Incorporating Digitized Images in the UHCARL PAC Online Catalog

by Martha Chantiny

The University of Hawaii Libraries received a federal grant to acquire scanning and digitized image storage equipment. The Libraries will be utilizing prototype CARLterm retrieval software jointly developed by the Boulder Public Library and the Colorado Alliance of Research Libraries to preserve an important archival visual resource for Pacific researchers. The software links bibliographic records describing images with the digitized images themselves. Prior to digitization these photographs were not available for general research. A review of the progress of the project and a display of the images will be discussed.

History of TTPI Archives at University of Hawaii Libraries

Origin of Trust Territory of the Pacific Index

The trust Territory Archives is a microfilm record of the files of the U.S. Administration of Micronesia. After WWII, the islands of Micronesia became a U.N. strategic trusteeship, administered by the United States. The trusteeship came to an end in 1988. In the early 1980s the University Libraries participated in a program to preserve the records of the Trust Territory Government. Over 2,000 reels of microfilm were deposited in the Pacific Collection of the University of Hawaii Libraries. The index to the Trust Territory records were received on magnetic tape and reorganized into MARC format for loading into an automated online catalog system.

TTPI on the ALOHA System

The index to the archives, called TTPI, was originally loaded as a separate database subsystem on the Libraries' former automated system, ALOHA. It was searchable using the same OPAC software, but switching between the main database and the TTPI database required logging out and logging back into a separate set of files.

Transfer to UHCARL

In 1989, when the library switched to the CARL automated system, the TTPI database was converted and loaded on the new Tandem computer. The CARL software has built-in support for easily switching between different PAC databases. The TTPI database became accessible from the same PAC menu as the main online catalog database.

Visual Materials in the Trust Territory Collection

The photograph collection of the Trust Territory Archives was also donated to the University of Hawaii and consists of an estimated 30-40,000 photographs and/or negatives and 2,000 slides. Records describing the photographs are already included in the TTPI database, but collections of photos are indexed under general headings and by folders.
Overview of the Project Proposal

Boulder Pilot Project

In August of 1990, the University Libraries became aware of a pilot project underway at Boulder Public Library to make digitized images of visual materials accessible on CARL PAC workstations. The Archivist and other staff at Boulder Public Library were working with CARL Systems programmers to develop software interfaces between digitized images and MARC cataloging text stored on the Tandem mainframe computer. Since the UH Libraries have a number of archival photographic collections, and there are visual materials collections of great historical interest in a number of public and private institutions in the state of Hawaii, interest in a similar project was strong.

UH Libraries Federal Grant Application

In order to obtain the equipment and personnel that would be needed to undertake such a project, an HEA Title II-C federal grant, under the category “Strengthening Library Resources” was filed by the University Libraries in June 1991. A revised budget requesting approximately $44,000 for personnel, $11,000 for student assistants, $53,000 for microcomputer, scanning, networking and optical storage equipment, and $15,000 for photographic equipment was submitted and approved.

Initial Project Implementation

Funding and Hiring

Funding was released in October 1991. Research and request for quotes for equipment began at that time. The position of Project Manager was advertised and interviews were held in November. Requests for purchase of the initial scanning equipment were submitted to the Library and University campus purchasing offices. The Project Manager started work in mid-January 1992.

Scanning Workstation

The microcomputer, scanner and software for the scanning workstation arrived and were set up in mid-January. The microcomputer is a 386/33 with 8MB of RAM, a VGA color monitor and a 200MB hard drive. The scanner is a flatbed Umax brand (similar to Microtek300G). The scanning software is a commercial product called Picture Publisher Plus, running under Windows. The printer is an Acer IIIG laser printer, capable of producing printouts with better resolution and gray-scale than the standard laserjet type printer.

Experimentation and Demonstrations

Although the procedures used at Boulder were available as “starter” documentation, a great deal of experimentation with scanning and cataloging procedures characterized the first five months of the project. Understanding how the proprietary CARLterm software worked in conjunction with the UHCARL PAC program and exploring the implications of cataloging practice with regard to record display and retrieval required time-consuming study and debugging.
IN-STATE DATABASES, INFORMATION AND LIBRARY SYSTEMS

33. Hawaiian/Pacific 'UnCover' Journal Article Access
35. Hawaii Sheet Music Index
36. Trust Territory of the Pacific Database

Enter the NUMBER of your choice, and press the <RETURN> key >>

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Figure 2. Display of selections within In-State Databases

In addition to getting the project underway, setting up processing procedures, learning the scanning and CARL Maintenance software, the Project Manager and the Library Systems Office staff were also called upon to demonstrate the embryonic system at a number of locations. The most prestigious occasion was at the March 5, 1992 reception honoring the former University Photographer, Mr. Masao Miyamoto, for over forty years of service. The Miyamoto Photo Collection has been added to the University Libraries Archive collection and is a resource highly suitable for inclusion in a digitization project.

As of the end of September nearly 1,900 images have been digitized, all but 68 of them black and white. Bibliographic Records

Over 875 bibliographic records have been updated or enhanced, and nearly 570 of those records have been linked to digitized images. There are an average of ten images linked per record. However, the number of digitized images per bibliographic record ranges from one to fifty-three. New MARC records need to be created to accommodate records with more than 15 digitized images linked to them, because there is a CARL software limit on the maximum number of words...
which can be indexed per bibliographic record. That limit is 409 words, which is exceeded if a large number of images are described and linked to a single bibliographic record.

**Equipment**

Three public display workstations and printers have arrived but have not yet been installed. A File Server and Novell Netware 3.11 are on order. A purchase order has been issued to Micro Design International to acquire a Laserbank Library WORM Jukebox system.

**Personnel**

Two student workers began assisting the full-time Project Manager in May 1992. They worked half- and full-time during the summer learning inventory, scanning and cataloging. Three more workers were added at the start of the Fall semester; currently, nearly 60 hours per week of student assistant hours are devoted to the project. A full-time Library Photographer is working primarily on this project and is assisted by one student worker who works twenty hours per week.

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1. **Department of Public** UHM IMAGED - Palauan storyboard carvers MFILM V10001 Reel 1756 F
2. **Department of Public** UHM 1973 Palauan traditional leaders in saipan at hicom MFILM V10001 Reel 1768 F
3. **Department of Public** UHM IMAGED 1973 Palauan traditional leaders in saipan at hicom MFILM V10001 Reel 1768 F

<RETURN> TO CONTINUE DISPLAY ENTER <LINE NUMBER(S)> TO DISPLAY FULL RECORDS (Number + B for Brief) <P> Previous FOR PREVIOUS PAGE OR <Q>QUIT FOR NEW SEARCH

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**Figure 4.** Summary display of records for digitized images

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**AUTHOR(s):** Department of Public Affairs Publication Division  
**TITLE(s):** PALAUAN STORYBOARD CARVERS  
4 B/W contact sheets; (4 imaged).  
Photo 3 - Storyboard carver working on the right. (Neg. PA002-91).  
Palauan storyboard carver at work demonstrating style in this traditional art form, a mainstay of the handicraft trade. 1966.  
Photo 1 - Storyboard carver, facing forward. (Neg. PA 002-89).  
Photo 2 - Palauan storyboard carver, looking down. (Neg. PA 002-90).  
Photo 4 - Storyboard carver working on the right edge. (Neg. PA 002-92).  
Image File: AACA00001756.05

**OTHER ENTRIES:** Palau Information and Public Relations Films and Photographs

**LIBRARY:** UHM IMAGED **CALL #:** MFILM V10001 Reel 1756 Frame  
NA — Trust Terr. Archives—

<RETURN> to continue, <Q>QUIT for a new search, or <R>EPEAT this display  
<X> for EXPRESS <H> for HISTORY ? for HELP >

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**Figure 5.** PAC Display of individual bibliographic record for digitized images
during the summer and ten hours per week during the academic year.

Explanation of the Image Linking Process

MARC Tags in Bibliographic Record

Descriptions of each photographic image are entered as text in one or more 530 tags, subfield 3. The filename of the image, or last image if more than one is described in the bibliographic record, is entered in a separate 530 tag, in subfield d.

CARLterm and PAC

The CARLterm Image Display software reads the filename from the 530 tag and seeks the image based on the information encoded in the filename. The PAC program also reads the 530 tag, and displays a prompt on the option line at the bottom of individual bibliographic record displays which says "Image File Available." The user then presses Alt-F2, and the CARLterm Image Display software will display the image to the screen of the workstation monitor. The VGA display produces a full-screen image which retains the detail of the original photograph and in some cases produces an image more easily studied than the original document.

Link Between File Server, Workstation, and UHCARL

The public microcomputer workstation, running CARLterm Image Display software, will be the link between the file server, which mediates multiple access to the optical disk storage system, and the Tandem mainframe computer, which houses the bibliographic database and indexes. The full configuration is expected to be installed by January 1993.