# Chapter 8A

Describing digital objects

Overview

The Archivists' Toolkit enables the description of digital objects. Digital objects are digital content files that are accessible online by at least the repository's staff, if not end users. The digital object may be a digitized version of materials contained in an archival resource or born digital materials collected as an archival resource by a repository. The digital object may be a simple object or a complex object. A simple object is one in which the intellectual content of the object is contained in one digital content file. A digital image of the Golden Gate Bridge is a simple digital object. So too is a TEI transcription of Melville's *Moby Dick*. A complex object is one in which the intellectual content is distributed over two or more digital content files. A digitized version of a 24 page diary would be a complex object since each page would be represented by a different digital image file. Complex digital files require structural metadata so that the parts of the whole will be presented in the right sequence to the end user. Finally, the AT will produce an unbound or bound digital object. An unbound digital object is one in which the metadata record simply references the digital content file. A Dublin Core record that references a digital content file is an example of an unbound digital object. A bound digital object is one which the metadata and the digital content files are bound together through the use of a digital binder or wrapper. The Metadata Encoding and Transmission Standard (METS) is the digital wrapper probably best known in library environments. METS not only binds the metadata and digital content files, but supports expression of the structure existing among the content files. In sum, the digital object description record is designed to accommodate a broad range of repository needs and practices. The repository using this tool will benefit greatly if it develops a firm understanding for how it intends to manage and provide access to its digital objects and then formulates guidelines for producing the appropriate kind of digital objects.

Digital object and digital object component records

Two types of records, digital objectg records and digital object component records, are available for describing digital objects. A digital object record represents a unitary digital object, which may be a simple object or a complex object. Digital object component records are for expressing the structure of complex digital objects. They may contain metadata as rich as that in the digital object record or metadata that consists of little more than a label, a sequence value, and a file version.

The hierarchical interface

As you describe a digital object and its component parts in the Toolkit, each new record will be reflected in the hierarchical interface.
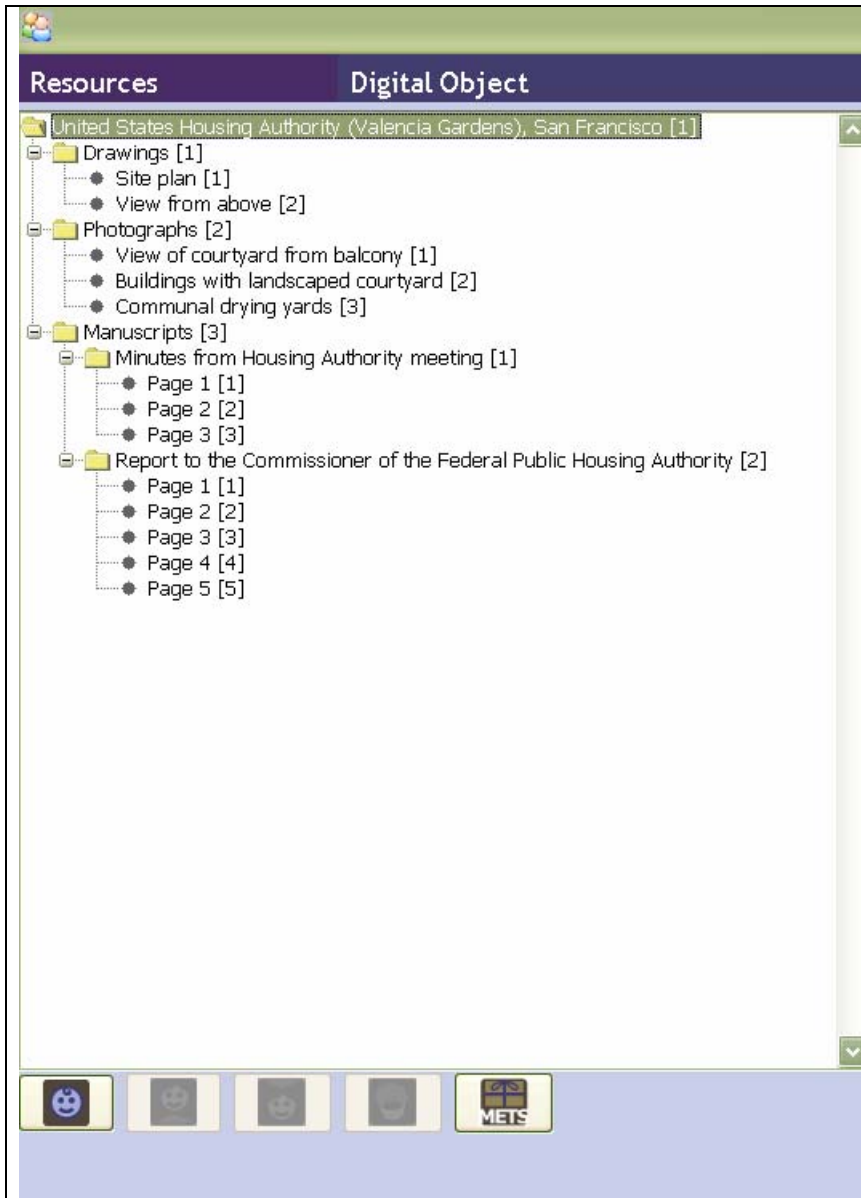
In the hierarchical view, a folder represents the digital object (United States Housing Authority in this instance), or any component which contains additional components. Components that have no children are represented with a bullet. Either the title, label, or date is displayed (as well as the sequence value if recorded) for every component record.

To display the contents of a component, click on the + to the left of a folder, and the Toolkit will display all of the components within it. To collapse the list, click on the - to the left of an open folder.

To display the record for any component, click on the title, label or date of the component. This helps you navigate directly to a given record for editing or review.

To insert a new component into the description, use the buttons found below the hierarchical interface. Keep in mind that the context for the following buttons is the component currently selected and displayed in the record window.

The Add Child button will open a new component record that is hierarchically

subordinate to the context record.

The Add Sibling Above button will open a new component record that is at the same level as the context record, and that precedes the context record within the sequence.

The Add Sibling Below button will open a new component record that is at the same level as the context record, and that follows the context record within the sequence.

The Delete Component button will delete the selected component and all of its children. If you wish to delete the component but not its children, you must reorder the components first, so that they no longer part of the component you wish to delete.

Basic steps for creating a digital object description record

1. From the **Resource Record** or a **Resource Component Record** , select option to **Add Instance.**

2. Select **Digital Object** on the list of instance type and click **OK**.

Note: A record template for digital objects will appear over the record template for resources.

The following data will be copied from the resource or resource component record from which the digital object is created: title, date expression, date begin, date end, language, all notes the repository allows for the digital object, and all linked name and subject records.

A repository should modify, delete, or augment the copied data where pertinent.

3. Enter a **Title**.

4. Enter a **Date Expression** and/or **Begin Date** and **End Date** for the digital object.

5. Select the Object Type from the list of object types.

6. Select the Structure Type from the list of structure types.

7. Save the record by pressing the **OK** command button at the bottom right corner of the window.

Caution: If the record does not include the required elements listed above, the Toolkit will indicate that the record cannot be saved because one or more of the required fields is not completed. The uncompleted fields will

be indicated in the error message. The required field(s) must be completed in order to save the record.

Basic steps for creating a digital object component description record

1. From an open digital object record or digital object component , press either the **Add Child**, **Add Sibling Above**, or **Add Sibling Below** button.

2. Enter at the least either a **Label** OR a **Title** OR a **Date Expression** OR a **Date Begin and Date End**.

3. Save the record by pressing the **OK** command button at the bottom right corner of the window.

> Caution: If the record does not include the required elements listed above, the Toolkit will indicate that the record cannot be saved because one or more of the required fields is not completed. The uncompleted fields will be indicated in the error message. The required field(s) must be completed in order to save the record.

Digital object data elements

The Basic Description Tab

1. **Label**. *Optional.* Can serve as a basic descriptor for parts or structural units within a complex digital object, e.g., page, chapter, entry, etc.

2. **Sequence**. *Optional.* The sequence value indicates the sequential relationship one node has to another in a mult-part, complex digital object and thus the relationship that one file version has to another. The sequence value is extremely important for proper rendering of the METS records output from the AT. A complex digital object will typically contain a set of sequences for each set of sibling records, with each sequence beginning with the integer 1. See the example in the hierarchical display above, which contains six sets of sequence values.

3. **Title**. *Required for digital object records. Required for digital object component if label or date information is not present.* The title is copied over to the digital object record from the resource or resource component record to which the digital object record is linked. The title may be kept as copied or edited to something more specific and descriptive of the digital object.

   Examples:

```
1:    Resource title: William W. Wurster /
      Wurster, Bernardi & Emmonds Collection


      Digital object title: United States Housing
      Authority (Valencia Gardens), San Francisco


      A group of materials from a collection
      presented as a single complex digital object
      and linked from the resource record.


2:    Resource title: Oral History of John Arthur
      McGowan


      Digital object title: Oral History of John
      Arthur McGowan


      A single digital audiorecording linked to an
      item level resource record.


3:    Resource title:  Around South America


      Digital object title:  Around South America


      A single digital videorecording linked  to
      an item level resource record.
```

3. **Language Code**. *Optional.* Copied over to the digital object record from the resource or resource component record to which the digital object record is linked. Otherwise, select the code for the language that describes the digital object as a whole and, at the digital object component level, describes a particular component part of the digital object if it differs from the language expressed at the parent level.   You may jump to the appropriate place in the list by typing the first few letters of the language you are seeking.

Examples:

```
English; eng
French; fre/fra
```

4. **Dates.** .Three elements are available for recording the dates of creation of digital objects. Dates can be entered in normalized form (**Date Begin and Date End**) and/or as a free-text string (**Date Expression**). Normalized dates are used to support computer processing of date information (e.g., searching). The date expression is designed for human readability, and allows for the use of qualifiers, such as circa or before. It is the date expression that displays tend users. *Date expression OR Date Begin AND Date End are required for digital object records. Date information is required for digital object component records only when the label and title are absent.*

    a. **Normalized dates**. (**Date Begin and Date End**). Normalized dates must be entered in the YYYYMMDD format, though month and day elements are not required.

    To enter a single date, enter the same date in the **Date Begin** field and **Date End** field. Enter inclusive dates using the **Date Begin** and **Date End** fields. Bulk dates are not supported in description of digital objects.

    Examples:

```
19220614
200603
1900
```

    b. **Date Expression**. A natural language expression specifying the date or date range of the materials. If you wish, you may only enter a **Date Expression** rather than using the fields for normalized dates. However, doing so may limit your ability to support meaningful date searching.

    Examples:

```
1876-1933
Between 1925 and 1953
ca. 1911
1913-1998, bulk 1950-1972
```

5. **Restrictions Apply**. Yes/no field indicating if access restrictions apply to the materials being described. The **Restrictions Apply** element is applied to the digital object as a whole and not any component parts. If the digital object record is marked restricted, it is assumed that all component parts are to be restricted as well.

6. **Object Type.** *Required for digital object records.* A single descriptor for indicating the predominant type of the resource. The list of values is based on the MODS <typeOfResource> element, and thus cannot be modified. The Object

Type is applied to the digital object as a whole only and not to the component parts.

7. **Structure Type**. *Required for digital object records.* A single descriptor indicating the kind of structure the digital object has. The default attributes are: 1) Logical, meaning the units are are logical units such as chapters or diary entries and as such may be comprised of several physical parts, 2) Physical, meaning the units are physical units such as pages and are represented by a single content file, and 3) Mixed, meaning the structure is comprised of both logical and physical units. The Structure Type is applied to the digital object as a whole only and not to the component parts.

8. **EAD DAO Actuate.** *Optional.* A control element for indicating how a digital object produced as part of an EAD finding aid is to behave, that is, whether a link is enacted automatically or must be requested by a user. The Actuate attribute is used in conjunction with the Show attribute. The default values are 1) onload, meaning the object is displayed automatically; 2) onrequest, meaning the object is displayed when a user requests it; 3) actuateother, meaning some other action occurs with respect to the link; and 4) actuatenone, meaning no action occurs with respect to the link.

9. **EAD DAO Show.** *Optional.* A control element for indicating whether a digital object linked to an EAD finding aid appears at the point of the link, replaces the existing link, or appears in new window. The Show attribute is used in conjunction with the Actuate attribute. The default values are: 1) embed (the target resource displays at the point of the link); 2) new (the target resource appears in a new window); 3) replace (the target resource replaces the local resource that initiated the link); 4) showother (some other action takes place with respect to the target resource); and 5) shownone (no target resource displays).

7. **File Version**. File versions are for recording the URI of and intended use for the digital content file(s) corresponding to a digital object record or digital object component record. See "Adding File Versions" below.

The Names & Subjects Tab

Use the Names & Subjects tab to add names as creator or subject, and to add topical subject terms to any component level of a digital object record. See Chapter 10 for instructions.

The Notes, etc. Tab

The **Notes, etc.** tab provides 30 notes that can be added at any component level of a digital object record. They are the same basic notes available to resource and resource component records. See Chapter 8 for definitions of the notes.

For some repositories, not all those notes will be applicable for digital object. Those repositories can indicate the notes available for digital objects by configuring the master

list of notes. To do so, select **Edit Notes etc.** on the **Admin** menu. Simply enter a check in the "Include in Digital Objects" column if the note is to be available for digital objects. If the note is not be available for digital objects, then leave the check box unchecked for the note.

Adding File Versions

The file version record is for recording the digital content files corresponding to the description recorded in a digital object record or digital object component record.

Recording file versions is not required in the AT. However, it is the file version information that will serve as identifier information in a Dublin Core, MODS, MARC XML, or METS record. Further, a METS record will not be properly rendered if it is lacking file version information, as well as sequence information.

The file versions recorded at the same node are understood to be equivalent in respect to content, in the way a tiff, jpeg, and gif can be different format versions of the same image.

File versions that are not equivalent in respect to content should be recorded at separate and appropriately sequenced nodes if the digital object is to be rendered via a METS record with a "page" turner application. As a rule of thumb, two files of the same file format will not be recorded at the same node.

Use the following instructions to add one or more file versions to a digital object or digital object component description record.

1. From either the **Digital Object Record** or **Digital Object Component Record**, select the option to **Add File Version**.

2. Enter the **URI** for the digital content file corresponding to the digital object record or digital object component record.

3. Select the appropriate **USE Statement** from the list of file USE attributes.

> Note: The **Use Statement** is used in the METS record for indicating the use for which the digital content file is intended. Some files are intended only for preservation, e.g. a tiff or high quality audio file, while other files, because they require less bandwidth, are intended for use by end users. Such files would be a jpg or a lower quality audio file.
>
> The list of Use Statement values is non-authoritative. The default list provided with the AT is borrowed from the UCSD Single Object METS profile located at http://www.loc.gov/standards/mets/profiles/00000012.html. The values

on the default list may be modified, deleted, or augmented by repositories according to their needs.

3. Press **OK** to save the file version record. The record will not be saved unless both the URI and file USE attribute values are recorded.

Relationships with other records

Managing digital objects requires linking other records to digital object and digital object component records. These include:

1. **Creator(s)**. Adding creator information to the record involves linking the digital object or digital object component record to one or more name records. See Chapter 10.

2. **Subject Name(s)**. As with creators, adding a name as subject to a digital object or digital object component record involves linking to a name record. See Chapter 10.

   Note: A source may not be linked to a digital object or digital object component record. The source for a digital object is represented in the resource record to which the digital object record is linked.

4. **Subject(s)**. Adding topical, geographic, genre, and other headings to digital object and digital object component records requires linking to one or more subject records. See Chapter 10.

Digital object reports

Any individual digital object or digital object component record, or a blank record, can be printed out as it appears on screen using the Print command button in the lower right hand corner of the window. Your repository may wish to take advantage of this process to establish a work flow in which the data entry operator prints the record on completion so that it can be reviewed by a supervisor or other staff member.

You can also generate several descriptive, administrative, and statistical reports drawn from the digital object records. Chapter 12 provides instructions for generating reports. Examples of the following reports are available in the Appendices:

1. **MARC record**. Resource-level catalog record output in MARC XML with a reference to the content file(s).

2. **Dublin Core record**. Resource-level Dublin Core metadata record with a reference to the content file(s).

3. **MODS record**. Descriptive metadata for objects with a reference to the content file(s).

4. **METS record**. A binding of the descriptive and structural metadata with references to the content files.

5. **Digital object inventory**. Comprehensive list of digital objects within a repository, indicating the resource (and resource components) to which the digital objects are linked.