Contribution ID: **90** Contribution code: **2-14** Type: **Poster**

HMC Earth and Environment - Using PIDs in Helmholtz Earth and Environment Data Infrastructures

PIDs (Persistent Identifiers) are a core concept at the center of FAIR data architectures such as FAIR Digital Objects. They point to a digital resource such as a publication, dataset or a set of information in a distinctive and lasting fashion and are assured to persist over longer, defined periods of time.

We looked into six established PID systems (ROR, ORCID, PIDINST, IGSN, DataCite DOI, Crossref DOI) to map the interconnection (graph) and overlap between systems. This was carried out by inspecting and comparing the metadata schemas of these PID systems in their current version to find out, to what extent they support each other as PID systems and how this is done.

We expected these PID schemas not to overlap in too many elements, but we expected some of the systems / schemas to recognize and make use of each another.

The number of external PID systems supported varies considerably for the six PID systems investigated, with ROR at 4 and up to 49 systems at ORCID. The system mostly implemented as a reference is DOI (4 other systems do refer to DOI in their metadata schema), while ROR is only referenced by DataCite DOIs yet.

Interconnected PID systems can be visualized as graphs of relationships (PID graphs) between for instance scientists, datasets, publications, institutions etc. They can be machine actionable and thus be tailored to specific questions or fields of interest, as was shown by EU programme FREYA (https://www.project-freya.eu).

Our findings show, that PIDs act as an important part of the data space we are constructing. They allow to link meta information of different data sets in a uniform manner. Consistently implementing PIDs will allow a high level of informational data interoperability among distributed data sets, which should complement other interoperability measures, e.g. the semantic interoperability.

Please assign your poster to one of the following keywords.

Standards

In addition please add keywords.

Strategy, Standards, PID, Earth, Environment

Please assign yourself (presenting author) to one of the stakeholders.

other (please specify)

Please specify ”other” (stakeholder)

Data Infrastructure Provider, Data Curators

Primary authors: WEINELT, Martin (GEOMAR Helmholtz-Zentrum für Ozeanforschung Kiel); PÖRSCH, Andrea (HMC Hub EE at GFZ); BUTTIGIEG, Pier Luigi (GEOMAR Helmholtz-Zentrum für Ozeanforschung, Kiel, Germany); SÖDING, Emanuel (GEOMAR); LORENZ, Sören (GEOMAR Helmholtz Centre for Ocean Research Kiel)

Presenters: WEINELT, Martin (GEOMAR Helmholtz-Zentrum für Ozeanforschung Kiel); SÖDING, Emanuel (GEOMAR)

Session Classification: Postersession I

Track Classification: Postersession