## 1. Statement of Need

In response to new expectations by the public and made possible by dramatic advances in imaging technology, the Art Institute of Chicago (AIC) has launched a new initiative to fully digitize 100% of our collection through the Rapid Imaging Project (RIP). Currently, digital images exist for approximately 25% of our collection of just under 132,000 catalogued objects, well behind peer institutions such as the National Gallery of Art, Museum of Fine Arts Boston, and the Fine Arts Museums of San Francisco. The RIP will allow us to make images of all of our objects accessible to the public on the museum's Web site, including works that are seldom, if ever, displayed because of their light sensitivity and/or fragility. This imaging effort will create a vast resource of images, which will be used in collateral print publications; digital slide presentations; interpretative material for student, teacher, and family programs; and visitor information kiosks located within the museum. Additionally, the images produced will be used by our conservation department to plan research projects and as digitally annotated illustrations accompanying condition reports and other written articles.

Most fundamentally, the RIP has been undertaken to advance the museum's mission "to conserve, research, publish, and exhibit a permanent collection of objects of art of all kinds…and to cultivate and extend the arts by appropriate means." The advancement of the mission will be achieved by (1) creating greater intellectual control over our collection by forming links between our collections management database and the burgeoning repository of digital images, and (2) increasing public access to our collection, allowing us to reach a broader general and scholarly audience through online resource discovery and increased digital publications capabilities. The RIP is a key component of a massive digitization program that is coordinated with a redesign of the Web site, curatorial record upgrade and verification, and numerous other corollary activities.

Furthermore, the AIC's digitization program advances the objectives of the strategic plan created by our board of trustees in 2002. Specifically, the program addresses the mandate to "ensure that the Art Institute's audiences are as diverse and numerous as the works of art in our collection" by "improving access to the art experience for all people through engaging interpretive strategies that build visitor confidence and connection to the art works." (Please see attached strategic plan for more details.)

The RIP also fits well within the goals of the Collections Stewardship category of the Museums for America program. The project is fundamental to the mission of the museum and the MFA grant program in that it will make the museum's collection comprehensively available to the public through accurate and engaging images and information. This project will greatly increase AIC's institutional capacity to reach new audiences, provide greater access to those parts of our collection that cannot be regularly displayed due to light sensitivity or fragility, support meaningful and personalized experiences for the public, and make the AIC's collection a more valuable resource for scholars.

*Audience/Demographics*

The Art Institute's constituency is local, regional, national, and international. Last year approximately 1.4 million people visited the museum, which is supported by a membership of 84,000. Of these visitors, approximately 44% live in Chicago or its surrounding suburbs, 5% live in another part of Illinois, 45% live in another U.S. state, and 7% live in a foreign country. Based on recent surveys, 18% of AIC visitors also visited the museum Web site, which received 1,892,743 hits in FY07. Visitors to the AIC are predominantly Caucasian (82%) and have a high household income ($92.5K).[1]

[1] Audience demographic data taken from 2005 survey. Another audience survey is currently underway and will be completed in Spring 2009.

The RIP will benefit all visitors to the museum as well as visitors to the Art Institute's Web site by ultimately providing them with access to a broad selection of images and information about all of the objects in our collection, including those that are seldom or never displayed in the galleries. Furthermore, through the museum's new interactive Web site (scheduled to launch in February 2008) school groups, students, and other visitors will be able to create their own online "personal collections," allowing them to plan visits to the museum prior to their arrival, significantly improving their ability to find their way through the galleries and create new opportunities for discovery.

Along with the benefits to a larger public, the digitization project will also benefit more specialized constituencies, specifically, AIC curatorial staff and external scholars, who will benefit from the greater intellectual control and enhanced availability of the AIC's collection. The AIC's collection is one of the largest held by an art museum in the United States, and is used extensively for collection-based research by scholars throughout the world. The digitization project will make it immeasurably easier for scholars to access information on the collection, plan research trips to the museum, as well as request print-quality images for the inclusion in catalogues and other print publications.

*Strategic Planning Process*

In the Spring of 2001, the AIC Board and the Executive Committee asked the Marketing and Audience Development (MAD) Committee to initiate and oversee an institutional planning effort, prompted by major expansion plans and new challenges to visitation in the cultural and leisure market. With the full support of executive management, the MAD Committee contracted the services of Slover Linett Strategies (SLS) to learn more about the AIC's current audiences, the marketplace and competitive forces acting on them, and the need to craft new strategic positions to ensure our continued success.

SLS conducted its audience research from October 2001 to June 2002, gathering extensive community input for the planning process. Research efforts included six focus groups with non-members and members from the city and surrounding Chicago suburbs; 48 intercept interviews conducted off-site at two neutral, tourist-friendly locations; 16 "undercover" visitor audits by people with a range of ages, ethnicities, and prior experience with the Art Institute; and a quantitative survey mailed to 14,000 households, including a sampling of the museum's current and lapsed members. To gather input from the field, SLS also conducted a competitive assessment of four major cultural organizations in Chicago and a peer study of several innovative national and international art museums.

The research findings and recommendations were presented to Board and staff during the Summer of 2002, and executive leadership collaborated with SLS on major strategies through the Fall. Once the strategies were finalized, the Board and executive management created several staff sub-committees to oversee the implementation of improvements in the major strategy areas. These sub-committees continue to oversee these strategically important areas.

## 2. Project Design

The Art Institute of Chicago respectfully requests that IMLS provide a grant of $150,000 in support of the Rapid Imaging Project (RIP) from August 2008 until July 2009, which will be shortly after the opening of our new Modern Wing. The RIP is a critically important component of a massive digitization program recently initiated at the museum. The AIC has made a strong institutional commitment to presenting 100% of the museum's holdings on the World Wide Web. This digitization project will provide public access to the breadth and depth of the museum's collection of art objects, most of which cannot be on public display. It will augment the many other means by which we will

provide improved public access to our collections, and is part of the institution-wide modernization of how we serve the public, a transformation precipitated by the 260,000 square foot Modern Wing addition. When the Modern Wing opens in the summer of 2009, our goal is to have digital images of 75% of our collection accessible on the AIC's Web site as well as on information kiosks located in the new wing and the existing museum. These kiosks will eventually provide museum visitors with access to images of the AIC's entire collection, allowing them to easily locate works currently on display in the galleries as well as find other works of interest that are not on public display.

The RIP, for which we are seeking IMLS support, is a critically important component of a coordinated digitization program that includes a number of corollary efforts. The other activities include (1) redesign of the Web Collections user interface, (2) curatorial upgrade and verification of records in the collections information management system (CITI), (3) retrospective reformatting of print-published object information, (4) re-architecting digital publishing infrastructure, (5) publication permissions acquisition for selected contemporary and modern works, (6) and scanning selected assets from the existing film archive. Concurrent to these activities we will continue our normal studio photography program of visually documenting large three-dimensional objects and other objects not suitable for the rapid imaging workstations. Record pre-publication copyediting and verification are underway and will continue to run concurrent to the RIP. The redesign of the AIC's searchable Web Collections database began in August 2007, and the new Web site will launch in February 2008.

*Project Scope*

Reduced costs and increased capabilities of digital imaging equipment have made possible the RIP, which is optimized for the rapid production of images designed for digital publication, augmenting traditional "studio-grade" photography operations, which are designed for the needs of print publication. The RIP has developed a new balance between quality, cost, and pace that enables rapid image production and the resulting online availability of a comprehensive and illustrated database as well as other digital publications. In this way, we can create digital images of the breadth of our collection that are of excellent identifying quality for resource discovery and most publication needs.

The RIP yields "discovery images" (up to 18 Mb raw capture files, 24 bit color) for designed digital delivery. These images are of ample quality for almost all digital publication needs but require significantly less time and money to create than the "studio-grade" images necessary for publication in catalogues and other print media. Attributes of "discovery images" include (1) more than sufficient resolution for full-screen presentation with current monitors, (2) ability to support on-screen magnification of up to three times without pixelation, and (3) ability to support 300 dpi print publication images of up to approximately 4" x 5", quite sufficient for the majority of publication needs. For publications that require higher quality images, AIC has adopted a policy to re-shoot objects in the studio on request.[2]

In order to realize the quickest return on the RIP, we are first concentrating on small- to moderate-sized works of art on paper, which compromise nearly 50% of the AIC's collection. These works can be easily imaged at sophisticated digital imaging workstations, which have been located in or near departmental

[2] A particularly distinguishing element of the RIP is the need for a policy shift on the part of museums. By committing to produce discovery images, the museum must also commit to respond to print publication requests by handling the objects a second time in order to make new, studio-grade images. In essence, this offers the public a significant role in choosing which objects are imaged at the highest quality level. The willingness to embrace a market-driven methodology such as this is quite different than most existing policies, in which the criteria guiding imaging operations is primarily responsive only to the research needs of the curators and their scholarly colleagues.

storage areas, eliminating the time and potential hazard required to transport objects to the main photographic studios. By concentrating on objects of this type, we are able to capture approximately 50 images per workstation each day, based on previous experience at the AIC and other institutions.

During the IMLS grant period (August 2008 to July 2009), the RIP will work on those collections with the largest number of small- to moderate-sized two-dimensional works of art: Prints and Drawings, Photography, and Ancient and Asian Art. Three imaging workstations are currently in use – one in each department storage area. With three imaging workstations operating at full-time capacity, we expect to create a minimum of 31,500 images during the IMLS grant period. See attached supporting documents for an inventory of objects in each department and the schedule for imaging those objects.

*Rapid Imaging Workstations*

Mobile, direct digital capture imaging workstations, located in or near department storage areas, allow for minimal movement and handling of objects. The AIC currently employees three Digital Imaging Technicians (please see attached job description) working on three workstations consisting of high-end, consumer-grade equipment, including (1) a direct digital capture SLR camera, (2) a copy stand or other three-dimensional neutral lighting set up, (3) photographic lights, (4) laptop computer, and (5) mobile cart and technician's chair (please see attached image of workstation). All three workstations were purchased prior to the IMLS grant period, and thus we are not requesting funds for their purchase.

*Procedures, Workflow, and Data Management*

The RIP is overseen by the AIC's Imaging Department, which is responsible for the initial setup and outfitting of imaging workstations; the quality assurance of procedures, production timeframe, and final results; post-production management of digital assets; and batch uploads and attachment of images to object records. The Imaging Department consulted with curatorial staff to develop procedures that optimize production and assure high-quality images without placing an unreasonable burden on the curatorial departments. These procedures include a general illumination style to assure uniform images and accurate identification; once-daily calibration of imaging equipment (saving valuable time in the RIP process); and "A to Z" object selection, which has proven to be faster and provides more consistent results than determining whether film images exist of individual objects.

The digital images created during the RIP will be managed by the AIC's existing in-house collections management software: CITI (Chicago Information, Text and Indexing system). Originally created in 1992, CITI has nearly 20 years of institutional development supporting it. CITI provides functions for accessioning works of art; fully indexed object cataloguing; inventory control; on-going location tracking; intellectual property rights information; and Boolean search capabilities. By connecting the curatorial content contained in CITI to the images created through the RIP (which will be stored on a separate image server), this application has become the authority for all collection data, which provides for more efficient management of the new digital images than creating a separate database for their management.

The AIC is also building a new middleware system to manage the workflow of image creation. Scheduled to be functional in April 2008, the new system, named Felix, will assist imaging technicians by communicating between the CITI database and the rapid imaging workstation. Felix will query the CITI database by object location and display a list of all objects located in one storage box along with thumbnail images of the objects when available. The Imaging Technician will remove this box from storage and begin taking pictures of the images, creating raw CR2 files for each image. The Technician will then convert the CR2 file into a DNG raw file using Adobe DNG Converter. The Technician will then crop, white balance, and profile the DNG file before saving it as a tiff document with image

number and name. This process will be repeated until all of the works in the box have been imaged. (Please see the workflow chart in supporting documents for more details of the RIP process.)

A component of the successful public usage of the images created by the RIP will be the upgrade and verification of curatorial records in the CITI database for those objects being imaged. This ongoing effort, overseen by the AIC's Manager of Museum Information Systems and coordinated by the Technology Support Coordinator in the Museum Technology Department, will concentrate on records for objects being imaged in the departments of Prints & Drawings, Photography, and Ancient and Asian Art, and will include record verification and copy editing.

*Concurrent and Future Projects*

In order to meet our mandate to create publicly accessible digital images for 100% of our collection, the AIC has committed to undertake a number of projects to complement the RIP. These projects are not included in the current grant request but are indicative of the AIC's commitment to its digitization program. These projects include (1) a redesign of the AIC Web site (schedule to launch in February 2008) that will provide interactive access to all of the available digital images in the museum's collection; (2) ongoing studio photography of large, three-dimensional objects; (3) update of the CITI database, which will include curatorial review of records, editing of existing content, and creation of new content; (4) a retrospective reformatting of print-published object information for inclusion in CITI; (5) a program of publication permissions acquisition for selected contemporary and modern works; (6) the digital scanning of approximately 2,100 existing films of objects in our photographic archive; and (7) the inclusion of visitor information kiosks in the new Modern Wing, scheduled to open in Summer 2009, and elsewhere in the existing museum, which will allow visitors to search for images in the AIC collection and locate objects in the museum galleries.

## 3. Project Resources: Time, Personnel, Budget

In order to be fully successful, the RIP has been completely integrated into the Imaging Department's overall capability. By so doing, the professional experience, techniques, and sensibilities of AIC studio photographers can be engaged to develop the best setups and methodologies for implementation by the imaging technicians. Additionally, by integrating this capability into the operations of the Imaging Department, experienced studio personnel can assist and mentor the imaging technicians. For example, when—owing to size or fragility—objects are deemed to be outside the setup specifications of the workstation, the imaging technicians will pass these on to the more experienced staff. By planning for these inevitable contingencies, the program's production throughput will not become overly encumbered or fall behind schedule. Finally, oversight of the program by the Imaging Department also guarantees consistency throughout the system and quality assurance of the end product.

Project staff is highly qualified, with significant experience in digital imaging and collections management. (Please see attached CVs for all relevant staff.) The entire digitization project is overseen by the Vice President for Collections Management, Imaging, and Information Technology – Sam Quigley – who is responsible for coordinating the activities of the imaging staff and curatorial departments as well as setting project goals and priorities. Mr. Quigley came to the AIC in November 2006 after serving as the Director of Digital Information and Technology at the Harvard University Art Museums for the previous five years. At the Harvard University Art Museums, he was responsible for the departments of Information Systems, Application Development and Support, Collections Information Management, and Digital Imaging and Visual Resources. He also designed and implemented a collections online Web resource that provides public access to more than 110,000 object

records, as well as a comprehensive inventory and imaging project using barcode labeling and custom-developed production applications. Mr. Quigley is considered a museum-industry leader in managing institutional transitions from older models of data organization to comprehensive and current inventory tracking systems. Bringing Mr. Quigley to the AIC represents a significant institutional commitment to the digitization of our collection: since coming to museum in November 2006, he has increased the number of objects with digital images from approximately 2% of our catalogued collection (roughly 2,600 objects) to over 25% (roughly 33,000).

The RIP is overseen by the Associate Director of Imaging, and direct supervision of the three Rapid Imaging Technicians is the responsibility of the Coordinator of the Rapid Imaging Program. Additional support to the project will be provided by the Manager of Museum Technology and the Museum Technology Support Coordinator, who oversee the maintenance of the CITI database.

In order to assure accurate imaging and careful handling of the objects, curatorial staff in the Prints and Drawings, Photography, and Ancient and Asian Art departments also will work closely with staff from the Imaging Department throughout the entire course of the RIP. Curatorial staff in the participating departments has dedicated adequate space in their storage areas for imaging workstations and assisted in the set-up of these workstations to assure their full-time usage is unimpeded but does not interfere with work within the department. Curatorial staff also assisted in the selected and training of the Imaging Technicians in order to assure that objects are properly handled during the imaging process. Furthermore, curatorial departments have designated one of their staff to oversee the handling of objects, and curators have the authority to stop the imaging process if concerns arise.

On an institutional level, AIC leadership has determined digitization of the collection to be one of the museum's highest priorities, and a significant percentage of the regular job duties for staff in the Imaging, Collections Management, and Museum Technology departments has already been assigned to the RIP project. Actual image capture is being performed by three Rapid Imaging Technicians, who are special projects employees already employed by the AIC, so the project will not significantly detract from the regular job duties of other AIC personnel, particularly in the curatorial departments.

The equipment and technological needs of the digitization project are modest. The three workstations for the RIP – including direct digital capture SLR cameras, copy stands, photographic lights, laptop computers, mobile carts, and technician's chairs – have already been purchased (although one camera is nearing the end of its duty cycle and needs to be replaced). We are using our in-house collections management database (CITI) to manage the newly created digital images, and the workflow will be managed by a middleware package (Felix) that is being developed in-house. Additional expenses for the RIP to be incurred during the IMLS grant cycle will include the purchase of additional storage space and contracting for the off-site storage of images. These expenses have not been included in the grant request, however. (Please see attached budget for more details.)

## 4. Impact

The RIP will substantially increase the breadth of our collection that is available to the public (both general visitors and scholars) as well as dramatically improve the experience of using the AIC's online resources. By the time we launch our new Web site in February 2008 (see http://www.artic.edu/artexplorer/), approximately 24,000 object records, 80% with images, will be available. As the digitization of our collection continues, the number of available objects records will grow, until we eventually reach our goal of creating digital images for 100% of our collection. This will

provide the public with access to the breadth of the AIC's collection, including works that are seldom, if ever, displayed due to their light sensitivity and/or fragile condition.

The newly created digital images will also be made available to museum visitors through kiosks located in the AIC's new Modern Wing. These interactive kiosks will allow visitors to access images of objects in our collection, helping them find art works on display in the galleries and connecting them to works that may be of interest but are not currently on display.

The RIP will also significantly increase the functionality of our collection as a resource tool. The AIC holds one of the largest collection of any art museum in the United States, including particularly strong holdings in French Impressionist and Postimpressionist paintings, African American art from every decade of the 20th century, one of the world's most comprehensive collections of modern art, one of the largest concentrations of objects by German artist Gerhard Richter, and some of the finest public collections of Yoruba African art, ancient Chinese jades, Japanese woodblock prints, Surrealist art, architecture, and photography. This collection is a critical resource for scholars around the world, and the images created by the RIP will provide them with an increased ability to view our collection, plan research, and request images for print publication.

Along with its long-term impact on external constituencies, the RIP will also provide significant internal benefits to the AIC. Most significantly, by linking the newly created images to our already existing collections management database, we will increase our intellectual control over our collection, making the use of the collection less time consuming for curatorial staff and other AIC personnel. Digital images will also provide a valuable resource for staff in our conservation lab, who can use the images to plan research projects and as digitally annotated illustrations accompanying condition reports and other written articles.

Finally, because the images created by the RIP will be of sufficient quality for many publication needs, upon completion of the project, we will have a vast repository of images to use as collateral material. These materials could include advertisements and other promotional materials for museum programs; communications to external constituencies, including newsletters, invitations, and digital slide presentations; signage for use in the museum or at special events; and interpretive material for distribution to museum visitors. The images will be a valuable resources to the AIC's Museum Education Department for use in poster packets, which are distributed as teaching aids to Chicago-area schools; interpretive lesson plans for teachers; and preparatory materials distributed to schools in preparation of student visits to the museum.

## 5. Conclusion

The Art Institute of Chicago respectfully requests that IMLS support our Rapid Imaging Project with a $150,000 grant. The project is a key component of AIC's high-priority goal of making digitally accessible 100% of our collection. The program addressed the need of several museum constituencies, including general visitors as well as scholarly researchers, and has significant internal benefits for the museum as well. Furthermore, the RIP has developed a new balance between quality, cost, and pace in creating discovery-quality digital images of the entire collection that can be created within constrained museum resources.

## BUDGET FORM - PAGE FOUR

### Section B: Summary Budget

| | $ IMLS | $ Cost Share | $ TOTAL COSTS |
|---|---|---|---|
| 1. Salaries and Wages | 100,157.00 | 121,744.00 | 221,901.00 |
| 2. Fringe Benefits | 30,278.00 | 36,802.67 | 67,080.67 |
| 3. Consultant Fees | | | 0.00 |
| 4. Travel | | | 0.00 |
| 5. Supplies and Materials | | | 0.00 |
| 6. Services | | | 0.00 |
| 7. Student Support | | | 0.00 |
| 8. Other Costs | | | 0.00 |
| TOTAL DIRECT COSTS (1—8) | 130,435.00 | 158,546.67 | 288,981.67 |
| 9. Indirect Costs | 19,565.00 | 23,782.25 | 43,347.25 |
| TOTAL COSTS (Direct and Indirect) | 150,000.00 | 182,328.92 | 332,328.92 |

**Project Funding for the Entire Grant Period**

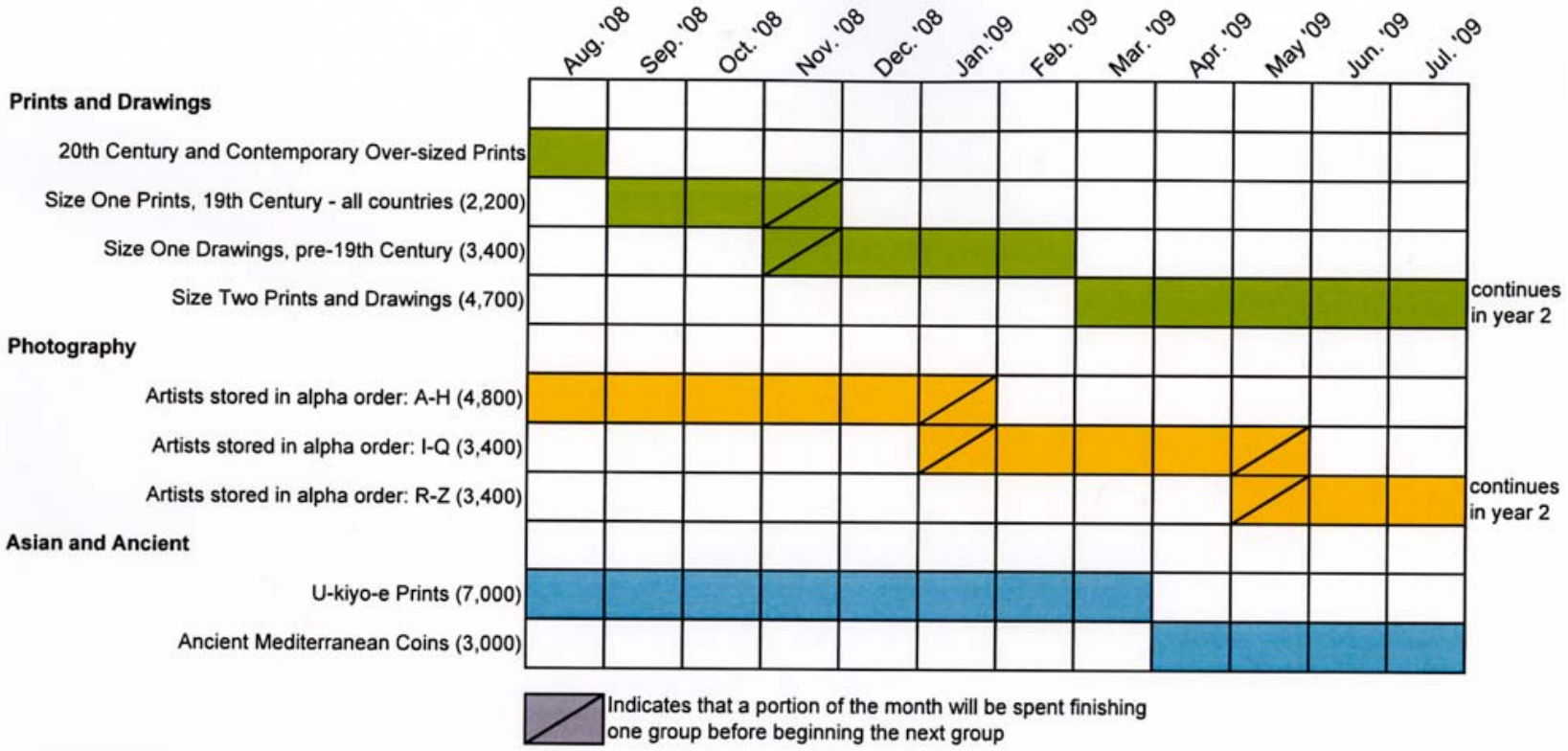
| | |
|---|---|
| 1. Grant Funds Requested from IMLS | 150,000.00 |
| 2. Cost Sharing: | |
| a. Cash Contribution | 182,328.92 |
| b. In-Kind Contribution | |
| c. Other Federal Agencies* | |
| d. TOTAL COST SHARING | 182,328.92 |
| 3. TOTAL PROJECT FUNDING (1+2d) | 332,328.92 |
| % of Total Costs Requested from IMLS | 45.00% |

* If funding has been requested from another federal agency, indicate the agency's name:

Art Insitute of Chicago

# Rapid Imaging Project
## Work Schedule

IMLS Grant Application
November 1, 2007




**Prints and Drawings:** A renowned collection of works on paper, including particular strength in the areas of French 19th-century prints and drawings; British, French, and Italian drawings; Old Master prints. See http://www.artic.edu/aic/collections/prints/index.php

**Photography:** Spanning the history of the medium from its beginning in 1839 to the present, the Art Institute's distinguished photography collection contains representative works of many of the medium's most celebrated practitioners. See http://www.artic.edu/aic/collections/photo/index.php

**Asian and Ancient:** The collection of Japanese woodblock prints is one of the finest in the world and the Ancient collection includes examples of Greek, Roman, Byzantine, and Early Christian coins of outstanding quality and interest. See http://www.artic.edu/aic/collections/ancient/index.php