Keweenaw Digital Archives
A Digital Imaging System for Historical Photographs

Abstract
The project will develop a web-based searchable database of digitized historical photographs documenting Michigan's historic copper mining district. Images will be drawn from several regional institutions, including the MTU Archives & Copper Country Historical Collections, Keweenaw National Historical Park (a unit of the National Park Service), the Houghton County Historical Society, and the Calumet Public / School Library.

Intended Outcomes
The project will develop a web-based searchable database of digitized historical photographs. The system will:

- Provide access to a database of digital images via any web browser
- Include digital copies of images from several institutions and collections
- Allow keyword and subject searches
- Allow browsing of low resolution images online
- Allow patrons to submit comments and descriptions of images (which will be searchable by subsequent users)
- Enable patrons to develop web exhibits of their favorite images
- Create an online ordering mechanism for patrons to order high resolution duplications of images in a variety of format
- Reduce handling of fragile original prints and negatives
- Provide secure off-site storage of digital surrogates for disaster protection

Project Overview
The project will develop a web-based searchable database of digitized historical photographs documenting Michigan’s historic copper mining district. It will immediately provide remote, digital access to resources that are currently trapped in fragile formats and necessarily secured in controlled storage environments. By focusing patron use on digital copies, the system will aid in the preservation of irreplaceable original artifacts. This non-traditional delivery system will engage emerging digital imaging technologies and information management systems. Faculty, staff, students and the general public will have direct access to these resources, encouraging innovative use of digital materials in a broad range of settings, including K-12 and college curricula, academic historical studies and general cultural outreach activities.
The system will greatly improve research and access to this material, allowing remote patrons to search for specific topics, review and directly select low resolution images online, and purchase high-resolution images for specific projects.

By engaging users with historical photographs, the system will also attract patrons to other non-digital holdings at the MTU Archives and its project partners. It will serve as a marketing and promotional tool for the MTU Archives, the University, partner institutions, and the region as a whole.

The system will also be designed with the capability to manage other types of digital content - digital audio, video, text and other types of graphical material such as maps and engineering drawings. Initial work, however, will be limited to photographic images as these materials have greater needs in terms of preservation, access and descriptions, while also have potential for high-use by our patron base.

This project also creates an important new node in the J.R. Van Pelt Library's continuing digital initiatives, building new skill sets and design experiences of value to subsequent projects.

**Operational Components of System**

The project will develop an integrated system of hardware, software and staff processes designed to make traditional photographic media available through a web-based portal. The system will allow for scanning, storage, searching, retrieval and high-quality output of digital images.

**Scanning Station & Staff Interface**

The system will include a scanning station capable of creating digital surrogates of historical photographic prints, negatives and other documents. An initial selection of images will be digitized from unique historical prints and negatives (including some rarely used glass plate negatives). Scanning will be done at the highest possible resolution, following a set of standards determined during the project design phase. The station will also provide templates for description of material.

**Image Storage**

Low resolution JPEG format surrogates will be stored in a high-capacity server environment located at the J.R. Van Pelt Library at Michigan Technological University. Images will be stored in high resolution TIFF version 3 format as well as burned onto a CD-ROM. Disks will be stored in the MTU Archives under secure conditions. Additional off-site tape back-up of data will provide disaster protection.

**Metadata Cataloging and Query Capability**

Images will be cataloged following standards determined during the project design phase. The image database will be designed with a variety of query formats. This will be a secure, in-house
component of the system, accessible only to authorized members of the J.R. Van Pelt Library staff.

Web Portal

The project will include software development and hardware for a searchable web portal. Low resolution images with embedded credit lines will be extracted from the in-house collection of high resolution images and shared to this web portal along with their accompanying information. This portal will allow patron access from any web browser worldwide. Patrons will be able to browse images or conduct keyword searches of the associated catalog data. Designed as a "Virtual Copper Country Photographic Collection," the web portal will be designed to also allow for images from other institutions to be shared through this single web-searchable database. Other institutions, such as the Keweenaw National Historical Park and local museums, will be invited to provide low resolution images with embedded credit lines and associated catalog data for the system. On-screen information accompanying each image will direct patrons to specific institutions for high-resolution duplications of individual images.

Patron-Initiated Components of Web Portal

The web-based system will include two additional components encouraging patron interaction. The first is a "comment" section, allow patrons accessing the web system to add their own comments, recollections, images or other descriptive information to the information accompanying any given image. The second will be a "build your own exhibit" component, which will allow users to select images, add their own comments/narrative, and combine them into a web-based photographic exhibit available to the public. Both of these patron-initiated components will encourage additional information about individual historical images to be collected and preserved, thereby improving the collective knowledge of Copper Country history.

Output Operability

Patrons accessing the web portal will be able to directly download low resolution images to their workstations. The secure, in-house image system will also allow the MTU Archives to provide quick delivery of high-resolution images at the patrons’ request. Included will be functionality for delivery of digital images via e-mail and CD-ROM, as well as high-quality prints in a variety of sizes.

Assessment Component

The system will include statistical components to capture, gather and report statistics of use, particularly public use of the web portal access unit. Statistical reports will allow for review of production efficiencies, geographical profiling of users, and overall success and achievement of the project. Assessment of success will be quantified via usage figures, requests for high-quality duplication (and associated revenue stream), and with a follow-up assessment program including survey and focus group input.
Sponsorship

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