

PREMIS AND DAITSS



DAITSS

- DAITSS in use by Florida Digital Archive since 2005
- OAIS-based preservation repository system
- Employs normalization and forward migration
- Roughly 300,000 AIPS, 30 million files, 80 TB
- Recently completely re-written (DAITSS 2.0)
- DAITSS 2 follows PREMIS closely
 - Objects, Agents, Events
 - Data Model
 - Schema

Preservation Metadata in DAITSS

- PREMIS metadata and format-specific technical metadata supplied (extracted/created) by system
- Every package (AIP and DIP) has a METS descriptor
- PREMIS is embedded in the METS descriptor
- Format-specific technical metadata uses standard schema (where possible) treated as **objectCharacteristicsExtension**

A snippet of format information in the AIP Descriptor

```
-<format>
  -<formatDesignation>
    <formatName>Raw JPEG Stream</formatName>
  </formatDesignation>
  -<formatRegistry>
    <formatRegistryName>http://www.nationalarchives.gov.uk/pronom</formatRegistryName>
    <formatRegistryKey>fmt/41</formatRegistryKey>
  </formatRegistry>
</format>
-<objectCharacteristicsExtension>
  -<mix:mix xsi:schemaLocation="http://www.loc.gov/mix/v20 http://www.loc.gov/standards/mix/mix20/mix20.xsd">
    -<mix:BasicDigitalObjectInformation>
      -<mix:ObjectIdentifier>
        <mix:objectIdentifierType>JHOVE</mix:objectIdentifierType>
      </mix:ObjectIdentifier>
      <mix:byteOrder>big endian</mix:byteOrder>
    -<mix:Compression>
      <mix:compressionScheme>JPEG</mix:compressionScheme>
    </mix:Compression>
  </mix:BasicDigitalObjectInformation>
  -<mix:BasicImageInformation>
    -<mix:BasicImageCharacteristics>
      <mix:imageWidth>4288</mix:imageWidth>
      <mix:imageHeight>2848</mix:imageHeight>
    </mix:BasicImageCharacteristics>
  </mix:BasicImageInformation>
  -<mix:ImageAssessmentMetadata>
    -<mix:ImageColorEncoding>
      -<mix:BitsPerSample>
        <mix:bitsPerSampleValue>8</mix:bitsPerSampleValue>
        <mix:bitsPerSampleValue>8</mix:bitsPerSampleValue>
        <mix:bitsPerSampleUnit>integer</mix:bitsPerSampleUnit>
      </mix:BitsPerSample>
    </mix:ImageColorEncoding>
  </mix:ImageAssessmentMetadata>
</mix:mix>
</objectCharacteristicsExtension>
```

PREMIS Objects

- Representation objects
 - AIP can contain 1,2 or 3 representations
 - Each has a separate StructMap in METS
 - Each has minimal PREMIS metadata
- File objects
 - All PREMIS semantic units except for **environment**
 - Descriptions recorded in PREMIS and extensions
- Bitstream objects
 - Described like File objects
 - Only for certain embedded bitstreams



PREMIS Events

- PREMIS Events considered part of permanent provenance
- Document stages of processing and actions on packages, e.g. submit, virus check, validate, normalize, migrate, ingest, disseminate, etc.
- Stored in AIP descriptor file within the AIP so in Archival Storage and “AIP Store”
- Also stored (selectively) in fast access database



Event information in the AIP Descriptor

```
.. ----- .
<!-- premis event -->
-<event>
  -<eventIdentifier>
    <eventIdentifierType>URI</eventIdentifierType>
    <eventIdentifierValue>1</eventIdentifierValue>
  </eventIdentifier>
  <eventType>describe</eventType>
  <eventDateTime>2011-05-13T09:50:53-04:00</eventDateTime>
  <eventDetail>Well-Formed and valid</eventDetail>
  -<eventOutcomeInformation>
    <eventOutcome>success</eventOutcome>
  </eventOutcomeInformation>
  -<linkingAgentIdentifier>
    <linkingAgentIdentifierType>URI</linkingAgentIdentifierType>
    <linkingAgentIdentifierValue>info.fda/daitss/description/v0.2.1</linkingAgentIdentifierValue>
  </linkingAgentIdentifier>
  -<linkingObjectIdentifier>
    <linkingObjectIdentifierType>local</linkingObjectIdentifierType>
    <linkingObjectIdentifierValue>archiveteamphoto</linkingObjectIdentifierValue>
  </linkingObjectIdentifier>
</event>
<!-- premis agent -->
-<agent>
  -<agentIdentifier>
    <agentIdentifierType>URI</agentIdentifierType>
    <agentIdentifierValue>info.fda/daitss/description/v0.2.1</agentIdentifierValue>
  </agentIdentifier>
  <agentName>Format Description Service</agentName>
  <agentType>Web Service</agentType>
  -<agentNote>
    built with JHOVE 1.6 (built on January 24, 2001), DROID 3.0 with DROID signature file version 34.
  </agentNote>
</agent>
```



Operations (Ops) Events

- For tracking, problem-solving, operations audit trail
- SLP rejected, ingest started, ingest finished, ingest snafu, disseminate started, disseminate finished, report sent, fixity success, fixity failure, etc.
- Stored in DAITSS database, but not in AIP



PREMIS 2012

PREMIS Agents

- Used to document software agents

```
<!-- premis agent -->
```

```
<agent>
```

```
  <agentIdentifier>
```

```
    <agentIdentifierType>URI</agentIdentifierType>
```

```
    <agentIdentifierValue>info:fda/daitss/description/v0.2.1</agentIdentifierValue>
```

```
  </agentIdentifier>
```

```
  <agentName>Format Description Service</agentName>
```

```
  <agentType>Web Service</agentType>
```

```
  <agentNote>
```

```
    built with JHOVE 1.6 (built on January 24, 2001), DROID 3.0 with DROID signature file  
    version 34.
```

```
  </agentNote>
```

```
</agent>
```



For more information:

<http://daitss.fcla.edu>

<http://fclaweb.fcla.edu/FDA>