



Beitrag ID: 30

Typ: Talk

O2A SAMPLES: From Expedition to Digital Database –A Unified Framework for Sample Digitization and Interoperability

Comprehensive and standardized sample management is crucial for advancing field research under challenging conditions. We present the “O2A SAMPLES” prototype: a generic Sample Management System designed as a hosted service that unifies diverse sample metadata in one interoperable framework (samples.o2a-data.de). Developed collaboratively by AWI and GEOMAR, O2A SAMPLES not only facilitates automated, digitized workflows for capturing metadata (such as unique sample identification via DataCite, and Nagoya compliance) but also offers seamless integration with well-established Helmholtz systems. The main contribution is 1.) a sample management for the Helmholtz community and beyond—enabling institutions, universities, and research organizations to view and loan samples, identify them by QR-code, conduct experiments on actual materials, and benefit from standardized workflows without managing underlying infrastructure and 2.) rigorously documented standardized workflows and standard operating procedures (SOPs) for sample management, ensuring that every aspect of the process is fully described. This integrated approach promises to set a new benchmark for digital sample management, enhancing interdisciplinary collaboration and resource utilization across the research community.

ONLY WORKSHOPS - Proposed interaction format

Alternative Track

ONLY WORKSHOPS - Tentative audience

ONLY WORKSHOPS - Maximum number of participants

ONLY WORKSHOPS - Special technical requirements

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Sitzung Einordnung: TALK SESSION

Track Klassifizierung: HMC Conference 2026 Track Topics: 2. Software Interoperability for (Meta)data Acquisition