![ArchivesSpace]

Digital Objects Workshop

ArchivesSpace Member Forum
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Workshop Scope and Overview

Introductions

- Instructors

- Participants

Prerequisites

This workshop assumes all participants have prior experience with the ArchivesSpace application and particularly creating and linking agent and subject record.

Learning objectives

Upon completing this workshop, you'll have a working knowledge of the following areas:

- The functional scope of the ArchivesSpace Digital Objects module

- How ArchivesSpace might be used in tandem with external digital asset management systems

- Model, create, and update simple and complex Digital Object records

- Link and relate Digital Object records to Resource and Accession records

- Generate Digital Object metadata exports in standardized data formats such as METS, MODS, and Dublin Core

- You will also become more familiar with applying a content standard, in this case DACS, where applicable, to determine the kind and form of data recorded in a Digital Object record.

What won't be covered

This workshop will not cover or only cursorily touch on, the following aspects of ArchivesSpace:

- Installation, upgrading and repairing the application.

- Working with the underlying database application.

- The following specific ArchivesSpace functional areas and processes:

    o Repository records

- o User records

- o Location records

- o Accession records

- o Resource records

- o Event records

- o Collection Management records

- o Classification records

- o Importing legacy data

- o Rights records

- o Encoding inline tags

- o Multi-part notes

- o Merge/Transfer functions

- o Reports

- o Customizing the application

- Future ArchivesSpace development.

As noted, if time permits we may review or touch lightly on some of the topics listed above as not being within the scope of the workshop. You will find more information about these topics, and topics covered in more detail in this workshop, in the ArchivesSpace member services documentation.

NOTE: All screenshots in this workbook are of ArchivesSpace version 1.5.

Post-workshop resources

ArchivesSpace Help Center:
https://docs.archivesspace.org/_help_proxy/admin

Downloading, installing, and running the software:
http://archivesspace.github.io/archivesspace/user/getting-started/ Follow-up questions:
ArchivesSpaceHome@lyrasis.org

Functional Overview of the Digital Object Module

Terminology and concepts

ArchivesSpace enables the description of digital objects, such as digitized archival resources or born-digital materials. A "digital object" can be defined as an entity comprising the following three items:

- **Metadata record:** Metadata can range from descriptive information to support discovery of the resource, to rights information or technical details about the digital files that make up the object. It can also include structural metadata, defining the logical or physical relationship(s) of the content files comprising a complex digital object (as discussed further below). Metadata is represented in the form of a structured data record.

- **Content file(s):** Digital files that range from still to moving images, to audio recordings, to textual documents such as PDF records. Typically, a digital object may include multiple content files, sometimes, but not always, of the same type (e.g., an image file vs. an audio file). For example, with image-based objects, you might have a TIFF master image, a JPEG service image, and a GIF thumbnail reference image.

- **A link or digital wrapper** that binds the metadata record and content file(s).

This characterization is based on the California Digital Library's (CDL) definition of digital objects (**http://www.cdlib.org/gateways/technology/glossary.html#d**).

When creating a Digital Object record in ArchivesSpace, you will be presented with a range of data field options for constructing a metadata record for a given object. The **File Version** data field is used to indicate and link to those content files associated with a given digital object, as well as record information about the file *qua* file. Some file types, JPEG and GIF, will display in line and the staff view mode and public interface, while other file types will open in a new window in the active browser.

A 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 (and its variants). A digital image of the Golden Gate Bridge is a simple digital object. So too, is a PDF file comprising Melville's *Moby Dick*.

  Simple objects are single-level in structure. They comprise a metadata record (representing a description for the entire item), bound with a content file (and its variants).

- 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 if each page were 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.

Complex objects are <u>multi-level</u> in structure. They comprise a parent-level metadata record (representing a description for the entire item) and component records for the individual content files. Components may have metadata as rich as that in the parent-level digital object record -- or components may have metadata that consists of little more than a label and a file version.

When building an object in ArchivesSpace, you have the flexibility to model them as either simple or complex objects. For example, a multi-page book could be digitized and formatted into a single PDF file. In this case, it could be modeled as a simple object. Alternatively, it could be digitized and formatted into multiple image files (e.g., one image per page). In this case, it could be modeled as a complex object. Furthermore, the complex object could have a flat structure or a hierarchical structure.
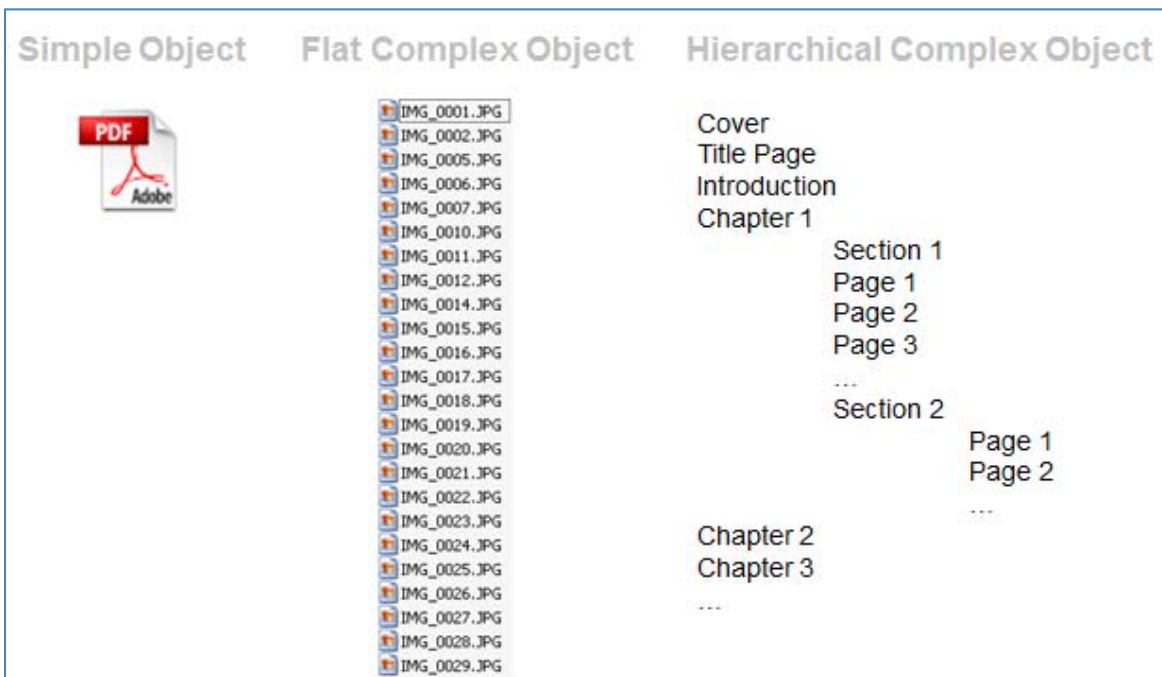
Use cases

By using ArchivesSpace to manage Digital Object metadata, you can conveniently and efficiently manage descriptions of your archival holdings within a single system. Moreover, you can associate digital objects to accessions and / or resources of which the digital object is a part. You can then publish the Accession or Resource record through the ArchivesSpace public interface, and you can additionally export the Resource record as an EAD finding aid containing digital archive objects, <dao>s. The resulting Accession or Resource records will have links to their associated digital object records; hence providing users with more comprehensive access to your holdings, as well as increased understanding of a digital object's context.

Functionally, ArchivesSpace supports the creation, updating, and display of Digital Object metadata. Digital object metadata records can also be exported with references to all associated content files, and packaged into a digital wrapper using the Metadata and Encoding Transmission Standard (METS) format. The METS files hence can contain a complete representation of the digital object, and it can subsequently be transmitted to a preservation service for long-term storage, and / or to a publication service for dissemination to end users. Within the Open Archival Information System (OAIS) reference model, METS files generated from ArchivesSpace can be viewed as a type of "Submission Information Packages".[1]

It is important to note that ArchivesSpace is optimized for managing metadata records and that ArchivesSpace does not support the direct management of content files. The assumption is that the files will be stored and managed in a network- or web-accessible location, such as a file server or a digital asset management system that is capable of managing the files as files.

That said, the software can be used to support a range of use cases. Two key use cases are summarized below.

> **Use case #1: You want to use ArchivesSpace as your primary management and publication platform for Digital Object records**
>
> - In this scenario, you use ArchivesSpace as your primary software for creating and managing Digital Objects records for your repository. (Again, this assumes that you have an external digital asset management system to manage your content files, or that they are stored at a network or web-accessible location, or that file management is not an objective).
>
> - Within your Accession and/or Resource records, you'll include links at the relevant levels of description to associated Digital Object records. (Or alternatively, you choose to leave the Digital Objects as "standalone" entities – and not to link your Accession and/or Resource records to Digital Objects).

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[1] For more information about the OAIS reference model, see
http://public.ccsds.org/publications/archive/650x0m2.pdf

- You'll use ArchivesSpace public interface as your primary means for publishing your Accession, Resource, and Digital Object records.

- Optionally and additionally, you can also contribute Resource records (e.g., as EAD finding aids) and Digital Object records (e.g., as METS records) to an external system, such as a statewide or regional aggregator.

Use case #2: You use a different system to manage digital objects, but you want Accession and Resource records in ArchivesSpace to link to those digital objects
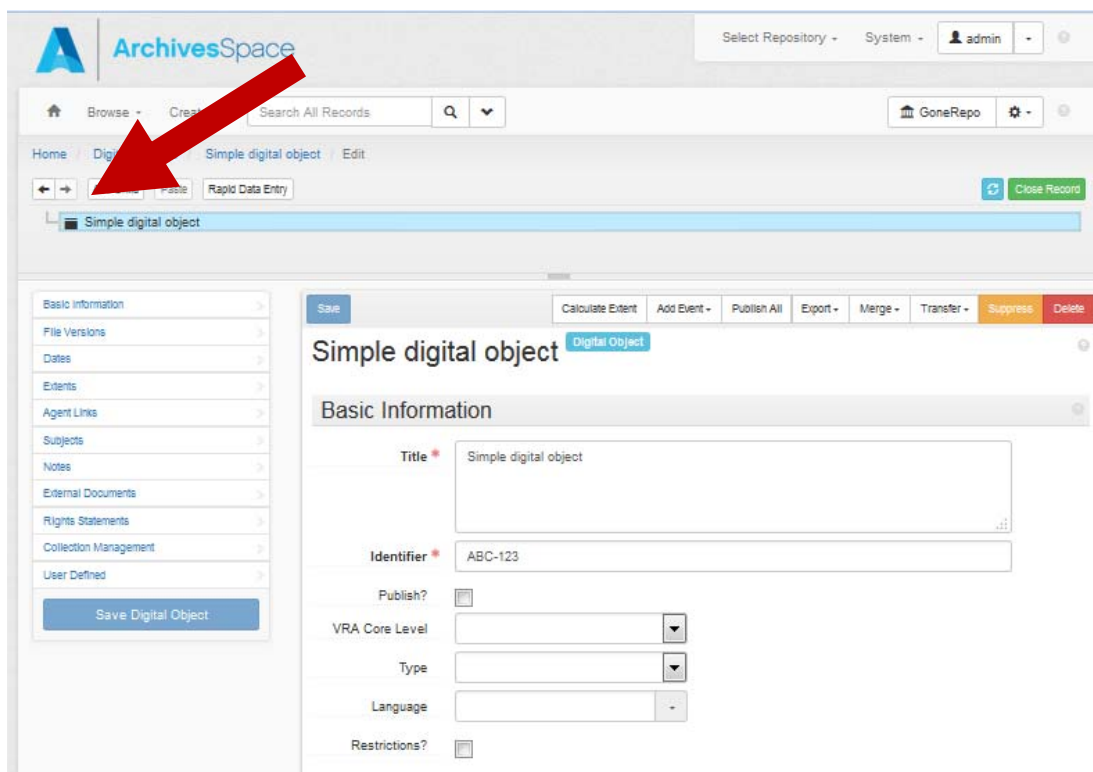
- In this scenario, you're using a different software platform or digital management system to manage and publish digital objects.

- Within your Accession and/or Resource records, you'll include links at the relevant levels of description to associated digital objects.

- You'll use ArchivesSpace public interface as the means for publishing your Accession and Resource records, which will include links to associated digital objects in external systems. .

The main contents of this workbook primarily address **use cases #1**.

Data entry and the hierarchical interface

The Digital Object data entry screen presents digital objects and its components within a hierarchical interface, which is displayed near the top of the interface. In the hierarchical view, the top node represents the primary digital object record.

Simple objects are single-level in structure. They have a single, parent-level node comprising the Digital Object record, as shown in the example below.

Simple object example

Complex objects are multi-level in structure. They have a single, parent-level node comprising the parent-level Digital Object record and child-level nodes representing the component records. To display the metadata content for any component record, click on the title of the component. The corresponding record will then be displayed in the record display area of the interface.
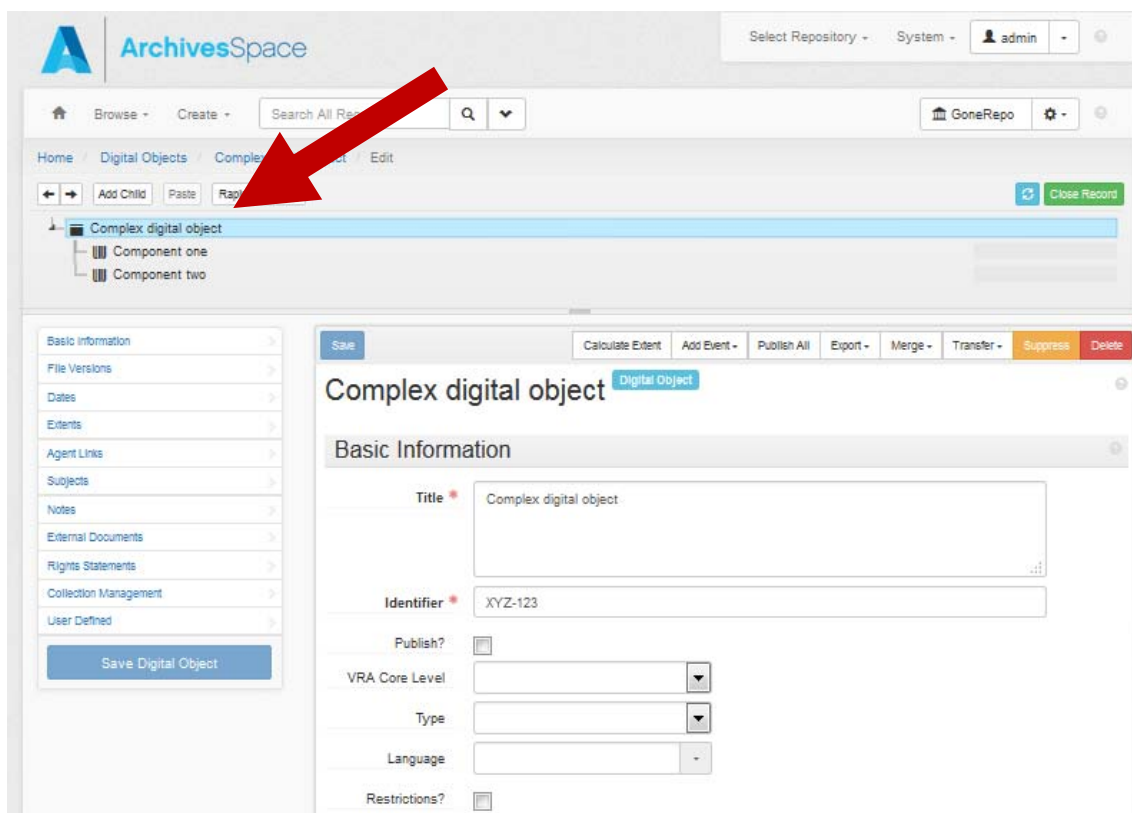
Complex object example

Viewing modes

The following are the command functions when selecting a Digital Object record from a browse or search results list in either the **View** or **Edit** mode. The following are the command functions:
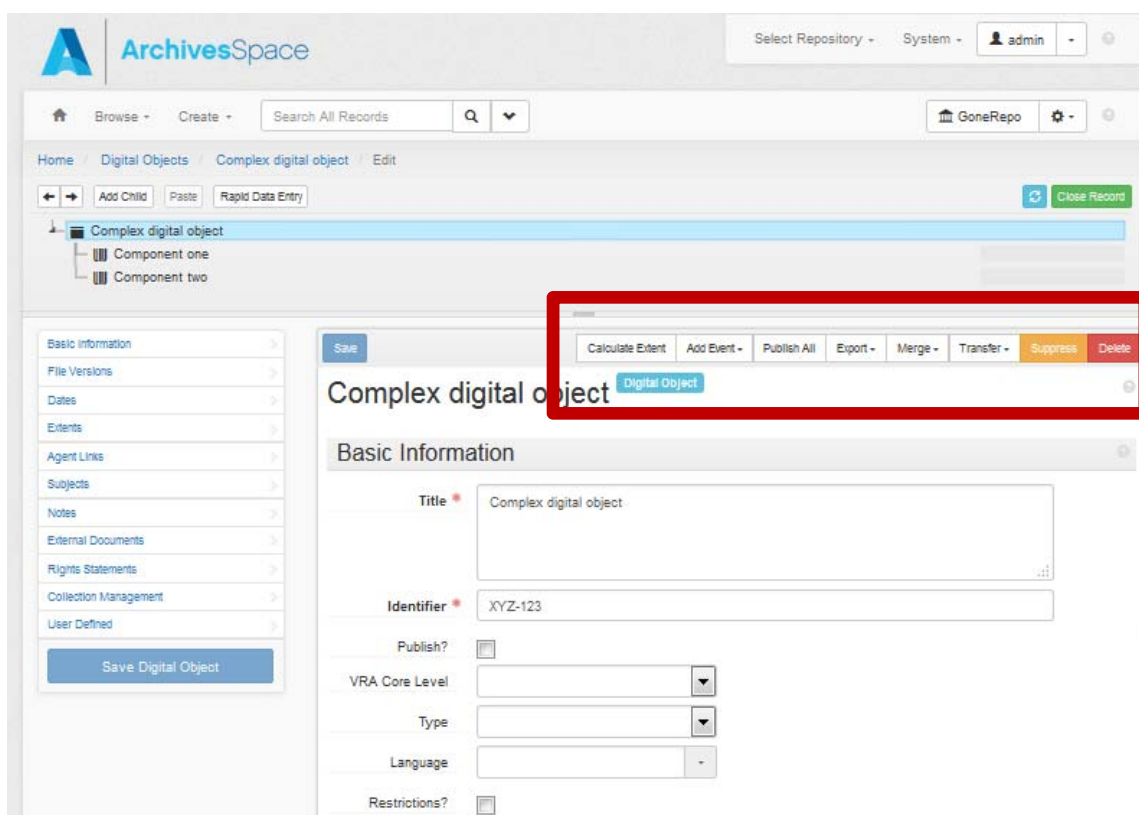
- **Calculate Extent**: This option will calculate the volume of the digital content.

- **Add Event**: This option is for adding Event records. Events represent a specific action that one or more agents performed in relation to a given Digital Object, including a description of the event, the outcome of the event, and when the event was completed. Repository staff may use event records for several reasons, including documenting actions that modify digital files (e.g., fixity checking, validation) and actions that create new relationships between Digital Objects records.

- **Publish all**: Use this button to indicate that metadata for the entire Digital Object record (including metadata associated with any components) that should be published to the ArchivesSpace public interface.

- **Export**: Use this button to export metadata for a given Digital Object.

- **Merge**: Use this function to combine the content of one digital object record into another digital object record, for example, to make a complex digital object from several simple digital objects.

- **Transfer**: Use this function to change the repository context of a digital object record, for example, to change its repository context from Repository A to Repository B.

- **Suppress**: Use this button to suppress from staff view a digital object record or component or a digital object that has been removed from the repository's collection. The record remains in the repository as a trace that the repository owned the digital object and chose to de-accession it. The record can be included in staff views or removed from them, and recalled as needed.

- **Delete**: Use this button to delete a selected record or component; unlike "Suppress", the "Delete" option will permanently remove the data from the ArchivesSpace database.

Select the **Edit** button to toggle to the **Edit** interface, which is used to create or modify Digital Object records. The following are the command functions:
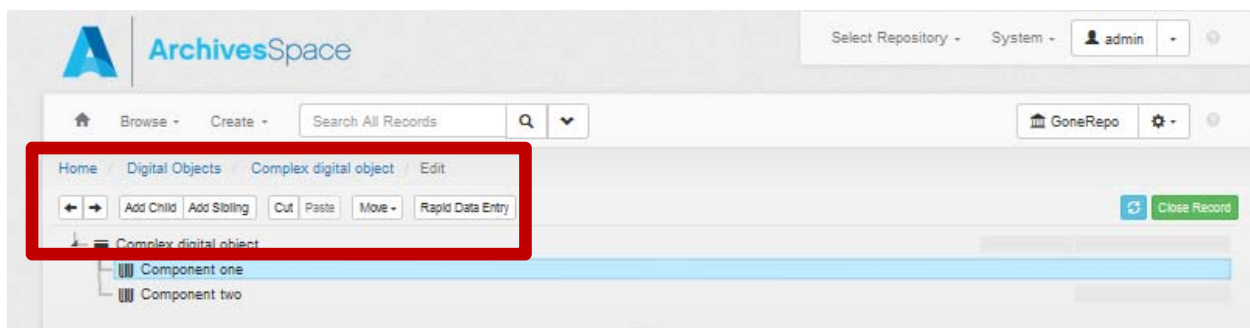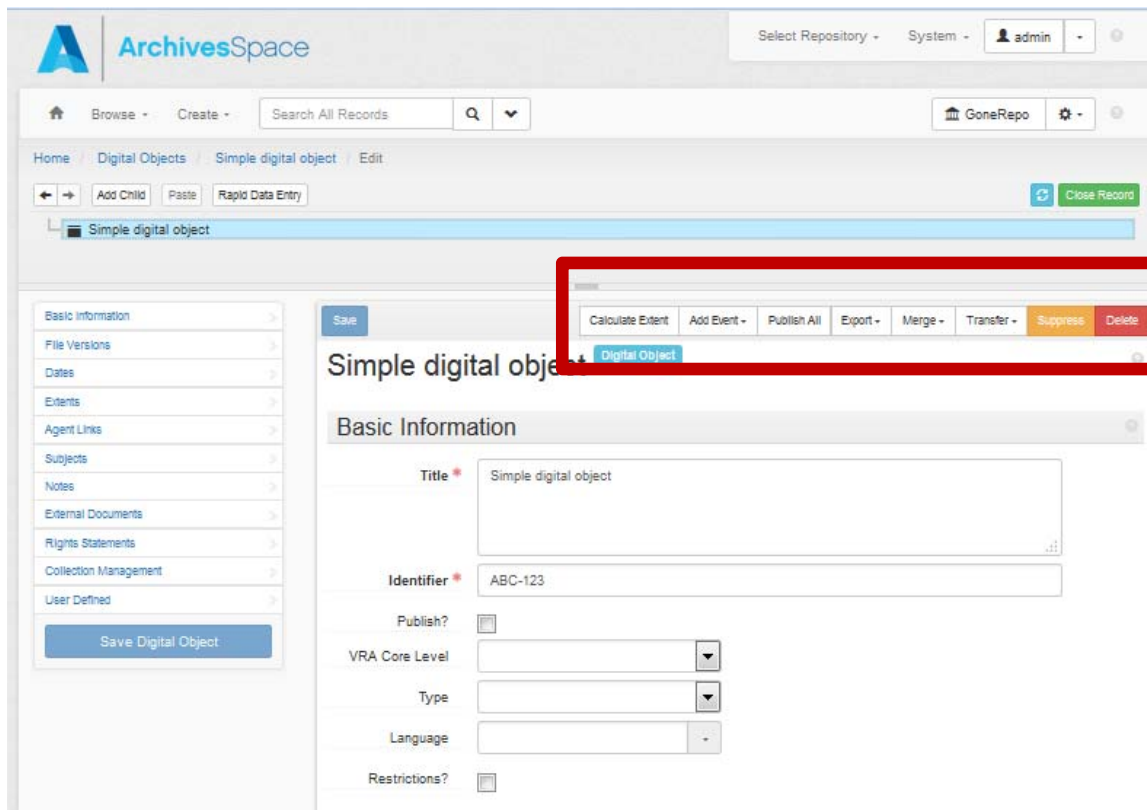
- **Left/Right Arrows**: The left pointing and right pointing arrows enable navigation up (left) or down (right), one component at a time.

- **Add Child**: This button will open a new component record that is hierarchically subordinate to the context record (the highlighted record from which you use the **Add Child** button).

  Each Child record represents a level of hierarchy. ArchivesSpace will support an unlimited hierarchy.

- **Add Sibling**: This 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 component sequence. Sibling records may not be created at the parent-level.

  ArchivesSpace places no limit on the number of sibling records.

- **Cut/Paste**: When selecting a given component record, using the **Cut** button will "copy" the component record; you can then use the **Paste** button to add the copied record to a different place in the digital object structure.

- **Move**: You can rearrange a multi-level description using this option or by dragging and dropping. You can:

  o Move a component to a new position within the same level,

  o Promote a component, i.e., move it higher in the hierarchy, or

  o Demote a component, i.e., move it lower in the hierarchy.

  Bear in mind that all components that are children of a component that is moved will move with their parent component.

- **Rapid Data Entry**: This option is for entering a series of components at the same level that have very similar metadata, e.g., date, rights statement, etc. The Rapid Data Entry option is discussed in greater detail below.

Associating Digital Objects with Accession and/or Resource records: Workflow Considerations

Digital Object records can, but need not, be structurally linked to associated Accession and Resource records. In the case of Resource records, Digital Objects can be linked to the relevant level of description in a Resource record, such as file- or item-level component descriptions.

Within the staff interface, the Digital Objects will be displayed within the context of the **Instances** section of the Accession record, Resource record, or Resource component record. Within the public interface, the Digital Objects will be displayed in a similar manner.

ArchivesSpace supports several workflow options for linking Digital Objects to Accession and / or Resource records:

- **Workflow option 1:** Create a Digital Object record within the context of an associated Accession or Resource record (and automatically link the Digital Object record to the associated Accession or Resource record) when the Digital Object record is saved.

- **Workflow option 2:** Create a Digital Object record directly in the Digital Object module. Subsequently link to the Digital Object record from an associated Accession or Resource record.

  Alternatively, leave a digital object record unlinked to an Accession and / or Resource record if the Digital Object is a "standalone" entity. Oral histories, electronic theses and dissertations, and visual resource materials (e.g., art images) can be such kinds of materials.

These instructions can be used to link from an Accession and / or Resource record to an existing Digital Object record in ArchivesSpace. Linking is handled through the **Instances** section of the Accession and / or Resource record.

To Link an Existing Digital Object to an Accession or Resource Record

1. Browse or search for the Accession or Resource record and then open the record in **Edit** mode.

2. If linking from an Accession Record, navigate to the **Instances** section.

   If linking from a Resource record, select the particular component level description (from where you'd like to add a link to a digital object). Typically this will be the component that contains the analog material from which a digital file was digitized. However, digital

objects can be linked at any level. Then navigate to the **Instances** section for the selected component.

3. Select the **Add Digital Object** button. Select the option to **Browse** existing Digital Object records.
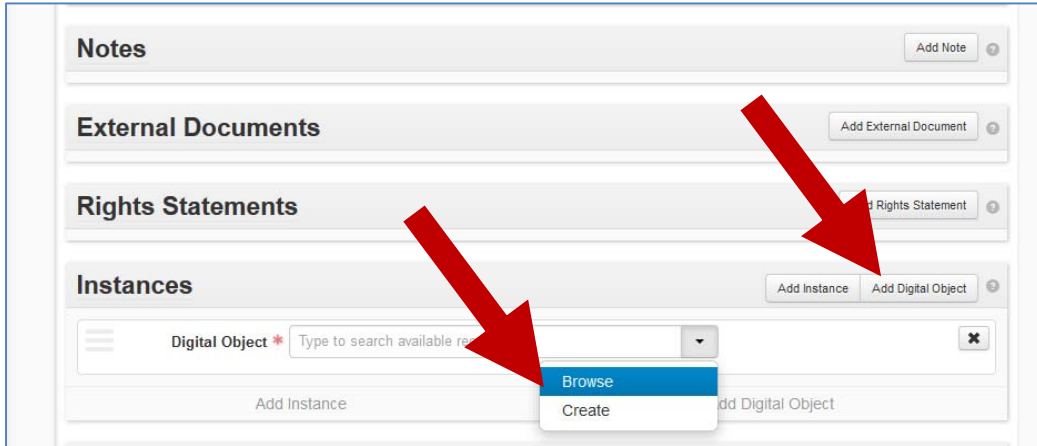
4. You'll now be presented with an option to browse Digital Object records. Use the radio button to select the Digital Object record, and click **Link to Digital Object**.

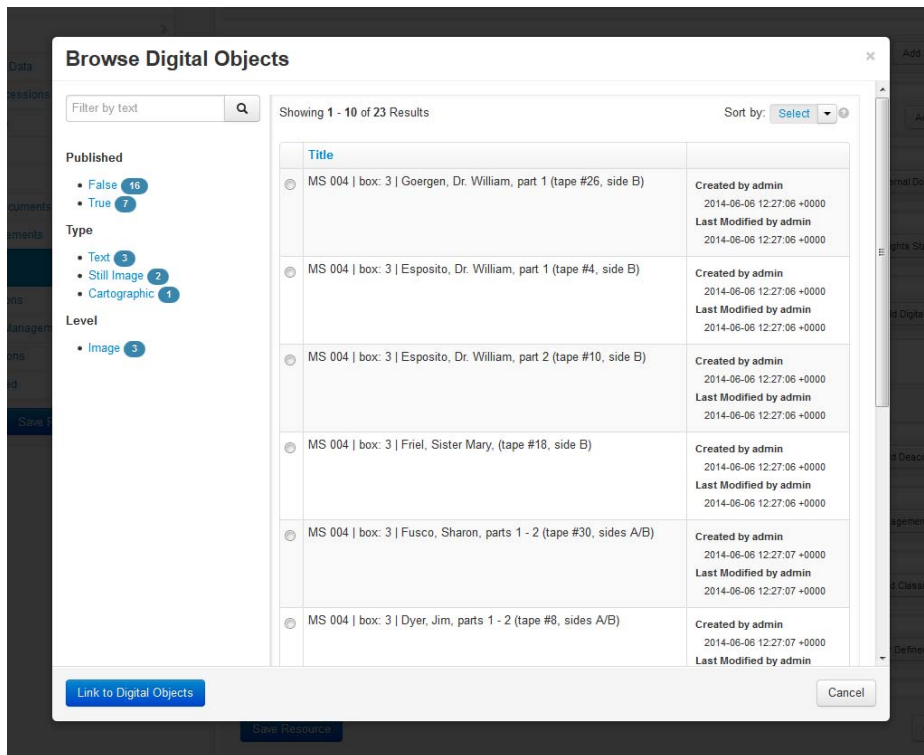**To Create a Digital Object from Within an Accession or Resource Record**

1. Browse or search for the Resource record and then open in the **Edit** mode.

2. Within the Resource record, select the particular component level description to which you would prefer to link a digital object.

3. Then navigate to the **Instances** section for the selected component.

4. Select the **Add Digital Object** button. Select the option to **Create** a new Digital Object.
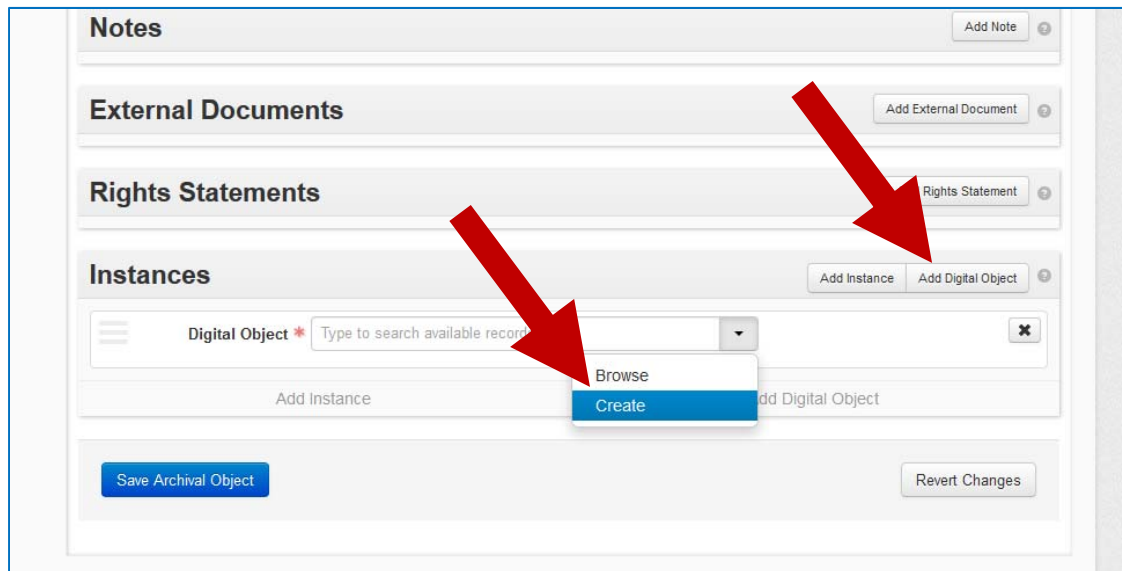
5. You'll now be presented with a new Digital Object record. Transcribe or provide a **Title**, to briefly characterize the Digital Object.

6. In the **File URI** in the **File Versions** sub-record, enter the complete URL to the digital object, as displayed and accessible in the external system. Save the record once the URL is added. (The URI can also be added to the **Identifier** field in the **Basic Information** sub-record, but it will not be actionable there.]

7. Enable the **Publish** checkbox option(s), unless there is reason not to.

8. Repeat steps #1-5 for any other digital objects that you'd like to link to, from the Resource record.

Build a Simple Digital Object

Basic steps

1. Choose your workflow option for creating a new Digital Object:

    Workflow option 1: Create a Digital Object record within the context of an associated Accession or Resource record (and automatically link the Digital Object record to the associated Accession or Resource record)

    *   In this scenario, open the associated Resource record (from the toolbar, select Browse->Resources or Create->Resources)

    *   At the selected component where you'd like to add a Digital Object, navigate to the **Instances** and select "Add Digital Object"

    *   Choose "Create"

    *   You will be presented with the Digital Object data entry screen

    Workflow option 2: Create a Digital Object record directly in the Digital Object module. Subsequently link to the Digital Object record from an associated Accession or Resource record (as described in **Appendix B** of this workbook). Or, alternatively, if the Digital Objects are "standalone" entities that are not associated with any Accession or Resource record, do not link Accession or Resource records to them.

    *   In this scenario, create a new Digital Object record (from the toolbar, select Create->Digital Objects)

    *   You will be presented with the Digital Object data entry screen

2. Enter a **Title**, comprising a descriptive or transcribed title for the resource.

3. Enter an **Identifier**, comprising a unique identifier for the digital object as a whole. Examples include an ARK, a HANDLE, or a URI for a METS files. The identifier may also be a local ID that a repository uses. The only requirement is that the identifier be unique within a repository's set of digital object identifiers.

3. Save the record by pressing the button at the bottom right corner of the window. If you are entering multiple records, the **+1** button will save the record you are working in and open a new record

Title and **Identifier** are the only two data elements ArchivesSpace requires for a valid digital object record, but additional basic information can be provided in the fields listed below.

- **Publish:** Select or clear the check box. A selected check box indicates that this Digital Object or Component will be published to the ArchivesSpace public interface.

- **VRA Core Level**: Choose from a non-configurable controlled value list. Primarily for use in multi-level VRA Core compliant records to indicate that a description is about a collection, a work, or an image.

- **Type:** Choose from a configurable controlled value list. A generic term indicating the basic content type of the digital object. The default options correspond to the MODS <typeOfResource> element.

- **Language:** Choose from a non-configurable controlled value list. Indicate the language term and code for the content represented by the Digital Object.

- **Restrictions:** Select or clear the check box. A selected check box indicates that restrictions apply to the material. Additional description of the restriction should be provided in appropriate Notes or Rights Statements for the record where the restriction occurs.

After the required and basic data has been entered, you can continue to describe the Digital Object using the sub-records available in the left navigation bar. When you add a sub-record, depending on the type of record, specific fields may be required. If any required information is missing, you will be prompted to add the required information.

File Versions

One of the most significant digital object sub-records is File Versions. This sub-record links a digital object or digital object component description to an associated content file and contains the actionable link to the digital file.

The required field is the **File URI**.

- **File URI:** Open text field. Supply an identifier for a file associated with a digital object, accessible on the web or in a file directory.

- **Publish:** Select or clear the check box. A selected check box indicates that this File Version will be published to public (patron) interfaces.

- **Use Statement:** Choose from the configurable controlled value list. Indicate the use for which the digital file is intended (e.g., a thumbnail).

- **XLink Actuate Attribute:** Choose from the non-configurable controlled value list. This attribute is used during export to indicate how the digital object should display in the context of an EAD document (e.g. whether the link occurs automatically or must be requested by the user). It is used in conjunction with the XLink Show attribute.

- **XLink Show Attribute:** Choose from the non-configurable controlled value list. This attribute is used during export to indicate how the target of a link should be displayed in the context of an EAD document, i.e. whether in the same browser window or a new window. It is used in conjunction with the XLink Actuate attribute.

- **File Format Name:** Choose from the configurable controlled value list. Choose the name of the format for the file type.

- **File Format Version:** Open text field. Enter the version of the format for the file type.

- **File Size (Bytes):** Open text field. Enter the size (in bytes) of the digital file.

- **Checksum:** Open text field. Enter a digital signature for monitoring the integrity and authenticity of a digital file

- **Checksum Method:** Choose from the configuaable controlled-value list. Indicate the algorithm used for generating the checksum.

As needed, additional sub-records can be used for a more comprehensive description of the Digital Object, as well as to support discovery and use. The additional sub-records are:

- **Dates**

- **Extents**

- **Agents**

- **Subjects**

- **Notes**

- **External Documents**

- **Rights Statements**

- **Collection Management**

- **User defined**

For information about these additional sub-record fields, see **Appendix A.**

Exercise 1: Simple Digital Object

Create a Simple Digital Object

Context

YNHSC conducted preservation scanning of two watercolors from the "Jedediah Horcrux Congreave fly fishing correspondence and photographs" (YNHSC.MS.292) collection. The watercolors were scanned as high-resolution master TIFF and service JPEG images.
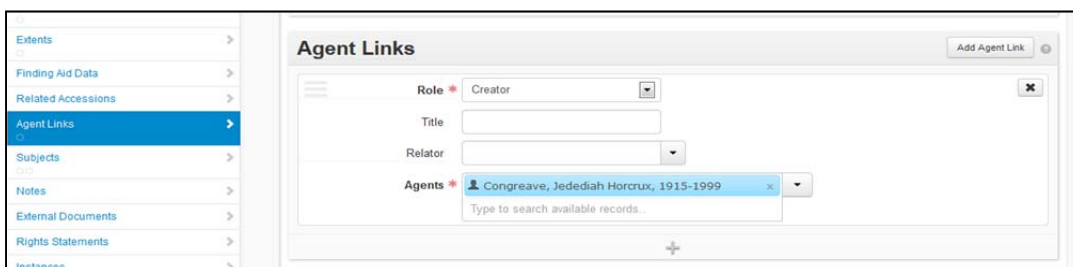
The Exercise

1. Download the **Exercise Samples** file at **http://tinyurl.com/aspace-do-samples**, and save it to your workstation. Refer to the section "Exercise 1a-1b" in that document, to build your simple Digital Object records.

2. Create two simple Digital Object records – one for each watercolor:

   - Create one Digital Object record directly within the context of the "Jedediah Horcrux Congreave" Resource record (**workflow option 1**).

   - Create each Digital Object record directly within the digital object module and link it to the "Jedediah Horcrux Congreave" Resource record (**workflow option 2**).

   - Declare them BOTH as **Instances** linked from the "Correspondence, 1925-1935" series.

   - Add File Version sub-records for a master TIFF and service JPEG images.

   - Be sure to add all notes (Immediate Source of Acquisition, Conditions Governing Use, Scope and Content note, etc.) in a preferred sequence of your choosing.
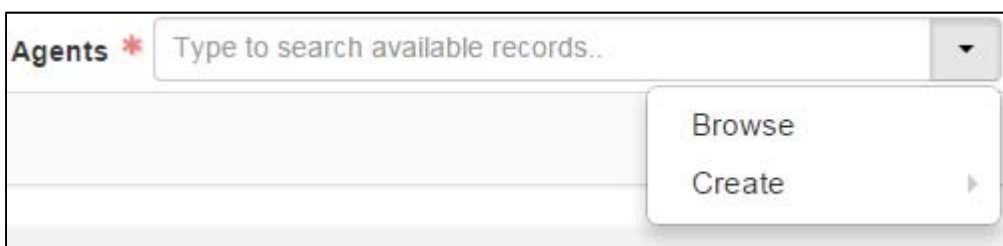
Adding Links to Agent and Subject records

As with Accession and Resource records, Digital Object records may link to the Agent records for entities (persons, families, and corporations) that are responsible for the creation of the digital object content, are the source of the content (i.e., donor), or are represented in the digital object content. Also, event records may link to the Agent records for software applications that were used in processing or managing a digital object file.

To link a Digital Object record (or component record) to an Agent record:

1. Click **Agent Links** and then click **Add Agent Link** on the left navigation bar in the Digital Object record.

2. Next to **Role**, click the non-configurable controlled value list button, and select the role of the agent in relation to digital object linking it to: i.e., Creator, Source, or Subject.

3. Add a value for **Relator**, if you want to indicate the role more granularly.

4. Next to Agent, either start typing to see if the desired agent record already exists or click on the Browse option to load all Agent records

5. If it does, then select the Agent record from the browse list and click on **Link to Agents**

Browse Agents

			2014-04-28 13:26:11 +0000 **Last Modified by** 2014-04-28 13:26:11 +0000
☐	Person	ArchivesSpace Viewer	Created by admin 2014-09-09 22:26:50 +0000 **Last Modified by admin** 2014-09-09 22:26:50 +0000
☑	Person	Auchincloss, Theresa	**Created by admin** 2014-04-28 14:01:27 +0000 **Last Modified by admin** 2014-11-03 15:02:07 +0000
☐	Person	Barnett, Tim	Created by admin 2014-04-28 14:01:20 +0000 **Last Modified by admin** 2014-04-28 14:01:20 +0000
☐	Person	Bielewski, Jennifer	Created by admin 2014-04-28 14:01:21 +0000 **Last Modified by admin** 2014-04-28 14:01:21 +0000
☐	Corporate Entity	Boston College	Created by admin 2014-07-11 18:27:15 +0000 **Last Modified by admin** 2014-07-11 18:27:15 +0000
☐	Corporate Entity	Boston College. Office of the President	Created by admin 2014-07-11 18:27:06 +0000

Content Standard 34
- Local rules 16
- Anglo-American Cataloging Rules 14

Link to Agents | Cancel

6. If you know there is no record for your agent, or you cannot find one when you type or browse, click on **Create**, and select Person, Family, Corporate Entity, or Software, depending on what type of Agent record you wish to create and complete the Agent record accordingly.

7. When you have completed the new Agent record, click on **Create and Link to Agent**, which will link the new Agent record to the Digital Object record.

8. Both processes will end with the Agent record linked to the Digital Object record and with a specified role.

Digital Object records may also link to Subject records in order to indicate the content or context of the Digital Object. A Digital Object record (and its components) may be linked to all of the subject types available for Accessions and Resources.

To link a Digital Object record to a Subject Record:

1. Click **Subjects**, and then click **Add Subject**.

2. Begin typing or select the Browse option to view the Subject records already available in the database:

3. Select one or more Subject records to link to the Digital Object record and then click on **Link to Subjects:**

Browse Subjects

		2014-04-28 13:55:55 +0000 **Last Modified by admin** 2014-04-28 13:55:55 +0000
☐	Biochemistry -- Instruments	**Created by admin** 2014-04-28 14:00:57 +0000 **Last Modified by admin** 2014-04-28 15:39:51 +0000
☐	Business records -- California -- 19th century	**Created by admin** 2014-06-24 14:35:12 +0000 **Last Modified by admin** 2014-06-24 14:35:12 +0000
☐	Business records -- Massachusetts -- 20th Century	**Created by admin** 2014-06-24 14:31:36 +0000 **Last Modified by admin** 2014-06-24 14:32:18 +0000
☑	Carpe Diem University -- Societies, etc.	**Created by admin** 2014-10-15 01:34:50 +0000 **Last Modified by admin** 2014-10-15 01:34:50 +0000
☑	Carpe Diem University -- Students	**Created by admin** 2014-10-15 01:36:37 +0000 **Last Modified by admin** 2014-10-15 01:36:37 +0000

« 1 2 3 4 5 6 7 8 9 10 11 » Last

Link to Subjects   Cancel

4. If you are unable to find an appropriate subject record, click on the Create option to create a new Subject record and complete it accordingly.

5. Then click on **Create and Link to Subject**

Exercises 2 and 3: Adding Agents and Subjects

The Exercises

1. Refer to the **Exercise Samples** file ("Exercise 2") that you previously downloaded at **http://tinyurl.com/aspace-do-samples**, for some initial Agent headings to add to the simple Digital Object record that you created.

2. Add a few additional relevant Agent headings. Be sure to indicate the relevant **Source** or **Rules** for each Agent record that you create. The following online resources may also be helpful:

   The NACO (Library of Congress) Name Authority File, available at **http://authorities.loc.gov/** or **http://id.loc.gov**

   The Virtual International Authority File (VIAF) is available at **http://viaf.org/**

   Refer to the **Exercise Samples** file ("Exercise 3") that you previously downloaded at **http://tinyurl.com/aspace-do-samples**, for some initial subject headings to add to the simple Digital Object record that you created.

3. Add a few additional relevant Subject headings. Be sure to indicate the relevant **Source** for each Subject record that you create. The following online resources may be helpful in this exercise:

   - The Library of Congress Subject Headings, available at **http://authorities.loc.gov/** or **http://id.loc.gov**

   - The Getty Art and Architecture Thesaurus, available at **http://www.getty.edu/research/tools/vocabularies/aat/index.html**

   - The Getty Thesaurus of Geographic Names, available at **http://www.getty.edu/research/tools/vocabularies/tgn/index.html**

   - The Library of Congress Thesaurus of Graphic Materials, Part I: Subject Terms, available at **http://www.loc.gov/rr/print/tgm1/toc.html**

   - The Library of Congress Thesaurus of Graphic Materials, Part II: Genre & Physical Characteristic Terms, available at **http://www.loc.gov/rr/print/tgm2/toc.html**

Build a Complex Digital Object

Basic steps

1. Follow the process for creating a simple digital object, as outlined in the previous section of this workbook.

2. After the required and optional basic data has been entered, you can continue to describe the component using the sub-records available in the left navigation bar. When you add a sub-record, depending on the type of record, specific fields may be required. If any required information is missing, you will be prompted to add the required information. We recommend indicating **File Versions** at each of the lowest child-level component records, in a given hierarchy. (For information about additional sub-record fields, see **Appendix A**.)

3. After the parent-level Digital Object record has been created, add component records using the hierarchical navigation bar.

   - Select the parent-level Digital Object record in the hierarchical navigation bar, to set it as the context record.

   - Use the following command functions to build the component hierarchy:

     o **Add Child**: This button will open a new component record that is hierarchically subordinate to the context record (the record from which you use the **Add Child** button).

       Each Child record represents a level of hierarchy. ArchivesSpace will support an unlimited hierarchy.

     o **Add Sibling**: This 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 component sequence. Sibling records may not be created at the top level.

       ArchivesSpace places no limit on the number of sibling records.

   - For each component record, ArchivesSpace requires *at least one* of the following metadata elements in a Digital Object record: **Title**, **Date,** or **Label**.

Add multiple components using the Rapid Data Entry (RDE) tool

The **Rapid Data Entry (RDE)** tool supports repeated entry of Digital Object component records at the same level, thus requiring fewer mouse clicks than when adding individual component records using the **Add Child** or **Add Sibling** buttons. Through the use of "sticky values" and other mechanisms, the RDE tool provides a more efficient interface for entering components, where multiple components of the same level and same basic content are entered one after another.

To create component records using the RDE:

1. Select a component record in the hierarchical navigation bar, to set it as the context record. Component records added through the RDE will be hierarchically subordinate to this context record.

2. Select **Rapid Data Entry** at the top of the multi-level description.

3. Within the first row of the table, enter the desired metadata for a given component. A **Label**, **Title**, or **Date** element is required for each component.

4. Select **Add Row** to add another row, or use **Shift + Return** to add another row using all the data in the previous row.

5. Select **Validate Rows** to check that all rows are properly encoded.

6. Select **Save Rows** to save the row(s) to the Digital Object record.

You can modify the RDE tool in the following ways during a given session:

• Remove columns from view using the **Columns: ## visible** display configuration option.

• Turn sticky values on and off by clicking on the label for a data column.

- Reorder the left-to-right sequence of the data columns using the **Reorder Columns** option.Designate a value to fill all occurrences within a data column using the **Fill Column** option.

- Create, Save and Reuse a template using the **Save as Template**, **Apply an RDE Template**, and **Remove Template** options.

- Use the **View Inline Errors** button to preview errors before trying to save.

Exercise 4: Complex Digital Object

Context

YNHSC conducted preservation scanning of two pieces of correspondence from the "Jedediah Horcrux Congreave fly fishing correspondence and photographs" (YNHSC.MS.292) collection. The first item comprises a letter from Julia Child to Congreave. The second item comprises a letter from Congreave to his father, with attached photographs. All items were scanned as high-resolution master TIFF and service JPEG images.

The Exercise

1. Refer to the **Exercise Samples** file ("Exercise 4a-4b") that you previously downloaded at **http://tinyurl.com/aspace-do-samples**, to build your complex Digital Object records.

2. Create two complex Digital Object records, directly in the Digital Object module (**workflow option 2**).

   - The first object will comprise the letter from Julia Child to Congreave. This first object will have a flat structure.

   - The second object will comprise for the letter from Congreave to his father. This second object will have a hierarchical structure.

   - Add relevant Agent and Subject headings.

   - Be sure to add all notes (Immediate Source of Acquisition, Conditions Governing Use, Scope and Content note, etc.) in a preferred sequence.

   - Also add File Version sub-records for a master TIFF and service JPEG images.

3. Link each complex Digital Object record to the "Correspondence, 1952-1992" file, within the "Jedediah Horcrux Congreave" Resource record.

Exporting Digital Object Metadata

ArchivesSpace can be used to export metadata for either 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 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 structural relationship(s) existing among the content files.

The following exports can be generated for any given Digital Object record:

- **MODS record**: A Metadata Object Description Schema (MODS) XML record, comprising the Digital Object's metadata -- and additionally any component level metadata.

- **Dublin Core record**: A Dublin Core XML metadata record, comprising the Digital Object's metadata. For complex objects, only the parent-level metadata is reflected in the Dublin Core XML record.

- **METS record**: A Metadata Encoding and Transmission Standard (METS) XML file, comprising the Digital Object's metadata -- and additionally any component level metadata – as well as references to any associated content files (noted in the **File Version** section of the records). The Digital Object's metadata is itself formatted using the MODS standard.

The **ArchivesSpace website** (ArchivesSpace Application > Technical Documentation > Data Import and Export Maps) provides a summary of export mappings from the ArchivesSpace database fields that underlie the Digital Object record data entry fields, to the export formats.

Exporting records

1. Find the Digital Object record you want to export. You can browse or search.

   - To browse, on the main toolbar, click **Browse** and select Digital Objects. A listing of all the records in the repository will display.

   - To search, type your search query into the Search box on the main toolbar.

2. Next to the record you want to export, click **View** or **Edit**.

3. Click the **Export** button and select an export option:

   - **Download MODS**

- **Download METS**

- **Download DC**
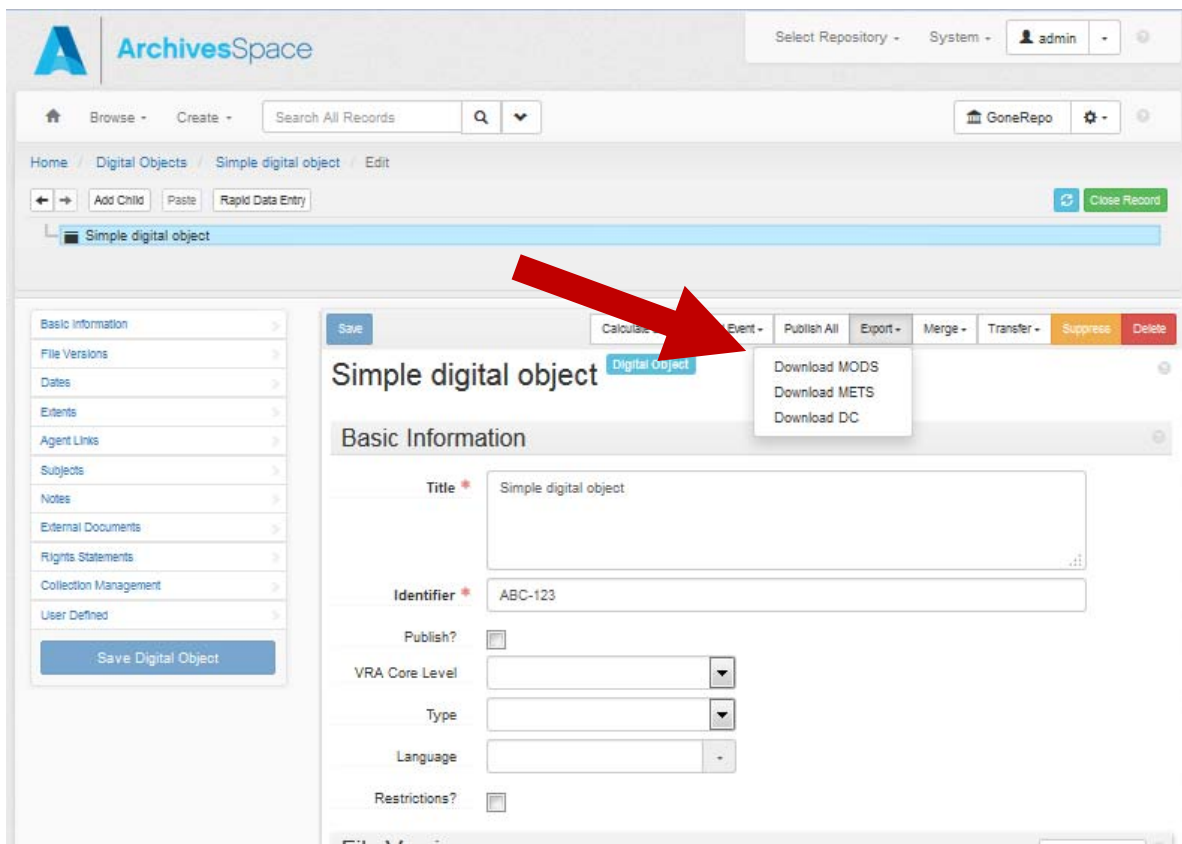
4. The data will download to your computer as a XML file. ArchivesSpace will use the **Identifier** as the file name. Depending on your browser's settings, the file will be saved to your Downloads folder or you may be prompted to choose a location for saving the file.

Exporting Resource Records with Links to Digital Objects

ArchivesSpace supports exporting of Resource records as EAD files (XML-encoded documents compliant with the EAD 2002 schema), with links to associated Digital Object records.

The EAD file will contain URL links at the levels of description where the Digital Object records have been declared as Instances. The URL links are formatted within HREF attribute, within the Digital Archival Object <dao> tag (**http://www.loc.gov/ead/tglib/elements/dao.html**).

To generate an EAD export of a Resource record, with links to Digital Objects:

1. Find the Resource record you want to export. You can browse or search.

   - To browse, on the main toolbar, click **Browse** and select Resources. A listing of all the records in the repository will display.

   - To search, type your search query into the Search box on the main toolbar.

2. Open the selected record in the **View** or **Edit** mode.

3. Click the **Export** button, and choose **Download EAD -> Include <dao> tags**

4. The data will download into an EAD XML file. Depending on your browser's settings, the file will be saved to your Downloads folder or you may be prompted to choose a location for saving the file.

Exercise 5: Export

1. Export the simple and complex Digital Object records that you created as METS files.

2. Export the Resource record for the "Jedediah Horcrux Congreave fly fishing correspondence and photographs" (YNHSC.MS.292) collection, as an EAD file with <dao> links.

Importing Digital Object Metadata

ArchivesSpace supports the importing of digital object metadata formatted as comma-separated values to generate new Digital Object records within the application. An example of where this feature might be used is when you want to migrate digital object metadata from an external system to centralize the management of that information within ArchivesSpace.

Metadata (to be imported) must be formatted and normalized according to ArchivesSpace CSV import mapping specifications. See the **ArchivesSpace website** (ArchivesSpace Application > Technical Documentation > Data Import and Export Maps) for CSV import mappings -- and in particular, for a template that can be used to format accession data.

Importing records

1. Format the metadata (to be imported) based on the ArchivesSpace CSV import mapping specifications. Save the file as a comma-separated value file.

2. On the Create list of options, click **Background Jobs**.
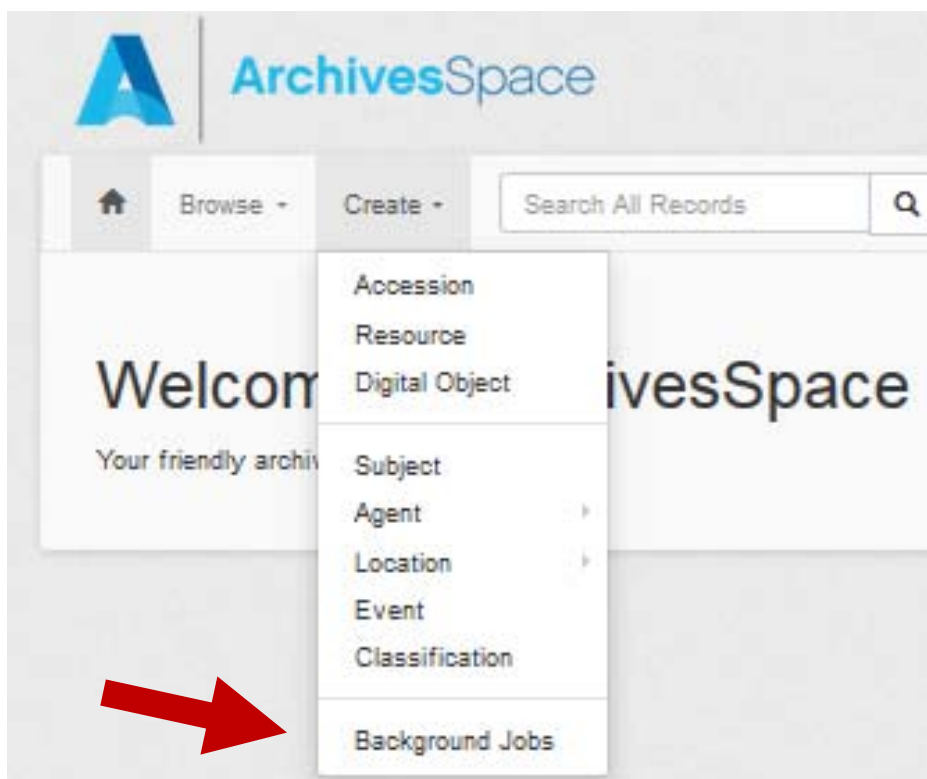
3. Select **Import Data** from the **Job Type** drop down.
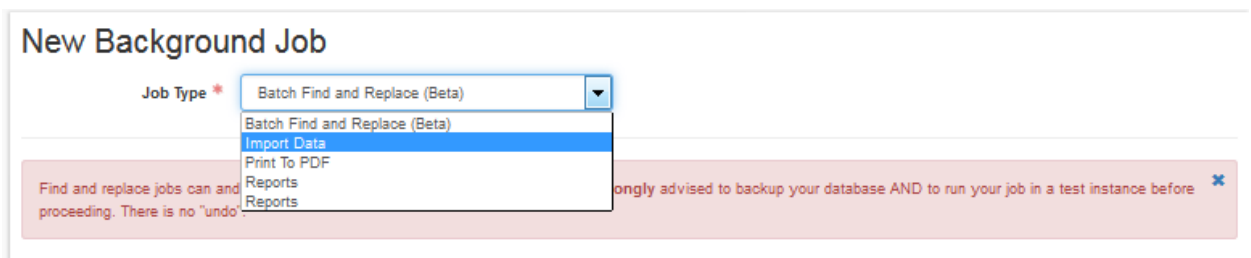
4. Select the type of file: "Digital Object CSV".
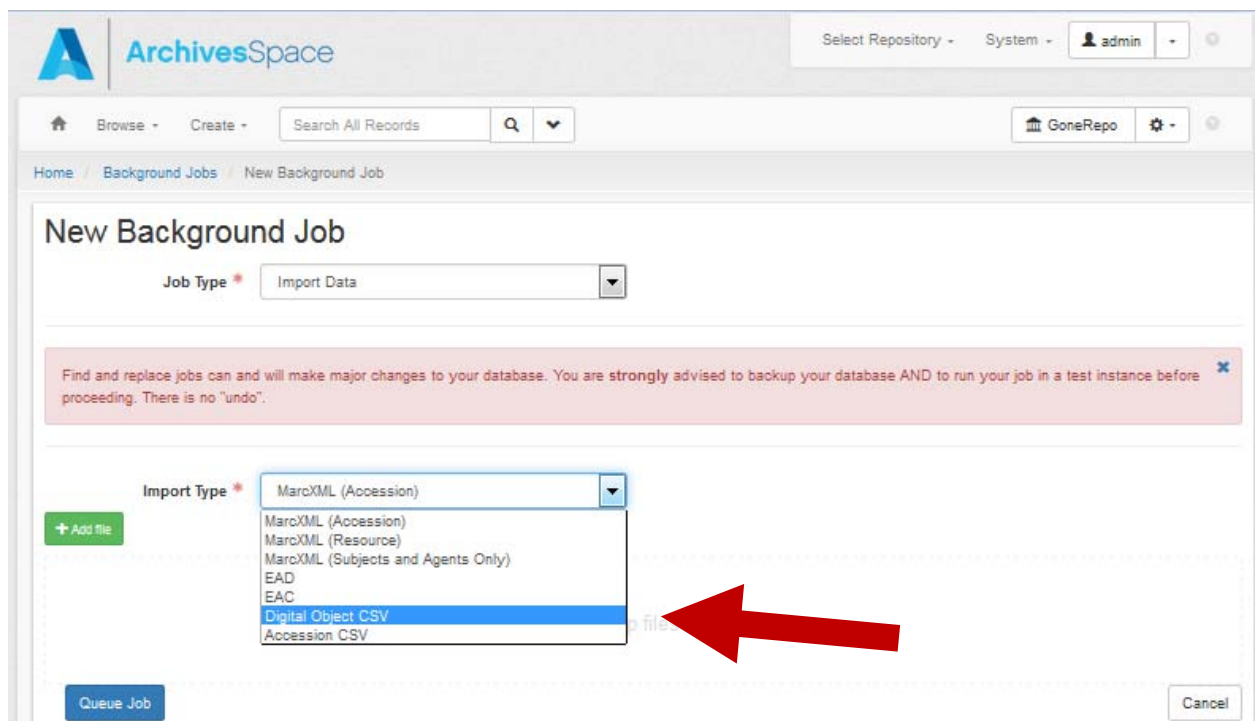
5. Click **Add File** and select the file(s) to import; note that you can select multiple files. Alternatively, drag-and-drop the file(s) into the designated area of your browser window.

6. Click **Queue Import Job**.

7. When import is complete the page will indicate an import summary, including a report with any errors.

8. The imported data will subsequently be available as new Digital Object records.

1. Download the files in the **Import Samples** folder at **http://tinyurl.com/aspace-do-import**, and save them to your workstation.

2. Using the file named "do_import.csv", import the Digital Object metadata from that file into ArchivesSpace.

3. Link the imported Digital Object records to the appropriate location in the related Resource record for the "Jedediah Horcrux Congreave fly fishing correspondence and photographs" (YNHSC.MS.292) collection.

4. See also the sample images in the same folder, if you'd like to add additional notes after importing the metadata.

Appendix A: Digital Object Data Fields

This sub-record identifies and records the date(s) that pertain to the creation, assembly, accumulation, and/or maintenance and use of the materials being described.

The required fields are **Label** and **Type**.

- **Label:** Choose from a drop-down list. Describe the type of activity that the date signifies.

- **Expression:** Open text field. You must first select Type in the drop-down list. A natural language expression specifying the date or date range of the materials in the accession. Required when a normalized date is not recorded. Some examples: 1968; 1979-1993;1785-1960;bulk 1916-1958;1827; circa 1870-1879;1906 March 1; undated.

- **Type:** Choose from a drop-down list. Indicate the type for normalized date information, either a single date or a date range (inclusive or bulk).

- **Certainty:** Choose from a drop-down list. Indicate the level of confidence for the in formation given in a date statement. This information is optional and should only be added when you are qualifying date information as potentially uncertain based upon the description or cataloging rules in use.

- **Era:** Choose from a drop-down list. Period during which years are numbered and dates reckoned, such as B.C. or C.E. The value "ce" is the default.

- **Calendar:** Choose from a drop-down list. System of reckoning time, such as the Gregorian calendar or Julian calendar. The value "Gregorian" is the default.

This sub-record is used for recording the size of the described materials.

The required fields are **Portion**, **Number**, and **Type**.

- Portion: Choose from a drop-down list. Used to specify whether an extent statement relates to the whole or part of a given described aggregation or object. Only one extent statement may refer to the whole object. All additional extent statements must refer to parts.

- **Number:** Open text field. Enter a numeric value indicating the number of units in the extent statement, e.g, 5, 11.5, 245. Used in conjunction with Extent Type to provide a structured extent statement.

- **Type:** Choose from a drop-down list. Choose a term to indicate the type of unit used to measure the extent of materials described.

- **Container Summary:** Open text field. A list of container and container types housing the materials described in the component record.

- **Physical Details:** Open text field. Enter other physical details of the materials described, e.g., analog, black and white, negatives.

- **Dimensions:** Open text field. Enter the dimensions of the materials described.

Notes

The Notes sub-record contains additional descriptive information about the materials described, usually in the form of text or structured lists.

The required fields are **Note Type** and **Content**.

- **Note Type:** Choose from drop-down list. Note types are used to guide the export of note contents to certain elements in specific data formats. Depending on the type of note you choose, a single part note or a multipart note form will open containing some or all of the following fields:

    o **Label:** Open text field. Enter a label or heading for the specific note. If a label is not used, the note type will be used as the label wherever required.

    o **Type:** Choose from drop-down list. In a multipart note, you can choose a type for this field that is different from the upper level Note Type.

    o **Publish:** Select or clear the check box. A selected check box indicates that the note will be published to public (patron) interfaces.

    o **Content:** Open text field. Enter the content of the note.

External Documents

This sub-record allows links to information in other description or management systems, such as donor files or processing plans.

The required fields are **Title** and **Location**.

- **Title:** Open text field. Enter the title of an external document. The document may be of any form or content. A web accessible file, a network accessible file, a file on the same computer as the application, etc.

- **Location:** Open text field. Enter the location of the file, ideally a resolvable URI. Example: http://www.archivesspace.org/membershipfile:///c:/path/to/the%20file.txt

- **Publish:** Select or clear the check box. A selected check box indicates that this External Document will be published to public (patron) interfaces.

Rights Statements

This sub-record contains information about the rights status of the materials described and whether there are specific restrictions or permissions that have been indicated.

The required field is **Rights Type**.

- **Identifier:** Uniquely identifies the rights statement within the repository domain. Rights Statement identifiers are usually auto-generated by the application.

- **Active:** Select or clear check box. A selected check box indicates that the rights record is active.

- **Rights Type:** Choose from drop-down list. Choose the basis for the rights statement being made.Four bases are allowed: intellectual property, license, such as donor agreement, legal statutes such as Fair Use or FERPA, and institutional policy.

Collection Management

This sub-record is used to add internal-only information about how the materials will be processed or have been processed.

Optional Fields:

- **Cataloged Note:** Open text field. A note about cataloging of the archival unit (accession, resource, digital object), including provision of catalog record identifiers.

- **Processing Hours Estimate:** Open text field. The time a repository estimates that is required to process a unit of archival materials (e.g. a linear foot or an item in the case of digital objects). The estimate may factor in, or not, the production of finding aids, catalog records, and other access products.

- **Processing Total Extent:** Open text field. A numerical expression for the total extent (cubic feet, linear feet, items, etc) processed.

- **Extent Type:** Choose from drop-down list. A term indicating the type of unit used to measure the extent of materials described.

- **Total Processing Hours:** Open text field. The numerical result of multiplying "Processing hours per foot estimate" by "Processing total extent"

- **Processing Plan:** Open text field. For recording a plan for processing of the archival unit. The plan may include an outline of the arrangement for the archival unit, as well as instructions for how to treat particular objects in the archival unit. The plan might also specify different assignments for different repository staff.

- **Priority:** Choose from drop-down list. Indicates the priority assigned to processing of an archival unit.

- **Processing Status:** Choose from drop-down list. For indicating the current status of processing for an archival unit (accession, resource, or digital object).

- **Funding Source:** Open text field. Used to indicate the source of funding the processing of the described materials

- **Processors:** Open text field. For listing staff to whom processing of the archival unit (accession, resource, or digital objects) has been assigned

- **Rights Determined:** Select or clear check box. A selected check box indicates that the rights for an archival unit (accession, resource, or digital object) have been determined and there is a rights record created and linked to the archival unit.

User Defined

This sub-record allows for creation of user defined fields for recording additional information not captured in other sections of the application.

Types of fields available:

Boolean
Integer
Real
String
Text