PIDs for physical objects

Report of Contributions

Contribution ID: **14**　　　　　　　　　　　　　　　　　Type: **not specified**

Welcome

Thursday 20 February 2025 09:30 (10 minutes)

Session Classification: Session 1

Contribution ID: **15**
Type: **not specified**

Distribution of PIDs for physical objects in Germany

Thursday 20 February 2025 09:40 (25 minutes)

The presentation focuses on the dissemination of PIDs for physical objects. The PID Network project conducted an extensive survey in science and culture in 2024. These results will be examined in more detail, supplemented by a temporal visualisation.

Primary author: CZERNIAK, Andreas (Bielefeld University Library)

Presenter: CZERNIAK, Andreas (Bielefeld University Library)

Session Classification: Session 1

Contribution ID: 16   Type: **not specified**

PID4Cat: Persistent Identifiers for Catalysis Research

Thursday 20 February 2025 10:05 (20 minutes)

This talk introduces PID4Cat, a new solution for handle-based persistent identifiers (PIDs) that stores PID-related metadata in the handle record. Its generic metadata model is described as a LinkML model. The first application is in catalysis research. We will discuss the importance of PIDs in ensuring FAIR data principles and how PID4Cat facilitates early-stage data sharing and collaboration within the NFDI4Cat community. Additionally, we will cover the technical implementation of PID4Cat and its integration with services benefiting from automatic code generation from the PID4Cat-model.

Presenters: LINKE, David (Leibniz Institute for Catalysis. e.V.); RODRIGUES, Preston (High-Performance Computing Center Stuttgart (HLRS), University of Stuttgart)

Session Classification: Session 1

Contribution ID: **17**   Type: **not specified**

IGSN –International Generic Sample Numbers:Uniquely identifying your samples

Thursday 20 February 2025 10:25 (20 minutes)

This presentation will provide an overview of International Generic Sample Numbers (IGSNs) and their significance, with a focus on the services available in Germany and at the GeoForschungsZentrum (GFZ). In addition, the latest results of the HMC project FAIR WISH, which is carried out in cooperation with the GFZ, the Alfred Wegener Institute (AWI) and Hereon, will be presented. This talk emphasises the importance of IGSNs for the scientific community and illustrates their application in improving data availability and usability. (tbc)

Presenter: ELGER, Kirsten

Session Classification: Session 1

Contribution ID: **18**   Type: **not specified**

The persistent identification of archaeological object data in iDAI.world

Thursday 20 February 2025 11:15 (20 minutes)

iDAI.world is the digital research infrastructure of the German Archaeological Institute. It comprises systems for recording, documenting, analysing, storing, visualising and publishing research data. In addition to information on objects, buildings and geodata, it also includes contextual information on field research and scientific data.

To date, the DAI has primarily used its own unique identifiers to address the object data. PIDs are used in the context of publications and in some cases for sample identification, and a technical concept that enables PID-supported citation is now being implemented as part of the DFG project 'CiVers'. Concepts and issues relating to the modelling, publication and citation of object data are also being discussed together with the community.

Presenters: RIEBSCHLÄGER, Fabian (German Archaeological Institute, DAI); RIEDEL, Marcel (German Archaeological Institute, DAI)

Session Classification: Session 2

Contribution ID: 19   **Type: not specified**

Application of PIDs and digital twins of plant genetic resources at IPK Gatersleben

Thursday 20 February 2025 11:35 (25 minutes)

The Leibniz Institute of Plant Genetics and Crop Plant Research (IPK) is a leading international plant science institute with a research focus on biodiversity and crop performance. In order to implement a sustainable data and material management infrastructure three pillars has been built in the last 15 years. An institutional policy for research data management, defined processes and a technical infrastructure. The technical backbone is a Research and Laboratory Information Management System (RALIMS) which was established 2011 and is operated as general-purpose data management system across all research groups and departments.

This RALIMS based ecosystem of databases, file storage, desktop clients, web applications and APIs serves two major classes of data management processes. The first class are service processes for centrally managed instruments, facilities and service units. They follow institutional agreed processes and operated by permanent staff. Examples are the high-throughput sequencing, chemicals management or phenotyping service processes. Service processes comprises (a) defined personnel and organizational responsibilities including defined transition points between the laboratories, the scientist and the LIMS project team, (b) defined standard-compliant and machine-processable data formats, (c) mandatory metadata standards and d) defined data publication processes, i.e. the minting of PUIDs, like DOIs, and data upload into international data repositories.

The second class of process are data flows in research projects. Here a more agile and are less rigidly structured processes are in place that reflecting the nature of innovation-driven science. Nevertheless, they are dovetailed with the core service processes and support immersive analytics driven knowledge generation in research projects. For example, research project for the genotypic and phenotypic characterization handle of thousands of plant samples and connect them with millions of data points. Scientist and technician work hand in and to interweave scientific data analysis and visualization pipelines and tools. This data servant approach, which is operated over more than 15 years, enabled the preservation of more than 6 million samples and terabytes of data files in a FAIR manner. The interplay of policies, processes and IT is a central backbone to support research data and material management at IPK and contributes data services to networks such as the European life-sciences infrastructure for biological information (ELIXIR), the German Bioinformatics Network (de.NBI) or the National Research Data Infrastructure (NFDI) in the consortia, FAIRAgro, DataPLANT and NFDI4Biodiversity.

This talk provide an overview to the policies, technology and processes at the IPK to implement FAIR data and material management and show case the application of digital twins in recent research projects.

Presenter: LANGE, Matthias (IPK Gatersleben)

Session Classification: Session 2

Contribution ID: **20** Type: **not specified**

Group work - part I

Thursday 20 February 2025 12:00 (1 hour)

World café
Three topics, rotation principle

Session Classification: Workshop: group work

Contribution ID: **21**　　　　　　　　　　　　　　　　　　　Type: **not specified**

Group work - part 2

Thursday 20 February 2025 14:15 (1 hour)

Session Classification: Workshop: group work