

## TAKING ADVANTAGE OF TMS\*

By JANICE KAMRIN AND JENNIE CHOI

The Metropolitan Museum of Art relies on The Museum System (henceforth TMS) as its collections management database. It is the system of record for the most up-to-date information on the collection and is integral to supporting administrative functions across the institution. But first, the caveats. Although TMS is a powerful commercial system used by many museums around the world, it was originally created for collections focused more on two-dimensional art and does not always lend itself easily to archaeological collections. The interfaces can be difficult to use and are in many ways counterintuitive; like almost all software, it also occasionally freezes or crashes at inopportune moments. However, the vendor continues to work to improve the product, and the TMS team, led by Choi (General Manager of Collections Information), helps the curatorial departments use the system as effectively as possible.

In the end, TMS is a robust tool, and the digital and curatorial departments of The Met, working closely together, have been able to develop some creative ways in which to take advantage of the system. This paper focuses on initiatives in whose development the Department of Egyptian Art has participated, and discusses some of the procedures that this department now uses regularly.

The Met's curatorial departments maintained their own separate TMS databases until 2013, when the Museum's twenty-three databases were consolidated into a single system. With the creation of a single database, new cataloguing rules were established to ensure data was consistently entered and searchable. As our collections can be quite different, not all curatorial departments use the same protocols, but the TMS team has provided us with a good balance of consistency and flexibility.

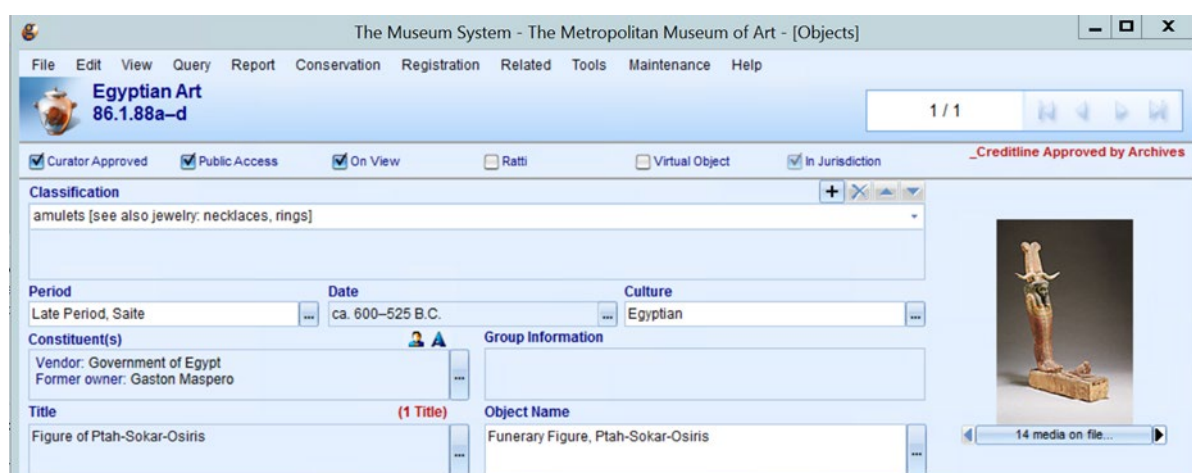


Fig. 1: The persistent upper screen of a sample Egyptian Art record in The Met's TMS system.

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## TAKING ADVANTAGE OF TMS

On the persistent area at the top of our data entry screen, we record classification, period and dates, and the title and object name (the latter of which is a keyword field). Also visible here are a thumbnail of the primary image, related “constituents,” and group information (Fig. 1). The remainder of our data entry screen consists of a series of tabs that record a variety of information, a subset of which is then visible on The Met's website (Fig. 2).

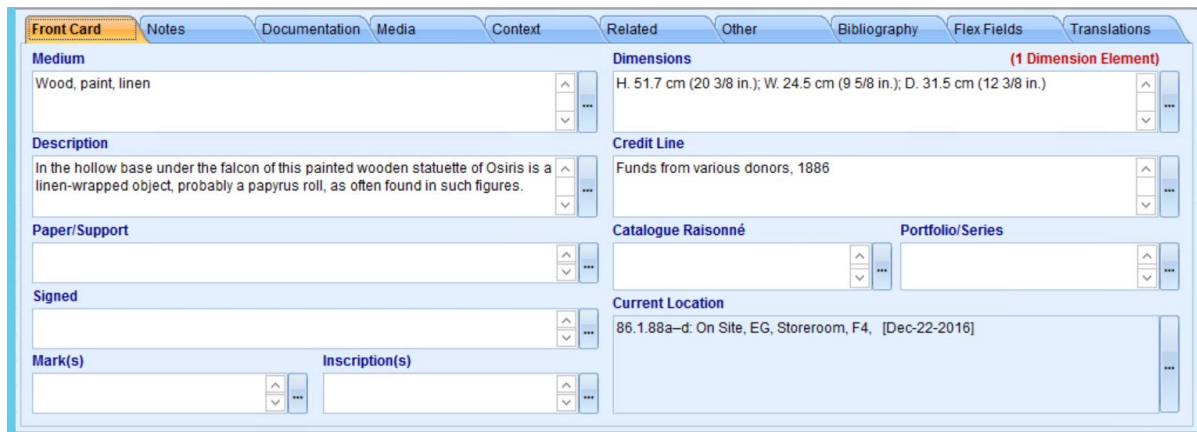


Fig. 2: The first tab (the “Front Card”), where the materials, dimensions, credit line, and current location are visible.

The Met uses a separate Digital Asset Management system (NetX) to archive and store digital files. The system is integrated with the Media module of TMS, so that files staff upload to NetX are deployed to TMS automatically (as long as the metadata for the asset is correct). We then go to the media records to add additional information (such as captions) and make selected images public. Staff can then rank these images on the media tab of the objects module to control the order in which they are viewed online. Most kinds of media can be attached here; at the moment we primarily attach JPEG and PDF files. Other data stored in TMS includes accessioning information, alternate numbers, geography, provenance, valuation, location history, bibliography, exhibition history, and curatorial notes. The Museum also records basic information on conservation activities and manages exhibitions and loans through TMS.

One curatorial task is to add what we call “web labels” to our objects; these are stored in the Text Entry field in TMS. The author of each label is recorded, but like a gallery label, appears to the public without attribution (Fig. 3). Web labels range from brief descriptions to more substantial texts, and appear on our web site beside the primary image of the object. One of the first ventures into enhancements of these labels, supported by the TMS team, was through the addition of simple HTML code, which allows staff to make text italic, underlined, or bold, and also lets us cross-reference Met objects through the use of hyperlinks. We also use hyperlinks within our web labels to link to related content on our website, or to link to external web pages.

Several years ago, under the leadership of its Curator in Charge, Diana Craig Patch, and in concert with other curatorial departments, the Department of Egyptian Art advocated for another type of public-facing Text Entry, one that was more along the lines of a signed catalogue entry.

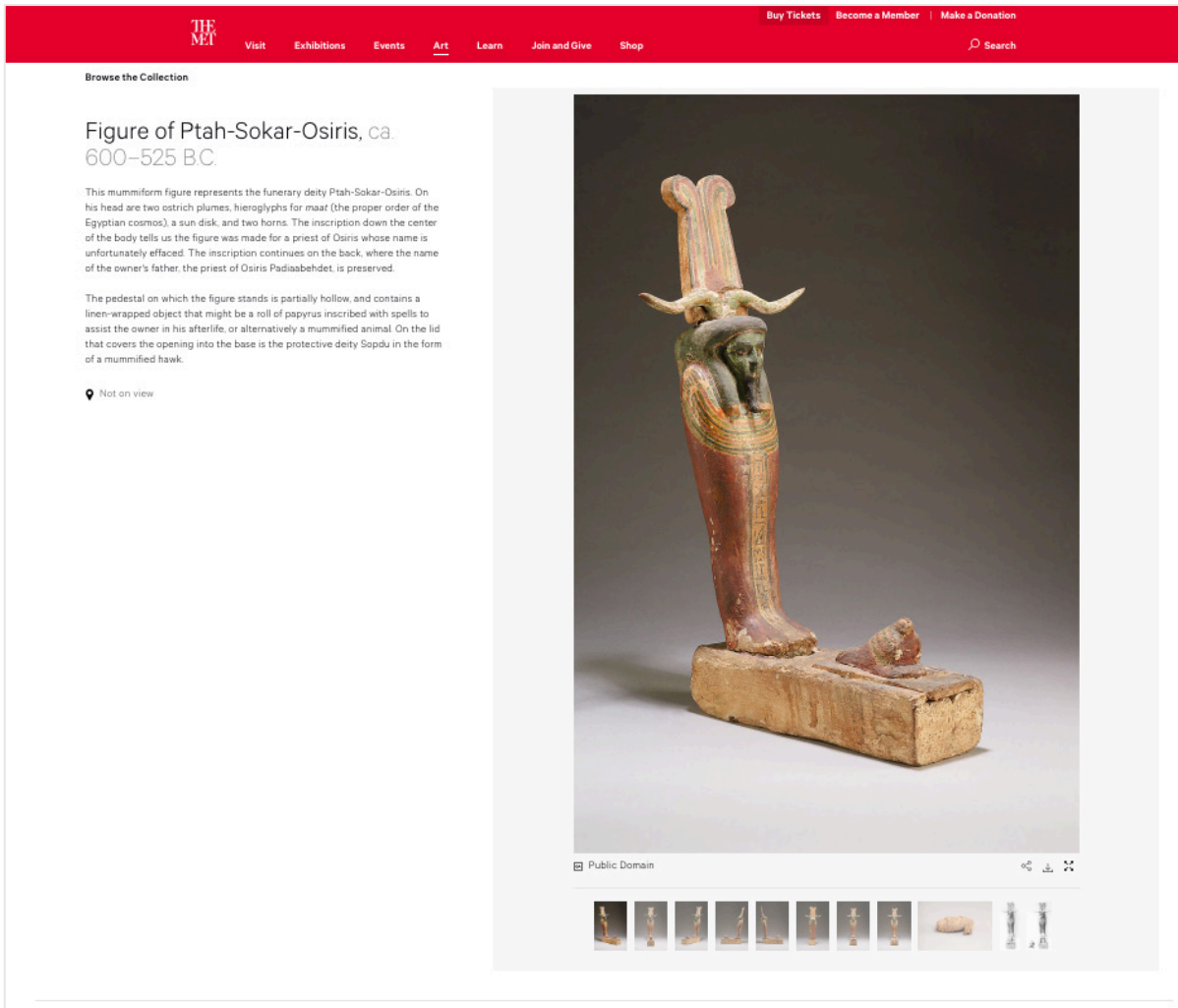


Fig. 3: Upper part of the same record on The Met's website, with primary and secondary images and unsigned web label visible.

With the support of the TMS team and the Museum's web developers, this new type of text entry was soon made available to curators and conservators. The Department of Egyptian Art now has three options for signed labels that can appear on the web: Curatorial Interpretation (flagged in TMS as Research); Inscription (Inscriptions); and Conservation and Scientific Analysis (Technical Notes) (Fig. 4). As of April 2019, Egyptian Art had 555 of these text entries, and the department is continuing to work to enhance its records and provide citable references for students and colleagues.

In 2017, the Museum launched an Open Access initiative to allow free and unrestricted use of all images of objects in the public domain. At that point, the Department of Egyptian Art took down reference images that did not meet Met publication standards. However, in view of the value of reference photographs for students and colleagues (and of course the interested public), and under the guidance of the TMS team, it is making good quality photos available online that are adequate for reference but not approved for publication; they are, however, restricted, so that they are not Open Access. This has proved to be a satisfying solution for all involved, allowing the department to provide information and enhance the web site without compromising our standards (Fig. 5).

## TAKING ADVANTAGE OF TMS

**THE MET** Visit Exhibitions Events Art Learn Join and Give Shop Buy Tickets Become a Member Make a Donation Search

Browse the Collection

### West wall of the chapel of Nikauhor and Sekhemhathor, ca. 2465–2389 B.C.

Nikauhor was a judge and a priest of Userkaf's sun temple and mortuary cult. His wife, Sekhemhathor, was a priestess of Hathor and Neith. The false door niche on the left, flanked by figures of Nikauhor, belongs to him, that on the right, flanked by figures of the couple, belongs to his wife. Nikauhor's offering stela is missing and that of Sekhemhathor—which originally was placed above her false door—has been displaced to the left because of the height of the wall.

Nikauhor's single figures in particular are very finely carved; his mature, austere features are characteristic of 5th Dynasty style as opposed to that of the 4th. The relief flanking his wife's false door is flatter and less modeled.

The intervening expanse of wall shows, from the bottom, a painted dado, the slaughter of cattle, the presentation of offerings, and a game of *senet* being played alongside a group of musicians. Such scenes sometimes have recognizably allegorical meanings: the passage through the afterworld was, for instance, likened to a game of *senet*. White outlines among and over the figures of the uppermost preserved register are traces of chair legs and the leg of a large seated figure, which belonged to an erased scene.

The mastaba of Nikauhor, like those of Raemkai and Perneb, was located in a cemetery north of the Djoser complex.

On view at The Met Fifth Avenue in [Gallery 103](#)

Public Domain

#### Curatorial Interpretation

**Location**

The mastaba of Nikauhor belongs to the group of mastabas outside the northern enclosure wall of the Djoser complex, which was excavated in 1907/08 by Quibell. He writes: "The west wall has been sold to the Metropolitan Museum of New York. The three other walls, which must suffer a good deal each time they are exposed to the air, were copied before they were again filled." Quibell published modest line drawings of this wall decoration (Quibell 1909, pl. 62-66).

The exact location of the mastaba has not been established. However, one can conclude from Quibell's numbering system that S 915 lay somewhere to the east of the Shepsesre mastaba (see [13183.3, the Tomb of Perneb](#)).

**Date**

Nikauhor was a judge and a priest of Userkaf's sun temple and the royal mortuary cult in the nearby king's pyramid. His wife, Sekhemhathor, was a priestess of Hathor and Neith. Nikauhor may have been a contemporary of Userkaf but a date down to Niuserre or even later has been suggested.

**Description**

No documentation of the tomb exists but it seems to have consisted of a north-south oriented chapel with two false doors in the long wall of the west side. According to the Museum's plan the chapel was 5.15 m long and 1.12 m wide. The entrance to the chapel was from the east. The west wall was of good quality limestone and decorated with fine relief. The other three walls were of local, "marly" limestone. One can assume that the mastaba core consisted of brick and that only the chapel was cased with limestone.

The chapel's west wall, now in the Metropolitan Museum has two recessed false doors, which divide the wall into 5 sections. The false door niche on viewer left, flanked by figures of Nikauhor, belongs to the tomb owner; the false door on the right, flanked by figures of the couple, belongs to his wife.

Originally, as typical in tomb decoration, a slab stela was placed above each false door. Nikauhor's slab stela is missing. That of Sekhemhathor, which was originally placed above her false door, has been displaced to the left in the Museum's display because of the height of the wall. The first display in the Museum included a reconstructed door drum above the left false door.

The wall space between the false doors is decorated with three registers of activities. The top register includes the playing of the *senet*-game, and musicians singing and playing the harp and the flute. A procession of offering bearers marches in the middle register and butchers slaughter cattle in the lower register.

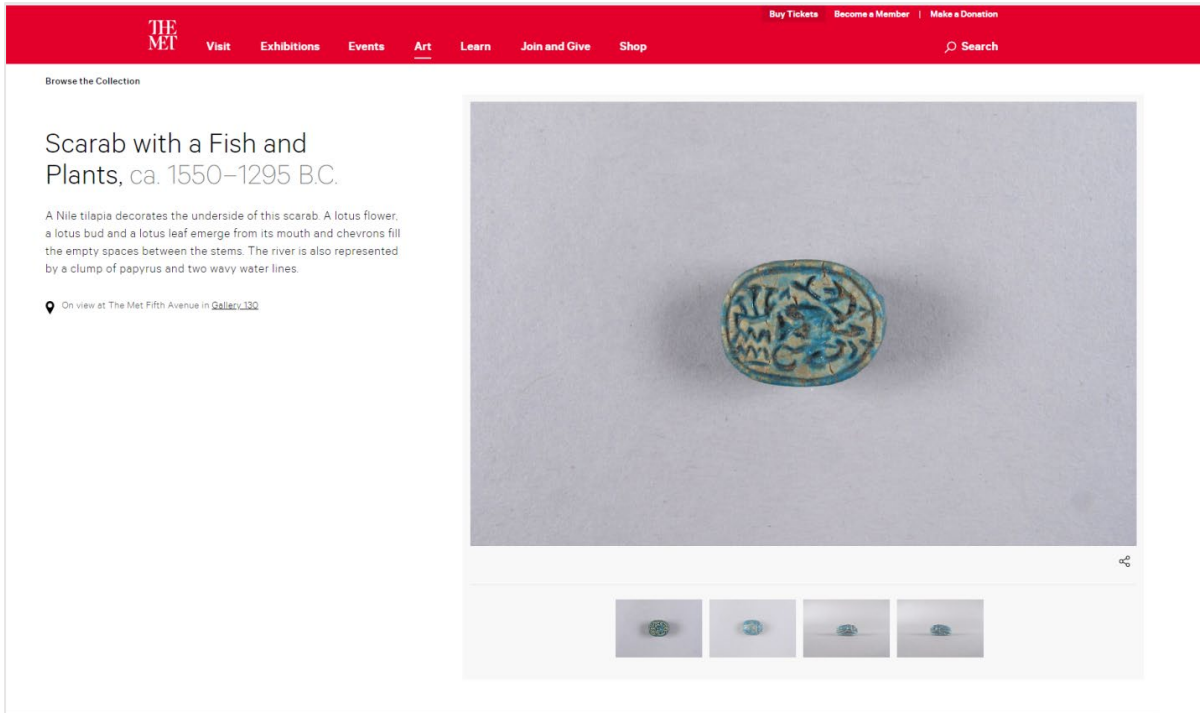
The two spaces at the ends of the wall each contains three registers with offering bearers.

White outlines among and over the figures of the uppermost preserved register include traces of chair legs and the leg of a large seated figure, which belonged to an erased scene.

Dieter Arnold 2015

Fig. 4: Object record in the Online Collection highlighting a curatorial interpretation.

With the support of the TMS team, the curatorial departments have begun to use the Events module of TMS for a number of purposes. Each curatorial department uses this module somewhat differently; the Department of Egyptian Art uses this to track actual events, gallery rotations, incidents, and various types of requests from colleagues. Each type of event is coded through the event name: requests from colleagues outside the Museum, for example, all begin with EG-OR (for Egyptian Art Outside Request). The rest of the name is descriptive; in the case of requests, it includes the name of the scholar.



*Fig. 5: Reference image taken by Mellon Fellow Vanessa Boschloss under the supervision of Imaging and Design Specialist Gustavo Camps, made available online but with access restricted.*

One key use of the Events module is to track incidents, such as vandalism or accidents involving objects or collections spaces. The Department of Egyptian Art previously had a separate incident database called AVAND, implemented by Dr. Patch in 2008, but this did not work with the new digital platform. Other departments faced similar issues, so the authors worked closely with Egyptian Art's senior collections manager, Elizabeth Fiorentino, and representatives from other departments to develop the Events module for this purpose. We are very pleased with the results: it is now possible to record (and sort by) date, location, and type of incident, and to attach relevant objects and personnel, as well as photographs (with captions, if desired), to the record.

Another important use of the Events module by the Department of Egyptian Art is to track requests from scholars for information or images (both of objects and from our expedition archives), for permission to visit and study objects, and for permission to publish. The request is categorized and then keywords, a brief description, and the date, both in the date label field (which is used for sorting) and under the begin date and time field, are added. When the request has been fulfilled, the ending date is recorded in another field. This is important because it allows us to pull up groups of requests and filter by whether or not they have been completed. Staff again can attach objects here. They add relevant correspondence as text entries, which both serves as an archive and is very helpful if another curator needs to get involved. The Department of Egyptian Art gets many requests for publication-quality images, and an event record makes it easy pull up the attached objects so we can see where it is in the process of getting new photography (Fig. 6).

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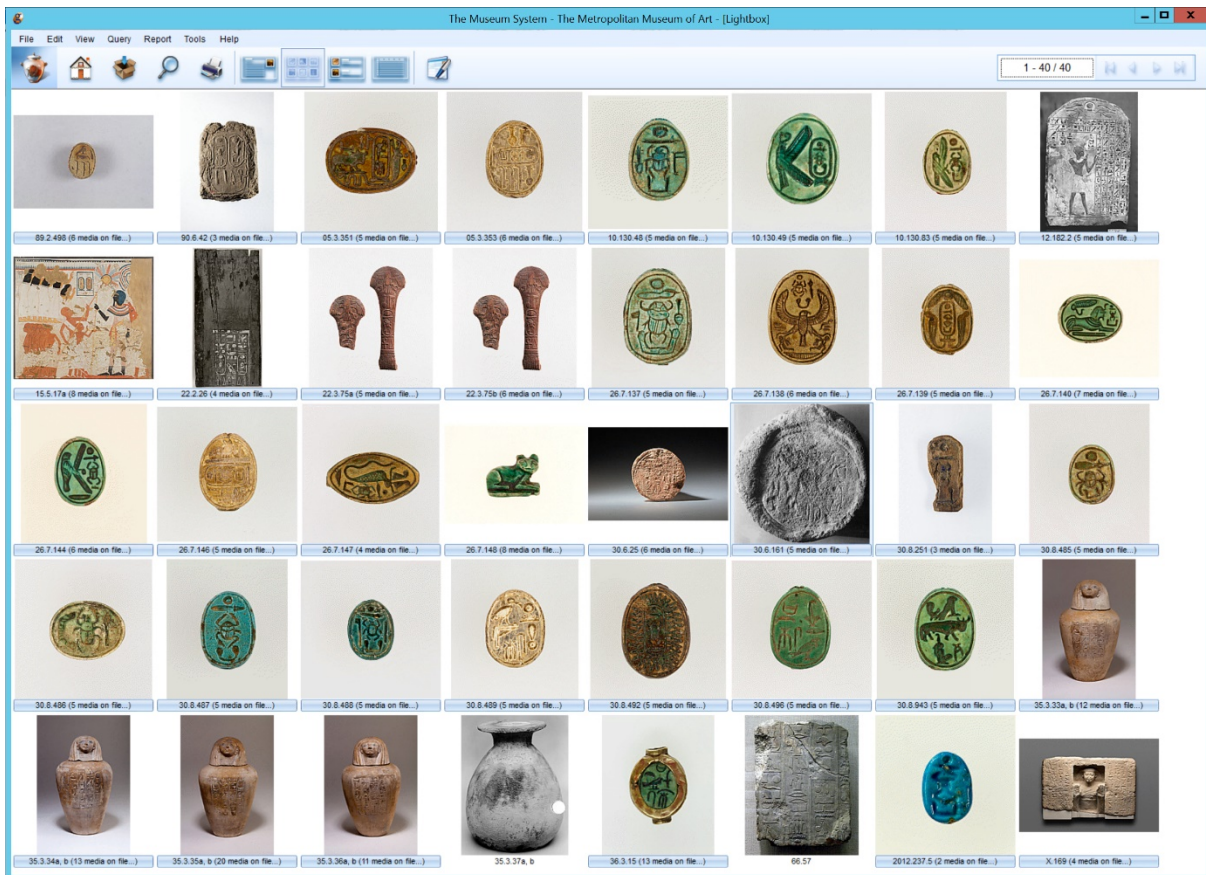


Fig. 6: Lightbox showing the objects attached to an Event record in a view that displays their primary images; it is possible to see here that there are still several objects that need publication-quality photography.

The Department of Egyptian Art is also now using TMS to track our extensive and extremely important departmental archives. The department has several dedicated areas for the storage of some of these materials, but others are scattered throughout various office spaces. Several years ago, Dr. Patch decided these needed to be recorded and their locations tracked systematically. In response, Kamrin created a Filemaker database, but designed it with eventual migration to TMS in mind. In 2015, the department decided to move the data into TMS; Choi created a special TMS department called Egyptian Art-Restricted Archives and a unique data entry screen. All archive records are prefixed with EAA (Egyptian Art Archives) so that staff can easily bring up all these records at once through a simple search (Fig. 7). To date, the department has recorded only the most basic information and the location for most of these records, but gradually is adding more information as well as images. This brings us to the last topic to be discussed here: using TMS to organize archival excavation records in preparation for eventual online publication.

The Department of Egyptian Art is fortunate to have an extensive collection of archives from The Met's early 20<sup>th</sup> century Egyptian Expedition, which carried out excavation and documentation at a number of sites between 1906 and 1935. It is currently focused on digitizing both excavation and graphic expedition records (the latter of which are primarily photographs of decorated tombs) from the Theban area. These archives include "tomb cards," which are field notes; "photoboard," which are cardboard sheets on which printed

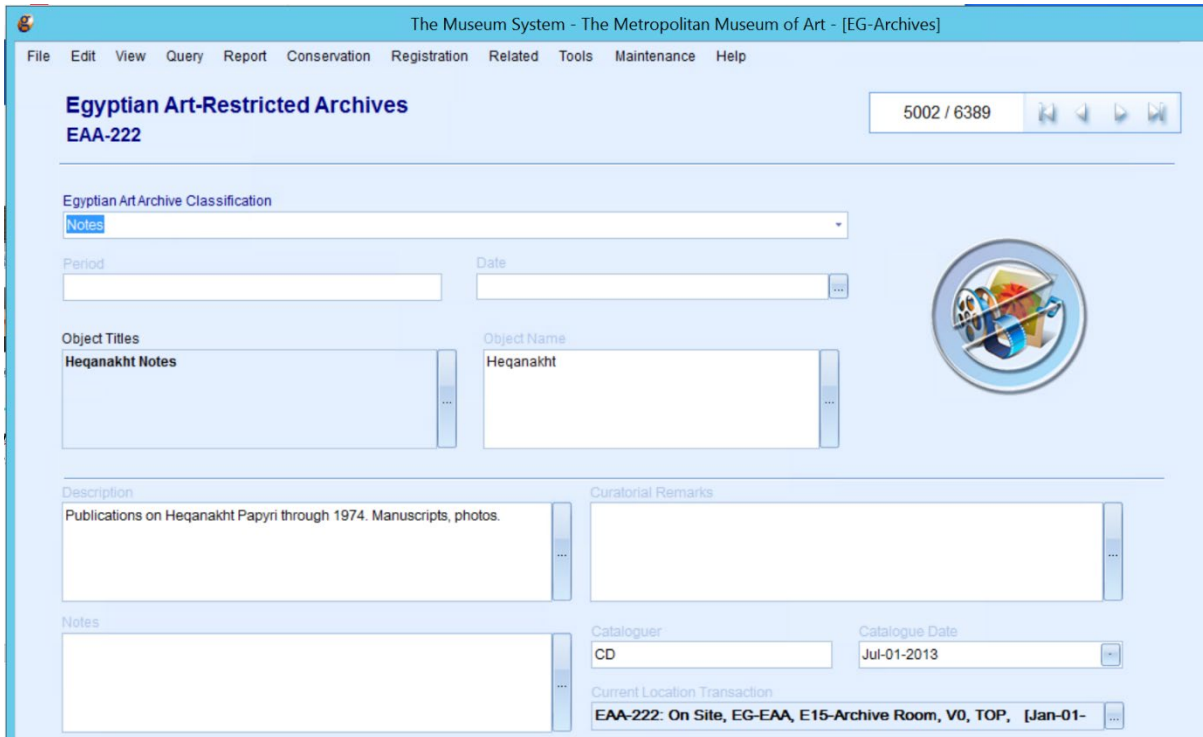


Fig. 7: Example of a TMS Object record for the Egyptian Art archive.

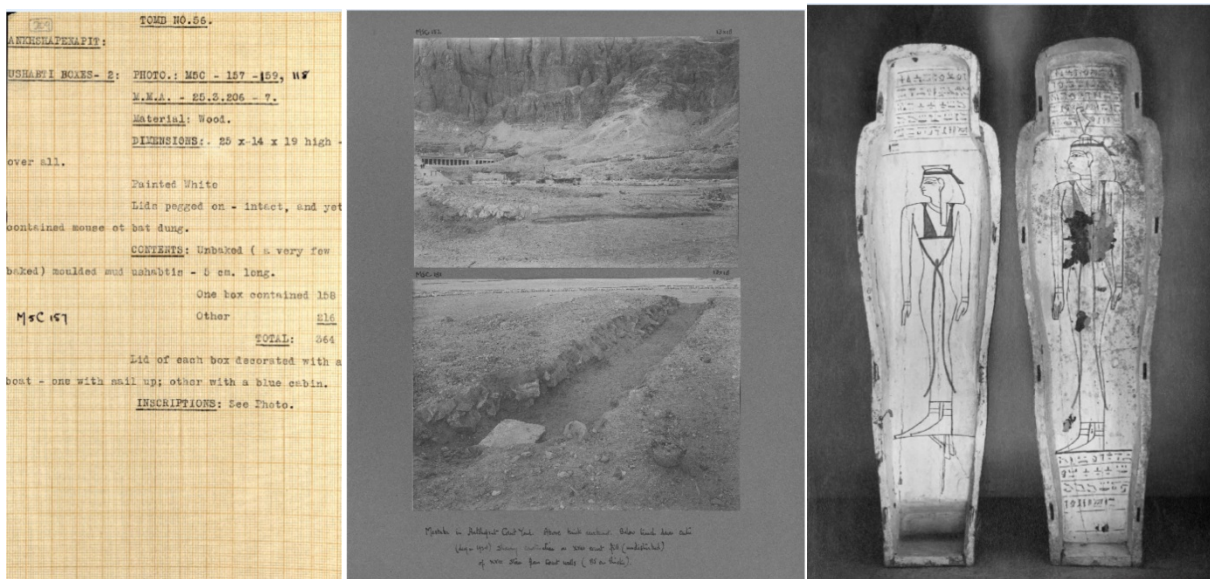


Fig. 8: Digitized archives from the Egyptian Expedition of The Metropolitan Museum of Art (left to right: tomb card, photoboard, expedition photograph).

black and white field images have been attached and captioned; and large format maps and plans (Fig. 8).

These archives are a rich source of information, and have resulted in a number of important publications, either completed or forthcoming (most notably by Dieter Arnold, Dorothea Arnold, Christine Lilyquist, Catharine H. Roehrig, Peter Dorman, James P. Allen, and

Geoffrey Martin).<sup>1</sup> However, a significant portion of this material has been published only as summaries written by the excavators in *The Bulletin of the Metropolitan Museum of Art*.

Since 2012, Kamrin and Dr. Roehrig, with the active support of Dr. Patch, have been working (with a great deal of help from a series of dedicated interns) to digitize all of the Theban archival material. As of the end of 2018, all of the tomb cards, all of the excavation photoboards, and about a quarter of the graphic expedition photoboards (not counting our set of Tutankhamun images) had been scanned. Much remains to do in terms of processing this material (adding or correcting metadata, cropping, color correcting, and cleaning up individual images), but we are making great progress.

Early on in this process, the authors worked together to create a system in which TMS could be used to collect and organize this material. They created a record for each tomb or assemblage in the TMS Sites module. This record can then be linked to related sites, tombs, and individual assemblages through a hierarchy system. Since Egyptian Art is no longer the only department using this module, the site number is prefixed with 'EG'. The basic record includes a site name and geographical information for the tomb or assemblage, along with other basic information (such as bibliography, field director, and photographer) (Fig. 9).

All relevant object records are then attached to the site record. These include objects given to the Museum through partage and still in the collection, as well as deaccessioned objects. Choi also created a TMS "Research" department in the objects module, which allows the Department of Egyptian Art to create and link object records for non-Met artifacts (for the most part objects that remained in Egypt).

As the archival material is digitized, it is linked to the appropriate site records. The linking process has gone through several iterations, but there is now a streamlined procedure that involves NetX, the digital asset management system mentioned above.<sup>2</sup> Once staff have scanned the material and done whatever processing is needed,<sup>3</sup> we add metadata that includes a TMS object record number in the Title field, and then use the Batch Rename feature in Adobe Bridge to create filenames that follow a consistent protocol. The files are then uploaded to a "hotfolder" set up for us by the NetX team; the system automatically creates a media record in TMS and matches the asset to the appropriate object record. Our archival object records (see above) are being used for this purpose—there is an archival record for the tomb cards, one for each set of photoboards, one for each set of images, and separate records for each individual map and plan. Once the media record has been created and matched to

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<sup>1</sup> In 2007, Christine Lilyquist launched a project designed to create an online publication of one large "court" tomb in the Asasif, and has digitized all of the relevant material for this. Her project is currently based in a complex Filemaker system and is scheduled to be put online by the Oriental Institute of the University of Chicago. Most of her material has also been migrated into the TMS system described here, and eventually will be re-published as part of The Met's online platform as well.

<sup>2</sup> We wish to thank here several current or former Met staff members who have been instrumental in helping us develop and implement this process: Farhan Ali; Neal Stimler; and Claire Dienes and Stephanie Post of the NetX team.

<sup>3</sup> We are scanning the photoboards with no corrections, and are leaving them untouched so that we always have the originals.



an object record, it is easy to link it to the appropriate site record. Staff are also able to use the media record as a place to store transcriptions, captions, and other relevant information.

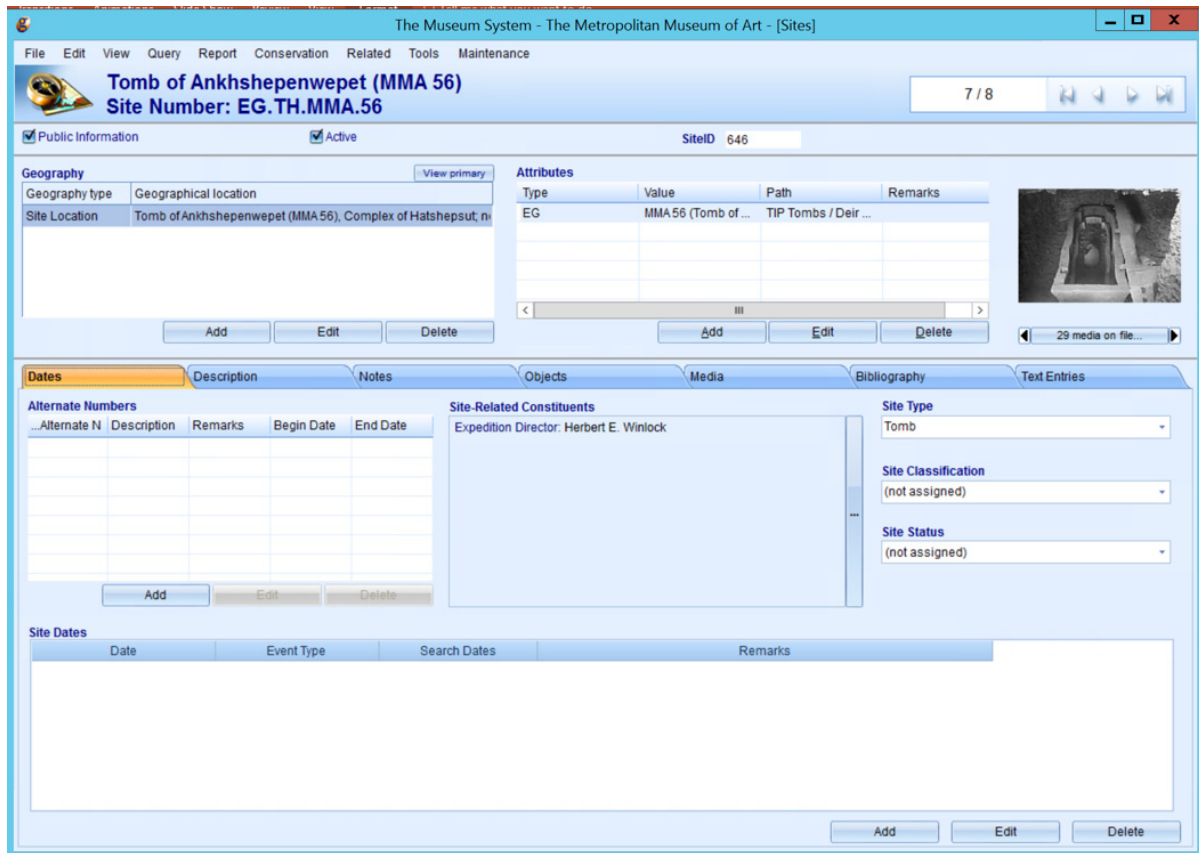


Figure 9: Example of a site record in TMS

Staff are currently (albeit slowly) working through the Theban material one monument or assemblage at a time: checking the tomb cards; creating “research” object records; making sure all media (including maps and plans) are digitized, processed, and attached; adding transcriptions and captions; and writing original essays to describe and interpret the material. Egyptian Art curators, Choi, and Senior Digital Producer and Editor Sumi Hansen are working actively to develop an online publication platform,<sup>4</sup> although there may be a need to push content through to the website from the objects module rather than directly from the site records. Even if this is the case, the sites module has proved an effective way of organizing and processing the archival material.

TMS can be difficult and even counterintuitive to use, and certainly has some drawbacks, especially for archaeological collections. However, approached creatively, and with active collaboration between curators and digital experts, it is proving to be a powerful tool that moves beyond collections management to support dissemination of information and active scholarship.

<sup>4</sup> The authors wish to thank The Met’s previous Head of Digital Content, Lauren Nemroff, for her support of this aspect of the project, which we hope to launch within the next few years.