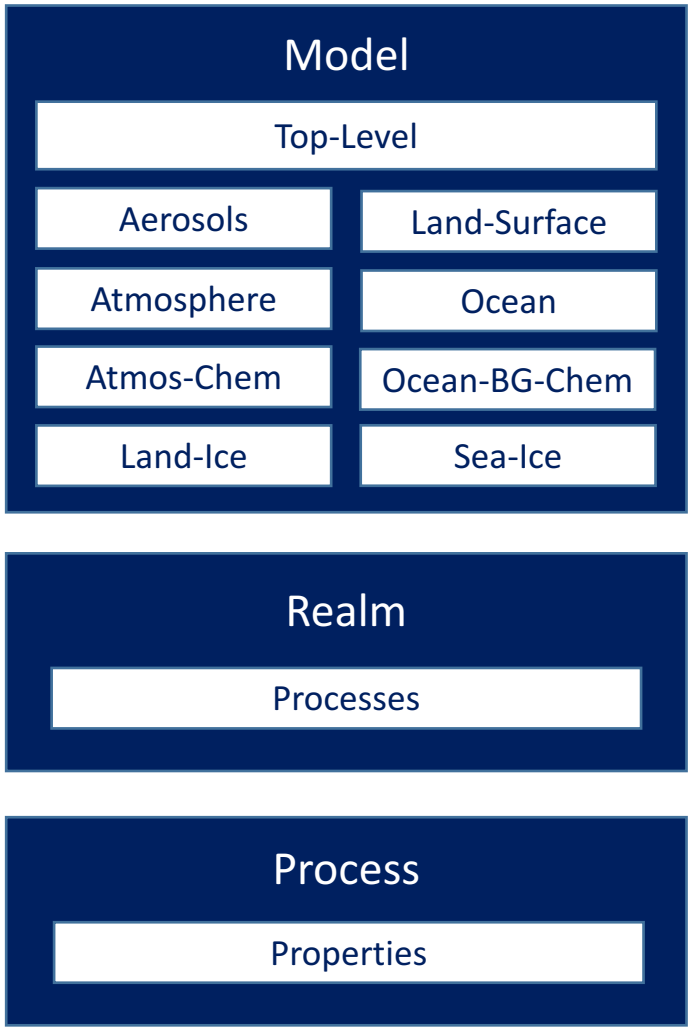
- Extensive interactions with **WCRP & MIPs**
- A single **spreadsheet** used to capture > 1000 documents
- Major task was **mapping**:

  MIPs --> Experiments
  Experiments --> Requirements

- Mandated by WCRP as **reference** CMIP6 experimental documentation
- Online @ documentation.es-doc.org/cmip6
- Creation tools: Spreadsheet, script

Charlotte Pascoe @ NCAS, UK

Models



- **Realms** defined by WCRP-CMIP, e.g. ocean
- ES-DOC co-ordinates with realm experts to define **specializations**:
  - Processes - e.g. ocean advection
  - Properties – e.g. monotonic flux limiter for vertical tracer
- ES-DOC co-ordinates with WGCM to define **short tables**
- Institutes create **documents** using various tools
- Creation tools: IPython, online questionnaire, script

Eric Guilyardi @ IPSL, FR

Ensembles

Ensemble

Ensemble Member

Simulation

Conformance

- Ensemble document(s) **auto-initialized** when datasets are published
- Institutes must supply experimental requirement **conformances**:
  - A spreadsheet to be filled in with **default** conformances
  - A spreadsheet per MIP with **specific/non** conformances
- CMIP6 NetCDF files have a **futher_info_url** header which will link to the full set of published ensemble documentation
- Creation tools: Spreadsheet , Script

David Hassell @ NCAS, UK

Post-Simulation

Machine

Performance

- **After** simulations have been run:
  - Metrics concerning **HPC performance** can be published
  - Performance information **is linked to** relevant ensembles
  - Creation tools: **IPython**

Dataset Errata

- As **dataset errors** are discovered:
  - **Errata** information is published
  - **Persistent Identifier** (PID) services are notified
  - Creation tools: **Script**

David Hassell @ NCAS, UK / Guillaume Levavasseur IPSL, FR

Links

White Paper
http://bit.ly/2p3BgLb

Email
cmip6-help@es-doc.org

Further information
es-doc.org/cmip6

Published Documents
documentation.es-doc.org/cmip6

Social Media
twitter.com/esdocumentation