cooperative effort. Only a few such systems exist now: the Michigan Art Network of nine museums is such an example.

Lending institutions benefit from efficient information exchange by reducing the cost of the exhibit. The lender could transport electronically: loan agreements, the curator and designers' object lists, the borrowers insurance information, press kits, brochures, labels and text, opening invitation images, educational packets, condition reports, crate lists, and instructions for installation and repacking.[97]

D. FUTURE RESEARCH SUGGESTIONS

1. Outreach:

Museums need to reach out beyond their own community. They should promote interest in computer companies to test museum data and to adapt their databases to museum needs. Most companies gear software and hardware development toward more profitable business applications. It is time for museum administrators to aggressively pursue computer companies to develop museum computer applications, commercial packages for museum use. The American Association of Museums (AAM) has just begun to promote computer companies and their software products through AAM Bookstore advertisements sent to members through the mail.[98] Recent good resources for vendor information are the annual conferences of the Museum Computer Network, the MCN quarterly publication SPECTRA, and the Directory of Software for Archives and Museums.[99]

Museums can use the experience of commercial companies to solve museum problems. Why not match packing case size with

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97. Elizabeth Cunningham, "How the West Was Hung: A Corporate Collection Tour," Registrars On Record, Essays on Museum Collections Management ed. by Mary Case. Washington, AAM, 1988. This is a very clear review of all the steps in organizing and touring a corporate art show through six years and twenty venues. There is no mention of automating this process in the article.

98. Six computer companies are using the AAM Bookstore postcard deck service. This is a new (1986-87) advertising approach for companies that market museum products. They feature each product on a separate postage paid postcard.

99. David Bearman, Directory of Software for Archives and Museums, Archives & Museum Informatics, Pittsburgh, PA, Spring, 1988. Bearman is a Board Member of the MCN.

Airline cargo container size? How about linking trucking and air transport companies computer programs directly to museums. ICOM has been promoting standard procedures for packing and transport in international exhibit exchange for years. Specifications could come from these ICOM standards.[100]

2. Within museums:

To gain vocabulary control and adopt data standards for information exchange, museums must define present and planned computer systems with written thesauri, data dictionaries and operating guides. For models, art museums can consult the newly created Clearinghouse Project at the Thomas J. Watson Library in the Metropolitan Museum of Art. This is a database containing resources on computerized art information in museums and libraries and the literature about these projects.[101]

It appears that the idea of terminology control is very much alive. The recent Museum Documentation Association Conference, in Cambridge, England, revealed the variety of international work being done on specific museum vocabularies and museum data structures.[102] Over sixty speakers provided the participants with background on each project. Overall, it was evident that different vocabularies must control different disciplines. The variety of use and user viewpoints make each vocabulary unique. Each discipline must address its own definitions. International sharing of data involves grammar, syntax and context. "Proper names" and "place names" have shown real progress since databases and methodologies have been established. All agreed that information must be defined, before the exchange of information can take place. The MDA will publish the proceedings before next year's conference in September. Hopefully, the museum community will find new guides to specific terminology problems through this research.

At the 1986 Museum Computer Network Conference in New Orleans, Judith Schulman, Registrar at the Detroit Institute

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100. Christine Sitwell, "Transporting Exhibitions: Museums must act together," International Journal of Museum Management and Curatorship 2 (December 1983): 356-8.

101. Dierdre Stam, "For Data Based on Art, Call ... A Computer Information Clearinghouse," Museum News (June 1987): 67-74.

102. Museum Documentation Association International Conference on Terminology for Museums, 18-24, September, 1988. Author attended

of Arts,[103] said she is most often asked by other institutions for her computer program authority list and vocabulary list. She believes that there needs to be standards in language control, especially in the Fine and Decorative Arts. Peter Homulus, Director of the Canadian Heritage Information Network (CHIN), suggested the use of a network of collection authority files in worldwide travelling exhibit development. Andrew Roberts, Director of the Museum Documentation Association (MDA), stated that "access to other institutions collections will increase by sharing authority files and bibliographic files via computer. Accountability should be encouraged with these connections." Ron Kley, Consultant with Museum Research Associates, states the problem of data content standards this way: "Unless we address and far greater rigorousness, we are going to find that our dreams will turn to nightmares." [104]

To gain user control of a planned computer system, museums must gather information from the users on their duties and what they expect of the system. By recording daily tasks, reports, lists, and labels, one can see a complete picture of how information travels throughout and outside the museum. A data flow chart can be designed and used to explain to the staff and board how a computer system will enhance operations and make for more consistent and streamlined information exchange. Assessing and defining documentation is a tedious and painstaking process, but it is the best way to understand the full scope of the project.

3. Within the museum community:

Through the American Association of Museums, museums could benefit from writing a source list of all commercial travelling exhibit companies and distributing it to AAM members. The list should include information on computer services, divided geographically so members can find local backup for computer needs. The 1988 AAM Official Museum Directory lists eleven companies or alliances that distribute travelling exhibitions, hardly a complete list since there are over one hundred companies offering museum application software to museums. A joint effort to create this source list should be between the national Registrars committee and the Exhibits committee (NAME) of the AAM.

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103. Statements from the Museum Computer Network Conference in New Orleans, October, 1986. Author attended.

104. R. Kley, "Whatchamacallit: Problems and Potentials in Nomenclature and Classification," Curator 30/2 (June 1987): 107-112.

Museums should simplify the process of exhibit exchange by writing a simple outline or checklist for prospective exhibit borrowers and organizers. This checklist can be presented to the national AAM exhibit and registration committees for approval and distributed to AAM members. The Association of College and Research Libraries wrote a similar document: "Information for Prospective Borrowers: Professional practices in the borrowing of special collections material for exhibition purposes".[105]

The AAM professional practices sub-committee has developed and ratified a standard facility report form to offer better security and confidentiality.[106] It will be available from the AAM this Fall. By agreeing on a set format, it will be easier to create standard fields of information to put facility reports into computer form.

Exhibit contracts could also be standardized and computerized to clarify responsibility for insurance, shipping, cost of delay, storage and photography rights. The AAM Program Sourcebook - 1987 has the basis for such a model exhibit contract in the article by Debra Pughe.[107] When conservators set national standards for condition reports, these reports can be computerized.[108] Eventually, museums could send each other facility reports, exhibit contracts and condition reports via floppy or modem.

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105. Ellen Dunlap, Rosenbach Museum and Library, developed for Association of College and Research Libraries, "Information for Prospective Borrowers: Professional practices in the borrowing of special collections material for exhibition purposes," (June 1986): 1-14. Draft of document made available by Nancy Zinn, Special Collections Librarian, UC Medical Center, San Francisco.

106. Lynn Kahler Berg, Chairman of Professional Practices Sub-Committee, AAM Registrars Committee, "Standard Facility Report-Second Draft," (June 1987): 1-30.

107. Debra Pughe, "Exhibit Contract Checklist and Agreement," AAM Program Sourcebook (1987): 197-213.

108. Alice Lang, editor, "Information Exchange," Network News 1/4 (Autumn, 1988): 4. The Intermuseum Conservation Laboratory (ICL) is in the process of designing a program for the Macintosh to write condition reports, treatment reports, etc. Developers are asking for other system information designed for the same purpose. Contact Bob Lange, ICL, Allen Art Building, Oberlin, Ohio, 44074.

