DOCUMENT RESUME

ED 380 102 IR 017 031

TITLE	Education and Cultural Heritage: Solid Partners for the NII. Current and Emerging Projects and Approaches. Project Descriptions.
INSTITUTION	Getty Art History Information Program, Santa Monica, CA.
PUB DATE	14 Jan 95
NOTE	44p.; Booklet produced for a panel discussion, "Education and Cultural Heritage," held in conjunction with the National Conference of the Getty Center for Education in the Arts (Santa Monica, CA, January 1995).
PUB TYPE	Reports - Descriptive (141) -- Speeches/Conference Papers (150)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	*Art Education; *Cultural Background; Educational Change; Educational Innovation; *Educational Technology; Elementary Secondary Education; Fine Arts; Higher Education; Integrated Activities; Intellectual Property; *Program Descriptions; *Technological Advancement
IDENTIFIERS	Getty Center for Education in the Arts; *National Information Infrastructure

ABSTRACT

This booklet, distributed at a meeting, contains project descriptions from each participating organization and fact sheets on the Getty Art History Information Program's (AHIP's) initiatives. Held in conjunction with a national conference on transforming education with the arts, the discussion was conducted by representatives of many projects and institutions that are currently using technology to expand educational programming beyond the walls of the traditional classroom and that are investigating the educational impact of the National Information Infrastructure (NII). The meeting occurred at a time when serious questions of intellectual property rights, quality, access, and availability impede the potential benefits that the arts can offer education. Participants shared ideas and explored approaches to integrating cultural heritage information into educational programs. Brief descriptions are provided for 17 projects. An appendix contains six fact sheets for the Getty AHIP. The program agenda is also included. (SLD)

This booklet was developed by the Getty Art History Infc mation Program (AHIP).

Education and Cultural Heritage: Solid Partners for the NII

Current and Emerging Projects and Approaches

THE GETTY
ART HISTORY
INFORMATION
PROGRAM

Eleanor E. Fink, Director

January 14, 1995

Welcome

The Getty Art History Information Program (AHIP) welcomes you to the panel discussion, "Education and Cultural Heritage: Solid Partners for the NII, *A Profile of Current and Emerging Projects and Approaches*." Held in conjunction with the Getty Center for Education in the Arts' fifth national conference, "Beyond the Three Rs: Transforming Education with the Arts," our discussion includes representatives of many projects and institutions using technology to expand the reach of educational programming beyond the walls of the traditional classroom.

As art images and art-historical information become more accessible over communications networks, collaborative partnerships with education greatly benefit the national student population in both K-12 and higher education. Program participants will provide insight into the opportunities that new and emerging technologies offer for collaboration. We meet at a time when serious questions regarding issues of intellectual property rights, quality, access, and availability impede the potential benefits to education. We will share ideas and experiences and explore approaches to integrating cultural heritage information into educational programs.

I am grateful for the unique contributions of the projects and institutions represented here today. It is our hope that this meeting will encourage the use of technology as a means of delivering cultural heritage information and expanding our understanding of the opportunities that can be realized through interdisciplinary collaborations.

Thank you for joining us.

Sincerely,

Eleanor E. Fink
Director

401 Wilshire Boulevard, Suite 1100 Santa Monica, California 90401-1455
Telephone 310 395-1025 Fax 310-451-5570 Telex USITT 4946202 Gettyahip UI Internet: efink@getty.edu

TABLE OF CONTENTS

Agenda 1

Special Presenters and Session Moderators 3

Project Descriptions

ArtEdNet, Getty Center for Education in the Arts 7
Art Gallery of Ontario 8
ArtsEdge, John F. Kennedy Center for the Performing Arts 10
ArtsWire, New York Foundation for the Arts 11
Common Knowledge: Pittsburgh 13
Dallas Museum of Art: Collections Information Center 14
EduPort (IBM/University of Nebraska Project) 15
Library of Congress Electronic Programs 16
Michael C. Carlos Museum 18
McMichael Canadian Art Collection 19
Museum Informatics Project, University of California, Berkeley 21
National Gallery of Art 23
National Geographic Society 25
National Museum of American Art 26
Smithsonian 27
Telluride InfoZone 28
Walker Art Center 29

Appendices

Getty Art History Information Program Fact Sheets

Categories of the Description of Works of Art
The Imaging Initiative
Intellectual Integration Initiative
International Documentation Standards for the Protection of Cultural Objects
Museum Educational Site Licensing Project
The Network Access Project

Education and Cultural Heritage: Solid Partners for the NII
Current and Emerging Projects and Approaches

AGENDA

January 14, 1995

2:00 - 5:30 PM
Washington Hilton & Towers, Washington, D.C.

I.	**Welcome/Opening Remarks**	Susan Siegfried Getty Art History Information Program
II.	**Assessing the Potential**	
	Perspectives on education and technology	James Mecklenburger Global Village School Institute
	Perspectives on cultural heritage information	David A. Bearman Archives and Museum Informatics
	Examining rights and museum/education cooperation (MUSE Project Overview)	Jennifer Trant Getty Art History Information Program Imaging Initiative
	Models and Prospects for Funding	Nora H. Sabelli National Science Foundation
(15 Minute Break)		
III.	**Project Descriptions & Panel Discussion: Content Issues**	Moderator: Jennifer Trant
IV.	**Project Descriptions & Panel Discussion: Facilitating Mechanisms**	Moderator: David A. Bearman
V.	**Closing Remarks**	Susan Siegfried

SPECIAL PRESENTERS AND SESSION MODERATORS

DAVID A. BEARMAN

David Bearman is the president of Archives & Museum Informatics and is a consultant to many leading organizations including the Getty Art History Information Program. An internationally recognized author and speaker, Mr. Bearman has published over ninety articles and books. He previously served as the deputy director of Information Resource Management at the Smithsonian Institution, and was the director of the National Information Systems Task Force of the Society of American Archivists. Mr. Bearman is currently the senior editor of *Archives and Museum Informatics,* and is active in numerous professional organizations throughout the world.

JAMES A. MECKLENBURGER

James A. Mecklenburger is the executive director of The Global Village Schools Institute, a national not-for-profit organization established to assist and support those who envision and implement the next generation of learning and teaching. A consultant to schools, associations and industry, Dr. Mecklenburger is the president of The Mecklenburger Group, and is a nationally acclaimed leader, advocate, writer and speaker on the impact of technology for education, especially for K-12 education. In addition, he is the editor of *Inventing Tomorrow's Schools,* the Journal of the Institute.

SUSAN SIEGFRIED

Susan Siegfried has focused on community outreach and end-user issues since joining the J. Paul Getty Trust in 1987. Her series of reports on the online-searching practices of humanities scholars has been published in *Library and Information Science Research, Journal of the American Society for Information Science,* and *Library Quarterly* (1993-1994); other articles include "Getty's Synoname™ and its Cousins: A Survey of Applications of Personal Name-Matching Algorithms" (with C. Borgman), *Journal of the American Society for Information Science* (Aug. 1992). She is co-chair of *Humanities and Arts on the Information Highways: A National Initiative*, and in 1992 organized the conference *Technology, Scholarship, and the Humanities: The Implications of Electronic Information.* An art historian specializing in late eighteenth and early nineteenth century French art, she holds a B.A. from Wellesley College, a Ph.D. from Harvard University, and an M.A. from Oxford University. In addition to numerous articles, her publications include a book forthcoming from Yale University Press, *Boilly: The Spectacle of Modern Life in Postrevolutionary France.*

JENNIFER TRANT

Jennifer Trant is the manager of the Getty Art History Information Program's Imaging Initiative, and is playing a leadership role in the landmark project, The Museum Educational Site Licensing Project, launched by AHIP and MUSE Educational Media. This project will enable the museum and educational communities to develop common solutions to problems now inhibiting the development of computer-based learning tools for the study of art and culture. Ms. Trant previously served as the coordinator of the Catalog Development Program at the Canadian Centre for Architecture, where she planned and developed documentation systems and standards for the center's collections of prints, drawings, and photographs. She has also frequently acted as a consultant to art galleries and museums regarding the management of information about works of art.

Special Thanks

The Getty Art History Information Program gratefully acknowledges the participation of Jane Smith Patterson of the U.S. Advisory Council on the National Information Infrastructure (NII). Ms. Patterson is the advisor to the Governor for policy, budget and technology for the state of North Carolina.

Project Descriptions

The Getty Art History Information Program expresses its appreciation to each participating organization for submitting the following project overviews.

THE GETTY CENTER FOR EDUCATION IN THE ARTS
401 Wilshire Blvd., Suite 950
Santa Monica, CA 90401-1455
Tel: 310-395-6657/Fax: 310-451-8750
Email: cborland@getty.edu
Contact: Candace M. Borland, Program Officer

ArtEdNet

ArtEdNet is an electronic online service designed and sponsored by the Getty Center for Education in the Arts to support its mission of improving the quality and status of arts education in grades K-12. Initially it will focus on using the Internet as a means to disseminate multimedia information and to provide opportunities for the open exchange of information and ideas on discipline-based arts education. ArtEdNet's first service will be a World Wide Web server on the Internet and interactive, online discussion groups with nationally recognized arts education experts.

A prototype of ArtEdNet's Web server was demonstrated at the just completed Getty Center conference. ArtEdNet will become operational in the summer of 1995.

The Getty Center for Education in the Arts, an operating program of the J. Paul Getty Trust, is dedicated to improving the quality and status of arts education in the nation's schools. It initiates and supports programs in five major areas: advocacy for the value of art education; professional development for teachers and administrators in schools and universities; theory development; demonstration programs; and curriculum development. All programs are developed in consultation and cooperation with recognized experts in art education and related fields.

ART GALLERY OF ONTARIO
Musée des beaux-arts de l'Ontario
317 Dundas Street West
Toronto, Ontario
CANADA, M5T 1G4
Tel: 416-979-6660 ext: 212/Fax: 416-979-6674
Contact: Carla Roth

Ramping Up To the Information Highway: New and Emerging "Electronic Outreach" Initiatives

The Art Gallery of Ontario has embarked on a five-year plan to engage the public imagination by encouraging new ways of seeing and thinking about art. Our strategy for achieving this ambitious goal includes the exploration and implementation of new and emerging technologies to reach audiences beyond the walls of its facility in downtown Toronto.

In 1994, the Ontario provincial Ministry of Education committed millions of dollars to set up the infrastructure needed to "wire" our schools and link students and teachers to networks across the country and the world. This commitment will ensure Ontario classrooms have unprecedented access to information and resources.

The Art Gallery of Ontario has embarked on many collaborative projects, laying the foundation for sustainable joint ventures. We are beginning to converge and form long-term strategic alliances with other cultural organizations, government, corporations, application developers and the educational community.

CURRENT PROJECTS

- ***Visitor Directory***

  The Art Gallery of Ontario's Visitor Directory is a multimedia touchscreen kiosk located in the Gallery's main entry lobby. The program provides visitors with an introductory overview of the Gallery including sections titled "In the Galleries," "Before Your Visit," "Programs and Activities," "Services," and "Resource Centres." Visitors using the program can activate an introduction to a collection area or the library, or listen to an overview of family programming while seeing action on-screen. Following a formal evaluation in June 1995, further applications will be leveraged from the digital framework of the Directory including an online multimedia network interface, CD-ROM production as pre-visit material, exhibit enhancement, etc. The project is a partnership between the Art Gallery of Ontario; Microplacement, Inc.; Apple Canada; and Radius, Inc., Canada.

- ***On-Line with Ontario Schools***

  In 1993 the Gallery met with several local school boards to assess the use of networking applications. As a result the Gallery is now online with many Ontario school boards reaching over 7,000 teachers across the province. One Ontario school board, Scarborough Board of Education, showed remarkable leadership and innovation by partnering with a private company to develop their own networking software. The resulting software, FirstClass, is now widely used for non-school applications. Information about exhibits, services and special educational activities is posted and can be read or downloaded. "File histories" are easily accessible and tell us who read or downloaded a particular file.

UPCOMING PROJECTS

- ***Intercom Ontario Trial***
  Intercom is a pre-consumer network trial involving several private sector partners, broadcasters, local museums, galleries, universities and consumer services, to provide broad-band width interactive programs and services to a test "village" in a Toronto suburb. The trail was conceived at York University under the auspices of CULTECH, a Canadian centre for excellence in technology funded by the federal government. Several cultural organizations, including the Art Gallery of Ontario, developed a joint "cultural consortium" proposal consisting of a network and related multimedia applications. The group is currently awaiting funding approval for the trail through the provincial government.

- ***Art and Culture OnLine***
  The provincial Ministry of Economic Development and Trade has set-up a matching grant program to stimulate the advancement of Ontario's network infrastructure called the Ontario Network Infrastructure Program (ONIP). To date, all of the projects funded by the government are from the private sector. The Art Gallery of Ontario, along with other cultural organizations, local Boards of Education, and Bell Canada have submitted a proposal to develop an international art and culture information and resource network. The five year project is scheduled to begin in March with the assessment of priorities, selection of the pilot projects, and development of the business plan.

Other projects in the areas of licensing and digitization, and the development of a collaboratively sponsored multimedia development center to integrate the tools and expertise needed for digital conversion, the delivery of online services, and CD-ROM "virtual gallery" program production and distribution are also being explored.

THE KENNEDY CENTER
The John F. Kennedy Center for the Performing Arts
Washington, D.C. 20566-0001
Tel: 202-416-8847/Fax: 202-416-8205
Email: stoner@tmn.com
Contact: Scott D. Stoner, Director, ArtsEdge

ArtsEdge, National Arts and Education Information Network

ArtsEdge is supported through a cooperative agreement between the Kennedy Center and the National Endowment for the Arts (which includes funds from the U.S. Department of Education through an interagency agreement with the NEA). The cooperative agreement began with the prototype development stage on July 1, 1993 and is expected to continue support for the pilot and implementation phases through 1996.

PURPOSE

The ArtsEdge network has been designed to solve the lack of useful and easily accessible information that demonstrates how educators and artist-educators can use the arts to transform teaching and learning. Basic goals are to: 1) connect people to people, 2) connect people to information, and 3) develop a new knowledge base for arts education.

PROGRAM DESIGN

ArtsEdge operations are based at the Kennedy Center, however, online services are provided through the MetaNetwork (tmn.com) and information is also available on the World Wide Web through the Clearinghouse for Networked Information, Discovery and Resources (k12.cnidr.org). The ArtsEdge Information Gallery is located on the MetaNetwork gopher area and contains searchable information about successful programs and practices, print and multi-media resources, professional development opportunities, education reform legislation, directories of organizations as well as information about other areas of interest to the arts and education communities. The MetaNetwork also hosts conference areas for online discussion (available only to pilot users provided with ArtsEdge accounts by the Kennedy Center - e.g. three field sites cited below, state arts agency coordinators, the Kennedy Center's Alliance for Arts Education and Performing Arts Centers and Schools networks).

Both the ArtsEdge gopher area and the ArtsEdge home page on CNIDR include NewsBreak, which contains news of interest to participants, brief summaries of effective programs, and new arts and education resources available to constituents (the CNIDR-based information contains graphics accessible through Mosaic or an equivalent browser).

The project also includes three primary field sites that are developing online information resources, and services that will interface with the national ArtsEdge network. The California Arts Project is coordinating a statewide pilot effort in partnership with the California Technology Project and Far West Lab. The Kennedy Center IMAGINATION CELEBRATION program at Fort Worth is coordinating a second pilot in partnership with the Fort Worth Independent School District. The third pilot involves CapAccess, a free public access network, which is hosting the development of information contributed by six contiguous jurisdictions in metropolitan Washington, D.C.

NEW YORK FOUNDATION FOR THE ARTS
155 Avenue of the Americas, 14th Floor
New York, NY 10013-1507
Tel: 212-366-6900 ext: 212/Fax: 212-366-1778
Email: green@tmn.com
Contact: David Green, Director of Communications

Arts Wire

Arts Wire is currently the only fully operational national network for the arts. It was designed to enable artists, individuals and organizations across the country to better communicate, share information and coordinate their activities. As well as providing a fast and efficient communications tool, it delivers news and information on a wide variety of subjects for its diverse subscribers.

Arts Wire has been operating for two and a half years and currently has 600 subscribers, joining at a rate of approximately 40 per month. Arts Wire is on the Internet and the World Wide Web; has 70 conference forums (roughly half of which are private conferences); has developed a relational database and many informational read-only conferences, a weekly arts news bulletin and, arguably, the most comprehensive arts gopher space leading users out to a very broad range of other arts spaces on the Internet.

Arts Wire has developed, through active engagement with its project partners, a wide rage of national, regional and local groups and has 39 active interest groups and 25 interest groups in development. Active interest groups include ArtFBI, Artists, ARTSMAG (an interactive digest of art-related articles from alternative and nonprofit arts press), and Eastman House to the College Art Association, the National Alliance of Artists' Communities, NAAO, National Alliance of Latino Arts & Culture, the NEA, National Institute for Art and Disabilities, National Performance Network, People for the American Way and Public Partners (a forum for over 20 states and regional arts agencies to date), and 26 others. Those being developed include the Alliance for the Arts, the American Council for the Arts, American Symphony Orchestra, Association of Performing Arts Presenters to OPERA America, Printmakers Society and Women's Caucus for the Arts.

Many conferences by their nature contain the raw ingredients of cultural heritage and cultural heritage-in-the-making. However, many areas are more specifically geared to the presentation of cultural heritage; these would include:

- *Artists*—an opportunity for an artists' discussion of their own work
- *ARTSMAG*—an interactive digest of art-related articles from alternative and nonprofit arts press
- *Cognisculpture*—an artists-developed gopher space featuring text, graphics, sound and program files
- *DataCenter*—a monthly annotated bibliographic service on the politics of culture in the U.S.—posted both in an Arts Wire conference and on our gopher site
- *Eastman House*—a gopher space with papers by scholars and others who are part of its Working Group on Digital Images in Curatorial Practice
- *Interactive*—a conference on and about interactive art and art on the Internet

- *NewMusNet*—a conference on and about new music; this group is also planning a Wo ' l Wide Web project using sound files
- *Project ArtNet*—an intergenerational community history project involving poetry, movement and computer technology, that provides at-risk students with exposure to online art--organized by Aida Mancillas, a San Diego artist and educator

COMMON KNOWLEDGE: PITTSBURGH
Department of Physics and Astronomy
University of Pittsburgh
3941 Ohara Street
Pittsburgh, PA 15260
Tel: 412-624-9027/Fax: 412-624-9163
Contact: Robert Carlitz, Professor

School Networking in Support of Educational Reform

Common Knowledge: Pittsburgh (CK:P) is a testbed for school networking sponsored by the National Science Foundation, the Buhl Foundation and the Vira Heinz Endowment. The project is a collaboration involving the following partners and activities:

Pittsburgh Public Schools - educational programs
Pittsburgh Supercomputing Center - technical support
University of Pittsburgh - assessment and project management

CK:P seeks to design and implement wide-area computer networks to support high-quality educational programs in the Pittsburgh Public Schools. The project serves the following goals:

- *Reduce isolation of the traditional classroom.* Through connectivity to the global Internet CK:P provides access to a wide range of new educational resources.

- *Provide equity of access to information.* The implementation of networking technology in schools across the district provides equity of access to technology and to information. After-school access through public facilities extends the school day at sites around the city.

- *Support educational reform.* Networking technology provides an important tool in support of school restructuring and site-based management. CK:P seeks to develop models which make this promise a reality.

- *Develop the means of institutionalization.* The project seeks to develop models by which teachers and school support staff will be able to maintain school networks over time and continue to apply the technology to new curricular activities.

- *Provide a national model.* The technological and educational strategies of CK:P are immediately applicable to school districts across the nation through the online resources of CK:P.

THE DALLAS MUSEUM OF ART
Collections Information Center
1717 North Harwood
Dallas, TX 75201
Tel: 214-922-1281/Fax: 214-954-0174
Email: czbb020@access.texas.gov
Contact: Kevin J. Comerford, Manager of Information Technology

The Dallas Museum of Art Internet Public Access Project

In November 1993, the Dallas Museum of Art (DMA) partnered with the University of North Texas to provide public access to museum information over the Internet. Starting originally as a pilot project, the DMA first went online with 25 digital images of permanent collection artworks and selected text information on museum exhibitions and events. Today, a year later, the project has grown to become a repository of over 150 digital images, three multimedia brochures, the Internet's first all-electronic teaching packet, and substantial information about DMA services and facilities.

The museum is currently accessed online by over 9,000 users each month, and DMA information services staff answer approximately 50 electronic mail reference questions during the same period. Many users who access the service tend to be college students or faculty who are Internet *browsers*. However, with the rapid growth of the Texas Education Network (TENET) over the past year, more and more K-12 teachers are now able to use the DMA online service to help support their curricular activities. Several successful pilot efforts to utilize the Internet in conjunction with school field trips to the museum have been made in the past year, and future efforts are being planned in cooperation with the North Texas Institute for Educators in the Visual Arts (NTIEVA) at the University of North Texas, and the Kennedy Center *ArtsEdge* online pilot project in Fort Worth.

The unique partnership between the museum and the University of North Texas to provide this service has proven beneficial for both institutions over the past year: the generous technical support furnished by the University has given the museum low-cost access to the Internet, while the content material provided by the Dallas Museum of Art has helped serve UNT's goal of providing off-campus information resources for its student body. Future plans for the *DMA Online* include further development of electronic teaching resources, and a potential partnership with IBM to provide comprehensive access to other cultural resources in the North Texas Area, via an *Online Cultural District.*

- **How to access the Dallas Museum of Art Online:**

  I. On the Internet:

electronic mail:	DMA@gopher.unt.edu
via Gopher:	gopher.unt.edu/dfw/dma
via the World Wide Web:	http://www.unt.edu/dfw/dma/www/dma.htm
via anonymous ftp:	ftp.unt.edu cd /dma

  II. On the CompuServe Information Service:

electronic mail:	71233,2412
for images & information:	*GO FINEART*

UNIVERSITY OF NEBRASKA-LINCOLN
201 Miller Hall
Lincoln, NE 68583-0713
Tel: 402-472-5630/Fax: 402-472-5639
Internet: ianr002@unlvm.unl.edu
Teacher
Contact: Jim Emal,
Professor & Computing Coordinator

LINCOLN HIGH SCHOOL
2229 "J" Street
Lincoln, NE 68510
Tel: 402-436-1301
Contact: Rose Kotwas, Art

Project EduPort - Digital Libraries for the NII

Project EduPort introduces a vision of how digital libraries of educational content can be created, stored, maintained and delivered "on-demand" to the nation's schools. The country's first working prototype has been established in Lincoln, Nebraska and is delivering digitized, 30 frame per second full screen video, from the University campus to one of our largest schools in the state, Lincoln High School. This research project could serve as a model for high speed *video streaming* technologies to be employed across the National Information Infrastructure (NII).

Project EduPort is a demonstration project involving IBM, the University of Nebraska, Lincoln Public Schools (Lincoln High) and the Lincoln Telephone and Telegraph Company. The project provides teachers and students instant access to digitized information stored on a mainframe computer at the University. The electronic information includes video, audio, still images, graphics and text drawn from sources like NASA, the FDR Library, the John F. Kennedy Center for the Performing Arts, and the Smithsonian.

High speed access is obtained via dedicated fiber optic cabling between the schools, utilizing a 16MB token ring computer network. The exploitation of mainframe storage and high volume LAN-serving capabilities make video streaming a logical and economical platform choice.

Our goals for the project are to 1) identify a funding partner for the research project, 2) incorporate locally produced resources, enabling teachers and students to digitize, store and retrieve their own content material, 3) broaden the platform to include Macintosh and ethernet components, 4) identify hardware and software tools for storing digitized files in the MPEG video format for more universal acceptance, and 5) eventually interface EduPort files with World Wide Web access tools on the Internet.

THE LIBRARY OF CONGRESS
Office of Electronic Programs
101 Independence Ave. S.E.
Washington, D.C. 20540-8610
Tel: 202-707-1543/Fax: 202-707-9898
Contact: Robert Zich, Director of Electronic Programs

Library of Congress Digitization Activities

The Library began digitizing some of its unique non-copyrighted collections and those for which it has the necessary rights and permissions almost five years ago. Today, digitization activities focus not only on the Library's collections but also on the services the Library provides to the nation, such as cataloging and copyright registration.

Although the grants and gifts given to the Library on October 13, 1994, are earmarked for digitization of historical collections in the public domain, the Library will continue to offer its major exhibitions, online catalog and links to other digital offerings from around the world via the Internet at no charge. Current activities include:

AMERICAN MEMORY

American Memory was the Library's initial digitization project. So far, more than 210,000 items from more than two dozen collections on American culture and history in the public domain have been digitized. Until recently, American Memory was available only at 44 test sites across the United States. The Library is in the process of making those collections more widely available, over the Internet.

Currently, four photo, film and manuscript collections from American Memory are available on the Internet via World Wide Web, an online delivery tool. Many others in all formats will become available in the next few years.

- Selected Civil War Photographs from the Library of Congress, 1861-1865. Civil War encampments, battlefields and portraits as captured by Mathew Brady and his staff.

- Early Motion Pictures, 1897-1916. Three groupings from the earliest period of the medium: New York City, President William McKinley and the Pan-American Exposition; and San Francisco Before and After the Great Earthquake and Fire.

- Life History Manuscripts from the Folklore Project, WPA Federal Writers' Project, 1936-1940. Typescript interviews from the Federal Writers' Folklore Project offering collections of Americans from many walks of life.

- Color Photographs from the Farm Security Administration and the Office of War Information, ca. 1938-1944. Photographs of rural and small-town America during the late 1930s, and scenes of the defense and war mobilization efforts from 1939-1944.

ONLINE EXHIBITIONS

Not everyone can come to Washington to see Library exhibitions, which are on view for only a relatively short period. Thus, over the past two years, the Library has been making available images and accompanying text from its major exhibitions over the Internet, where they can be viewed from across the country or around the globe, increasing their longevity and outreach. The Library is the only national cultural institution with six major exhibitions online:

- Rome Reborn: The Vatican Library and Renaissance Culture
- Selections from the African-American Mosaic
- 1492: An Ongoing Voyage
- Revelations of the Russian Archives
- The Dead Sea Scrolls
- In the Beginning was the Word: The Russian Church and Native Alaskan Cultures

The Library intends to digitize future major exhibitions.

MICHAEL C. CARLOS MUSEUM
Emory University
571 South Kilgo Street
Atlanta, GA 30322
Tel: 404-727-4282/Fax: 404-727-4292
Email: manders@unix.cc.emory.edu
Contact: Maxwell Anderson, Director

Information Technology at the Michael C. Carlos Museum

Through the generosity of the Lila Wallace-Reader's Digest Fund, the Michael C. Carlos Museum is undertaking an innovative multimedia project using state-of-the-art technology to expand the educational experience of every museum visitor. In addition to reading traditional label copy and wall text, visitors can become active participants in the learning process by means of interactive programs available at seven kiosks linked to a hypermedia authoring station. Objects (on view and stored) in the permanent collection will be made available to visitors in the spring of 1995 through sound, video, graphics, photography, hypertext, and computer animation. Scholars, the general public, and school children desiring information on works in the collection may browse an image and text database of the Museum's permanent collection.

Another innovative aspect of the program is the ability of the Office of Exhibition Design to create "virtual exhibitions" using images downloaded from the Museum's database and placed in a three-dimensional "exhibit" created with CAD software. This "virtual exhibit" can be pressed onto a CD-ROM and made available to an unlimited audience. Every department from security to education can invision the display long before it arrives, and plan accordingly. From preparation to execution, this approach will allow us to offer the "virtual exhibit" to other potential venues and exhibitions sponsors, as well as prospective visitors in schools, libraries, and other venues worldwide via the Internet. Once an exhibit has closed at the Museum, visitors (on-site or in Cyberspace) will be able to enjoy the "virtual exhibit" as it was captured and saved.

On July 1, 1994, the Carlos Museum launched an interactive tour of the Museum over the Internet by means of the Mosaic program on the World Wide Web. Featuring over 70 full-color images, it is among the most comprehensive of such programs to date and has been used by tens of thousands of "virtual" visitors from 38 countries. "Virtual visits" allow anyone accessing Mosaic to view the exterior and interior of the Museum, enter specific galleries, download color images on dozens of works from the permanent collection, and access text about the works themselves as well as general art historical information about the period or culture in which the works were created. To log onto the Mosaic program dial: **http://www.cc.emory.edu/CARLOS/carlos.html** or locate Emory University through Netscape.

Programs now under development at the Michael C. Carlos Museum are working in partnership with the Multimedia Technology Laboratory at the Georgia Institute of Technology. An authoring station featuring a Power Macintosh with Macromind Director, Adobe Photoshop, and other multimedia software is located in the Museum. Staff, students from the graduate program in multimedia design, as well as the staff of the MMTL and Georgia Tech use this system for rapid prototyping. With highly advanced hardware and software, the Carlos is planning to undertake its own color separations, digital imaging, desktop layout, and typesetting. "Digital handbooks" of highlights of MCCM collections may encourage increased use of our collections and sale of printed matter as well as CD-ROM publications.

MCMICHAEL CANADIAN ART COLLECTION
D'ART CANADIEN
Islington Avenue
Kleinburg, Ontario LOJ 1CO
Tel: 905-893-1121/Fax: 905-893-2588
Contact: Shelley Falconer, Coordinator of Education Services

Digitizing/Multi-Media Program Plan/School Computer Access Pilot Project

The McMichael Canadian Art Collection is committed to the exploration and use of emerging technologies that will enhance access to and study and appreciation of our collection. Our projects include the planning and implementation phases of a collection digitization and multi media program development project, the pilot for which is the "School Computer Access Project."

The primary focus of our project team activities is the design and production of electronic media "products" for students, researchers and the broader public. Distribution strategies and the formation of production and/or distribution partnerships are significant aspects of the Project. Liaisons have been developed with schools (University of Toronto, Ryerson Polytechnical Institute, City of North York Board of Education and the Ontario Teacher's Federation), cultural organizations (Art Gallery of Ontario, TV Ontario and the Royal Ontario Museum), the private sector and educational associations.

COORDINATION TEAM

There is a high degree of interdependence among the various internal teams who are participating in the development of our multi media programs as information is shared across our function boundaries.

PROGRAM TEAM

Currently we are assessing the needs of our school audience for the "School Computer Access" pilot. Once needs are determined, the program team will develop programs with the appropriate images, information and interactivity. Although we are a national institution, the McMichael cannot expect to serve the national school audience by traditional means, such as school field trips and extension resource packages. However, new electronic media can provide instant access via the Internet. As increasing numbers of schools are becoming connected, the Internet also offers an effective means of going into the classroom and involving students with collections and/or exhibitions before or after the "real" visit.

Close relationships are being developed and maintained with local school board consultants and teachers to ensure that curricular goals and objectives are being met. This pilot project will test a variety of formats for interactive educational programming for the school audience, initially using electronic bulletin boards and later national school networks on Internet, such as the new "Schoolnet." The use of these programs will be monitored and measured as part of the program development process.

The Program Team includes education, curatorial, archival and marketing expertise.

TECHNICAL TEAM

The Technical Team is at present studying the technologies available; the program requirements for image quality, image manipulation, text integration and interactivity requirements; image capture and/or conversion issues; and the realities of cost and operational constraints. The Technical Team will identify, test and acquire the hardware needed for all the technical components of the project. In addition, they are responsible for the design and implementation of our staff training strategy that will ensure the multi-media literacy of all the project staff. The Technical Team includes registration, programs and systems expertise.

LEGAL TEAM

Issues surrounding control of copyright and moral right over images once they have been made accessible through electronic media are numerous and complex; and they will vary with the copyright status of the works of art concerned. The legal team will explore these issues, and participate in the development of strategies to achieve the required balance between access to and control of images.

The Legal Team includes registration and finance/administration expertise.

DOCUMENTATION TEAM

The Documentation Team manages the collections information that is generated through the Project, and seeks the most effective ways to integrate and supplement it with our collection records, and address collection record security concerns. Digitized images will be formatted for easy access by researchers, and a protocol for use designed.

Since 1992, we have been imaging two dimensional works from the Cape Dorset Collection (The Collection consists of 100,000 prints, drawings and sculpture from the arctic community of Cape Dorset currently on long-term loan to the McMichael) using a Sony Laser VideoDisc recording system and video camera. The technology captures still images which are recorded onto 12" Sony CRV discs. These images have been integrated with our existing Canadian Heritage Information Network (C.H.I.N.) records to enable onsite image and text linking. The image system is non-manipulative on screen therefore the extent and presentation of content is considered prior to the imaging process. The system produces medium grade colour photo representations and is used by researchers through the registration department. Investigations are underway to determine viability of the medium for other collections management functions in the future.

The Documentation Team includes registration, library/archives and curatorial expertise.

MUSEUM INFORMATICS PROJECT
University of California at Berkeley
2111 Bancroft Way, Room 501
Berkeley, CA. 94720
Tel: 510-642-6533/Fax: 510-643-8856
Contact: Tom Duncan, Director

Museum Informatics Project

OVERVIEW

The Museum Informatics Project (MIP) is a collaborative effort at the University of California at Berkeley to coordinate the application of information technology in museums and other organized, non-book collections. As one of a small number of universities holding a wide array of collections, over eighty spanning many disciplines and media, the campus is well-suited to undertake this project.

MIP works with faculty, collections managers, and curators to develop data models, system architectures and demonstration systems as bases for coordinated and integrated approaches to the application of information technology. Through these efforts, MIP expects to facilitate and broaden access to fundamental academic collections resources by scholars, students, and the public.

MIP is collaborating with the University Library and the School of Library and Information Studies. Collaborative relationships exist with similar projects at Harvard University, Cornell University, and the Association on Systematics Collections, among others.

GOALS

- Provide ongoing strategic planning for museum informatics.
- Develop and implement guidelines for data and information modeling, hardware, software, and networking options for deployment of electronic information systems in museums and collections.
- Maintain an information clearinghouse about museum informatics issues, standards, and resources.
- Evaluate, select, and implement or develop data access, analysis, and information management software tools for scholars.
- Evaluate, select and implement or develop curatorial and collections management software tools for curators.
- Operate a demonstration and development facility containing leading-edge hardware, software, and networking tools relevant to museum informatics.
- Obtain extramural funding for museum informatics and assist in the coordination of such efforts among museums and collections.

- Assist museums and collections in implementing solutions to existing collection information management problems.

APPROACH

Employ strategies that:

- Promote information sharing among collections and institutions through high speed, local, national, and international networks.
- Recognize the unique character and circumstances of individual museums and collections.
- Serve the broadest possible spectrum of potential users of these information resources.

ORGANIZATION

The Museum Informatics Project is a department in Information Systems and Technology (IST). MIP works closely with the Advanced Technology Planning group (ATP) and the Instructional and Collections Computing Facility (ICCF), as well as other departments within IST. ATP investigates new technologies of interest to the Berkeley campus generally, and to museums and other collections specifically. ICCF provides server support for MIP participants' databases.

NATIONAL GALLERY OF ART
Education Division
Washington, D.C. 20565
Tel: 202-842-6273/Fax: 202-842-6935
Contact: Linda Downs, Head, Department of Education
Ruth R. Perlin, Head, Department of Education Resources

MICRO GALLERY - New Public Computer Information Service

Through a major grant from the American Express Foundation and the National Gallery of Art Circle, a Micro Gallery--an interactive computer information system and seventeen workstations--will enable visitors to probe new ways of exploring the National Gallery's permanent collections. A specially designed information room at the Mall entrance to the National Gallery, the Micro Gallery is expected to open in the fall of 1995.

The Micro Gallery will be the first multimedia system based on an entire art museum collection in the United States. It will incorporate digital color images, text, graphics, and animation, along with sound for a pronunciation guide to foreign terms. Designed for people without prior computer experience, the system will work as an electronic encyclopedia, allowing visitors to research individual interests. By simply touching the screen, they will be able to choose orientation information about the National Gallery or select additional background on any of the 2,500 works on view in the Gallery's permanent collection. Visitors using the system will be able to find objects by artist, subject, date, or place of origin. They will be able to develop customized tours of the Gallery based on personal interests and print out an accompanying map. In some cases, visitors will be able to study a work of art in detail: its subject, composition, historical context, special effects, and conservation history. A schedule of daily events and special exhibitions also will be available on the system. Various images or text appearing on the screen can be printed out. As at the National Gallery in London, the Micro Gallery system in Washington will be developed with Cognitive Applications, Limited, of Brighton, England.

PROJECTS

- ***American Art from the National Gallery of Art*** (videodisc), produced from a digital imagebase created for the project and as a resource for additional programs and potential electronic distribution. Includes 2,600 works of art, providing a comprehensive view of the Gallery's American collections. Printed index of artists and works included. Annenberg grant supported awards of 2,500 copies for educational institutions in every state; available for long term free loan through the Gallery's extension programs system. The videodisc was produced specifically for educational use in schools across the nation.
  Production detail: Start date, January 1991; publication, May, 1993
  Produced by the Department of Education Resources, National Gallery of Art, with funding from The Annenberg Foundation. Producer, project director: Ruth R. Perlin, with "videodisc team" brought together for production. Digital image capture: AXS Optical Technologies, Inc., Berkeley, CA., from Gallery transparencies; manufacture and packaging: The Voyager Company.
- Bar Code Index: 1993, departmental production

- Hypercard Program: in process 1993-1995; extensive text on all artists, on works of art, themes/subject in American art; content being developed by department; software program by The Voyager Company
- CD-ROM: to be produced following release of Hypercard program

NEW PROJECT

- ***European Art from the National Gallery of Art.*** Designed for educational use the project includes approximately 2,500 works of art (paintings, sculpture, works on paper) representing the rest of the Gallery's collection. Digital imagebases being developed for release in both videodisc and CD-ROM forms. Inception: August, 1994; projected completion date: 1998. Supported in part by grant from the Annenberg Foundation.

PROGRAM BACKGROUND

- Mandate to provide access to Gallery resources to distant audiences, primarily educational institutions, cultural organizations.
- Outreach to broad national audience through development and fee-loan distribution of educational resources.
- Large, diverse educational audiences require range of resources, options for use.
- Initial exploration videodisc technology:
  Development of original National Gallery of Art videodisc, 1979-1983
  Videodisc: enhanced capacity--large numbers of still-frame images, wide range of content to meet audience needs; self-directed use, adaptability to varying educational objectives, interdisciplinary programming.
- American and European projects:
  Importance of visual quality in dealing with images of works of art.
  Digital imaging: clarity, resolution, fidelity to original, flexibility in approach, sequencing of images; stable photographic record. Conversion to videodisc for current educational use. Supplementary interactive programming: enhanced instructional options. Imagebase as secondary resource for curatorial, education, publications programs, research, derivative programs, electronic distribution.

NATIONAL GEOGRAPHIC SOCIETY
Educational Media Division
1145 17th Street Northwest
Washington, D.C. 20036-4688
Tel: 202-857-7299/Fax: 202-429-5770
Contact: George A. Peterson, Vice President/
Director, Educational Media Division

National Geographic Society's Electronic Programs

The National Geographic Society's mission is the increase and diffusion of geographic knowledge. Developing innovative programs to foster an understanding of our cultural heritage is an important part of our mission. And, we believe in the power of technology to improve education. For more than a century the Society has pioneered in harnessing new technologies from photography to television; and, over the past decade, computers and telecommunications.

Two programs highlight our efforts to harness technology in the service of education. *GTV: The American People*, a fully computer-interactive videodisc program enables students to explore the diverse cultural heritage of our nation and, using powerful computer software which comes with the program, they can draw from the rich visual, text, and auditory resources in the program to express their own views and feelings about their heritage. A second example is National Geographic Kids Network, a telecommunications program which draws students together from locations all around the world as they work on projects in science and geography and exchange information about one another.

Kids Network was developed in collaboration with TERC and with funding from the National Science Foundation. Both GTV and Kids Network are ongoing and are only a part of the Society's total efforts to improve geography education and cultural understanding through the use of technology.

NATIONAL MUSEUM OF AMERICAN ART
MRC 210, Room 242
Eighth and "G" Streets N.W.
Washington, D.C. 20560
Tel: 202-357-1959/Fax: 202-357-2528
Contact: Dr. Elizabeth Broun

Education and Information Technology Projects at the National Museum of American Art

Challenge Nebraska: In collaboration with IBM, NMAA participated in Senator Kerrey's May conference demonstrating the feasibility of using computer networks to supply educational content based on NMAA programs.

AT&T's Picasso Still-Image Phone Demonstration: Students at Carrollton Oaks Elementary, near St. Louis, "visited" the museum for a reading of Li'l Sis and Uncle Willie. NMAA's Gwendolyn Everett, the book's author, displayed the colorful paintings by William H. Johnson and discussed the book.

America Online: As the Smithsonian's largest America Online "site," subscribers can visit our "virtual" museum via modem, investigating our current publications, educational programs, exhibitions and images from the collection.

Collection Highlights CD ROM: A CD ROM is being designed which will not only incorporate all the information in NMAA's upcoming book, but will greatly expand the number of images and amount of text with a similar "look and feel" and will include many interactive activities suitable for home and school use.

Internet Discussion List TEACHART: To expand participation in the museum's 1994 Summer Institutes for Teachers, NMAA established an Internet discussion list. The list's success prompted NMAA's Education Office to continue the discussion on an ongoing basis.

NMAA-Ryder Gopher Server: On January 1, 1995, NMAA made current publications, educational programs, exhibitions and images from the collection available via Internet. Current emphasis is on providing access to materials suitable for K-12 educational users, the fastest growing sector on the Internet.

Hispanic Content on TENET: The museum is collaborating with the Texas Education Network (TENET) to develop a software template for the delivery of NMAA's Hispanic content over Internet to the 38,000 teachers connected to TENET.

Art and Technology Integration: NMAA, Westside Community Schools in Omaha, and the University of Nebraska have received funding to demonstrate a practical model for the development of replicable interdisciplinary curriculum units that deliver museum materials via Internet.

Automated Research Resources Supporting Education:
Inventories of American Painting and Sculpture
Save Outdoor Sculpture!
Permanent Collection Database
Library bibliographic records
Photograph Archives

SMITHSONIAN
Office of Elementary and Secondary Education
Arts and Industries Building
1163/MRC 402
Smithsonian Institution
Washington, D.C. 20560
Tel: 202-357-2425/Fax: 202-357-2116
Internet: esead001@sivm.si.edu
Contact: Dr. Tom Lowderbaugh, Director

Smithsonian Online

On June 28, 1993, Smithsonian Online was launched via the America Online Commercial Network. This service offers the only integrated, interactive computer access to the Institution, its exhibitions, and materials.

Smithsonian Online offers images (with captions), text (for example, curricular materials, visitors brochures, and news releases), message boards, real-time chats with Smithsonian experts, reference services, subscription and order forms, and even an online contest. A keyword search capability allows teachers and students to quickly access these resources. As the project grows, we anticipate that many more museums and services will launch services as part of Smithsonian Online. Project staff are currently engaged in redesigning the service to make it even more inviting and to help users find related materials from across the entire Institution.

The greatest obstacle to Smithsonian Online's growth is the lack of staff time. The project depends upon the voluntary cooperation of staff, who usually add these responsibilities to their other duties. In the face of this burden, we appreciate even more the level of support from America Online. Without the network's technical expertise, hardware, and proprietary software, the Institution could not have devised a service of Smithsonian Online's magnitude or complexity.

Even with such support, Smithsonian Online is growing slower than anyone would like. As more staff learn about its success, they try to develop a service based on their museum's or office's work. Creating such an area requires much time, and thus the span from initial effort to the final launch of a service can be much longer than either the Smithsonian or America Online would like.

Educators should play a major role in developing such services. Education staff should be the in-house experts on how best to intrigue and inform the public. Online services, of course, redefine a museum's public, including in it people who may never set foot in the museum itself. Educators can make a major contribution, so that online services don't merely reproduce print materials in a different medium. Smithsonian Online--like other networked services--has opened the door to an exciting new world. Educators could become guides to this world, helping users understand the value of museums and their collections.

TELLURIDE INFOZONE
A Program of the Telluride Institute
P.O. Box 1770
Telluride, CO 81435
Tel: 303-728-6960/Fax: 303-728-4919
Email: rl@infozone.telluride.co.us
Contact: Richard Lowenberg, Program Director

Telluride InfoZone

The Telluride InfoZone is a pilot project for broad spectrum community development and education, using information and telecommunications technologies.

The InfoZone is a program of the Telluride Institute, a not-for-profit research, education and cultural organization. Other Institute programs include: Deep West Arts; Native American Writers; Composer to Composer; San Juan Basin Ecosystems; Sustainable Agriculture; and the Healthy Communities Initiative. All programs utilize INFOZONE services for greater benefit and efficiency.

The InfoZone Program, initiated in late 1992, consists of a regional community networking project and a research and modeling project, addressing the social, cultural, economic and political implications and impacts of the emerging information society.

Program partners and supporters to date include: The Town of Telluride; San Miguel County; Colorado Advanced Technology Institute; US WEST Communications; the Colorado Trust; Apple Library of Tomorrow Program; Colorado Supernet; Global Village Communications; US Robotics; IBM; SuperMac, Inc.; Tetherless Access, Ltd.; the Telluride regional community; and many others.

Program Director Richard Lowenberg is an internationally recognized media artist, environmental designer, and tele-community planner. His current project: "Tele/Comm/Unity" is funded by the Colorado Council on the Arts and the National Endowment for the Arts, Regional Initiatives Program.

The InfoZone is a site-specific pragmatic response to this regional community's needs and desires; and an intelligently creative model that may be learned from by other communities. It is a long-term test-bed venture, that by example, hopes to promote "an ecology of the information society."

WALKER ART CENTER
Vineland Place
Minneapolis, MN 55403
Tel: 612-375-7600/Fax: 612-375-7590
Contact: David Henry, Director of Education

New Technologies Think Tank

New technologies are creating radically different information delivery systems and altering ways that students learn and teachers teach. Walker Art Center, one of the nation's leading presenters of 20th-century performing, visual, design and media arts has embarked on two new projects to bring the creativity, innovation and reflections of artists and critics to emerging technologies.

Together with the Asia Society in New York and the Henry Art Gallery in Seattle, the Walker has begun a New Technologies Think Tank. Each of these diverse cultural organizations will participate in an ongoing electronic conference about the ways in which new technologies may change the face and future of museums. Joining in these electronic conversations will be experts from the fields of education, technology, museums and art.

A second component of the New Technologies Think Tank will be that each of the partner institutions will develop at least on pilot project involving the application of new interactive technologies in the galleries. Walker's project is "Digital Campfires" an exhibition scheduled for March 1996. Created by award-winning Walker Design Director, Laurie Makela, Digital Campfires is a visionary exhibition that explores the design of content in the digital age. Five teams of preeminent visual communicators, writers, and technologists have been commissioned to create new works of interactive media that push our changing standards of reading, writing and learning. Essential to the exhibition will be an extensive education program (co-sponsored by the American Institute of Graphic Arts), Internet dialogue, a printed brochure, interactive didactics, and a CD-ROM sampler.

Representing Walker at the session will be David Henry, Acting Director of Education. An artist, historian, and educator, Henry's most recent project is the production of a 17-minute video, "The Listening Project." Written by teens, "The Listening Project" greets visitors to the Walker's galleries and presents new avenues to explore the art of our time.

The New Technologies Think Tank is part of Walker's "New Definitions/New Audiences" initiative which is funded by the Lila Wallace-Reader's Digest Fund.

Getty Art History Information Program Fact Sheets

Categories for the Description of Works of Art

The Getty Art History Information Program (AHIP) is known for its contribution to the development of standards for information about cultural heritage and the arts. AHIP collaborates with national and international organizations to identify standards that will provide the foundation for access to and exchange of information across electronic networks. The *Categories for the Description of Works of* Art are such an emerging standard, representing the consensus of representatives of communities that provide and use art information.

The *Categories for the Description of Works of Art* articulate an intellectual structure for the content of object and image descriptions. They were developed by the Art Information Task Force (AITF), an initiative sponsored by AHIP and the College Art Association (CAA). The *Categories* are intended to enhance compatibility between diverse systems and enable the sharing of art information. By providing guidelines for content, independent from software and hardware, the AITF *Categories* can serve as a model to which existing art information systems can be mapped and as a basis on which new systems can be developed. Such guidelines can contribute to the integrity and longevity of information transmitted across networks and eventually moved to new systems. Compatible structures also provide researchers with consistent, reliable access to information stored in a variety of systems in geographically dispersed places.

To further consensus on the work of the AITF, AHIP's data standards program sponsors workshops at conferences to introduce participants to the *Categories* and how they can be integrated into institutional practice. These sessions offer registrars, curators, and information managers hands-on experience in mapping the AITF guidelines to existing databases and in planning new resources based on the *Categories*.

The AITF working documents, including a work-in-progress version of the *Categories for the Description of Works of Art*, are scheduled for release via anonymous ftp (file transfer protocol) from the Coalition for Networked Information at cni.org. The *Categories* and accompanying materials will be published in 1995. Comments and suggestions are invited and encouraged. For more information, please contact AITF at the Getty Art History Information Program (aitf@getty.edu).

Sponsored by the College Art Association and the Getty Art History Information Program, the Art Information Task Force has maintained liaisons with the Art Libraries Association of North America (ARLIS/NA), the Museum Computer Network (MCN), and the Visual Resources Association (VRA). Since its inception in 1990, the project has received funding from the Getty Art History Information Program. In 1991 the National Endowment for the Humanities (NEH) awarded a two-year matching grant to the College Art Association.

401 Wilshire Boulevard, Suite 1100, Santa Monica, California 90401-1455
Telephone 310/395-1025, Fax 310/451-5570, Telex USITT4946202 Getyahip UI

The Imaging Initiative

The Getty Art History Information Program (AHIP) collaborates with many institutions to explore the issues connected with making art-historical information more accessible by means of advanced computer technology. Digital images offer the potential to make our cultural heritage available to a wider audience in ways never before envisioned. Distribution of these images over communications networks will change the nature of teaching and research. For this transformation to take place, however, a critical mass of digital information about works of art must exist, and it must be available in standard forms. AHIP has launched an international initiative to explore the issues involved in digital imaging. The Getty AHIP Imaging Initiative will facilitate the development of common standards essential for sharing and preserving digital image information, and explore means of protecting and administering intellectual property rights to images.

The research, teaching, and cultural heritage communities must find a common voice, to ensure that their interests are not neglected in the headlong drive to commercialize digital imaging. Community-based standards, reflecting a shared vision of how images of works from museum and archival collections are used in research and education, are the means to ensure that the complex needs of the arts and humanities are met as new technologies are implemented. The Getty AHIP Imaging Initiative will operate as a catalyst, moving the field forward at this critical juncture. Its activities will build on AHIP's past strengths, bringing together disparate groups to develop solutions to shared problems.

The Purpose of Common Standards and Practices

Documentation, capture, storage, and transmission standards for images and art information must be the foundation of a critical mass of high-quality images and information capable of supporting innovative research and teaching. Without them, data is difficult to exchange, and geographically distant resources are difficult or impossible to merge or link. Standards protect our investment in digital images, ensuring that this expensive resource can be used in many systems, for many purposes, over many years.

The specialists brought together by the Getty AHIP Imaging Initiative will assist the community in defining necessary standards. Because standards must be based on real needs, the Initiative is currently assessing the communities who use images, how they use them, and the quality levels they require; it will then propose a matrix of image users, image uses, and image qualities against which to evaluate imaging technologies.

An accurate description of image files themselves is critical for the long-term viability of image archives. The characteristics of a digital image are shaped by the circumstances under which it was created. Capture devices influence color fidelity; source material limits quality; and scanning resolution dictates the amount of visual information recorded. Images captured by different methods cannot yield accurate comparisons without a knowledge of each image file's specific characteristics. The Getty AHIP Imaging Initiative will recommend a standard description of an image file that contains the information needed to

401 Wilshire Boulevard, Suite 1100, Santa Monica, California 90401-1455
Telephone 310-395-1025, Fax 310-451-5570, Telex USITT4946202 Gettyahip UI

compensate for these differences. This is now being defined in association with the Coalition for Networked Information.

Intellectual Property Rights

Imaging systems require a complex balance between the interests of rights holders and the desires of those who use images for study, research, or entertainment. Without a common framework of rights, permissions, and restrictions, the development of imaging systems is hampered. The Getty AHIP Imaging Initiative is working to bridge the gap between image users and rights holders. The Museum Educational Site Licensing Project brings representative museums, colleges, and universities together to define the terms and conditions for educational use of museum images and information on campus-wide networks. Model agreements and test systems for procurement and fulfillment will lead the way to solutions that meet the needs of all communities.

Other Activities

The concepts and technologies connected with digital imaging are complex. A common understanding of the principles and issues involved in the creation and distribution of digital image archives is required for the field to move ahead as a whole. The Getty AHIP Imaging Initiative is developing a tutorial on digital imaging which will be published, presented at professional conferences, and made available on the Internet. Best practices in the creation of digital image archives are being documented to ensure that resources are constructed with the longevity of information in mind. The Getty AHIP Imaging Initiative will also commission papers and sponsor symposia to explore the more problematic areas of imaging and to propose solutions that meet community needs.

For further information about the Getty AHIP Imaging Initiative, please contact its manager, Jennifer Trant, by telephone at 310/395-1025; by fax at 310/451-5570; or by electronic mail at jtrant@getty.edu.

Intellectual Integration Initiative

Since its beginnings in 1983, the Getty Art History Information Program (AHIP) has worked to make cultural heritage information more accessible by means of computer technology. In addition to carrying out technical research, AHIP has produced several automated databases of scholarly information (such as the *Bibliography of the History of Art* (*BHA*), successor to *the Repertory of the Literature of Art* (*RILA*); the *Avery Index to Architectural Periodicels*; and the Provenance Index) and created coordinated vocabulary tools (see below) to make it easier for others to create similar databases in the arts, and for users to search them effectively.

The recent explosive growth of public interest in the Internet--the network of networks that forms the so-called information superhighway---has provided AHIP with a new avenue for exploiting the full potential of access to cultural heritage information: integrating AHIP's vocabulary and tools with Internet information technologies to create a "knowledge navigator." The immediate result will make AHIP's information available to a wider audience than ever before. The longer-term goal is to help anyone search the Internet for any kind of arts information.

For more than a decade, AHIP has envisioned a unified "virtual" database in the arts: i.e., the ability to search heterogeneous arts databases in geographically diverse locations as if they were a single system. Intellectual integration is AHIP's name for a two-pronged effort: exploring enhanced access to databases by means of structured vocabularies such as AHIP's *Art & Architecture Thesaurus (AAT)*, the *Union List of Artist Names (ULAN)*, and the *Thesaurus of Geographic Names (TGN)*, as well as investigating the application to large data sets of structured information protocols such as the Art Information Task Force's *Categories for the Description of Works of Art* and the ISO Z39.50 protocol.

Early work of the initiative has validated the concept and laid the technical foundation. That foundation is based on using a World Wide Web (WWW, or Web) document server, a text database engine called FreeWAIS, and a relational database system. The Web server will foster research in a number of areas, leading to improved access to AHIP databases via the Internet. The year-long experiment will test the validity of enhancing database indexes by applying AHIP vocabulary resources (*AAT*, *ULAN*, and *TGN*). In the initial phase, AHIP will mount the entire databases of *RILA*, *BHA*, Provenance sales catalogues, the *Avery Index*, and, possibly, text files from the Witt Computer Index and the Census of Antique Art and Architecture Known to the Renaissance. Databases will initially be searchable as simple full text. As the Mosaic database search form will indicate, this copyrighted material is part of a short-term experiment. The purpose of this project is not to duplicate established channels for accessing electronic databases, but to explore enhanced access by means of controlled vocabularies and structured information protocols. AHIP believes that intellectual integration techniques can yield greatly improved access to databases of cultural heritage information.

For more information, contact Marty Harris, Project Manager, at 310/395-1025, or by electronic mail at marty@ahip.getty.edu.

401 Wilshire Boulevard, Suite 1100, Santa Monica, California 90401-1455
Telephone 310/395-1025, Fax 310/451-5570, Telex USITT4946202 Gettyahip UI

International Documentation Standards for the Protection of Cultural Objects

International Initiative

Looting of archaeological sites, illicit trade in art, natural disasters, and armed conflicts are just a few of the many events that threaten the world's cultural heritage. In recent years there has been a growing recognition that two keys to the protection of objects are their effective documentation and the assurance that information is recorded in ways that enable it to be shared across agencies, national borders, and international boundaries.

As part of its long-standing work in the area of developing and encouraging standards for art-historical information, the Getty Art History Information Program (AHIP) has launched an international initiative to establish documentation standards for the protection of cultural objects.

A conference on International Documentation Standards for the Protection of Cultural Objects will convene representatives from agencies charged with protecting cultural materials, including the Council of Europe, Interpol, the International Council of Museums, UNESCO, and the United States Information Agency.

These representatives will seek consensus on what constitutes adequate, unique identification of cultural objects. This consensus is intended to form the basis of guidelines recommending those categories of core information that should appear in all records of cultural objects.

Conservation Component

An important consideration in determining core information for uniquely identifying objects is the material condition of the object. Material condition has long been the responsibility and area of expertise of the conservation professional. The Art History Information Program and the Getty Conservation Institute are collaborating to organize international working groups of specialists in various facets of conservation to examine the physical characteristics necessary to identify an object.

The conservation working group will develop recommendations for the larger AHIP initiative. It will also sponsor a series of papers establishing the context, techniques, and value of identifying and recording physical characteristics.

401 Wilshire Boulevard, Suite 1100 Santa Monica, California 90401-1455
Telephone 310 395-1025. Fax 310 451-5570. Telex USITT4946202 Gettyahip UI

The J. Paul Getty Trust

The J. Paul Getty Trust is a private operating foundation dedicated to the visual arts and humanities. Through its activities and collaborative projects with institutions around the world, the Trust seeks to make a significant contribution to the vitality of the visual arts in the areas of conservation, scholarship and education. The Art History Information Program and the Conservation Institute are two of the J. Paul Getty Trust's six operating programs.

The Art History Information Program works to make art-historical information more accessible by:

- addressing information technology issues and policies
- developing and promulgating standards
- providing access to research databases.

The Getty Conservation Institute contributes to scientific knowledge and professional practice in conservation through a combination of in-house activities and collaborative ventures. In its programs, it addresses the conservation needs of:

- museum objects and archival collections
- archaeological structures and sites
- historic monuments and cities.

For additional information about this project, please contact Robin Thornes, Project Coordinator, at 011 44 653 658 595 (telephone and fax), or contact him by electronic mail at robint@demon.co.uk. (Internet).

For additional information about the Conservation Component, please contact Suzanne Deal Booth, Project Coordinator, at (310) 395-2834; or by fax at (310) 395-5056.

Museum Educational Site Licensing Project

Since its beginnings in 1983, the Getty Art History Information Program (AHIP) has sought to make art-historical information more accessible through electronic technology. Digital imaging offers the potential to make our cultural heritage available to a wider audience, in ways never before envisioned. Distribution of these images over communications networks is changing the nature of teaching and research. For this transformation to be completed, however, a critical mass of digital information must exist, and it must be available in standard forms. Imaging systems also require a complex balance between the interests of rights holders and the desires of those who use images for study, research, or entertainment. Without a common framework of rights, permissions, and restrictions, the development of imaging systems will be hampered.

The Getty AHIP Imaging Initiative is working to bridge the gap between image users and rights holders. The Museum Educational Site Licensing Project brings representative museums, colleges, and universities together to define the terms and conditions for educational use of museum images and information on campus-wide networks. This two-year collaborative initiative, launched in association with MUSE Educational Media, will develop methods and guidelines for the academic use of digitized museum materials at colleges and universities. A small number of selected educational institutions and museums will collaborate in good faith to agree on terms of capture, distribution, and use of images of works from museum collections and their associated texts. The project is undertaken in the interests of exploring and promoting the educational benefits of digital access to museum collections through campus networks.

The partners in the Museum Educational Site Licensing Project will develop and test administrative, technical, and legal mechanisms that could eventually make it possible to deliver large quantities of high-quality images from the museum community to diverse academic institutions. Museums will provide images and information. Educational institutions will provide networked access and test-use of images for educational purposes. Together, project participants will define the terms and conditions that will govern the future distribution and educational use of museum images and information on campuses.

Participating museums are the Fowler Museum of Cultural History at the University of California, Los Angeles; the George Eastman House, Rochester, New York; the Harvard University Art Museums, Cambridge, Massachusetts; the Museum of Fine Arts, Houston, Texas; the National Gallery of Art, Washington, DC; and the National Museum of American Art, Washington, DC. Participating universities are American University, Washington, DC; Columbia University, New York; Cornell University, Ithaca, New York; the University of Illinois at Urbana–Champaign; the University of Maryland at College Park; the University of Michigan; and the University of Virginia.

401 Wilshire Boulevard, Suite 1100, Santa Monica, California 90401-1455
Telephone 310/395-1025, Fax 310/451-5570, Telex USITT4946202 Gettyahip UI

Each participating institution will field an interdisciplinary team of experts in such areas as art history, instructional technology, museum collections documentation, imaging, and academic computing. In addition, a network of observers, drawn from the more than 80 museums, colleges, and universities that applied to participate in the project, along with other interested parties, will allow for the broader community to follow the development of the project.

Museums participating in this pilot project will make digitized images and information, representing at least 3,000 works (500 from each participating museum), available to educational institutions in standard formats. Those institutions will install the digitized images and accompanying descriptive texts on campus networks for research and education during the academic year 1995-1996. A minimum of 3,000 additional works will be added during academic year 1996-1997. Works included will be selected by museums on the basis of criteria suggested by the universities. Educational institutions have been encouraged to propose and explore a wide variety of educational and research uses for the material, in a broad range of disciplines, from art history to communications.

Images and accompanying documentation will be provided without site license or royalty fees during the term of the project. This arrangement will allow the participants to evaluate and compare the uses of the images and information on university campuses, to define requirements for network security, evaluate various technological methods for its implementation, and to develop the terms of a model site licensing agreement. Once the two-year test is completed, images and information will be withdrawn from campus networks, unless subsequent licensing agreements are enacted to allow for continued use.

Participating museums, galleries, and educational institutions will contribute staff time and technical resources to the execution of the project. Planning and organization is being funded by AHIP's Imaging Initiative, which will also provide some matching funds for project implementation. Additional funding will be sought from public and private foundations. These funds will be administered by AHIP's partner organization, MUSE Educational Media, a non-profit organization whose Multi-Media Study Group is developing model site licensing agreements for the use of museum images in CD-ROM publications. The project has the support of the Association of Art Museum Directors, the American Association of Museums, and the Coalition for Networked Information.

For further information about this project, please contact Jennifer Trant, Manager, Imaging Initiative, by telephone at 310/395-1025, by fax at 310/451-5570, or by electronic mail to jtrant@getty.edu. Additional documents are available via anonymous ftp from the Coalition for Networked Information: ftp to ftp.cni.org and look in the directory MUSE.

95/1/17

The Networked Access Project

The Getty Art History Information Program (AHIP) uses advanced computer technology to make cultural heritage information more accessible. The electronic networks that constitute the emerging "information infrastructure" will allow arts and cultural heritage organizations to offer a virtual tour of museums or monuments, researchers to access source materials and communicate interactively with colleagues, artists to create and transmit their work, and students to learn and communicate in an interactive multimedia environment.

The opportunities offered by the age of networked information also pose challenges for those who hope for wider access to humanities and arts information. Will such information be broadly accessible? How should it be digitized for maximum flexibility and longevity? Who will own it, and how will it be transmitted to a vast audience? To address these issues, cultural organizations need to build alliances that cut across disciplinary, organizational, and national boundaries. Representatives from interested cultural heritage communities must work together to develop open systems built on a solid foundation of standards. AHIP's experience and interests equip it to play an essential catalytic role, helping those who value the arts and humanities to be ready to take advantage of the possibilities offered by this new age.

In November 1993 AHIP and two partners, the American Council of Learned Societies (ACLS) and the Coalition for Networked Information (CNI), formed Humanities and Arts on the Information Highway: A National Initiative, a grass-roots collaboration among representative individuals and organizations concerned with the future of cultural heritage information, dedicated to marshaling support for a campaign to influence the National Information Infrastructure (NII). By establishing an area in which the many constituencies of the cultural sector could express themselves, AHIP and its partners spoke out to Washington policymakers, and the scholarly community at large. The work of this Initiative resulted in a report titled *Humanities and Arts on the Information Highway: A Profile*, issued in the fall of 1994.

Following the reorganization of the National Initiative as the National Initiative for a Networked Cultural Heritage (NINCH), AHIP launched its **Networked Access Project**, a project building on the momentum of the National Initiative and dedicated to convening groups of humanities and arts organizations to help them address specific goals that will need to be achieved in order to foster access to cultural heritage information in a networked environment.

The Networked Access Project is undertaking activities such as convening a meeting of producers and distributors of databases of cultural heritage information to discuss common goals and standards that can lead to a "knowledge base" for reporting and retrieving information about digital projects in the humanities, arts, and culture. Consistent with the new

401 Wilshire Boulevard, Suite 1100, Santa Monica, California 90401-1455
Telephone 310-395-1025, Fax 310-451-5570, Telex USITT4946202 Gettyahip UI

national emphasis on public-private partnerships, the Networked Access Project will convene representatives of the private sector (for example, the entertainment, telecommunications, cable, and technology industries) to discuss their role in providing networked access to cultural heritage information.

For further information about the Networked Access Project, please contact Susan Siegfried, Project Manager, by telephone at 310/395-1025; by fax at 310/451-5570; or by electronic mail at ssiegfried@getty.edu. To order copies of *Humanities and Arts on the Information Highways: A Profile* or the conference summary *Technology, Scholarship, and the Humanities: The Implications of Electronic Information* by electronic mail, please use ahip@getty.edu.