Archives and Museum Informatics

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UNIFIED CULTURAL RESOURCES DATABASES

When I formed Archives & Museum Informatics five years ago, it seemed an odd conceit, even to me, that archives and museums had enough in common to have a unified publication aimed at both audiences. Readers have noted that I have actually always included botanical gardens, zoos, libraries, historic sites, and aquaria in my eclectic perspective. In fact, I have been writing for cultural repositories as if they were a single audience because I have hoped to make them more of one. I was therefore delighted, in reading between the lines of the recent announcement from the Research Libraries Group, that it is going to devote itself to forging such an alliance.

Following its most financially successful year ever, RLG announced its intention to "become a vehicle for the cooperative development of research information management systems, technology and associated standards focussed on primary materials, nontraditional formats, and information delivery." The new thrust will require RLG to "reformulate its programs, products and services in direct support of scholarship and research". RLG envisions that the change in direction will involve changes in its current governance structure and management (opening up to increased participation by archives and museum members who have not been on the board to date) and that membership options, programs and activities will be affected. RLG plans to disband its standing program committees in favor of task-force driven cooperative projects, streamline and refocus its central staff, and negotiate with other organizations to ensure that services which it has in the past provided to its members (read library cataloging) will be made available by others in the future. It explicitly aims to exploit "the potential for new collaborative efforts and new alliances with a broader range of institutions devoted to research and scholarship than were represented in RLG's original membership roster."

These moves by RLG signal a recognition by the scholarly community of the importance of primary materials held by archives and museums and reflect the realization by research library members of RLG that the future of advanced scholarship in depends upon the creation of multimedia knowledge-bases, new types of software functionality and access to primary resources found in cultural repositories of all types.. Among other things, these changes mean RLG will expand its services to archives and museums and enhance access to images, archives, multimedia and other nontraditional types of information, but I suspect RLG will not be alone. Other vendors will seek to provide software similar to the RLG proposed Archives and Museum Information System (AMIS) which RL:G claims "will provide these institutions with sophisticated local control of their collections and day-to-day operations while integrating research information into RLIN (the Research Libraries Information Network)." And other vendors will seek to build national databases for scholarly and commercial use.

I hope RLG will define its network services as an open system so that other vendors software will be able to access RLIN and "broaden the range of information about primary source materials available online to the research community." This might prevent the proliferation of competing networks. It is equally important that the services provided by RLIN meet the needs of archives and museums. I hope the archives and museum communities will learn that they must play an active role in shaping these efforts: they must articulate what network services should provide. The opportunities, and the risks, are too great to leave important choices to the market.

David Bearman, Editor

In This Issue

LETTERS TO THE EDITOR

From **Barbara Teague**, *Kentucky Department for Libraries and Archives*

In an article on the 1990 NAGARA conference in vol.4#3 (Fall 1990, p.7), [you] stated that the state archival institutions of Kentucky and North Carolina were "not active participants" in the efforts of the Research Libraries Group's Government Records Project. Contrary to this statement, the Public Records Division of the Kentucky Department for Libraries and Archives joined the Research Libraries Group as a special member in February 1989. KDLA staff have been active participants in RLG activities and in the NHPRC-funded Government Records Project. During the two years of the project, Kentucky loaded over 12,500 SPINDEX records into the RLIN database, and added or updated over 2,000 more records. The Government Records Project ended in February 1991, but KDLA continues to participate in RLG activities and projects.

The bibliographic descriptions done in RLIN will be downloaded and integrated into the Public Records Management System (PRMS) currently being developed by KDLA, and will become part of this comprehensive meta-database. Conversely, descriptions of permanent holdings that are entered first in PRMS will also be added to the RLIN database. KDLA staff who worked on the Government Records Project are participating in the development of PRMS, contributing their expertise on descriptive standards, vocabulary control and indexing.

From **Kathleen Roe**, *New York State Archives*

In your last issue of Archives and Museum Informatics, you stated that the North Carolina MARS system was the only online public access catalog available in a public repository. While I would agree that there needs to be much more attention to the development of direct user access to such information, I know that North Carolina is not the only institution to have an OPAC. Since 1988, the New York State Archives and Records Administration has had an online public access catalog, CMS (Collections Management System) which has been available in our research room for public use.

CMS contains information on all holdings of the State Archives: for over 50%, there are full series level descriptions, for the remainder there are base level records (agency, title, dates, volume, basic index points.) Information on new accessions is available in the system within one month of its receipt at the Archives. In addition, in 1989, the holdings of the State Library's Manuscripts and Special Collections Section were also added to the database, providing our users with access to both archival government records as well as personal papers, business records, archival maps and other private papers.

The State Archives prepared an RFP for a complete lifecycle tracking system in 1987, but did not receive any viable bids. To address the immediate need for an OPAC, the State Education Department's EDP Unit produced a "clone" of the programming done for the State Library's OPAC. Our records, which we create on RLIN, were downloaded into the clone, and we were effectively "online" for our onsite researchers. In the past year, our accessibility has been expanded by the loading of our tapes into the main State Library OPAC. So now archival and manuscript records are available right along with the books and other library materials. This makes our materials available to the wide audience who use the State Library. This includes off-site users, since the State Library OPAC is available by dialup access, and actively used by libraries and researchers around the state.

CMS is very much a library OPAC; it provides traditional author, title, and subject searching. Since CMS was originally designed for the library in the 1970s, it is now undergoing redesign to meet more modern access needs and approaches. The State Archives and State Library Manuscripts staff are participants on the committee charged with redesigning the database, an important step to ensuring better access for our materials. While CMS is not the ideal, and hopefully not the final solution, it has been an important tool for providing better access to our users. It can be used with little instruction, and our researchers seem to have adapted well, and are pleased with the system.

From **Paul Perrot**, *Virginia Museum of Fine Arts*

I could not agree with you more regarding the need for museums to improve their accountability, but I take strong exception to the notion that the new auditing standards are the appropriate medium. To assign a dollar value to items in our collections is so awesome a task intellectually and physically that I cannot conceive of it being carried out with any sense of completeness, or indeed, integrity. Nationally the task is just too immense. . . . Were regular inventories, spot-checks, and the like mandatory, I would be delighted, but to have a process that would lead to capitalization, depreciation and so forth is opening a Pandora's box of complexities in addition to suggesting that collections are indeed negotiables. While the auction houses, no doubt, would rejoice, I think it would be a dark day for the profession.

[Ed. I agree that the rules are not an ideal vehicle for achieving accountability. I am pleased to adopt the position advanced by Dr. Perrot that museums should accept the "accountability" aspects of the regulations while rejecting the "financial appraisal" bias. This argument was also made by Henry Jaenicke and Alan Glazer in "Accounting for Museum Collections", a study commissioned by the American Museum of Natural History, the Art Institute of Chicago, the Metropolitan Museum of Art and the Museum of Modern Art in New York in response to the FASB recommendations. For copies of their report contact the AAM bookstore, 1225 Eye St., NW, Suite 200, Washington DC 20005; 202-289-9127]

THE MICRO VIEW (OR ARCHIVES IN WONDERLAND)

by Kathleen Roe
New York State Archives & Records Administration

In assessing the microcomputer systems developed for archives, flashes from Lewis Carroll's tale of "Alice in Wonderland" pop into mind. Talking about archival automation is more than vaguely reminiscent of life in Wonderland, where things are not quite what they appear to be. Inanimate objects don't behave in expected ways, and archival automation discussions are beginning to sound more and more like the Mad Hatter's Tea Party. The differences between appearance and reality plague discussions of microcomputers, the MARC format, and archival automation. This all leads to the topic to be addressed here, "The Micro View". The "micro" it was meant to refer to is the microcomputer. This is not a detailed assessment of the features and functions of specific microcomputer packages, however. There are certainly plenty of software reviews out there for anyone who wishes to know specifics, as well as vendors themselves and a growing body of users to query on the exact nature of the systems. Instead, this will be a consideration of four ways the term "micro" applies to the microcomputer implementations of archival automation:

The first "micro" is the microcomputer itself, that is, a small, self-contained piece of hardware that opens the potential for archival automation to a wide audience;

The second "micro" addressed is how the developers and users of microcomputer systems have chosen to build systems that are 'micro' or little library systems in the way they operate;

The third "micro" relates to our proclivity as archivists to treat our automated archival practices as a 'micro' version of library practice;

And finally, this paper will consider how the problems of microcomputer systems are really a microcosm of the problems of archival automation generally.

The role of microcomputers in archival automation

Microcomputers are an important option for a large number of repositories considering archival automation. Although a certain group of large institutions dominate archival automation at present, in fact a significant number of small institutions exist. For these institutions, the cost is prohibitive to either participate in a large vendor system such as RLIN or OCLC, to purchase a local library system such as NOTIS or GEAC, or particularly to develop a local archival system. So the microcomputer systems designed for archival use, the major choices currently being MicroMARC:AMC, Minaret, or AIMS (the new entrant in the field), are possibilities.

From what unscientifically can be gathered based on the microcomputer users groups newsletters, from conference sessions, from the vendors, and from users themselves, the basic configuration in which microcomputers are used is as a single terminal in a repository. This is understandable for many small archives who have neither the finances nor the amount of archival activity to require more than one terminal.

There is some interest in developing local area network applications, and Minaret came out with their LAN version in January 1991. This has important possibilities for getting beyond the one terminal syndrome. Without LAN versions, repositories would have to try to maintain identical copies of the database on a number of stand-alone machines--a cumbersome, if not maddening task at best. Curiously, when vendors were asked about their plans for LAN versions, they indicated there had not been a great deal of interest expressed to them so far--either indicating that archivists do not perceive a need for LANs, or are simply not asking.

Even for those institutions who can participate in a library system such as RLIN or OCLC, or who share a system with their library, having a microcomputer system provides the potential to accomplish functions not available in the larger library system. That is not to imply that the microcomputer should be used instead of sharing a library system. It can be used to meet more specifically archival needs, while still acting as a device to transfer information on to the larger library system so that archival holdings can be made available to a wider user public. Again through informal information-gathering methods for this paper, although a few archivists have been discussing the possibility, there does not appear to be much in the way of major efforts to piece together an archival information system using a combination of library systems and a microcomputer system.

The microcomputer offers a number of approaches to meeting archival automation needs, but so far there have not been a significant number of creative implementations or efforts to stretch the possibilities of microcomputer use. This leads to the second point, that we are approaching archival automated systems as if they are, or should be, micro, or "little" library systems.

Archival micro- systems as "little" library systems

Basically, most of the archival microcomputer systems around today operate as 'micro' versions of larger library systems, usually RLIN and OCLC. They do the same basic functions as vendor systems. Much of this can be traced to the "historical" development of automation. Since RLG really led the way by implementing the MARC AMC format on their Research Libraries Information System (RLIN), it became the pattern that people came to expect. The development of MicroMARC:AMC, the first MARC-based microcomputer system, was clearly influenced by RLIN. This is evident from the input form, complete with mnemonic codes for the fixed fields, and

the separation of bibliographic information from information on the donor and actions fields, both RLIN implementations. Minaret admits its likeness to library systems by offering its users two default screen types, an RLIN-style and a LC style screen. Beyond those obvious similarities, the micro systems also provide more substantial similarities to library systems in their design. The focus of most microcomputer systems is really on what in library terms is called "bibliographic records." That is, on the creation of, and access to, information about items in the repository's holdings. They allow archivists to create bibliographic records, and are more generous than some library systems in the amount of text they allow archivists to put into each record. They also allow archivists or patrons to search those records, again by employing very familiar library type searches including author, title, and subjects. Some allow for more searching flexibility; for example, Minaret permits the archives to create any types of searches it may want, but the truth is, most current implementations stay pretty close to the searches we all know from library systems--that is, author, title, subject. The microsystems also provide reporting capacities like the library systems do. There have been no unique functions introduced by microcomputer systems, no radical developments in searching--just basically "souped up" versions of library approaches.

Since the MARC format concentrates on the bibliographic record, it is logical that in adopting our part of that family of formats, the AMC format, we first concentrated on the "bibliographic" or descriptive function. It is also the function having the most commonality with library practice; our appraisal and acquisitions functions are not very parallel to those of libraries, nor do we have circulation or holdings tracking functions that clearly parallel the library activity. That bibliographic function serves as the core and focal point of our archival microcomputer systems as is does in library systems. We have assumed that is as it should be, but we might consider whether that is indeed the case.

Perhaps the most divergence comes in the area of what archivists have come to call "processing control"--that is, recording, searching, and providing information about archival actions. For example, this might involve providing information as part of the regular bibliographic record on the conservation needs of series or collections; or recording information on how long it took to describe each series. This information can be used for planning and reporting purposes. One might, for example, search for all maps requiring conservation treatment, then apply to a foundation for grant money to do so. Or one might create statistics on how long it takes to describe certain types of materials in order to project the time needed to describe records of a similar type. Most of the microcomputer systems either offer, or allow the archives to develop the capacity, to enter and manipulate this kind of information. This is still not a complete variance from library systems, since RLIN does provide a separate screen, called the "ARC" segment, which permits the entry of this kind of data, and also has a search now that will allow it to be manipulated. While this is the most archivally specific development offered by microcomputer systems, there has been little exploration of its potential and use. Many people seem interested in the idea, but not much is actually happening. One hears many presentations, and reads numerous articles on the "bibliographic" applications, but frankly there has been little done with the process tracking capacity offered by microcomputers. It may be that many archivists are in repositories where this kind of planning and tracking hasn't been done anyway, so we don't miss automating what we weren't doing anyway. And possibly the complications of dealing with automation have been sufficiently difficult that we haven't had time to focus on additional developments.

Perhaps one of the reasons we have patterned our microcomputer developments on library systems relates to the fact that the current wave of archival automation is closely entwined with the use of the MARC AMC format. This leads to the third point, that archival automated practices are taking on the appearance of being "micro" versions of library practice, including those on library vendor systems, but also those on microcomputer systems.

Microcomputer implementations as a "micro" version of library practice

A small aside is necessary here to talk about the MARC AMC format. It has had a clear impact on archival automation over the past five to seven years. Most archivists by now have heard of the Society of American Archivists' National Information Systems Task Force (NISTF), the group that eventually brought the archival profession into the MARC family. NISTF was charged with assessing the potential for a national archival automated system. They concluded that no one archival system would be developed. However they did conclude that it was necessary to have a common communications format so that archivists could exchange data with other archival repositories--perhaps those having a common geographic region, such as in one state--or those having common subject materials, such as labor history records--or those having a common type of material, such as university records. In addition, using a common communication format that could be shared with libraries would allow individual institutions to integrate their holdings with those of the libraries of which many archives are part, or are closely related. A common communications format offers archivists the best possibilities for really expanding the access to, and availability of information about, archival records. This motivation resulted in the development and adoption of the MARC AMC format.

Providing this capability to share information through the use of the MARC AMC format is one of the essential components of any archival microcomputer system, and hence one of the things that has made Minaret and MicroMARC:AMC the predominant choices. While the MARC format is not the best, the most elegant, or the most technically profound format, it is a practical reality. If archivists wish to share information with anyone, whether it be another archives or a library, or a national database, we have to have a common communications for-

mat. MARC AMC, very simply provides that. While one can assume and hope that someday the library profession will move beyond MARC, it is nonetheless a current practical reality--it is what the majority of people use, it works as a communications format, and without it archival automation would be considerably further behind than it is now, because we are not a wealthy profession, and we would not have gotten far on our own resources. And it is absolutely essential that we preserve the potential to exchange our information with other institutions such as archives and libraries, as well as with geographical areas, whether regionally, statewide, or nationally.

Any valid microcomputer system for use in archives must have the capacity to communicate information on to other systems, and the current vehicle for that is the MARC AMC format. Unfortunately, the importance of using MARC AMC as a communications format has led many archivists to overcompensate by embracing library practice in perhaps an overzealous bear hug. Which brings the discussion back to the third point about the current tendency to treat archival practice as a "micro" version of library practice.

While the MARC AMC format has brought us many blessings, there have been many myths that accompanied the adoption of the MARC AMC format by the archival community, and some of these have been detrimental to the development of archival automation. There seems to be an overriding myth that the MARC AMC format can make an archivist "do things". An often repeated inaccuracy is the complaint of hearing that "The MARC format makes you use the Anglo-American Cataloging Rules", or the companion whine, "MARC makes you use Library of Congress Subject Headings". There is nothing, anywhere in the MARC format that contains these requirements. The MARC AMC format could be used as a communications format without using either of those tools. They are not mandatory, but there are some compelling reasons to use them if a repository intends to exchange information with anyone else.

Any user of an archival microcomputer system who intends to eventually transfer that information needs to make use of certain library practices if there is any hope of retrieving the materials in a library system. Libraries use the Anglo-American Cataloging Rules 2 and the Library of Congress Subject Headings to choose common access points and to determine the forms of names or words so they can be retrieved with some predictability by users. Because of the searching capacities of library vendor systems, using controlled vocabularies is really essential to effective searching. Some of the access terms archivists apply clearly do need to follow library practice so our records will be retrievable in those databases we share with libraries.

Many archivists have consequently stayed within the safe boundaries of library controlled vocabularies and library principles of applying indexing terms. That may be understandable for institutions using only vendor systems. But we have failed in our microsystem implementations to explore additional or more adventurous modes of access in addition to the ones we use in order to be able to share information. One that has been suggested very directly to us by Richard Smiraglia (interestingly enough, a librarian who teaches archivists how to use LCSH in an SAA workshop) is the use of faceted indexing strings. There is even a MARC field for it. But to date, there has been no investigation of or experimentation with this approach, or any other approach to access, and a microcomputer system is the perfect place to do it. There are other areas like indexing that we might want to investigate more fully and look for some compromise which will allow us both to share information via MARC, but also make more use of the potential power of automated systems, including microcomputers.

Some archivists may compliment themselves on not being so foolish to have gotten involved in MARC based systems, but frankly, they have failed to provide any alternative or workable approach to archival automation. Most approaches that are not MARC compatible are hybrid, eclectic systems, and only perpetuate the archival anarchy that existed in our manual systems.

AACR2 and LCSH are not the only places where we have taken on library practice. We have committed some more dangerous confusions between library and archival practice by assuming too many likenesses between the products of our descriptive work. It is not uncommon these days to hear archivists talking about "bibliographic records". It has already been done in this paper, and many archivists could confess to using that term regularly over the past few years. A library "bibliographic record" is essentially a physical description and identification of an item to provide physical control over and access to that entity. We do some of this in archives, but we do a lot more than that--we provide information on the provenance and context of a record, we schedule and dispose of institutional records, we negotiate with donors to acquire private papers, we apply conservation treatments, we rearrange when necessary, we impose and remove restrictions--any archivists can recite this range of activities. By focussing on, and by using systems that focus on, the "bibliographic" elements, we have failed to develop automation for the other parts of archival practice. The "bibliographic" portion of what we do is probably what we most will want to share with others, the part for which the MARC format is most applicable. But that is not all we do, nor is it all we should automate. We have been a little too "micro" in our view of automating archival practice. This does not mean to imply that we have not been totally blind to our other archival automated needs--some institutions like the National Archives are certainly making substantive efforts to developing a full "life cycle" automated system, and other institutions have talked about the same possibility. So far though, no clear system design applicable profession-wide has appeared.

There is one new microsystem that has possibilities in this direction, the AIMS system, developed by MIS, which has been demonstrated at archival conferences recently. It results from the efforts of the Florida State

Archives to automate their range of functions, and the MIS corporation is hoping to get input from other archives about how to generalize this to a larger archival audience. This is one of the first signs, and a welcome one, that we are beginning to move in a real way beyond our "micro" view of archival automation. This may be the "first robin of Spring", and hopefully we will see a further development of this, as well as other efforts. The microcomputer environment is perhaps one of the most fertile places for this to happen.

Microcomputer implementations as a "microcosm" of archival automation

The last "micro" point to be made relates to how the issues raised by microcomputer implementations reflect the problems to be faced in archival automation generally. One of the most irritating questions people innocently ask is what microcomputer system they ought to buy. The choices available provide a range of adequate alternatives to the very limited approach archivists have taken to automating information about their holdings. None of them, however, reflect the true needs of archival automation. That is not because of the failure of vendors, but because the archives profession has failed to define its automation needs in a comprehensive, thoughtful way. It would be most helpful to have a "Red Queen" of the Archives Wonderland, who could scream at the top of her voice for everyone to just STOP. And then before the archival automation game could go on, a few things would have to be accomplished.

First archivists need to sit down and think, really think hard about what it is we do. We archivists in the United States have an appallingly limited conceptual base for what we do. We hardly even have the an agreed upon basics of "archival vocabulary". We have little in the way of solid theory and analysis of archival information. There are some basic questions that don't have solid answers--like why do we propound that description should be done at the series or collection level--who said so? Where and when did this big idea come from? Was it just an historical convenience because our backlogs were too big for item level control?

Or what is evidential value really? How do you know when records really have "got" it? How much of it, do you "got" to have to have enough? One could go on like this endlessly, but the point is that we have rushed into automating things we don't really understand. Our colleagues in Canada have taken a much more cautious approach to automating their descriptive information at least, and are attempting to get a set of agreed-upon concepts and approaches before they get into automation. While there are some drawbacks to that approach, right now it might have been helpful if we had or would take the time to get some of our own basic premises more firmly established and agreed upon by our profession--and by enough of our profession for it to be meaningful.

Another "Red Queen" edict would be to make people forget about library systems and MARC, and concentrate on thinking about archival information: how is it created, how is it changed, how is it used, how it is accessed? There is actually some potential movement in this area following on the recommendations of the Working Group on Standards for Archival Description. The Working Group's report recommends the development of an "information architecture" for archives, that is essentially a model identifying the sources and users of information; the processes by which it is collected, transformed, and used; and the structures within which it resides. The definition of such an information architecture for archival description would present the community with a comprehensive structure within which archivists can develop more effective and efficient description practices and systems. With this model, archivists could better understand the environment in which their institutions operate and make informed decisions about the types and levels of description they need to support.

Work is underway on developing an "information architecture" for archives--David Bearman (Archives & Museum Informatics), Richard Szary (Yale University), and Ted Weir (National Archives) spent several weeks last summer working on this "archival information system". After drafting a framework, they shared it with a group of 15 colleagues who critiqued it and felt it should be expanded into a document for the profession. NHPRC has funded a grant project to refine and complete the work. This may strike some archivists as a bit ethereal, but having a clear definition of what information archives create and handle, and how that information is manipulated and used is the crucial first step to building a rational automated system. We can never hope to have truly effective systems built for archives unless we make the commitment to the analysis that precedes the design of any automated system. Our microcomputer systems have been built on some good guesses, some good mimicry and adaptations of library functions, but that is not a solid basis for building archival automation.

That is only the first step; there is more to do after defining an archival information system. We then have to look at what "record types" we should create. We have conveniently "adopted" the library bibliographic record as one record type--but is it really appropriate for our use? The library bibliographic record is really a very "flat" record, which is reflected in the MARC format. Most library items exist as individual entities. There are some archival descriptive issues that are hard to express using the library bibliographic record approach. For example, a series of photographs taken by Lewis Hine for the New York Child Labor Commission have a complex set of relationships. The photographs were taken by Hine, a famous photographic artist. But they were taken as part of Hine's work for the Child Labor Commission. And they are of specific individuals, and they are a special photographic form, and are related to another set of photographs he took for a settlement house. Those who've used the MARC format know what a headache it is to express all those relationships in a flat MARC record, how hard it is to decide what format it goes in, and what a nightmare to decide whether to do item or

series level description. Hopefully this recitation will provide convincing evidence of the need to think about how best to make all the facets and faces of archival and manuscripts records available. We need to take a fresh look at our archival information systems, then decide what the appropriate record types are to create.

Only when we get those core issues settled will we be able to turn to our friendly microcomputer vendors and tell them what it is we are looking for in their systems. One cannot evaluate MicroMARC:AMC, Minaret, AIMS, or any other system until there is a yardstick against which to gauge them. At present, we have nothing against which to measure archival automation. The same is true of the "big systems", hence the fourth point that the micro systems are just a microcosm of archival automation.

Survival in Wonderland

So how do we survive archival wonderland, and make it through the looking glass and beyond? While there is not a "wonderful" archival microcomputer system, or any library vendor system for that matter. That does not mean we should all abandon automation. A recent seminar sponsored by the New York State Forum for Information and Resources Management was given by Xerox Corporation. One of their top executives gave an overview of how Xerox Corporation got started in automating various functions, then realized they needed to go back and develop an overall "information architecture" for their work processes. Sound familiar? Archivists are really not automation dunces, we seem to be having a common "automation experience" to those going on elsewhere. We need to proceed, but we need to learn from others around us, and make some changes along the way. One of the things most striking in the seminar was discussion of the need to stop automating tasks, and begin to look at automating work processes. There is a subtle, but important difference there. We need to look at an archival information architecture, and consider how we might now change the way we do our work. So far we have basically automated pieces, have made "fast paper" based on our manual systems. We need to venture out and start looking at how to redefine our work processes and use the computer to support and facilitate streamlined, more effective practices from scheduling and appraisal through reference. There is a great deal of work that needs to be done, and many more of archivists ought to get involved in cooperative projects to push our automated developments forward. The microcomputer arena is a great place to experiment with systems design and work processes. We need to explore and test alternative means of access, we need to try creating different record types and linking them together. Microcomputers are a wonderful place to do a lot of experimenting because we won't be mucking around in a national level library database, doing odd things that upset other traditional users of the system. RLIN has been the spearhead system for trying to automate access to appraisal data, records schedules, agency history records--why haven't there been similar grant projects proposed by groups of microcomputer system users?

Another area to explore is how MARC really fits into all of this. There has been little action in the area of trying to download records from OCLC or RLIN, and only a bit in uploading to one of the vendors. Why aren't we looking at how to get our systems so they are able to produce MARC compatible records when those are appropriate, and do things that exceed traditional capacities of MARC when that is appropriate? MARC is a tool, not a religion, and we need to find the right use for that tool.

Perhaps the most disappointing things resulting from the background work for this paper was the response from vendors when asked what kinds of things people were asking them for in their systems. They indicated they were often asked for the following things: Color screens, reverse video, windows. These are the most important demands we can think of to make? As one vendor noted, "Archivist's interest in really testing the system is limited -- requests for new approaches are as thin as gruel."

We need to willingly step forward and explore unfamiliar territory. We need to examine our past practices, and try some different approaches. We are at an opportune time when we are not so committed to systems that we have to just stay with what we've got because we're in too deep a hole to get ourselves out. We may make some mistakes, we may bump our heads, but we just may learn some new and "wonderful" things. Most of all, we need to take on Alice's sense of adventure, we need to be willing to plunge down the rabbit's hole in Wonderland, try the pills and bottles, get into the croquet game. If we don't we just may wind up being the white rabbit of the information world, always rushing around, always in a frenzy, and always, always, " too late".

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DIGITAL IMAGE RIGHTS

by David Bearman

On February 23rd, following the College Art Association conference, staff of the National Museum of American Art, the National Gallery of Art, the Smithsonian General Counsel and Office of Photographic Services, the Art Institute of Chicago, the J.Paul Getty Trust Art History Information Program, and I met with two representatives of Interactive Home Systems, a company founded by Bill Gates, to discuss the digital images rights issues.

In the round of introductions, Jim Wallace of the Smithsonian Institution Office of Photographic Services reported that he had mounted about 80 images on COMPUSERVE, in an "Art Gallery Forum" (Library 11) since November, and that there had been 3500 downloads of these relatively low quality images to date, without any advertising, reflecting a market that is trying to define itself. Alan Newman of the Art Institute of Chicago projected that this decade would see the full integration of digital imaging and photography and the end of the chemical darkroom. He foresaw digital image databases both as finding aids or visual indexes and as the high quality researcher oriented knowledge bases.

Discussion centered on the question of how digital image environments change the nature of the control museums are used to exercising over their images. I suggested that the major change was that we had been approving all uses on an individual basis, but that, due to the very large numbers of images they require (and hence of rights negotiations they would require), digital image based products would only be enabled when we establish databases in which the terms governing use of images of particular purposes are specified up front and the costs of using a single image are extremely small.

Susan Lammers of IHS explained their interest in having museums "participate in a digital image database", but the discussion did not greatly clarify the kinds of services or products IHS intended to offer. The inability to specify the kinds of products reflects in part the novelty of the market, and I proposed a contractual arrangement that would continue to involve a representative body selected by the museums in the database in setting policies towards types of licensing arrangements as new arrangements were proposed.

In order to move the discussion forward, I offered to provide participants at the meeting with a copy of the Digital Image Rights Advisory I wrote for my clients in 1990. Having made this rash offer, I decided to simply publish it. I welcome comment, and expressions of interest on the part of organizations interested in participating in a digital image rights consortium.

CLIENT ADVISORY ON IMAGE RIGHTS

As you know from our discussions, there are a number of commercial interests that would like to acquire rights to images of objects owned by your archives or museum. Because the distribution of images in digital form is certain to become a major method of image acquisition and use in the relatively near future, it is important that you develop policies that will safeguard your interests in images from your collections before licensing any digital image rights. The following points should be considered in any agreements that you make for image rights. While this advisory does not suggest specific stances with respect to these issues, I will be glad to advise you on any given points if you are uncertain of how best to represent your concerns. In the interim, I would recommend that you explicitly prohibit digitization of images sold or licensed by you for any purpose and that you take steps to secure the rights of your institution in all its existing collection photography, or replace it.

Any agreement must:

1) Define who decides what items/objects will have images in the product, which specific images of those items may be digitized, and which digital files of those images will be provided. (Note that you should be in control of both the items to be imaged and the images to be used; you may want to consider more than one image per item to enhance the value of the product to potential users. You may also want to require more than one digital file per image to reflect the requirements of output to different devices - here see also terms regarding density).

2) Define who pays for images to be made of objects for which there are not existing images, for which existing images are not acceptable, or for which rights to existing images are not securely owned by the museum, and establish who owns the image rights to such images. Establish who secures rights that are not owned by the archives or museum. (Note that you should review all contracts for images made previously to determine whether rights are unambiguously owned and rewrite contracts under which photographs are now being taken.)

3) Define who digitizes images and who pays for the digitization, as well as where it takes place. If the archives or museum does not do the digitization, define who determines if a digitized image is acceptable for licensing. Establish the rights of the archives or museum to the digitized files. Define the way in which the digitized file will be uniquely identified. (Note exclusive licensing of one digitized file of an image to one product is likely to be the only protection against unauthorized copying. This can be achieved through file alteration and/or encryption).

4) Define the resolutions at which the image will be captured, the resolutions at which they will be offered, and the medium on which or by which the user will acquire them. For each combination of resolution and medium, define licensing terms. (Note that digital images are worth more as the resolution increases; very low

resolution images, such as VGA screen captures, are basically useful only for private browsing or as a catalog of available higher resolution images. High resolution images are capable of substituting for transparencies. Note that capture at a number of resolutions which are then displayed gives the creators of the digital file more control over the file than high resolution capture from which the producer then makes display resolution files. This is especially true as contracts may wish to reserve the rights to provide images at resolutions not originally specified due to technology changes, but remember that as long as the relationship is still amiable, this should be easy to renegotiate when the time comes).

5) Define what data, and what credit text, accompanies each image and who determines the content of this text. (Note that you want to assure that this text is always displayed with the images, and that software provided with the images does not provide any facilities to separate the image, credit line, or attribution. You will also want to define the rights in the data separately since the resulting database could be distributed independently from the images).

6) Define whether the software with which the images will be distributed permits any digital clipping, modification, or enhancement. Establish how software dependent images will be and whether the system will support export of image files. (Note that the current state of standards for monitors are such that the colors of images will differ from display to display.)

7) Define what product(s) or service(s) the images are licensed for, and the extent of the distribution of such products or services. Establish the means by which the number of copies distributed will be verified, including the number of images viewed if the service licensed involves communication of images. (Note that image use in network environments may need to be controlled on a site license basis, rather than a per use basis, and that on public networks it may only be possible to charge for connect time).

8) Define the period for which the license right applies and the terms under which the period can be extended or renewed. (Note that unlike printed materials, digital products are unlikely to have a single "press run", but will likely be generated in small batches over time and even incorporated into custom outputs).

9) Define whether or not rights granted are exclusive. [Note that exclusivity may be a protection against unauthorized copying since the specific digital source can then be identified]

10) Define the rights, other than the right to display images, that are granted to users of the product(s) or service(s). Specifically address whether rights include the right to fix the image in any form (as in to local data store for reuse) and on paper. If any secondary rights are granted, define the terms under which images may be used, addressing all the same issues as in the primary contract. (Note that if any secondary rights are granted that include the right to disseminate images in any way, then all tertiary rights will be granted. Also note that rights may be limited to specific media. Note that photo agency fee splits (relicensing) tend to be in the 50/50 range while publisher/author splits (one time publishing) are more often 5-15%. Be careful to correctly understand the specific relationship in the contract.)

11) Define the mechanisms by which digital images made for and licensed in this product are to be protected from misuse and the mechanisms for testing whether images were derived from these sources. (Note that no mechanisms exist to absolutely prevent misappropriation of the images, but that the encryption of the distributed file which can be displayed only under software control, and the display of relatively lower resolution images, can make misappropriation unattractive.)

12) Define the method of compensation for images, including the proportion of fixed fees per product and per image to royalty based fees. Define whether the proportion of use or the proportion of images from the source in each product will determine any use based fees. Determine the basis of calculation for royalty based fees, the royalty rate, and the periodicity of payment. Establish a basis for auditing payments. (Note that proportional fees may be extremely limited if a product contains 10-100,000 images of which you have provided only a percentage or two; minimum per product fees might be considered. Note that site licenses may be the best mechanism for general, encyclopedic, imagebases.)

13) Define whether any other uses may be made of images, as in uses for advertising products or services licensed, and the fees associated with such uses, if any. (Note that low resolution image catalogs may be the best approach to advertising and that it may be counterproductive to attach fees to those services if offered in conjunction with higher resolution downloading options. You might even wish to require that fingernail or low resolution images are made available.)

14) Define all standard contractual terms, such as who the parties are, when and how the contract comes into force, and how the contract may be abrogated, extended or renegotiated.

Assuming you don't currently have digital images, the best initial arrangements might be to receive an up front payment per image in kind (digital data plus systems to display them), with royalty payments fixed for a specific product or a specific limited time, or royalty payments subject to renegotiation after a fixed time. Products should either be explicitly defined, or mechanisms should be established for participation by the archives or museum in the definition of terms for categories of products as they are proposed. If you are approached about digital image rights, whether commercial or cooperative ventures, please feel free to contact me. I am not a lawyer, so obviously you should have legal advice, but I will consult with you on proposed agreements.

CONFERENCES

CALENDAR

April 19-20 Old Sturbridge Village, Museum Archives Institute "Museum Archives Automation" [Old Sturbridge Village, 1 Old Sturbridge Village Rd., Sturbridge, MA 01566-1198; 508-347-3362]

April 26-29 Santa Clara, CA ASIS Mid-Year Meeting "Multimedia Information" [8720 Georgia Ave. Suite 501, Silver Spring, MD 20910-3602; 301-495-0900]

May 7-9 New York City 12th National Online Meeting [143 Old Marlton Pike, Medford NJ 08055]

May 14-17 Edmonton, Canada; IASSIST '91 "Data in the Global Village" [Chuck Humphrey, IASSIST, 352 General Services Building, University of Alberta, Edmonton T6G 2H1, Canada]

May 19-23 Denver CO, American Association of Museums, Annual Conference [AAM, 1225 Eye St., NW, Suite 200, Washington DC 20005; 202-289-1818]

May 20 Hartford, Connecticut; "What Should We Save?: Selection for Preservation" [Gay Tracy, Northeast Document Conservation Center, 100 Brickstone Square, Andover, MA 01810; 508-470-1010]

May 21-25 Banff, Alberta Canada, Association of Canadian Archivists Annual Conference [ACA, P.O.Box 2596, Station D, Ottawa K1P 5W6, CANADA]

June 6-8 Albuquerque, New Mexico; 19th Annual meeting of the American Institute for Conservation of Historic and Artistic Works; Special pre-conference "Natural Disaster Mitigation Workshop, June 3-4. [AIC, 1400 16th St., NW, Suite 340, Washington DC 20036; 202-232-6636]

June 10-23 Southeastern Media Institute [South Carolina Arts Commission, Media Arts Center, 1800 Gervais St., Columbia, SC 29201; 803-734-8696]

July 24-27 Chicago, Illinois, National Association of Government Archives and Records Administrators [NAGARA, c/o Council of State Governments, Iron Works Pike, P.O.Box 11910, Lexington, KY 40578-1910]

September 3-6 Canterbury, UK; Museum Documentation Association 1991 Conference "European Museum Documentation Strategies and Standards" [MDA, 347 Cherry Hinton Rd., Cambridge CB4 1DH, UK; 223-242-848]

September 4-5 Crystal City, VA "Electronic Democracy Conference" (Electronic Democracy, 1831 V St., Sacramento, CA 95814)

September 20 New Brunswick, NJ "How to Assess Library/Archival Facilities from a Preservation Perspective" [Professional Development Studies, Rutgers School of Communication, Information and Library Studies, 4 Huntington St., New Brunswick, NJ 08903; 908-932-7169]

September 23-26 Orlando, Florida, Association of Records Managers and Administrators 36th Annual Conference [ARMA, 4200 Somerset Dr., Suite 215, Prairie Village, KS 66208-5287; 800-422-2762]

Recent Meetings

Working Meeting on Electronic Records Research Issues

With support from the National Historical Publications and Records Commission, the Minnesota Historical Society held a two day meeting in Washington DC, January 24-25, to identify research issues facing archivists and records managers who are grappling with electronic records. The morning of the first day, approximately 50 invited participants heard papers by Margaret Hedstrom (New York State Archives) and Tora Bikson (Rand Corporation) and discussed the strategic and methodological issues they raised. In the afternoon, four breakout groups addressed Political, Organizational, Economic and Technological research issues. The four groups identified twelve priority projects. After reviewing the proposals generated by the sub-groups and the discussions that led to their identification as priorities, the organizing committee: A) Identified criteria that should be applied to the evaluation of project proposals B) Formulated ten research questions which were considered most important to answer, and described projects to address these questions based on the work conducted by the sub-groups during the Working Meeting, and C) Articulated three information analysis and advocacy tasks that were identified by the Working Meeting as important accompaniments to a research program.

A. Criteria for project evaluation

The Working Meeting on Research Issues in Electronic Records urged the adoption of the following criteria in the evaluation of proposed projects. The order of presentation of the criteria does not reflect their importance, as all these criteria were regarded by participants as important to different degrees based on the nature of the proposals to which the are applied. The organizing committee suggested that these criteria should be cited in any public invitation to submit proposals for funding electronic records management research.

Projects should:

- be suitable for support from multiple sources
- build on prior work
- be multi-disciplinary in execution
- result in usable models or have generalizable results
- build links to existing archival principles
- analyze how adopting their recommendations would impact on archival management and on users
- evaluate their political and policy implications
- assess economic impacts
- identify mechanisms required for widespread implementation
- publish in the regular literature and deposit project reports in the Archives Library Information Center (ALIC)

B. Research Questions and Projects

The organizing committee distilled the twelve projects described by the sub-groups into ten questions. The organizing committee felt strongly that the order in which the questions were addressed was important. Specifically it felt that the first three questions held the key to answering many subsequent questions as they would operationalize the concept of "archival requirements" in electronic records and the technical characteristics of different application environments that are most directly related to successful archival management of electronic records. Research on the first three questions was deemed to be required before research on subsequent issues would be sound. The order in which the final seven questions were addressed was not considered critical.

QUESTIONS	PROJECTS
1) What data and functions are required to manage electronic records?	Systems analysis of tasks in electronic records management.
2) What data can feasibly, and reasonably, be retained from implementations of a variety of applications?	Analysis of applications, current data retention plateau's, and identification of logical levels.
3) What are the documentation requirements of software such as: GIS, CAD, AI E-Mail, Hypermedia etc.?	Analysis of software dependent data objects and data/systems
4) How does information about information systems help manage electronic records?	Pilot meta-data implementations
5) What archival requirements have been addressed in major systems development projects? Why?	Historical comparisons of 10 "critical" systems.
6) What policies best advance the management of electronic records?	Policy evaluation
7) What elements should be present in electronic records programs and how can they be evaluated?	Case studies
8) What incentives contribute to creator and user support for electronic records concerns?	Analyze successes experiment with incentives
9) What barriers have prevented archivists from implementing electronic records programs?	Focus Sessions
10) What do archivists need to know about electronic records?	Knowledge creation & educational design

C. Analysis, Advocacy and Action Tasks

The organizing committee agreed with the recommendation of some of the sub-groups organized in the Working Meeting, that there would be significant benefits at this stage of public and professional understanding of electronic records management issues in three types of projects focussed on analysis of existing information, advocacy based on present knowledge, and action to expand the numbers of archivists with direct experience of electronic records management issues. The three kinds of projects were further defined as:

Analysis: Projects resulting in "white papers" defining the nature and scope of electronic records management problems, and intended to build a constituency.

Advocacy: A project to study the need for, and feasibility of, an organization to coordinate, attract funding and provide leadership for electronic records management research.

Action: Challenge grants to institutions to establish basic archival electronic records capabilities and to assume responsibility for management of archival electronic records.

A report is being prepared for the NHPRC which is expected to be available in June. [For copies, contact Lisa Weber, NHPRC, NARA, Washington DC 20408; 202-501-5610].

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Current Issues in Government Information Policy

On March 7-8, the Kentucky Information Systems Commission held a meeting focussed on freedom of information in the electronic age, which was attended by more than seventy state officials from throughout Kentucky. The conference was moderated by David Dick, the Pulitzer prize winning ex-CBS News journalist who is Director of the School of Journalism at the University of Kentucky.

The first session of the conference addressed perspectives of participants in Freedom of Information and access debates. Ann Sheadel presented the position of the Office of the Attorney General of Kentucky, Jon Fleischaker, legal counsel to the Courier-Journal presented arguments for openness, and Doug Brown, director of Legislative Legal Services for the State of Colorado, explored the pressures which state legislators feel as they formulate policies in this arena. My presentation, which wrapped up the session, focussed on the difference between the granularity of information that is the focus of concern by contemporary information management professions and the concept of a public record, or evidence of a governmental function, that is the focus of public access to government information policies. Participants in the meeting then met in breakout groups to formulate consensus positions on such questions as what is a public record and what criteria should govern access to public records.

The second session addressed the problems of day-to-day administration of public access policies. Ron Moore, CIO of the University of Louisville, and Kim Moore (Kentucky Cabinet for Human Resources) asked for greater clarity in state access policies and for drawing lines between types of systems. Dick Rainsberger, registrar of Carnegie Mellon University, observed that such clarity was provided with respect to access to student records by the Family Rights and Privacy Act (1974) and the office set up to provide registrars with guidance in its administration. Sharon Dawes of the New York State Information Resource Forum discussed the benefits to government agencies of sharing electronic information, and how cooperation between agencies, if the risks of information sharing are openly acknowledged, can produce benefits for the state.

The final session of the meeting pitted those arguing for public information as a public good against those who saw reasons for the state to sell access to public information in electronic formats. Kentucky has recently adopted a law which provides for government agencies to sell database and geographic information system data to requesters who intend to make commercial use of such information. The impacts of this law on others and the potential for cost recovery, or even income generation, through the sale of information resources thus served as the problem around which the final breakout sessions tried to build consensus.

Proceedings of the conference will be published later this year by the Kentucky Department of Libraries and Archives whose commissioner, James Nelson, was the chairman and organizer of the meeting. I believe the meeting served an extremely useful purpose for Kentucky archivists, freedom of information officers, and information resource management professionals. Other states might consider holding similar sessions to build a better understanding between parties and to educate government employees about the need for access to electronic records of government. □

Digital Libraries, Electronic Publishing and Intellectual Property

On February 11, the Congressional Office of Technology Assessment hosted a one day meeting in Washington to explore the implications of digital libraries and publishing for the copyright law. Fifteen invitees addressed what they believed were the most critical issues: how technology change will impact on intellectual property, how intellectual property policy affects access to and use of information, and the relevance of such traditional intellectual property concepts as "fair use", "reward and compensate", and "public interest".

Invited spokespeople presented predictable positions. The librarians advocated free access for the public, sought permission for libraries to make preservation and replacement copies, and saw even use fees as barriers. Publishers of electronic databases saw government competition with the private sector as an issue and wanted better mechanisms for monitoring use. Economists focussed on the need for research on the desirability of intellectual property based restrictions and on appropriate mechanisms for compensation. Lawyers noted the ambiguity in the relationship between software law and data law that is exposed by software dependent data. A few of us who are involved in multimedia information systems argued the need for a redefinition of the concept of copying as object oriented technologies create large numbers of potentially "recombinant" forms and network access erases the distinctions between kinds of use.

Among the common themes identified from the opening presentations were: how to define a copy and whether technology can prevent copying, how to compensate owners, whether and how mixed media present special copyright problems, what happens to property rights when information is on a network whether function and content are separable intellectual property and whether standard interfaces are required or desirable

The discussion that took place during the day amplified concerns over how to delineate "fair use" from protected use in order to assure that rights holders would be appropriately recompensed in a digital market. Those players who were not currently publishing or serving as libraries generally held that fair use could not work in the digital networked environment and that it was one of the barriers currently impeding the development of multimedia object oriented data repositories, while those with existing electronic (textual) databases felt adequately protected.

Other barriers perceived by participants included the absence of demand and of high resolution displays. Ultimately, it was agreed, the sophistication of users would determine the kinds of products offered. No consensus was developed by the group as to the desirability of change to the copyright statutes to reflect the tensions introduced by data that combines with software to have functional attributes, or images accessed over networks. In their parting comments, participants continued to reflect the interests that had brought them to the table. The Office of Technology Assessment staff will make recommendations based on what they heard; what I heard widely agreed was that the direction of technological evolution in the 1990's was to more and more intelligent data objects with greater and greater granularity, and that intellectual property rights in such small objects, whether images, or intelligent algorithms, would be much more difficult to protect in the future than rights in data in larger containers - articles, books and databases - have been in the past. Further, I heard that networked environments cannot distinguish the purposes for which any given connected device wishes to view an object, and that viewing multi-media databases is a valuable commercial right in itself, so the definition of fair use will either need to change or it will continue to inhibit the development of multimedia knowledge-bases. [for further information, contact Karen Bandy, OTA, 600 Pennsylvania Ave. SE, Washington DC 20003; 202-228-6760]

IN-BOX

REPORTS

Converging Disciplines: Management of Recorded Information in Developing Countries, Papers Presented at a round-table discussion held at the National Archives of Canada, Ottawa, May 18, 1989 (International Development Research Center, Ottawa, October 1990) Report # IRDC-MR234e; 60p

This report contains five exceptionally interesting papers, which focus the themes of the 1989 Converging Disciplines conference on third world archives. The first paper is a general discussion of administrative records management practices in the third world by Saliou Mbaye and Mbaye Thiam of Senegal which deserves to be read by archivists anywhere. The last is a presentation of a Hypercard front end to Chilean archives by Soledad Ferreiro and Marialyse Delano which would be adventurous for archivists in the developed world. Between them the accounts of archival practice in Malaysia, Singapore, India and Zimbabwe are solid contributions.

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U.S.Department of the Interior, National Park Service, **Computer Use in State Historic Preservation Offices** (Cultural Resources Information Management Series) compiled and researched by Noriko Wood (Washington DC, National Park Service, September 1990) 58pp. plus appendixes [available from: Interagency Resources Division, NPS, P.O.Box 37127 Stop 413, Washington DC 20013-7127]

This directory of systems in state historic preservation offices identifies seventeen categories of data that are found in such offices and records the hardware, operating system, application software, number of records and contact person for each automated application of each type of data in each state. It may be useful to commercial designers attempting to determine the size of the market, but is too limited to provide much insight into what automation is actually doing in these offices, or to what extent the data is compatible between states.

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National Archives of Canada, **Disposition of the Records of the Government of Canada - A Planned Approach** (Ottawa, July 1990)

This report describes a new approach to Federal records retention that was introduced in Canada in November 1990 and will be fully phased in by March 31, 1991. In essence it requires that the Archives plan for records disposition rather than allowing agencies to submit records for scheduling at their own initiative. The concept is to force the Archives to develop an acquisition strategy.

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U.S. Congress, House of Representatives, **Taking a Byte out of History: The Archival Preservation of Federal Computer Records** (U.S.GPO, Washington DC, 1990) House Report 101-978

This report is an indictment of the electronic records management practices of the National Archives and Records Administration and a rejection of their rationale for those practices. It finds that "an increasing number of Government records worthy of preservation for historical purposes will necessarily exist only in electronic formats" and that "NARA's current policies are inadequate to assure longterm preservation of electronic records" and "NARA is not currently prepared to accession some computer records created by Federal agencies that will be candidates for preservation in the next few years". It calls for record keeping procedures to be designed into electronic information systems and for NARA to recommend to Congress what changes are required in law to assure that electronic records will be managed appropriately. The analysis is insightful and well documented; this report should be read by any archivist interested in electronic records and by any potential users of Federal Government archival records of the late twentieth century.

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Computer Science and Telecommunications Board, System Security Study Committee, **Computers at Risk: Safe Computing in the Information Age**, (Washington DC, National Academy Press, 1991) 303p., available from National Academy Press, 2101 Constitution Ave. NW Washington DC 20418; $21.95 including shipping; 800-624-6242.

This fascinating report on U.S. Computer security discusses the concept of security in terms of system design and system access and identifies approaches that will be of value to any information manager. Its recommendations are reprinted in *Information Hotline* (March 1991), but systems administrators will want to obtain the report because of its uncharacteristic clarity and concrete advice.

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Sharing Information on Intergovernmental Records by Marie B. Allen, NAGARA Government Records Issues Series #3, December 1990

This eight page report on the NARA Intergovernmental Records Project and findings will be of interest both to government archivists and others interested in resource sharing. I think it unfortunate that it appears in such a free-standing report format rather than in a journal. [Bruce Dearstyne, Executive Director, NAGARA, New York State Archives & Records Administration Rm. 10A46, Cultural Education Center, Albany NY 12230]

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ARTICLES & BOOKS

Judy Diamond, **Prototyping Interactive Exhibits on Rocks and Minerals,** *Curator 34/1* (March 1991)

Not only is it refreshing to read about an interactive exhibit that was refined through interaction with real audiences, it is interesting to be reminded that interactivity can be (and has long been) achieved without computers. The four interactive exhibits discussed in this article use a Geiger counter, radio wave transmission, polarizing film and a computer program to provide interactive feedback. The author makes an informed case for feedback during the exhibit design process by presenting the changes made to logically sound designs through prototyping. Other research articles in this issue make a case for prototyping labels and exhibit sizes.

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Andrea Garnier, **The Future of the Audio-Visual Age: Implications for Museums and Archives** (Alberta *Museums Review*, vol.16 #2, Fall/Winter 1990; reprinted in *ACA Bulletin* vol.15 #3 Jan. 1991)

This review of two conferences held in Ottawa in May 1990 on audiovisual archives not only summarizes many major issues presented at those meetings but also contributes a useful, pragmatic and balanced professional assessment.

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Richard Paske, **Hypermedia... (a three part progress report),** *T.H.E. (Technological Horizons in Education) Journal*, vol.18 #1,2,3 (August-October) 1990

This is a chatty, but useful, overview of the promise, current state and near future prospects for interactive multimedia.

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Marc Rorvig, ed., **Intellectual Access to Graphic Information,** *Library Trends* 38(4), Spring 1990

This collection of articles presents a number of quite different issues associated with imagebases, ranging from vocabulary control and the potential of visual thesauri to user interface designs appropriate for retrieval from imagebases. Unfortunately the issue was three years in the making, so some of the pieces are less timely than they could be. The papers on ArchiVISTA (Stone and Sylvain), the UC Berkeley Image Database (Besser) and the NASA-JSC Image Archives (Seloff) are the best published descriptions of these important efforts. The article by Frank Walker and George Thoma on Access Techniques for Document Image Databases will be useful to archivists, although the authors have since published in more technical journals.

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William Saffady, **Optical Storage Technology 1990-91: A State of the Art Review** (Westport CT, Meckler, 1990) 230p.

This three part technical report treats CD-ROM, Read/Write Optical Disks and Optical card and tape, and provides a sixty page bibliography. It is the sixth annual review in this series, and like its predecessors it is well researched, dryly written, nicely illustrated and has useful tables and charts. It will not inspire, but it does an excellent job of informing.

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NEWSLETTERS & JOURNALS

Advances in Library Resource Sharing, (ISSN 1052-262x) vol.1, 1990 238 pp.

This new annual, edited by Jennifer Cargill and Diana Graves for Meckler Publishing Co. ($55.p.a) makes a valuable contribution to the literature of resource sharing. It includes an historical overview (Richard Dougherty and Carol Hughes) and an annotated bibliography, and fourteen new articles which, although they focus on the library experience, have implications for archives and museums.

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Competitions, is a quarterly journal which began with vol.1 dated Winter 1991. [Available from P.O.Box 20445, Louisville KY 40250, $28 p.a. includes quarterly newsletter "Competitions Hotline"]. The first issue contains several excellent articles on architectural competitions for library buildings, discussions of participating in public building competitions by architects, and a calendar of upcoming, in-progress and recently awarded competitions.

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Intelligent Systems, a new newsletter from the Foundation for Intelligent Systems in the Social Sciences, Arts and Humanities, made its debut with vol.1#1 in the Spring of 1991. The initial issue reports the results of a survey of the profession which reported an interest in such a newsletter, and entries on intelligent systems reported to the Foundation as a consequence of the survey. [$25 p.a., 2637 Asilomar Drive, Antioch, CA 94509]

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REFERENCE

Corporate Giving Directory, 12th edition, 1991 [The Taft Group, 12300 Twinbrook Parkway, Suite 450, Rockville, MD 20852]

This directory, subtitled "Comprehensive profiles of America's major corporate foundations and corporate charitable giving programs", lives up to its billing by providing 670 pages of detailed profiles and indexes by corporate name, headquarters location, and operating locations, by grant type (awards, capital, challenge, emergency, employee matching etc.), types of in-kind support, and types of recipient institutions, as well as by the names of officers and directors names, their places of birth, and their alma mater! The texts themselves present the philosophy of the foundation along with their priorities and typical gifts, and provide details on restrictions and how to approach the foundation. In sum, this is an excellent reference tool.

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RLIN Preservation MasterFile on CD-ROM from Chadwyck-Healey Inc. [1101 King St., Alexandria VA 22314] provides access to .5 million bibliographic records to enable libraries, archives and museums to determine quickly whether a microfilm master negative exists for an item in need of preservation.

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EPHEMERA

Treasury Board (Canada), **Office Systems Standards Working Group, Information Management in Office Systems: Issues and Directions,** Draft report September 1990

This working group, which is articulating the functional requirements for information management within office systems in the Canadian Federal government is attending both to policy requirements and how best to define standards to satisfy them. Its work continues to be worth monitoring. [John McDonald, GRB-ISPD, National Archives of Canada, Ottawa K1A 0N3, CANADA]

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Documentation Practices in Historical Collections: A Report from the Common Agenda (AASLH Technical Leaflet #176, 1991 [AASLH, 172 Second Ave. North, Suite 202, Nashville TN 37201]

This 1990 survey reports on documentation practices nearly nine hundred history museums and historic houses which it finds sorely lacking. The report is intended to provide a statistical basis for greater emphasis on documentation both within the profession and as a national political objective. It is interested to see that 37% of reporting institutions used computers in their documentation and that those using computers had inventoried over 75%, cataloged over 65% and researched over 33% of their collections while those relying on manual and memory based approaches were, on the average, less well documented. Of course the relationship is not caused by computers, but rather is a reflection of resources, as is the presence of computers themselves.

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Principles of Public Information

This one page, artificially "aged", pseudo-parchment by the National Commission on Libraries and Information Science, presents eight principles of public information intended to influence government information policy formulation at the Federal level, although they are equally applicable to state and local public information. They are:

1. The public has the right of access to public information.
2. The Federal Government should guarantee the integrity and preservation of public information, regardless of its format.
3. The Federal Government should guarantee the dissemination, reproduction and redistribution of public information.
4. The Federal Government should safeguard the privacy of persons who use or request information, as well as persons about whom information exists in government records.
5. The Federal Government should ensure a wide diversity of sources of access, private as well as public, to public information.
6. The Federal Government should not allow cost to obstruct the people's access to public information.
7. The Federal Government should ensure that information about government information is easily available and in as single index accessible in a variety of formats.
8. The Federal Government should guarantee the public's access to public information regardless of where they live and work, through national networks and programs like the Depository Library Program.

☐

NEWS

NEW YORK FUNDING

The New York State Archives and Records Administration's new Documentary Heritage Program has announced the recipients of its initial funding cycle which awarded 28 grants totaling $200,000. Initial grants went to museums as well as archives, libraries and non-profit institutions with a commitment to documentary heritage. [contact Judy Hohmann, 518-473-8037]

☐

NHPRC PROJECT PUBLICATIONS

The National Historical Publications and Records Commission has issued a list of publications from its recent grant funded projects which identifies the cost and distributors of fiftenn recent reports. [NHPRC, NARA, Washington DC 20408; 202-501-5610]

☐

DOD FOIA REGULATIONS

New DOD FOIA regulations issued by Pete Williams, Assistant Secretary of Defense for Public Affairs in October 1990, define a standard of "reasonableness" to the provision of information from electronic databases as an amendment to the previous regulations which established that "there is no obligation to create or compile a record to satisfy a FOIA request". The new clause now adds: "With respect to electronic data, the issue of whether records are actually created or merely extracted from an existing database is not always readily apparent. Consequently, when responding to FOIA requests for electronic data where creation of a record, programming or particular format are questionable, Components should apply a standard of reasonableness. In other words, if the capability exists to respond to the request, and the effort would be a business as usual approach, then the request should be processed. However, the request need not be processed where the capability to respond does not exist without a significant expenditure of resources, thus not being a normal business as usual approach." If we forgive the casual approach to the English language, it seems that the DOD regulations would require satisfying FOIA requests for any data in any record structure or output format from 4th generation database management systems.

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ICOM FORMS AUDIOVISUAL COMMITTEE

An organizing meeting of AVICOM, the audiovisual committee of ICOM, will be held in Paris June 5-7. Attendees will witness projects under way at the Musee d'-Orsay, the Musee de l'Armee, the Musee National des Arts et Traditions, the Fondation Albert Kahn , La Villette, the Cinematheque Francaise et Musee du Cinema, and the Videotheque de Paris, and be treated to an array of receptions.[Claude-Nicole Hocquard, Secretariat provisoire AVICOM, 34 Quai du Louvre, 75001 Paris, FRANCE; tel (331) 40.20.56.31]

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LC TO SELECT AMERICAN MEMORY SITES

The Library of Congress is selecting 30 libraries throughout the nation to serve as evaluation sites for its American Memory program, an electronic multimedia distribution service employing CD-ROM and videodisk technologies. Sites must furnish their own hardware. The first collections focus on history and social sciences, with a focus on the period 1880-1920. They will most likely include: African-American Pamphlets 1820-1920; First-Person Narratives of California 1849-1900; Ethnic Folk Music from Northern California 1938-1940; Films of President William Mckinley and the Pan-American Exposition, 19012; Life Histories from the Federal Writers Project 1936-1939; Films of New York City, 1897-1906; Sound Recordings from America's Leaders, 1918-1920; Photographs from William Henry Jackson and the Detroit Publishing Company, 1880-1920; Selected Civil War Photographs, 1861-1865; and Documents of the Continental Congress and Constitutional Convention, 1774-1789. [American Memory, Special Projects Office, Library of Congress, Washington DC 20540]

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REGIONAL HISTORY NETWORK FOR SOUTHERN CALIFORNIA

The Regional History Center of the University of Southern California and the Los Angeles City Historical Society are beginning a History Computerization Project to build a Regional Information Network for Southern California History, utilizing the History Database computer program and the Pick database system, running on IBM PC compatible computers. The network will facilitate the exchange of information between researchers, librarians, archivists, museum curators, and historical societies who share a common subject interest. The project will also create a Regional Union Catalog for Southern California History, composed of data on sources for the history of the region. The information will be available for database searching, accessible over telephone lines by a computer attached to a modem. The cataloging records contributed by each repository will remain the property of that repository.

The project will offer a series of short courses on the computer-cataloging and retrieval of historical materials. The course textbook, **Computer Database Management for Research, Writing, and Cataloging**, written by David Clark, is published by McGraw-Hill. Representatives of local historical societies who possess particular areas of expertise on subjects such as harbor development, the electric railway lines, architectural styles, or the histories of different ethnic groups will be invited to a free, one-day course on the cataloging and retrieval of historical photographs by computer. Each society will work with photographs pertaining to that society's area of knowledge. The photos will be drawn from the Title Insurance and Los Angeles Chamber of Commerce collections which are owned by the California Historical Society.

[For more information: David L. Clark, History Computerization Project, 24851 Piuma Road, Malibu, CA 90265-3036. Telephone: (818) 888-9371.]

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APPEAL UPHOLDS RIGHTS OF CITIZENS TO RECORDS

On January 25, the U.S. Court of Appeals ruled in the case of Armstrong vs. Bush that citizens had a right to sue to compel the government to carry out procedures of the Federal Records Act designed to prevent agency destruction of government records. The decision returns the substance of the suit which is trying to prevent the destruction of the electronic mail files of the National Security Agency to the lower court which will now proceed with review. In so doing, it could potentially strengthen the hand of the Archivist of the United States in issuing and enforcing guidelines for agency disposition of all records, including electronic records.

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IMAGING NEWS FROM QUESTOR

Three Questor users have made strides in integrating imaging with their use of a collections management system. The Dallas Museum of Art is installing Questor with a touch screen facility to provide public access to their system. The public will be able to display a full screen image, a series of images of a single object, up to 12 different objects, and data concerning the images on the screens. The Henry Ford Museum and the Southwest Museum have each recently received copies of their new videodiscs. The Henry Ford Museum has added another 50,000 images of objects and ephemera to their existing disc libraries. The Southwest has captured 50,000 historic photographs on their latest videodisc which is available on an ARGUS public access station in the Southwest Museum Library.

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THE HERMITAGE COMPUTER NETWORK

The State Hermitage Museum (Leningrad, Soviet Union) is launching a computer network intended to serve as a computerized museum catalog and database for all departments of the museums including the library, a service for restoration of museum objects, an inquiry facility for visitors and scholars, the source of a videodisc imagebank and distribution system, and a data exchange facility with foreign museums and libraries. Alex Kelbas, who is responsible for the venture is interested in hearing from American museums, networks, vendors and videodisc production firms who would like to be involved. [Alex@Herm.spb.su on Internet].

SOFTWARE

THESAURUS CONSTRUCTION SYSTEM: PROFESSIONAL EDITION

In vol.3#2 (Summer 1989) I reviewed TCS, Thesaurus Construction System: Basic Edition, by Liu-Palmer, and mentioned plans by the company to release two more powerful editions. Recently I received release 1.0 of the Professional Edition (TCSP), which is available $450 ($300 to licensees of the Basic edition) from Liu-Palmer [2272 Colorado Blvd., Suite 1280, Los Angeles, CA 90041; 213-254-7700].

The functions of TCSP include everything that was provided with TCS, plus support for poly-hierarchical thesauri including block transfer of terms between hierarchies and integrated alphabetical reports from a combination of hierarchies, password control and systems logs to track growth, and provision for unlimited length scope notes and user-defined types of use notes. The Professional Edition requires more advanced hardware than the Basic Edition (DOS 3.3+ and at least 10MB of hard disk), and its manual does not make an effort to teach thesaurus construction since it is aimed at people who have this skill. The emphasis of the package is still on reducing the labor intensive process of thesaurus construction by providing a facility that maintains relationships between terms, allocates cross-references and inserts updated entries. As in the Basic Edition, the use of facet indicators (terms defining the principles governing the organization of narrower levels of a hierarchy) is supported.

TCS Professional is supplied on two 5.25" disks with an automated installation routine that works as intended; it will add a line to your AUTOEXEC.BAT file and may change your CONFIG.SYS file as well. When first used, the system will asks if you have a color monitor, and will use colors if you do.

The first step in developing a thesaurus is to name the hierarchy which is its root; TCSP will ask for a name and a two character code and then default either to a hierarchy selection screen (if more than one is present) or to the top of the declared hierarchy. The screen will initially display the hierarchy name and six pull down menu's at the top of the screen: Display, Select, Update, Report, Adjust, Quit. The pull-down menu's are accessed by keying the first letter; options are selected by positioning by arrow keys. Each option is designated by a one character plus ALT-key sequence which the frequent user will rapidly learn, but these can only be activated if the menu is not selected.

To begin to elaborate the thesaurus, users will choose Update, which enables them to add narrower terms or facet indicators, and to add Used For terms, scope notes and use notes (whose types must be initialized using the Adjust menu). After each new term is added, the system allows the user to add more terms or display the hierarchy. Professionals will appreciate the speed with which many new terms can be thus added. Relationships between terms added can then be declared, and individual terms (or groups of all the narrower terms under any given term) can be moved to new locations within, or outside, the hierarchy. All these functions work quite intuitively so that even on first use I consulted the users manual only once (other than to read it for review purposes, and discover that it was a terse, but usually clear, 30 pages).

Once the user has constructed a working thesaurus, the other functions of TCSP come into play. The user may **Display** related terms, siblings, used for terms, or the thesaurus in alphabetical, or hierarchical order. The user can **Select** an entire hierarchy to display, or a term from within the current hierarchy (with automatic truncation that shows all terms beginning with the letters requested), or a term from within all the available hierarchies. And the user can **Report** from the database to a file or printer. Options for reports include an alphabetical report which provides each term, its scope and use notes and cross references, BT/NT, and related terms, and a rotated display which is a KWIC around multi-word terms, as well as the system log and statistics.

The utilities of TCSP, which are provided under the pull-down menu titled **Adjust**, include packing the hierarchy (used after many deletions and movements of terms), backup and restore (to read thesauri out to floppy and back again). Except that the packing function operates from DOS, these are all straightforward. Three powerful "utility" functions allow the user to define tables for "Maintain stoplist", "Define new note type", and "Add a password". Stoplist words are added or deleted easily on a screen which displays them alphabetically. New note types can be defined (history note, source note, examples, etc.) which will then print in the alphabetical report with a special designator. And passwords can be readily added and changed. Some customization of functions can be achieved with the "Set system controls" option which enables users to change defaults which are initially set to delete only terms, not terms and all their children, include narrower terms in the alphabetical reports, show facet indicators as broader terms, and report to a depth of up to 99 indents. Personally I found reporting facet indicators as broader terms annoying in the alphabetical report and changed this default, with the result that they are shown in hierarchical displays but skipped in the alphabetical display reporting BT/NT.

Overall I found only one minor glitch in this first release, and was much impressed by its functionality, ease of use, and price. The Thesaurus Construction System: Professional Edition appears to be a useful tool for vocabulary control professionals; I welcome reports from colleagues on their experience with it.

David Bearman

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TRAVIS & SOFTWARE: MODEL 1000

Bob Heinonen of Travis & Software [229 Ridgewood Dr., Ferris TX 75125; 214-544-3937, fax 214-544-2680] advertises his systems as having all the "features of the big names in development office management systems at 1/3 the price". Heinonen has 16 years of experience in development management systems including a role as the designer of one of those big name systems. He argues that his approach, which does no advertising, produces no expensive user manuals, and eliminates need for training by providing in-depth on-line help, will save users even more than that over time.

Heinonen sent me Model 1000, the single user top of the line version of his software (Model 2000 is the same systems for networks; Models 100, 200 and 300 are low end versions). Prices for these models are $590 for 100, $990 for 200, $1390 for 300, $1990 for 1000 and $2490 for 2000.

Heinonen provided a demonstration version of Model 1000 which comes on 7 distribution disks and has the full functionality of the package except that it will allow only 35 records to be created. It installs according to the printed instructions (occupying an enormous 2.5 MB of disk with 298 files!). The system maintains files for individuals, foundations and business prospects, donors, workers, volunteers, and clients. It tracks prospects and donors in the context of campaigns, manages pledges and gifts, and provides an interface to word processing mail merge packages.

After entering a password, the system reveals a main menu with eight functions: "Constitutents, Pledges and Payments, Send to WP, Administration, Reports and Forms, Build a Report, Analyze data Sets and How to . . ."

The Constituents function permits the user to enter and edit quite extensive data on organizations, families and individuals and to link empoloyes and employers, spouses and other family relations in a relatively easy fashion. Coded values can be created by users and will show in popup fields which can be entered by placing the cursor over the correct values. Demographic information, contact plans for prospects and histories of actual contacts can be recorded. The system allows for regular and irregular pledge repayments, multiple addresses and mail receipt options, multiple naming options, campaign definition and the assignment of prospects to campaign workers. It also provides for more than two dozen standard reports and the function of selecting relevant sets to report, including constructing sets from specified individual record numbers.

Overall the system seems to have a great deal of the desired functionality, including the advertised on-line help facility, but I gave up on it after several hours of encountering bugs of increasing importance and ultimately having the system lock up in the middle of a pledge recording function. In themselves these glitches were relatively trivial but in the aggregate they left me concerned about the stability of the package which is, of course, critical when it is housing all your membership data. By all means you should look at this package; you should also consult users about their experience however before making any decisions.

David Bearman

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MORE ART AUCTION IMAGEBASES

Since we reported on the art auction imagebase from Astor House in Winter 1990 issue, two more systems have been announced.

In January, by Stephen Abt introduced Artfact, a CD-ROM subscription service reporting sales of fine arts and antiques from 35 auction houses (largely U.S.) since January 1986. The product, which will be updated quarterly, currently lists about 50,000 sales, but Abt has guaranteed subscribers data from 700,000 sales by the end of the first year! Images of objects are displayed if the images were in the auction catalogs; copyright images will be on separate discs and others will be organized by the type of objects. Abt estimates that about 30% of the sales will ultimately have NTSC quality images associated with them. Subscriptions cost $4,500 for the first year (discounts are provided to nonprofits) which includes run-time licence retrieval software and historical data back to 1986 and $2,200 for future years which will include only new listings. The software is Mediabase, which will license Artfact users a full function local copy for an additional $700) [Artfact Inc., 1130 Ten Rod Rd., Suite E104, N.Kingston, R.I. 02852; 401-295-2656]

In March, Centrox announced an online data and imagebase with results of all major paintings and sculpture sold at 172 auction houses worldwide since 1989. It will also include a registry of stolen art and a listing of works for sale. It charges $9,000 for equipment which includes a dedicated 386 and high resolution monitor, plus a monthly fee of $75 and on-line charges of $1.12 a minute.

Meanwhile, Astor House has announced an inhouse facility based on its International Auctions Laser Reference technology which enables museums to construct a "Paperless Archive", combining video or digitized images with a retrieval facility. [Astor House, 439 Lafayete St., New York, NY 10003; 212-982-1500]

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AAT ELECTRONIC EDITION

The Art and Architecture Thesaurus is now being sold by Oxford University Press in an electronic edition (4.6 megabytes of text). The files are apparently intended for import into a thesaurus or database application since the data does not come with a thesaurus front end. List price $250 includes a users manual and introductory text. [For information about site licenses or MARC tapes, write Royalynn O'Connor, Oxford University Press, 200 Madison Ave., New York, NY 10016]

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MORE IMAGEBASE SYSTEMS

Since introducing its ImageQuery product at the fall MCN meeting, Carlyle Systems [2000 Alameda de las Pulgas, San Mateo, CA 94403; 415-345-2500] has produced a brochure directed at archives, museums and similar special collections to describe the graphical user interface system. A more detailed report on the software is Howard Besser's description of the Berkeley work that led to the ImageQuery product (Library Trends, vol.38#4, Spring 1990).

Interactive Home Systems, a firm founded by Bill Gates of Microsoft last year, has also formulated its approach to the museum image marketplace. It has recently been circulating a "prospectus" announcing its intention to create a number of virtual "libraries" of images, organized by museum, by artist and by period, and edited by "curators" who will select the images and author accompanying texts. It now looks on the "re-licensing" of images to secondary publishers, which seemed to be an important part of its initial business strategy, as an option which it would offer to museums that wished it to serve as their agent for digital image rights. [contact Susan Lammers, IHS, 1 Microsoft Way, Redmond, WA; 206-861-4533]

Cuadra Associates, makers of the multi-user text management system STAR, have announced the addition of facilities to integrate text data with still images and sounds. Images could be documents, displayed on high resolution monitors on the new SUN Microsystems platform, or objects, photographs and maps. The sounds could provide multiple languages. STAR was one of the first firms in the field to offer Exabyte, the DAT storage system, which makes it practical for small institutions to store gigabytes of archival data for tens of dollars each. Cuadra Associates, which has long been a leader in integrating standards, has focussed on being storage device and capture technology independent in the design of their imagebase options. [contact Judith Wanger, Cuadra Associates Inc., 11835 W. Olympic Blvd., Suite 855, Los Angeles CA 90064; 213-478-0066]

I-Mode Retrieval Systems Inc. has released I-Search with Windows Personal Librarian for DOS, Windows 3.0, Unix and VMS environments. The package features full text retrieval and Group III, IV and VGA image display in a graphical interface with some hypertext features. [7 Odell Plaza, Yonkers New York 10701; 914-968-7008]

CD Romics is advertising Imago II which it describes as a "Professional electronic slide table" for PC platforms and videodisc, CD or magnetic disc imagebases. Imago II displays up to 16 images at a time, permits the adding of new images and data, and provides for up to 64,000 characters of free text data per image. CD Romics also offers an Artists Biographical Authority File and "Vellum", a full manuscript management system, as well as image resources on videodisc and CD-ROM for use with Imago. [P.O.Box 221085, San Diego, CA 92122; 619-546-8278]

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NEWS FROM QUESTOR SYSTEMS

Questor Systems wishes to welcome its new ARGUS and MUSE clients including the Museum of Northern Arizona, the Allen Memorial Art Museum at Oberlin College, the University of Michigan Museum of Art, the Science Museum of Minnesota, the Cincinnati Museum of Natural History and Williams College Art Museum. The Heard Museum in Phoenix is running ARGUS and MUSE on an IBM RS/6000. Questor sees the new machines, which benchmark at speeds equivalent to most mini-computers, as an affordable platform for its systems and is monitoring the project closely. Questor has begun a project with the Dallas Museum of Art for bar coding their slides and some objects. Phase 1 of the project will identify the best techniques for affixing bar codes to objects, while Phase 2 will concentrate on strategies for scanning bar codes into the ARGUS database. The museum expects that the bar codes and associated software will eliminate problems of identification using hand applied numbers and speed up inventories and moves.

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GTE IMAGESCAN DEMONSTRATION

The Center for Telecommunications Research at Columbia University, the Avery Architectural Library at Columbia University, the Library of Congress and the Commission on Preservation and Access recently cooperated with GTE ImageScan to demonstrate the high-speed transfer of compressed and uncompressed images from the Library of Congress to the Avery Library, the creation and use of an associated online database to permit user access and requests for retrieval of images, the demonstration of progressive transmission of images (low resolution, outlining, and then higher resolution), and a comparison of the same image as displayed in a 35mm slide, an analog videodisc, a 24-bit screen and printer, and 8 bit screen and printer, and HDTV. [GTE ImageScan, One Stamford Forum, Stamford CT 06904; 203-965-3533; Center for Telecommunications Research, Columbia University, 1220 Seeley W. Mudd Bldg., New York, NY 10027; Paul V. Christianson, 212-854-2572]

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NEW IN MEMBERSHIP & DEVELOPMENT

Federated Software Services, a wholly owned subsidiary of the United Jewish Federation of Pittsburgh [5001 Baum Blvd., Pittsburgh, PA 15213; 412-622-6800] have announced the public release of Fund/Soft, the development module of a package developed for UJF which includes a development, endowment, general ledger and accounts payable. Fund/Soft runs on PC's, has an interface to WordPerfect 5.1, and performs most posting, reporting and inquiry functions. The package was originally written in RPG for an IBM 36 so it uses a batch update, provides security but no multiuser lockout, and prints from a spooler, all of which gives it a rather dated feel. Nonetheless it is powerful enough for large databases and provides a reasonable array of reports. No demo disc is available.

IDS System One, a non-profit accounting system, is now available in version 5.0 for single or multiple users (on a Novel network). The Medicaid, Fund Raising Payroll and Human Resources Administration Modules are scheduled for release in April [Institutional Data Systems Inc., 2 Hamilton Ave., New Rochelle NY 10801; 800-322-4371].

PhilanthroTec [6135 Park South Drive, Suite 109, Charlotte NC 28210; 704-554-1646] has announced the availability of "The Deduction Calculator", a planned giving package, which will provide instant calculations of deductions for any giving technique and generate two reports for each technique: a summary for the donor and a complete deduction report to be attached to the donor's tax return for validation of the gift. The package is offered at $495 plus $150 per year after the first year for maintenance.

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DOCUMENT IMAGING

Accessible Archives Inc. [697 Sugartown Rd., Malvern PA 19355; 215-296-7441] offers image scanning services from microfilm at 200,300 and 400 dpi to a number of output formats and media. They will do image enhancement for OCR recognition and image rotation and create document databases including indexing and OCR to free text or fielded databases. Written proposals will be furnished for all projects.

Image Graphics Inc. [917 Bridgeport Ave., Sheldon CT 06484; 203-926-0100] specializes in going the other way - recording digital data onto microfilm using its proprietary Image Graphics Electron Beam Recorder with rates of up to 20 megapixels/second, which records high contrast silver halide film in a variety of sizes from 16mm to 9.5".

MSTC [3541 Chain Bridge Rd. Suite 9, Fairfax VA 22030-2793; 703-385-7074] specializes in analysis of imaging system requirements, design, acquisition and implementation. MSTC is not affiliated with any vendor, manufacturer or service organization and does not accept finders fees from them.

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CD MASTERING OFFER

Crowninshield Software Inc. [1105 Commonwealth Ave., Boston MA 02215; 617-787-8830] is offering four $500 coupons (a total of $2000 of credit) on disc mastering services performed by Dublin Ohio based Discovery Systems to customers purchasing its CD-Formatter product before July 1, 1991. CD-Formatter, priced at $3900, enables CD-ROM publishers to output ISO 9660 formatted tapes, optical discs or other large scale removable storage media so that disk layout and data retrieval capabilities can be tested with CD-Formatter's simulator.

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CD TITLES

Enough CD releases are appearing now that archives and museums may want to consider getting drives (players). Recent CD releases of interest include:

"Birds of America" the John James Audubon 1840 albums including 500 images with bird sounds ($99. from CMC ReSearch Inc., 7150 SW Hampton, Suite C-120, Portland OR 97223; 800-262-7668)

"The National Register of Historic Places", 52,000 entries ($295 from Wayzata Technology)

"Exotic Japan" (Voyager Company, 1351 Pacific Coast Highway, Santa Monica CA 90401; 800-446-2001).

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POINT OF SALE FROM WORDSTOCK

Wordstock Inc., developers of WordStock, a bookstore point-of-sale and inventory control system who describe themselves as "by booksellers for booksellers" is making efforts to expand their foothold in Museum shops after selling more than fifteen systems in this niche. They are now writing a "cost-of-goods-sold" program especially designed for museum shops, and have recently expanded the number of special discount categories supported by their package as well as providing guidance to museums on how to use "store sections" coding of merchandise to track items relating to specific exhibitions. They claim that WordStock is also particularly easy to teach to volunteers, especially because the automatic credit card authorization function built into the program is especially simple and fast. Wordstock offers its entire user base the opportunity of combining their purchasing power so as to take advantage of an initial rate of 2.1% in transactions with Visa and Mastercard. [48 Grove St., Suite 103, Somerville, MA 02144; 617-666-9455]

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NEW FROM MINITEL: MUSEUMS ON VIDEOTEX

The Minitel Services Company, a U.S. marketing arm of the French Minitel videotex services, is trying to interest museums and other cultural institutions in using Minitel either as a private service within their institution or, in cooperation with other cultural institutions, as a public information service. To illustrate the kinds of uses that museums can make of Minitel, they point to the array of offerings of French museums on kiosk 3615 of Minitel. These include such national, regional and museum specific files as: "Arts" a calendar of festivals and events throughout France, the "Editions du Castelet" which is a guide to chateaus, museums and caves in France, "Capitale", a cultural guide to Paris, listing museums, galleries, monuments, parks, etc. and their public programs, "Le Vignerai" a guide to the wine growing region of Languedoc-Roussillon, "Artpaca" a guide to historic sites and markers in several regions of France and "Kahn" a guide to the Albert Kahn museum. [for further information contact: Cece Drummond, Marketing Manager, Minitel Services Company, 2900 Westchester Avenue, Suite 101, Purchase NY 10577; 914-694-6266]

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WILLOUGHBY ANNOUNCES NETWORK STUDY

Willoughby Associates has announced "Project Catalist", a study of museum information interchange needs using a combined database of existing museum records provided by members of the Willoughby Users Group. The purpose of the study is to determine who will use such a database, how they use it and how they would like to use it in the future. Willoughby announced the study as a contribution to the discussion of museum data interchange and descriptive practices standards. [for more information contact Lenore Sarasan @ 312-284-6600].

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PRODUCT DIRECTORIES

- A Directory of Authoring Systems, listing 90 products, was published in the March/April 1991 issue of *Instructional Delivery Systems*.
- The March 26 issue of *PC Magazine* contains a useful review of 2400 bps modems and a directory of products with comparative analysis.
- The March 1991 issue of *The Records and Retrieval Report* is a directory of PC-based records management software which compares 34 systems from 22 vendors according to data provided by those vendors
- Joe Moreau, A Directory of Computerized Inventory Control Systems, *American Bookseller*, November 1990, p.25-33 This listing of 22 vendors providing computerized inventory control systems for bookstores will be useful to anyone with a museum shop function to automate. Each system is described by features, target environment, history, configuration and cost, training and support..

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STANDARDS

UNICODE CONSORTIUM

In mid-February, twelve major U.S. firms including IBM, Apple, Sun, Microsoft, and Xerox announced the formation of a consortium to develop and promote Unicode, a code for representation of alphabets and character sets from all the words languages that is intended to replace ASCII (the American Standard Code for Information Interchange) which has been the principal method of representing text since 1967. Because ASCII uses only 8 bits (which provide only 256 unique characters) it cannot represent the thousands of special characters in Asian languages or even all the diacritics of European languages. The new code uses 16 bits (providing 65,536 unique characters) of which an informal group in existence since 1989 has assigned to 27,000 sequences to date in representing European languages plus Chinese, Japanese and Korean. The effort could define a standard as early as this year, although work still needs to be done to get it accepted internationally and to ensure backward compatibility with ASCII.

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TERMINOLOGY FOR MUSEUMS

The Proceedings of the 1988 Museum Documentation Association conference on Terminology for Museums is now available from the MDA [347 Cherry Hinton Rd. Cambridge CB1 4DH ENGLAND ; fax 44-233-213-575] for 50.00 plus 3.00 for overseas orders (Visa accepted, provide card #, name, expiration date).

The volume contains nearly 100 chapters, an extensive bibliography, and a source list. Most of the important vocabularies employed in archaeology and anthropology, fine arts and visual representation, social history and material culture, natural sciences and geology and conservation are presented and discussed. Although not a standard, this volume could be titled "Towards Terminology Standards" since it, like the conference itself, will contribute to the growing realization that shared definitions are critical to meaningful information exchange and to scholarship.

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OPEN SYSTEMS INTERCONNECTION

Finally, just when you thought everyone but you already knew everything that was possible to know about OSI, *Library Hi Tech* publishes a full issue (#32, 1990) on it. Now you can read all about OSI in the privacy of your home without letting on that it was ever a mystery to you. The articles in this issue edited by Ray Denenberg of the Library of Congress, cover the history of OSI, data communication (lower levels), applications support (the upper levels), x.400, Z39.50, ILL requirements, X.12 and EDI, x.500, OSI Network management, GOSIP, Conformance testing and even include an OSI product survey. When you are finished reading this 144 page primer you'll know everything a user could need to know.

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PRINCIPLES OF ARCHIVAL DESCRIPTION

The Ad Hoc Commission on Descriptive Standards [Hugo L.P.Stibbe Project Director, National Archives of Canada, Office of Descriptive Standards, 395 Wellington St., Ottawa K1A 0N3 CANADA] is inviting comments on its Statement of Principles Regarding Archival Description (adopted at Hohr-Grenzhausen, Germany, October 1990). According to the Commission "agreement on the Statement is the first step towards formulation of international rules for archival description which will aim to encourage standardization and to facilitate the international exchange of information concerning archives". While in theory these principles could lead to such internationally accepted standards of description, actual practices in the countries represented in drafting these principles are still very far apart and the next steps are not going to be easy. Comments are due by July 1 in order to provide an opportunity for review and redrafting in time for the Commission to submit a substantive document for adoption at the ICA Congress in Montreal in September 1992.

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CD-ROM Read-Only Data Exchange Standard

The Intelligence Community Staff , has released Version 3.0 (December 30, 1990) of its draft CD-RDx standard. This version accommodates graphics, imagery and textual data. A U.S. Government advisory panel has been formed whose purpose is to refine CD-RDx prior to submission to NISO. Comments are being solicited [Intelligence Information Handling Community, P.O. Box 571, Washington DC 20044]

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SISAC/BISAC EMBRACE EDI

In September, the Serials Industry Systems Advisory Committee agreed to develop an electronic data interchange (EDI) data set for journal orders, acknowledgements, claims cancellations and invoices, with the understanding that the Book Industry Systems Advisory Committee (BISAC) is also going to adopt the X12 standard. Because publishers need to deal with book stores and distributors as well as libraries, they preferred a unified approach rather than one that required special communications processes with libraries. [for more information on BISAC/SISAC contact: Book Industry Study Group, 160 Fifth Ave., NY NY 10010; 212-929-1393]

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BUREAU OF CANADIAN ARCHIVISTS - RULES UPDATE

The Planning Committee on Descriptive Standards of the Bureau of Canadian Archivists has circulated a draft, dated January 1991, of Chapter 3 of Rules for Archival Description (the draft rules for description of textual records), and requests comment in two parts:

1. A general summary of your critique and
2. A detailed analysis focussing on specific rules.

They also request good examples to illustrate rules and general suggestions about presentation. [Comments due by April 30 to Planning Committee on Descriptive Standards, c/o Room 5078, 344 Wellington St., Ottawa K1A 0N3] The draft follows the somewhat peculiar general rule 0.24 in defining text in terms of output format "holograph, typescript and computer printout form", thereby excluding text on microform or in published materials, as well as text in machine-readable form. Since I am at a loss to understand this first principle, I find much of the rest unduly narrow. The suggestion to further develop form of material as an access point for archival text surrogates, however, seems to me a sound one.

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STANDARDS FOR DIGITAL MOTION PICTURES AND AUDIO

Since January 1988, when ISO/IEC JTC1/SC2 Working Group 8 developed the JPEG standards for high quality still picture encoding, additional working groups have tackled other aspects of the challenge of digital transmission of multimedia. Working Group 11 (MPEG), formally constituted in April 1990 from an Experts Group that held its first meeting in May 1988, is devoted to developing a standard for joint handling of audio and video information. Work to date (leading to a discussion draft adopted in September 1990) has focused on coding a combination of audio and video with a total bitrate of about 1.5 Mbit/s, which corresponds to the bitrate of digital storage media such as CD, DAT, and WORM. The next phase of the work (scheduled to produce a discussion draft by September 1992), motivated by progress in magnetic, optical and magneto-optical recording technologies, is to define standards for coding up to about 10Mbit/s. Working Group 12 (MHEG) is attending to multimedia and hypermedia information objects, and has focused on validation of a set of specifications (working document S), as a generic standard to be employed by a variety of client standards. Tests are now underway to determine the correctness (lack of ambiguity), extendability, and robustness of the standard and the reusability of objects exchanged between a variety of client applications. The MHEG standard will accommodate interchange of monomedia objects, multimedia and hypermedia objects, and script software operators. I found the model developed by this group to represent different types of objects useful; it is a 2x2 matrix in which one axis is Media (one, more than one) and the other is Links (Implicit, Explicit). Quarant 1 includes a novel, audiotape, slide set, and televised broadcast (one medium, implicit links). Quadrant 2 includes an illustrated novel, movie, narrated slide set and television production materials. Quadrant 3 (one medium, explicit links) includes a book with its endnotes and indexes, a dictionary or a hypertext. In Quadrant 4 (more than one medium with explicit links) we find a tape with slide signals, A/V program instructions, and a CD-I. The Working group uses the term multimedia to refer to quadrants 2 and 4 (distinguished by more than one modality), and hypermedia to refer to quadrants 3 and 4 (distinguished by explicit links).

Figure

MEDIA

LINKS	One	Many (Multimedia)
Implicit	Novel Slide set	Illustrated Book Movie
Explicit (Hypermedia)	Book w/endnotes Hypetext	Tape w/slide signals CD-I

ICHIM '91

International Conference on Hypermedia and Interactivity in Museums

The program for the First International Conference on Hypermedia and Interactivity in Museums, which has been organized by Archives & Museum Informatics and will be held in Pittsburgh October 14-16, 1991, features more than forty sessions including workshops, plenaries, product reports, project reports, and formal papers on museum applications, museum implementation issues, and underlying technologies, as well as a shareware fair.

PRE-CONFERENCE WORKSHOPS (October 13)

"Introduction to Hypermedia" will be taught by Judi Moline of the National Computer Systems Laboratory, National Institute of Standards and Technology.

"Hypertext Engineering", a more advanced course, will be instructed by Robert Glushko, Principal Scientist with Search Technology, an Atlanta based consulting firm.

PLENARY SESSIONS

The meeting will open with plenary sessions featuring large-scale projects being conducted world-wide. To kick the meeting off, Rockley Miller, editor of Multimedia and Videodisc Monitor, will provide an overview of the marketplace. Following this, Achim Lipp will introduce the plans and projects of the European Museums Network, Christian Lahanier will explore Project Narcisse, a major French undertaking, Susan Stedman will discuss the projects launched by the Museum Education Consortium in the US, and Jim Page will present the Jean Talon project underway in Canada.

IN-CONFERENCE WORKSHOPS

In depth workshops of 2-4 hours duration, will be offered by Paul Kahn (Brown University) on "Hypermedia Tools and Applications"; Lisa Liseman (Carnegie Mellon University) on "The Interactive Project: Soup to Nuts"; Jane Wheeler (Voyager Company) on "Repurposing: The Low End Solution"; Kathleen Wilson (Bank Street College of Education) on "Design Issues In Discovery Based Learning"; Rus Gant (Gant Associates) on "Developments in Cyberspace & Virtual Reality"; and Achim Lipp (European Museum Network) on "Museum Interactivity Networking".

TECHNOLOGY SESSIONS

Sixteen contributed papers (seven from abroad) will be presented in sessions devoted to technology issues, entitled "Authoring Tools & Interfaces", "High Definition & Beyond", "Production Environments", and "Standards and Delivery Media".

ISSUE SESSIONS

An additional twenty-one papers (nine foreign) will be presented in sessions focussed on design and implementation issues including "Audiences", "Intellectual Property", "Managing Interactive Projects & Installations", "Evaluation", "Museum, University & Library Partnerships", and "Spin off Products".

APPLICATION SESSIONS

Twenty-nine papers (including 12 from abroad) will be presented in applications sessions devoted to "Directories & Orientation Systems", "Collections Management Applications", "In Depth Study Opportunities", "Archaeological Curation and Interpretation", "Interactive Exhibits", "Low Budget Museums Without Walls", "Visitors Creativity Experiences", and "Public Spaces & Public Programs".

PROJECT REPORTS

Project reports will be presented by Scott Palamar (Palamar Productions, US); Gary Locke (Inst. of Archaeol, Oxford, UK) and Phil Smith (New Media Productions, UK); Dick de Vries (Rotterdam Maritime Museum, NE); Deborah Cooper (Oakland Museum, US); and John Loven (Baker Videoactive, US). Projects at the University of Pittsburgh will be presented by Howard Besser (Univ.Pittsburgh, US), Beatrice Van Bockstaele (Bibliotheque de France, FR), Lynn Cox (Museum Computer Network, US), and Mark Francis and Megan Shay (Andy Warhol Museum, US). Projects at Carnegie Mellon University will be presented by Lynn Holden (College of Fine Arts), Robert Cavalier (Center for Design of Educational Computing), Scott Stevens (Software Engineering Institute) and Dario Guise (Robotics Institute).

PRODUCT REVIEW AND SHAREWARE FAIR

Finally, several sessions devoted to commercially available products for museum interactivity will review than thirty products, usually highlighting their implementation in a museum context. An experimental shareware fair will present shareware products developed by attendees. What it will actually be is anyone's guess but initial indications are that quite a number of participants have developed software and tools which they are willing to share.

EXHIBITION

An exhibition hall will be open for a total of 24 hours during the meeting. Dozens of vendors of software and exhibition design firms catering to museums will be on hand to display their offerings.

SOCIAL EVENTS

Receptions for conferees will be hosted by, and held at, The Carnegie Museum of Natural History (October 14) and the newly opened Carnegie Science Center (October 15) as well as in the Sheraton Station Square hotel. A river cruise dinner will precede the Science Center desert reception. Following the conference, registrants are invited to a special preview of the Carnegie International, a trennial art exhibit sponsored by The Carnegie Museum of Art since 1896.

For more information or to arrange for exhibition space, contact David Bearman, ICHIM '91, 5501 Walnut St., Suite 203, Pittsburgh, PA 15232-2311; 412-683-9775 or fax 412-683-7366.

To register, copy and complete the form on page 24, and mail with check or credit card authorization.

CONFERENCE REGISTRATION

Registration Fees: Registration fees include attendance at all conference technical sessions, up to two limited enrollment in-conference workshops on a space available basis, receptions on Sunday (at the hotel), Monday (at The Carnegie Science Center) and Tuesday (at The Carnegie Museum of Natural History). A complimentary copy of ICHIM '91 Proceedings will be provided to each registrant.

☐ Pre-Registration (by Sept.15) @ $ 395	$ 395
☐ Late Registration (after Sept.15) @ $ 445	$ 445
☐ Students (with 1991/2 I.D. at door) @ $ 195	$ 195
☐ Day Registration (Circle - Oct14,15,16) @ $175	$ 175
☐ Pre-Conference Workshop (Oct 13) (Circle W1; W2) @ $ 100	$ 100
☐ Dinner Cruise and Sightseeing (Oct.14) @ $40 x number of registrants/guests (# tickets)	$____
☐ Guest tickets for receptions (Oct 14 & 15) @ $10 each guest, each night (#tickets)	$____
TOTAL AMOUNT DUE	$ _____

Please enroll me in the following in-conference workshop(s). I understand there is no extra fee but space is limited and will be allocated on a first-come, first served basis.

1st Choice:

2nd Choice:

Registration is made when your completed form and amount due is received. Registration fee payments are fully refundable if written request is received by September 14, 1991. No refunds thereafter.

REGISTRATION FORM

Name _____

Title _____

Institution _____

Address _____

City _____ State _____

Postal Code _____ Country _____

Day Telephone _____ Fax _____

Accompanying Person Name (if attending social events):

_____

Make checks payable to ICHIM '91.

Or, to pay by Visa or MasterCard, authorize below:

Credit Card: Visa/MC Number _____

Exp.Date _____

Signature _____

MAIL PAYMENT OR AUTHORIZATION TO:

ICHIM '91
Archives & Museum Informatics
5501 Walnut Street, Suite 203
Pittsburgh, Pennsylvania 15232-2311 USA

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