

AN APPLICATION OF OPTICAL DISK CD-ROM TECHNOLOGY TO MUSEUM RECORDS

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ABSTRACT

Based on the requirements under the Native American Graves Protection and Repatriation Act (NAGPRA) for federal agencies to develop a comprehensive data base for agency-owned archaeological collections, the Bureau of Land Management initiated a three-year study to obtain collections data from curation facilities in California, Nevada and Oregon. Over the course of our study it became clear that a major problem was the duplication of catalogue and other material for use in our offices statewide and by other agencies. Inasmuch as our hard copy files now consist of eleven file drawers of material from hundreds of archaeological sites statewide, we decided to use optical disk CD-Rom technology as it allowed ease of access by users, but also was expandable and relatively inexpensive and could be used to reproduce original museum documents.

INTRODUCTION

The Bureau of Land Management is an agency within the Department of the Interior. It is responsible for administering about 14 million acres of public lands in California and northwest Nevada. For the purposes of this paper the significance of our administration of land rests in the fact that the BLM is a late arriver compared to the history of collections acquisition in the west. The BLM originated after World War II as a result of a merger of an old agency which was extremely important in the settlement of the Nation, the General Land Office and the Taylor Grazing Service which served to oversee and monitor grazing practices on the public lands.

With the passage of the American Antiquities Act of 1906 and its Uniform Rules and Regulations of 1907 permits were required to be issued for the pursuit of research and collections. Permitting authority for such academic enterprises was delegated to the Secretary of the Interior then peer reviewed by the Smithsonian Institution until

1960. The Office of the Undersecretary of the Interior then issued permits until the Office of the Departmental Consulting Archaeologist began issuing permits for all Interior and Defense agencies in 1968.

The earliest known permit in California was issued to A. L. Kroeber in 1910 to excavate a site in Kern County. Permits were also issued to Mark R. Harrington for work in the California and Nevada deserts, Elizabeth Crozier Campbell for work with the Southwest Museum in the Dalifornia Desert, and to Malcolm Rogers of the San Diego Museum of Man for his extensive work in the Mojave and Colorado Deserts.

Until the passage of the National Environmental Policy Act of 1969, archaeology legitimately conducted on public lands focused on research, collections and student training. For a short time after the passage of NEPA the National Park Service served as staff to various Interior agencies. By 1972 BLM needed to look at hiring their own staff of archaeologists, which occurred

when Herrick Hanks was hired in 1973 and Bill Olsen was hired in 1974.

By the 1980s archaeologists were located in nearly every resource area. Secretarial Order 3104 effective on October 1, 1984 transferred the permitting authority for antiquities from the Secretary of the Interior to the Director of the Bureau of Land Management. Internal memoranda limited the authority to the Deputy State Director and stated that it could not be additional redelegated. Hence, today the authority to issue permits which now are labeled as cultural resource use permits rests in BLM's 11 state offices.

The significance of this short history of permitting authority on BLM land is that for much of the history of the public lands the BLM did not exist, then for a large segment of the history of the BLM the agency had no archaeologists. So there is little collected memory of what was collected from the public lands by whom and when; also there was nearly no knowledge of where particular pre-1980 collections resided.

As explicated in the 1906 act that permits could be issued for "increasing the knowledge of such objects, and that the gatherings shall be made for permanent preservation in public museums." With the passage of the amendments to the Archaeological Resources Protection Act and the Native American Graves Protection and Repatriation Act the BLM in California was charged with locating, documenting, archiving and distributing information on the collections to various groups including California Indian tribes. Since Bill Olsen was BLM's first California State Archaeologist and he had served in the Department of Parks and Recreation as a senior archaeologist since 1958 he was asked to undertake this project. Bill will now explain how the process worked and how the CD-Rom technology as contracted to EBS Office Solutions play an important part in the completion of our inventories.

Following three years of investigation, which included review of antiquities permits, both from our files and NPS files, BLM contract files, publications and personal knowledge of BLM staff from 1972 to 1995, the Bureau of Land

Management was able to identify 40+ curation facilities which hold Bureau collections. Included in this total area 9 branches of the California State University system, 5 community colleges, 5 branches of the University of California system, 3 out of state universities, 4 consulting firms, 12 museums, and 6 other facilities including the US Forest Service, National Park Service, California State Park system, and Orange County. We are also aware of some collections that are at present untraceable.

At this point we had acquired collections data, mainly catalogues, from most of these facilities. In some instances we also obtained photographs (negatives and prints), site location maps, field notes, site location data, etc. While we still lack collections data for all collections, we accumulated some eleven file drawers of paper related to hundreds of individual collections and anticipate the acquisition of additional collections data over the next few years as it may become available. There are still instances where collections were never processed, and in some instances even information on the original acquisition is poor. In some instances collections suffered from lack of funding to bring the records to an acceptable level. This is still a problem for some museums or other curatorial facilities.

It was clear that the Bureau could not manage the immense amount of paper generated by the collections inventory in a manner which would make the data of any use to either the Bureau or other prospective users. To copy the many feet of paper files was simply out of the question, when we had to provide it to some 16 field offices. This obviously necessitated an approach which did not involve duplicating paper records. On this basis we looked at preparing summary documents, though this was rejected in that it would not allow us to meet NAGPRA requirements, and was not useful for other users of the collections data. In looking for a suitable mechanism for copying the material in a format that allowed some ease of retrieval and use, we decided to investigate current CD-ROM technology. Discussions with Bureau computer staff specialists led us to pursue this option based on several considerations, including the ability to reproduce the original documents, including photographs and maps and relative ease of use of the resulting

optical compact disks. In many instances the advantages of this optical technology were of immense benefit. Some of the catalogues were still in the original form, as were some of the field notes referring to collected material which may or may not have been formally accessioned into a collections system. We thus avoided the need for redoing the catalogues to make them available for duplication.

While the CD-ROM optical disk technology does not allow changes in the data, this is not a problem in that we simply needed copies of existing collections documentation rather than files which could be manipulated. Our goal was to account for collections and not to carry out research on those materials in the collections. It would appear that the CD-ROM optical technology would be ideal for recording, in a permanent manner, older collection data, field notes and other raw data where the purpose is to preserve original documentation in a relatively permanent manner and in a manner which allows some add-on information to be inserted, but without change to the original material.

WHAT IS PAPER TIGER?

The software we used to run the collections data is Paper Tiger. Paper Tiger is an affordable, image-based, easy to use Microsoft Windows program that stores paper documents, drawings and handwritten notes on a computer. The user can search for a document by choosing one, some, or all of the field names given to the document at the time of scanning. The document can be found by opening its cabinet and folder and/or searching on up to three additional fields. Once the document is found, it can be easily viewed, annotated, faxed and printed.

The Paper Tiger store module provides an efficient interface to scan and index documents into the system. Scanning a document is simple: select the cabinet and folder for your document from the list boxes, then click the scan button. Name the document by using some or all of the three fields for indexing. Once the document is stored, it is easy to retrieve, view and print.

System Requirements

To run Paper Tiger, one needs at a minimum the following workstation hardware:

- A PC with an Intel 486 or higher processor
- A mouse
- MS DOS version 5.0 or newer
- Microsoft Windows 3.1 or later
- 8 MB of random access memory; 12-16 MB recommended
- Super VGA or accelerated video adapter
- 14-16 MB of hard disk space
- At least 2 MB of hard disk space in Windows temporary directory

To run Paper Tiger from a network one must use one of the following:

- Windows NT
- Windows for Workgroups
- Novell 3.x or greater

CONCLUSION

Has the program worked? From the perspective of the agency, collections management and NAGPRA needs the program has, we feel, been successful. From the perspective of increased ability of field office and research entities to utilize the collections and toher data we feel that the product has been under-utilized. The one thing that our efforts have pointed out is the large body of raw material available to the researcher currently held in museums and other repositories. When one realized that in some cases these older collections are the sole evidence of some archaeological sites or areas, it would appear that they are of immense value and will continue to increase in value in the future. We urge consultants to investigate the potential of this as yet under-utilized resource.