

Architectural Archives: To Web or Not To Web

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SUMMARY. Architectural records are important documents of an artistic process. Also, they are important as records of a society, tools for maintenance and renovation of existing buildings, historical records of buildings that no longer exist, documents of unbuilt designs, and as legal evidence. Architectural archival collections contain those artifacts unique to past and present projects, special private architectural data, personal notes, renderings, and sketches of ideas. It is important to document these collections and make them accessible to patrons and the public. By focusing on specific projects this article will explore many of the issues involved in providing digitized Web access to archival collections. [Article copies available for a fee from The Haworth Document Delivery Service: 1-800-HAWORTH. E-mail address: <docdelivery@haworthpress.com> Website: <<http://www.HaworthPress.com>> © 2003 by The Haworth Press, Inc. All rights reserved.]

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15

Many libraries, archival collections, and visual resources centers are the repository of great, irreplaceable architectural drawings and objects. These collections can be found in large universities, small colleges, museums, government agencies, private institutions, and personal and business locations. The materials housed at these sites are important as primary sources in the study of architectural history and our society. Architectural records document the creative process of building and many have great inherent beauty as works of art. They are important as records of a civilization, as tools for the maintenance and renovation of existing buildings, as historical documentation of buildings that no longer exist, as records of unbuilt designs, and as legal evidence. Architecture distinguishes itself from other art forms because it is a product of society as a whole, as well as the vision of an individual. Architecture reflects the values and ideals of people, and documents the character of the time and place in which it was created. Architectural archives often contain a narrative of the social interactions involved in the creative process not disclosed by the building, landscape, or structure. Such collections contain documents and visual materials unique to past and present projects, special private architectural data, personal notes, renderings, and sketches of ideas.

Architectural archival collections consist of drawings, photographs, correspondence, building material samples, specifications, site photographs, and contracts. The complete set of files from a project will show an historic record from the first rough sketches to working drawings, and the as-builts. All of these stages bear witness to the architect's or builder's original design and its relationship to their environment. How do our patrons get access to these unique historic collections? Some of the larger archives have begun entering their collections into Web-based databases that include electronic finding aids and digital surrogates of drawings and photographs.

Originally this article was to summarize a panel presentation that took place at the 2002 ARLIS/NA conference, entitled, "Architectural Archives: To Web or Not To Web." However, as is usually the case, there is more to it than that simple statement. The title of that presentation was not accurate because already we are Webbing. The title should have asked "when and how to digitize." In addition, the relevant question to be asked is *why* would you want to digitize past or contemporary architectural drawings for the Web. As our panel discussion began to take shape we discovered that digitizing architectural collections is an interaction of preservation and access using evolving technologies. While digitizing architectural archival collections appears to be a positive move, we must be very careful not to lose what we already have,

and perhaps what we don't yet have on paper or in CAD (computer aided drawing).

Each speaker on the panel served a distinct role. Kelcy Shepherd, Project Director, Five College Finding Aids, University of Massachusetts Amherst, discussed issues related to the creation of electronic finding aids for a database of archival collections. Previously she worked on the Greene & Greene Project and currently she is involved with The Five College Finding Aids Project in Western Massachusetts. Ardys Kozbial, Visual Resources Librarian, Harvard University, presented an overview of a project in process, the Greene & Greene Virtual Archives Project. In this project three architectural archival collections are being digitized and put on the Web with a grant awarded by the Getty Grant Program to The Gamble House. Nancy Thorne, Archivist at the University of Pennsylvania, presented an overview of the digital, Web-accessible project, the Philadelphia Architects and Buildings database, which is the most complete project to date. Web addresses for these projects appear in the bibliography following this article. Papers from the panel discussion are summarized below. The author thanks Kelcy Shepherd, Ardys Kozbial, and Nancy Thorne for allowing summaries of their presentations to be included in this article.

CREATING ELECTRONIC FINDING AIDS

Not long ago, the development of an institutional Web site represented a great advance for researchers seeking access to architectural archives. Now many archives have moved beyond the basic Web site and have added electronic exhibits, finding aids, collection descriptions, and digitized images to their inventory of online resources. What can be learned from these early efforts, and how are expectations and trends in electronic access evolving? What questions must we ask before planning such projects? What standards can we use to facilitate the discovery and sharing of archival resources on the Internet? Finally, how are users incorporated into the bigger concept of availability and usage?

The digital landscape constantly shifts. Continual developments in descriptive schemas are represented by use of digital images as aids to locating primary sources. It is exciting to see how these various approaches work together in an integrated fashion. Funding agencies increasingly expect digital projects to fit into a larger context of international resources. Projects that support a variety of uses including teaching, research, and publishing are favored. How archives define themselves and how they fit

into larger research needs within the fragmentary digital landscape are questions that merit discussion.

Conceptualizing the suitability of architectural archives for digitization requires a number of steps. After the first step, securing funding, comes an assessment or survey of types of materials to be included in the project. Collection control, that is intellectual and physical control on an item level, must be established. A descriptive framework, Web-ready data, technical support, and possible opportunities for collaboration with other institutions are required. Next, one must make a decision on the types of content and the resources to be made available on the Web. The ability to present raw data that can be manipulated in various ways by different audiences is a great strength of the Web. For that reason it is necessary to create an interface design that will serve the needs of a diverse community.

Electronic resources require standards to encode data in the finding aids and to build a consistent structural base. EAD (encoded archival description) is the standard in the archival community for encoding finding aids in SGML and XML. While HTML tags describe how contents will look, EAD tags describe what type of information contents will hold. A separate document, called a style sheet, is used to define how the finding aid will be displayed. Although limiting the discussion to content, use, and standards may be useful when conceptualizing your digital project, you will need to consider other important issues including cost, copyright, personal privacy issues, organizational culture, as well as long-term maintenance and increased demands for access based on the philosophy, “if you build it they will come.”

New technologies challenge us to build on the foundations of experience and traditions while moving beyond the limitations of the past. We can take advantage of this opportunity by trusting both our expertise and our profound understanding of the materials in our care.

GREENE & GREENE: A GRANT-FUNDED PROJECT IN PROCESS

Charles Sumner Greene was born on October 12, 1868 in Cincinnati, Ohio, and fifteen months later, on January 23, 1870 Henry Mather Greene was born. The Greene brothers' early education and training fostered their focus on tools, materials, and craftsmanship. After finishing high school, the brothers enrolled in the Massachusetts Institute of Technology. In 1891 both left MIT with Certificates of Partial Course, the two-year program followed by most of MIT's architecture students. They

apprenticed with several of the finest firms in Boston, including those whose principals had worked with H. H. Richardson. In 1894 the Greene brothers began to practice architecture in Pasadena, where their parents now lived. Charles' interest in the English Arts and Crafts movement began in February, 1901, after honeymooning in England, Scotland, and Europe. The Greenes created some of their finest work during the period 1902 to 1910, when the firm was at its busiest primarily with residential commissions. By 1903 they had begun to offer integrated design services for clients, providing building design, furniture design, and other interior appointments. They created approximately 150 projects during these prolific years. After 1911 the practice began to decline.

Charles and Henry Greene are widely considered to have brought high-art aesthetics and exquisite craftsmanship to the American Arts and Crafts Movement in the early twentieth century. In the early 1900s they were featured in many of the popular architecture and design magazines, such as *The Craftsman*, *House Beautiful*, the *International Studio*, *House and Garden*, and *American Home and Garden*. This acclaim spread the popularity of their designs throughout the country. Their work was rediscovered in the 1950s and celebrated for their distinctly American interpretation of the Arts and Craft style, which was seen as an antidote to the International Style so popular in Europe. Today, The Gamble House, one of the Greenes' masterpieces, receives 30,000 visitors each year from all over the world. Recent tours of their Thorsen and Blacker houses have drawn thousands of visitors and raised awareness of their home designs as well as home furnishings. Interior design, architectural design, and architectural history journals are full of advertisements placed by contemporary merchants offering reproductions of Greene & Greene furniture and décor.

The Gamble House, which was deeded to the University of Southern California School of Architecture and the City of Pasadena, applied for funds from the Getty Grant Program to implement a two-year project to create a collaborative, virtual research archive on the Internet. The Web database will contain encoded finding aids for collections held at four repositories, selected images, and accompanying item-level descriptive metadata of the works of Charles and Henry Greene. This project will allow electronic access to full collection inventories and 4,629 images (out of 15,000) from the Greenes' extant architectural records, photographs, personal papers, and decorative arts collections. The collective inventory to be used in the project currently resides in four separate locations: The Gamble House in Pasadena, the Gamble House Greene & Greene Archives housed in the Huntington Library in San Marino, Cali-

fornia, the Avery Architectural and Fine Arts Library, Columbia University, New York, and the Environmental Design Archives, University of California, Berkeley. Project Director is Edward R. Bosley, Director of the Gamble House.

The four principal institutions will collaborate in a national and regional partnership to develop a Web site for the Greene & Greene Virtual Archives and to have the electronic finding aids and digital images mounted on the Online Archive of California (OAC) at the California Digital Library.¹ Implementation will be carried out jointly by curators, archival technicians, catalogers, consultants, vendors, and staffs of the collaborating institutions, all of whom will bring special expertise in the area of architectural collections' management and access, intellectual appraisal of Greene & Greene documents, Encoded Archival Description (EAD), software technical support, and metadata. MrSid™ software will be used to facilitate viewing large drawings. Among the many advantages of implementing such a virtual archives is that material previously available only to those able to travel great distances will now be accessible to researchers worldwide.

The four repositories will create and prepare finding aids, using EAD standards and OAC Best Practices Standards Guidelines.² The finding aids, along with digital surrogates of drawings, photographs, documents, and decorative arts, as well additional MARC records when needed (much of this material had already been cataloged), will be mounted on the OAC. In addition, a unique Web site will be developed to provide access to the digital surrogates in a way that encourages different types of use than that provided on the OAC. This Web site will include electronic finding aids from the four repositories, as well as a finding aid that describes the virtual collection and groups images by project with their histories. Both the OAC and the Web site will link the Greene & Greene Virtual Archives at the four sites. Digital records and documents will be made available through the campus networks of USC, Columbia University, and UC Berkeley, as well as to users everywhere on the Internet. Actual location of material, whether in California or New York, will not be evident until the user reads captions. Promoting access to the digital reproductions has the added benefit of decreasing direct handling of the originals, thus helping to prolong their usable life.

Although there are many benefits to digitizing archival collections, there are problems that await solutions. It is difficult to maintain scale and retain definition when a larger image is reduced to a small screen size. Technical details obvious in the images are difficult to discern on the small screen. Because more users will be able to access the collec-

tions on the Internet, demand for physical use of the originals could increase, thereby defeating one of the goals defined in the grant proposal. Other problematic issues include varying image quality, which is dependent on the computers used to view them. The computer program, MrSid™, is challenging to learn and use, making it difficult for the viewer to manage results. These issues will have to be addressed in the future. Additionally, there are technological problems such as size of files, user connection speed, and image download time. There are copyright concerns: do the institutions hold the copyright and if so, how will they maintain control? With commercial use of the Internet firms like Greene & Greene, who designed furniture, lighting, and buildings, have had designs “borrowed.” A limited number of images will be scanned in this particular project; even with a disclaimer, will users understand that they retrieve only partial results? Yet these collections do belong on the Web and the project merits the effort. Mounting architectural archives on the Web breaks new ground in user access and in preservation of valuable primary source material.

***PHILADELPHIA ARCHITECTS AND BUILDINGS:
A WEB-BASED, IMAGE-RICH RESOURCE***

The Philadelphia Architects and Buildings Project (PAB) is a regional initiative that dramatically expands free public access to information on the architects and the built environment of Philadelphia and the surrounding five county area in Pennsylvania, Delaware, and New Jersey. As a user-friendly, Web-based digital image resource, it is an ambitious and successful example of private, academic, and public cooperation. PAB brings together collections, data, images, and the professional expertise of the staff at the Athenaeum of Philadelphia, the University of Pennsylvania Architectural Archives, the Philadelphia Historical Commission, the Pennsylvania Historical and Museum Commission, and many local cultural institutions.

After nearly three years of hard work funded by the William Penn Foundation, the Philadelphia Architects and Buildings Project has produced a free, publicly searchable Internet database containing architectural and historical information and digital images. Over 140,000 architectural projects, built and unbuilt, are represented in the database and the number continues to grow. Project records are seamlessly integrated with a Web-based, digital version of Tatman and Moss's *Biographical Dictionary of Philadelphia Architects* (Boston: G. K. Hall,

1985). This important architectural reference work (long out of print) has been revised and corrected, and its scope has been expanded to include related professions such as engineers, landscape architects, builders, etc. As of January 2003, approximately 13,000 individuals and firms are represented in the database. Project records and Architect records are seamlessly integrated with a Web-based library of over 29,000 digital images. By 2004 the database will provide digital images of most existing original architectural documents of Philadelphia area buildings before 1900, and representative images (when available) for each twentieth-century building included in the database.

PAB represents the collaborative work of archivists, librarians, and art historians and combines the characteristics of an art historical reference work and a regional union catalog of archival resources for the study of architecture. Original scholarship is found in biographies of architects, engineers, and builders, in historical sketches of firms, in the compiled lists of the projects of an architect or firm, and in detailed information about individual projects. Institutional holdings are represented by holdings records for individual architectural projects and digitized images of related drawings and photographs. Unlike a conventional union catalog, this database does not include all the holdings of contributing institutions, and it cannot be a substitute for MARC records, finding aids and EAD. Rather, the goal has been to build a model for presenting authoritative resources for the study of building history and the history of architectural design. Architectural projects entered in the database are either located in the greater Philadelphia region or designed by Philadelphia area architects (firms, etc.), including projects designed by Philadelphia area architects but located elsewhere in the United States and abroad. As of January 2003, twenty-five repositories in the region have collaborated with the four sponsoring institutions to contribute data related to their architectural holdings. The project holds itself to a very high standard of accuracy. Statements of fact are either based on institutional holdings or on published material clearly listed in the database bibliographies. Architectural historians are responsible for writing biographies of architects and historical sketches of firms, and for editing the scholarly content of the database as a whole.

PAB is a remarkable tool for end users ranging from academic researchers (in art history, architecture, social history, urban design and development, local and regional history) to practicing architects and engineers, and even homeowners. From the navigation sidebar, the user can choose to search by Project/Building, Architect, Location or Collection and retrieve the following data:

- A Project record offers summary data for the project, digital images of architectural drawings and photographs, citations to published material, and links to holdings records for source materials in contributing institutions. A chronological list of events such as competitions, preliminary designs, engineering studies, later alterations and additions, landscape design, etc., serves to unify in one record the related projects of different designers, with each designer's name linked to an Architect record.
- An Architect record offers a biographical/historical sketch (with links to Architect records of related individuals and firms), digital biographical images and a project list with links to Project records.

Digital images are presented as thumbnails. Ordering information is available with each image for users who wish to buy reproductions or arrange publication rights. In addition, individual users are offered an opportunity to subscribe to the PAB database (\$40 per year) for access to compressed high-resolution images (ECW) via ERMMapper, a free browser plug-in. A pricing structure for non-profit and academic site licenses is currently in development.

This is an ambitious project and the work is ongoing. Some images and biographical sketches are blocked from view until they are approved. Data is being added and edited every day, and users will find records which are incomplete and errors yet to be corrected. A long-range goal is to link the PAB database with the Philadelphia region's growing Geographical Information System (GIS), in order to provide authoritative geographic coordinates for architectural and building history data. The overarching goal is to build a national model for creating and presenting authoritative building history resources, which might easily be linked to similar regional projects throughout the United States.

The Philadelphia Architects and Buildings project encourages links from library Websites to <http://www.philadelphiabuildings.org>.

CONCLUSION

The future of digitizing architectural archives is promising despite inherent problems such as costs, changes in software, and long-term maintenance. The two specific projects discussed here illustrate the value of collaboration in overcoming challenges that might otherwise prevent an individual institution from attempting to create a digital archive. "Digital Architect," a monthly column in *Architectural Record*, reports on how

working architects incorporate digital media into their professional practices. In the May, 2002 column, Deborah Snoonian, P.E., documents the newest of the new.³ The architect Frank Gehry and the firm Foster and Partners are using computer models to construct digital designs. Conceived in the digital world and never existing on paper, where will those designs reside, and how will they be preserved? Many questions await answers in the future. “Fixing the problem cannot be done by the cultural players alone since they need technical innovations, nor by high-tech people alone since their world lavishly rewards immediacy rather than continuity. Happily, each group is titillated by the other’s tools and issues, so the prospects are good for periodic collaboration.”⁴

NOTES

1. University of California, California Digital Library. *Online Archive of California*. <http://www.oac.cdlib.org>.
2. University of California, California Digital Library. *Online Archive of California, OAC Best Practices Guidelines*. <http://findaid.oac.cdlib.org/about/forarchivists.html>.
3. Snoonian, Deborah, P.E. “Digital Architect.” *Architectural Record*, May 2002.
4. MacLean, Margaret and Ben H. Davis, editors. *Time & Bits: Managing Digital Continuity*. (Los Angeles: J. Paul Getty Trust, 1998.) Afterword by Stewart Brand.

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Web Sites

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<http://www.columbia.edu/cu/lWeb/indiv/avery/>
- Documentation and Conservation of the Modern Movement–DOCOMOMO. The function of DOCOMOMO is to co-operate with official and voluntary organizations for the furtherance of the aims set out in the Eindhoven Statement which was issued at the conclusion of the founding conference–<http://www.bk.tudelft.nl/docomomo>
- Earth Resources Mapper Inc–ER Mapper–<http://www.ermapper.com/>
- Harvard University, Graduate School of Design, Francis Loeb Library–
<http://www.gsd.harvard.edu/library/>
- International Federation of Library Associations and Institutions–IFLA
<http://www.ifla.org>
- International Centre for the Study of the Preservation and Restoration of Cultural Property
<http://www.iccrom.org>
- International Confederation of Architectural Museums–<http://www.icam-Web.org/>
- Library of Congress, EAD (Encoded Archival Description)–
<http://www.loc.gov/ead/ead.html>

Lizard Tech Inc. Creator of the Mr SID technology–<http://www.lizardtech.com/>
National Historical Publications and Records Commission–
<http://www.nara.gov/nara/nhprc>
Philadelphia Architects and Buildings Project–<http://www.philadelphiabuildings.org/pab/>
Preservation (digital Library SunSITE)–<http://sunsite.berkeley.edu/Preservation>
The International Council of Museums–ICOM is the international non-governmental organization of museums and professional museum workers established to advance the interests of museology and other disciplines concerned with museum management and operations–<http://www.icom.org>
International Council on Archives–ICA is the professional organization for the world archival community, dedicated to the preservation, development and use of the world's archival heritage–<http://www.ica.org>
International Council of Monuments and Sites–ICOMOS–<http://www.icomos.org>
National Trust for Historic Preservation–<http://www.philadelphiabuildings.org/pab/>
Society of Architectural Historians of the United States–<http://www.sah.org>
Society of Architectural Historians of Great Britain–<http://www.sahgb.org.uk>
Universal Preservation Format–<http://info.wgbh.org/upf/index.html>
University of California, The California Digital Library–<http://www.cdlib.org/>
University of Southern California, School of Architecture/City of Pasadena. *The Gamble House*–<http://www.gamblehouse.org/>
University of California, Berkeley, Environmental Design Library–
<http://www.lib.berkeley.edu/ENVI/index.html>
University of California, Berkeley, College of Environmental Design, Environmental Design Archives–<http://www.ced.berkeley.edu/cedarchives/>

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