

# Collaborative Capture: Leveraging Minimal Studio Space for Maximum Output

Margaret C. McKee and Adam Neese, *The Menil Collection*

## Abstract

*In early 2018, the Menil Collection received financial support via a generous grant from the Houston Endowment to spearhead a new digitization initiative. Through tactical cross-departmental collaboration, the Menil has been able to strengthen institution-wide support for imaging. This initiative has allowed us to hire and train staff members, equip an industry-standard photography studio, and develop institution-wide workflows that support the long-term values in our commitment to taking extraordinary care for works of art and the central role of research and scholarship in the collection.*

*Managed by Digital Asset Manager Margaret McKee and technically managed by Conservation Imaging Specialist Adam Neese, this project has resulted in over 1,500 objects being digitized to date with additional images of every object being captured for condition documentation and scholarly research. This paper outlines workflows established for collaborative capture at the Menil and discusses case studies in which the workflows have been utilized.*

## A Brief Menil History

The Menil Collection is an art museum located in Houston, Texas, that has been shaped by the vision of its founders, John and Dominique de Menil, and their belief that the arts are central to the human experience. Admission to the museum is free. The Menil is known for its serene galleries and lack of didactics, meant to encourage a direct, personal encounter with the works on display. The museum's collection is not intended to be encyclopedic but instead reflects its founders' collecting interests in such varied areas as Surrealism, Byzantine art, and civil rights photography. The collection is continually growing.

Prior to the granting period, high quality collection images at the Menil Collection were made on an as-needed basis by contract photographers responsible for providing their own equipment. Utilizing in-house staff, the conservation department undertook photographic documentation for condition reports, treatment-related image needs, and analytical studies. The Collection Management department hired a contract photographer at strategic times throughout the year to capture images needed for its needs and publications. When digital photography began to be adopted by the museum's contract photographers around 2008, separate filing cabinets evolved into separate servers, and images became increasingly siloed.

## Collaborative Capture

With financial support from the Houston Endowment, a private philanthropic institution that works across the community for the benefit of the people of greater Houston, key staff members from the Menil Collection came together to design a digitization program that complements the museum's larger initiatives and vision. This program includes developing workflows that create images that are useful to multiple users, monitoring image quality metrics, and implementing capture, file storage, and metadata standards for documentation and future growth.

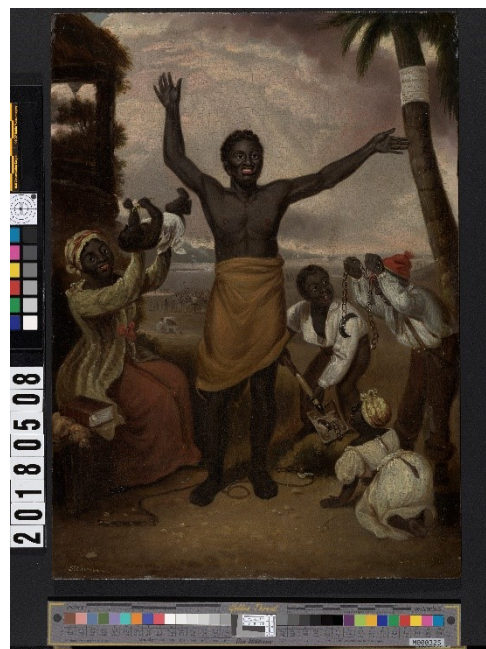
This collaboration is the result of stakeholders from two departments, Collections Management and Conservation, developing a program dedicated to the creation of high-quality digital assets while eliminating unnecessary handling of objects and reducing the need for additional imaging of each work of art. In general, when images of a work of art are requested for either collection or conservation purposes the photographers are cross-trained in the baseline documentation standards of both departments as well. We have been fortunate to hire photographer and long-time friend of the Menil Paul Hester two days per week for the duration of the granting period.

## Baseline Images

There are two types of images captured during this project: primary and secondary. Primary views are the images intended to represent the object as a whole in its best light and without additional scene-referred information, these will be used inside and outside the institution to represent the work in thumbnail form. Secondary views are captured with scene-referred color target and scale bar in place and serve as condition documentation and alternate views of an object. Each painting is photographed as the artist intended; i.e. for paintings with artist-made or intrinsic frames the painting is photographed framed.

Paintings are captured in a series of three or four images:

1. Primary view, normal illumination [1], recto. Made with even illumination and conforming to a strict color workflow. Utilizes flat-fielding in software.



**Figure 1.** Samuel Raven, *Celebrating the Emancipation of Slaves in British Dominions*, August 1834, ca. 1834. Oil on panel, 12 5/8 × 9 1/4 in. (32.1 × 23.5 cm). *The Menil Collection, Houston*

2. Raking illumination [2], recto. This image is most helpful for condition documentation and can reveal surface texture, stretching distortions, or flaking pigments.



**Figure 3.** Detail showing raking illumination.

3. Specular Illumination [3], recto. An image made with the light source reflecting off the surface of the work to reveal reflectivity or texture of varnish, brushstrokes, or pigments.



**Figure 4.** Detail showing specular illumination.

4. Normal illumination, verso. Whenever the painting has a visually accessible verso it is documented for inscriptions and other relevant information.

3-D Objects and sculptures are captured in a series of six or more views

Given the wide range of the collection and the uniqueness of each individual object, three-dimensional photography was the most challenging imaging task within the scope of our project, requiring the photographer to make important decisions regarding the number of images, view angle, lighting, and cropping. The objects are photographed in front of a medium gray sweep background for small- to medium-sized objects, but white may be substituted if it is more suitable. Large objects that would be installed on the floor or those with specific pedestal requirements may be photographed in-situ in a gallery setting. Lighting strategies prioritize creating an image representative of the objects' characteristics in a legible way

and then the lighting is left in place for the remaining secondary views. When cropping, the photographer leaves a reasonable amount of space around the work in order to create an aesthetically pleasing image for publication. The first image captured is the primary view and is made with and without scene-referred color and scale targets. All of the remaining views are made with the targets near the edge of the frame so they can be cropped out easily if the photograph is needed for publication or other use without scene-referred information.

1. Primary view, three-quarter, typically proper right.
2. Three-quarter view with scene-referred color target, scale bar, and tombstone information.



**Figure 5.** Mediterranean, Jar, 1<sup>st</sup>-4<sup>th</sup> century, Glass, 8 3/8 x 8 x 8 in. (21.3 x 20.3 x 20.3 cm). The Menil Collection, Houston

3. All four sides (front, back, left, right) and top and bottom with tombstone information and scene-referred color and scale targets. The scene referred data is included near the edge of the frame for easy cropping for future use.



**Figure 7.** Screen capture during imaging of Jar.



## Works on paper- four views

1. Primary view, normal illumination, recto. Made with even illumination and conforming to a strict color workflow. Utilizes flat-fielding in software. On occasion our drawings will have special marks, pigments, or surface differences and a raking light or large specular light will be used at the photographs discretion to reveal these details and represent the work well.



**Figure 8.** Odilon Redon, *Untitled*, 1896. Lithograph, 17 × 13 in. (43.2 × 33 cm). The Menil Collection, Houston

2. Raking illumination, recto. This image is most helpful for condition documentation and can reveal surface texture, handling creases, or flaking pigments. This image is often embedded in digital condition reports.
3. Secondary view, normal light verso. To document inscriptions, maker's marks, or condition issues.
4. Secondary view, raking light view verso. This image further documents condition and can help to differentiate plate marks against handling creases and other paper condition issues.

## Case Studies

In addition to fulfilling image needs timed with regularly programmed exhibitions, we have also been able to digitize areas of the collection in need of imaging but with less specific deadlines. Due to tight scheduling related to museum construction and art installation schedules, there were several moments in the granting period when it was simply unfeasible to setup a studio for medium or large works anywhere on campus. During these times we undertook specific digitization projects to fulfill future image needs.

### 1. Cy Twombly Gallery

A collaboration between the Menil, the Dia Foundation, and the artist himself, the Cy Twombly Gallery that opened in 1995 reflects the institution's commitment to individual artists and to a standard of presentation that honors the creator's intent as it immerses visitors in a carefully created environment. As a permanent installation, many of the paintings and sculptures housed in the gallery have not been photographed with high resolution digital cameras since their initial installation. For two weeks, Photographer Paul Hester and Conservation Imaging Specialist Adam Neese systematically photographed all 28 large-scale painting in the gallery using the series of captures described above.

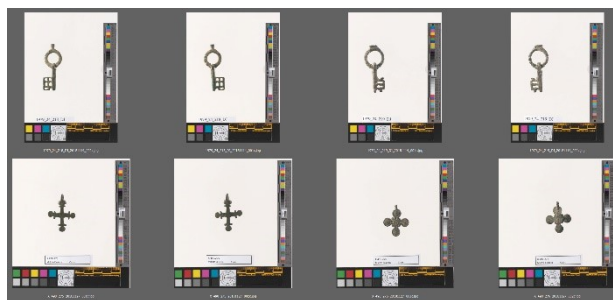


**Figure 10.** Cy Twombly, *Say Goodbye, Catullus, to the Shores of Asia Minor*, 1994. Oil, acrylic, oil stick, crayon, and graphite on three canvases, 157 1/2 × 624 in. (400.1 × 1585 cm). The Menil Collection, Houston, Gift of the artist. © Menil Foundation, Inc.

### 2. Byzantine collection objects

Forced to photograph in tight quarters, the team began looking at smaller objects in the collection. There are several hundred byzantine-era bronze crosses, stamps, keys and other extraneous small objects that were perfectly suited to a comprehensive survey. A single lighting scenario was created and left in place for nearly a month to facilitate rapid imaging of both sides of each object and ensure a uniform body of work.

Working with small objects provided new challenges in obtaining good images. When using a macro lens, extension tubes, or a camera with a bellows a photographer is able to capture images close up. This results in macro images but reduces the depth of focus of the image. To determine the camera to subject distance there was a trial and error process of lowering and raising the camera mere centimeters to capture sharp images with enough resolution. In most situations the objects are occupying only a small part of the frame because the camera to subject distance was increased to improve depth of focus.



**Figure 12.** Screen capture during imaging of Byzantine keys and crosses.

## File Naming and Metadata

Separate servers for conservation and collections imaging had led to differing file naming standards that prioritized different values. Because the conservation department valued the date of photography most highly in order to track any changes in appearance over time, the date of photography was incorporated into their filenames consistently. Because collections management valued knowing which image of an object was most aesthetically pleasing and should be used for reproduction, a set of suffixes to indicate readiness for publication were being used consistently in their filenames. Prior to the start of photography, it was agreed that files would be named by conservation's protocol, with collection management's suffixes being added for views intended for publication.

The Menil Collection has never had an education department, and therefore never developed an extensive collection of teaching slides. Without such a collection, there was never a need to create a database for cataloging images and

creating slide labels. Analog photography of collection objects was stored in folders organized by accession number. When digital photography began to be adopted by the museum's contract photographers, embedded metadata quickly became part of the process and, without an image database, was essential for recording any information unique to each image.

Metadata was embedded by the contract photographers hired by the Menil based on the object list they were given for the shoot. The Menil's conservation department relied on embedded metadata as well, and worked with Greg Reser, a metadata analyst for the University of California, San Diego, to develop a custom Adobe Bridge metadata palette for the department. The palette made it easy to enter artwork information consistently and select keywords from a controlled list of technical imaging and conservation terms significant to the department.

In the months leading up to the start of grant photography, we worked to develop an institutional standard for embedded metadata that merged the needs of both departments. Using the required core set of embedded metadata recommended by the Smithsonian Institution's Embedded Metadata Working Group as a starting point, we insured that all essential metadata was being captured. [4] Staff responsible for licensing images to external parties emphasized the need for the most vital information for identification of the image to appear in fields that are viewable through commonly used applications such as Windows File Explorer in Windows and macOS Finder. An external party may not have access to Adobe applications, much less have custom panels installed.

After developing a comprehensive list of metadata to be embedded in each file, we sorted the metadata elements into three groups: those whose values would remain consistent, those whose values would remain consistent throughout a photo session, and those whose values would change for each object photographed. Elements from the first group were embedded by the photographer during capture using a customized metadata "preset" in CaptureOne. Elements from the second group were embedded by the photographer as well, either through CaptureOne or Adobe Bridge. Elements from the third group were entered by the imaging technician in Adobe Bridge upon receipt of the files from the studio, with the exception of conservation keywords, which were embedded by the photographer at the time of capture to eliminate any confusion at the end of the process regarding which images were intended for publication and which were intended for condition documentation only. Future refinements will focus on the possibility of bulk imports of tombstone object data.

## **Workflows**

In 2013, Head of TMS Julie Thies and Collections Registrar David Aylsworth began using the event module of the Menil's collection management system, The Museum System (TMS), to plan and document photo sessions. Every time a session with a freelance photographer was planned, an event record would be created for the date of the photo session with the photographer linked as an event-related constituent and the objects to be photographed linked to the object tab of the event. Object-specific remarks could be added with special instructions or concerns.

This system worked well to plan the group of objects to be shot in each session and made it easy to generate reports that could be shared with the photographer and others. The events

also served as an easy-to-access historical record of when an object had been shot. Later, the events were also used to track the receipt of the files from the photographer and their upload to the server.

Because this method of tracking photo sessions had been so useful in the past, we decided to continue tracking photography using the event module even though photo sessions were no longer sporadic events. We began creating weekly photo session event records to track all objects that would be photographed that week. In addition to the event record, an Outlook calendar appointment was sent for each photo session to key staff in Collection Management, Art Services, and Conservation to prompt them to check the TMS event record and review the objects slated for photography in order to voice any concerns and plan appropriately.

## **Conclusion**

Any collaboration requires a team of people to be successful and our work to date could not have been accomplished without the support of many of our coworkers at the Menil and elsewhere. Houston Endowment's support has created a unique opportunity for us to establish institution-wide procedures that can be used into the future. This cross-departmental collaboration supports the Menil Collection's larger goals of taking extraordinary care for works of art by reducing the handling time, creating high-quality digital assets, and documenting condition and inscriptions for scholarly research.

## **References**

- [1] J. Warda, *The AIC Guide to Digital Photography and Conservation Documentation*. pg. 113. (2011).
- [2] J. Warda, *The AIC Guide to Digital Photography and Conservation Documentation*. pg. 116. (2011).
- [3] J. Warda, *The AIC Guide to Digital Photography and Conservation Documentation*. pg. 118. (2011).
- [4] EMDaWG (Embedded Metadata Working Group – Smithsonian Institution, *Basic Guidelines for Minimal Descriptive Embedded Metadata in Digital Images*. (2010).

## **Author Biographies**

*Margaret C. McKee is the Digital Asset Manager at the Menil Collection in Houston, Texas. Previously, she worked in photographic and imaging services at the Museum of Fine Arts, Houston. She holds an AA from Bard College at Simon's Rock, a BAFA in Art History from the University of New Mexico, and an MS in Information Studies from the University of Texas at Austin.*

*Adam Neese works as the Conservation Imaging Specialist at the Menil Collection in Houston, Texas. He is also an artist and a recovering academic, having worked at the University of North Texas' College of Visual Arts and Design teaching studio art in the photography program. He earned a BFA from the School of the Art Institute of Chicago, and an MFA from the University of North Texas.*