

## **Museums and Online Archives Collaboration Digital Asset Management Database**

### MOAC: Community Toolbox

Museums are working with archives, libraries, cultural organizations, and individual scholars and artists to build a national network of cultural content such as artworks, images, and digital learning objects to create and sustain a nation of learners. However, progress in building this national network continues to be stymied in part by the high cost of participation in such large-scale efforts. Issues of cost, time, labor, and technical capacity limit the ability of museums and libraries to share digital content broadly, thus limiting the growth of a national network of cultural content. Clearly, if we are to build a national network and support our nation's learners, one challenge that must be overcome is to lower the cost of participation and raise the capacity of the nation's museums, libraries, and scholars for broad content sharing. MOAC: Community Toolbox is a project of the MOAC consortium that has developed a software tool that enables easy, practical, and cost-effective production and sharing of standards-based content.

Building on previous successful work in the areas of standards and online collections access, the new MOAC software tool, the Digital Asset Management Database (DAMD), has been developed as both a utilitarian tool and as a test case for exploring more general issues of content sharing and community tool development. This tool has two primary functions that can be used together or separately: it provides basic digital asset management for simple to complex media objects and it easily transforms collections information into an extensible variety of standards-based XML formats, such as METS and OAI, to allow even small organizations without technical staff to share their collections broadly and participate in building a national network of culture. DAMD was developed as an "open solution," built on FileMaker Pro software (8.5 or above) because of the broad base of installed users of FileMaker in the museum and arts communities. DAMD is available for free to cultural organizations. The tool, and its unique export/transform functions (detailed in the documentation), are open-ended, allowing organizations to customize the tool for themselves or the community to improve the tool for all.

Thanks to funding from the Institute of Museum and Library Services, DAMD is now ready to be shared freely with the cultural heritage community on the project website at <http://bampfa.berkeley.edu/moac>.

### Project Goals & Objectives

- \* Enhance interoperability, integration, and seamless access to digital library and museum resources of statewide, thematic, and national scope
- \* Lower the cost of participation for museums and libraries wishing to share digital content in standards-based, national-level, content gateway projects
- \* Raise the capacity of museums and libraries to share digital content broadly by utilizing technical and descriptive standards in practical, cost-effective ways
- \* Develop a practical software tool that allows museums and libraries to easily produce standards-based data (in Encoded Archival Description, Metadata Encoding and Transmission

Standard, and Open Archives Initiative standards) for broad content sharing

- \* Test effectiveness of tool for broad content sharing by working with multiple museums to distribute digital content to several national content gateways
- \* Share tool freely with cultural heritage community and develop framework and website (a “Community Toolbox”) for sharing this and other open tools

## Project Partners

### Museums

- \* University of California, Berkeley Art Museum and Pacific Film Archive
- \* Oakland Museum of California
- \* San Francisco Museum of Modern Art

### Libraries & Library Organizations

- \* University of Illinois Library
- \* California Digital Library
- \* RLG (formerly Research Libraries Group)
- \* UC Berkeley Library & Bancroft Library

## Project Outcomes

- \* Tested, documented model with which museums and libraries can share digital content broadly
- \* Practical, freely available software tool that allows museums and libraries to produce and share standards-based content; “Community Toolbox” website and framework for sharing cultural tools
- \* Dissemination of large amounts of digital cultural content to several national online gateways for use by our nation’s learners

This software tool is released to the community as-is, with no implied technical support.

Organizations using the tool are encouraged to improve the tool and release new versions into the community. Thanks go to: the Institute of Museum and Library Services who funded the project, Beeswax Datatools who developed and programmed the tool, Patrick Schmitz who wrote the project analysis, Andrew McDiarmid who wrote the tool manual, and staff from all of the cultural partner organizations who made this project a success.

## Quick-Start Guide

The Museums and Online Archives Collaboration's Digital Asset Management Database (DAMD) is designed to facilitate exporting surrogate media metadata in standards-based formats, including the Metadata Encoding and Transmission Standard (METS) and the Open Archive Initiative (OAI), as well as raw XML and basic HTML. Additionally, the tool can be used to manage media resources' metadata and basic collections' information. The tool performs three main functions: **importing** data from existing collections management systems; **collating** that information with digital asset metadata; and **exporting** digital asset metadata in the above mentioned standard XML formats.

FileMaker Pro was chosen as the platform for the DAMD because of its common use in museums, and some familiarity with FileMaker is assumed to use the DAMD.

### Icon Definitions



Navigates to the detailed record for the specified row. For example, in the items screen, clicking next to a creator's name will take you to that creator's record.



Navigates to the list of items. A selected item's details are shown on the right side of the screen.



Navigates to the list of creators. A selected creator's details and related items are shown on the right side of the screen.



Navigates to the list of groups. The items in a selected group are shown on the right side of the screen.




Creates a new record in the respective table.



Deletes a record from the respective table. For example, clicking here in the items table will delete that item, but clicking here in a row of an item's measurements table will delete only that measurement.



Within a line item of the media table, clicking the  at the far right will remove the associated thumbnail, but not the media record.





Within a row in the media table, associates a thumbnail image with that line item.

## Importing Item Metadata

The DAMD can accept item metadata from other FileMaker Pro databases using FileMaker's standard import mechanism, which accepts other FileMaker databases as well as various formats of delimited text. The fields to import must be in the following order (note that all fields must be present or represented by blank columns to ensure the imported data maps to the correct fields):

- \*Type (e.g. "Print")
- Date
- \*Title
- \*Material
- \*Measurement
- Creator First Name
- \*Subject
- Creator Nationality
- \*Identifier (e.g. accession number)
- Credit Line
- Description
- Rights
- Creator Last Name
- Creator Full Name
- Creator Date
- Date Qualifier
- \*Measurement Qualifier
- Group Title (e.g. "The John Doe Collection")
- Group Description
- Repository
- Related Media URL

For fields marked with an asterisk, multiple entries can be imported. Entries will be separated into rows in related tables, and must be in a single field separated by pipe ('|') characters. For example a Title field reading “The Power Broker|Portrait of Robert Moses” in the database to be imported would create two related title records in the DAMD. (Fields below the line are currently not set up to be imported if, as discussed, we suppress import dialogs.)

Once imported or created by clicking , Item metadata can be edited by clicking  at the top of the list of items. Related metadata, shown on the right side of the screen in the Items layout, can be edited inline on the Items layout.

## Importing Media Metadata


Related Media metadata can be imported in two ways. To import metadata from an existing database or spreadsheet, click “Import Media” from the Items layout. As with importing item metadata, this uses FileMaker’s standard import mechanism, and accepts database and delimited text files. The fields to import must be in the following order (note that all fields must be present or represented by blank columns to ensure the imported data maps to the correct fields):

- Relationship
- \*Identifier
- Caption
- Compression
- Data rate
- Duration
- File type
- Height
- Image file path
- Media name
- Notes
- Relationship sequence
- Sample rate
- Sequence
- Sound
- Source
- Storage
- URL
- Version
- Width

\* For media metadata to be correctly associated with its item, the Identifier field’s contents must match that of an item already in the DAMD.

To associate metadata for one or more media files with a single item, click “View Item Media” from the Items layout. This displays any media metadata currently associated with that item.

Clicking “Import Media for this Item” will import metadata for all picture and movie files in “untitled folder” on your desktop and associate it with the current item.

As with items, media metadata can be hand-edited by clicking  from the Related Media layout.

### **Exporting Media Metadata**

The Export Items layout by default lists all item records. Results can be filtered by entering Find Mode, typing search terms in the available fields, and clicking “Perform Find.” The behavior of the search buttons is similar to that of the Search layout, annotated below.

Once you have found the items whose media metadata you wish to export, generate the desired XML by clicking the appropriate icon at the top of the screen. For OAI and raw XML (built into FileMaker) and HTML, a single file will be generated. For METS XML, one file per media record will be generated. For OAI, a repository name and base URL are required in the fields provided. For HTML and METS, a destination folder name is required, which must already exist on the desktop.

The HTML export is extremely basic, and intended for creation of static HTML pages, one page per item. When exporting HTML, if an item record has multiple associated media records, only the first related image file will be used as the source for an image on the resulting HTML page.

The XSLT stylesheets and HTML template used to generate the various export formats can be viewed from the Configurations layout.

**Annotated screenshots for Items, Media, and Search follow as separate documents.**

# Items

Institution name  
Click for address

Type criteria here to filter items list.  
Click to remove current filter.

Navigate to Import, Search, and Export layouts.

Berkeley Art Museum and Pacific Film Archive

Items

Import Media

Search

Export

Measurements

35 x 40 ( )

Titles

Three Figures

Identifiers

1981.10

Identifiers: 1981.10

Currently selected item

View Item Media

Light indicates currently selected record. Related metadata shown in tables at right.

Click above to edit additional details.

Titles	Identifier	Measurements	Titles	Identifiers
The Chief	1966.2		Three Figures	1981.10
The Looters	1966.1			
The Evening Chant	1971			
The Rainbow	1967.89			
The Evening Via Nomentana	1974.5			
The Search for the Source of the Nile	1981.4			
Tree Tracings	1981.31		Materials	oil on canvas
The Girl in Bed	1978.7.24		Subjects	Painting
The Mermaid	1992.31.1			
Three Figures, illustration to Shih Ching, Tszai	2001.4.6			
The Fourteen Stations of the Cross, no. 7 of 14	1970.82.7			
Two Bathers	1985.20			
Tree	1987.4			
Three Unknown Hero	X.1993.106			
Three Figures	1981.10			
Torse De Femme	1970.21			
Tribute to the Infinite	1971.55			
Two Actors, One Standing, One Kneeling	1985.44			
The Willow Dwelling	CC.116			
The Actor Segawa Kikunjo As a Woman with a	1985.51			
Two Eagles	CM.95			
The Zen Poet Han-Shan	1970.99			
Travelers in a Landscape	1980.42.32			
Two Boys on Water Buffalo	1980.42.81			
The Sound of the Tide	CT.40			
Trees by a River	1980.18			
The Eighteen Ahats Crossing the Sea	1986.35			
The Pleasures of Fishermen	CM.84			
The Kamo Horse Races (Horse Race on the	1978.17.7			
Three Figures, illustration to Shih Ching, Tszai	2001.4.6			
The Fourteen Stations of the Cross, no. 7 of 14	1970.82.7			
The Artist's Mother in Wicker Chair	1945.5			
Then a Spirit Passed before My Face	1954.3			
The Scandal	1965.40			
The Defects of Its Qualities	1967.77			
The Martyrdom (Das Martyrium): plate 3 from	1970.59			

Creator(s)	Nationality	vital dates	Items
Name	Mexico		7
Groups			
Title	Description	Repository	

# Media

The screenshot shows a web browser window titled "Berkeley Art Museum and Pacific Film Archive" with a sub-header "Related Media". The main content area displays "Title: Gloriamundi Identifier: 1964.5". Below this is a "Media" section with a table of items. Annotations with arrows point to various elements: "Institution name Click [i] for address" points to the top left; "Current item info Only media for current item is shown" points to the title and identifier; "Black sidebar indicates currently selected record" points to the first row of the table; "Shows more info" points to an information icon; "Deletes media record" points to a red 'X' icon; "File name and location URL" points to the file path in the table; "Adds new media record" points to a green plus icon; "Imports thumbnail" points to a thumbnail image; and "Clears current thumbnail" points to a red 'X' icon over the thumbnail.

File Type	Dimensions (h x w)	Duration	Version
image/jpeg	150 129		3
<a href="http://www.bampfa.berkeley.edu/collections/bam/images/mos2/bampfa_1964.5_1_3.jpg">http://www.bampfa.berkeley.edu/collections/bam/images/mos2/bampfa_1964.5_1_3.jpg</a>			1
image/tiff	2500 2151		4

Click here to access media

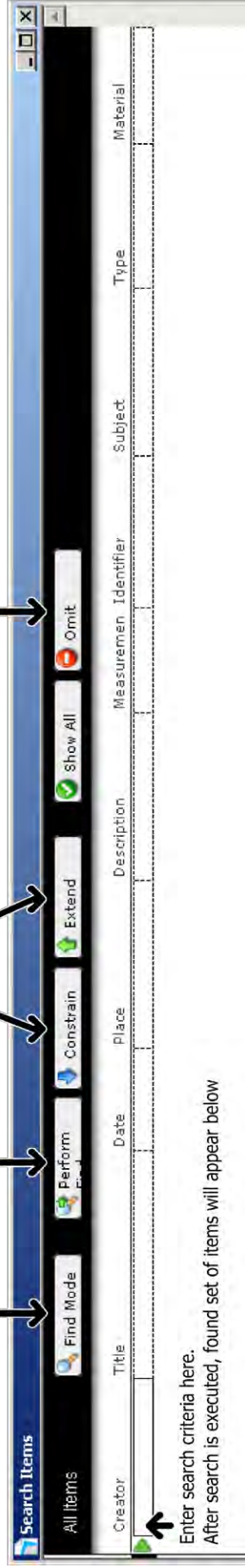
# Search

Enters Find Mode, where search criteria can be entered (Search Items layout opens in Find Mode by default)

Executes a search using the given criteria (shortcut: Enter key)

Constrains or extends the current found set using the given criteria

Omits selected record from the current found set using the given criteria



Enter search criteria here. After search is executed, found set of items will appear below