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INTEGRATED INFORMATION: MULTIMEDIA, MULTINATIONAL, MULTI-INSTITUTIONAL

I've been traveling a great deal over the past several months as is evident from this issue in three ways: there are many conference reports, there are no software reviews although I have six products in my stack to review which will appear in the Winter issue, and there is an emphasis throughout on progress being made in the integration of information from different countries, different types of institutions, and different media.

Integration is the rationale for this newsletter. Several reports in this issue deal with discussions at international meetings that are seeking to reach consensus on methods for managing cultural heritage which are trans-national. Like European integration itself, these meetings which have been brought about in large part because of the challenges of the EEC in 1992 are raising my appreciation for cultural differences. In appreciating these differences it seems we can often find the clues to integration.

Incredibly, it often seems more difficult to find common ground between different kinds of institutions. I found it distressing, for example, that there is virtually no realization of the importance of information sharing in the September/October issue of *History News*, which featured articles on the NEH sponsored conference **Venues of Inquiry into the American City: The Place of Museums, Libraries and Archives**. At a meeting focussed on collaboration and partnership, how could the authors have avoided addressing the integration of archives, library and museum information sources as a strategy for improving research and for supporting the public interpretation of local history? The phenomenon was repeated in an article by Victor Danilov (in *Curator*, vol.34#3) on the Presidential Library/Museums system in which the failure of this "system" to adopt common descriptive practices between its "branches" and the failure to integrate data between the archives, library and museum components of the individual institutions was never referenced.

We are making better headway in the integration of different types of data. On the one hand we can put different modalities of data together in a single "multi-media" package as evidenced by the extraordinary range of archives and museum projects at ICHIM '91, the International Conference on Hypermedia and Interac-

tivity in Museums. On the other hand, we can respect the differences between the data handling requirements of different kinds of information, as the CIMI Committee is, and adopt a suite of technical protocols for the interchange of data that respect the requirements of each kind of information but recognize that a total communication often requires multi-media.

Reflecting my belief that integration at all these levels is the primary requirement of cultural institutions today, we have just published the Proceedings of the ICHIM '91 conference and have scheduled for 1992 publication technical reports on Functional Requirement for Integrated Cultural Heritage Information Systems, Functional Requirements for Interactive Multimedia Systems for Archives and Museums and a new edition of the Directory of Software for Archives and Museums which was last updated in December 1990.

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CONFUSION IN THE IMAGE INDUSTRY

The acquisition of The Image Bank, the nations largest photo licensing agency with more than 60 offices in the U.S. by Kodak (*Optical & Magnetic Report*, October 1991) highlighted the growing confusion in the market for imaging technologies, image rights, and image publication created by the same corporate players taking on conflicting roles. *Photo District News* (September 1991) carried an outraged, front page report, on an image contract being offered by Microsoft Corporation which seems to want to play the role both of content owner and principal software tool supplier. I have long felt that one of the reasons it has not signed museum to provide images for its otherwise attractive concept of publishing electronic "libraries" for the home, is that Interactive Home Systems is attempting to compete with its own customers to sell image rights to third parties. At the recent ICHIM '91 Conference, Michael Ester of the Getty Art History Information Program accused Nathan Benn's Electric Book Company, which was formed as a rights cooperative of photographers, of behaving too much like a wholesaler and software provider.

What is going on here? How can these role conflicts be resolved? In informal discussions with Benn and others, I have suggested a model of the image industry that I feel can help reduce these conflicts. The industry should be seen as providing five roles, organized in a sequence from the earliest activity in the life of an image to the last, and in a sequence of increasing "value-added". The first stage of the image life and the first role belongs to the image creator who is also a rights owner. The next role is that of a rights registry/ image listing service which is currently played by agents for the rights owners but could also be played by a copyright collective such as that proposed by Benn or that which operates for music by ASCAP as long as this collective deals with all potential users equally. The third role is that of content wholesalers who put together value-added "libraries" of images for use by third parties under agreements with rights owners or their agents. The fourth role is that of software providers who supply image capture, manipulation, retrieval and display tools that will be used in products created for public consumption. The final role is played by publishers who create specific products containing images and other data for sale to the public.

The problem in the current image marketplace is not that some individuals or organizations are playing more than one role but that they are trying to play contiguous roles. A rights owner could publish his or her own content, and a software provider could create images, but when the wholesaler tries to lock up the rights registry or a software provider promoting a standard such as Microsoft or Kodak tries to take on the role both of wholesaler and publisher, other parties begin to become uncomfortable. Will the vertical market control result in an unfair advantage? Does it mean that Kodak or Microsoft will not be honest brokers of their technologies? Obviously the fact of control does not lead to ir-

responsible behavior, but it does lead to the fear of irresponsible behavior. As long as two contiguous roles are not played by the same entity, each can be an honest broker to the next.

Can this analysis help archives and museums to sort out the role they want to play? I think it can.

Archives and museums are in the position of rights holders either because they directly own the rights to images in their collections or because they must provide such images only with the permission of the ultimate holder of the rights. It is in their interests that the *availability* of images in their collections for licensing be as widely known as possible whether or not they hope to profit financially from the licensing. As such, they have a definite interest in non-exclusive listing with multiple agents, or the emergence of a single licensing/listing service. Such a service will not come about if it is perceived as just another wholesaler of images, or if it restricts the wholesaling of images by others.

Archives and museums are interested in the publication of their images, either as a means to make money or because they want to promote scholarship (and usually for both reasons at once). Such publication will best be promoted if the costs of licensing images are proportional to the market for imagebased products. This means that archives and museums will want to resist one time payments for *perpetual* rights to using images because they will result in too high or too low a cost for licensing and they will want to avoid having to set the price of each image for each product because the number of such negotiations that a multimedia publisher would have to undertake would in itself force the price of creating large-scale multimedia products beyond the likely return. Instead they will want to have contracts that negotiate payments every few years based on experience and which contain broad categories of types of uses. Ideally, archives and museums could decide on these broad categories of uses among themselves to simplify matters for wholesalers and publishers without invoking anti-trust wrath by deciding collectively on the actual price each institution would charge.

Archives and museums are also interested in the development of excellent, widely available and inexpensive tools for image capture, storage, manipulation, retrieval and display. Not only will they benefit directly from the emergence of a consumer market for digital images through the licensing of rights, but they will benefit indirectly (perhaps even more) as consumers of image products and users of imaging software. Here archives and museums need to make known to software developers what their requirements are, and they need to avoid providing certain image content exclusively to one software provider or in one format or on one medium.

Here the argument is much more pragmatic than philosophical. Frankly, there is no digital image market in the world today. All the "standards" with which we are dealing are provisional at best. And software companies,

even 'giant' software companies, don't last very long. The very large companies that have entered the image marketplace even in the past five years but have since withdrawn outnumber those who remain. Making deals with a single purveyor could easily assure that the images we want so badly to make available will never be available to anyone.

Archives and museums can also play a useful role by beginning to be publishers. They can make digital images available on optical media or on networks, insisting on the protection of copyright even if the economic issue is not paramount so as to assure that other rights are respected, and demonstrate what quality of content, both reproduction quality and the quality of associated text, they expect. A model for this kind of activity is the Library of Congress American Memory series or the National Gallery of Art videodisc. They can also co-publish with others, especially traditional publishers who cannot otherwise enter the digital marketplace until real wholesalers begin to emerge since because the costs of negotiating rights can be so prohibitive.

Finally, archives and museums are potential outlets for digital multimedia products. They tend to attract an upscale audience to the shops and mail order catalogs and they can sell to this audience the kind of high quality digital image products for which there is not yet a broad consumer market. This could offset some of the costs of making such products for educators whose class's will be visiting the museum, or for kiosks which will be incorporated into exhibits, and which might then travel beyond the museum to other institutions.

In the long-run, if these digital multimedia products do help us to see more of the collections of the museum, to better place them in their context, to experience them in ways that we could not experience the originals, then we will become our own largest market. Archives and museums can begin now to acquire videodiscs and optical media publications from other museums and begin to build them into their public program, their study opportunities and their research.

What we can't do, according to the role analysis, is be our own licensing agencies. We can't do it because no one institution could be trusted to be an honest broker in such a role (like the airline reservation systems which are accused, probably rightly, of weighting the schedules in their own favor). And we can't do it because it would be an immense distraction from the job we do need to do. As I see it we have two options if we want to see a market for image rights develop and thrive, and both require that archives and museums list their images with an agency that performs the licensing role.

Before exploring these separately, let me briefly reiterate the reasons why we cannot continue to act as our own licensing brokers for digital images as we have for photographic plates, slides, prints and rights to reproduction. The reason lies in the economic of optical publication or network database services for images: both kinds

of distribution assume very large numbers of images will be made available to the consumer. For the sake of argument let us use the figure 10,000 images even though the actual numbers in imagebases in the year 2000 or on whatever consumer discs are being sold in that year could be much larger. The advantages of these media over their paper counterparts is, after all, the volume of information they can hold and the ease with which it can be retrieved.

If a publisher or database provider is to negotiate with each rights holder for the licensing of this large a number of images, even if the rights holders waived all fees, the costs of acquiring rights would be astronomical. It is conservatively estimated that the cost of locating a rights holder, generating a request to them and processing the reply is about \$100, so the costs of negotiating for 10,000 rights could be \$1 million even if no fees were assessed. Clearly the product that was being envisioned would need to be quite a hit to even imagine recovering such a staggering up front cost.

When we were dealing with book publishers who might be interested in publishing as many as 100 color plates in a volume that would sell for \$75 we could talk about licensing charges of hundreds of dollars and assume that the costs of contacting rights holders could also be assumed by the publishers. But if we take the same attitudes towards digital image rights the most interesting aspects of the new technology will be choked off before they can develop.

So archives and museums are faced with two choices: they can work with other rights holders such as photographers to develop a rights collective that will be a central listing service for wholesalers or publishers, or they can develop non-exclusive, short term, contracts with as large a number of agencies as they can to assure that anyone who wants access to their images will have somewhere to go to get them.

The latter course will still involve a great deal of work on the part of the museum since the players in the agency market will change rapidly over the next decade and the terms that need to be negotiated are extremely difficult to determine unless one has a broad view of the entire marketplace which would not be available unless there was a central licensing entity. On the other hand, the exact outlines of a licensing entity are not yet completely clear as the exchange between Michael Ester and Nathan Benn demonstrates.

I hope that in the next year we can hold a conference of archives and museum image holders to discuss these issues and to explore the possibilities of the new technologies and the challenges that they present to the traditional ways we have provided access to our holdings. Such a meeting would explore not only copyright but also developments in high resolution display, emerging standards and media for consumer distribution of images, and some of the new software products for building and using imagebases. More on this front soon.

**HYPERMEDIA AND INTERACTIVITY
IN MUSEUMS - ICHIM '91**

As its Chairman and organizer I was able to attend somewhat fewer of the sessions of the first International Conference on Hypermedia and Interactivity in Museums than most of the other 300 registrants, but since I had an opportunity to read most of the papers in advance during the process of editing the Proceedings volume and because I spent a substantial amount of time with exhibitors and speakers, I hope my account will do the meeting justice.

The meeting attracted an energetic and enthusiastic audience from over twenty countries which had a demonstrably fun time despite a large number of concurrent sessions, exhibits and special workshops that demanded their attention. About a third of the participants came from abroad, and the Americans were split nearly equally between museums staff and professionals working for design firms, software houses, content acquirers and publishers, and technology providers. Few attendees knew more than a handful of others before the meeting began, so ICHIM's success must be partially measured by the opportunity it provided for making contacts and even new friends.

The conference opened with a plenary session at which Myron Krueger, a video artist/computer engineer, presented work he has done over the past 22 years on the design of user interfaces employing the full human body without the gloves and goggles associated with "virtual reality". The impact of experiencing his tour de force performance and seeing the demonstration of a psychologically and physiologically appropriate user interface cannot be easily reported, but it is an experience not to miss if you have an occasion in the future.

At the second plenary session the first morning, Rockley Miller, Editor of Multimedia and Videodisc Monitor, gave a brief, but insightful, overview of the state of the industry and the market which noted that ICHIM '91 opened to Microsoft's announcement of the Multimedia PC (MPC) platform and would close with Philip's kick-off of the consumer CD-I, illustrating a market punctuated by rapid change, gravitating towards consumer standards, and ready to take off soon. Achim Lipp of the European Museum Network delighted the audience with an historical tour through concepts of the virtual museum beginning with the renaissance notion of the *Kunstammer*, and including some marvelous 19th century mechanical virtual museums illustrated by designs with pulleys and winches to bring items from storage at the request of users. Susan Stedman then described the evolution of the Museum Education Consortium from a collective of Art Museums cooperating in the development of an interactive multi-

media prototype for the in-depth exploration of art, to as professional association of individuals.

No reviewer, and especially not me, could report completely on the next two and one half days in which thirty sessions, several ad hoc presentations, an exhibition hall with products ranging from Kodak's Photo CD and GTE Image Span's high speed image telecommunications, to collections management, imagebase and authoring software and exhibit design firms and software publishers, competed for attention. As a strategic attendee, I focussed on products demonstrations, informal sessions and papers which did not appear in full in the Proceedings.

The products exhibited at ICHIM were particularly wideranging and quite impressive. On the software tools front, AXS Optical Technology Resources has made tremendous strides in developing its PhotoAccess system which shows its image handling database interface to good advantage. Q Systems Research, which did not demonstrate its telecommunications facilities, nonetheless showed how its DVI based compression of images and their retrieval worked on a single workstation. Questa introduced a bundled or software only editing environment with a presentation kiosk for rapid development and implementation of interactive exhibits. Willoughby Associates demonstrated its InfoTouch exhibition system and its newly released AccessPoint natural language front end to museum collections management databases built with its other software offerings and to lexicons and subject terminologies provided in its Lex-o-Matic and Top-Pic products. Astor House and Gallery Systems showed their Image Data Management applications and content products based on auctions house data.

Several vendors showed new platforms and technologies. Capitol Disc Interactive displayed CD-I products for museums. Elemond Art showed the first several CD-ROM discs of a series covering all of Italian, and eventually European, Art which it is publishing.

Some vendors displayed feats of technical virtuosity. Volotta Interactive Video used a separate room to demonstrate its Mars Navigator exhibit in full Dolby surround and breathtaking 3-D fly-by graphics. Eastman Kodak, as noted earlier, produced poster size printouts of PhotoCD quality digital data (c.18MB files). GTE Image Scan left everyone who has ever tried sending an image gasping by demonstrating its existing capacity to deliver still and motion images over highspeed telephone lines and satellite links. Brêmeur Ltd. demonstrated the results of extremely high resolution image capture they have been experimenting with as the lead contractor for the EEC project VASARI.

Companies with years of experience in this field which have been seen at AAM meetings were also present. Veritech Corporation and Electronic Vision showed how they have become suppliers of standard industry components and specialized equipment for interactive museum exhibits. Tour Mate Audio Tour System

reminded attendees that multimedia involves sound and that they could deliver a range of languages and styles of presentation, indoor and out. New England Technology Group showed some of its recently developed exhibits, plus many delivery ticks that it has developed for clients over the past decade.

Several companies showed pre-release products. VAR/NY previewed its alpha release tools for the 386 (to be released for Mac's and Unix machines as well) which provide a NeXT-like application interface layer that can provide users with the same front-end to numerous databases and analysis tools. Carlyle Systems demonstrated its beta release museum collections management system with ImageQuery. Oaktree Software Specialists displayed Accession 2.0, the multi-user version of their Macintosh collections management system.

In two specially organized informal sessions, Microsoft gave a briefing on the MPC platform standard which is intended to bring multimedia to every desktop and Apple gave a sneak pre-view of the Quadra platform which was announced the following week, using a demonstration called the "Virtual Museum" to show off its catchy 3-D graphics. Other sessions outside the regular pattern were held at the University of Pittsburgh to demonstrate work done by students in Howard Besser's classes and at Carnegie Mellon University to show the best projects from the Robotics Institute, Software Engineering Institute, Center for Design of Educational Computing, Center for Creative Inquiry and other multimedia labs.

Within the standard program, concurrent sessions addressed "Applications" in one lecture hall and "Issues" or "Technologies" in a second. Issues sessions, such as those devoted to Intellectual Property, Evaluation, Design, Installation Management, Partnerships, Spin-Off Products and Standards seemed especially heavily attended. Applications sessions attracted those interested in projects devoted to Public Spaces, Children's Museums, In-Depth Study, Orientations and Tours, Interactive Exhibits, and Visitor Creativity Experiences. Technology sessions included Authoring Tools and Interfaces, Production Environments, High Definition and Beyond as well as fifteen half-hour product reviews by vendors.

The response to ICHIM '91 was extremely favorable, so the Organizing Committee decided to go ahead with plans to hold ICHIM '93 in Cambridge England in September 1993. For information about participating in ICHIM '93 or copies of the Proceedings for ICHIM'91 (available for \$50 prepaid), contact David Bearman, Archives & Museum Informatics, 5501 Walnut St., Suite 203, Pittsburgh PA 15232-2311 or Andrew Roberts, Museum Documentation Association, Building O, 347 Cherry Hinton Rd., Cambridge CB1 4DH England.

David Bearman

Vendors mentioned in the report on the ICHIM conference and are listed below:

AXS - Optical Technology Resource, 2560 9th St., Suite 219 Berkeley CA 94710 415-540-5232; fax 415-540-5636

Capitol Disc Interactive, 2121 Wisconsin Ave., NW Washington DC 20007 202-965-7800; fax 202-965-7815

Eastman Kodak Company, 343 State St. Rochester NY 14650 716-781-7757; fax 716-724-9629

Electronic Vision Inc., 28 Station st. Athens OH 45701 614-592-2650

Elemond Art, Electa Multimedia, via Trentacoste 7 Milano 20134 ITALY 392-2641-2586

Gallery Systems, 439 Lafayette St. New York, NY 13 212-982-1500; fax 212-475-2048

GTE Image Span, One Stamford Forum Stamford CT 06904 203-965-2300

Microsoft, Multimedia Division, 1 Microsoft Way, Bldg 13 Redmond WA 98052-6399 206-936-8809; fax 206-883-8101

New England Technology Group, Interactive Systems, One Kendall Square, Bldg 700 Cambridge MA 02139 617-494-1151; fax 617-494-0998

OakTree Software Specialists, 515 E. Altamonte Dr., Suite 250-9A Altamonte Springs FL 32701 407-339-5855; fax 407-331-3007

Q Systems Research Corp., 75 Ave. of the Americas New York NY 10013 212-941-1440; fax 212-941-7960

Questa, 12 Bicknell St. Marlborough MA 01752-4102 508-460-9774

Tour-Mate Systems Ltd., 449 Adelaide St. West Toronto M5V 1T1 CANADA 416-594-2376; fax 416-594-2377

VAR/New York, 101 West 57th St., Suite 11F New York NY 10019 212-262-0811; fax 212-262-1025

Veritech Corporation, 37 Prospect St. East Longmeadow MA 01208 413-525-3368; fax 413-525-7449

Volotta Interactive, Video P.O.Box 2028 San Anselmo CA 94979 415-459-6949; fax 415-459-2216

Willoughby Associates, Ltd. 266 Linden St. Winnetka IL 60093 312-284-6600; fax 312-284-3827



"Archives & Europe without Boundaries", October 1991, Maastricht, the Netherlands

This celebration of the one hundredth anniversary of the foundation of the Royal Netherlands Society of Archivists and the pre-anniversary of European economic unification, attracted well over 300 archivists from throughout Europe and a few from North America and elsewhere, with delegations almost always led by the national archivist. Unlike most international conferences of this sort, the papers were often quite radical (and will be published in JANUS) but the formal program was arranged so that plenary sessions alternated with concurrent sessions on the same topic so that I often found I wanted to go to all the concurrent sessions on a given issue or to none.

In the first session, devoted to the topic of the "citizen and administration", the speakers were politicians with pronounced views on the need for public accountability, but no question period was allowed in which to explore the arguments they advanced that the archivists, as a mediator between the citizen and the bureaucracy, owes stronger allegiance to the citizen and his rights to access. Of particular interest was the battle cry advanced by Hermann Tjeenk Willink, President of the Upper House of the Netherlands States General that "Europe without boundaries must be a Europe of citizens not for bureaucracy".

In the concurrent session which picked up on this theme, Richard Norton Taylor, a Guardian reporter who has spent the past decade opposing the British Official Secrets Act, argued that most withholding in the U.K. is to protect agencies from embarrassment, not to protect real secrets and that despite the fact that the British government often uses Privacy Act protections to avoid release of materials, the real threat to personal privacy comes from state secrecy not from FOIA. Trudy Peterson of NARA argued that privacy was not absolute and that in the U.S. the privacy of the general public was given more protection than the privacy of "public figures" or of government officials and reviewed tests for "germane-ness" and "balancing of interests". She ducked my question of how NARA could better assure that records were made and kept of important government acts when it insists in the PROF's case that the heads of agencies are entirely free to declare, or not declare, anything a record.

In the second plenary session, two archivists committed themselves to information services over antiquarianism. Michael Roper (Keeper of Public Records, U.K.) suggested it was time to revise Jenkinson dictum that the first duty of the archivist is to preserve the record and the secondary duty is to researchers. Instead he suggested that both were equal duties and that selection and preservation were not ends in themselves. Reasonable facilities in the modern age included actively providing documents; soon the Public Records office will begin to release its

finding tools on CD's. Also it involves releasing metadata and detailed documentation that takes the user below the level of traditional finding tools. Bernhard Vogel (President of the Konrad Adenauer Foundation) suggested that archivists need to take a public stance about what is significant to retain in order to assist politicians with problems like those posed by the East German political police archives. He also proposed taking an active role in documentation, recounting a recent German archival initiative to interview Buchenwald prisoners (creating records on the continent that most vociferously argues that such activity is off limits to archivists!).

Two of the concurrent sessions on information services were devoted to standardization and the new technology and two to role changes. Since I was giving a paper in one of these I was only able to attend it. Warwick Longmann of Wang Ltd., gave a lengthy account of the move towards OSI and the client/server model. In a few remaining minutes, I suggested how an understanding of the difference between data content explicitly provided by the records creator, data structure implicitly communicated by the products, and data context reflected in the transaction itself, could orient archivists to the most effective standards for interchange and interoperability, and hence for archival retention of information in a software independent manner.

On the second day of the meeting the first plenary addressed the difficult issue of European wide training or recognition of archival professional credentials across Europe after 1992. David Veysey (Librarian of the Bodleian Library, Oxford) and Hans Hofmann (Head of Archives of the EEC) hemmed and hawed but came to no hard conclusions. In the concurrent session I attended, Kate Thompson reported on the Register of the U.K. Society of Archivists which is not very different from the concepts underlying the certification program in the U.S., and Terry Eastwood argued that accreditation had to come first in order to assure the public that archivists possessed training that instilled professional norms rather than institutional ones.

In the afternoon plenary, Eric Ketelaar (National Archivist, the Netherlands), discussed the need for European standards on access, preservation, and automated systems compatibility and urged archivists to become proactive. In the concurrent session I attended afterwards on the European Technology Industry and the Archival Heritage David Thomas (Public Records Office) introduced the session by stressing the need for archivists to specify requirement and industry to respond with technical solutions, and the two archivists and two industry spokesmen who followed discussed specifications and requirements as suggested, but they chose to focus on preservation of paper and audiovisual records which was certainly not what I had expected. At least the session demonstrated that as long as electronic records are not on the archival agenda, we can't expect them to be high on industry's agenda either.

□

The Changing Character of Scholarly Research and Its Implications, July 18-20, Bentley Library, Ann Arbor Michigan

Avra Michelson (NARA) and Jeff Rotherberg (Rand Corporation) received a fellowship to examine the implications of changes in the nature of the research process for archives. Their paper, which focussed on humanities and social science scholarship as impacted by Bitnet and the Internet served as the basis for discussion by an invited group including the archivists Richard Cox (Univ. of Pittsburgh), Charles Dollar (NARA), Anne Kenney (Cornell), Bill Wallach (U.Michigan) and Joan Warnow-Blewett (American Institute of Physics) as well as Michael Sperberg-McQueen (Director of the Text Encoding Initiative), Paul Peters (Director of the Coalition for Networked Information) and Jerome Yavarkovsky (Director of the New York State Library) as well as myself.

The paper prepared for the meeting made the case that a growing number of scholars are being significantly impacted by trends in connectivity and end-user computing, particularly by their access to the Internet. Citing projects reflecting these trends, Michelson and Rotherberg illustrated why some archives patrons may soon want to obtain records in digital formats for local processing and value added information production. The paper assumed that if patrons wanted such services they should be a priority for archives, and therefore focussed on how to make research data sets available, but the discussion introduced several additional considerations which might have greater priority, even for patrons. Participants especially felt the need for archivists to provide access to metadata about archivally significant activities over networks so that researchers can locate records that should have been created and might be available and relevant to their research.

Most of the topics discussed at the meeting - conversion, appraisal, preservation, access - exposed issues relating to management of electronic records which are no different for scholars than for other potential audiences, however the meeting kept returning to issues of archival retention of networked based scholarly dialogues (list servers, bulletin boards, e-mail) or networked based data sets (text repositories, electronic journal, research results). In my view the fact that many sites are linked over Internet does not alter the archival responsibility which resides with the institution or project that manages the data. This responsibility may not be recognized, and it is evident that the creators of such data sets and the host institutions on whose computers they reside are ignorant of the contextual information needed to make sense of these electronic information resources and the metadata that is required to describe them, but I see not reason why archivists from other institutions should therefore seek to accession materials which, if they were on paper would be considered outside their scope. What was evident is that too many archivists and most technology using non-archivists are ignorant of the data capture requirements for

archival management of electronic records and that they share a misconception that the role of archives is to collect interesting old information rather than to serve the organization of which they are a part by preserving as long as necessary those transactions of the institution for which documentation is required. Hopefully the published version of the paper will reflect these concerns and be instructive to these audiences rather than accepting the definition of archives thrust on us by historians and other lay users.

D.B.



CALENDAR

November 5-9 New York NY; Association of Moving Image Archivists Annual Conference [National Center for Film and Video Preservation, P.O.Box 27999, 2021 North Western Ave., Los Angeles CA 90027; 213-856-7637]

November 6-9 Santa Monica CA; Museum Computer Network Annual Conference [MCN, 5001 Baum Blvd, Pittsburgh PA 15213; 412-681-1818]

November 11-14 Phoenix AR; "CALIS: MAKING IT HAPPEN!" CALIS Expo '91, Conference & Exposition [National Security Industrial Association, 1025 Connecticut Ave., NW, Suite 300, Dept. CALS, Washington DC 20036; 202-775-1440]

November 15 Philadelphia PA; Museums and the Law: Collections [Mid-Atlantic Association of Museums, P.O.Box 817, Newark DE 19715-0817; 302-731-1424]

December 3-4 Ottawa Canada; Electronic Democracy International Conference and Training Session [Riley Information Services Inc, 633 Bay St., Suite 2207, Toronto M5G 2G4; 416-593-7352]

December 12 Washington DC; "Interactive Multimedia in Museums" A National teleconference [Multimedia Development Program, The George Washington University, Washington DC; 202-994-8233]

December 12-13 London England; CHArt Conference, Computers and the History of Art, "CD-ROM for the History of Art" [Robert Senecal, Secretary, CHArt, Goldsmith's College, Lewisham Way, London SE14 6NW]

February 6-13 Chicago IL; 20th Annual Conference of the Art Libraries Society of North America [ARLIS/NA 1992 Conference, 3900 East Timrod Street, Tucson, AZ 85711; 602-881-847]

February 12-15 Chicago IL; 10th Annual Conference of the Visual Resources Association [Rebecca Hoort, Senior Associate Curator, Dept. of History of Art, University of Michigan, 40 Tappan Hall, Ann Arbor, MI 48109-1357; 313-747-3328; fax 3132-747-4121]

National Association of Government Archives and Records Administrators, Annual Conference, Chicago July 24-27

This may be the year NAGARA finally came into its own. Last year's meeting in Boston, before the great state budget crunches, attracted a few more people and other conference have had a greater variety of programs, but in 1991 the rationale for a special organization for public records, and an organization which bridges the archival and records management professions, was transcendently obvious. Not only did the management of electronic records, and the focus on records as "corporate memory" justify having a meeting of government archivists and records managers, it demonstrated that the concerns of this community are distinctive and that the progress they have made in the past few years has carried them far beyond their counterparts in the historical manuscripts tradition and in private sector repositories.

This exciting three day meeting featured two keynote talks by outsiders to NAGARA, Ellsworth Brown of the Chicago Historical Society and Ian Wilson of the Provincial Archives of Ontario, both of whom emphasized the importance of identifying and serving the user community and of strategic planning in focussing information management on mission critical objectives. These themes were echoed by speakers in other sessions, but for the most important theme the outsiders introduced was the special characteristic of the clientele for "public" records, their right to records as citizens, which has been overlooked by recent generations of government archivists and records managers who have portrayed their users as researchers no different from those in private repositories. After years of insisting that government records and archives are not a luxury but a necessity in free societies, I was gratified to hear this theme echoed in talks by the keynoters, and by speaker after speaker.

A third theme struck by the keynoters was also played throughout the meeting. Archives, they argued, must be more strategically focussed, they must concentrate their resources in order to play new roles in a world of electronic information systems, and they must become technologically adept and sophisticated in order to intervene proactively in the emerging information society to ensure that archival functional requirements are satisfied in organizations operating in the information age.

My first choice of concurrent sessions led me to "IRM-just another buzzword? where John Henry (Illinois Department of Finance, past President of NASIRE), provided a statistical overview from a recently published NASIRE report of the spread of Information Resource Management offices to State governments (45 out of 50; 9 at cabinet level, 6 independent agencies, the rest at a sub-cabinet level). His view of IRM was generally traditional (e.g. confined to the management of the hardware, software and personnel devoted to information management), even though he suggested that the next stage in the

evolution of the IRM function would be knowledge management.

The archivists who followed Henry demonstrated that archivists can be oriented to knowledge management along with the cutting edge of the information management profession. Mike Miller (EPA) discussed the challenges the EPA faces in making a transition from traditional IRM (which EPA does quite well) to IRM defined as information content management. The transition involves the records management staff in moving beyond guidelines on optical discs and on systems design (both of which they have already completed) to involvement in data value standards and in the definition of common GIS data sets. The three main areas which have emerged are: * defining what data is required for corporate purposes; * identifying the relationship between data in paper and machine-readable forms; and * determining appropriate retentions based on data content.

Charles Robb (Kentucky State Archives) described the work he has been doing since 1985 to position the State Archives with respect to IRM. By taking the initiative the State Archives was able to become the lead agency for a statewide information locator system based on data dictionaries for public data systems which is now publicly available across the state using a videotex system also used by the State personnel agency to post job offerings and the Department of Environment to notify the public about toxic wastes. They also linked into the creation of a database created by the state IRM planning function for review of agency information plans which include mission statements and record keeping requirements for all proposed systems. Using these the Archives can make meaningful scheduling decisions based on data now provided by agency staff and effectively describing 8000 records series created over the past 20 years.

In the afternoon, John McDonald (National Archives of Canada) and I spoke on Information Technology Standards and Archives. McDonald presented a framework for linking "corporate memory requirements" to short, medium and long-term strategies based on information technology standards. He described the project in which the National Archives, the Canadian Workplace Automation Study Group and the Department of Treasury have been involved to produce guidelines for Information Management and Office Systems Advancement (IMOSA). Particularly he stressed the importance of clear policy objectives and information accountability, corporate rules of the road for system utilization, and training and support. These have led to the FOREMOST specification (a short-term specification), a focus on application portability standards (a mid-term objective) and initial steps towards definition of the profile of a suite of standards for interoperability (a long-term goal). He emphasized that in all this work, the standards we set must relate to business purposes and the functional requirements must clearly serve program delivery aims.

My talk articulated the rationale for archival involvement in standards for electronic mail and document

headers, Information Resources Directory Systems, and markup languages and other means of identifying document formalisms, each of which relates to the interchangeability of information about records that is external to the content of a recorded transaction. This information is either resident in the structural relations between parts of the document or transaction or related to the context of creation or communication of the document or transaction. In either case, this data is currently managed by each system in a proprietary fashion and thus cannot be exported or migrated beyond that system without substantial cost. The consequence is that in most systems migrations or archival deposits of electronic records this data, which is what gives the document its "recordness", or its value as evidence, will be lost. Therefore it is towards these issues that archivists should direct their attention if trying to influence standards.

The next session was devoted to reporting on the Electronic Records Research Conference whose report is now published. Larry Hackman and Lisa Weber presented parts of the conclusions of the NHPRC funded study and urged groups interested in pursuing the matter to obtain copies of the published report and submit research proposals for funding. Hackman urged the States to get their feet wet and suggested the possibility of creating a national center for electronic records to promote advocacy and action projects identified in the research report but not actually part of the research effort.

The next session, devoted to strategic planning in information management provided Ed Bridges (Archivist of Alabama) an opportunity to report on the products of two years of the NAGARA/University of Pittsburgh sponsored "Pittsburgh Institute" which was devoted to strategic planning and education on matters of information management. He described the Institute as personally transformative, requiring the "re-visioning" of the archival mission and the adoption of a position which emphasizes the regulatory role of archives over their custodial role. He then recounted numerous activities throughout the country at the State level which reflected archival initiatives in strategic information planning.

John McDonald followed with a second paper, this time devoted to how the National Archives of Canada is "positioning" itself within the broader governmental policy framework consisting of the policy statements on Management of Government Information Holdings and Management of Information Technology. NAC is delegating authority for program documentation to the agencies, first by requiring a planning approach to disposition of records rather than the traditional reactive approach, and secondly by asserting the responsibilities of the agencies for corporate memory. Operationally this means insisting on a planned approach to records disposition in place of the traditional "reactive" approach and providing agencies with advice, training, guidelines and standards for management of recorded information relating to the corporate memory but requiring to design and implement adequate records management practices.

At the luncheon, Ian Wilson, Archivist of the Province of Ontario picked up the planning and service themes of the meeting and challenged archives to become concerned about use and users and transform themselves into the kind of institution members of the general public feel they need. Wilson emphasized that access to public information is a basic right in a democratic society but archival practices have had the effect of making access neither free nor equitable. He urged consideration of policies to be open hours that citizens can reasonably be expected to be free, to make information retrieval tools which do not charge users in the time it takes to find things, to distribute materials and access in a partnership with other information providers and networks.

I had to leave the conference early and was therefore only able to hear the first afternoon talk, which appropriately was a description by Discilla Simpson of the North Carolina State Archives MARS system which makes online public access to the NC State Archives holdings possible. (review in this journal, vol.4#4, Winter 1990)
D.B.

Impact of Information Technologies and Information Handling on Offices and Archives - Marburg Germany October 17-19

Twenty-six archivists and researchers on public administration and organizational behavior met in Gladenbach Germany October 17-19 under the auspices of the Archivschule Marburg and the Volkswagon Foundation. The three day meeting reaffirmed for me that archivists have the option of controlling electronic records creation and retention through either administrative or technological means. It also revealed how thoroughly archivists in Germany and Scandinavia trust in administrative controls and how, in their absence American archivists seek to rely on technological means. The Canadian, French, Spanish, Dutch, English and Belgian participants seemed to toe a middle course.

Angelika Menne-Haritz, Director of the Archivschule Marburg and organizer of the meeting, invited a small and knowledgeable group including eight Germans, five Americans, four Britons, and one person from Holland, France, Belgium, Norway, Sweden, Spain and Canada. As with the meeting of a similar group in Macerata in May, many of the most valuable insights gleaned from the sessions involved the differential impact of different legal and administrative traditions in the formulation of requirements for electronic records management.

The conference opened Thursday morning with talks by Rick Barry (World Bank) and Charles Dollar (NARA) on information technology developments. Because I flew in from ICHIM '91, I arrived late for talks, but from the papers and conversation with others I gathered that Barry emphasized the need for organizational policy

frameworks and role definition, in line with the report I prepared for the UN ACCIS panel which he chaired. Dollar stressed the technological trends which are leading to distributed systems, networking and greater demands for information interchange. They each used my definition of a record from the UN report, which focussed on records as communicated transactions, and this was subsequently accepted by the group throughout the seminar.

In the second session of the morning, Hans Reinemann (Hochschule für Verwaltungswissenschaften, Speyer) and Tom Finholt (University of Michigan) discussed case studies of the impacts of electronic mail on organizations. Both papers affirmed that e-mail was changing the nature of work, not just the way it was performed. The degree of job transformation as opposed to task transformation was, however, a matter of continued debate during the symposium as not all participants viewed it as desirable or inevitable, and some proposed strategies for controlling records which assumed that these impacts could likewise be controlled.

When I arrived Thursday afternoon, I heard paper by Victor Bekkers (Univ. Brobant, Netherlands), Richard Kessner (Babson College, USA) and Peter Bohl (Landesarchiv Baden-Württemberg). Bekkers studied the importance and character of communication in the Dutch civil service and discovered that it was largely effective (rather than ritualistic or bureaucratic) but that it was, as yet, barely touched by e-mail. Kessner argued that IRM and archives, library and other information services under IRM, should aggressively seek to provide tools, leaving the use of these tools to the workers. While the audience as a whole did not disagree, I felt that Richard's view of end-users as the customers for archival services ignored the role of archives as agents of the administration or corporation. Peter Bohl's paper, delivered by Walter Tragenberger, assumed that archivists were agents of the organization and were solely responsible to it. It proposed mandatory registry functions for all electronic communications and snapshots of databases, both imposed by administrative fiat. In the discussion which followed it became clear that administrative means of control were not as impossible in Germany as they would be in the United States. For example, the German archivists could assert that because the only questions which can be addressed to a database on citizens are defined in the law, even the Minister responsible for immigration could not request and receive a report on the numbers of immigrants from one nation to a particular city if this use of the data was not anticipated in law. All systems are registered along with their permissible uses and generalized user-driven software capabilities are not permitted to be acquired or implemented even if an agency argues that its effectiveness could thereby be improved.

By the end of the first day the themes which came to dominate the meeting were thus already pronounced. Americans were seeking high-tech methods to intervene in systems design and standards in order to capture and store archival electronic records while the Europeans were stemming the degree of organizational disruption by

relying on traditional procedures of strong bureaucratic control over the means of communication. It was clear that both sides would have a great deal to learn from each other if their respective methods could be explored during the course of the meeting.

The Friday morning papers provided an excellent bridge. John McDonald (National Archives of Canada) reported on the Canadian IMOSA project which combines technology based intervention with administrative controls and give equal emphasis to the articulation of functional requirements or technical standards and on policies and "corporate rules of the road". Michael Cook (University of Liverpool) reported on his efforts to implement PROFS at the University for archival review of records, and reported why it was essential for the records manager to play a role in IT planning. His experience is one in which the use of information technologies has been slow to catch on. Wulf Buchman (Bundesarchiv, Koblenz) who chaired the session, noted the benefits of the emphasis American's placed on life-cycle management, information technology training, and capture of accountable records and to the strength of the European tradition of documents as records, diplomatics and historical training, and the attention paid to the legal system and its procedures (juridical context).

On Saturday morning (after a Friday afternoon and evening of sightseeing and culture), the meeting reconvened with papers by Claes Granstrom (Deputy Director General of the National Archives of Sweden) and Bruno Delmas (Prof. of Contemporary Archives, Ecoles des Chartres, Paris). Granstrom noted that provenance has been the basis of Swedish archival practice "by law" since 1900. Records are registered when they are created. The archives act is now subordinate to one of Sweden's "fundamental laws", the Freedom of Press/Information Act of 1966 which guarantees equality of access to information and hence requires the archives to make knowledge of the existence of public records available to the public. The archives act gives formal expression to the right to access, the need to support the administration of justice, and the value of supporting research on Swedish cultural heritage. The definition of records is consistent with that in the FOI legislation. In practice, the means that the Swedish National Archives has issued regulations requiring the registration of all ADP systems including filing metadata definitions, secrecy limitations, appraisal regulations, and information about where the public can access the system and the name of an official who will provide them help in using it. Only prescribed access is allowed to anyone, including the government officials who created it or members of the public, and the data in a system is a record from the moment of creation (and its metadata is a record even before it is populated by any instances). In addition, the archives has issued documentation requirements which must be satisfied by all systems, regardless of size or breadth, which include the definition of manual and/or automated routines (including AI rules) and functionality (including changes made to functionality). Each agency with access to a record system, including database views, must conform to all these requirements, as must the agen-

cy which created the records system. Granstrom asserted that these laws are being obeyed; if so they have effectively established through administrative means each of the objectives being pursued by American's through automated methods.

Bruno Delmas, who has just inaugurated a radical change in the pedagogical structure of the Ecoles des Chartres by developing a separate concentration for modern than for ancient records (which share a core of common courses), asserted that the concepts of the archival document as taught in diplomatics are equally relevant to electronic as to paper documents. He claimed that authenticity of such documents can be established by the criteria of continuity and standard business practice that govern the acceptance of microform as evidence, that each has a distinctive form, and that all are related to other records under software control in ways that can be made evident by software. He seemed less concerned about the logical reconstruction of these relations or of provenance, but the discussion was all too brief.

My own paper on the validity of archival theory for the management of electronic records concluded the program. In it I concurred with the previous speakers that provenance was still the basis for archival practice because it points to the relationship between information and activity which is the crux of the concept of evidence. I then discussed three types of information which are conveyed at an historical moment of transaction and the problems in retaining each type over time. The simplest level of information is the data content created by the maker of the record (text, image, sound) and interchanged using low level standards for data representation such as ASCII, JPEG, or FM audio. The next level is information contained in the structure of the data such as page layout and fonts in texts or relation of data groups and records in databases. This is the information archivists call "form" and on which a substantial amount of archival theory and practice is built. It is rarely explicitly captured in electronic systems or transferred between systems in software independent ways. The third level of information relates to context or provenance and identifies the action to which the information testifies or which it represents. My thesis was that "evidential historicity", that which gives the record its "recordness" or its value as evidence, is preserved only when we can capture, represent, and interchange the basic data content, the structure and the context of electronic information in all applications that generate records of archival significance. I proposed for a variety of applications how we would go about operationalizing this requirement, largely through automated means implemented as a consequence of formal statements of archival requirements guiding specification for systems development and implementation.

In the discussion which followed, and on which we ended the conference, we returned to questions about the evidential vs. informational mission of archives in different countries and concurred in the value of both diplomatics and systems analysis as tools for archivists. □

Software Assisted Preservation Management Tools - product reviews by:

Sally A. Buchanan and Jacalyn Mignogna
School of Library and Information Science
University of Pittsburgh

Curtin, Bonnie Rose, **Guide & Resources for Archival Strategic Preservation Planning**. NAGARA; Atlanta, GA, 1990. 10

The Society of American Archivists, 600 S. Federal St., Suite 504; Chicago Il 60605; \$95 to members; \$120 to non-members plus postage and handling]

This 600+ page resource compendium, manual for preservation planning strategies, and computer-assisted self study has been a massive undertaking, supported by a grant from NHPRC. The result deserves a heartfelt and professional WOW! The project director, Bonnie Curtin, assisted by a distinguished advisory team and project administrators, has produced in a remarkably short time a preservation planning tool that should encourage and support comprehensive archival preservation for years to come. There can be no possible excuses any more for the failure in archives of sound and thoughtful preservation planning.

It is almost impossible to review this publication thoroughly without writing volumes about it. Two reviewers attempted it: one an experienced preservation administrator and educator, the other a newcomer to the preservation field.

The preface to the document states that the GRASP "offers a methodology to develop a comprehensive preservation plan. It applies to all types and sizes of archives and manuscript repositories ...". It does this and more while employing a very exciting technique - artificial intelligence. The computer-assisted self study utilizes A.I. to assist the user in deriving and prioritizing goals and objectives tailored to the individual repository. This sometimes tedious chore actually becomes fun as well as challenging. Best of all, it works.

However, it is the Manual that contains the core of the planning component with strategies, objectives, and plans of work that are sensible and seemingly adaptable for all repositories no matter how modest or bureaucratic. This practicality is probably not too surprising given the field testing that was undertaken before the GRASP was revised and published.

In spite of its depth and breadth, the GRASP is comparatively easy to use because of excellent organization, sound instructions, tabbing, and detailed tables of contents. A slight quibble is the lack of good indices - but that may simply have been too daunting.

The newcomer felt somewhat overwhelmed by the size and the information, finding that the clarification provided on policies in the computer assisted self-study

helped, but she was still lost, as a novice, with the "big picture". She comments additionally that completing the survey in one sitting, unless you are an archivist with perseverance, was exhausting due to the monotony of one question after another. She adds that in order to see how effective or practical the recommendations are, it would be interesting to have a number of institutions run the A.I. program and compare results to see if the survey indeed tailors solutions to individual needs or if generic solutions are provided. Since data will undoubtedly be available as the program is used, a compilation and analysis could prove extremely useful to the field.

This is a remarkable resource and reference tool that should serve the archival and records repositories in the same way that the earlier ARL Preservation Planning Manual assisted the early library preservation administrators. This effort improves on that, benefiting from a great deal more preservation/conservation information and experience gained over the past decade. Experienced archivists will undoubtedly discover some "holes" where additional or more detailed information may be helpful. But it is hard to imagine, after eight hours of reading and testing, that much has been omitted. Because of the insight provided by the novice preservation manager, NAGARA might consider a novice's guide to the use of GRASP. Perhaps some newcomers to the field would be willing to compile it.

In the meantime, this reviewer advises everyone, archivist, records manager, librarian, to make the acquisition of this planning guide a high priority. Preservation planning and education will be greatly enabled by its publication.

Maines, Rachel P. and Associates, **Disaster Preparedness Plan**. Cornell Research Park: Ithaca, N.Y., 1991. \$89.95 prepaid.

The author and associates have developed a "plan-builder" designed to assist staff in museums or archives to develop a disaster plan. Included is a disaster plan template entered on an IBM compatible diskette to enable users to enter local data directly onto the plan ready to print out when completed. The diskette is contained in a pocket in a three ring binder with the printed sample of the text. Much of the format and the information contained in the planning document were based on the guidelines developed by Sally Buchanan for the New York State Conservation Program Office consulting with the Northeast Document Conservation Center, as the authors acknowledge. Most of the printed material is available in a slightly different format from the N.Y. State Conservation Office, Division of Library Development, as a planning packet for a minimum fee. If a novice planner, however, would like the convenience of the program laid out on a diskette with the ability to print as many copies as necessary, then this may appeal.

This disaster preparedness plan was reviewed by two readers - one an experienced preservation administrator and educator; the other a novice in the preservation field.

Neither reviewer was able to read the diskette. This problem clearly needs to be addressed by the authors.

The novice reviewer found the template understandable and thorough, if very basic. She felt it could serve as a reliable reminder for planners which they could check during the disaster planning process. It would answer the questions often asked by staff, who aren't quite sure how to begin, about what to include and how to get started. She did suggest that the "Emergency Reporting Chart" needed to be rethought. Two pages of telephone numbers might be disconcerting in the midst of a disaster.

The simplicity and basic nature of the disaster plan that seemed encouraging and supportive to the novice reviewer caused some concern for the preservation administrator. The design of the plan was acceptable, but it was isolated from any accompanying text explaining, for instance, to potential users what was meant by "collection salvage priorities", how they might be set, why they are important. Under the section named "Prevention/Protection" users are advised to fill in how many feet they are above flood level or the local water table. For many users this will be irrelevant. A better approach might be more generic advice recommending the identification of potential local natural hazards and possible protective measures that could be undertaken. Additional explanations and advice about fire detection and suppression equipment is often necessary before staff can fill in the blanks or make recommendations or decisions. Many institutions have neither kind of equipment and require assistance in addressing these issues in an effective, objective manner. The sixteen pages in the middle of the text devoted to names and addresses of suppliers and services would be better located in an appendices where it did not interrupt the main body of the text. Under "Response/Mitigation" four pages are dedicated to lists of people responsible for certain actions, but only a partial page is given to instructions for the critical response action itself! "Recovery" gives no advice or help with a description or comparison of potential drying methods and under what circumstances each might be selected. "Rehabilitation" lists only five steps to consider when planning. Yet this consideration in a large disaster can consume much of the recovery time and budget and requires careful and extensive planning. The authors recommend including wiring diagrams in the plan, yet facilities services in many institutions will not share that information due to security restrictions.

We think this kind of help with disaster planning is a creative idea. Anything that makes planning easier and encourages the creation of institutional disaster plans is to be supported. We recommend, however, that the authors rethink their text and include a great deal more information for planning staff to use in writing local disaster plans. I also recommend some stricter editorial work cleaning up the text so spacing is regular, lines of print are even, and names are not misspelled.

S.B. & J.M.



INBOX

REFERENCE

European Visual Arts Information Network, **ITEM - Image Technology in European Museums and art galleries database**, (Ipswich UK, EVAIN, 1991) vol.1, January 1991, 113p. and vol.2, July 1991, 131p.

These two spiral bound volumes are printouts of records from the ITEM database describing imaging projects in museums throughout the world. In addition to the project name and commissioning institution, most have a description of the program and information about its technological platform and software. Some entries include other information as well. The books are not exactly bedside reading, but they are valuable to give a perspective on the breath of projects worldwide and could be useful as a directory.

BULLETIN BOARDS

The National Association of Museum Exhibition (NAME) has set up a bulletin board called **NAME Exhibitionist BBS** which contains public domain programs, user-contributed files, and comments. Callers are invited to upload files and programs that other NAME users may find useful. The phone number is 203-271-2655 92400 baud, no parity, eight bits, one stop bit and full duplex).

Museum-L is a list moderated by John Chadwick of the University of New Mexico. To subscribe send an e-mail message to list-serv@unmvm.bitnet stating "subscribe Museum-L MyName". Museum-L carries miscellaneous news, critical comments, and informal exchanges between from readers.

REPORTS

Donald J. Waters, **Report to the Commission on Preservation and Access, From Microfilm to Digital Imagery: on the feasibility of a project to study the means, costs and benefits of converting large quantities of preserved library materials from microfilm to digital images** (Washington DC, Commission on Preservation and Access, June 1991, 41p. [available for \$5 from the Commission, 1785 Massachusetts Ave., NW, Suite 313, Washington DC 20036; 202-483-7474]

In his December 1990 report to the Commission, Michael Lesk reaffirmed the role of microfilm in preservation today, but suggested that it might actually be an intermediary step to digital imaging. Waters presents the planning that Yale University has been undertaking to develop a framework for converting microfilm to digital images. While it is probably too soon to follow them, the assumption they make that this will be the way to go is valid and Yale's plans should be studied by anyone in the preservation microfilm business today.

General Accounting Office, **Federal Records: Document Removal by Agency Heads Needs Independent Oversight**, August 1991 GAO/GGD-91-117, 35p. [one copy free from USGAO, P.O.Box 6015, Gaithersburg, MD 20877]

At the request of Congress, the GAO studied the removal of documents by the last two agency heads of the Departments of Defense, Justice, State and Treasury under the Reagan administration (Caspar Weinberger, Frank Carlucci, William French Smith, Edwin Meese, Alexander Haig, George Schultz, Donald Regan, James Baker). They found that all eight had removed materials, without independent review, and that the procedures in place to review records removals were inadequate to protect the interests of the government. None of the eight collections removed were available for public review and none had been examined by NARA. Classified information had been removed in some cases without any protection and original documents were removed without agency knowledge. The report recommends that "Congress amend the Federal Records Act of 1950 to prohibit agencies from relinquishing any federal documents to agency heads and agency heads from removing such documents until NARA has determined that their relinquishment and removal are consistent with existing federal laws and regulations". It seems to me that this is the minimum one could recommend given the extraordinary facts uncovered in the investigation! Why aren't archivists up in arms?

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Kentucky Information Systems Commission, **Current Issues in Government Information Policy Conference Proceedings** (Frankfurt KY, KISC, 1991) c.50p. [available from Commissioner's Office, Kentucky Department for Libraries and Archives, Box 537, Frankfurt, KY 40602]

Although the audience for the conference held March 7-8 1991 in Louisville Kentucky was primarily Kentucky civil servants and citizens interested in access to public information, the meeting was of national significance. It is therefore a pleasure to receive the transcribed proceedings of the meeting, even if they suffer as most unedited transcripts do from the effort to reduce oral remarks to writing.

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National Archives & Records Administration, **Archival Research and Evaluation Staff, Optical Digital; Image Storage System Project Report**, by William Hooten et al. (Washington DC, NARA, 1991) 378p. [available from NARA; contact Ruth Gardner 202-501-5540]

This very large report summarizes the results of a six year project to test the feasibility of digital capture and optical storage of archival records using a sample of c.54,000 military service records from the Tennessee Confederate Cavalry and miscellaneous other documents with specific types of capture requirements.

The report actually consists of three types of documents: a report with recommendations (p.2-22), a project history (p.23-162; 206-359), and a tutorial (p.164-203;360-378). The tutorial is quite useful for background, although very detailed and sometimes not written as clearly as it might be. The project history is of interest to those who want to examine the research methodology in depth. But the majority of the readers will probably want to understand the "Archival Management and Technology Summary", which contains the recommendations, and here they will encounter serious problems, presumably because NARA did not like the actual findings and did everything it could to disguise them.

The conclusions of the study, in summary, are: - standard document preparation was adequate for scanning - the ODISS mechanical paper transport caused no damage - replacing digitally scanned images was easier than it was with electrostatic or microfilm copying - digitally scanned images could significantly improve quality over the originals - data was stable for one hundred years on optical disks and repeated use did not degrade them - there was a substantial improvement in retrieval speed - ODISS staff and NARA operators could perform searches - digital images could be used in decentralized environment - actual throughput over the life of the project was 1158 pages a day due in part to early experiences, but models showed that in excess of 3800 pages could be scanned at a workstation -with 80,000 pages to a disk began to achieve space storage savings (including equipment) as soon as more than 1'000 cu.ft. was scanned - a three fold reduction in staff time required to search and retrieve was achieved - using a 10 year cost analysis model that can only be described as purposefully misleading since the majority of costs in the paper baseline resulted from reference staff @ \$96,000 p.a. and those in the optical disk model result disproportionately from up front costs, NARA was unable to demonstrate savings at this time. In other words, NARA doesn't want to act on the basis of this report, but you might.

National Historical Publications & Records Commission, **Research Issues in Electronic Records** (St.Paul, Minnesota Historical Society, 1991) [available free from Lisa Weber, NHPRC, NARA, Washington DC 20408]

This report of a working meeting held in Washington DC January 24-25 1991, presents the conclusions of a broadly based group of archivists and scholars of information systems and organizational impacts of technology regarding the issues that must be researched in order to develop sound archival practices for management of electronic records. The report itself consists of 24 pages of description of these research issues followed by an attendees list and an account of the proceedings. The research priorities identified three areas in which work must proceed before other questions can be addressed:

1) What functions and data are required to manage electronic records in accord with archival requirements?

Do data requirements and functions vary for different types of applications?

2) What are the technological, conceptual, and economic implications of capturing and retaining data, descriptive information and contextual information in electronic form from a variety of applications?

3) How can software-dependent data objects be retained for future use?

BOOKS & ARTICLES

Robert Bergman and Thomas Moore, **Managing Interactive Video/Multimedia Projects** (Englewood Cliffs NJ, Educational Technology Publications, 1990)

This is one of those paperback resource books produced by the multimedia industry that should not be overlooked. It is packed with useful, clearly laid out advice and with forms to copy and fill out for making storyboards, producing RFP's, doing flow charts, estimating costs, etc.

Vesna Blazina, "Mapping to MARC at the Bibliotheque de L'amenagement, Universite de Montreal", *IRA Bulletin* vol 18(3), Fall 1991, p.14-21

A discussion of the issues confronted in mapping a database of slides from the architecture, industrial design, landscape and urban studies programs at the University of Montreal. We seem to have an endless appetite for demonstrating that mapping to MARC is relatively trivial.

Case, Donald Owen, "Conceptual Organization and Retrieval of Text by Historians: The Role of Memory and Metaphor", *Journal of ASIS* 42(9) 1991 p.657-668 This empirical investigation of the "stacks" of information in offices of historians and their methods of retrieving texts is a gold-mine for archival analysis and suggests an arena for interdisciplinary research that is, so far as I know, untapped.

David Clark, **Database Design: Applications of Library Cataloging Techniques**, New York, McGraw Hill, 1991

In spite of its title this unusual book, like the authors' work with the History Computerization Project (described in chapter 22, is about the application of MARC to archives and historical collections, especially those involving photographs. The text moves rapidly and without warning between issues having to do with theory of descriptions, with conventions for data interchange, and with software and even hardware dependencies, with interesting insights obscured by odd prejudices and complex prose. A hardnosed editor would have been a help.

Norman Desmarais, "The National Portrait Gallery Permanent Collection of Notable Americans and Coate's Art Review - Impressionism", *CD-ROM Librarian*, September 1991 p.33-40.

These may be the first two reviews of museum CD-ROM's to be published; anyone involved in making a product would do well to read them. Others may just wish to see how museum products will be received by the new CD market.

Luciana Duranti, "ACA 1991 Conference Overview", *ACA Bulletin*, vol 154(6) p.22-27

Duranti strong point of view colors this description of the ACA meeting and makes it worth reading. You may not know what happened, but knowing what Prof. Duranti thinks about the presentations is worth more.

Anne J. Gilliland-Swetland, "Automated Archival Systems", *Encyclopedia of Library & Information Science*, vol.48, Supplement 11 (New York, Marcel Dekker, 1991) p.1-13

Because people rely on Encyclopedia articles it seems to me incumbent on editors and authors to make special efforts to assure their accuracy; unfortunately neither party took that responsibility here in an article that is full of inaccuracies, and superficial and poorly documented to boot.

Peggy Johnson, *Automation and Organizational Change in Libraries*, Boston, G.K.Hall, 1991

Although this is a study of libraries, it results are important to archives and museums investigating or in the throws of automation. From chapter 4 on, once the obligatory review of the history and nature of libraries is completed, the discussion of organizational impacts and implementation challenges will prove rewarding to any professional involved in the automation of cultural institutions.

Clifford Lynch, editor, "Perspectives on Imaging: Advanced Applications", in *Journal of the American Society for Information Science*, vol.42(8) p.575-620

The term "advanced applications" in the title does not imply highly technical presentations, and the articles in this special issue edited by Clifford Lynch are exceptionally readable. Archives and museum readers are especially pointed to Lynch's introduction and Howard Besser's 'Imaging: Fine Arts'.

George F. MacDonald and Stephen Alford, *The Museum as Information Utility*, *Museum Management and Curatorship* (10) 1991 p.305-311

Yet another ideological statement from the duo in charge of the Canadian Museum of Civilization; somehow I still want results.

Ann Peterson, *Do Real Archivists need Archives & Museum Informatics?*, *American Archivist* vol.53 (1990) p.666-675

Pederson joins Lawrence McCrank (Special Collections vol.4, p.117-132) in having reviewed the entire output of the journal and technical reports to date. I confess that it is very nice to have a review, and two generally enthusiastic reviews are especially nice. It should keep me going for another year!

Phyllis Pivorum, *Why and how MARC is being used for automating the Architectural Slide Collection at Clemson University*, *Visual Resources Association Bulletin*, vol.18(2) Summer 1991, p.18-21

On NOTIS is why and how, but the case study of its implementation is useful.

Richard Smiraglia, editor, *Describing Archival Materials: The use of the MARC AMC Format*, New York, Haworth Press, 1991

Reviewed in vol.4 #4 when it was first published in *Cataloging & Classification Quarterly*.

NEWSLETTERS & JOURNALS

ADPU Newsletter [Association of Public Data Users, Princeton University Computing Center, 87 Prospect Ave., Princeton, NJ 08544] publishes reports on data sets available for public use and user conferences on the use of electronic data. It also covers legislative and other policy issues and reports on publications and conferences of interest to users of government information.

Bulletin of the American Society for Information Science (ISSN 0095-4403) bi-monthly available as part of membership in ASIS. [American Society for Information Science, 8720 Georgia Ave., Suite 501, Silver Spring, MD 20910-3602] The August/September 1991 issue is devoted to Access and Availability of Federal Information; October/November is on Government Information Policy. Both contain articles of considerable interest to archivists, including articles of electronic records. December/January will be on Art Information and includes articles on standards and services which should be of interest to museum professionals.

Digital Media: A Seybold Report (ISSN 1056-7038) vol.1, 1991, \$395 p.a. in U.S. [Seybold Publications Inc., Box 644, Media PA 19063; 205-565-2480, fax 215-565-4659]

In most respects, this 24 page bi-weekly publication is a typical Seybold report - nice printing and layout, 2-4 page articles, popular/management oriented content. The first three issues contain reports on the Apple/IBM alliance (nothing new in it), Judge Greene, Consumer CD players.



J.Paul Getty Trust Bulletin [The J.Paul Getty Trust, Department of Public Affairs, 1875 Century Park East, Suite 2300, Los Angeles, CA 90067-2561] free

This newsletter, now in its sixth year of publication, is emerging as an interesting and important source of information about technology in the arts as well as about the projects of the Getty Museum, Center for History of Art and the Humanities, Art History Information Program, Center for Education in the Arts, Program for Art on Film, Museum Management Institute and Grant Program. Also recently received was the annual report of the Trust for 1989-90 which includes an excellent summary of the work of AHIP.



Museumedia (ISSN 1055-8624) vol.1, 1991, bi-monthly \$75. [Museumedia, 557 North 68th St., Milwaukee WI 53213]

This new journal, edited by Sharon Kayne Chaplock, describes itself as serving museums, zoos, botanical gardens and science centers. Its editorial board includes people long active in multimedia in museums and its early issues include reports on meetings, articles on topics of concern to developers, and book, film and video reviews along with the usual events calendars and lists of distributors and vendors. Keep an eye on it.



New Media News [Boston Computer Society, Building 1400, 1 Kendall Sq., Cambridge, MA 02139]

I'm embarrassed to say that I only became aware of this tremendous resource when they asked to send a reporter to the ICHIM '91 meeting. Now that I've read through the bi-monthly issues that constitute volume 5, I've subscribed on my own to what must be the richest source of good information on this topic, as well as the least expensive (available to members of the Boston Computer Society for \$7 in addition to BCS annual fees of \$35 which entitle members to one of the many BCS journals, including this one, for free).



Scientific American (ISSN0036-8733) [415 Madison Ave, New York, NY 10017]

If you haven't seen the September 1991 issue on "Communications, Computers and Networks: How to Work, Play and Thrive in Cyberspace", go right out and get it. As always Scientific American has produced reliable, readable and intellectually challenging prose on the major issues of the day from the leading participants in the development of computing and telecommunications technologies and public policy. The cast of characters is reminiscent of **The Computer Age: A Twenty-Year View** (MIT Press, 1979), and the message about computers being about the transform our work and play is similar enough to remind skeptics that things take time, but the difference now is that the prototypes of all these changes are in laboratories and installed in test environments. We almost certainly will feel their impact by the end of the decade.



State Government News (ISSN 0039-0119) [Council of State Governments, Iron Works Pike, P.O.Box 11910, Lexington KY 40578-1910]

The first issue of this completely remodeled journal (vol.34 #7, July 1991) is devoted to information technology in State Governments and includes a brief note by Larry Hackman, State Archivist of New York, calling attention to the archival requirements for electronic data.



EPHEMERA

Computerized Information Management for Museum Collections (Mountain Plains Museum Association Registrar's Committee, \$5) 28p.

The 1990 Mountain Plain Museum Association Meeting in Boseman Montana featured a session at which David Ryan (Colorado Springs Pioneer Museum), David Battle (National Park Sergei), Richard Brenner (Westar Systems) and Lynn Adkins (Consultant and Publications Editor for the MPMA) gave the papers in this slim volume. They contain generally good, sensible, introductory advice for small museums considering automating.



Corporate Guide to Optical Publishing, 39p. [free from Dataware Technologies Inc. 222 Third St., Suite 3300, Cambridge MA 02142; 617-621-0820]

Dataware is a major provider of CD-ROM software and services which include integrating systems, developing custom applications, and supplying authoring tools. This booklet presents data which makes a strong case for in-house publication of CD's by large firms without actually advancing any arguments at all. The data is reliable and should prove useful for estimating costs on other types of projects.



Information and People: A Campus Dialogue on the Challenges of Electronic Information (Ann Arbor MI, School of Information and Library Studies, University of Michigan, March 1991)

This report by three committees established at the University of Michigan in 1990/91 to examine "User's Changing Needs", "Electronic Collections", and "Funding of Information Resources", explores impacts of the electronic campus being felt throughout the world. Each committee had members from faculty and administration from throughout the U. Michigan campus who identified and analyzed issues of importance well beyond those boundaries.



Strategic Framework for the Information Management Standards and Practices Division (National Archives of Canada) April 1991; **Strategic Priorities for the Information Management Standards and Practices Division** (April 1991); **Strategic Goals for the Information Management Standards and Practices Division** (July 1991), **Operational Goals for the Information Management Standards and Practices Division** (June 1991)

These four documents are John McDonald's blueprint for the unit of the National Archives of Canada responsible for working with agencies of the Canadian government, including standards bodies and records creators, to assure the preservation of "the corporate memory of the Government of Canada" and especially of its electronic records which are most at risk. They are certain to be of use to anyone currently involved in an electronic records management function.

NEWS

NAGARA TARGETS ELECTRONIC RECORDS PROJECTS

The NAGARA Committee on Information Technology has identified a number of priority projects which it hopes will be proposed and funded. They are devoted to an analysis of State records laws; an survey and analysis of Information Locator Systems, a project to identify key government participants in each state, an investigation of the systems design methods in use in state governments, a guideline on how archivists can use data directory systems, an analysis of the documentation requirements of key governmental functions, a publication of standards and the exploration of possible new sources of support for all the above projects including a "National Center for Electronic Records". [Contact committee chair, Larry Hackman, New York State Archives, Cultural Education Center 10D45, Albany NY 12230; 518-474-2718]

BRITISH LIBRARY DIGITIZATION DEMO

The British Library Research and Development Department has opened to the public its research and demonstration project on factors involved in digitization of rare manuscripts, 35mm roll microfilm, slides and photographs and on the use of OCR/IR technologies. From October 1, 1991 on, visitors may view demonstrations and explore their special areas of interest with project staff. [Contact Arthur Shiel, Cimtech Lmtd. Hatfield Polytechnic, College Lane, Hatfield, Hertfordshire AL10 9AD; 707-279691; fax 707-272121 in advance to make an appointment for a visit]

AASLH OPTS FOR TECHNOLOGY & INFORMATION MANAGEMENT

As an outgrowth of the Common Agenda initiative, and especially its Philadelphia based database projects, the AASLH has established a new department on technology and information management based at the Balch Institute in Philadelphia and directed by Margareta Sander. The department is cooperating with CIMI in the articulation of cultural history museum requirements for information interchange. [contact: AASLH, 172 Second Ave North Suite 202, Nashville, TN 37201]

INTELLECTUAL PROPERTY PROTECTION FOR NATURAL INFORMATION

Joseph Vogel has written a small book entitled "Privitisation as a Conservation Policy: A Market Solution to the Mass Extinction Crisis" in which he argues for copyright and patent protection over forms of life as a method of protecting them from extinction. He presents his ideas briefly in an article in CIRCIT Newsletter, vol 3(5) June 1991 available from the Centre for International Research on Communication and Information Technologies, 4 Riverside Quay, South Melbourne 3205 AUSTRALIA

IMAGING TECHNOLOGY ENHANCES L'ENFANT PLAN FOR DC

To commemorate its 200th birthday and protect it for the future, the Library of Congress, National Geographical Society, National Park Service and the U.S. Geological Survey created a digitized version of the 1791 L'Enfant plan for Washington DC. In the digitized version it is possible for the first time in decades to discern details included in the plan and handwritten notations by Thomas Jefferson. The \$350,000 project was initiated four years ago and has answered many technical questions along the way. The original captured files were 809 MB of data, which when the background noise was removed, resulted in a file of 105 MB of shading data and 15MB for the map itself.

Other parts of the 4 year project included classification and cataloging of all maps in the Library relating to Washington DC, conservation treatment of 4500 individual maps and 250 atlases in the DC map collection, microfilming of the maps for preservation purposes, publication of an historic atlas derived from LC maps and maps in other collections, and mounting of a major exhibition.

NATIONAL ARCHIVES RESPONDS ON "TAKING A BYTE OUT OF HISTORY"

Archivist of the United States Don Wilson responded to the Congressional report Taking a Byte out of History as required by the House Committee on Government Operations by asserting that NARA was doing the right things now and didn't need any further authority. It didn't suggest any serious attention had been paid to the suggestions in the report that NARA might be playing the wrong role in trying to be a custodian of records, or that it should be more aggressive in insinuating itself into systems design through regulation rather than passive educational campaigns. The answer does, however, make one concession by noting that "NARA would be more effective in promoting good records management and disposition if the Archivist had the authority to issue binding regulations which would guide agency heads in determining what constitutes a record, and if the Archivist had the authority to inspect agency records for purposes of evaluating records management practices and determining the appropriate disposition of records". Given the PROF's case and the recent GAO report on Agency Heads removal of records, I would have wished that NARA would open up a bit more and ask Congress for authority to require agencies to develop and implement effective plans for managing electronic records and for retaining archival records until it is possible for NARA to care for them in an interoperable environment. [NARA's response and the original report are available from Michelle Cobb (NSE-C), 202-502-5515].

NATIONAL GALLERY OF LONDON GOES INTERACTIVE

The MicroGallery at the National Gallery of London which opened its twelve workstations to users in August displays not only the best of the Western European collections of that institution but also the best in interactive multimedia design. The product developed for Curator Martin Ellis by Ben Rubinstein and his colleagues at Cognitive Applications Ltd. uses high end Mac's and Radius monitors to deliver stunning quality images in a simply designed and esthetically pleasing user interface which allows the visitor to select images by artists, types of paintings key terms and historical geography. The latter view presents an historical atlas which reflects the changing landscape of European art over the past 3000 years and allows the user to select locales and times. Pages from the catalog may be printed out at nearby printers using a charge card available from dispensers in the MicroGallery.

NATIONAL ARCHIVES OF CANADA AND OPTICAL DISC

Roger Blais provides a brief report on the exploration by NAC of alternatives to magnetic media storage with the pilot projects of the Preservation Section of the Moving Image, Data and Audio Conservation Division which has concluded that optical discs are "potentially suitable for use as an archival medium" and that "once industry standards for optical disc have proven that it is a viable replacement for magnetic tape, the Archives would consider the disposal of backup copies residing on magnetic tape. The reference copy of optical disc will be used to create a backup optical disc copy, which would be stored off-site. (The Archivist, vol.18 (1) January-June 1991 p.15-16)

GEORGIA'S "ARMIS" IN DBASE

The staff of the Georgia State Archives has developed an archives records information system with six subsystems devoted to: agency information, accessions information, location, reference activity, dispositions/destructions, and reporting. While some definitions of fields might not be completely portable, it may be worthwhile for other states to check it out. [Contact Peter Schinkel, Georgia Department of Archives & History, 330 Capitol Ave., SE, Atlanta GA 30334]

Archives and Museum Informatics is a quarterly newsletter published by Archives & Museum Informatics, 5501 Walnut St., Suite 203, Pittsburgh, PA 15232-2311; 412-683-9775, fax 412-683-7366. The newsletter is edited by David Bearman whose authorship may be presumed for all items not otherwise attributed.

Archives and Museum Informatics carries news, opinion and reports on information technologies, techniques and theories relevant to archives and museums. Submissions of press releases, publications for review, letters to the editor and articles are welcomed. Deadlines for submissions are the 15th of March, June, September and December.

Subscriptions are available on a calendar year basis at \$80 for institutions, \$40 for individuals (to home addresses by personal check only), with a surcharge of \$5 for postage to Canada and Europe and \$10 elsewhere outside the USA. **Archives and Museum Informatics Technical Reports** are separately priced, and are available by standing order (with a 10% pre-publication discount) or single purchase. Write to the office for a complete list of Technical Report titles.

IMAGE ACCESS AND RIGHTS

The Canadian Workplace Automation Research Centre (1575 Chomedey Blvd., Laval H7V 2X2; 514-682-3400; fax 514-686-1990) is demonstrating a prototype image access and licence registry system called Medialog which is intended both as a searching environment for cultural multimedia information and as a mechanism through which to pay creators royalties. The project is sponsored by the Department of Communications of Canada.

VIDEODISCS IN MUSEUMS

Roberta Binder (Behind the Scenes, 6585 Sawmill Rd., New Hope PA 18938; 215-297-0679; fax 215-297-8331) is putting the finishing touches on a second edition of Videodiscs in Museums: A Project Report and Resource Directory first published in January 1988. If you have a project that should be included, contact her for a survey form. If you want to place an advance order (20% off = \$60; call Future Systems at 800-323-DISC ext.159

MUSEUM STORE ASSOCIATION CAPTURES DATA

The Museum Store Association (One Cherry Center, 501 S. Cherry St., Suite 460, Denver CO 80222) is offering its members an automated visitor survey system which is set up in the museum in two locations for a period of three weeks and asks pre-defined or museum designed questions. After returning the boxes to MSA, MSA supplies the museum with a written report on its survey. If conducted twice a year, as recommended by MSA, the service would cost a museum \$1100.

SOFTWARE

Accessible Archives

Accessible Archives Inc. (697 Sugartown Rd., Malvern PA 19355; 215-296-7441) provides just that with its CD-ROM edition of the Pennsylvania Gazette from 1728 to 1800 (on three CD's) with full text access. The firm is already at work developing electronic editions of eighteenth century issues of the South Carolina Gazette, the Boston Gazette, American Weekly Magazine and the Maryland Gazette for genealogists, historians, teachers and the interested public. It is seeking both to sell copies of what is already published and to obtain your ideas for future publications of archival materials on CD-ROM.

A.R.T.Systems Ltd.

A.R.T.Systems Ltd. (18 East 16th St., New York, NY 10003-3111; 212-741-1906; fax 212-741-1846) has recently release Encore, a modular system written in Clipper for IBM PC's and linked to Q Systems DVI based imaging software. A.R.T. has previously been in the galleries market but believes its new product should be of interest to museums as well.

Carlyle Shows Beta Version of McManis

Carlyle Systems Inc. (2000 Alameda de las Pulgas, San Mateo CA 94403; 415-345-2500) has been demonstrating the beta release version of its McManis collections management\image handling software developed for the Lowie Museum, University of California, Berkeley at national meetings. They exhibited recently at both the ICHIM and the MCN conferences and plan to release a product early in 1992.

Centrox Announces Data Only Access

Centrox Corporation (17 East 76th St., New York, NY 10021; 212-772-9173; fax 212-734-7047) has announced a data only access to its art auction imagebase for users with only standard PC's (no DVI board) and interest in economical (and imageless) access.

C.I.Systems

C.I.Systems (5 Town & Country Village, Suite 504, San Jose CA 95128-2026; 408-297-5824) is soliciting museums willing to beta test its PhotoMemory Collection Management System currently available for Macintosh computers (expected 1992 Windows release). PhotoMemory comes with the Library of Congress Thesaurus for Graphics Materials and Moving Image: Genre Terms and the ability to add terms and build new thesauri and is integrated with bar code reading for slides and storage tracking.

Digital Archival Restoration and Recovery Systems

Digital Archival Restoration and Recovery Systems Inc. (#105 - 1208 Wharf St., Victoria V8W 3B9 CANADA; 604-381-3277) offers conversion of sound recordings to digital audio tape and compact disc formats, copyright consulting and audio archive design assistance. Archives and museums with sound recording collections will find that digital conversion is now a cost effective way of preserving originals at their best possible quality and enhancing lost sound. It also offers a way out of the many different physical formats in which sound has been stored.

Eloquent Systems in Archives and Museums

GENCAT, the Generic Cataloging System by Eloquent Systems (#25 - 1501 Lonsdale Ave, North Vancouver V7M 2J2 Canada; 604-980-8358; fax 604-980-9537) has recently been installed at the Northwest Regional Center of the Washington State Division of Archives and Records Management. Plans are to install GENCAT in all five regional sites. GENCAT is also installed in a regional museums network in the Province of Saskatchewan which serves many local museums and passes their data from GENCAT to the CHIN database in Ottawa.

Museum Technology Source Inc.

Museum Technology Source Inc. (20 Bacon St., Box 306; Winchester MA 01890; 617-729-5895) is offering videodisc and CD controllers for museum markets.

NOTIS Ships Z39.50 Software

NOTIS Systems Inc. (1007 Church St., 2nd fl. Evanston, IL 60201-3622; 708-866-0150; fax 708-866-0178) has shipped test versions of a local online catalog to make seamless connections to an OPAC at a remote library using Z39.50 protocols and a client/server architecture.

PANDA seeks Beta Sites for TEXTRA

Panda Software (P.O.Box 984, Hanover, NH 03755) is seeking institutions with multimedia informational requirements to serve as beta sites for testing its Textra hypermedia text annotation system running under Apple's HyperCard. Textra is owned by Dartmouth College where it has been under development since 1988.

PG Calc Inc.

Version 2.7 of the Planned Giving Manager from PG Calc (129 Mount Auburn St., Cambridge, MA 02138; 617-497-4970; fax 617-497-4974) calculates the values of insurance policy gifts, produces written descriptions of life income gifts and writes letters explaining the benefits of specific gifts, calculates bargain sale gifts and the costs of reinvestment of assets of remainder trusts, and much else that is new. PG Calc is offering the package until the end of the year with a \$500 discount at \$1495. It is also giving a \$1000 discount off its Gift Annuity Organizer software.

Sea Studio's Wins Awards & Contract

Sea Studios (810 Cannery Row, Monterey CA 93940; 408-649-5152; fax 408-649-1380), designers of the Monterey Bay Aquarium exhibit "Live from the Deep Canyon", won the AAZPA award for the best educational program of 1991. In addition they were awarded a U.S. Forest Service contract to develop computer/video interactive exhibits for the Mount St. Helens National Volcanic Monument.

TRAC Raises Funds with MacTRAC

The Technology Resource Assistance Center Inc. (530 Oak Grove Ave., Suite 101, Menlo Park CA 94025; 415-853-1100 and 800-266-1101) announced several new features of its MacTRAC fund raising software available in the fall of 1991 including linked records for relatives, friends or associates, duplicate name analysis routines, enhanced batch gift entry, report definition saving, and zip code reporting. In addition, several add on products are now available including Major Donor and Grant Tracking and a Multi-User capability.

Travis & Software Changes to ABC

Noting that Travis & Software was not meaningful to anyone other than himself, Bob Heinonen has renamed his firm America's Best Constituent Software Company (ABC is still at 229 Ridgewood Drive, Ferris TX 75125; 214-544-3937; fax 544-2680, and still selling Model 1000.)

Verity Inc. Large Scale Full Text Retrieval

Verity Inc. (1550 Plymouth St, Mountain View CA 94043; 415-960-7600; fax 415-960-7698) has incorporated weighted retrievals based on a user defined rulebase into a distributed architecture full and structured text retrieval package called TOPIC. TOPIC is being used in very large corporate text environments for access to the corporate knowledge resident in hundreds of distributed office system storage devices. It has some interesting object-oriented features in addition to the quasi intelligent weighted retrieval capabilities that lend it to being used as a central files management tool in distributed settings and which suggest it may have value to archives seeking to control office records from diverse settings while leaving the physical data in situ.

WANG ARIS (Archive Information System)

At meetings in Europe this summer I picked up literature about a European WANG offering called ARIS, developed for the City Archives of Rotterdam, which is designed to manage finding aids for public and staff retrieval. Although the package was limited in applicability to Dutch archival tools (essentially summarizing and indexing a registry record called an extract card), it was interesting to see how much money WANG had invested in order to gain the prestige of serving the archives market! Some things don't translate well across cultures, but perhaps the corporate interest in archives could be awakened in Wang in the U.S.? Wang has long had imaging tools that it is interested in placing in records management contexts and which could be useful as a selling point.

STANDARDS

THE MDA DATA STANDARD

The Museum Documentation Association's revised data standard, dated January and March 1991, arrived finally in October. It is without any question the most useful presentation of the MDA work on standards over the past decade, and the best data dictionary ever published for museum applications. The introductory text which describes how the data standard is to be employed and places the dictionary in the context of standards for data interchange and data value representation is generally useful also, although it occasionally raises unresolved issues.

The Data Dictionary itself, consisting of 1-3 pages of description of each of the 160 MDA data fields, constitutes 85% of the pages of this looseleaf publication which is compiled in a manner that suggests it is intended to be updated regularly. Each field is named and defined according to its function, the history of its use in the MDA standard is provided, the logical grouping of data to which it belongs and the subfields that belong to it, guidelines for entering the values and the terminologies that apply to these values, as well as examples of usage and of terminology. The definitions and examples are generally clear and should be useful to anyone developing a system or in-house conventions for data recording.

The fields defined in the data dictionary are, of course, those which the MDA data model authorizes. These are organized under seven entities (primary fields): Item, Person, Corporate Body, Place, Event, Activity and Reference. Each of these entities is associated with its own set of "group fields" or attributes which can have attributes of their own, called "common fields". The peculiar aspect of the MDA data model is that the so-called group fields may be clusters of other fields or they may stand alone as the only data about that aspect of the entity. Values of the so-called common fields are controlled by a combination of attributes and data types: for example the common fields number, date(s), and price are data types, while the common fields method, relationship, and action are presumably governed by value tables. Not all the conventions about representing the data model that have been made by the MDA will be universally agreed - I have a great deal of trouble with a common field "text" which is nothing more than the value of the group field with which it is associated, as qualified by the other common fields in its cluster (a concept very like the MARC subfield "a") - but overall it is consistent and usable.

Where the MDA Data Standard falls short is in defining exactly what kind of standard it is intended to be. It is quite permissive in its instructions about how users are to follow its guidance. We are told that "to conform" there must be "a correspondence between the fields in your system and the concepts in the Standard", which is quite different from there being a correspondence between the fields in the system and the fields in the standard. In

other words, users in conformance may have different data contents in their systems. Nor are we told what significance the terminology and value standards are intended to have. Presumably conformance also does not mean that users will have data values drawn from the same authorities when they use the same fields. So what function does the Standard serve? In my view, it is a useful series of guidelines but would be substantially more useful if it was more forceful about how and why to conform. Until such a technical standard for museum data is agreed to by the U.K. museum community however, this will have to do. Even as it is, it's the best we have.

Z39.50 = ISO 10162/10163

The adoption of the Z39.50 standard for database searching and retrieval between computer systems by the International Standards Organization as ISO 10162 and 10163 opens the way for these largely library community standards to be employed for inter-system query in any information retrieval environment. For a review of implementation issues remaining for the library community see Mark Hinnebush *Computer in Libraries*, September 1991 p.30-31.

ILL PROTOCOLS ADOPTED AS ISO 10160 and 10161

The ILL Service Definition and ILL Protocol Specification have been adopted as ISO standards. Interestingly, they provide methods for communicating these transactions either as an ASN.1 defined data type definition or as a standard EDIFACT message reflecting the fact that a number of methods of interchanging fielded text can be functionally equivalent and differ only in the degree of overhead required in each message and the software to decode the representation used by the receiving system. [contact ISO, or the chair of the development committee: Fay Turner, Library Network Specialist, IST Division, National Library of Canada, 395 Wellington St., Ottawa K1A 0N4, Canada].

RLIN INTRODUCES ARABIC SCRIPT

The Research Libraries Group has added Arabic script capability to RLIN, enabling users to enter, search, display and retrieve records written in Arabic script. With this capability RLIN becomes the only online bibliographic utility in the world to support Arabic script the first to support all the JACKPHY menu of languages that use non-Roman scripts (defined by the Library of Congress as Japanese, Arabic, Chinese, Korean, Persian, Hebraic and Yiddish). RLIN also supports Cyrillic script.

WITT INDEX COMPLETED

The Courtauld Institute of Art and the J.Paul Getty Trust has completed its database of American Art representing 57,000 individual works by 3,800 artists working between the 17th and 20th centuries. The index provides access to iconography, topography, sitter identification, historical events, generic natural phenomena, historically significant objects, venues of exhibition and history of museums and dealers associated with a work as well as the usual tombstone data. Information may be requested by writing to the Witt Computer Index, Courtauld Institute of Art, Somerset House, Strand, London WC2R 0RN, England; 44-71-873-2770; fax 44-71-873-2772.

INFORMATION TECHNOLOGY STANDARDS AND ARCHIVAL DESCRIPTION

The Working Party to the National Council of Archives, UK has released its March 1991 report on Information Technology Standards and Archival Description which is a review of descriptive standards, authority lists and data interchange formats in use throughout the world of archives and a recommendation to the U.K. archives community that it embrace the data content of the Manual of Archival Description (and reject RAD or MARC AMC as cataloging conventions) while leaving open the possible future use of MARC as a data interchange format if data exchange becomes desirable to U.K. archivists in the future. The proposed minimum data content standard and recommendation for interchange of this content as an ASCII file for the construction of a proposed UK National Archival Database are inadequate to meet the needs of U.K. institutions to interchange data between their own systems or to assure the development of software sufficient to satisfy in-house automation requirements. Given the absolutely minimal data being interchanged the argument advanced in the report against ISO 2709 because it can't carry images, sound and full text, and the arguments advanced against MARC or RAD conventions for description, are equally suspect. Basically this group wanted to find a way to convey an abstract of MAD data to a national database, and decided that this could be done with a simple interchange protocol. There is nothing wrong with any single application, such as the construction of a national database, defining its own input conventions, but the suggestion that this is the same thing as adopting a standard that enables institutions to convey holdings information regardless of the purposes or character of any given receiving application is to confuse apples and potatoes. [contact Christopher Kitching, Royal Commission on Historical Manuscripts, Quality House, Quality Court, Chancery Lane, London WC2A 1HP, ENGLAND]

BEST PRACTICES IMAGING STANDARD FOR PHOTOGRAPHS AND SIGNATURES

The JPEG (X3L3) Committee is currently considering recommendations from the Motor Vehicle Information Systems (MVIS) digital imaging standards subcommittee (DIS) of the American Association of Motor Vehicle Administrators regarding "best practices imaging standards for photographs and signatures" (report dated May 14, 1991). The report will likely be of interest to archivists involved in any signature imaging as well as to state archives following the development of entirely electronic state registries of vehicles, and other licensing functions [Charles Touchton, Chairman JPEG, IBM, 3405 West Buffalo Ave., Tampa FL 33607]

CD-RDx DEMONSTRATION DISC

The Director of Central Intelligence's Information Handling Committee has released a demonstration disc for proof-of-concept of the CD-RDx data exchange standard. The disc is available free to government agencies of any jurisdiction from IHC, P.O.Box 571, Washington DC 20044 and for a \$15 service fee (paid in advance) to private sector and individuals from Helgerson Associates, 6609 Rosecroft Place, Falls Church VA 22043.

ICA PRINCIPLES FOR ARCHIVAL DESCRIPTION DRAW COMMENTS

The Society of American Archivists official response to the ICA Statement of Principles for Archival Arrangement and Description criticizes the "Principles" as holdings centered rather than focused on the activity context out of which the records arose and for its simplistic and fuzzy definition of the concept of a fonds on which the entire statement rests. Drawing on the work of the Working Group on Standards for Archival Description, the official response adopted by SAA Council June 14, 1991, asks the ICA to revise its statement accordingly. [contact SAA, 600 S. Federal St, Suite 504, Chicago IL 60605]

The Association of Australian Archivists official response rejected the definition of the fonds as the primary unit of archival description because it creates problems in dealing with multiple provenance records.

Individuals were also invited to comment. In my commentary, I took exception to statement on these same grounds, and also rejected the concept, expressed in the statement, that the "definitive process of description. . . takes place after the units or entities to be described have been determined" and noted that retrieval by provenance requires that provenance and organizations have attributes in the descriptive system.

RAD RULES FOR GRAPHICS MATERIALS

The planning Committee on Descriptive Standards of the Bureau of Canadian Archivists has published Chapter 4 of its Rules for Archival Description in draft form. These rules for Graphics Materials are being circulated for review. Comments should be sent to the PCDS, c/o Room 5078, 344 Wellington St., Ottawa K1A 0N3 for their late November meeting.

COMPUTER INTERCHANGE OF MUSEUM INFORMATION

The Committee on Computer Interchange of Museum Information (CIMI) held its second meeting in April 1991, at which it completed the identification of functional requirements for museum data interchange, examined a variety of communications protocols and discussed their suitability to particular applications of interchange, and developed a framework for debating the acceptance of protocols at its November 3-4 meeting in Santa Monica. CIMI News #2, August 1991 summarizes the previous six months [contact John Perkins, 5659 Merkel St., Halifax B3K 2J1, CANADA]

LC ISSUES NEW STANDARDS

The Library of Congress has published four new standards volumes in the past few months. * Subject Cataloging Manual: Subject Headings (4th edition); * ALA-LC Romanization Tables: Transliteration Schemes for Non-Roman Scripts; * Map Cataloging Manual * US-MARC Format for Holdings Data Update #1

[available from Library of Congress, cataloging Distribution Service, Customer Services Section, Washington DC 20541-5017; 202-707-6100]

ART INFORMATION TASK FORCE FRAMEWORK

The Art Information Task Force (AITF) of the College Art Association, since July funded by the NEH in addition to the J.Paul Getty Trust, has taken its first step towards defining the information needed for scholarly documentation of works of art with the definition of a framework for art information based on the analysis of information in prevalent genres of scholarly publications by Professor Marilyn Lavin (Princeton University) and of data in museum computer systems by Patricia Barnett (Metropolitan Museum of Art). The merged results of the parallel analysis revealed four primary categories of art information: Descriptive, Historical, Documentary, and Management. Further analysis of the data elements in each category was presented to the Task Force at its meeting in October at which the major portions of a data dictionary were accepted, subject to a final review.

FUNCTIONAL DIRECTORY TO THE ITALIAN GOVERNMENT

The 1992 "Blue Guide" to the government of Italy, now available in both English and Italian editions, provides a functional directory to the structures of the Italian bureaucracy along with names and addresses of 12,000 officials. Archivists outside of Italy may be interested in the description of functions. [contact Paul Parks, D'Anselmi Editore, via Sommacampagna 9, 00185 Rome].

ARCHIVES AND MUSEUM PROFESSIONS JOIN NISO

Culminating several years of lobbying by myself and others, the SAA Council voted in June to join the National Information Standards Organization as a full voting member. The Museum Computer Network also joined NISO this summer as information associate, a category short of full membership.

HYPERAD

Wendy Duff and Elaine Toms have received a grant from the Canadian Council of Archives to develop a hypertext prototype of the Rules for Archival Description using commercially available text retrieval software. The authors hope that HypeRAD will "negate the limitations of the paper-based format, enhance access to the rules, and eliminate the problems of maneuvering through RAD. They expect the prototype to be demonstrated at the XII Congress of the ICA in Montreal in September 1992. [Elaine Toms, Assistant Professor, School of Library and Information Studies, Dalhousie University, Halifax B3P 1T7; Wendy Duff, Instructor, Nova Scotia Community College, Halifax].

NATIONAL MUSEUM DOCUMENTATION STANDARDS INITIATIVE (U.K.)

Following a planning meeting in July, a group of museum professionals from throughout the United Kingdom developed plans to move from de facto data standards and procedural guidelines promulgated by the Museum Documentation Association to a formal national standard for U.K. museum documentation. Taking many definitions and arguments from the Working Group on Archival Description Standards in the U.S., the U.K. meeting voted to press ahead with definition of data and procedural guidelines and to coordinate its work with CIMI. The ongoing work will be coordinated by Andrew Roberts, MDA Standards Officer, who is also chairman of ICOM/CIDOC and a member of the CIMI Committee and the Board of the Museum Computer Network [contact Andrew Roberts, 53 Shelford Rd., Cambridge CD2 2LZ, England; 44-223-841181; fax 842136].

HYPERMEDIA AND INTERACTIVITY IN MUSEUMS

PROCEEDINGS OF AN INTERNATIONAL CONFERENCE

Archives & Museum Informatics has published the proceedings of the International Conference on Hypermedia and Interactivity in Museums held in Pittsburgh October 14-16, 1991. The volume contains over forty papers on the changing character of museums, the issues museums confront in the design, evaluation and implementation of interactive multimedia, and the broader cultural issues and technological challenges presented by these new technologies.

The volume includes project reports on about twenty museum based programs distributed on videodisc, CD-ROM, CD-I, and DVI. It examines such vexing problems as the ability to communicate across cultures using images, the unresolved state of copyright for digital media products, the technologies for extremely high resolution image capture and delivery, and the evolving state of hypermedia standards. With 330 pages of text and images, full papers and extended abstracts, this volume will be a welcomed resource for museum educators, exhibit developers, and related visual resource curators and software developers.

*Archives and Museum Informatics Technical Report
#14 October 1991, 334pp. ISSN 1042-1459
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