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iSamples Metadata Scheme

Stephen M. Richard, USGIN smrTucson@gmail.com

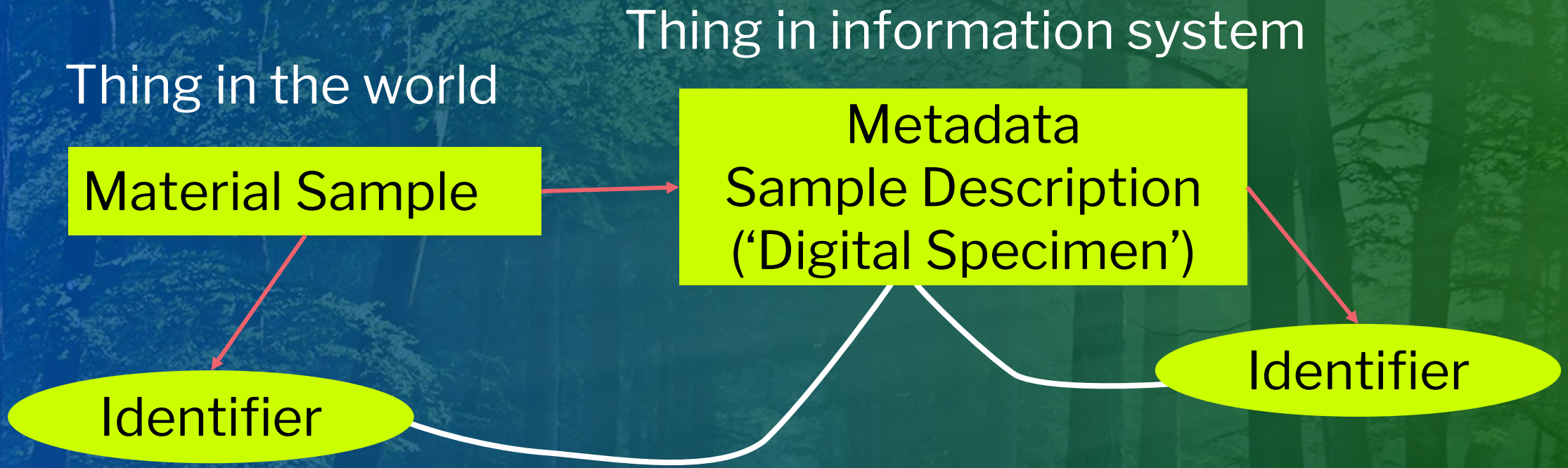
Objective

- Develop core sample description scheme applicable to material samples from any of the partner systems.

Approach

- Study existing sample descriptions
  - OpenContext: Samples from archaeology sites
  - GEOME – Genomic samples
  - SESAR --- Earth Science samples
  - Smithsonian – various, mostly biological samples
- Review models
  - IGSN GeoSciML SESAR
  - ODM2 TDWG W3C SSN

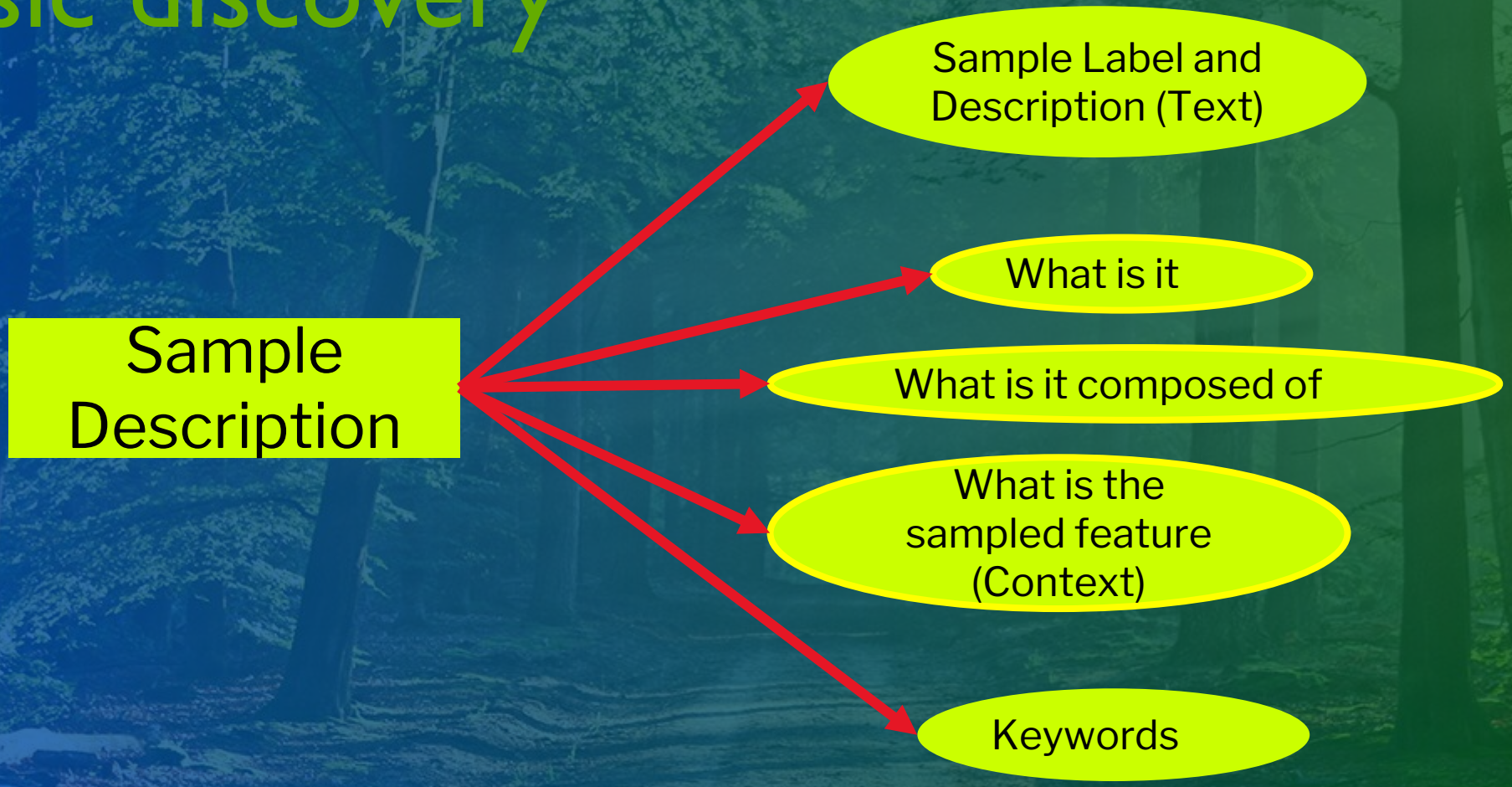
Identifiers



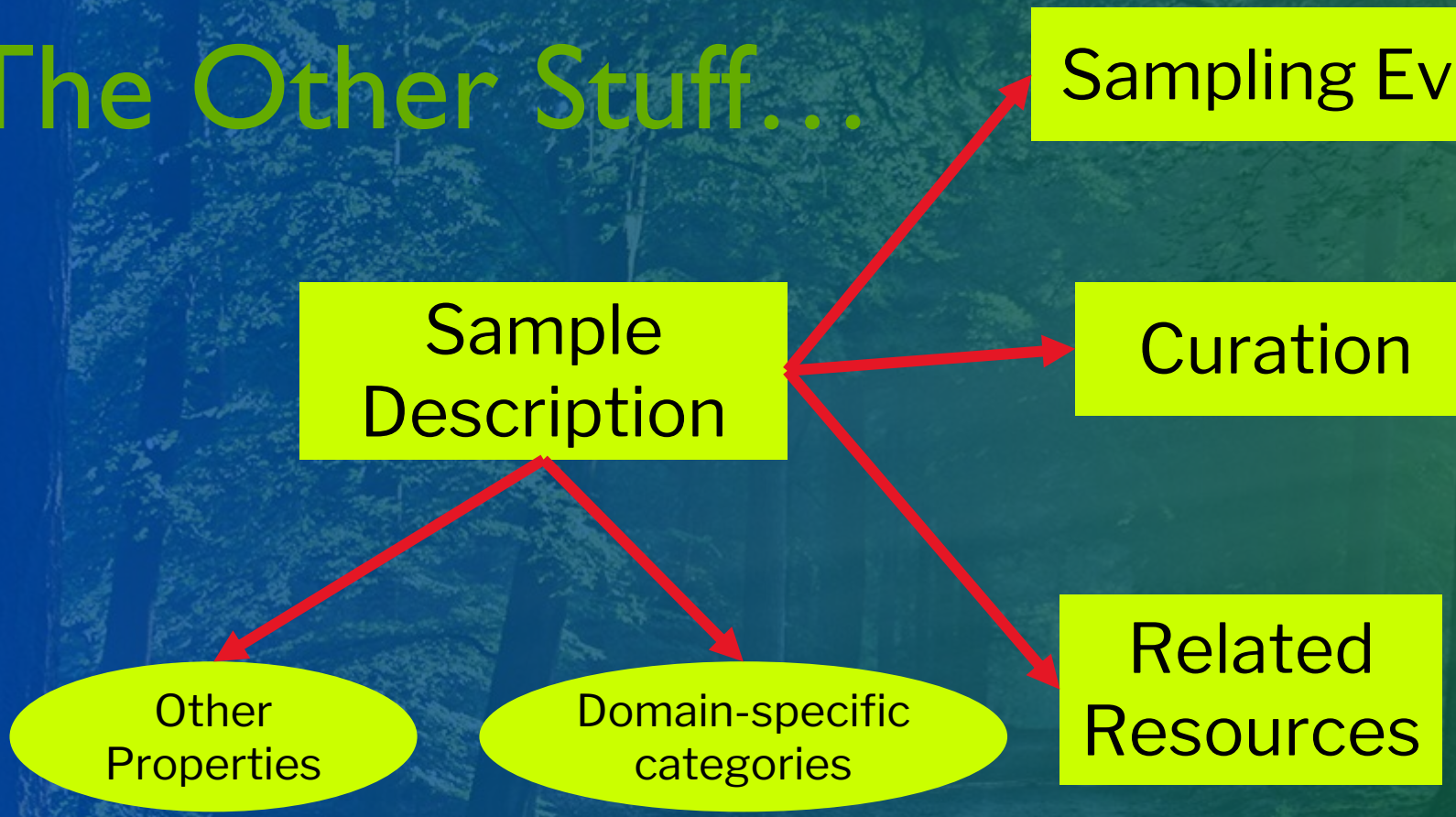
Identifier for material sample dereferences to the sample metadata record

The metadata record is the digital representation of the material object, Also known as 'Digital Specimen'

Basic discovery



The Other Stuff…



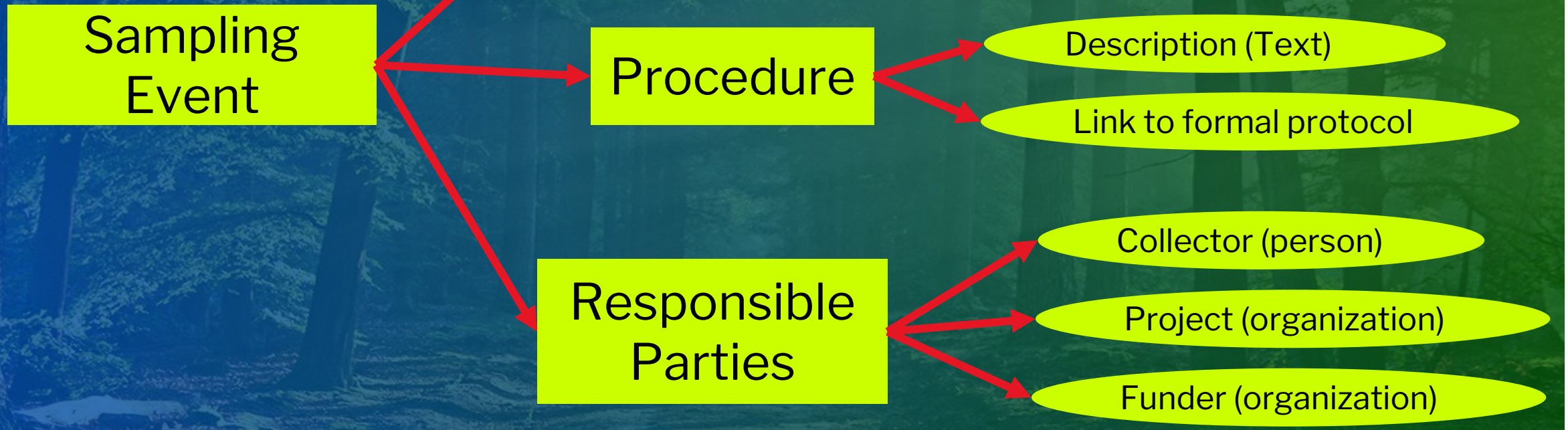
Where ?
How ?
Who ?
When?

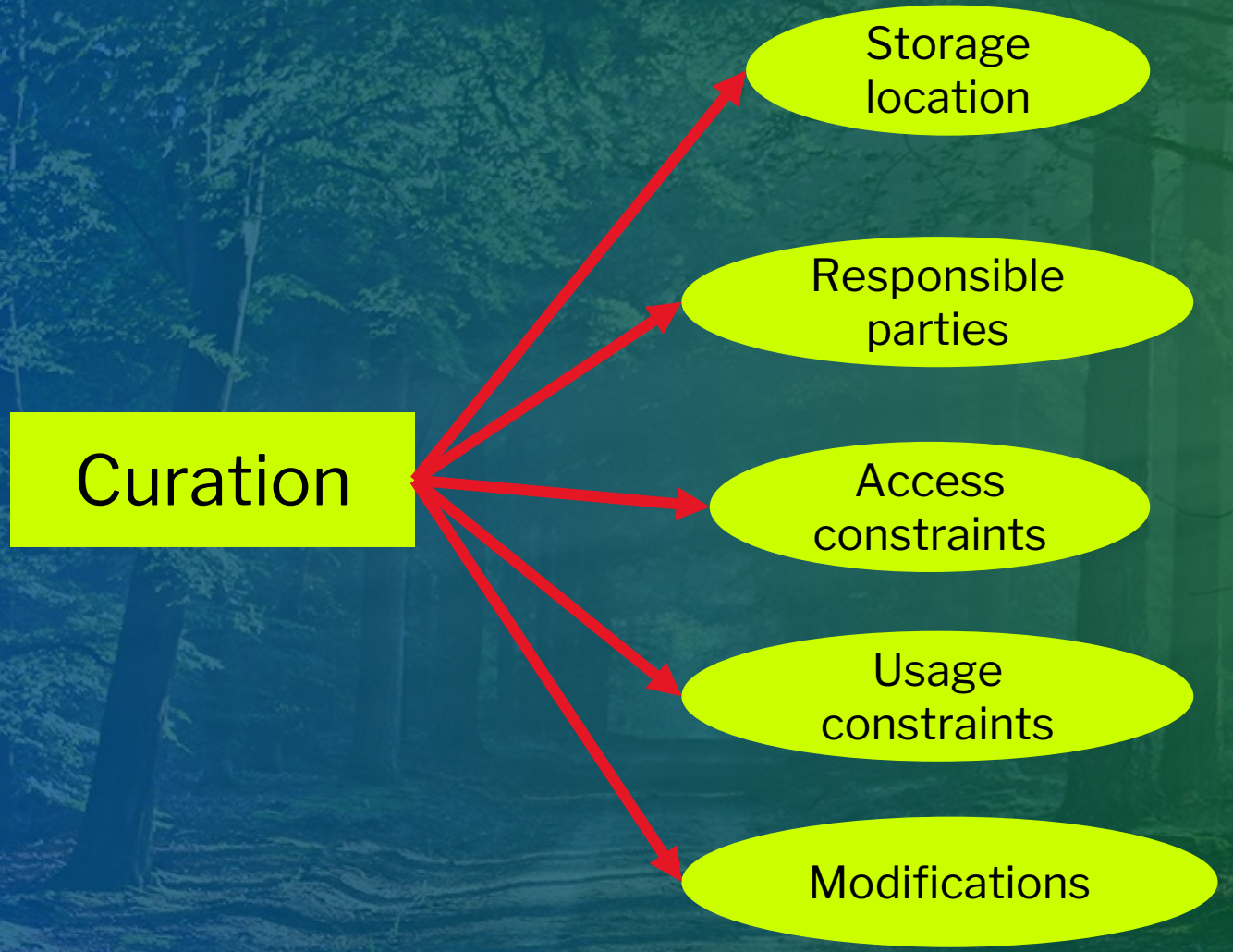
Where is the sample now?
Can I access the sample?
How do I access the sample?
How has it been modified ?

- Derived from relations
  ('parent', 'child')
- Publications
  - About the sample
  - Based on the sample
- Datasets
- Collection membership
- …

Key-value pairs
e.g. dimensions, mass, origin age

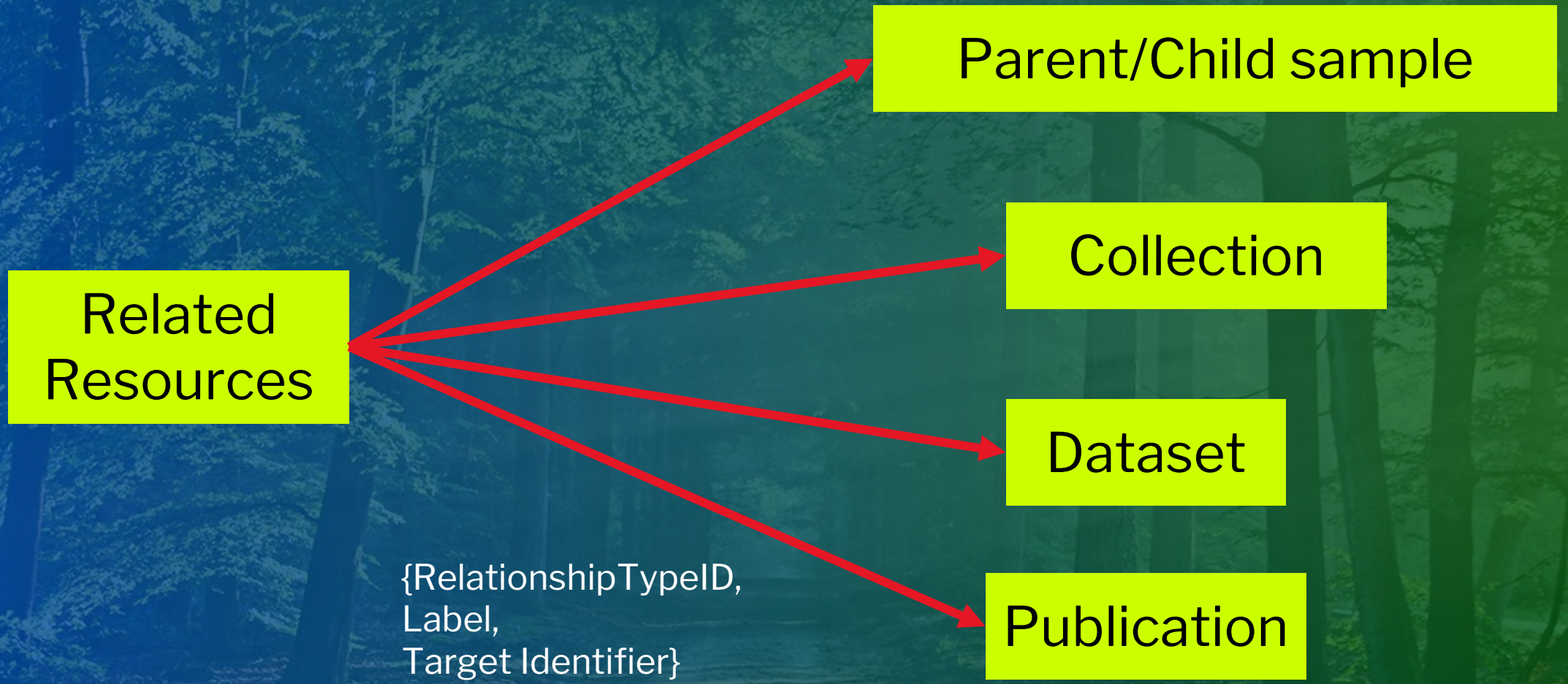
Scoped Names
e.g. Rock type, Biologic taxon, Culture


Sampling Event
Location
Geospatial point
Domain specific locations
Accessibility information
Procedure
Description (Text)
Link to formal protocol
Responsible Parties
Collector (person)
Project (organization)
Funder (organization)
{role} {person or organization}



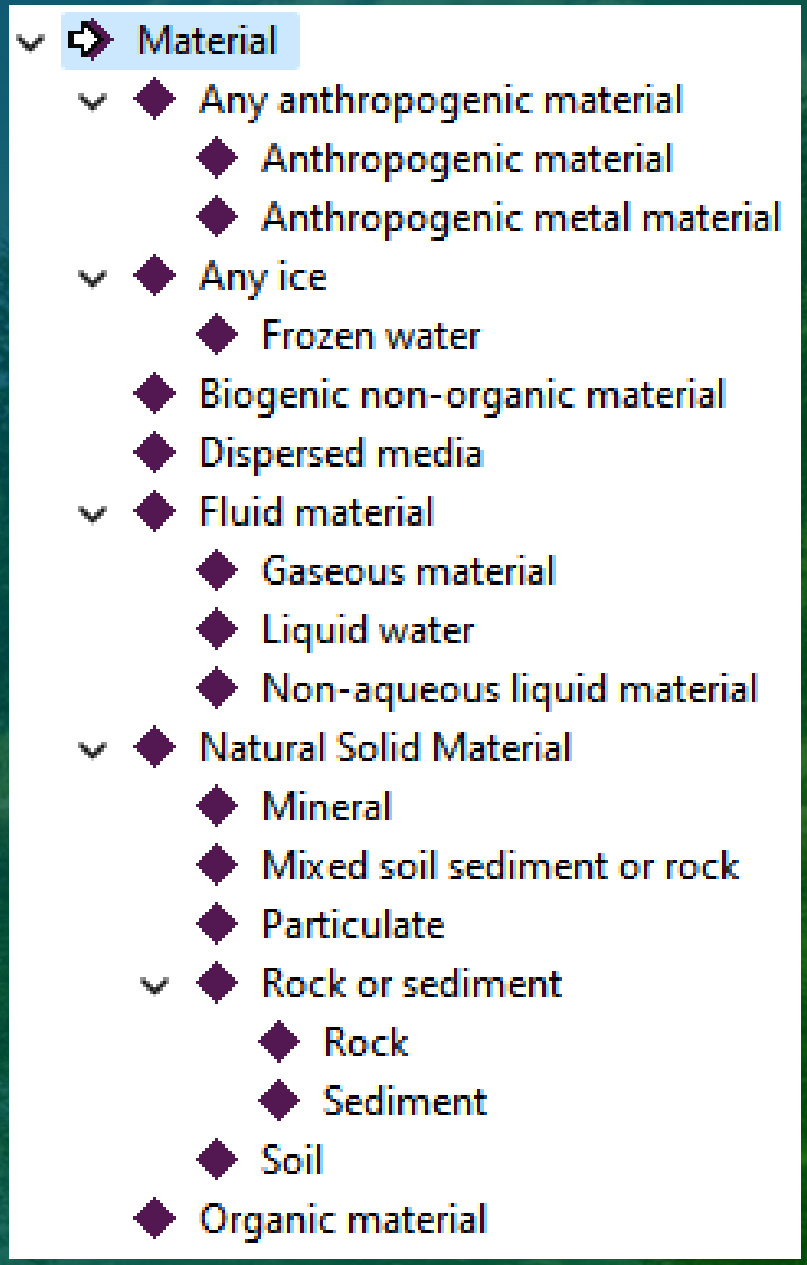
Name, role, contact information

Preservation actions, Destructive analyses


Related Resources
Parent/Child sample
Collection
Dataset
Publication
{RelationshipTypeID,
Label,
Target Identifier}

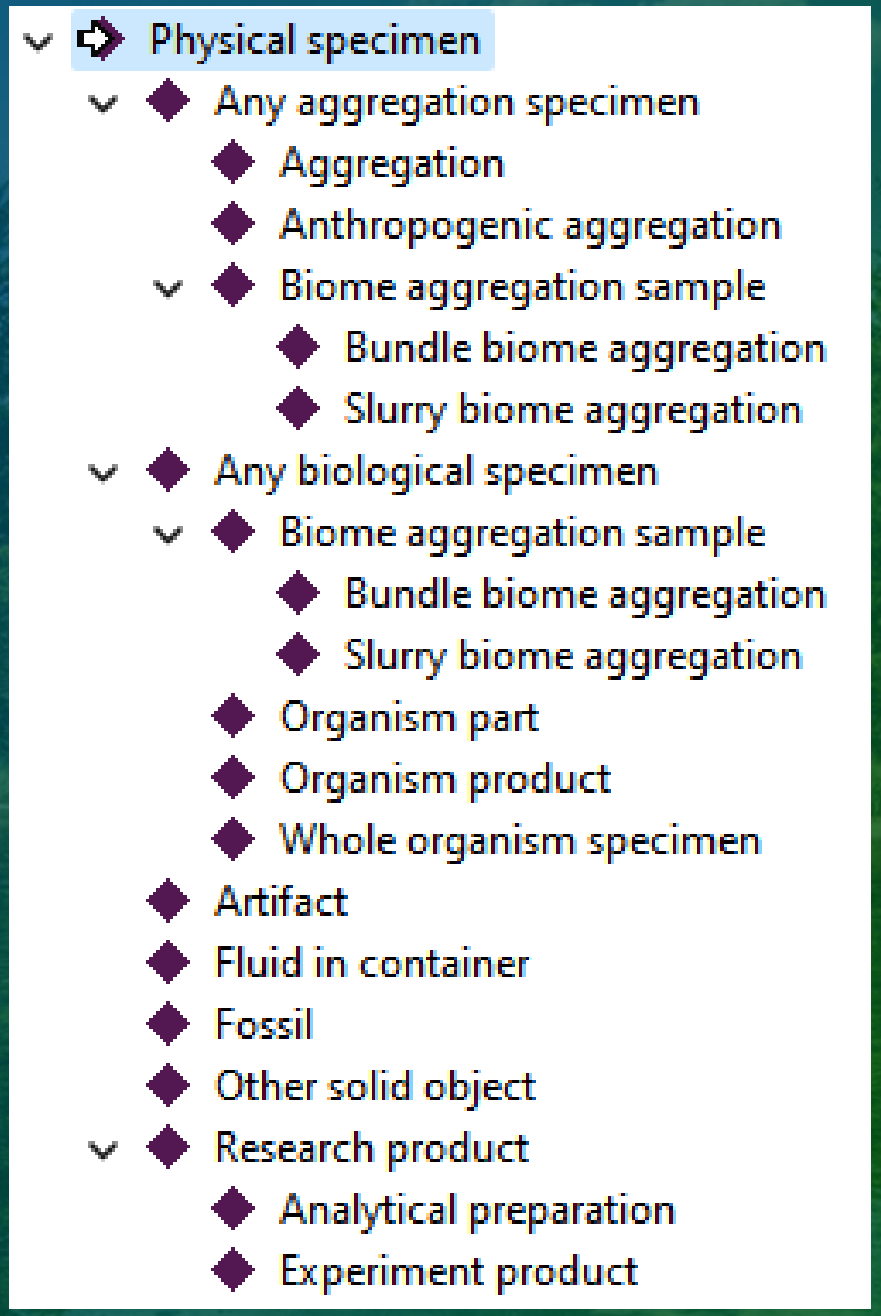
Material Type Vocabulary

- What is the sample composed of – what is the ‘substance’



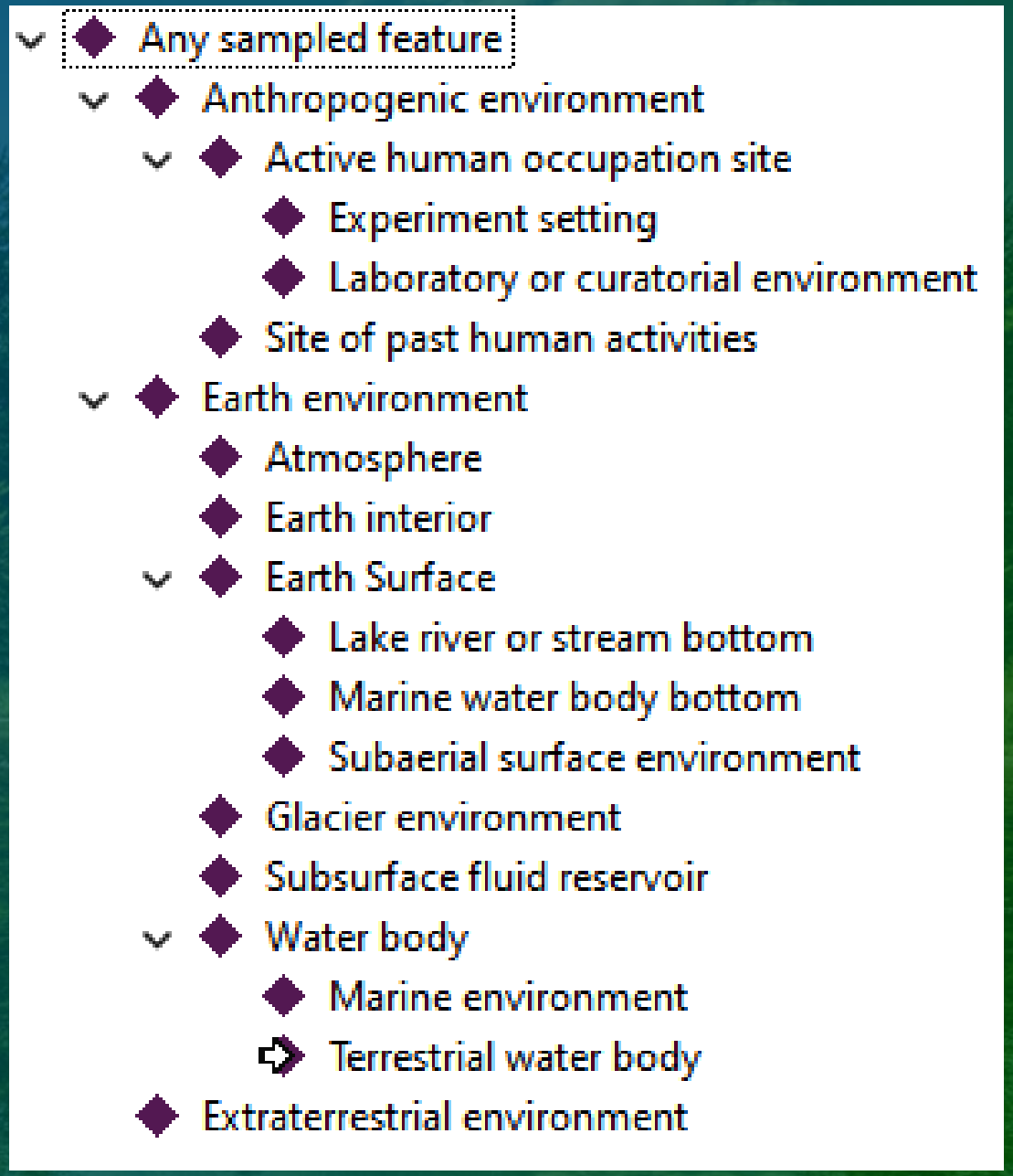
Specimen Type Vocabulary

- What kind of object is the sample?

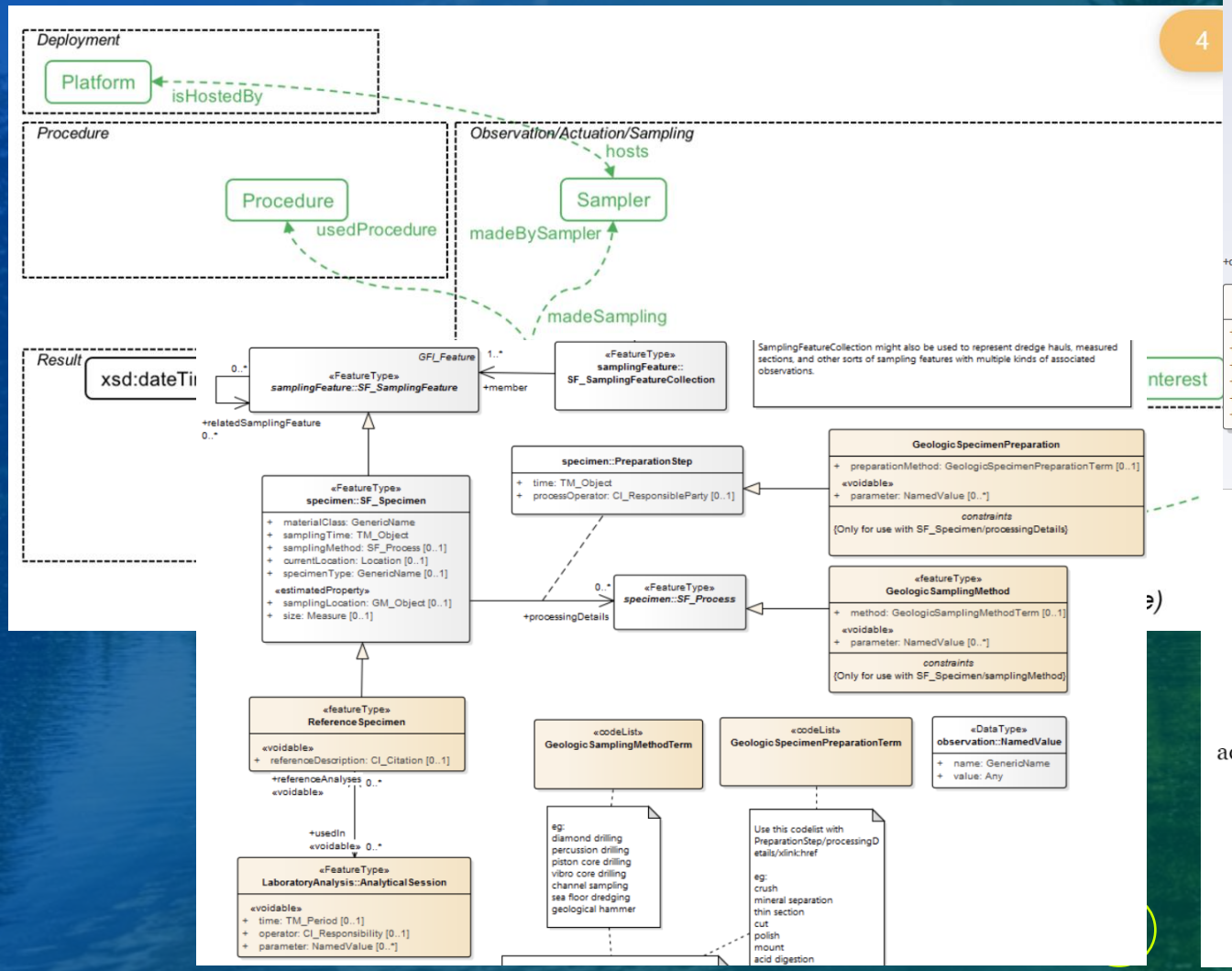


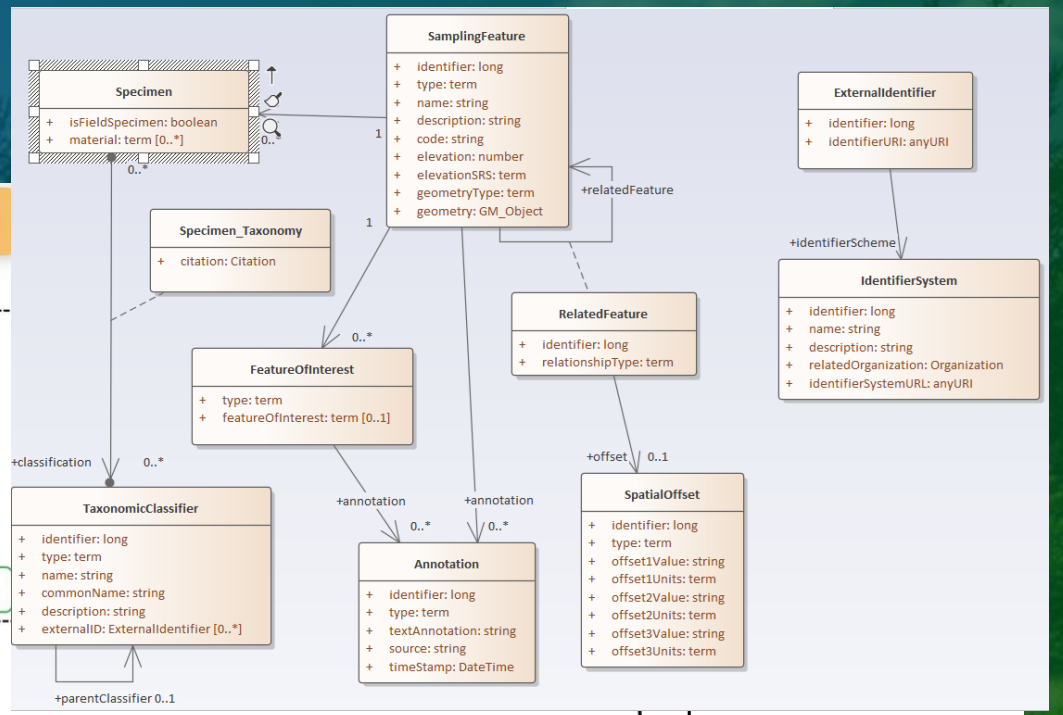
Sampled Feature type Vocabulary

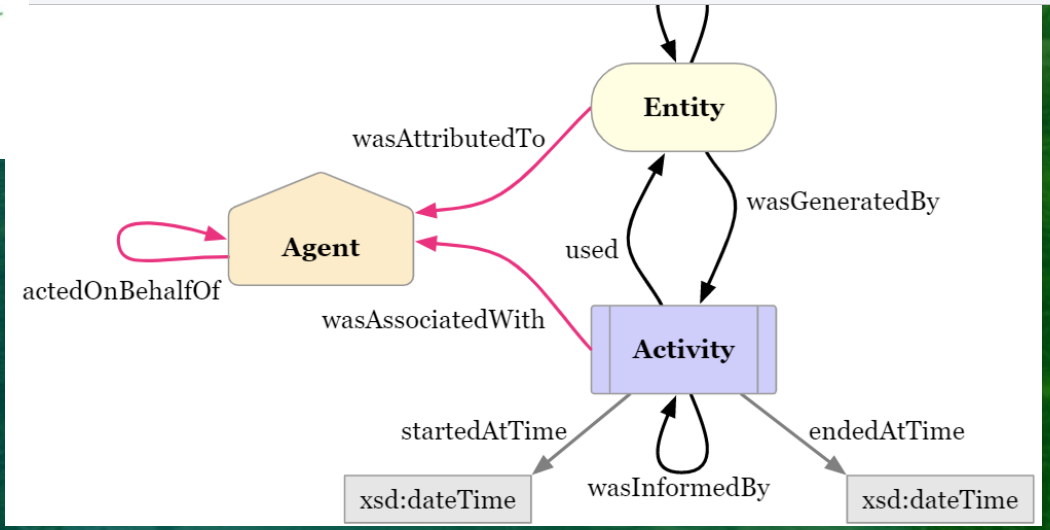
- High level categories for the context— What is the sample supposed to represent?



Related models….







Links

- Github Repository: https://github.com/isamplesorg/metadata/
  - **Current JSON schema**: iSamplesSchemaBasic0.3.json
  - **Vocabularies**: /vocabulary subdirectory
    - Decision trees:
      - SpecimenTypeDecisionTreev2.pdf
      - MaterialTypeDecisionTreev3.pdf
      - SampledFeatureDecisionTreeV4.pdf
    - Turtle (.ttl) files are skos versions.
- **Card sorting** exercise to test vocabularies (not active)
  - Specimen type: https://x12745x3.optimalworkshop.com/optimalsort/3x1kqnv2
  - Material type: https://x12745x3.optimalworkshop.com/optimalsort/ud4300c4-0
  - Sampled feature/context: https://x12745x3.optimalworkshop.com/optimalsort/qf1254qw