

## Policy and Procedure



## Digital Projects and Programs: A Comprehensive Strategy

*Revised September 2004*

This comprehensive strategy provides general guidelines and principles for digital projects and programs that involve the University Libraries at The University of Alabama.

This document will be made available to departments and programs at The University of Alabama and to other institutions and groups who seek to initiate or join a collaborative project or program with the University Libraries. This document will also be made available to the general public and potential funding sources.

### 1. Purpose and Guiding Principles

The purpose of digital projects and programs at the University Libraries is to develop accessible digital collections of materials that support the teaching and research of UA faculty and students, and that, in turn, further the mission of The University of Alabama.

The University Libraries especially welcomes proposals that:

- increase the value of materials by providing new forms of intellectual access to the content of the works,
- create additional research possibilities, such as virtual collaboration among scholars, students, and cultural institutions of all sizes via the World Wide Web,
- physically unite disparate collections of items relating to the history and culture of the state of Alabama,
- highlight materials of unique historical and cultural significance from the University Libraries' collections, and/or
- facilitate teaching and learning at the University of Alabama.

Selection for digitization requires, in most cases, that materials have enduring value and that they form a significant research corpus. Short term projects will be evaluated on the basis of their own merits. To the fullest extent possible, completed digital projects and programs will be available to the general public via the World Wide Web.

### 2. Digitization and Preservation

The University Libraries has a commitment to the preservation of intellectual content for the use of future generations. As part of that commitment, the University Libraries supports the application of digital technologies to extend the useful life of materials at risk. ARL (Association of Research Libraries) has endorsed digitization as an accepted preservation reformatting option for a range of materials. As a member of ARL, the University of Alabama and the University Libraries are committed to adhere to accepted standards and best practices in digital reformatting and to establish institutional policies to maintain digital products for the long term. The choice to use digitization, or any reformatting option, for preservation remains a local decision. (See ARL's "[Recognizing Digitization as a Preservation Reformatting Method](#)")

### 3. Legal Issues: Copyright and Intellectual Property Rights

The University Libraries will conform to U.S. copyright and intellectual property law, and follow best practices of academic research libraries.

The University Libraries will consider digitization of materials which are either in the public domain or for which copyright clearance or written permission for open access on the World Wide Web has been obtained.

Any property rights related to digital collections created by the University Libraries shall be those of The University of Alabama, unless these rights are otherwise protected by The University of Alabama Faculty Handbook, Appendix H, "[Determination of Rights in Copyrightable Materials at The University Of Alabama](#)." The rights holder must specifically authorize secondary or derivative use of digital files or collections. Secondary or derivative use of UA digital files or collections may occur only after appropriate authorization has been requested and received.

#### 4. Bibliographic Integrity and Identification

The University Libraries will follow best practices when cataloging digital works.

The University Libraries will assign pre-existing or create original metadata records for all digital projects.

The University Libraries will consider for digitization complete works or collections as well as component parts.

#### 5. Specifications and Standards

Preparation of specifications for each project will be an integral part of the planning process and will follow best practices and developing standards.

The University Libraries' Digital Program Advisory Committee will review project proposals as to technical feasibility and assess how well a project will integrate with workflow, platforms, and systems in use at the University Libraries or at peer institutions.

#### 6. Project Initiation, Development, and Resource Requirements

The Digital Projects & Programs Checklist should be consulted during the process of project development. (This checklist has been revised and can now be accessed as: [Project Evaluation Criteria](#))

Additional resource issues that need to be addressed during the planning process include:

- Need for systems development
- Security of rare items
- Transcription of items not suited to optical character recognition
- Pre-scanning conservation measures and production of stable preservation quality output products
- Expected demand for extensive services to remote users or expansion of user services
- Use of technologies (including hardware and software) not available through the University Libraries.
- Need for personnel with appropriate skills.

The Digital Program Advisory Committee will review completed proposals. Proposals and recommendations will be forwarded to the Dean of University Libraries for consideration and final decision.

*Note: Modeled on The University of Pittsburgh's "Mission and Guiding Principles of the Digital Research Library"*

[Digital Program  
Project Recommendation Form](#)  
[Project Evaluation Criteria](#)  
[Master List of Digital Projects](#)



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**Digitization Standards: Non-transmissive Materials**

lower resolution

**Group A**

- Visual presentation only
- Images only
- Use for course study / lecture support
- No pan & zoom needed
- Low-Moderate resolution standards

Examples: World Civ. class lecture, web presentation, PP presentation; slide sets for course reserve.

GROUP A Digitizing Standards		
	MASTER	DISPLAY
Resolution	72 - 150 dpi	72 dpi
Long Dimension	63 - 1500 pixels	63 - 630 pixels
Bit Depth	1 bit bitonal, 8 bit grayscale, 24 bit color	1 bit bitonal, 8 bit grayscale, 24 bit color
File Type	TIFF	JPEG
Compression	None or lossless	Lossy

**Group B**

- Detail desired
- Visual presentation with multiple views (pan & zoom)
- Text capture
- Born-digital surrogates of existing and accessible objects – originals still available for technical upgrade
- Resolution standards usually medium to high

Examples: Image intensive presentations—art history lecture; Images of manuscripts to be displayed with text transcription; maps.

GROUP B Digitizing Standards		
	MASTER	DISPLAY
Resolution	300 - 1200 dpi	72 dpi
Long Dimension	262 - 12K pixels	63 - 630 pixels
Bit Depth	1 bit bitonal, 8 bit grayscale, 24 bit color	1 bit bitonal, 8 bit grayscale, 24 bit color
File Type	TIFF	JPEG
Compression	None or lossless	Lossy

Detail Continuum

**Group C**

- Greatest detail desired
- Images for very detailed analysis (more than group B) and / or images that are digitized for preservation purposes
- Born digital items where access to the original is limited
- Brittle and/or light sensitive archival materials (you may only be able to scan the original once)
- Microprint / microform.
- Highest resolution standards

Examples: lantern slides; brittle manuscript pages; slides digitized for preservation purposes; painting in which detail of brush-strokes is desired.

*higher  
resolution*

<b>GROUP C</b> <i>Digitizing Standards</i>		
	<b>MASTER</b>	<b>DISPLAY</b>
<b>Resolution</b>	1200 - 2500 dpi	300 dpi
<b>Long Dimension</b>	1050 - 25K pixels	262 - 3000 pixels
<b>Bit Depth</b>	1 bit bitonal, 8 bit grayscale, 24 bit color	1 bit bitonal, 8 bit grayscale, 24 bit color
<b>File Type</b>	TIFF	JPEG
<b>Compression</b>	None or lossless	None or lossless

Dimensions used: low end - .875 X 1.75 inches; high end - 8 X 10 inches.

PRINT RESOLUTION: Standard for each group

\* Display image standard for GROUP A & GROUP B; high resolution provided via URL

\*\* Thumbnail images are generated by CONTENT



**Digitization Standards: Transparent Materials**

These standards apply to transparent film originals such as 35mm slides of previously printed materials and negatives. We assume that these materials are being digitized primarily for in-class presentation, and therefore recommend only the highest digital capture resolutions. We further recommend a series of pre-production scans at multiple levels within the specified ranges to accommodate differences among scanning hardware devices and to establish uniform digital capture standards for the project.

Lower resolution

**Group A: not recommended**

**Group B**

- Detail desired
- Text capture
- Born-digital surrogates of existing and accessible objects – originals still available for technical upgrade
- Digitization of previously printed materials
- Resolution standards usually medium to high

Examples: Image intensive presentations—art history lecture; Images of manuscripts to be displayed with text transcription; maps.

GROUP B Digitizing Standards for transparent materials		
	MASTER	DISPLAY
Resolution	600 - 1200 dpi	72 dpi
Long Dimension	262 - 12K pixels	63 - 630 pixels
Bit Depth	1 bit bitonal, 8 bit grayscale, 24 bit color	1 bit bitonal, 8 bit grayscale, 24 bit color
File Type	TIFF (LZW)	JPEG
Compression	lossless	Lossy

**Group C**

- Greatest detail desired
- Images for very detailed analysis and / or images that are digitized for preservation purposes
- Born digital items where access to the original is limited
- Brittle and/or light sensitive archival materials (you may only be able to scan the original once)
- Microprint / microform.
- Highest resolution standards

Examples: lantern slides; brittle manuscript pages; slides digitized for preservation purposes; painting in which detail of brush-strokes is desired.

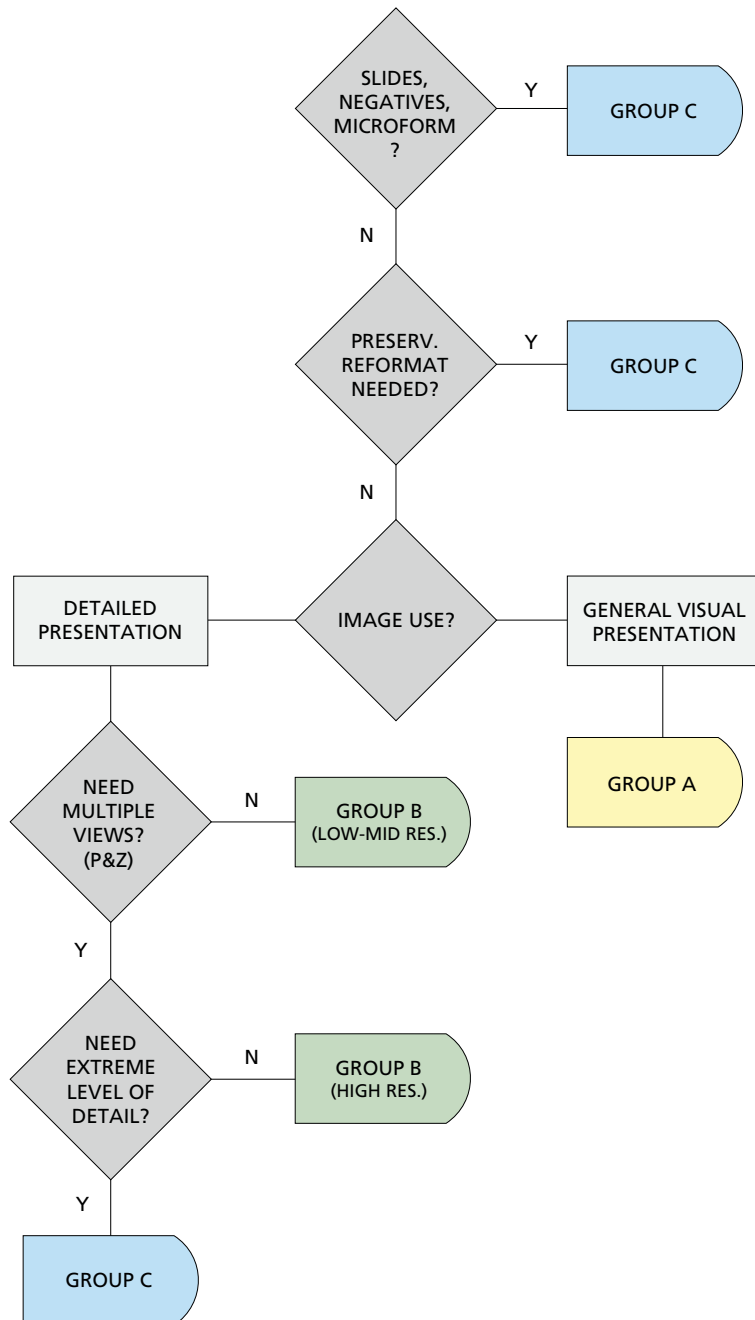
Detail Continuum

*higher resolution* ↓

<b>GROUP C</b> <i>Digitizing Standards for transparent materials</i>		
	<b>MASTER</b>	<b>DISPLAY</b>
<b>Resolution</b>	1200 - 2500 dpi	300 dpi
<b>Long Dimension</b>	1050 - 25K pixels	262 - 3000 pixels
<b>Bit Depth</b>	1 bit bitonal, 8 bit grayscale, 24 bit color	1 bit bitonal, 8 bit grayscale, 24 bit color
<b>File Type</b>	TIFF (LZW)	JPEG
<b>Compression</b>	lossless	None or lossless



### UBdigit Digitization Decision Tree







## Policy Statement on Cost Recovery for Grant-funded Partnership Projects with Digital Collections at the UConn Libraries

Drafted by the Digital Collections Facilitation Team – Approved by Leadership Council on June 4, 2003.

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### Background

The Libraries seek to make its expertise and services available to projects that enhance its mission and its collections. While seeking to partner with university departments and external institutions on bringing digital collections to the Web, it is important to recognize that there are costs for the Libraries associated with these collections. We recognize that there is little value in creating a model of charging back to university departments for personnel and fixed-cost expenditures such as software maintenance and hardware amortization. However, the contributions of the Libraries must be reflected in grant application budgets and in working with institutions external to the university.

### Policy

The Libraries bear real costs in the development and maintenance of digital projects. In particular, there are three costs that need to be considered:

1. Personnel: a percentage of someone's time for maintenance of the interface and software components for upgrades, etc.
2. Server support: cost for maintenance of the software, server, and amortized cost of server replacement
3. Data storage/delivery: cost for the amount of disk space consumed as a measure of the project's size. There are no delivery costs (e.g. per megabyte delivered by the system). There are also no costs associated with the indexing structures.

As of the time this document was last revised, those costs include the following:

1. \$780 for 1% of staff FTE per year (24 hours/yr); which should include the maintenance of the underlying system and application developer time for interface development, consulting, etc.
2. \$100 per year for a portion of software and server maintenance and hardware upgrade costs
3. \$50 per gigabyte of information loaded into the system

In recognition of partnerships with other university departments, the University Libraries does not assess the personnel costs associated with projects except in extreme circumstances. When drafting budgets for grants departments are expected to include all library costs as part of the grant.



## Policy Statement on Description & Access for Digital Collections at the UConn Libraries

UConn

Drafted by the Digital Collections Facilitation Team – Approved by Leadership Council on June 4, 2003.

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### Background

In accordance with the University Libraries' ["Digital Collections Strategic Plan"](#) (March 2002), the digital collections program will strive to "describe digital collections in accordance with established metadata, cataloging, and other standards to promote interoperability and provide effective universal access to resources." The ability to accomplish this description and access goal was partially realized with the purchase of Endeavor Information System's digital library product, ENCompass, in fall 2002. The ENCompass for Digital Collections (EDC) module specifically enables the University Libraries to more fully integrate access to owned, licensed, and locally developed resources while simultaneously providing a comprehensive tool for the standardization of descriptive, technical, and preservation metadata.

### Policy

The digital collections program must continually evolve in response to emerging national and international standards and grow in concert with access technologies purchased, adopted, and supported by the University Libraries. Therefore, the DCFT advocates that, where appropriate and applicable, existing and future locally-developed digital collections should be integrated into the ENCompass system. In addition, effective spring 2003, the DCFT will only endorse delivery of standards-based digital collections using XML or prevailing technologies that are compatible with ENCompass.



UNIVERSITY OF CONNECTICUT LIBRARIES  
DIGITAL COLLECTIONS PARTNERSHIP PROPOSAL

Date Submitted:

Staff Member Requesting Partnership: [Name of Principal Investigator/Project Manager at UCL]

Partner(s) Names/Titles/Organizations:

[Principal Investigator at UCL], [Job Title], UConn Libraries (UCL)  
[Principal Investigator at Partner Institution], [Job Title], Institution (Acronym if applicable)  
[Principal Investigator at Partner Institution], [Job Title], Institution (Acronym if applicable)

1. Describe the partnership/project including (attach any relevant documents):
  - Define the goals, activities, expectations, and products
  - Its relationship to library and university goals
  - An implementation plan explaining the responsibilities of the partners
  - The resources required (staff, funding, equipment) and how these will be provided
  - A project timeline including dates for start-up, evaluation, and closure or continuation
  - If a product is created, who owns the product
  
2. Briefly describe the impact of the partnership on each library area that is affected by the proposal.
  
3. If the project is to be sustained after the initial effort is complete, indicate how it will be maintained.

Leadership Council's Decision:

- \_\_\_\_\_ Partnership Approved
- \_\_\_\_\_ Partnership Disapproved
- \_\_\_\_\_ Partnership Proposal Returned for Further Review

Area Head Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## Guidelines for Submitting Progress Reports on Digital Collections Projects at the University of Connecticut Libraries

Drafted by Heidi N. Abbey, Digital Collections Librarian ❖ Revised

### Introduction and Purpose

Progress reports on digital collections projects are instrumental in measuring the success of the Libraries' digital initiatives to date. They also serve as a practical exercise for digital project managers, consolidating critical information about a given project that can subsequently enable and encourage the effective exchange of good practice among library staff. According to the "Lund Principles" of benchmarking digitization policies (Lund, Sweden, 4 April 2001), there are a number of key themes that can be identified and used as indicators of good practice, including the following:

1. **Management** (objectives, milestones, workplan, timetable, implementation plan, meetings);
2. **Human Resources** (staff resources used, skills identified and/or acquired via training);
3. **Funding** (public/private investments in digitization; strategies for attracting private funding; costs for digitization and long-term maintenance);
4. **Productivity** (intellectual property rights investigated and copyright secured, licensing agreements drafted and approved, partnership documents created and approved, conversion, metadata created, volume of digitized content, website design and development; automated and manual feedback mechanisms created);
5. **Impact** (usability, improvements in access to materials, preservation of original objects, encouragement of Internet use, marketing and promotion of digital resources);
6. **Priorities** (criteria needed to direct resources towards digitizing materials); and
7. **Technical Aspects** (information architecture created or licensed, identification and/or use of appropriate technologies to suit digitization).

The seven themes listed above and questions listed below should be considered as starting points for digital project managers when thinking about and compiling monthly progress reports. Digital project managers should address the seven broad themes and are encouraged to include both qualitative (subjective) and quantitative (objective) data in the reports whenever possible and appropriate.

### Suggested Contents for Progress Reports

1. **Management**  
What objectives did you have for a given month? Quarter? Year? Did you achieve them? If yes, please elaborate. If no, why not?  
What milestones did you reach?  
Did you create any new workplans? Timetables? Implementation plans?  
What meetings did you attend? How many? Were they effective forms for communication?
2. **Human Resources**  
How much of your time (in hours, days, or % of total work time) did you devote to working on your digital collections project?  
How much time (in hours, days, or % of total work time) did other project collaborators (please specify the individual) devote to working on your digital collections project?

Have you attended any training sessions (workshops, institutes, etc.) directly related to your digital collections project?

Have you acquired any new, significant skills?

Did you acquire these new skills on your own? Via workshops or special training sessions?  
Consulting with experts?

### 3. Funding

Do you have adequate funding to complete your digital collections project?

Have you applied for and/or received any grants?

Have you identified strategies for attracting private funding?

What costs have you incurred in creating your digital collections project? What was purchased?

### 4. Productivity

Have you investigated intellectual property rights for your project?

Have you secured copyright for the materials to be digitized?

Did you complete a license agreement with an outside party?

Did you complete a partnership document with an outside party?

Have you converted any materials into digital format? If so, how many items? Images? Pages of text? Did you outsource this work? To whom? How long did it take?

Have you created any metadata? If so, what type? How much?

Have you created any databases? If so, what software did you use? How will the database be delivered to the Web?

Do you have a website for your digital collections project? Dedicated URL? Written content for the website? If not, have you taken steps to see that a website is created?

Have you developed mechanisms for compiling user feedback? Analog statistics? Interactive feedback form online? Focus groups? One-on-one interviews with users?

### 5. Impact

Can you measure the usability of your digital collections project? In other words, have you received feedback from users about how easily your digital collection can be searched, how easily content can be printed out, etc.?

Can you quantify improvements in user access to materials because of your digital collection?

Have you altered your work plan or objectives based upon user feedback?

Have original materials been better preserved/conserved as a result of your digital collection?

Has a collection been processed as a result of your digital collection?

If your digital collection is online, how many users have visited your website? On a given day?

During a given week? Month? How long do users view your digital collection? What comments have you received from users? Positive or negative?

How much marketing or promotion of your digital collection have you accomplished? In what forms (meetings, workshops; local, regional or national conferences; UConn Libraries website, [UConn Libraries Newsletter](#), [UConn Advance](#), local newspaper, print brochure, etc.)? Have these promotional efforts made an impact upon usage?

Who or what organizations are linking to your digital collections project online?

### 6. Priorities

What information architecture do you need to create your digital collections project?

What level of communication have you developed to manage your project?

What policies have you created surrounding the development of your project?

Have you established policies for the preservation of original objects, content selection criteria, development of new services, or wider digitization potential?

**7. Technical Aspects**

Have you identified all of the technologies that will be needed to deliver your digital collection online? If so, what are they? If not, how are you addressing the technical aspects of your project?

Do you have an information architecture plan?

Do you have a schematic of the technology solutions that will be integrated so that your digital collection is made available online?

Is the data you have generated being backed-up on a regular basis?

Have you addressed the short-term preservation of your digital project? In house? Offsite?

Have you addressed the long-term preservation of your digital project? In house? Offsite?

# About Us

[Hardware & Software](#) [Process](#) [MetaData](#) [Image Capture Specifications](#)

## Purpose

This document is designed to document the philosophy and decisions that have been made regarding image capture procedures for archival images. It is important to maintain a high level of image quality across projects and over time. By documenting our decisions we hope to decrease the likelihood of rescanning fragile archival materials. It is also important to choose digital object formats that are likely to stand the test of time for long term preservation of the Purdue Libraries archival resources.

### Scope

- Scanning and file format recommendations for:
  - Photographs, maps, graphic and text materials
  - Document hardware description
  - Document software description
  - Quality control, file naming, scanner and monitor calibration, targets and color bars, storing images, and recording and verification of CD-ROMs

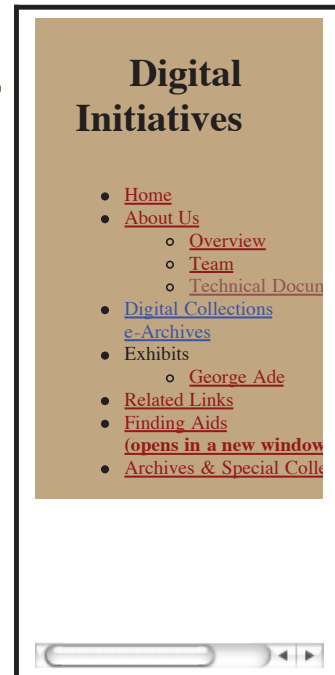
### General Principles

- Scan at the highest resolution for the type of original material
- Scan at the highest quality the first time to prevent re-handling of delicate materials.
- Create an archival copy of the images on high quality CD-ROM media.
- Provide online access copies using NAS storage.
- Create access copies stored on stable CD-ROM media.
- Create meaningful metadata for image files or collections.
- Monitor technology shift and copy to media as needed.
- Document a migration strategy for maintaining access to all of our digital resources.
- Scan original or first generation item wherever possible.
- Minimize on-going costs in favor of one-time expenditures.

## Toolkit

The Digital Initiatives Team has endeavored to create a hardware/software architecture that efficiently handles the large files that will be generated by the project. By appropriately sizing our tools it is expected that labor costs will be minimized.

### Computers



The Libraries has purchased three Dell Precision 670 computers that are dedicated solely to the digital initiatives project. These machines are designed to handle the expected file sizes with ease. We anticipate that many images may exceed 22 megabytes per image. With the need to manipulate such files in Random Access memory (RAM) the project has purchased two dual processor computers with four gigabytes of RAM. Each machine will be equipped with two 20" flat panel displays, two 500 gigabyte hard drives, high-speed FireWire (IEEE 1394) connection and CD/DVD RW drives.

## Scanners

Two Epson 10000XL Expression Photo Scanners with Silverfast scanning software have been purchased. The Epson machines have the capability of capturing 2400 dpi (optical resolution) on a 12.2" by 17.2" flat bed. The team believes that this will handle the vast majority of the materials that are to be scanned. The scanners are equipped with FireWire connections for speedy data communications with the computers. While the scanner is capable of scanning at a color depth of 48 bits, the team is planning on scanning at color depth of 24 bits. The Epson 10000XL is reported to have an optical density of 3.8 Dmax, thus insuring rich detail capture. SilverFast scanner software comes with the scanner. Testing with SilverFast indicates that scanning times may be significantly reduced when compared to using the Epson software.

## Printer

A single Epson printer was purchased. The printer is used to supply users with high quality prints from our collection. The prints are expected to be fade resistant for 100 to 200 years. It also comes equipped with high speed FireWire data connection, ensuring the rapid transfer of data from the computer to printer.

## Hardware and Software Specifications

### Server

Dell PowerEdge  
2 x Intel 300 GHz Xenon Processor  
2 GB of RAM  
4 x 300GB SCSI Hard Drives

### Server Software

CONTENTdm 4.1

### Workstations (3)

Dell Precision 670  
2 x Intel 300 GHz Xeon, 2MB L2 cache  
4 GB DDR2 SDRAM  
2 x Dell UltraSharp 2005 widescreen panel display (20")  
nVidia Quadro FX3400 dual DVI output  
2 x 500 GB SATA hard drives  
IEEE 1394a controller on-board  
3.5" floppy drive  
16X DVD drive  
16X DVD+-RW drive

### Scanners (2)

Epson 10000XL Expression Photo Scanner w/Silverfast  
Specifications



- large-format scanning (12.2" x 17.2")
- Includes 12.2" x 16.5" transparency adapter
- Powerful LaserSoft Imaging™ SilverFast® Ai 6 software
- image resolution - 2400 x 4800 dpi
- 48-bit color
- 3.8 Dmax for precision reproductions
- Hi-Speed USB 2.0 and FireWire® (IEEE 1394) connectivity

### The Bookeye scanner is coming soon!

#### Bookeye 3 color scanner



#### Some Features.

For a start, instead of a CCD that moves behind the lens, it is the other way round. The lens moves in front of the CCD. That has some serious advantages! Not only is the better, centre part of the lens used, there is no drop-off of quality near the edges of the large A1 scan.

Next, there is a constant pefocus device that follows just ahead of the path of the scan. That means that no matter how much the original is at different levels, it is always in perfect focus!

#### Technical Data

- Voltage: 100 - 240 V
- Frequency: 50 - 60 Hz
- Power supply: 50 VA standby / 150 VA operating
- Lamps: LUXEON white LED (light strip: approx. 5000 Lux)

#### Dimensions/weight:

- Width: 35.43" not including lamp arms
- Width: 57.48" including lamp arms
- Height: 47.25"
- Depth: 30.31"
- Weight: Approx. 130 lbs. not including packaging

#### Scanning

- Resolution: genuine 400 dpi on A1
- Colour depth: 36 bit internal / 24 bit external

- Interface: 1000 MBit TPC/IP, Scan2Net
- Software: BCS-2®
- Format: A1 25" x 35.4"

The principle of document imaging that preserves the original condition of historic books, valuable documents, bound originals, colored drawings and maps has been optimized and refined in the new generation of Bookeye® overhead scanners.

Bookeye3® was developed and produced in Germany. It unites a state-of-the-art scan lens, high-quality CCD image sensors and white LED light - clustered in a mobile light strip that follows the scan.

Bookeye3® satisfies the most individual of requirements. This scanning solution optimally equips you for the digitization of 95 % of all types of originals.

### Features

- Precise LINOS (Rodenstock) scan lens
- High-resolution CCD image sensors
- Mobile light strip with high power white LED
- Integrated motor-driven book cradle with 100 mm range
- Originals up to A1 format
- Spine widths up to 3.9"
- Telescopic rail system for the infinite adjustment of the book cradle plates
- Wood surface for the scanning of delicate originals

### Printer

Epson Stylus Photo R1800 Printer

- 8-color Epson UltraChrome Hi-Gloss™ pigment inkset for archival-quality glossy and matte photos
- Fade-resistant photos lasting up to 100-200 years
- Output photos up to 13"-wide
- Speeds through a 11" x 14" photo in under 2 minutes
- Creates borderless photos in seven popular sizes
- Prints directly on ink jet printable CDs/DVDs
- Built-in fast connectivity with Hi-Speed USB 2.0 and FireWire®

### Software

Photoshop CS has been purchased for the necessary image editing and manipulation. Additionally Monaco's EZcolor program has been acquired to use in color quality control. The team chose to acquire the OPTIX colorimeter to enhance the color management capability.

### Storage

The Digital Initiatives Team plans on using redundant storage systems to ensure availability of the digital objects. Each object will be stored on high quality gold/silver anodized CD-ROM for archival purposes. Additionally, copies will be stored off-site using network accessible storage (NAS) and a third copy will be kept on access

quality CD-ROMs. The archive copies on CD-ROM and NAS will be in uncompressed TIF format. The access copies will be high quality JPEG images. Those images are used for creating hard copy reproductions upon request. On-line copies will be available publicly as JPEG 2000 images.



## File Naming Convention

Files are named based on their location within the collection's finding aid. Each file begins with the person's last name followed by a 'b' for box followed by the box number, then an 'f' for folder followed by the folder number and then an 'i' followed by the item number. E.g. earhart-b1f10i5. In the case of corporate names an abbreviation will be used. For example, the Purdue University Retirees Association would be pura-b1f10i5. All letters should be in lower case.

## Technology re-assessment

Sustainability requires that media and servers be reevaluated on a regular basis to ensure that the objects are still accessible. 5 ¼ floppy inch drives do not exist today. As stewards of archival objects it is essential to ensure the viability of those objects over time.

# Intellectual Property Concerns

Watermarks fall into two categories; visible and invisible. Neither type prevents a user from downloading the image for non-authorized use. Visible watermarks simply add visible text or image showing the ownership of the object. Invisible watermarks are embedded in the file. If a file is posted online at a resolution of 300 dpi a user could copy it down and change it to 72 dpi. In doing so it is possible to render the invisible water mark useless. The use of watermarks enables Purdue University to identify its intellectual property.



# Metadata

Metadata falls into 4 different categories.

Descriptive Metadata	Descriptors that describe the intellectual content of the object.
Administrative Metadata	Data that describes ownership and rights management for the object.
Structural Metadata	Data that describes the relations between several objects.
Technical Metadata	Data that describes the structure of the object such as resolution, pixel dimensions,

compression, file size.



# Image Capture Specifications

Last Revised: May 9, 2005

	MASTER	PHOTOGRAPHIC/RESEARCH COPY	ACCESS COPY	THUMBNAIL
DESCRIPTION	Unedited high quality original scans that can serve as surrogates for the original artifacts	Also known as the duplication copy or the "use master." These scans will be made available to researchers who request high quality duplicates for publication, research, or display purposes	Copy used for delivering image via the web; should be acceptable quality for most research purposes	Very small copy used for browsing; presented with bibliographic record
RESOLUTION (PPI/ PPI)	600 (with a minimum of 3000 pixels on the longest edge)  (oversized may be 400)  Text images, scanned in color or grayscale will be scanned at 300 PPI. Pixel dimensions are dependent on the size of the original.	300	72	72
COMPRESSION	Uncompressed	Yes	Yes	Yes
FILE FORMAT	TIFF*	JPG*	JPG2000*	JPG*
SIZE	100% of original (up to 11" X 17")	100% of original	600 pixels on long side	100-200 pixels on long side  (They will either be

				one consistent size or a % of the master copy, depending on size of originals)
BIT DEPTH	24 bit color**	24 bit color**	24 bit color**	24 bit color**
SECURITY	Digital signature	Invisible watermark with transaction code when sending electronically	Visible watermark (nonintrusive) and Invisible watermark	N/A
STORAGE MEDIA	Gold CDs (master & backup copies) & Server	Server	Server	Server
NOTES	Unedited & uncompressed; rarely used copy; very large file size	Users must sign a permissions form specifying their intended use of the image and adhering to the Libraries copyright and publication policies and procedures	Should fit on standard monitor; reasonable file size	Should display quickly and give the user a general idea of the overall image

\*Multipage documents may be stored in PDF format

\*\*For black and white textual items, 1bit or 8 bit may be used

Scanning from negatives when possible is essential. In most cases, negatives are not available so it is important to use a first generation print. The team has chosen to scan all images as color in order to preserve the object as accurately as possible.

Although many formats for multi-resolution objects are available, the team chose JPEG2000. This is an open standard format and not proprietary. It uses a non-proprietary compression scheme providing extremely fast delivery times.

## Quality Control

### Dynamic range

A highly significant factor affecting image quality is the Tonal Dynamic Range – the color space that an image occupies between pure white (255) and pure black (0). Professional TWAIN drivers and image editors such as Photoshop can display tonal dynamic range. Reviewing histograms at the time of scanning is essential to maintain high quality scans.

### Clipping & Spiking

Clipping and spiking appear when black and white points are not set on TRUE black and white. Spiking on the ends of the histogram usually indicates clipping. The image itself may exhibit blockage and pixelization in the

shadows and blowouts in the highlights.

## Color management

Color management can be one of the most difficult parts of the digitization process. Each piece of hardware in the chain from scan to digital object can introduce biases. The team has acquired Monaco EZcolor and intends to use it to manage the system color space during the project.

# Project Manual

The Digits team has assembled a project manual that encompasses the workflow in preparing and displaying documents for the digital collections. As the manuals are completed we will add links to them.

[Scanning Guidelines](#)

[Instructions for Calibrating Monitors](#)

[Instructions for Calibrating Scanners](#)

[Quality Control Procedures](#)

[CD Burning Procedures](#)

[File Load Preparation Procedures](#)

# Works Cited

Kenney, Anne R. and Rieger, Oya Y. *Moving Theory into Practice: Digital Imaging for Libraries and Archives*, Mountain View, California, Research Libraries Group, 2000

Technical Guidelines for Digitizing Archival Materials for Electronic Access: Creation of Production Master Files – Raster Images, <http://www.archives.gov/research/arc/techguide-raster-june2004.pdf>

Inside the CDL, Digital Library Building Blocks, <http://www.cdlib.org/inside/diglib/>

Digitization Guidelines for Creating Digital Still Images, Alexander Turnbull Library, National Library of New Zealand, <http://www.natlib.govt.nz/files/nldraftdign.pdf>

Guides to Quality in Visual Resource Imaging <http://www.rlg.org/visguides/>.

Technical Advisory Service for Images, <http://www.tasi.ac.uk>



**Syracuse University Library  
Digital Library Project Proposal**

Name \_\_\_\_\_ Date \_\_\_\_\_

Department \_\_\_\_\_ Email \_\_\_\_\_ Phone \_\_\_\_\_

Project title (suggested) \_\_\_\_\_

Signatures:

Department Head \_\_\_\_\_ AUL \_\_\_\_\_

**Submission Procedures:**

This proposal requests detailed information on all aspects of the project. Talk with your supervisor, department head, AUL or interested others about the project and its merits.

1. Complete the Criteria Checklist, followed by the Project Proposal form, considering all aspects of the project. Feel free to contact the DLDS Director, Project Manager, or Imaging Librarian for assistance with this process.
2. Secure the signatures of your department head and appropriate AUL.

**Project description and justification:** include statement of importance of project to SUL community and beyond and links to library/university mission and goals.

**Intended audience and potential use:** whom will the project serve and how?

**Physical description:** please describe materials to be digitized, including type and number of items and condition.

**Intellectual property status of material:** please comment on any copyright considerations related to digitization and online availability of these materials. For example, note whether the content is out of copyright (published prior to 1923) or if SUL has been given permission to digitize.

**Metadata/Cataloging:** please indicate whether cataloging exist for these items; list any known cataloging or metadata requirements. Consult with the IMSS (Cataloging or Digital and Electronic Resource Management Services), if necessary.

**Preservation concerns:** indicate whether treatment might be needed prior to digitizing. Consult with Access and Preservation Services, if necessary.

**Budgetary contribution:** indicate whether budgetary support exists for this project and how the department might contribute in terms of budget or staffing.

**Timeline:** describe any preferred start and end dates or other deadlines.

**Collaborative partnerships:** list faculty or other project supporters.

**Standards:** describe metadata or technical standards envisioned for the project, if known.

**Assessment:** indicate measures that might be used in evaluating the impact of the project.

Please provide any additional information that might help inform the initial proposal review, including letters of support, links to any special event, thoughts on project organization.





## DLPS Text Digitizing Services

### for Selectors, Special Collections, RMDS, Preservation, and Patrons

Digital Library Production Services provides text digitizing services for the Library for the purpose of collection-building. We ask that you observe the following parameters when making your request:

#### *Keyboarding Services*

##### Texts:

- Should be in English or other non-Cyrillic European languages
- Should have been published in 18th-21st century or have a common, easily-readable typeface
- Should be of one of the following genres: Prose, poetry, plays, dictionaries, encyclopedias, letters, diaries.
- Texts will first have page images created by DLPS, and are therefore also subject to all parameters under *Page Imaging Services*.
- Further, the page images created (bitonal or color) will be available alongside the searchable text in the Digital Library delivery interface.
- Manuscripts, if handwritten, must be transcribed before DLPS can accept them.
- Few special characters in the texts can be examined or fixed.
- Texts, when finished, will parse against the [DLPS DTD](#).

#### *Page Imaging Services*

- Book bindings must be able to be opened to at least 120° (to be scanned on DLPS equipment). Further, Special Collections material will be scanned in DLPS at the discretion of the Head of Collections Services. If request is denied, other arrangements may be possible through Rare Materials Digitizing Service (RMDS).
- 600dpi bitonal TIFF page images with 600dpi color TIFF figure images will be created for selector and patron requests.
- 600dpi color or greyscale TIFF page images will be created for Special Collections, RMDS, and Preservation materials.
- Color and greyscale TIFFs will have standard jpeg derivatives created for use in the Digital Library delivery interface.
- Color and greyscale page images may or may not have searchable text in the Digital Library delivery interface.
- Bitonal page images will always have searchable text in the Digital Library delivery interface.
- Only whole books or typed manuscripts will be digitized; no sections, parts, or articles.
- A VIRGO or OCLC record for the text must exist (for TEI header creation).

#### *Additional Parameters for Digitizing Out-of-Print Texts Published After 1923 (texts not in the public domain)*

- Permission to digitize an out-of-print text may be granted by the publisher. A requestor should write to the publisher (sample letter provided) to request permission to digitize. If no response is received after 4 weeks, the requestor should follow up with a second letter to the publisher indicating the assumption that permission is granted, after which DLPS will proceed with digitizing.
- If the text is out of print, AND the publisher is out of business, AND the author is deceased, DLPS will proceed with digitizing.
- The requestor must be willing to do all research and provide all required documentation to DLPS before digitization can begin.
- Unless universal access is expressly granted by the publisher, all texts published after 1923 and digitized by DLPS will be restricted to on-Grounds use.

#### *General Guidelines*

- All requests will be queued; DLPS cannot accommodate Rush Requests.
- All texts must be approved by the Library selector for that subject area.
- DLPS does prep for delivery via the standard Digital Library text interface; no tailored services are available.
- The Electronic Text Center may be able to provide specialized services such as enhanced markup or the building of new tools and interfaces, but should be contacted separately.
- All works will be made available to at least the UVA community, but preferably without any access restrictions.
- The Library will archive the text and make the content available as long as is reasonably possible, providing the text can be migrated to new technologies as necessary. Migration may affect the look, feel, and functionality of the text.
- Copies of all text and image files will be burned to CD or DVD for requestors (if desired).

Exceptions will be made at the discretion of the [Director](#) of Digital Library Production Services.

## UNIVERSITY OF VIRGINIA

<http://www.lib.virginia.edu/digital/services/textparameters.html>

DLPS is located on the first floor of Alderman Library. DLPS does not accommodate direct-to-user digitizing services; DLPS only provides central digitizing services for the Library.

Review an updated list of our [Completed and In-Progress Texts](#)

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Charlottesville, VA 22904-4112

[Digital Initiatives Home](#) • [UVa Library Home](#)  
[Search the Library Site](#) • [UVa Home](#)  
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