

openDS: A specification for Digital Specimen

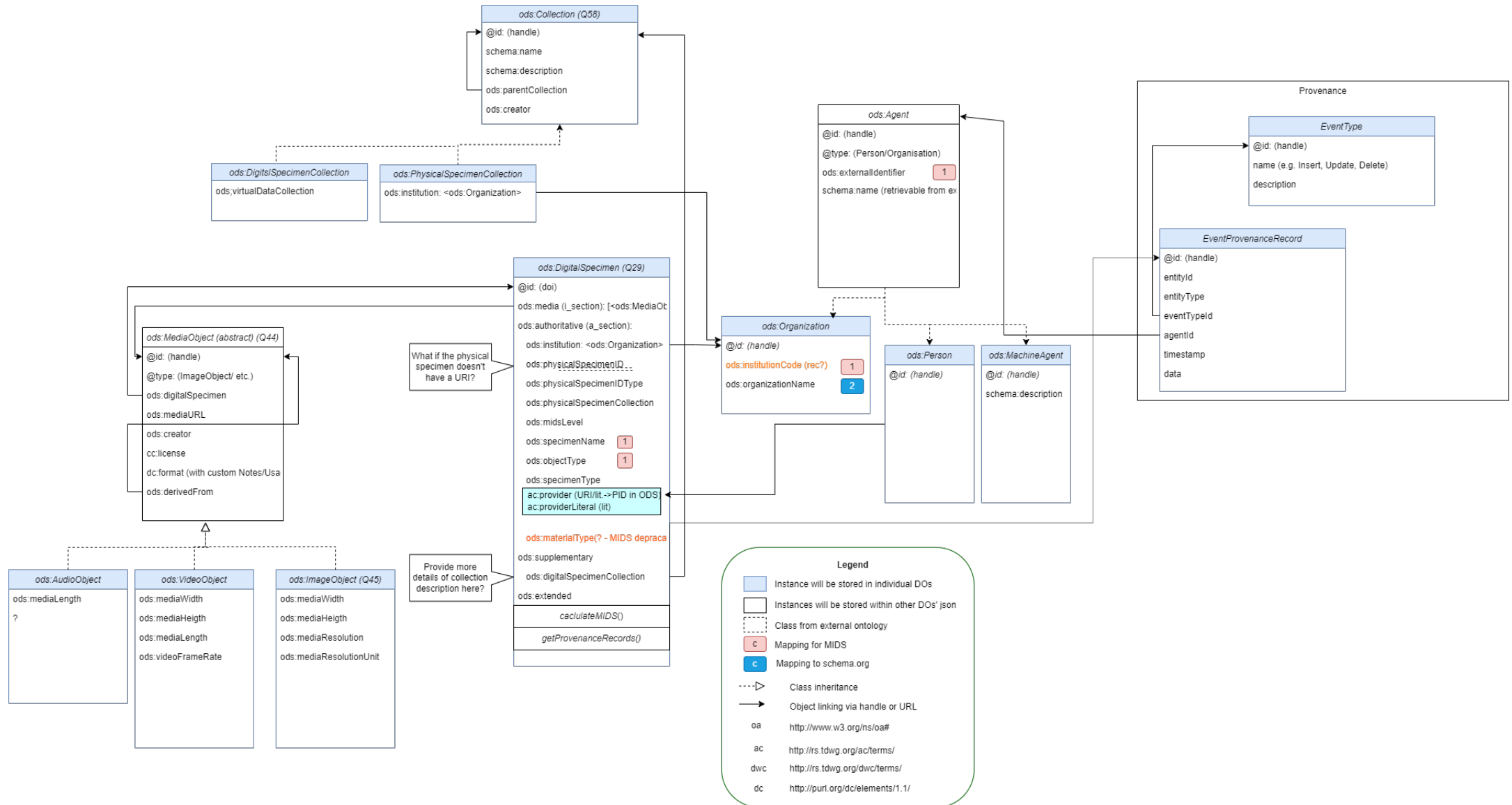
- A specification of Digital Specimen and other related object type definitions
- Defines the logical structure and content of each object type as well as the operations permitted to act upon them.
- Describes the handling rules and behaviors governing object operation
- Documents the serialization and packaging for transfer between systems.

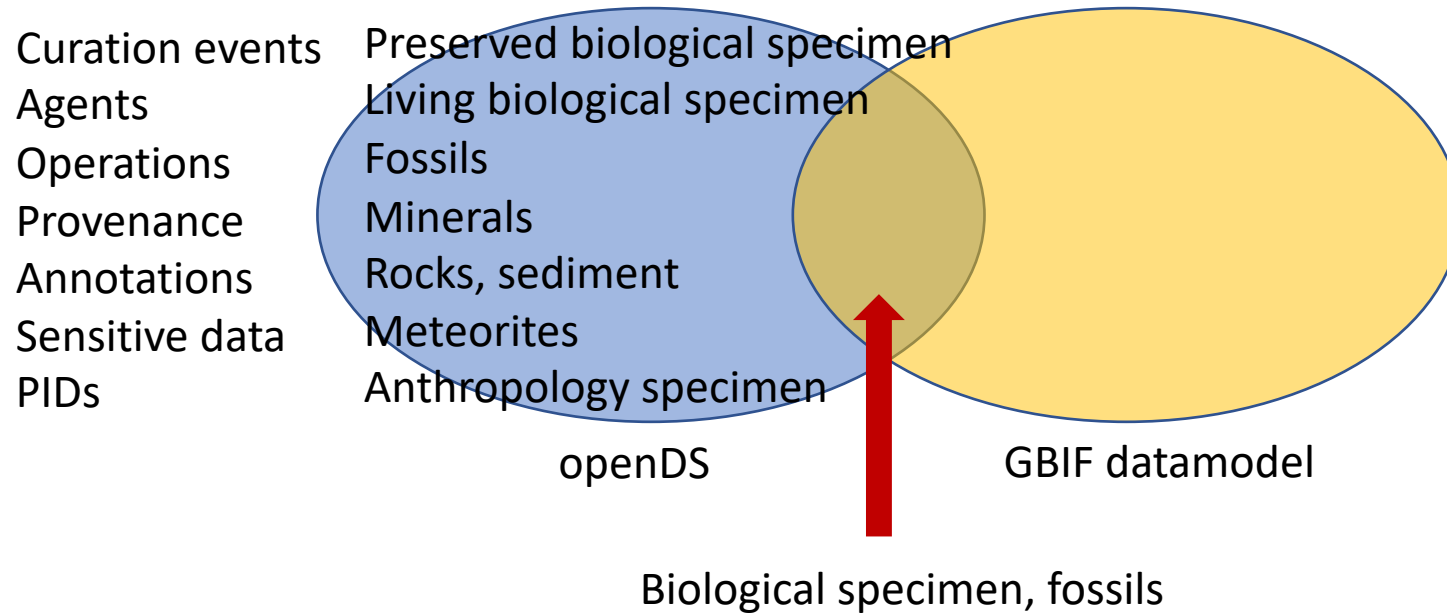
Design concerns

- Designed to support mass digitization, digital transformation and community curation of natural science collections
- Designed for use in a new generation of infrastructure and applications with focus on machine actionability, to make collections part of the emerging Internet of interlinked FAIR Data and Services.
- Designed for direct integration with local collection management systems for bi-directional, event-based data exchange and recording of provenance

- **The openDS data model**
 - Reuses main data model concepts from well-established standards like Darwin Core and ABCD
 - Focus on data management capabilities and interaction with the data objects rather than data aggregation
- **The Ontology for open Digital Specimens (ODS)**
 - Based on relevant OBO Foundry ontologies like Biological Collections Ontology (BCO) and extending these
 - Result of a specimen_collection_process is a specimen
 - 'digitization_process' as new kind of OBI:planned_process.
 - output of a digitization_process is a new class 'digital specimen'
- **The openDS Application Programming Interface (API)**
 - Support for REST and DOIP APIs

- Digital Specimen objects together with Multimedia Objects (which have subclasses for Image, Video and Sound).
- Kernel metadata: minimum metadata to be stored with each PID record.





Questions related to the new GBIF model:

- Would both Digital Specimen and Multimedia Objects be mapped to Digital Entity?
- How to specify which organization is responsible for a specimen (not necessarily the owner)

Save the day: 26 SEPTEMBER 14-18 CEST



Roundtable

AIM: to discuss integration between Collection Management Systems and openDS enabled infrastructure: support for event-based data exchange, digital specimen identifiers, authentication through AAI

Audience: CMS application providers, DiSSCo stakeholders

