



## **SCHOLARLY COMMUNICATION INSTITUTE 4**

### **ARCHITECTURAL HISTORY**

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#### **Introduction**

The Scholarly Communications Institute at the University of Virginia provides an opportunity for leaders in humanities disciplines, academic libraries, information technologies, and higher education administration to develop and implement strategies that advance scholarship in the context of the ongoing digital revolution. Knowing that it takes long-term institutional support to sustain digital scholarship over time, we have looked at strategies based on institutional strengths and commitments to scholarship (SCI3). SCI has also explored strategies grounded in the particular needs of a discipline: in the case of SCI 2, it was the emerging discipline of practical ethics.

The term “scholarly communication” is often used as shorthand for peer-reviewed publishing, seen as the ultimate goal of research and the primary way a discipline advances. But at SCI, the focus of attention is on the process of communication itself, in the broadest sense: how scholars find information, create knowledge, and communicate among themselves, with students, and beyond the academy with other audiences. For SCI, what is at stake is not just the article or the monograph. It is the creation and dissemination of knowledge that constitute the core value of scholarship to society. Crucial actors in these activities have been libraries and publishing houses, academic administration and funding bodies, information technologists and, of course, audience. And it is the sum of what they together create that should be sustained over time, even as the specific roles that individual actors play may change. It has become a commonplace that traditional print-based models of peer-reviewed publication are failing under pressures from economic demands, technological innovations, and expanding copyright monopolies. But more significantly, they are also failing to live up to the needs of current humanities scholarship, with its expanding appetite for non-print sources, its increased desire for having real-time impact on contemporary life, and the drive to recruit the best, most creative, and boldest minds to the professions that promote humanistic inquiry.

What new forms of scholarly communication that better support scholarship can we model and test?

### **Why Architectural History**

Architectural history presents a rich opportunity to engage the fundamental challenges that SCI addresses. This field is at an inflection point, ready to move on with developing new ways of documenting the built environment, of interrogating sources, of publishing and disseminating the results of research, of developing new ways of teaching, and of nurturing and rewarding the next generation of scholars. The field has always presented special challenges for a print-based model of scholarly communication, and many of the needs and aspirations of scholars and teachers in the field—the need to have access to images for research and to use images freely, prodigiously, in presentation of scholarship – have been unmet. The problems of scholarly publication in art and architectural history were the subject of studies undertaken earlier in 2006 by Hilary Ballon, Mariët Westermann, and Lawrence McGill. These studies are indicative of a field that is aware of itself in the context of a larger dynamic information environment, seeking to clarify the external influences that shape disciplinary practices, and positioning itself to change in light of what it discovers through such an environmental scan. The field also has a learned society, the Society of Architectural Historians, through which it can effect an agenda and which is self-consciously working to appropriate whatever advantages new information technologies can bring to their field—in presentation, research, teaching, publication, outreach to new audiences, within and outside the academy. The society and its premier journal, the *Journal of the Society of Architectural Historians* (JSAH), are actively seeking ways to retool themselves for the new information environment.

Finally, the field itself focuses on what has always been a human endeavor at the forefront of engineering and technology, populated by men and women who aspire to have a strong positive impact on humans and the way they live and inhabit the earth. At its best, architecture puts technology at the service of humanity, and endeavors to maintain a balance between means—materials, techniques, engineering—and ends—the environment that induces to better habitation. To paraphrase Bill Mitchell in his article about complexity in the digital age, architects are a curious combination of artists, who have visions of what can be, and engineers, who focus on problem-solving and making those visions wonderful places of dwelling. We take that mix of purpose and pragmatism as our starting point.

The strategy of the organizers was to invite distinguished professionals from a wide variety of domains—scholars and teachers, curators and librarians, academic officers and service providers, lawyers and funders—to get as many good ideas on the table as possible, explore them in group discussions, and then arrive at a series of targeted actions to implement over the coming 18-24 months that will move the field ahead concretely.

### **Grand Challenges**

We began our institute with an attempt to identify the so-called grand challenges facing humanities scholars and scholarly communication in the early 21st century, with critical focus on the core intellectual agenda of architectural historians and the impact of the availability, use, and opportunities of new communication strategies and information technologies. What possibilities are there for fundamental transformation of our disciplines? What aspirations do we have that seem to exceed our grasp, but only just? What could be realized by concerted and collective action, an infusion of resources, and disciplined execution? What ambitions, if achieved, would have a beneficial and transformative effect spread across populations that were not directly involved in the effort? To identify some desirable possibilities, the perspectives of senior scholar, academic officer, library director, and learned society executive were presented to the group. Panelists and audience were asked to face the future both as visionaries and as problem solvers.

A common view of the promises and the challenges that lie ahead in the next decade emerged, and both promise and challenge operate at various levels simultaneously—at the level of the individual scholar, of the academic organization, and of the entire humanistic enterprise as such.

First, there is a societal imperative for humanists to “engage the digital,” as most culture is now created digitally. Engaging the digital puts the humanities at the very center of the digital revolution, and offers the chance to infuse the Web and other information environments with the knowledge and values of the humanities. As university and college campuses build up their core infrastructures to support digitally-enabled research and learning, it becomes imperative that humanities faculty demand more resources for technology and for libraries, publishers, and the professionals who staff them. In terms of architectural history, the use of digital technologies by current architects and engineers is overwhelming and has vastly changed the capacities for building. (Frank Geary’s billowy facades, from the Guggenheim Museum in Bilbao to the Disney Music Center in Los Angeles, are possibly the best known exemplars of those technical advances, but they are by no means unique.) There is a disciplinary as well as societal imperative to engage the digital.

Another promise of new modes of scholarly communication for humanists is to make real the rhetoric of interdisciplinarity and help us to achieve what one scholar reminded us was the age-old dream of humanists: *homo universalis*, an individual with well-rounded appreciation for the many dimensions of the human experience. Digital technology has the power to reunite the disparate fields and subfields of humanities, as well as link them to the sciences. It can do that in part by putting into a commonly accessible multimedia library all the primary resources and interpretive literature that supports inquiry. And it can give us shared tools to use and present those sources.

New technologies can also expedite the emerging turn to disciplinary foundations, the re-engagement with primary sources in all media. For architectural historians and archaeologists, there is the specific promise of closer encounters with the basic techniques, fabrics, and sources of the built environment.

The challenges to fulfilling these promises are formidable, of course, but hardly intractable. To achieve these goals, architectural history as a discipline, individual scholars, and the organizations that support them, from universities and colleges to libraries, museums, and publishing firms, need to change the way they work, change the scale of their horizons, encourage greater risk-taking, and engage the critical information policy debates of our time, specifically, the encroachment of property law in the expression and exchange of ideas.

### **Collaboration and Collective Action**

Among the most powerful IT applications are those that provide a platform for collaboration—in many cases, actually demand collaboration. The technology as such is costly, and a number of skilled professionals with various expertise need to be on hand in the production mode, as well as the dissemination mode (unless one posts some simple formats to a Web site). But the working mode of the humanities has to this juncture not been amenable to collaborative work. Everyone recognizes that the traditional culture of humanities scholarship rewards soloists and provides very few incentives for talented folks to join the chorus, no matter how resounding the sound of many voices together. The good news is that reward systems are human-crafted, and, while not simple, it is entirely within the power of a discipline, driven by peer-agreed standards, to change that reward system.

As Barry Bergdoll pointed out, architectural history carries within it aspects of social and economic history, the history of ideas and technology, and the multiple perspectives embedded in archaeology. With the field's natural "resistance to the book," it must develop incentives and rewards for collaborative enterprises simply in order to make room for the very best scholarship. Buildings are designed and constructed by collaboratives of many professionals. In the case of archaeologists, buildings and their sites are studied in teams. In the course of such team work, they have pioneered the use of some of the most powerful tools, such as GIS and visualization. Archaeologists like Willeke Wendrich and Nick Eiteljorg testified to the power of collaboration to foster interdisciplinarity. Robert Kirkbride, who relies on collaboration both in the teaching and in the design process itself, spoke of its power to overcome the disadvantages that specialization can bring.

### **Scale and Scoping**

Until recently, the economics of the academy has been built around scarcity. As long as information resources were physical objects that could be used only in one time and at one place, people would cluster physically around those resources, and institutions would compete among themselves on the basis of access to scarce resources. This is obviously no longer the case. We now face the challenge, as James Hilton phrased it, of managing abundance, not scarcity—though financial resources to do so remain at essentially the same level. Now everyone has to cooperate in order to provide key resources critical to one and all. Now institutions such as libraries need to be in cooperation with

others to build image and text libraries. They also need to collaborate on preservation of sources so that there is no undesirable overlap and redundancy as the volume of resources that demand stewardship expand. How do we scale up to meet the need? How do we make the tough choices between competing demands?

From the scholar's point of view, the problem of abundance is in some ways even more unmanageable with current tools and ways of doing business. The sheer volume of information and knowledge that demand attention can be disorienting and ultimately deprive us of the time and space for reflection. On the one hand we demand access to more and more information. On the other hand, we have fewer and fewer means to sift through it to find quality. For better or for worse, our library catalogs, as they exist today, are not up to the task, especially for visual resources. Again, this is an area where the ability to find the right partner or set of partners to work with can help to cut through the confusing plethora of choices. Access to expertise across campus and across disciplines is very important. Many identified the library as the natural physical locus of such expertise, as it is a neutral ("non-partisan") institution on campus.

### **Innovation and Continuity**

For better or for worse, we find ourselves in a rapidly changing information landscape where innovation and information policy are driven by the entertainment industry and the life sciences. As humanists, we have no choice but to keep pace, if we wish to keep current our understanding of human experience. That is why, as Steve Wheatley summarized it, for humanities writ large "the grand challenge is creating environments and communities where digital scholars can work in spite of organizational and cultural challenges to making changes." We are able to point to many grand projects that technology is already able to accomplish—a universal digital library is one—but the conservative culture of the academy (in addition to market-driven policies surrounding the exchange of knowledge) remains a major barrier.

Universities themselves, including their museums and libraries, are among the primary agents of cultural continuity in our society and that is an important societal function. It is hard both to foster innovation and sustain valuable legacies. To take one example, as Deanna Marcum noted, much money is tied up in the legacy collections that libraries are charged with maintaining, and that equates to less money to invest in the future. Abandoning the commitment to preservation is not an option. Yet on some campuses the library is emerging as a key center of innovation. While difficult to achieve a balance between innovation and continuity within essentially the same budget, campus organizations need to open doors to the future without shutting out the past.

For the faculty, the challenges are just as daunting: the need to maintain the highest standards in teaching and scholarship, which are grounded on the conserving mechanisms of peer review and consensus-building; and the need to take risks in the pursuit of knowledge, and to reward younger colleagues for doing so. Where is it safe to experiment and risk failure? Willeke Wendrich

described a solution that faculty created at UCLA when they established the UCLA Digital Humanities Incubator Group (<http://projects.cdh.ucla.edu/udhig/>). This is a place where people from different disciplines can gather to share learning and to experiment (“we keep a space for anarchy, too”). This center is one place—libraries and technology centers may play the same role on other campuses—where researchers can push technology and information resources in order to discover their possibilities.

### **IP and the Myth of Sharing**

Several panelists cautioned that—somewhat surprisingly, given the lip service paid in the academy to openness and sharing—intellectual property (IP) is emerging as a looming challenge to collaboration and the growth of knowledge. Although originally designed to promote the circulation of information and ideas, copyright is increasingly used to restrict access to them. We know how this narrowing of access operates with commercial products, access to which is so crucial to architectural history and indeed to all who study human culture. But now we are discovering that an awareness of IP and concerns over who “owns” an expression is creeping into the classroom. Hilton noted that the incoming generation of students is increasingly worried about protecting their own intellectual property. So, increasingly, are faculty. With campus lawyers ever more cautious about faculty claiming fair use when accessing material, and faculty and students in some cases trending toward possessiveness with regard to granting access, it is hard to determine how to define, let alone defend, the educational enterprise and scholarship in particular as a public good.

In sum, all challenges to developing new models of scholarly communication involve collective action, the pooling of resources across departments and across campuses for the collective good. Benefits that accrue are felt at all levels—individual, organizational, and disciplinary and are liberating. Neither the promises we identified nor the challenges are necessarily exclusive to architectural history. Indeed drawing connections between the specific needs of the field such as a sharable image database and a broader national agenda can help us identify solutions. It can also lead us to new funding sources that solve such problems as scaling up services, scoping of activities, and lowering intellectual property barriers. With this grounding in the general, the following sessions were devoted to the specific needs and opportunities facing those who study the built environment.

### **Tools for Digital Scholarship: Foundations for New Methods and Knowledge in Architectural History**

The purpose of this session was to identify the tools and information resources that architectural historians use or wish they had at their disposal; to look at the problems encountered when using them; to explore the infrastructure that supports these tools and resources, locally and nationally, and see what might be missing; and discuss how to create priorities for development when there are competing needs.

The common themes that emerged were:

- the need for commonly developed and shared tools
- the need for open and sharable resources that are sustained over time
- the need for location-based expertise, that is, for research centers, laboratories, and centers, staffed by librarians and IT experts, where people can experiment with new technologies, risk failure for the sake of acquiring knowledge, and share experience and expertise.

## Tools

What are the investigative tools that are most important for architectural historians and archaeologists? The panelists concurred that the exploration and faithful representation of data in a rich and richly documented context is fundamental. Side-by-side comparison, visualizing change over time, keeping integral the historical layers in which a structure is or was found, the representation of three or four dimensions, the ready accessibility of documentation (metadata) about the data—these are all crucial for sound scholarship. With the advent of GIS (geographic information systems), one now has the possibility of representing the four dimensions critical for analyzing the built environment and how it changes over time. Georeferencing key data has now emerged as an important need. Such reference points would provide crucial (and completely standardized!) metadata. These would not obviate the need for descriptive metadata of other kinds for visual resources, but they may constitute a priority for investment because such metadata are useful to all different types of research communities. They would not pose conflicting or competing requirements that would then demand the creation of additional metadata crosswalks. (Ann Whiteside noted that 80 percent of the effort that goes into converting analog sources to digital lies in the creation of the metadata.)

That said, tools that allow catalogers and users of digital content to describe data remain critical both to the creation of new content and the conversion of our important “legacy” (that is, analog) collections. Flickr was mentioned as a model of simplicity for such mark-up or “tagging” which, while not comparable to MARC cataloging in its complexity, goes a long way to the ideal of enabling researcher to share, describe, and contribute knowledge to image databases. As Thorny Staples cautioned, the perfect is the enemy of the good: simple tools now are always preferable to perfect tools sometime in the future.

Desirable tools would allow one to manipulate images readily (for comparison), to show change over time, even in some cases to represent three dimensions through virtual reality (these tools would additionally require the software, hardware, and the theater for playback). The tools we want will be able to address the essentially dynamic nature of buildings and allow us to ask questions that were not even thinkable a few years ago. For example, Diane Favro asked, can we determine how buildings were used at different times of the day and different days of the year?

Finally, we need to be thinking ahead—or, more precisely, thinking about today’s architects and how we will be able to study their design processes. The widely used CAD (computer-assisted design) is going to be hard to preserve and render in the future. But daunting as that seems now, it is hardly the greatest challenge we face. Martha Thorne noted that a typical large architecture and design firm will use about 50 softwares, each proprietary, each on a rapid development cycle of its own.

## **Resources**

The development of resources that are open and sharable—a desire articulated by all—is likewise a challenge that “calls for collective action,” as Jeff Cohen put it. Such resources would range from rare book holdings and collected building documentation to reconstructions and personal image collections, comprising both images created during a research project and collected from third-party sources (the Web, a library database). We need to leverage these collecting activities to build shared databases. We also need platforms for better management of personal collections.

Building collections that are searchable, sharable, and well documented is not easy, especially for visual resources. They are expensive, demand more storage space and bandwidth than textual content, and usually require even more extensive negotiations for rights than text. Deciding who bears the costs of providing such databases is difficult. At present, we can anticipate that most arrangements risk creating a gap between the “haves” and the “have-nots.” James Shulman cautioned that no one library or database will have it all. He advised that agreement within our own domain on some priorities for commonly shared and supported databases will make it easier for content providers to meet our demands. Coming to this agreement is an area where the Society of Architectural Historians, making common cause with the College Art Association, might gain some traction. Given the scale of the task, we need to recruit commercial and non-commercial third-parties to work with (Getty Images, ARTstor, Flickr).

As the breadth of enquiry in architectural history expands, it will be increasingly important to find and incorporate images of people using buildings. Hilary Ballon said the importance of social uses of space is a growing topic in architectural history. We also want tools that help us visualize evolution of building changes, that allow buildings to reveal their dynamic nature. And finally, we need tools that allow for multiple authorship.

## **Centers of Expertise**

But how do we get there from here? Here again the notion of aggregation has powerful logic—not of images, in this case, but of expertise and funding resources. Centers for learning GIS emerged as one priority. So, too, was the development or modification of tools and learning how to use them. Cohen called for a center where one could find “mutual aids for coping with new technologies.”



## **A Word for Common Sense**

As Madelyn Wessel noted wryly, architecture is “particularly interesting” from a legal perspective because it deals with multiple media and multiple authorship. Digitization raises the stakes of intellectual property issues because of the increased potential for profligate access. And now enter universities, themselves players in copyright and intellectual property, especially in instances where the university has developed tools or claims rights in content. She warned that collaboration raises the issue of multiple authorship. To obviate problems, parties involved should the good sense to resolve licensing and other intellectual property issues at the start of a project. Collaborations can be like marriages: all parties rely ultimately on trust, but trust can be engendered by up-front (“prenuptial”) agreements.

## **Publishing and Dissemination: New Scholarship, New Technologies, New Directions**

Digital technologies create diverse opportunities and challenges for publication, both in the redesign of traditional publications and in the emergence of entirely new forms of publication. This session explored both, and paid special attention to renegotiating the delicate balance between supporting innovation and nurturing continuity. The ultimate question becomes how to open up a space for innovation within a culture that has developed such conservative mechanisms for assessing and rewarding quality of research results. And external to the research community lies an even more unyielding barrier to innovation than the cultural conservatism of the humanities: the growing constraints on access imposed by the contemporary copyright regime. That said, participants identified a number of areas under their control that could, if acted on, yield quick, decisive, beneficent results.

Hilary Ballon, incoming editor of the *Journal of the Society of Architectural Historians*, outlined the range of needs and possibilities before the discipline. First is the need for the monograph to be reinvented and reenergized, given that it remains, for the present, the gold standard for tenure. Next, there are additional possibilities for new modes of dissemination that will address the chronically unmet needs of those dependent on visual resources. New technologies would at least in theory make possible such things as catalogs that remain current with the state of knowledge, or a “networked article” that could have links to archival sources and not be bound by an arbitrary page limit. Something between an article (10,000 words) and a full-blown monograph (several hundred pages) is now possible and, one suspects, economically feasible as an electronic imprint.

Currency of publication is not a topic often touched on in gatherings of humanities scholars but it is certainly desirable among those who create, curate, and attend temporary exhibitions. What Ballon called “conversation projects” (responsive projects) such as exhibition reviews could be put up and receive real-time feedback during the life of an exhibition, rather than appear as the usual post-mortem appreciation or criticism. Finally, niche audiences,

which constitute most scholars who work deeply into a field or a topic, could benefit greatly from the (apparent) cost efficiencies of digital dissemination.

### **The Role of Publishers and Libraries**

Whatever models of scholarly communication emerge, there are major implications for the institutions that undergird scholarly communication—publishers and libraries. Several publishers discussed their responses to the changing environment. Chuck Henry described how Rice University Press, which folded not too long ago, has been reborn as a digital-only imprint, focusing on a few fields that have been particularly disadvantaged by print and may flourish in a digital environment: art history (including architectural history), archaeology, and music. As the press comes online, they are preparing to tackle head on what they anticipate will be a significant obstacle to success, and that is the credibility of the imprint among scholars. To that end, Rice has engaged an editorial board and a peer-review editor. While they will attempt to innovate in technology and business models (outsourcing content management, print-on-demand services, and marketing and sales), they will conserve what is crucial to the academy—the peer vetting of scholarship. Michael Jensen related the experience of the National Academies Press, which has been a leader in providing open access to their research results while maintaining a viable business model. Since 1994 they have made their publications freely accessible on the Web (roughly 200 titles a year), which has resulted in an increased sales of hard-copies of those titles. They are able to give things away in “non-optimal” formats and use the free version as a form of marketing for the high-quality format that people prefer to use. As successful as this enterprise has proven so far, there is always the dilemma of having to remain open while maintaining stability—of content, of formats, of financial viability. In the publishing world especially, it seems, past performance is not necessarily a good indicator of future returns on investment.

In many ways, libraries would seem to bear the greatest burden in this rapidly changing environment. As service organizations, libraries are designed to be responsive to their clients, the faculty. Libraries have been the first to feel the destabilizing effects of new information technologies and are the most vulnerable in times of unpredictable change, built as they are to be conservative institutions. Yet they cannot wait to react, even if their faculty are slower to adapt to this new environment. Many libraries are already well on their way to developing the infrastructure to support and sustain digital scholarship over time. Knowing that libraries must continue to be the site of reliable and trustworthy preservation, absolutely foundational to scholarship, many research libraries are deploying digital repositories on their campuses. In addition, some libraries (we heard from the University of Virginia, UCLA, Columbia, MIT, the Library of Congress) are also modeling new roles for themselves in the chain of scholarly communication, becoming sites of technology development, of teaching digital literacy, and of access and dissemination of research outputs. As Mackenzie Smith of MIT Libraries said, the academy should start thinking about publications as “webs of resources.” In this model, libraries, as the long-term stewards, hold the content; publishers and learned societies are aggregators of content, creating “overlay journals” by

linking content and adding value through peer vetting, filtering, packaging, and branding, content. A publication becomes a web of resources held together through an editorial process.

When it comes to primary resources, as opposed to secondary literature such as journals and monographs, the role of libraries and museums is considerably more challenging. Collecting, documenting, and preserving new formats is complex, and grappling with fragile, proprietary, ever-changing technologies such as CAD pose serious technical and IP challenges. As an example, Smith cited the CAD system used by Frank Gehry. Though in the process of collecting primary sources about his building at MIT, the library does not have access to what his office is doing. They would need physical and legal access to files mostly owned by the architect. At present there are no standards for incorporating these sources into publications, so decisions about curating them must be made in the dark. And the window for capturing and “freeze-drying” or “desiccating” any given format is about 5 years at the most.

### **Copyright**

Everyone recognized what a stunning problem copyright presents to the growth of knowledge, though, as many kept saying, it was meant to stimulate, not stultify, that growth. The complexity of the law has grown to such an extent that two distinguished copyright lawyers presented and held the group nearly rapt with attention. What emerged from those discussions (one in the session about tools and resources, the other in the session about publishing) was the clear consensus that a common vocabulary that can be understood by lawyers and scholars alike in discussions of the law is needed. Next, members of the academy have to become more knowledgeable about intellectual property as part of their professional skill set; it is simply too intrinsic to the fate of scholarship today to be ignored or treated as someone else’s area of responsibility. Finally, the best place to begin to achieve the above is to commence campus-wide discussions about the fundamental purpose of the copyright law and, at the departmental level, discussions about specific issues and questions that arise within a discipline.

Some general observations by Jeffrey Cunard in this session were that we are now in a rights-clearance/permission oriented culture. We are less able to rely on “fair use” now than before, as the academy’s gatekeepers (such as general counsels) grow increasingly risk-averse. Rights embedded in works that are digitized are in some ways even more complicated (or raise higher risks) than objects born digital, as it can be very tricky to know who can claim rights in the work (let alone find the people or entities). The Copyright Terms Extension Act (CTEA) has radically reduced the number of works that will enter the public domain, posing special problems for anyone studying the twentieth century.

### **Moving Ahead**

By the end of the second session on the fundamentals of scholarly communication, a common concern had emerged: that our habits of disciplinary practice, particularly in terms of archival or peer-reviewed

publication, threaten to impede real scholarship, open inquiry, and bold thinking. And primacy of the print also too often slams the door in the face of many talented graduate students. Senior scholars bemoaned the paradox that once upon a time, tenure was put into place to protect risk-takers in the academy. Now it operates to exclude them. Senior scholars could change the local departmental decisions about tenure “any old time we felt like it,” as John Dobbins expressed it. “Most of us here have tenure and we decide who gets tenure. If digital scholarship counts for us, then this issue shouldn’t be as big as it is.” With that, he offered to raise this issue at his next departmental meeting.

### **The View from Campus: Current and Future Developments in Digital Architectural History**

As new information technologies give rise to new research agendas and scholarly communication strategies, they are also changing the ways members of the higher education community interact on campus and across campuses. To get a sense of the variety of impacts felt on campus these days, we had three teams of institutionally-based innovators—senior and junior scholars, librarians, and technologists—report on how they are reacting to these challenges and opportunities through new campus alliances and extramural collaborations.

#### **University of California, Los Angeles**

The UCLA team reported that their work in the digital arena is a factor in attracting graduate students. Their Experiential Technologies Center [<http://www.etc.ucla.edu/>] promotes innovative technologies in humanities and social sciences. The ability of graduates students to have access to this resource gives UCLA a strategic edge in programmatic areas and in attracting graduate students. But the center also addresses some of the infrastructural problems that arise when deploying new information technologies, such as the scaling problem. For example, digital reconstructions are quite expensive, and investigators need to expand their funding base to be able to afford them. Such projects allow humanists access to larger grant sources, and in this case it makes funding graduate students possible (10 are currently supported this way). No culture of grants administration exists in the humanities departments, and the center, together with UDHIG, is incubating one. The center fosters natural—that is, project-based—collaboration with computer scientists and engineers. Departmental resources vary hugely, and Favro noted that it was really helpful in her work as a historian to be in the school of architecture, where she could communicate daily with practitioners and had access to better equipment and greater resources.

The UCLA team’s description of their working environment highlighted what one called the large discrepancy between the “haves and have-nots” relating to digital access and know-how, between scientists and humanists, between big research universities and small colleges, and between first-world research centers and those in the third-world. What is our obligation to share these resources and how do we do so? The penetration of such high-end applications

as immersive environments is not deep among humanities faculty; only 6 percent of faculty use technology to go beyond typical everyday functions.

### **University of Virginia**

Faculty on this team noted that UVa tends to be a somewhat balkanized campus, and digital issues are at least one area that really cut across all the departments. Furthermore, it is around technical infrastructure, centrally located at such places as the library—what Lisa Reilly termed a “non-partisan” site—that people can come together and collaborate. The faculty members, who came from several different departments, recognized that it is important for all sorts of reasons to network at the “top level,” but it is hard to work out common interdisciplinary modes of work. Each discipline brings a fully developed worldview to table. Nonetheless, balkanized or not, Frazier Neiman contended, faculty must be driving the integration of digital technologies into centers of virtual study, and as they do so, these will become important sites of interaction, between teachers and students and as well between discipline-based experts.

A number of UVa faculty on the team are engaged in long-term digital projects, and it seemed appropriate to them that they now tackle the issue of accepting dissertations in digital formats and digitally based scholarship in tenure and promotion cases.

### **Columbia University**

The Columbia group focused on the future of a unique university asset, the Avery Library of Art and Architecture, and what role it will play in the largely digital future of architectural history. There are plans afoot to bring certain treasures in the print collection into the digital realm. There are also conversations about how the Avery will be able to collect the born-digital course materials for contemporary architecture. The team, comprising a scholar, librarian, and technologist, talked about the specific challenge of developing a prospective program of documenting the university’s campus expansion program in Manhattanville.

Gerald Beasley said that they anticipate lots of different sources, in different media, will be available to collect and, indeed, would come flooding in if they were to just open the spigot. How should they scope the collecting? The challenges include planning for long-term sustainability, for unpredictable uses of the sources by a variety of communities, and for a plethora of tools and formats that may not last too long and that are likely to be proprietary. In short, the challenge is to manage the abundance while documenting the design-process, preserving fragile content, and ensuring the archives’ authenticity over time. The audience suggested that they start to work immediately on agreements with possible participants (what roles people will play, what expectations they can have for access, and so forth), and that they plan now for holding a significant portion of the sources in a “dark archive” for a period of time.

### **The Next Generation: The Perspective of Emerging Scholars**

The next generation of scholars and their colleagues will ultimately determine the shape the discipline's response to the challenges enumerated above and move the frontiers of knowledge further. A panel of graduate students and scholars in the early stages of their careers were asked to respond to what they had heard, and to articulate both their long-term ambitions and the short-term actions that should be taken to make those visions possible. In desultory but persistent fashion, each session had surfaced a number of anxieties about graduate education, about how to recruit and retain the best minds and spirits to scholarship, and whether or not the system was capable at present of rewarding those who show the greatest promise, curiosity, and creativity. Another thread of concern that emerged was what one wit called the problem of "CPA": continual partial attention. There seems to be a generation of students who have lost touch with the traditions of creating long, sustained arguments, which have been the centerpiece of humanistic disciplines since the rise of the monograph. Yet another question that arose in each session was about whether or not the professional demands of scholarship, especially those surrounding professional training and education, publication, and tenure and promotion, serve to advance or inhibit first-class scholarship.

A common desideratum among younger scholars is a universally accessible digital library, something that appears technologically possible to create and would be positively transformative for all. Yet it is a long way from being realized for a host of complex reasons. A corollary observation is that "content is king," and so we should be putting more effort into the creation of content than into that of specialized metadata and tools. This generation of students has seen plenty of the "new great thing" come and go. They expressed the view that we should be making do with whatever tools we have and using what metadata we can, rather than spend great energies on perfecting these. Both are destined to be replaced rather rapidly by new, improved versions of the same. Content lives much longer. As Chris Johanson said, the most revolutionary tool would be a worldwide digital library. On the other hand, there is recognition that data without metadata has limited utility for scholarly inquiry.

Young scholars ticked off a number of what might be called unmet needs in their graduate education. Johanson mentioned the skill of project scoping (its own version of "managing abundance"), including knowing when to go after "low-hanging fruit" rather than focus (too much) on the big picture. Kelly Miller questioned why most students have to learn about technology outside the classroom. Panelists agreed that technology offers the possibility of asking and answering important new questions through representation of comparisons, such as a map of change over time or tempero-spatial representation of process and flow. Why wouldn't we want to do this? Why do we have to learn about all this technology outside the classroom? Why is all of this excluded from the process of credentialing when this is where the intellectual action is? Why are we urged at forums like this to collaborate but that is not part of our education and such behavior is not rewarded? And where is the space for experimentation and failure in our training?

On the subject of credentialing, more than one graduate student advised others to package their research so that it looks more traditional. Caroline Yerkes questioned the assumption that up-and-coming scholars will be the ones to lead the scholarly revolution, when they are the most vulnerable members of the academy. Are they to be forced into the position of leading a revolution in which they have everything to lose? Robert Kirkbride summed up the recurring theme of this panel as the coupling of “tenure and fear,” at the same time as he offered an array of approaches he used in his classroom to “unleash his students” by working in teams, engaging in the design process as well as the critical process, and connecting students with the traditions of architecture as art and as a human-centered enterprise.

### **Next Steps**

After exploring many dimensions of scholarly communication in architectural history, and taking into consideration both the promises of new models of communication to advance scholarship and the problems that arise in doing so, the group moved to develop an action plan. The first order of business was to identify leadership at several levels—institutional, disciplinary, and national.

Institutional leadership resides in academic departments, libraries, and academic administration, each a locus of power and of resources. Departments have power over the credentialing of innovation within the internal processes of hiring and promotion. They could effect change by developing accepted methods for peer review and rewarding digital scholarly production in hiring and promotion practices, as well as incorporating new modes of scholarly practice, such as team work, into graduate education training and the fostering of risk-taking behaviors. While the change in acceptance of digital outputs requires the active involvement of all scholars in the field in the final analysis, it has to be initiated and aggressively led on campuses by senior scholars within their departments. As for new modes of publishing and dissemination, scholars agreed that “we need to accept the libraries’ invitation to consider the relationship of libraries to production of content, and engage with them to maintain and preserve scholarly products,” as Pauline Saliga put it. They also asked the libraries to take a lead in educating all parties about legal issues. And finally, the all-important work of fostering collaboration and experimentation requires strong administrative support—money and time release, building space and technology infrastructure, all supported by a campus-wide ethos of experimentation in the interest of knowledge creation.

Disciplinary leadership is concentrated in learned societies and their publishing wings. The SAH leadership agreed to craft an action agenda based on some key challenges discussed here. They would put their journal to work to promote new modes of scholarly communication. The group was challenged to submit their own digital work to the journal. And SAH leadership said they would seek to partner with the CAA on such key issues as developing image databases and tools. SAH also takes seriously the need to educate its members about copyright and proposed using their annual meeting as a venue for such topics.

Bringing the agenda of architectural historians and archaeologists into the broader national program of advancing the humanities, bringing it closer to the public, requires a different focal length. There are needs that scholars in these fields share with those in other disciplines: the desire for centers to learn about GIS; the need for richer, more accessible aggregations of content; the adaptation of existing tools for humanities inquiry and presentation—these are all needs that map to the larger landscape of cyberinfrastructure for the humanists and social sciences that is emerging from the American Council of Learned Societies tasks force on cyberinfrastructure. Participants were urged to connect individual and disciplinary work to the larger social issues that move people—including funders—to pay attention. The burden is on us, some urged, to make the case about why doing our work better makes a difference to the larger community from whom we seek support and resources.

The SAH agreed to respond to the invitation extended at the close of the meeting by The Andrew W. Mellon Foundation to support the development of digital extensions to the JSAH. The executive committee of the SAH agreed to host a session at their annual meeting and that of the CAA on what had been learned at the SCI. The SAH also committed to looking further into development of a shared image database and to engage ARTstor in talks about possible collaboration or co-development. At the local level, John Dobbins agreed to raise the issue of recognition of digital scholarship in the tenure and promotion process within his own department at UVa. As we were reminded by our host, Karin Wittenborg, in the end it is results that matter.





## **SCHOLARLY COMMUNICATION INSTITUTE 4: ARCHITECTURAL HISTORY**

**July 30 – August 1, 2006**

### **PARTICIPANTS**

#### **Dean Abernathy**

Associate Director, University of Virginia

#### **Hilary Ballon**

Hilary Ballon is professor of art history at Columbia University and editor of the *Journal of the Society Architectural Historians*. She has recently completed a Mellon-funded study of the State of Scholarly Publication in Art and Architectural History with Mariet Westermann (NYU), which addresses the untapped potential of electronic publication in art history. As JSAH editor she aims to create a digital extension of the journal.

#### **Gerald Beasley**

Gerald Beasley is Director of Avery Architectural & Fine Arts Library, Columbia University. He graduated from Oxford University and University College, London; worked from 1985 to 1991 at the British Architectural Library of the Royal Institute of British Architects (RIBA); from 1991 to 1994 at the Wellcome Institute for the History of Medicine, London; and from 1994-2004 at the Canadian Centre for Architecture, Montreal (CCA). Co-author of the RIBA's 5-volume bibliographical catalogue, *Early Printed Books, 1478-1840*, and co-editor of three catalogues of rare architectural books for the National Gallery of Art in Washington.

#### **Barry Bergdoll**

Barry Bergdoll has been teaching architectural history at Columbia since 1985 and has served since 2004 as Chairman of the Department of Art History there. Educated at Columbia and at Cambridge in art history, Bergdoll is currently the President of the Society of Architectural Historians. His numerous publications center on 19th and 20th century German and French architecture, he has also curated exhibitions—notably *Mies in Berlin* at MoMA (2001) together with Terrence Riley—and made films about architecture.

#### **James Childress**

James F. Childress (PhD, Yale, Religious Ethics) is the John Allen Hollingsworth Professor of Ethics at the University of Virginia, where he teaches

in the Department of Religious Studies and directs the Institute for Practical Ethics and Public Life. He is the author of numerous articles and several books in biomedical ethics and political ethics, among other areas. His books include *Principles of Biomedical Ethics* (with Tom L. Beauchamp), now in its fifth edition and translated into several languages; *Priorities in Biomedical Ethics*; *Who Should Decide? Paternalism in Health Care*; *Practical Reasoning in Bioethics*; *Civil Disobedience and Political Obligation*; and *Moral Responsibility in Conflicts*. Childress has been heavily involved in “public bioethics,” serving as vice chair of the national Task Force on Organ Transplantation and a member of the Board of Directors of the United Network for Organ Sharing (UNOS), the UNOS Ethics Committee, the Recombinant DNA Advisory Committee, the Biomedical Ethics Advisory Committee, and several Data and Safety Monitoring Boards for NIH clinical trials. In 1996-2001, he was a member of the presidentially-appointed National Bioethics Advisory Commission, which issued reports on several topics, including human cloning and embryonic stem cell research. Childress is an elected member of the Institute of Medicine and a fellow of the American Academy of Arts and Sciences. He is also a fellow of the Hastings Center.

### **Kinney Clark**

Kinney Clark is an architectural historian with the New Jersey State Historic Preservation Office, currently responsible for GIS and information management initiatives. His current focus is on creating comprehensive statewide cultural resources GIS data and developing enterprise data management solutions for cultural resources information. Kinney previously worked in the SHPO’s transportation unit providing regulatory review of transportation projects under various federal and state regulations, and has been involved with developing architectural survey guidelines and local historic preservation guidance. He has an undergraduate degree in Business Administration from the University of Georgia, and is currently completing a Masters in Historic Preservation from UGA’s College of Environment and Design.

### **Jeffrey Cohen**

Jeffrey Cohen is senior lecturer in the Growth & Structure of Cities Program at Bryn Mawr College. His research has mostly focused on topics in 18th- and 19th-century American architectural history, including the work of architects Benjamin Latrobe, Frank Furness, and Wilson Eyre, on townhouses, early architectural drawings, and the evolution of the 19th-century downtown. In the digital realm he has worked on document-based databases, electronic exhibition projects, and several courses where students create research websites. He has participated in a number of collaborative projects, an alphabet soup of anagrams from the now-defunct NINCH and Academic Image Cooperative, to the steering/advisory committees for PAB (Philadelphia), Catena (Bard), and CLiMB (Columbia/U Md). Since 1996 he has chaired the SAH’s Electronic Media Committee, which has arranged seven “Tools for Architectural Historians” sessions and built the SAH Image Exchange, a working pilot in posting digital images to be openly shared for teaching (a parallel to a similarly conceived VAFpie, being built with the Vernacular Architecture Forum).

### **Scott Craver**

Scott Craver is an advanced graduate student in the History of Art and Architecture in the University of Virginia, whose doctoral dissertation is focused on purpose-built, mixed-use building complexes at ancient Pompeii and Herculaneum. He is interested in the impact of digital publishing on his present and future work, and on the disciplines of Classical Archaeology and Architectural History.

### **Jeffrey P. Cunard**

Jeffrey Cunard, managing partner of the Washington, D.C. office, practices in the areas of information technology, intellectual property and communications law, including copyright litigation, joint ventures, privatizations, regulatory advice and e-commerce transactions, and US and international media and telecommunications law and he is an internationally recognized practitioner in the field of the Internet and cyberlaw. Mr. Cunard is the author of, a contributor to, and speaks widely on both communications and intellectual property law. With Debevoise partner, Bruce Keller, he is the co-author of *Copyright Law: A Practitioner's Guide* (2001-2005), published by Practising Law Institute. He also is the co-author of the "Obscenity and Indecency," "Copyright" and "Trademark and Unfair Competition Issues" chapters in *Internet and Online Law* (K. Stuckey, ed.) (Law Journal Seminars-Press 1999-2005) and annually co-authors a comprehensive summary of legal developments involving the Internet for the Practising Law Institute's Communications Law program. He is a major contributor to *The Future of Software* (1995), published by MIT Press, is a co-author of two books on international communications law, *From Telecommunications to Electronic Services* (1986) and *The Telecom Mosaic* (1988), both published by Butterworths, and is on the Board of Editors of *e commerce Law & Strategy*. With Mr. Keller, he both teaches a seminar at Harvard Law School, "Practical Lawyering: Internet-Related Issues" and is co-director of the Clinical Program at the Berkman Center for Internet & Society at the law school. Mr. Cunard is an active participant in community activities and the arts. He is Chairman of the Board of Trustees of the Freer Gallery of Art/Arthur M. Sackler Gallery, Smithsonian Institution; serves as Secretary of and is on the Board of Directors of Friends of Khmer Culture; and is Counsel to the College Art Association. He is a past President of the Woolly Mammoth Theatre Company and a past director of both Rhizome.org and the Choral Arts Society of Washington. Mr. Cunard graduated summa cum laude in English and Political Science from the University of California at Los Angeles in 1977 and received a JD in 1980 from the Yale Law School, where he was an Editor of the Yale Law Journal. After graduation from law school, he served as Law Clerk to the Honorable Wm. Matthew Byrne, US District Court for the Central District of California.

### **John Dobbins**

John Dobbins, University of Virginia, is a Classical Archaeologist whose primary research is the forum at Pompeii where he is the Director of the interdisciplinary Pompeii Forum Project (PFP). Numerous discoveries by the PFP are changing the scholarly understanding of the forum's evolution. Dobbins is interested in representing the three-dimensional history of this important urban center through computer models that document dynamic changes within the

urban ensemble and within individual buildings. Harrison (Nick) Eiteljorg, II Nick Eiteljorg is a classical archaeologist who has worked with CAD to record ancient structures and is now working on a stone-by-stone model of the Propylaea in Athens. He founded the Center for the Study of Architecture (<http://csanet.org>) to further the use of CAD in archaeology and architectural history.

### **Diane Favro**

Diane Favro is a professor of Architecture and Urban Design at UCLA and former President of the Society of Architectural Historians. Her research work explores the perception and interpretation of urban spaces in antiquity, as well as the pedagogy of Architectural History. She is Director of the UCLA Experiential Technologies Center, which promotes experiential research using a variety of technologies including the real-time modeling of historical environments complete with lighting, sounds, and linked metadata.

### **Bernie Frischer**

Bernard Frischer is the author of four books and many articles on virtual heritage and on the Classical world and its survival. He received his BA in Classics from Wesleyan University in 1971 and his PhD in Classics from the University of Heidelberg in 1975. He taught Classics at UCLA from 1976 to 2004. Since then he has been Professor of Art History and Classics at the University of Virginia, where he also serves as Director of the Institute for Advanced Technology in the Humanities. He has been a guest professor at the University of Pennsylvania (1993), the University of Bologna (1994), and held the post of Professor-in-Charge of the Intercollegiate Center for Classical Studies in Rome (2000-01). He is a member of Phi Beta Kappa, a Fellow of the Michigan Society of Fellows, a Fellow of the American Academy in Rome, and he has won research fellowships from the American Council of Learned Societies (1981, 1996), the Center for Advanced Study in the Visual Arts (1997), and the Loeb Classical Library Foundation (2003). From 1996 to 2003 he directed the excavations of Horace's Villa sponsored by the American Academy in Rome, and from 1996 to 2004 he was founding director of the UCLA Cultural Virtual Reality Laboratory. In 2005 he was given the Pioneer Award of the International Society for Virtual Systems and Multimedia.

### **Michael Furlough**

Director, Geospatial and Statistical Data Center, University of Virginia

### **Diane Harley**

Diane Harley is a senior researcher at the Center for Studies in Higher Education (CSHE), University of California, Berkeley (<http://cshe.berkeley.edu/people/dharley>). Her work focuses on the policy implications of integrating information and communication technologies into complex academic environments. Areas of investigation include the analysis of digital resource use in humanities and social science education, the economics of technology integration into large lecture courses, the policy implications of cross border e-learning, and faculty attitudes about new forms of scholarly communication. Prior to her work at UC Berkeley, Diane managed multimedia education projects with various universities, publishers, museums, and

software developers. She holds MA and PhD degrees in Anthropology from UC Berkeley.

### **Charles Henry**

Charles Henry is currently Vice Provost and University Librarian at Rice University. He is in charge of the library, the digital library initiatives, data application centers, and academic information technology. Previously he was director of libraries at Vassar College and assistant director, Division of Humanities and History, at Columbia University. Dr. Henry has served on the Steering Committee for the Coalition for Networked Information, is past president of the National Initiative for a Networked Cultural Heritage, is on the Advisory Committee for the new International University-Bremen, and a member of the Steering Committee for the Digital Library Federation in Washington. He chairs the Committee on Computer Science and the Humanities, sponsored by the American Council of Learned Societies and the Computer Science Telecommunications Board of the National Academy of Engineering. In 2001, Henry accepted six year appointment to the Texas Online Authority, Henry received his PhD from Columbia University and has published widely in the field of technology and higher education.

### **James Hilton**

As Vice President and Chief Information Officer, Dr. Hilton is charged with coordinating information technology-related activity across the Grounds, developing collaborations among UVA's academic and administrative units that advance the University's missions, and working with the University community and its leaders to define and implement a vision for the role of information technology at UVA. The Vice President and Chief Information Officer reports to the Executive Vice President and Chief Operating Officer. Dr. Hilton is also a Professor in the Department of Psychology. Prior to this appointment at UVA, Dr. Hilton was a member of the faculty at the University of Michigan in the Institute for Social Research and in the Psychology Department where he served as the Chair of Undergraduate Studies between 1991 and 2000. He is a three-time recipient of the LS&A Excellence in Education award, has been named an Arthur F. Thurnau Professor (1997-2006), and received the Class of 1923 Memorial Teaching Award. He has published extensively in the areas of person perception, stereotypes, and the psychology of suspicion. With Charles W. Perdue, he published "Mind Matters," a multimedia CD-ROM that combines text with interactive exercises and multimedia elements and places them in a navigational structure designed to nurture exploration. Dr. Hilton received a B. A. in Psychology from the University of Texas in 1981 and a PhD from the social psychology program at Princeton University in 1985. Michael Jensen Director of Publishing Technologies, National Academies Press Christopher Johanson UCLA ETC, Associate Director Penelope Kaiserlian Director, University Virginia Press, University of Virginia.

### **Karen Kingsley**

Karen Kingsley is Co-Editor-in-Chief of the Buildings of the United States series of books, professor emerita at Tulane University's School of Architecture, and former Head of the Architectural Archive at Tulane. She is author of *Buildings of Louisiana* (Oxford University Press, 2003) and has contributed numerous

articles to both scholarly and public interest journals and books. She earned her PhD at the University of California, Berkeley.

### **Robert Kirkbride**

Robert Kirkbride, PhD, is director of studio 'patafisico and a fulltime faculty member of Parsons The New School for Design, where he coordinates thesis year in the Product Design Department. An editorial board member of the Nexus Network Journal, Kirkbride has been a visiting scholar at the Canadian Centre for Architecture, architect-in-residence at the Bogliasco Foundation in Genoa, Italy, and his dissertation on architecture and memory received the Gutenberg-e Prize from the American Historical Association and will be published in conjunction with Columbia University Press. His investigations encompass architecture, ecological land planning, furniture, installations and scholarly research, and have been published and exhibited widely, including The New York Times, Vogue, House Beautiful, and the film XX/XY.

### **Jeff Klee**

Jeff Klee is an architectural historian with the Colonial Williamsburg Foundation, where he is responsible for the management of digital technologies—in particular, CAD, imaging, database construction and, in time, 3D modeling—for architectural research. He has an undergraduate degree in Architecture from Yale and is completing his PhD in Art History from the University of Delaware.

### **Richard Lucier**

Along with Deanna Marcum, Richard co-founded the Scholarly Communication Institute in 2002; he continues his involvement with SCI as a consultant to the University of Virginia. Since the mid-1980's, Richard has led and been involved in many innovative projects in scholarly communication including the Online Mendelian Inheritance in Man and the Genome Database at The Johns Hopkins Medical Institutions and the Red Sage Online Journals system at the University of California, San Francisco. As the Founding University Librarian of the California Digital Library, he initiated eScholarship program for the University of California.

### **Deanna Marcum**

Deanna Marcum became the Associate Librarian for Library Services with the Library of Congress in August of 2003. Prior to that, she served as director of Public Service and Collection Management at the Library of Congress from 1993-95. In 1995, she was appointed president of the Council on Library Resources and president of the Commission on Preservation and Access. She oversaw the merger of these two organizations into the Council on Library and Information Resources in 1997, and served as its president until July 2003. From 1989-92, she was dean of the School of Library and Information Science at The Catholic University of America and vice-president of the Council on Library Resources from 1981-89. Dr. Marcum is the author of several books and reports, and has written prolifically on a variety of subjects, as well as many articles on issues of concern to librarians and students of the information sciences. She holds a bachelor's in English from the University of Illinois and a

master's in Library Science from the University of Kentucky. In 1991, she was awarded a doctorate in American Studies from the University of Maryland.

### **Linda Matthews**

Linda Matthews is vice provost and director of libraries at Emory University and participated with a team from Emory in SCI3. She holds a PhD in history from Duke University and a library degree from Emory University. Kelly Miller Kelly Miller is a Council on Library and Information Resources (CLIR) Postdoctoral Fellow at the University of Virginia Library. She holds a PhD in Slavic Languages and Literatures from the University of Michigan, and her research and teaching interests include Russian and Czech literature, visual art, and culture. She has translated Czech poetry and Russian art historical criticism, and she is an external contributor to the online research archive, "The Russian Visual Arts Project" (<http://www.hrionline.ac.uk/rva/>), a collaboration between The British Library and the Universities of Exeter and Sheffield. She is currently preparing a paper on collaborative models for digital scholarship for the annual meeting of the American Association for the Advancement of Slavic Studies (AAASS).

### **David Millman**

David Millman is the Director of Systems Integration in the Columbia University Information Technology organization. He is responsible for University-wide technology planning and operations for identity management, learning management and content management services, as well as several digital library projects at the Electronic Publishing Initiative at Columbia (EPIC) in the University Libraries. David has developed and managed Internet-based services since the late 1980's, including public information systems, reference book databases, art museum collections, and electronic scholarly publications. A software developer since 1974, he has taught computer graphics and programming in higher education and in industry.

### **Fraser Neiman**

Fraser Neiman (PhD Yale, 1990) is director of archaeology at Monticello and lecturer in the Departments of Anthropology and Architectural History at the University of Virginia, where he teaches courses in historical archaeology, archaeological theory, and quantitative methods ([www.people.virginia.edu/~fn9r](http://www.people.virginia.edu/~fn9r)). He is also director of the Digital Archaeological Archive of Comparative Slavery ([www.daacs.org](http://www.daacs.org)), which is based at Monticello and funded by the Mellon Foundation, NEH, and the Thomas Jefferson Foundation. DAACS is an experiment in the use of internet technologies to promote comparative, quantitative, and synthetic study of archaeological data from sites occupied by enslaved Africans and their descendants in the Chesapeake, Carolinas, and Jamaica. Dietrich Neumann Dietrich Neumann is a professor for the history of Modern Architecture at Brown University in Providence, Rhode Island, U.S.A. He was trained as an architect in Munich, Germany and in London at the Architectural Association and received his PhD in architectural history at the University of Munich. Among his publications are books about the history of German skyscrapers, film set design ("Film Architecture"), and architectural illumination ("Architecture of the Night") and essays on historic building technologies, architectural education and individual

architects such as Mies van der Rohe and Richard Neutra. He has curated a number of major travelling exhibitions and has won teaching awards at Brown in 1993, '94, '99 and '06. In close collaboration with Brown's Scholarly Technology Group and thanks to a major grant from the university, he has developed new ways of teaching architectural history with the frequent use of panoramic QTVR photography and film. He currently serves as vice president of the Society of Architectural Historians.

### **Therese O'Malley**

Associate Dean, Center for Advanced Study in the Visual Arts, National Gallery of Art

### **C. Ford Peatross**

C. Ford Peatross is curator of the Architecture, Design and Engineering Collections in the Prints and Photographs Division of the Library of Congress. He has been instrumental in the expansion and dissemination of the Library's collections, in particular through its website; in establishing its Center for Architecture, Design and Engineering; and in the conception and development of the Norton/Library of Congress Visual Sourcebooks in Architecture, Design and Engineering series and the Library's exhibitions on the United States Capitol, Frank Lloyd Wright, and Charles and Ray Eames. He has lectured widely, and served as an adjunct professor at Union College and as a consultant to the Vitra Design Museum and Universal Studios. His publications include William Nichols, *Architect* (1979); *Historic America: Buildings, Structures, Sites* (1983); and *Capital Drawings, Architectural Designs for Washington, D.C., from the Library of Congress* (2005).

### **Lisa Reilly**

Lisa Reilly is a faculty member in the Department of Architectural History and the joint graduate program in Art and Architectural History at the University of Virginia. She is also a fellow at the Institute for Advanced Technology in the Humanities at the University Virginia where she is investigating the design process for late medieval architecture in England. She has published principally on Norman architecture in England. From 1999-2002 she held the Horace Goldsmith/NEH distinguished teaching chair at UVa.

### **Margo Reveil**

Margo Reveil is a Director of IT in the Office of Information Technology. Her primary focus is the integration and use of technology to advance the research mission in humanities, social sciences, architecture, and the arts. Margo is also a licensed architect in the State of California and has successfully combined her knowledge of architecture and IT to design and develop two immersive virtual reality theaters that support the development and presentation of scientific visualizations and historical architectural models. This seemingly diverse but effective skill set also allows her to use project and process management skills across multiple scales and project types – from websites and databases to complex technology rooms and buildings – such as her latest endeavor in managing the technology integration for the new California Nanosystems Institute at UCLA. In her thirteen-year career at UCLA she has successfully leveraged and applied these talents as a multimedia and web



developer, project manager, and technology integrator providing effective translation between technology professionals and researchers to create useable and highly functional IT solutions.

### **Will Rourke**

Digital Media Specialist, University of Virginia

### **Terry Ryan**

As the Associate University Librarian for the UCLA Electronic Library, Terry Ryan serves as the Chief Information Officer for the Library, with direct oversight of the UCLA Digital Library Program and Library Information Technology. Throughout her 35-year career in libraries, she has worked to expand the application of technology to both the stewardship and service roles of libraries. In recent years, the UCLA Digital Library has offered a suite of repository options to faculty and partnered with campus entities such as the Center for Digital Humanities to experiment with new forms of digital scholarship.

### **Pauline Saliga**

Pauline Saliga became Director of the Society of Architectural Historians in 1995, just as the Society was preparing to move its national headquarters from Philadelphia to the historic Charnley-Persky House in Chicago. Ms. Saliga, who holds a Master's degree in art history and museum administration from the University of Michigan, was Associate Curator of Architecture at the Art Institute of Chicago from 1981 to 1995. While at the Art Institute, Ms. Saliga organized numerous exhibitions and catalogs focusing on 19th and 20th century architecture in America and Europe, including *Fragments of Chicago's Past*; *Building in a New Spain: Contemporary Spanish Architecture*; and *Design for the Continuous Present: The Architecture of Bruce Goff, 1904-1982*. Ms. Saliga's other publications include *The Sky's the Limit: A Century of Chicago Skyscrapers* and many publications she has overseen at the Society of Architectural Historians.

### **Mark Saunders**

Assistant Director/Manager, Electronic Imprint, University of Virginia Press

### **James Shulman**

James Shulman serves as ARTstor's Executive Director. Prior to launching ARTstor, he worked at the Mellon Foundation for 9 years in a range of research, administrative and finance capacities. Mr. Shulman received his BA and PhD from Yale in Renaissance Studies.

### **Martha Sites**

Associate University Librarian for Information Technology, University of Virginia

### **Abby Smith**

Abby Smith is a historian and consulting analyst focusing on the creation, preservation, and use of the cultural record in a variety of media. In her previous position at the Council on Library and Information Resources, she collaborated with UVa on the Scholarly Communication Institute. She is

currently working with the Library of Congress and several universities on identifying digital content of long-term value, understanding various risk factors to its persistence, and analyzing organizational strategies for its long-term access.

### **MacKenzie Smith**

MacKenzie Smith is the Associate Director for Technology at the MIT Libraries, where she oversees the Libraries' use of technology and its digital library research program. She is currently acting as the project director at MIT for DSpace, MIT's collaboration with Hewlett-Packard Labs to develop an open source digital repository for scholarly research material in digital formats. She was formerly the Digital Library Program Manager in the Harvard University Library's Office for Information Systems where she managed the design and implementation of the Library Digital Initiative there, and she has also held positions in the library IT departments at Harvard and the University of Chicago. Her research interests are in applied technology for libraries and academia, and digital libraries and archives in particular.

### **Lisa M. Snyder**

Lisa M. Snyder is a senior member of the Urban Simulation Team at UCLA, the associate director for outreach and operations for the UCLA Experiential Technologies Center, and editor of the membership publication of the Los Angeles Conservancy, the largest local historic preservation organization in the country. Her research is focused on the educational use of interactive computer environments. Through the UST, she developed the real-time simulation of the Herodian Temple Mount now installed at the Davidson Center in Jerusalem and is currently working on a computer reconstruction of the World's Columbian Exposition of 1893. Snyder received her Master of Architectural History from UVA (Richard Guy Wilson, advisor), and her PhD in Architecture from the University of California, Los Angeles studying the design and use of experiential technology for the teaching of architectural history (Diane Favro, advisor).

### **Thorny Staples**

Thornton Staples is currently the Director of Digital Library Research and Development at the University of Virginia Library where he is designing and building a digital library infrastructure. He is also the co-director for the Fedora Project. Previous positions include: Chief, Office of Information Technology at the National Museum of American Art, Smithsonian Institution; Project Director at the Institute for Advanced Technology in the Humanities, University of Virginia; and Special Projects Coordinator, Academic Computing at the University of Virginia. He has a degree in Systems Engineering from the University of Virginia. He is also a sculptor, with his works represented in 25 private collections.

### **Janet Temos**

Director, Educational Technologies Center, Academic Services, Office of Information Technology, Princeton

### **Judith Thomas**

Director, Robertson Media Center, University of Virginia

**Martha Thorne**

Martha Thorne is currently Executive Director of the Pritzker Architecture. Prior to this she worked for almost 10 years as a curator in the Department of Architecture at the Art Institute of Chicago. She has always been involved in architectural exhibitions, publications, and research both in the US and during her many years living in Spain. She holds a Master of City Planning degree from the University of Pennsylvania.

**Karen Van Lengen**

Dean and Edward E Elson Professor of Architecture, University of Virginia

**Diane Parr Walker**

Diane Walker is the Deputy University Librarian at the University of Virginia. She came to UVa as Music Librarian in 1984, and has also served as Coordinator for the Education, Fine Arts, and Music Libraries, and as Associate University Librarian for User Services and Collections. Walker holds masters degrees in musicology from the University of Iowa and in library and information science from the University of Illinois. Before arriving at UVa, she held positions in the music libraries at the University of Illinois and the State University of New York at Buffalo. She is a past President of the Music Library Association and has also served as a member-at-large on the board of directors and as Treasurer of the Association.

**Donald J. Waters**

Donald J. Waters is the Program Officer for Scholarly Communications at The Andrew W. Mellon Foundation. Waters graduated with a Bachelor's degree in American Studies from the University of Maryland, College Park in 1973. In 1982, he received his PhD in Anthropology from Yale University. Before joining the Foundation in 1999, he served as the first Director of the Digital Library Federation (1997-1999), as Associate University Librarian at Yale University (1993-1997), and in a variety of other positions at the Computer Center, the School of Management, and the University Library at Yale. He is a fellow of the American Association for the Advancement of Science, and serves on the Steering Committee of the Coalition for Networked Information, the National Digital Strategy Advisory Board of the Library of Congress, and the Section 108 Study Group.

**Michael Waters**

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**Willeke Wendrich**

Willeke Wendrich received her PhD from Leiden University in the Netherlands in 1999. A member of the faculty of the Department of Near Eastern Languages and Cultures and the Cotsen Institute of Archaeology at the University of California in Los Angeles since 2000, Wendrich is co-director of a large survey and excavation project in the Fayum (Egypt) and the editor-in-chief of the UCLA Encyclopedia of Egyptology (UEE), an online publication that aspires to become the standard reference work in the field. In addition she is the Faculty Director

of the UCLA Digital Humanities Incubator Group (UDHIG), a consortium of faculty who integrate research, education and information technology.

### **Madelyn Wessel**

Madelyn Wessel is Special Advisor to the University Librarian, focusing on a broad range of library system legal issues including intellectual property, copyright, licensing, and special concerns arising in the area of digital scholarship. Her most recent presentation, "Copyright in a Digital Age," was to the Visual Resources Association Annual Summer Education Institute at Duke University. Ms. Wessel as an adjunct professor at the Curry Graduate School of Education and also taught a seminar in constitutional practice at the University of Virginia School of Law. She is a member of the bars of Virginia, Massachusetts, New Hampshire, and Oregon. Ms. Wessel served as Deputy and later Chief Deputy City Attorney for Portland, Oregon from 1989-2001, practicing in a wide range of areas including constitutional, employment, civil rights and government relations. Prior to her position in Portland, Ms. Wessel served as an Assistant Attorney General and Chief of the Opinions Division, Massachusetts Department of Justice. Ms. Wessel holds a BA from Swarthmore College and a JD from Boston University.

### **Steven C. Wheatley**

Steven C. Wheatley is the Vice President of the American Council of Learned Societies. He holds a BA from Columbia University and MA and PhD degrees in history from the University of Chicago. In 2005, the Vietnamese Academy of Social Sciences awarded him the "Medal for the Social Science Career".

### **Anne Whiteside**

Head, Rotch Library, Massachusetts Institute of Technology

### **Kate Wittenberg**

Kate Wittenberg is Director of the Electronic Publishing Initiative at Columbia (EPIC). She has developed and directs the electronic publications: Columbia International Affairs Online (CIAO), Columbia Earthscape, and the Gutenberg-e Online History Series.

### **Karin Wittenborg**

Karin Wittenborg has been University Librarian for UVa since 1993. She has established the first development program for the library, and has recently completed a successful library campaign, raising \$37 million. Prior to coming to UVa, Wittenborg held professional positions at UCLA, Stanford, and the State University of New York. In 1981-82 she was a management intern in the MIT libraries. She serves on the Advisory Council for Stanford's Academic Computing and Libraries, Brown University's Committee on Information Resources, and on the Executive Committee of the Digital Library Federation. She has consulted for Rice, Wesleyan, University of Miami, and Florida International University. She is a frequent speaker at conferences. She received a BA from Brown and an MLS from SUNY-Buffalo.

### **Carolyn Yerkes**

Carolyn Yerkes is a PhD candidate in architectural history at Columbia

University, where she also received a BA She received her masters in architecture at Princeton University and has worked in architectural offices in New York.