oi.uchicago.edu

# INTEGRATED DATABASE PROJECT

## Foy Scalf

## Introduction

During the 2013–2014 year, the Integrated Database Project (IDB) completed its second major phase of transformative development. Through this project the Oriental Institute has initiated a secure and sustainable platform for data curatorship of all internal digital information

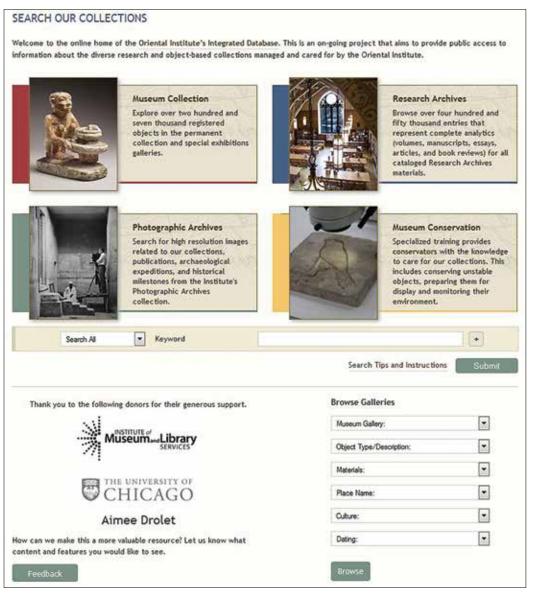


Figure 1. The online collection search (oi-idb.uchicago.edu) for Museum Registration, Research Archives, Photographic Archives, and Museum Conservation records

and associated metadata related to the departments of the Institute. In addition, a steady effort has made vast amounts of previously unknown information available to the public for the first time in the history of the Oriental Institute, thereby filling a major gap in the study of objects from the ancient Near East. Online access to the vast collections here, in concert with the digitization efforts of museums across the globe, will provide the foundation for a new generation of discoveries about the cultures of the ancient Near East.

It is important to emphasize that the IDB project consists of two separate, but related infrastructures serving two distinct goals. Internally, the database software provides a robust and stable platform for the long-term management of our digital assets according to international standards. On- and off-site backup procedures are in place to ensure the security and viability of these data. The current system offers a sustainable solution for securing, recording, storing, searching, and sorting digital information for the foreseeable future. Externally, data from the EMu system is being imported into a Solr database core on a separate server which runs the online collections search (http://oi-idb.uchicago.edu), publicly accessible through an internet browser. Researchers, faculty, staff, students, and interested members of the public will interact with this information primarily through this public portal. Additionally, future projects currently under discussion may include the integration of several institutions' ancient Near East collections through a single web portal.

The digital assets of Museum Registration and Research Archives were migrated into our EMu software platform during Phase One as outlined in last year's Annual Report. In Phase Two, funded by a grant from the Institute of Museum and Library Services, Photo Archives and Museum Conservation were scheduled for migration. With the help of project manager Angela Spinazze, teams from both departments (Mónica Vélez, Laura D'Alessandro, Alison Whyte, and Simona Cristanetti) spent many hours preparing their data, reviewing software templates, designing new modules for data analysis, and providing feedback to KE software engineers. After many months of planning and preparation, the data migration was completed at the beginning of 2014. In addition to the 750,000 records belonging to Museum Registration and Research Archives, EMu is now a repository for more than 90,000 Photographic Archives records and more than 10,000 Museum Conservation records. With all this information in one location, we can now begin the process of integrating data in extremely useful ways. Integrating data is necessarily a collaborative endeavor involving many individuals within the departments of the Oriental Institute. The remainder of this report will focus on progress related specifically to the Integrated Database divided by department. Further details may be found in the Annual Report contributions of those departments.

### **Museum Registration**

Museum Registration currently has more than 249,000 records in EMu and more than 218,000 of those records are available through the online collections search. More than 4,800 registration cards have been scanned and added to the database for individual objects. The scans of these registration cards have been made available to internal researchers only. In EMu, more than 7,500 objects have images attached to them. With the addition of image files to the internal database system, we can now display these images online as part of the online collections search. When searching, users will now see thumbnail images (200 × 200 pixels) in their search results and results can be filtered via a "Multimedia" facet to show only those records with images to display (fig. 2). There is also a search option to search only items with

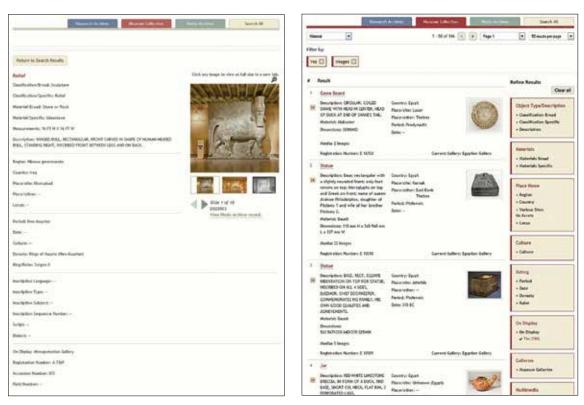


Figure 2. Results list after a search for "Egypt" and the filtering of records via the "Multimedia" and "On Display" facets under the Museum Collection tab

Figure 3. Details of the record for OIM A7369 showing the image rotator and link to the Photo Archives record under the Museum Collection tab

multimedia. Clicking on any individual record or image takes the user to a details page that provides further information as well as an image rotator displaying all images associated with that museum object and a larger size ( $300 \times 300$  pixels) of each individual image. Clicking on the images will open a new, larger image ( $1920 \times 1200$  pixels) in an additional tab within the user's web browser. 3,000 records for museum objects display photos of those objects. Under the image rotator, users can navigate to the Photo Archives record for an image by clicking on the "View Photo Archive record" hyperlink below each image.

## **Research Archives**

More than 478,000 bibliographic records from the Research Archives are available in EMu and through the online collections search. More than 3,000 of those records have associated PDF documents that can be downloaded directly from the website and there are currently more than 5,000 PDF documents in EMu for internal use. With the help of student interns and volunteers, the Research Archives has begun compiling data on the biographies of prominent individuals in ancient Near East studies. These records include dates and places of birth, dates and places of death, dates and places of academic degrees, academic advisors, employment history, specialties, short biographies, and portraits. As this information is amassed, it will allow researchers to conduct research into the institutional history of scholars and institu-

|                | Research Archives   | Museum Collection                                    | Photo Archives | Search All   |
|----------------|---|--|----------------|--|
| elevance       |   | 1 - 50 of 450 🥑 🌔                                    | > Page 1       | 50 results per page                                      |
| er by:         |   |  |                |  |
| ocumen         | ts 🖾  |  |                |  |
| Add resu       | ults 1 - 50 to citations  |  |                |  |
|                | Result  |  | Re             | fine Results   |
| 1<br>Cite      | Archaic Administrative Text (List of Rations): Catalog No. 52   |  |                | Clearal  |
|                | by Marzahn, Joachim (Author); Wagner, Robert (Translator)   |  | PDE            | Format   |
|                | Published in: Visible Language: Inventions of<br>Middle East and Beyond.<br>by Woods, Christopher (Editor); Teeter, Emi<br>Emberling, Geoff (Co-Editor) |  | Adobe          | Series Volume Section<br>(435)<br>Series Volume (15)     |
|                | Oriental Institute Museum Publications 32:-<br>Chicago: Oriental Institute of the University  |  | E E            | Authors  |
|                | Series Stacks S/OIMP/32   |  |                | Teeter, Emily (95)                                       |
|                | Online Open Access<br>Media: 1 PDF  |  |                | Emberling, Geoff (28)<br>Bailleul-LeSuer, Rozenn<br>(27) |
| 2<br>Cite      | Fowling in the Marshes and Aviculture   |  |                | Herrmann, Virginia R.                                    |
|                | by Bailleul-LeSuer, Rozenn (Author)   | 1  |                | (20)<br>MacArthur, Elise (20)                            |
|                | Published in: Between Heaven and Earth: Bi<br>by Ballleul-LeSuer, Rozenn (Editor); Ressman  |  | PDF            | More   |
|                | Oriental Institute Museum Publications 35:-<br>Chicago: Oriental Institute of the University  |  | Adobe          | Publication Year   |
|                | Series Stacks S/OIMP/35   |  |                | This year (53)<br>Last 10 years (449)                    |
|                | Online Open Access  |  |                | Past 50 years (450)                                      |
|                | Media: 1 PDF  |  |                |  |
| 3              | Hieratic  |  |                | Journals   |
| Cite           | by Bandy, Kathryn E. (Author)   |  |                | No facets  |
| R              | Published In: Visible Language: Inventions of<br>Middle East and Beyond.<br>by Woods, Christopher (Editor): Teeter, Emi<br>Emberling, Geoff (Co-Editor) |  | Adobe          | Series<br>No facets                                      |
|                | Oriental Institute Museum Publications 32:-<br>Chicago: Oriental Institute of the University  |  |                | Publisher  |
|                | Series Stacks S/OIMP/32   | en a redstaar te |                | Oriental Institute of the                                |
|                | Online Open Access  |  |                | University of Chicago                                    |
|                | Media: 1 PDF  |  |                | (450)  |
| 4<br>Cite<br>R | Bibliography for Cuneiform Essays   |  |                |  |
|                | Published in: Visible Language: Inventions of<br>Middle East and Beyond.<br>by Woods, Christopher (Editor): Teeter, Emi                                 |  | PDF            | Multimedia<br>Documents (450)                            |
|                | Emberling, Geoff (Co-Editor)  |  | Adobe          |  |
|                | Oriental Institute Museum Publications 32:-   | 6  |                |  |

Figure 4. Results list after the filtering of records via the "Multimedia" facet under the Research Archives tab, showing all records with attached PDF documents available for download

tions within ancient Near East studies. The integrated nature of our database will further stimulate connections between these parties previously unknown as the records with this biographical information are linked throughout the system to bibliographic items, museum accession records, research visits, as well as lectures and events. Currently, these biographical data are not available through the online collections search, but it is hoped that we will be able to develop a display for these data over the next two years.

## **Photographic Archives**

The Photographic Archives data migrated over the past year into EMu derived from a database initially designed in FileMaker by Tom James and further managed by Mónica Vélez. The initial migration consisted of more than 90,000 records consisting of born digital museum photography as well as scans of print photographs and negatives. These records have since been supplemented with more than 25,000 records from Museum Photography and photography from visiting researchers, totaling more than 115,000 multimedia records in

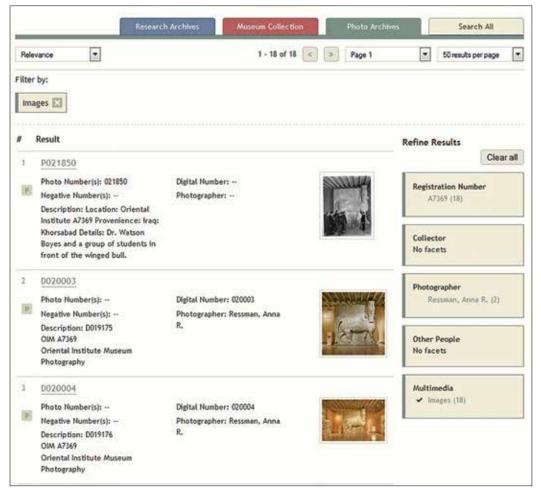


Figure 5. Results list after searching for "A7369" and filtering of records via the "Multimedia" facet under the Photo Archives tab

the EMu database. Those internal records are being evaluated and associated with object records wherever possible. During this process, the images are marked for publication online. There are currently more than 35,770 Photo Archives records in the online collection search and 27,000 of these records have associated image files. The records cover a wide assortment of material, including scans of archival photos and professional museum photography. Scans of archival images are especially interesting as many show monuments and sites that may no longer exist or have been damaged by time. It should be emphasized that the archival images also cover material beyond the Oriental Institute collection, showing sites, scholars, and objects from across the globe. For images of Oriental Institute Museum objects, users can navigate from the Photo Archives record to the Museum Registration record by clicking on the hyperlinked registration number from the details view. Over the next year, volunteers and Museum staff will continue the work toward cleaning and integrating the Photo Archives records while additional digital images from the Museum Archives, Museum Registration, and Museum Photography are incorporated.



Figure 6. Results list showing records for cuneiform tablets and filtering of records via the "Multimedia" facet under the Photo Archives tab

## **Tablet Room**

Data related to the cuneiform tablet collection is currently being reviewed for online publication by Paul Gauthier for the Tablet Room, curated by Walter Farber and assisted by Andrew Dix. Information in the EMu database is being updated and standardized based on recent printed research prior to its appearance in the online collections search. More than 3,700 records for cuneiform tablets have been edited and almost 1,400 have been published online. This is in addition to the 3,900 images of tablets added to the database from scans prepared and provided by the Cuneiform Digital Library Initiative project. For the use of internal researchers, the registration cards of the tablet room are being scanned and added to EMu by a team of volunteers. 3,500 Tablet Room registration cards have already been scanned and included in the system. Finally, data from a FileMaker database designed by Jon Tenney and curated by Andrew Dix has been moved into EMu so that the Tablet Room is now fully integrated into EMu. Over the next few years, Tablet Room staff and visiting scholars will continue to refine our museum data regarding the cuneiform tablet collection as we look toward the best solutions for also including editions of the cuneiform texts themselves.

## **Phase Three**

The above report demonstrates the exponential growth experience within the Integrated Database Project over the past year. It is already difficult to imagine that a few years ago the Oriental Institute had no form of collection search online beyond a rudimentary library catalog and a FileMaker database. Now, we have nearly a million records available within a single search engine and interconnections among the data. As we look toward the future, we anticipate further expansion as more departments migrate their data. This fall the data from the CAMEL lab map database is scheduled for migration. Simultaneously, training has begun for the Museum Archives staff to begin the enormous task of entering archival data into EMu. Over the next two years, we hope to be able to expand the collections search website to include these data silos, with a geo-spatial searching platform for the CAMEL lab data and the production of industry standard finding aids with inter-silo joins to other departments for the Museum Archives. The scale of the project is daunting, but we are building a large team of dedicated staff, faculty, researchers, students, and volunteers to keep the project moving forward efficiently. Our vision for this project is grand. Building upon the last four years of success, we will continue working toward building a series of unique research tools that will change the face of ancient Near East scholarship.

## Acknowledgments

The Integrated Database Project involves every department within the Oriental Institute and is expanding every day. A project of this scale and complexity could not be accomplished without the help of many dedicated individuals working countless hours toward our goals. We'd like to take this opportunity to thank them for making this project possible. The Institute of Museum and Library Science has provided generous funding through two grant cycles over the last four years to get the project off the ground. Further development on the project would have been impossible without the gracious donations of Aimee Drolet Rossi. Ongoing support from the Oriental Institute and the University of Chicago have allowed a stable foundation for year-to-year planning. Scott Branting, John Sanders, Jack Green, and Angela Spinazze assisted with writing the grant request for Phase Two as well as Phase Three. In Museum Registration, Helen McDonald and Susan Allison have worked tirelessly in managing EMu within their department. Under their supervision, Andrew MacIver began a project to digitize the old registration cards and Kirsten Forsberg began the immense task of entering bibliographic references for objects. Foy Scalf has worked tirelessly in the Research Archives expanding the content of the database along with the personnel working on it. Taylor Coplen, Young Bok Kim, Andrea Brown, Laura Krenz, Roberta Schaffner, Andrea Dudek, Ray Broms, Art Thorson, Paula Pergament, Stephen Adamcik, and Su Hyeon Kang all contributed to cataloging, data cleaning, and digitizing for the Research Archives. Foy also trained and supervised the following volunteers who worked on data entry for Photo Archives and the Tablet Room: Betty Bush, Rebecca Binkley, David Henson, David Zhao, Gabriele Correa da Silva, Laura Alagna, Amanda el-Khoury, and Malvika Jolly. Mónica Vélez and Austin Kramer worked diligently toward completing the Photo Archives data migration and post-migration clean-up in addition to supervising Michael Woodburn, Andrew Carr, and Joshua Donovan in assisting with those tasks. Work on cuneiform tablet data was performed by Andrew Dix and Paul Gauthier. Two focus groups were organized by Catharine Kenyon and Angela Spinazze to review Phase Two developments. The Achemenet Project, through Tytus Mikołajczak with

the help of Austin Kramer, has begun to update data on the Persian collection. Preparation for Phase Three has relied on the work of the CAMEL lab staff including Scott Branting, Emily Hammer, Susan Penacho, and Elise MacArthur. Development of the online search portal and tools is owed to the Web Services team of the University of Chicago: Bill Mulcahy, Rose Pezzuti Dyer, Michael Girgis, and Sarah Schmidt. Paul Ruffin has been very helpful with a range of IT support and other technical advice.