Simplified Logical Data Model

The Specify logical data model is a high-level representation of the underlying complex physical data model. The logical model portrays the major physical model entities (tables and fields) and the essential relationships between them. The Specify logical data model can be divided into three broad categories:

1. **People** – all individuals, groups, and organizations involved with the collection.
2. **Places** – collecting locality information.
3. **Things** – the collection objects: specimens or lots and any objects (preparations) derived from or related to them.

The following pages depict these three logical data model categories. The legend below explains the different typefaces used in the diagrams. All items (and sub-items) marked with an asterisk (*) are part of the physical model but have yet to be implemented in the program.

**LEGEND:**

<table>
<thead>
<tr>
<th>COLLECTION OBJECT:</th>
<th>Physical model table name in <strong>BOLD, UNDERLINED ALL CAPS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Four collection object types-</td>
<td>Related tables in physical model in ALL CAPS</td>
</tr>
<tr>
<td>Biological Object (specimen, lot or OBSERVATION):</td>
<td>Commonly used fields in main or related tables in Mixed case</td>
</tr>
<tr>
<td>-Field number</td>
<td>Indentation indicates hierarchical position in the physical model</td>
</tr>
<tr>
<td>BIOLOGICAL OBJECT ATTRIBUTES</td>
<td>Italicized items are subtypes within the physical model entity.</td>
</tr>
<tr>
<td>-Sex, age, stage, weight, length…</td>
<td></td>
</tr>
<tr>
<td>Physical Object (is derived from a specimen or lot):</td>
<td></td>
</tr>
<tr>
<td>-Preparation method</td>
<td></td>
</tr>
<tr>
<td>PREPARATION</td>
<td></td>
</tr>
<tr>
<td>-Medium, count, date…</td>
<td></td>
</tr>
<tr>
<td>-Parasite taxon name</td>
<td></td>
</tr>
<tr>
<td>Container (holds one or more physical objects):</td>
<td></td>
</tr>
<tr>
<td>-Container type</td>
<td></td>
</tr>
<tr>
<td>Image or Sound Event (special objects)*</td>
<td></td>
</tr>
<tr>
<td>IMAGE COLLECTION OBJECTS</td>
<td></td>
</tr>
<tr>
<td>IMAGE</td>
<td></td>
</tr>
<tr>
<td>SOUND EVENT STORAGE</td>
<td></td>
</tr>
<tr>
<td>SOUND</td>
<td></td>
</tr>
</tbody>
</table>
Simplified Logical Data Model

- People -

AGENT:
Person (individual)
- First name
- Last name...
may belong to
GROUP PERSONS
- Order (or rank)
Other (individuals)
- Name
Organization
- Name
- Abbreviation
Group (e.g. Project, etc.)
- Name

Functions:
- COLLECTORS
- PREPARATION
- DETERMINATION
- AUTHORS
- OBSERVATION
- PROJECT
- COLLECTION
OBJECT CATALOG
- Cataloger

Transactions:
- ACCESSION
- DEACCESSION
- PERMIT
- LOAN
- BORROW
- EXCHANGE IN
- EXCHANGE OUT
- SHIPMENT

AGENT ADDRESS
- Phone
- Fax
- E-mail
- Url
ADDRESS
- City, State...
**Simplified Logical Data Model**

**- Places -**

**LOCALITY:**
- Named place
- Site name
- Coordinates
- Elevations...

Is found in

**GEOGRAPHY:**
- Continent or ocean
- Country
- State
- County
- Island group
- Island
- Waterbody
- Drainage

Is cited in

**COLLECTING EVENTS:**
- Dates and times
- Methods
- Site numbers...

Of one or more

Can be characterized by

**HABITAT:**
- Temperatures
- Depths
- Types
- Host taxon name...

If paleontological, as

**STRATIGRAPHY:**
- Super group
- Group
- Formation
- Member
- Bed

GEOLOGIC TIME PERIOD
GEOLOGIC TIME BOUNDARY

**REFERENCE WORK:**
- JOURNAL
  - Title
  - Date
  - Volume
  - Page
  - Publisher...

To: THINGS
Simplified Logical Data Model

**COLLECTION OBJECT:**

*Four collection object types - Biological Object (specimen, lot or OBSERVATION):*
- Field number
- BIOLOGICAL OBJECT ATTRIBUTES
  - Sex, age, stage, weight, length…

*Physical Object (is derived from a specimen or lot):*
- Preparation method
- PREPARATION
  - Medium, count, date…
  - Parasite taxon name

*Container (holds one or more physical objects):*
- Container type

*Image or Sound Event (special objects)*
  - IMAGE COLLECTION OBJECTS
  - IMAGE
  - SOUND EVENT STORAGE
  - SOUND

**BIOLOGICAL OBJECT RELATION TYPE:**
- Parent/child
- Host/parasite
- Ate/eaten
- Sibling
- Attached to

**PROJECT COLLECTION OBJECTS:**
- PROJECT
  - Name
  - Description
  - Dates…

**COLLECTION OBJECT CATALOG:**
- CATALOG SERIES
- Catalog Number
- Subnumber (phys. object)

**DETERMINATION:**
- TAXON NAME
  (current and former)
  - Type status name
  - Method
  - Confidence
  - Date…

**REFERENCE WORK:**
- JOURNAL
  - Title
  - Date
  - Volume
  - Page
  - Publisher…

**COLLECTING EVENT**
- Each object can have a unique

**PROJECT COLLECTION CITATION:**
- Each object can have

**COLLECTION OBJECT CITATION:**
- Are linked to PLACES

**PROJECT COLLECTION EVENT**
- Can be cited in

**DEACCESSION:**
- Number, date…

**EXCHANGE (IN & OUT):**
- Quantity, date…

Can be included in

Physical objects are subject to

Each specimen, lot or observation can have

Each derived object can have

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