

Creating External Links and In-Line Images

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Introduction

The EAD tag library contains many elements used for linking internally and externally from a finding aid. OASIS supports four that link externally:

- <dao>: digital archival object
- <daogrp>: digital archival object group, expressed as a group of <daoloc>s
- <extref>: extended reference (to create a link via text or image to an external resource not part of the collection being described in the finding aid)
- <extptr>: extended pointer (to link to a digital object not part of the collection being described in the finding aid)

Implementation of these elements makes use of their attributes and subelements. (Note that the order of attributes does not matter; the order of subelements does.) The current Harvard schema requires each finding aid to include the declaration of XML Linking Language (XLink) (`xmlns:xlink="http://www.w3.org/1999/xlink"`). (For help on usage, please consult [MATAG](#).) XLink allows elements inserted into XML documents to create and describe links between resources. Linking elements are used for both "clickable" access to a web resource and to display "inline" images.

The results of clicking on a link can be customized by functionality available in the system to which the link points. For example, limiting access to a digital representation of a resource described in a finding aid to Harvard users only may be accomplished by linking to a resource in the DRS, a system in which such specific access can be configured.

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<http://hul.harvard.edu/ois/systems/mat/externallinks.pdf>

Note: An "inline" image is an image appearing within the body of a document, like this



image, as opposed to an external image that is visible only by clicking on a link.

Guidelines

Definition of Linking Elements

About the `xlink:actuate` and `xlink:show` attributes

Functionality in Digital Only View

Definition of Linking Elements

- `<daogrp>` | `<daoloc>` | `<daodesc>`

A `<daogrp>` tag wraps around multiple links to the same archival item. It contains `<daoloc>`s, each of which contains a link to a surrogate of the same object. An example of this is an in-line thumbnail image that also links to a higher-resolution image.

- `<dao>` | `<daodesc>`

A `<dao>` can provide:

- o an in-line "non-clickable" image
- o a textual hyperlink to a digital object

- `<extref>` | `<extptr>`

An `<extref>` that contains an `<extptr>` is used to create an image that is also an active link. This combination of elements is used wherever the EAD schema does not permit `<daogrp>`.

- `<extptr>`

An `<extptr>` used alone will display images that are not links. Examples of this include a "non-clickable" display of your institution's shield or a small portrait of the collection author.

These sets of linking elements have similar functionality, but are valid in different contexts in the EAD schema.

About the `xlink:actuate` and `xlink:show` attributes

Note that the *actuate* and *show* attributes control link behavior.

`<daogrp>`

`<daoloc xlink:actuate="onLoad" xlink:show="embed">`

The first `<daoloc>` with these attributes is the embedded object (for example, a thumbnail image)

`<daoloc xlink:actuate="onRequest" xlink:show="new">`

The first `<daoloc>` with this attribute is the on-line resource reached by clicking on the embedded object (for example, a medium-resolution version of the embedded image)

`<daoloc xlink:actuate="onRequest" xlink:show="new">`

Any subsequent `<daoloc>` with this attribute becomes available through a hyper-text link on a separate line below the in-line object (for example, a high-resolution version of the embedded image).

The default text for the link will be whatever is the value of the *href* attribute. Any custom text for this hyper-link is encoded in the <daodesc> element.

<dao xlink:actuate="onLoad" xlink:show="embed">

The image displays automatically, or a music or video file plays automatically, when the finding aid is loaded.

Note: This is the same behavior as <extptr>, but <dao> is needed because there are places where the schema permits <dao> and does not permit <extptr>.

<dao xlink:actuate="onRequest" show="new">

A hyperlink is created. The "clickable" text is the content of <daodesc> if it is present, or the value of the *href* attribute if it is not. When the user clicks on the link, the new content will open up in a new window.

<dao xlink:actuate="onRequest" xlink:show="replace">

The same as above except, when the user clicks on the link, the new content will replace the parent frame.

<extref xlink:actuate="onRequest" xlink:show="replace">

When the user clicks on the link, the new content will replace the parent frame.

<extref xlink:actuate="onRequest" xlink:show="new">

When the user clicks on the link, the new content will open up in a new window.

Note: This is the default behavior if no attributes are given.

<extptr xlink:actuate="onLoad" xlink:show="embed">

This is the only combination of attributes for <extptr> that OASIS supports. The image displays automatically, or a music or video file plays automatically, when the finding aid is loaded.

Functionality in Digital Only View

The finding aid Digital Only View is a separate view of the finding aid that is limited to materials in digital form. The Digital Only View is available only for finding aids that contain links out to digital materials and/or embedded thumbnail images. The XML elements that qualify for Digital Only View are any **daogroup/daoloc** and **dao** (within a "c" element) which has an @href attribute (which is the actual url of the link or thumbnail).

The Digital Only View includes some contextual text for the digital materials. This includes frontmatter and archdesc/did. For each item-level "c" element containing one or more dao or daogroup (with href attribute), text from the following elements (and child elements), if present, will be displayed:

Above the link/thumbnail:

- dsc/head (parent)
- c/did/unittitle (parent and self)
- c/did/unitid (parent and self)
- c/did/unitdate (parent and self)
- c/did/head (parent and self)
- c/did/physdesc (self)
- c/note (self)

Below the link/thumbnaill:

- daodesc (may be clickable)

Formatting and nesting of these specific elements will appear the same as on the Full Finding Aid view.

Examples

Shields: [Examples 1-2](#)

Links to repository: [Examples 2-3](#)

External links from text: [Examples 4-6](#)

External links from embedded thumbnails: [Examples 7-9](#)

Links within the same finding aid: [Example 10](#)

Links to other finding aids: [Example 11](#)

Note: To use the examples below, you may copy and paste the encoding into your EAD finding aid. Remember to replace the value in the **xlink:href** attribute with the URL or URN of your own resource.

Example 1. Display a shield image

XML Encoding:

```
<extptr xlink:href="http://nrs.harvard.edu/urn-3:HUL.OIS:fas_shield"
xlink:type="simple"/>
```

OASIS Result:



Example 2. Display a shield image that is also a link

XML Encoding:

```
<extref xlink:href="http://nrs.harvard.edu/urn-3:hul.eresource:archives"
xlink:show="embed" xlink:actuate="onRequest">
  <extptr xlink:href="http://nrs.harvard.edu/urn-
  3:HUL.OIS:hu_archive_shield" xlink:actuate="onLoad"
  xlink:show="embed"/>
</extref>
```

OASIS Result:



Example 3. Link to a repository name in the <archdesc> <did>

XML Encoding:

```
<repository>
```

```

    <extref xlink:href="http://nrs.harvard.edu/urn-
    3:hul.eresource:archives"    xlink:show="embed">Harvard University
    Archives
  </extref>
</repository>

```

OASIS Result:

Repository: [Harvard University Archives](#)

Example 4. Link to an archival object from unittitle text**XML Encoding:**

```

<c level="item">
  <did>
    <unittitle>
      <extref xlink:show="embed"
      xlink:href="http://nrs.harvard.edu/urn-
      3:FHCL.HOUGH:1997915">Humpty Dumpty and Tweedledum
      </extref>
    </unittitle>
  </did>
</c>

```

OASIS Result:

- [Humpty Dumpty and Tweedledum](#)

Example 5. Link to an archival object from unitid text (music file example)**XML Encoding:**

```

<c level="item">
  <did>
    <unitid>
      <extref xlink:href="http://nrs.harvard.edu/urn-3:FHCL.Loeb:sall"
      xlink:show="replace" xlink:actuate="onRequest"> [awm rl 15027
      (1)]
      </extref>
    </unitid>
    <unittitle>Tolling of bells on Mt. Athos </unittitle>
  </did>
</c>

```

OASIS Result:

- [\[awm rl 15027 \(1\)\]](#) Tolling of bells on Mt. Athos

Example 6. Link to an archival object from "clickable" added text**XML Encoding:**

```

<c level="item">
  <did>
    <unittitle>Humpty Dumpty and Tweedledum</unittitle>
    <dao xlink:href="http://nrs.harvard.edu/urn-3:FHCL.HOUGH:1997915"
      xlink:show="new" xlink:actuate="onRequest" xlink:type="simple">
      <daodesc>
        <p>Click here to see image.</p>
      </daodesc>
    </dao>
  </did>
</c>

```

OASIS Result:

Humpty Dumpty and Tweedledum [Click here to see image.](http://nrs.harvard.edu/urn-3:FHCL.HOUGH:1997915)

Example 7. Embed a "clickable" thumbnail in a folder list**XML Encoding:**

```

<c>
  <did>
    <unittitle>Humpty Dumpty and Tweedledum </unittitle>
  </did>
  <daogrp xlink:type="extended">
    <resource xlink:type="resource" xlink:label="start"></resource>
    <daoloc xlink:href="http://nrs.harvard.edu/urn-3:FHCL.HOUGH:1997915?height=150"
      xlink:label="resource-1"
      xlink:type="locator">
    </daoloc>
    <arc xlink:actuate="onLoad" xlink:from="start" xlink:show="embed"
      xlink:to="resource-1" xlink:type="arc"/>
    <daoloc xlink:href="http://nrs.harvard.edu/urn-3:FHCL.HOUGH:1997915"
      xlink:label="resource-2"
      xlink:type="locator">
      <daodesc>
        <p>Click for larger view</p>
      </daodesc>
    </daoloc>
    <arc xlink:actuate="onRequest" xlink:from="start"
      xlink:to="resource-2" xlink:show="new" xlink:type="arc"/>
  </daogrp>
</c>

```

OASIS Result:

Humpty Dumpty and Tweedledum



[Click for larger view](#)

Example 8. JPEG 2000 images with zoom

XML Encoding:

```
<c>
  <did>
    <unittitle>8th Graduating Class Chaplains School, Harvard
      University, Cambridge, Massachusetts, 1943
    </unittitle>
  </did>
  <daogrp xlink:type="extended">
    <resource xlink:type="resource" xlink:label="start">
    </resource>
    <daoloc xlink:href="http://nrs.harvard.edu/urn-
      3:HUL.ARCH:155548?height=100" xlink:label="resource-1"
      xlink:type="locator">
    </daoloc>
    <arc xlink:actuate="onLoad" xlink:from="start"
      xlink:show="embed" xlink:to="resource-1" xlink:type="arc"/>
    <daoloc xlink:href="http://nrs.harvard.edu/urn-
      3:HUL.ARCH:155548?buttons=y" xlink:label="resource-2"
      xlink:type="locator">
      <daodesc>
        <p>Click for larger view</p>
      </daodesc>
    </daoloc>
    <arc xlink:actuate="onRequest" xlink:from="start"
      xlink:to="resource-2" xlink:show="new" xlink:type="arc"/>
  </daogrp>
</c>
```

OASIS Result:

- 8th Graduating Class Chaplains School, Harvard University, Cambridge, Massachusetts, 1943



[Click for larger view](#)

Example 9. Link to images of differing resolutions**XML Encoding:**

```

<c>
  <did>
    <unittitle>Agnes Mongan aboard the Amsterdam, ca. 1950
    </unittitle>
  </did>
  <daogrp xlink:type="extended">
    <resource xlink:type="resource" xlink:label="start"></resource>
    <daoloc xlink:href="http://nrs.harvard.edu/urn-3:huam:77770_smdl"
      xlink:label="resource-1" xlink:type="locator">
    </daoloc>
    <arc xlink:actuate="onLoad" xlink:from="start" xlink:show="embed"
      xlink:to="resource-1" xlink:type="arc"/>
    <daoloc xlink:href="http://nrs.harvard.edu/urn-3:huam:77770_mddl"
      xlink:label="resource-2" xlink:type="locator">
      <daodesc>
        <p>Click for medium-resolution image</p>
      </daodesc>
    </daoloc>
    <arc xlink:actuate="onRequest" xlink:from="start"
      xlink:to="resource-2" xlink:show="new" xlink:type="arc"/>
    <daoloc xlink:href="http://nrs.harvard.edu/urn-3:huam:77770_lgdl"
      xlink:type="locator" xlink:label="resource-3">
      <daodesc>
        <p>Click for high-resolution image</p>
      </daodesc>
    </daoloc>
    <arc xlink:type="arc" xlink:from="start" xlink:to="resource-3"
      xlink:show="new" xlink:actuate="onRequest"/>
  </daogrp>
</c>

```

OASIS result:

- Agnes Mongan aboard the Amsterdam, ca. 1950



[Click for medium-resolution image](#)

[Click for high-resolution image](#)

Example 10. Linking within a finding aid

See [Internal Links in Finding Aids](#) for information on linking from one place in a finding aid to another place in the same document.

Example 11. Linking to another finding aid (in OASIS or external)

(These links go from anywhere in a finding aid to the top of another finding aid. It is not possible to link to a specific section of an OASIS finding aid, unless the link is coming from within the same document, as in [example 10](#).)

XML Encoding:

```
<relatedmaterial>
  <p>
    Records of the Division of Engineering and Applied Physics
    (UAV 362.5xxx),
    <extref xlink:href="http://nrs.harvard.edu/urn-
    3:HUL.ARCH:hua15001" xlink:type="simple" xlink:show="new"
    xlink:actuate="onLoad">
    Records of the Harvard Underwater Sound Laboratory
    </extref>
    (UAV 859.xx), and the General Office Files of the
    <extref xlink:href="http://nrs.harvard.edu/urn-
    3:HUL.ARCH:hua01999" xlink:type="simple" xlink:show="new"
    xlink:actuate="onLoad">
    Records of the Dept. of Physics
    </extref>
    (UAV 691) in the Harvard University Archives.
  </p>
</relatedmaterial>
```

OASIS result:

Related Material

Records of the Division of Engineering and Applied Physics (UAV 362.5xxx), [Records of the Harvard Underwater Sound Laboratory](#) (UAV 859.xx), and the General Office Files of the [Records of the Dept. of Physics](#) (UAV 691) in the Harvard University Archives.

XML Encoding:

```
<relatedmaterial>
  <p>Additional relevant material may be found in the
  <extref
  xlink:href="http://www.oac.cdlib.org/findaid/ark:/13030/hb8779p2c
  x" xlink:actuate="onRequest" xlink:show="new"
  xlink:type="simple">Guide to the 1906 San Francisco Earthquake
  and Fire Digital Collection
  </extref> available from the
  <extref xlink:href="http://www.oac.cdlib.org/"
  xlink:actuate="onRequest" xlink:show="new"
  xlink:type="simple">Online Archive of California
  </extref>.
  </p>
</relatedmaterial>
```

OASIS result:

Related Material

Additional relevant material may be found in the [Guide to the 1906 San Francisco Earthquake and Fire Digital Collection](#) available from the [Online Archive of California](#).