COMPUTER LABORATORY

INTEGRATED DATABASE PROJECT

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Introduction

The Integrated Database Project (IDB) has now entered its third official phase on the path toward integrating the data of the departments across the Oriental Institute. Recent vigorous progress on the project should be tempered by reflecting about the long and circuitous process by which we have arrived at our current circumstances. In the files of the Research Archives are the notes from an integrated database committee meeting from December 13, 2004. According to these notes, representatives from the Institute's faculty and staff met to discuss the idea of an integrated database in August 1990, an ongoing discussion that resulted

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in a series of grant proposals, and documents outlining the potential project developed throughout the 1990s. The long-standing vision for these proposals stems directly back to the Institute's founder, James Henry Breasted, who sought close collaboration in developing a comprehensive understanding of the ancient Near East and employing modern technology to aid that mission. Breasted's comments concerning the age in which the Institute was founded are an appropriate reminder of the responsibilities faced by each generation of scholars:

This is the first generation of orientalists who have been aided by the possession of highly perfected mechanical appliances for recording and multiplying graphic reproductions on an extensive scale ... Never before, therefore, has it been so feasible to undertake the immense task of making a permanent and multiplied record of all the written monuments of the past in the Near East. It is therefore one of the great and sacred obligations resting upon the orientalists of this generation to undertake this task (James Henry Breasted, "The Oriental Institute of the University of Chicago," *American Journal of Semitic Languages and Literatures* 35/4 [1919]: 204)

The sentiment in Breasted's words applies well to so-called "big data" applications and the goals of many projects in the digital humanities. As part of this trend to capture and preserve as much data about the ancient Near East as possible, the Integrated Database Project has made massive strides.

Over the past year, departments that migrated into EMu during phases one and two have continued to make steady progress. The Research Archives has cataloged 500,000 books, journals, articles, and pamphlets. Museum Registration has registered over 260,000 objects. New workflow procedures now ensure that every new object registered includes basic record photography added to the database. A backlog of permits for publication has now been cataloged. Over 20,000 museum registration cards have been scanned and attached to object records in the database. Over 150,000 digital images are now recorded from our Photographic Archives, including past special exhibits, photography for researchers, and scanned photographs or negatives. The treatment and analysis of any object that undergoes conservation is tracked, with over 9,000 records from our Museum Conservation department.

| Department | Records in EMu | Records on Website |
|-----------------------|----------------|--------------------|
| Research Archives | 491,086 | 491,071 |
| Museum Registration | 264,172 | 223,228 |
| Photographic Archives | 156,667 | 59,366 |
| Museum Conservation | 9,036 | _ |
| Museum Archives | 7,522 | 7,522 |

Table 1. Total records in the Integrated Database

These developments bring to a close phase two of the project during which the databases and digital assets from Museum Conservation and the Photographic Archives were migrated into EMu. We should like to acknowledge here the help of all the staff involved who help make this a success (see acknowledgements section below). Three individuals who are no longer with us should be singled out for acknowledgement here. John Sanders, Scott Branting, and Angela Spinazze were all instrumental in helping get the IDB project started and ushered us through phases one and two. Although they have moved on to other endeavors, the project would not be where it is today without their leadership.

Phase Three

In October 2014 the IDB received its third consecutive Museums for America grant from the Institute of Museum and Library Services. During phase three of the project we will work toward integrating data from the Center for Ancient Middle Eastern Landscapes (CAMEL) and the Museum Archives. CAMEL has a Microsoft (MS) Access database through which a large collection of digital maps and satellite images have been cataloged. Included in the CAMEL dataset is a massive set of images totaling roughly 60 terabytes. Up to this point, most of the digital information concerning the Museum Archives has been kept in the form of MS Excel spreadsheets and an incredible amount of digital scans. The move to EMu will create for the first time in the 100 year existence of the Oriental Institute a digital catalog of the incredible collections of the Museum Archives.

With the beginning of this new grant cycle, the first priority was for CAMEL and Museum Archives to work closely with software engineers at KE (now Axiell) in order to customize the client templates to suit the needs of each department. As EMu had a built-in design to handle archival data entered according to EAD (Encoded Archival Description) standards, the changes to the software were relatively minor. Planning and testing began in summer of 2014 under the supervision of John Larson, Angela Spinazze, and Jack Green, and then continuing into the fall with the help of Anne Flannery and Kiersten Neumann. By spring 2015 the Museum Archives client template was complete and the process of cataloging the Museum Archives has begun (see Table 1 for record numbers). Already, nearly 8,000 records have been created in EMu, covering over 100 collections. As part of the Achement Project, over 3,000 field registration cards from the Persepolis Expedition in the Museum Archives were scanned, cataloged, and attached in the database. New reports were also created to produce on-demand finding aids for any record in the collection. The complexity of the CAMEL database required a longer approach. CAMEL Director Emily Hammer and Assistant Director Elise MacArthur worked diligently to layout the current schema of their database and to create a series of documents detailing the mapping of the data into EMu, along with the necessary enhancements to EMu to create their desired functionality. As of summer 2015, the CAMEL template is mostly complete and the first data load has been reviewed. In the coming months, we will complete a series of data loads and reviews in preparation for the final migration into the system and eventually the development of a new tab on the online collections search to distribute CAMEL data to the public.

Online Collections Search (oi-idb.uchicago.edu)

The public face of the IDB, referred to here as the Online Collections Search, has undergone radical change in the past year. The first priority was redesign of the homepage to remove the inactive departmental boxes, streamline the user's navigation to the search by moving the search bar to the top, adding a rotating highlights slideshow, and merging the site with the design guidelines of the new Oriental Institute website (fig. 1). By December 2014, the redesign was complete and launched to the general public.

A further revision to the functionality of the site intended to make its operation more intuitive was the implementation of a smart tabs feature in February 2015. With smart tabs, inactive or empty tabs are hidden to unencumber searching and refining. Now, only tabs that include data relevant to a user's search will display. There is no longer a "Search All" tab, as each tab instantly refines all the results by department. A further search feature was

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Figure 1. Redesigned homepage of the online collection search

added so that users could search only for records with associated multimedia (such as images, documents, or videos).

In coordination with the redesigned homepage, an instructional Wiki page was launched as a guide for IDB users in January 2015 (http://oicollectionsearch.wikispaces.com). This site will continue to be updated and improved with instructions, quick tips, frequently asked questions, and demos of how to use the Online Collections Search. It is hoped that we can add video tutorials in the coming years to better serve our community of users.

Museum Archives

After the client template for Museum Archives was completed in the spring, we immediately began design of the Museum Archives tab as part of the Online Collections Search. The tab was launched in June and provides for the first time in the Institute's history a publicly accessible database covering the collections in the Museum Archives. Of course, we have only just begun to catalog these collections, so the available number of records is small (over 7,000), but in the coming years, users will see this resource grow into an amazing scholarly tool. The material in the Museum Archives is probably the largest single dataset to be migrating to the system. Records in the database for this material are joined together in a hierarchy consisting of Collection > Series > Box > Folder > Item. Collection level records provide an overview of a given collection (see fig. 2), including downloadable PDFs of finding aids for the collection, while series level records organize the data into meaningful segments (such as correspondence, field diaries, etc.). Box and folder level records help keep the physical material organized and retrievable as the box and folder numbers in the database match numbers attached to the physical boxes and folder. Item level records provide individualized descriptions about every item in the collection, down to individual sheets of paper (see fig. 3). Re-

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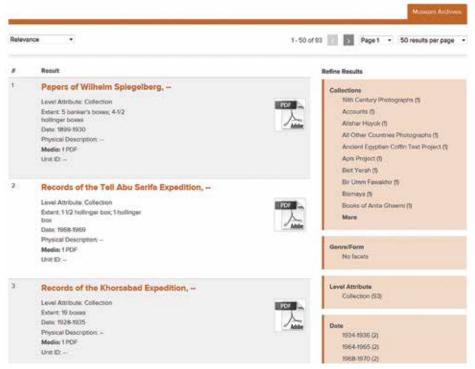


Figure 2. Collection records under the Museum Archives tab

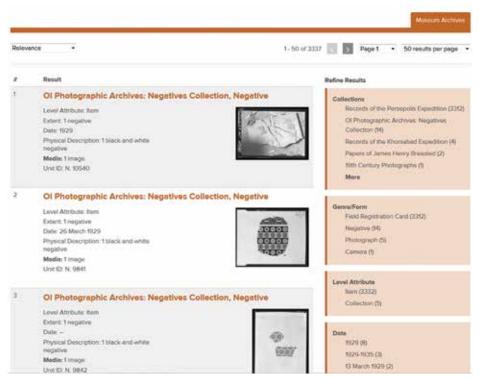


Figure 3. Item-level search results under the Museum Archives tab

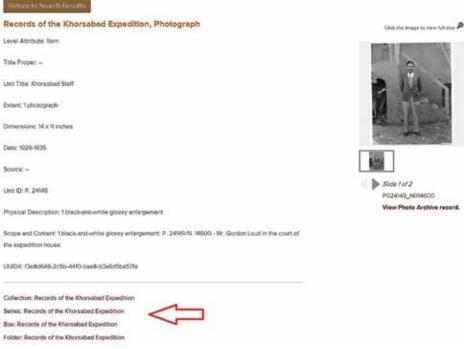


Figure 4. Hyperlinks for navigating between record hierarchy

cords from every level of the hierarchy are available for searching and sorting. Because the records are attached together in a hierarchy, users can easily navigate between the various levels of the collection using simple hyperlinks within the record itself (see fig. 4). Links between collections further allow users to see connections previously invisible to scholars. Museum Archives records link to Photo Archives record through the hyperlinked "View Photo Archive Record" text and back via a hyperlink identification number (see fig. 4). Links to Research Archives records are available for any bibliographic items attached to Museum Archives records (see fig. 5).

The cataloging of the Museum Archives will represent a major improvement to how staff and scholars access and inform themselves about these materials. Many of the collections in the archives are unknown to the outside world and scholars will be excited to discover a wealth of new information about various projects and individuals involved in ancient Near East scholarship. As one can see from the description above, no longer will such material be hidden or siloed. The IDB project is truly integrating the digital assets of the Oriental Institute in exciting ways that are sure to open up new paths of scholarship, allowing scholars to see connections that would have otherwise been overlooked or even unknown.

Acknowledgments

The IDB project requires a large and ever-growing team allied with significant resources to produce the desired results of data capture and integration. Such an undertaking is by necessity collaborative. At the core of the project team are the staff members of the Oriental Institute responsible for the preservation and care of items and data under their supervision. They are on the front lines in the trenches daily, helping to shape, curate, and share the material at the heart of the mission of the Institute. Under their watch, a community of faculty,

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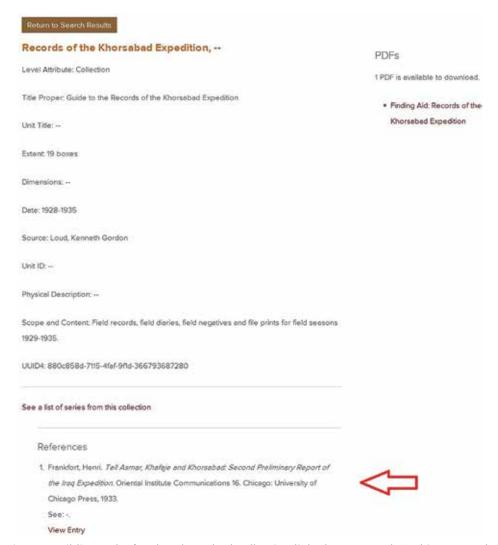


Figure 5. Bibliography for the Khorsabad collection linked to Research Archives record

staff, students, and a large cadre of volunteers have been recruited to help push the project forward. Without their hard work and dedication, projects of this size would be impossible. We would like to take the time to sincerely thank them for generously donating their time and effort to further our goals. All the individuals involved in the project are described under the individual departmental reports elsewhere in this volume. We would finally like to thank the University of Chicago, the Oriental Institute, the Institute for Museum and Library Services, and Aimee Drolet Rossi for their unflagging financial support.

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