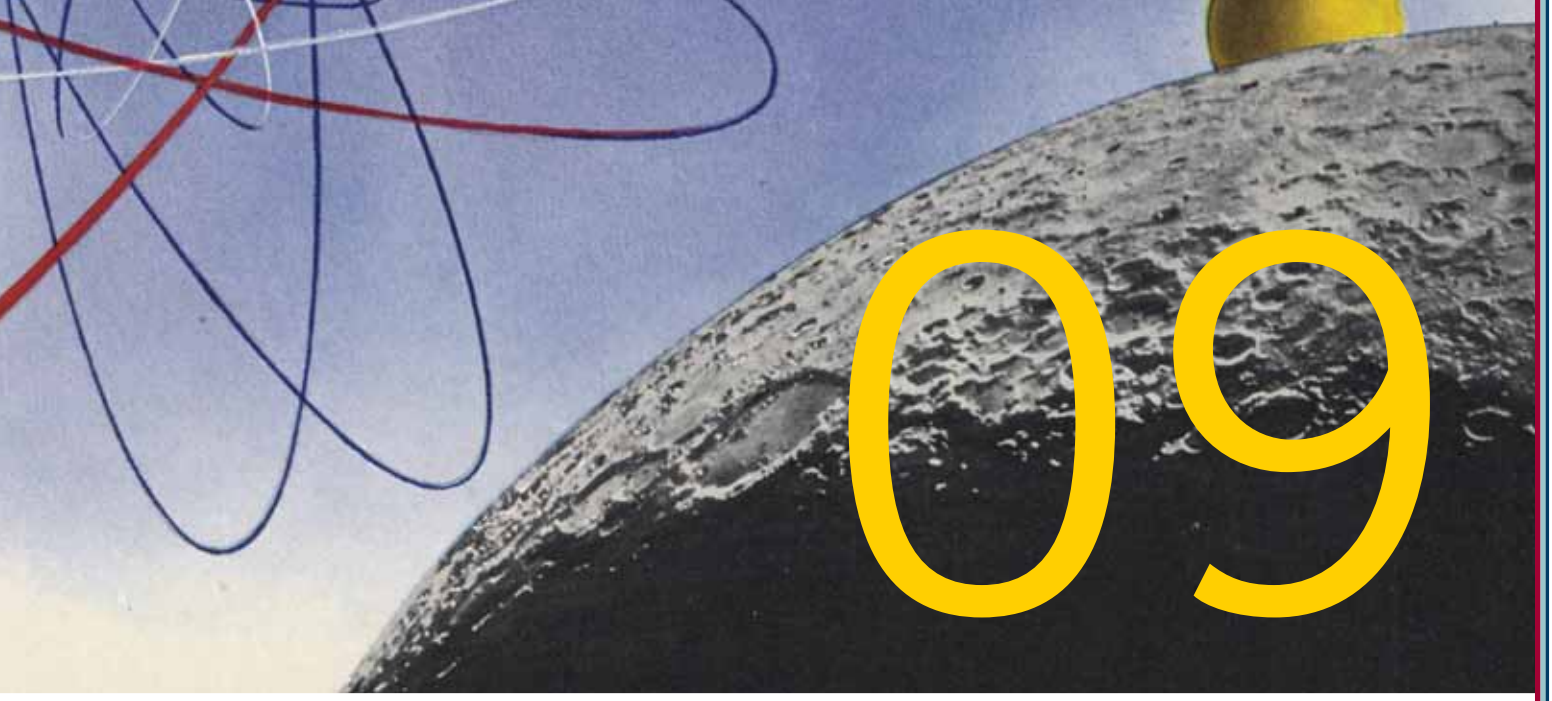
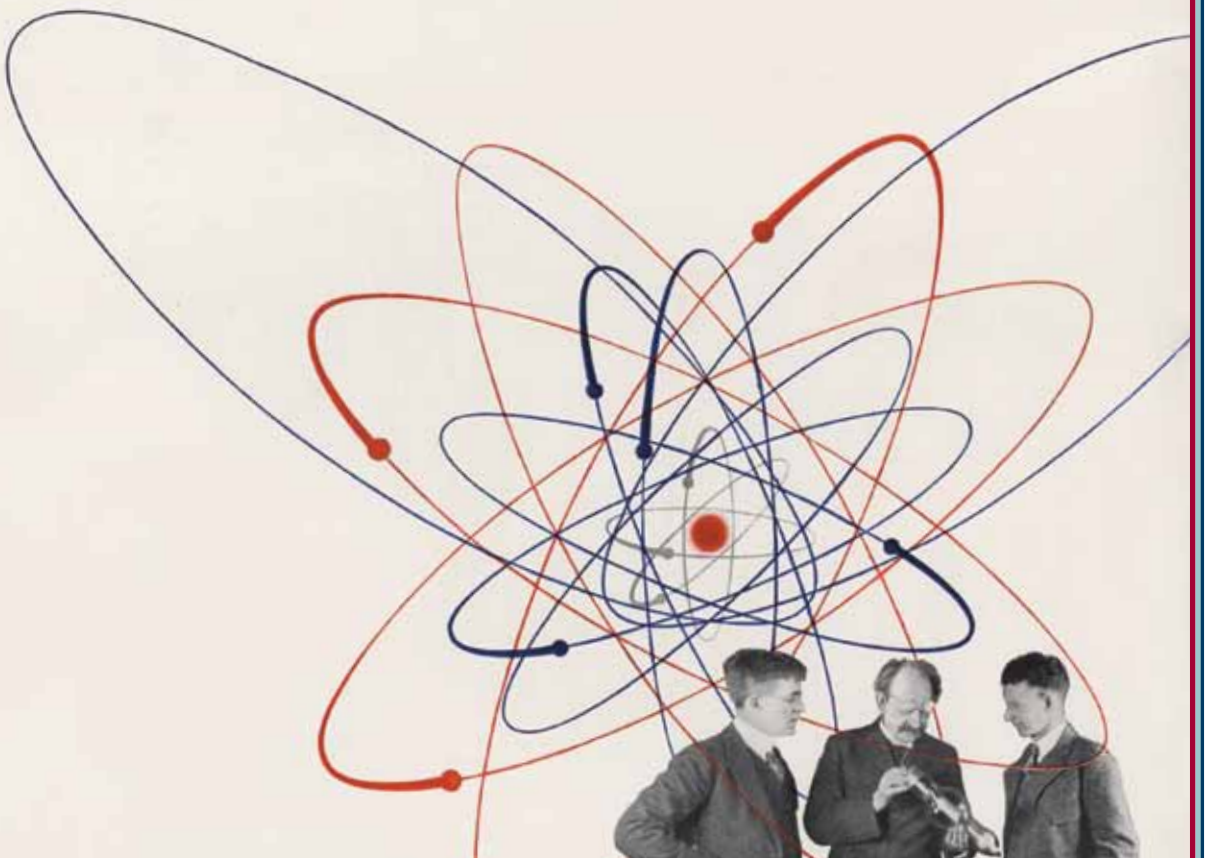


09

WebWise

Digital Debates

February 25–27, 2009
CONFERENCE PROCEEDINGS



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Written by Diane Zorich, except for the
Pre-Conference Workshop section, written by
IMLS Senior Program Officer Charles (Chuck) Thomas

The 2009 WebWise Conference was held February 25–27, 2009. Conference activities took place at the Hyatt Regency on Capitol Hill in Washington, D.C.

The 2009 WebWise Conference was co-hosted by the Institute of Museum and Library Services and The Wolfsonian–Florida International University.

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Booklet, *Electronics—A New Science For A New World*, 1942. Designed by Herbert Bayer (Austrian, 1900–1985). Published by General Electric Company, New York. Courtesy The Wolfsonian–Florida International University, Miami Beach, Florida

Dear Colleague

Digital Debates was the theme of the tenth annual WebWise Conference on Libraries and Museums in the Digital World.

The conference focused on some of the problematic "Big Issues" faced by museums, libraries, archives, and other cultural institutions as they deal with emerging technologies, changing social behaviors and expectations, and new economic realities. How can institutions involve audiences as collaborators and yet maintain their status as trusted information sources? What are cultural institutions' rights and responsibilities in an online environment? Can they partner effectively with other organizations, including corporate entities, without losing their own identities? What kinds of investments in technology are prudent or essential to the institution's mission? Leaders from the cultural heritage community and beyond shared their views and stimulated a wider conversation on these and related topics. No one has all the answers, but we firmly believe we are all stronger for exploring these questions as a community and standing together to face the future.

Though the 2009 conference was in Washington, DC, we were delighted to be partnering once again with The Wolfsonian-Florida International University, with additional support provided by the Florida Center for Library Automation and the John D. and Catherine T. MacArthur Foundation. In fact, it was MacArthur Foundation President Jonathan Fanton's keynote address at least 2008's WebWise Conference in Miami Beach that sparked the idea for this year's theme (see "Rights and Responsibilities Online: A Paradox of Our Times," reprinted in the August 2008 issue of the online journal *First Monday*).

In addition to the plenary sessions, the conference featured demonstrations of projects funded by IMLS and by the MacArthur Foundation. Attendees were also invited to sign up for a "Dutch-treat" dinner opportunity with MacArthur Foundation grantees, and to join in lunch-table discussions led by IMLS staff or grantee demonstrators on topics of particular interest.

The WebWise Conference has maintained a consistent focus throughout its history on cutting-edge technology issues with potential significance for the future of libraries and museums. However, each year it is special in some way, and 2009 was no exception, thanks to the innovative ideas brought by our partners and hard working program committee. We are grateful to all our supporters for their contributions to this tenth anniversary conference.

Sincerely,

Anne-Imelda M. Radice, PhD
Director, IMLS

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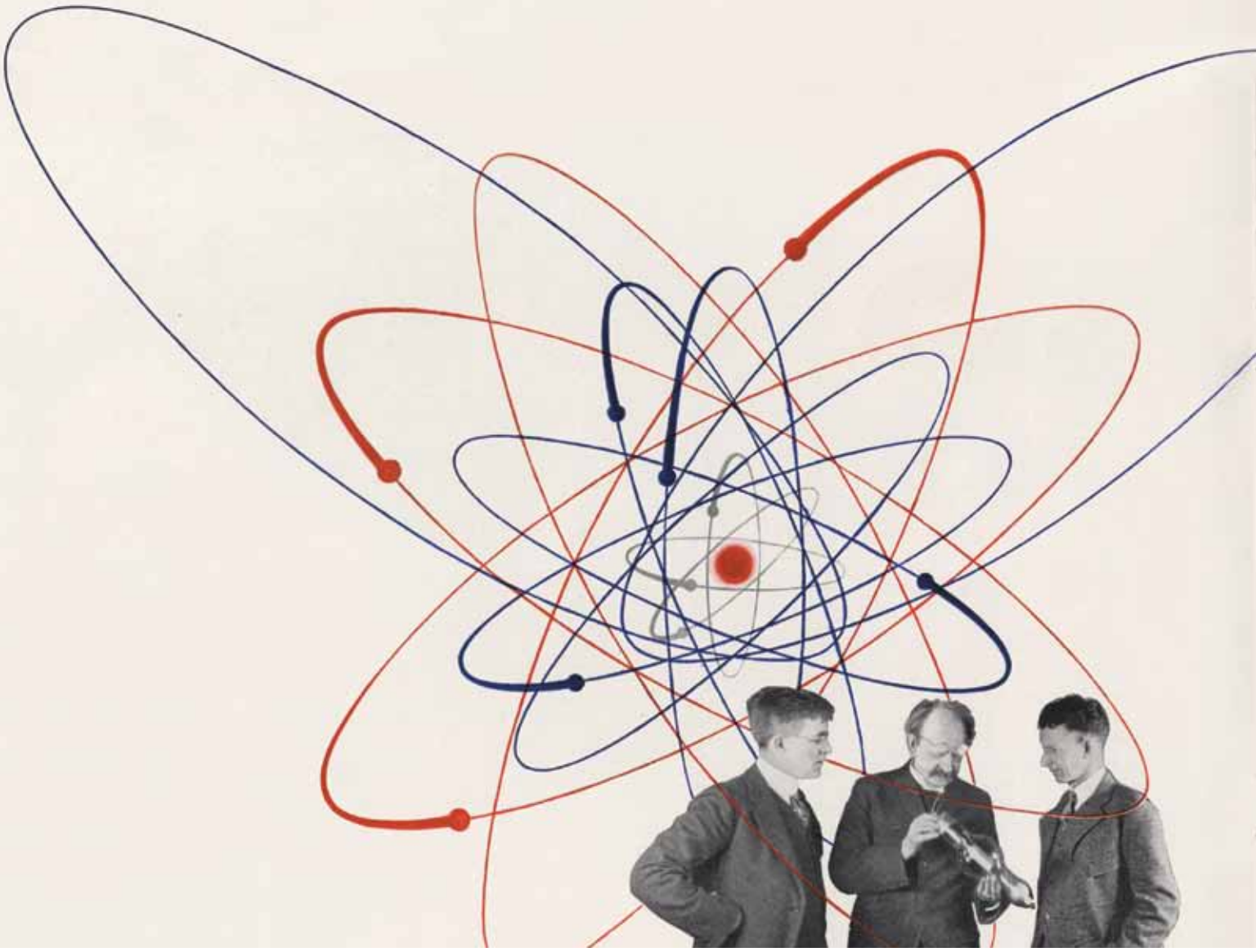


Introduction

Digital Debates

de·bate

1. To consider something; deliberate.
2. To engage in argument by discussing opposing points.
3. To engage in a formal discussion or argument.

—Excerpted from *The Free Dictionary*, www.thefreedictionary.com/debate

Debates typically invoke an image of individuals arguing over the merits of opposing viewpoints. However, the term has a softer, more deliberative sense that connotes reflection, discussion, and consideration. The 2009 WebWise conference, titled "Digital Debates," was conducted in this spirit, with panelists and attendees engaged in complex discussions about emerging digital media and their role in cultural and educational institutions.

The discussions focused on key questions facing museums, libraries, and related organizations: How do institutions strike a balance between their own missions and the needs of communities when developing social media strategies? What are the rights and responsibilities of cultural institutions to their collecting missions and to their audiences? How can institutions collaborate to leverage resources and outreach without compromising organizational identity or brand? And in these uncertain economic times, what strategies are needed to balance innovation with the demands of maintaining core services?

Experts addressed these issues in four major sessions whose formats varied from discussions to provocations to formal presentations. Serving as "bookends" to these sessions were two keynote addresses that explored the effect of cloud computing and the next generation of Internet users on cultural institutions. Woven throughout the formal program were impromptu debates posed during question and answer (Q&A) periods and in a **backchannel**[1] forum ("Today'sMeet") where attendees contributed to a live, online comment stream.

The conference sessions were recorded and are available in several formats. Panel presentations and their associated Q&A periods are available as webcasts at the WebWise conference site.[2] In addition, the keynote speakers' presentations will appear as peer-reviewed papers in the online journal *First Monday*.[3] Several inspired conference attendees have added links to the books, papers, articles, presentations, and websites referenced in the sessions (or identified by participants on the backchannel) to the Delicious bookmarking site.[4] Further, the conference was the subject of discussion in the blogosphere and in social media such as Twitter and Facebook. Readers are urged to search through these resources for personal insights, perspectives, and continued discussions on conference issues.

This report provides another, more traditional, format—that of a "conference proceeding." It includes speaker biographies, information on project demonstrations, and full text of the keynote papers. It also includes a summary of all the WebWise sessions and the discussions they engendered about important digital debates within the cultural community. The sessions' topical pairings (e.g., online communities and institutions, rights and responsibilities, identity and collaboration, edge and core) provided a framework for exploring these debates and uncovering the continuing challenges and opportunities they pose for cultural organizations.

1 Descriptions for boldface words appear in the Glossary.

2 See WebWise 2009, Washington, DC, at http://webwise2009.fcla.edu.

3 See www.firstmonday.org.

4 See http://delicious.com/tag/webwise for a list of resources referenced in WebWise presentations.

For ten years, the WebWise conferences have offered cultural heritage professionals a forum to discuss themes about digital issues and cultural heritage institutions. The 2008 and 2009 conferences were hosted by the Institute of Museum and Library Services (IMLS)[5] in cooperation with The Wolfsonian-Florida International University.[6] Both organizations have a deep and abiding interest in the intersection of digital technologies and cultural heritage. In WebWise 2009, this interest converged around the question of how digital technologies and Web 2.0 applications affect cultural organizations as they strive to meet the needs of twenty-first-century communities.

The Wolfsonian-Florida International University

Cathy Leff, Director of The Wolfsonian-Florida International University, noted that technology is "in the DNA" of The Wolfsonian, an organization founded over a dozen years ago to examine modern material culture as both agents and expressions of social, political, and technological change. With a collection of approximately 120,000 objects, rare books, and archives from the late nineteenth to the mid-twentieth centuries, the institution is acutely aware of the importance of technology in effecting change. It is committed to preserving and providing access to its holdings so that users can plumb its depths, uncover information, and create knowledge from this vast wealth of cultural material. As cohost of this and last year's WebWise conferences, The Wolfsonian is committed to understanding how digital and social media can make collections accessible and relevant to twenty-first-century learners. Leff thanked the many individuals who helped make this conference possible, highlighting the special accolades deserved by her colleagues at IMLS, whose support of this conference was a "true gift to the community."

5 www.imls.gov.

6 www.wolfsonian.org

Institute of Museum and Library Services

Dr. Anne-Imelda M. Radice, Director of the Institute of Museum and Library Services, opened the conference with a telling anecdote of how the stature and importance of WebWise was made evident to her when she became IMLS director in 2006. Many of the congratulatory calls she received at that time included a coda: the callers would mention WebWise and ask if she could get them into the conference after it was fully subscribed and registration was closed. Having participated in the WebWise conferences for the last three years, Radice described how she now understands what the callers back then clearly knew. She expressed pride that IMLS has founded and led such an important event, which she characterized as a launching pad for new ideas and an opportunity to forge new collaborations.

Radice also spoke of recent events, particularly the receipt of a number of new directives from the Obama administration. One of these directives addresses technology and instructs federal agencies to foster technology within their agency and "get ahead of the curve." Radice noted that IMLS is ahead of the curve in this area, thanks in part to the WebWise conferences.

Other Partners

This year's conference benefited from the additional support of the John D. and Catherine T. MacArthur Foundation,[7] whose participation enabled WebWise to feature the work of many MacArthur grantees in the area of digital media and learning. The foundation's support also gave conference attendees an opportunity to engage directly with these researchers on topics that intersect the world of technology, learning, and cultural institutions.

Additional partnership support was provided by the Florida Center for Library Automation,[8] which assisted with technology and conference planning.

7 www.macfound.org.

8 www.fcla.edu.

2009 Program Committee

- Matt Burdetsky, Capital Meeting Planning, Inc.
- Priscilla Caplan, Florida Center for Library Automation
- Kevin Cherry, Institute of Museum and Library Services
- R. David Lankes, Information Institute of Syracuse University
- Cathy Leff, The Wolfsonian–Florida International University
- Paul F. Marty, Florida State University
- Joyce Ray, Institute of Museum and Library Services
- Marsha Semmel, Institute of Museum and Library Services
- Nina Simon, Museum 2.0
- Benjamin Stokes, The John D. and Catherine T. MacArthur Foundation
- Susanna Temkin, The Wolfsonian–Florida International University

Pre-Conference Workshop

Making Web 2.0 Work for Your Institution (for Free)

The pre-conference workshop on using Web 2.0 technologies was well attended by WebWise participants. Registration closed at 164 with many more wanting to sign up than space permitted, and not a single vacant seat was to be found as the workshop began. More attendees continued to make their way in during the event, all willing to stand at the back of the room rather than miss the presentations. Workshop attendees represented a wide range of cultural institutions, jobs, ages, and interests.

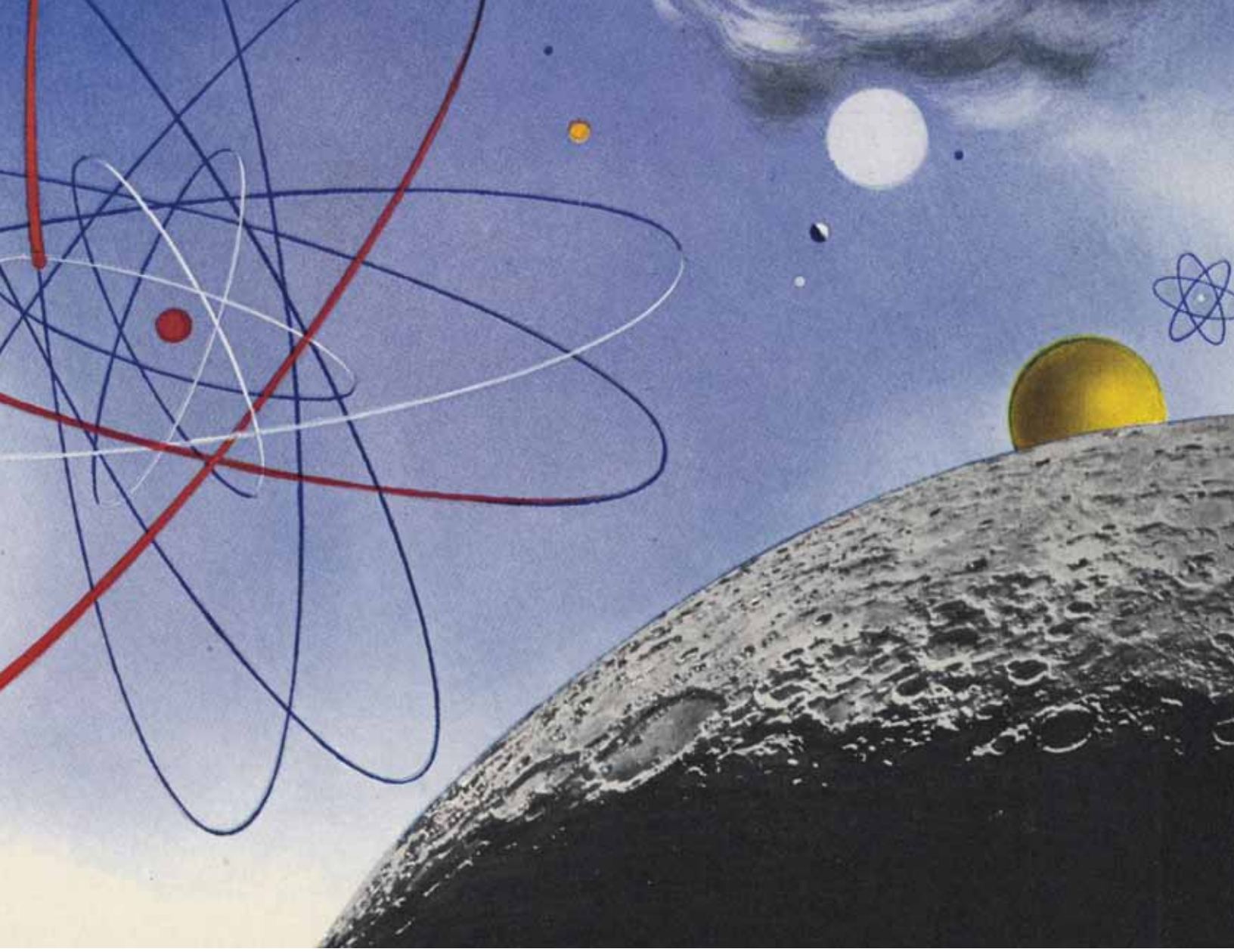
The workshop was divided into two main sessions. The first, moderated by consultant **Nina Simon**, was structured as a "social media challenge" in the style of the popular television show *Iron Chef*. Two teams were each asked to devise a one-year, social media/Web 2.0 outreach plan for different library or museum activities, using only existing social technologies and commonly available software. Team One consisted of Aaron Schmidt from the District of Columbia Public Library, while Team Two included corporate consultants Maddie Grant and Lindy Dreyer.

Each team chose a particular library activity or collection to emphasize, and each presented an overall strategy, key concepts, an implementation plan, and an evaluation strategy. Both articulated differences between Web 2.0 outreach and traditional Web-based outreach, including engaging audiences in their existing virtual spaces instead of forcing them to visit institutional Web site; promoting multidirectional communication; encouraging people to construct their own meanings through creating, sharing, and interpreting information; and building relationships.

Each team's plan included social media sites and software tools like blogs, Twitter, Facebook, Flickr, YouTube, traditional Web sites, and e-mail, as well as online and physical exhibits and events. The teams emphasized themes like empowering online users to voice their opinions, the importance of listening to online communities, enlisting virtual communities to help promote an institution's message, the importance of fun and interactivity online, and the ready availability of usable software and social networking sites. During this session, both teams and the moderator also included many extra tips and lessons learned from their own uses of Web 2.0 technologies.

The second session, moderated by **R. David Lankes** of the University of Syracuse, focused on the benefits of making an institution's data and databases more open, interoperable, and repurposable. The presenters and self-proclaimed "geeks" were Eli Neiburger of the Ann Arbor District Library and Joseph Ryan of the North Carolina State University Libraries. Using the same Iron Chef approach as the first session, both participants were provided a dataset of information about museum objects, and challenged to repurpose the data in meaningful and creative ways using Web 2.0 technologies. Both presenters explained key concepts and tools they used, and then demonstrated innovative applications created with the data, including a tool that performed real-time searches of ebay.com to look for items similar to the museum objects, and a multipurpose mapping visualization tool. Joseph Ryan employed the tools Timeline (www.simile-widgets.org/timeline), tagethe.net (http://tagthe.net/fordevelopers), and his own library's catalog to create the mapping tool. Neiburger's golddiggr.aadl.org was made using the hoard.it XML feed, the Yahoo! term extraction API (application programming interface), and the eBay marketplace API. The plumbing and presentation layer was Symfony, a PHP web framework.

Both workshop sessions were structured to help attendees understand the potential benefits of using Web 2.0 technologies, and to demonstrate that many organizations can take advantage of these technologies without heavy investments in new training or technical infrastructure. The moderators and presenters were veteran technologists, but they repeatedly emphasized that financial and technical barriers are minimal with these technologies.



Conference Day One

Keynote Address: The Cloud, the Crowd, and the 3-D Internet: Implications for Cultural Institutions

Michael R. Nelson, Visiting Professor, Internet Studies, in the Communication, Culture and Technology Program at Georgetown University, gave a "big picture" view of how the Internet is evolving in terms of expansion, content, and use. Nelson's extensive career as a scientist and self-described IT policy "wonk" in Washington has given him a broad perspective on technology development and the various ways that development can be shaped and influenced. He offered some practical lessons that have served him well when discussing technology policy and analyzing its trends:

1. Be able to express a point in seven or eight words, including some "buzzwords" (the "bumper sticker approach").
2. Have some memorable "factoids" available when making a point.
3. Look at headlines but also look beyond the headlines to uncover the "real" news.
4. State your conclusion up front, in case people leave before you finish making your point.

Following his own advice, Nelson began by stating his three conclusions. First, the Internet is in an adolescent state of maturity. Nelson estimates that we have witnessed only 15 percent of the total transformation that will be enabled by the Internet in terms of bandwidth capability, volume of content, and the number of users, devices, and applications that we can expect to see. Second, business practices and standards will be as important in shaping the Internet as laws and government regulations, and so the decisions we make as institutions will have an impact on the evolution of the Internet. Most important, we are entering what Nelson terms the "third phase" of the Internet, a phase that will be more revolutionary than the one introduced by the World Wide Web.

Nelson expanded on this last point by summarizing the various phases of the Internet. Phase I was characterized by the standalone personal computer (PC), which stored and used data and application software locally on its hard drive. Data from this computer was sent back and forth to other standalone computers via the Internet. Phase II built on this model, with the PC still storing and using application software and data locally, but also using a browser to tap into some data that now resided, via websites, on the Internet. We are moving into Phase III, **cloud computing**, where both data and application software now reside on the Internet and can be combined with other data and applications in the online environment. This third phase signals a radical shift in computing. Nelson quoted Google CEO Eric Schmidt to emphasize his point:

> **We are moving into the era of cloud computing with information and appliances hosted in the diffuse atmosphere of cyberspace rather than on specific processors and silicon racks. The network will truly be the computer.[9]**

The implications of this change are vast. Companies no longer need to run expensive systems: they can plug into the **cloud** and get the storage and applications they need there. Content can be easily "fed" into the cloud via plug-in devices (such as digital cameras and mobile phones) for use in applications (also stored in the cloud) such as Flickr, Facebook, or MySpace. Soon we will be using sensors to feed even more data into the cloud.

Nelson also described various "flavors" of cloud computing. On the high end is **grid computing,** where computers and servers are linked together to address a single processing problem, such as the mammoth number crunching needed for large research projects (e.g., astrophysical modeling or the human genome project). There also are a number of commercial applications like Amazon's Elastic Computer Cloud[10] or Akamai's[11] distributed storage system that store and distribute content for clients.

Moving on to other "headlines," Nelson discussed the influence of video on the Internet. The popular-

9 Eric Schmidt, "Business: Don't Bet against the Internet," *The Economist*, November 16, 2006, www.economist.com/theworldin/business/displayStory.cfm?story_id=8133511.

10 http://aws.amazon.com/ec2.

11 www.akamai.com.

ity of amateur and "pirated" video is enormous, accounting for huge amounts of online traffic (upwards of 80 percent of all Internet traffic in some countries). Futurists predict that massive amounts (**exabytes**) of data will continue to be uploaded, downloaded, and moved around the Internet, resulting in an exponential growth in traffic. Swanson and Gilder[12] call this torrent of data the "exaflood." Nelson notes that the exaflood increasingly will include rich media such as video, virtual conferences, business traffic, gaming, and virtual worlds.

Other "headlines" of note include the growth of online collaborations and social networks, which are moving the Internet from a medium to a place. People increasingly go online to "meet" with others. Clay Shirky's book, *Here Comes Everybody: The Power of Organizing without Organizations,*[13] expounds on the importance of this shift. We meet online for socializing and entertainment, but we also use the "Internet as place" in an activist capacity to solve problems in ways that are not possible in the physical world.

What do all these "headlines" mean? The short answer is that the current manifestation of the Internet will be radically altered. Nelson predicted that nearly all computing and storage will take place in the cloud in ten years' time. In addition, more than 100 billion devices and sensors will be connected to the Internet, feeding data back and forth into the cloud. The longer answer is more complex. Organizations and organizational culture will have to change in response to this transformation. Users will have to learn to trust the cloud and believe that their data and applications are secure in it. To enable this trust, business practices will have to move from proprietary to open-source formats. Standards and technical agreements will need to be adopted by industry and governments.

For cultural institutions, Nelson described the challenges as threefold: identifying how to work with resources in the cloud; learning how to compete for audience time in a flood of new media; and "taking the virtual and linking it face to face" with the physical. Institutions will have to rethink their organizations, partner and collaborate with other institutions in the cloud, "borrow instead of build" infrastructure, and shift resources in more efficient ways.

They also will have to give up some control. As cultural organizations increasingly meet their audiences online, they must build communities around their content and let those communities participate in conversations and **remixing**. Audiences should be encouraged to harness their collective energy in **crowdsourcing** activities that could benefit cultural institutions. And, in an era of global audiences, cultural institutions still must continue to build local links, making their presence integral to their local municipalities and states.

In the Q&A session that followed his keynote address, Nelson responded to concerns about the risks of early adoption of cloud technology and the preservation of services that live in the cloud. He believes increasing pressure for these cloud technologies and services will force the use of open standards and open-source software. Markets will demand this, and the service providers who thrive will be those who respond to this pressure.

In response to a question about the Obama administration's efforts to shape the online space, Nelson (who was involved in the campaign as an organizer and spoke on behalf of its technology team) reported that the administration is taking a proactive, visionary stance, examining how it can support thriving competition in the marketplace so that innovation, investment, and lower costs can emerge. Within government, the administration is trying to change the culture from regulation to engagement, letting citizens design some of the services by giving them the government data and tools they need.

12 Bret Swanson and George Gilder, "Estimating the Exaflood," January 29, 2008, www.discovery.org/a/4428.

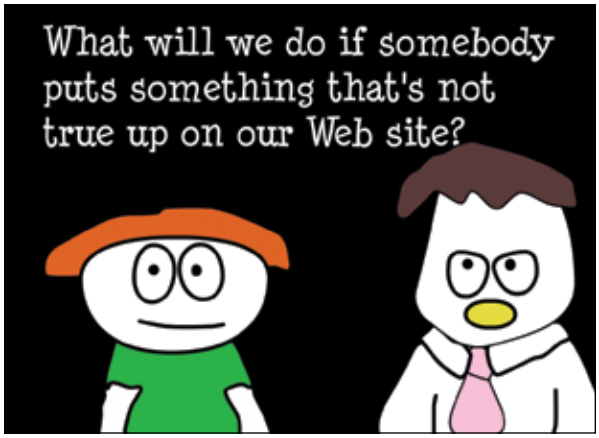
13 Clay Shirky, *Here Comes Everybody: The Power of Organizing without Organizations* (New York: Penguin Press HC, 2008).

Moderator **Nina Simon**, Experience Designer at Museum 2.0, introduced the session by framing the new realities emerging between institutions and their online communities. The advent and growth of social networking sites prompted a wave of excitement among museums, which saw these environments as a way to interact on a more intimate level with online communities. Institutions that took the plunge into social media soon realized, however, that this level of interaction came up against serious resource issues, particularly with demands on staff time. There is now a sense among these institutions that some audiences are more important to them than others, and they are making political and strategic decisions about the online communities they wish to serve.

Simon presented a series of focal questions for this session:

- How are institutions engaging with online communities?
- Which communities are they engaging online?
- How does this engagement affect an institution internally?
- How do institutions make strategic decisions about online community engagement?

To explore these issues, Simon selected a "provocation and response" format for the panel. Each panelist presented a five-minute provocation on some aspect of the topic, followed by an open discussion among panelists and the audience. **Michael Edson**, Director of Digital Media Strategy at the Smithsonian Institution, began with a flash animation[14] that pitted a "Web Tech Guy" against an "Angry Staff Person" in a parody illustrating what Edson described as the "endless, fruitless debate about authority and trust." Following the animation, Edson conducted a point-by-point rebuttal of the most frequent arguments expressed by the Angry Staff Person about an institution's participation in Web 2.0 activities.



Still from Edson's animation.

The first rebuttal addressed Angry Staff Person's argument that if you let audiences comment on collections, they will say untrue things. A corollary to this argument is that if you let people *use* your collections, they may use them in inappropriate ways. Edson replied that people say untrue things about collections all the time (noting that some of those people include curators, educators, and docents). People also say true things, even insightful things. And when given the opportunity to remix collections, they create wonderful things. Museums must recognize that the future of knowledge creation is rooted in making collections available and building knowledge collaboratively.

Another argument was that making collections available outside a vetted, authoritative context will confuse visitors. Edson discussed studies that show that people are keenly aware of "who is saying what" online, and they consider sources carefully. Even staid organizations such as the *New York Times* are returning citizen content with editorial content in search results—an acknowledgment that users can discern and weigh the merits of the content themselves. In addition, **reputation systems** (which rate online entities based on collective user experience) have matured considerably over the last few years and now offer individuals a useful assessment system for online resources.

Edson felt that Angry Staff Person's concern about "giving away control" was an odd argument, because

14 Michael Edson, "Web Tech Guy and Angry Staff Person," http://smithsonian20.typepad.com/blog/2009/03/web-t.html.

cultural institutions have never had much control. People routinely use museum collections on the Web, for posting photos of objects online, using these images in remixes, etc. In a recent talk at the Smithsonian, Chris Anderson, *Wired* magazine's editor in chief, made an important point about authority and control. He noted that most of the world's experts do *not* work for cultural institutions. They live and work in the world in other guises. We cannot readily find them, but they can find us and help us if we give them a point of access.

Other arguments such as "if we put it online, no one will visit the museum" or "we will lose licensing revenue" were described by Edson as tiresome bromides that have been proven false by so much evidence that they do not merit further debate. He reminded the audience that the licensing argument rests on the fallacy that museums generate profit from their licensing endeavors: they may generate *revenue* from this activity, but they do not generate profit.

There are some arguments proffered by Angry Staff Person that Edson does not discount. He understands concerns about inadequate time, staff, and resources. However, this argument cannot be used as an excuse to continue long-established ways of doing business. The audiences for cultural institutions—and the ways they engage with us—are changing, and this change requires new models. Edson conceded that it will be difficult to alter ingrained behaviors overnight and suggested we identify transitional models that can wean people from old to new ways of doing business. In the meantime, some resources will need to be diverted to social media activities: we cannot ignore the audiences in these environments because they are our future audiences. Edson cited Massachusetts Institute of Technology's (MIT's) OpenCourseWare[15] project as one of example of how diverting resources can result in a "win/win" solution. This project has made "superstars" of many professors who were initially resistant to the idea of making their course materials freely available, and it has garnered worldwide acclaim for MIT.

Edson also was mindful of concerns that Web 2.0 is a fad. He did not wish to be responsible for promoting any strategy that will lead to a dead end. However, he believes there are long-term strategic and short-term tactical precautions that institutions can take to prevent going down false trails, such as investing in core capabilities and openness without locking in to particular technologies.

Following Edson's presentation, the other panelists commented in situations evoked by Edson's "Web Tech Guy and Angry Staff Person" that occur in their own institutions. Both Deanna Marcum of the Library of Congress and Shelly Bernstein of the Brooklyn Museum acknowledged that these conversations take place all the time among their staff. Bernstein felt that the community-driven mission of the Brooklyn Museum was so engrained in all their activities that it helped diminish some of the fear among staff about the issues of engaging online audiences.

Simon asked panelists about possible transitional models that institutions could pursue as they move from old to new ways of doing business. Edson felt experimentation was important and suggested that institutions periodically put subsets of core information into social media platforms to see what emerges. In terms of procuring resources, he thought the business world's model with venture capital had merit. Museums need to secure start-up funding for staff in the short term, with the goal of developing alternate business models that will fund these staff and their work in the long term.

The second provocation was given by **Shelley Bernstein**, Chief of Technology at the Brooklyn Museum, who offered an examination of her institution's experience with Flickr, the online photo-sharing community. The museum's initial foray on Flickr began in 2006 when it created a museum account and uploaded some images of a graffiti mural being created in one of its galleries. The museum noticed that these images were generating a great deal of

15 "Free Online Course Materials, MIT OpenCourseWare," http://ocw.mit.edu/OcwWeb.

discussion on Flickr, and they wanted to see how they could extend the dialogue and outreach. They added images from other exhibitions, "behind-the-scenes" shots, etc., and staff began participating in the Flickr discussions.

In 2008, Flickr created "The Commons,"[16] a special area within Flickr where cultural institutions can share their collections. The Brooklyn Museum eagerly joined The Commons, initially contributing images from its collections of the Paris Exposition of 1900, the 1893 Chicago World's Columbian Exposition, and photographs of Egypt. They were quickly overwhelmed by the response. Bernstein compared the situation to moving from a "small-town community" to a "huge, bustling city." The volume of commentary was huge, and the museum found it was missing valuable comments (such as questions, novel insights, or new information about an image) amid a flood of emotive remarks (such as "Beautiful," "Gorgeous," or "I love this!").

They also were concerned about responsiveness. The museum was excited to receive all the community input, particularly information that contributed to the documentation of its collections, but their small staff often could not verify new information for several months because of other work commitments. This significant lag time (from when a user first posted the information to when the museum verified it and responded) ran counter to the immediacy expected in Flickr and in other social media environments. The museum was honest about the problem and discussed the lag time issue on its blog and in Flickr. Nonetheless, staff felt they were jeopardizing online relationships because of their inability to respond in a timely manner. They began questioning whether the museum could realistically participate in The Commons, and they considered going back to their individual account on Flickr.

Bernstein then described a development that changed the entire dynamic overnight: the formation of a Flickr Commons Group.[17] She described the members of this group as people who are truly passionate about The Commons' materials and the institutions that contribute them. They have brought a new level of engagement to the process that the museum could never have anticipated. Bernstein offered examples of the Flickr Commons Group's members performing amazing feats of research, engaging in historical discussions, and posing/debating intriguing questions with other members about various collections. One individual who was fascinated with the museum's images of the 1893 Chicago World's Columbian Exposition extensively researched the architecture, sculpture, and street scenes portrayed in these images. His work was so exceptional that the museum turned to him for assistance on a research inquiry that its staff could not answer.

In addition to documenting materials and engaging in discussions, the Flickr Commons Group contributed to the Brooklyn Museum in other ways, such as developing tools for use in the Flickr environment and providing technical advice on other social media projects. The involvement and interaction of this community has changed the museum's experience in Flickr Commons from being "primarily overwhelming to completely amazing."

In the discussion that followed Bernstein's presentation, session moderator Simon spoke of how many institutions use Flickr and other social media platforms solely as a space where they can put their assets and are not interested in joining the audience discussions that occur in these settings. For the Brooklyn Museum the opposite is true: the whole purpose of participation is audience connection. What the museum found difficult to sustain was not the contribution of museum assets but the ability to engage with audiences at a level they felt was important for fostering community.

16 See Flickr: The Commons at www.flickr.com/commons.

17 Flickr allows members to form special interest communities, which are called "groups." The Flickr Commons Group can be found at www.flickr.com/groups/flickrcommons/pool. For more background on the genesis of this group and related efforts, see Günter Waibel, "The People and the Commons," http://hangingtogether.org, January 22, 2009, http://hangingtogether.org/?p=606.

Simon also spoke about institutions' deciding which audiences are worth engaging online. Bernstein agreed that strategically choosing your audience was important. The Brooklyn Museum now completely ignores the more emotive comments they receive in Flickr and instead searches for users who are deeply imbued in discussions about their materials and appear committed to their resources. These are the individuals the museum wants to identify and develop lasting relationships with.

An audience member asked Bernstein her personal philosophy about facilitating dialogue in social media spaces. In addition to her regular duties as chief of technology, Bernstein sees herself as the community manager of the Brooklyn Museum online. She described herself as a member of a generation that does not believe in company marketing or public relations materials but instead wants to know that what she is looking at "comes from somewhere genuine." She feels those participating in The Commons are looking for this type of genuineness as well. Her involvement, and the involvement of other museum staff who join in the online discussions, shows the Flickr community that the Brooklyn Museum is a dynamic place full of people working toward the same types of discovery as they are. Transparency and a "personal face" are key for institutions that participate in social media environments.

The last provocation was given by **Deanna Marcum**, Associate Librarian of Congress for Library Services, who spoke about what happens in a national institution that is undergoing a period of transition. The Library of Congress, like many national institutions, serves an audience that Marcum characterized as "everyone and no one." The library's mission is to make its resources available and useful to the Congress and the American people. Fulfilling that mission for Congress is the easy part. The real challenge for them is identifying the needs of the American people.

Marcum provided some historical background on the library's earliest digitization effort, the American Memory project.[18] Begun in 1993 with an initial $15 million commitment from Congress, and a proviso to raise another $45 million from the private sector, the library's earliest decisions about audience were prompted by the fundraising needs of the project. When the library sought funds to implement this ambitious program, they discovered that the private sector was most interested in kindergarten through twelfth grade (K–12) education. Consequently the K–12 community became the library's primary audience in its first digitization effort.

Marcum noted that the Library of Congress has always perceived itself as the "library of last resort." Its role has been to acquire, conserve, and make materials available when no one else could. Within this staid tradition, staff often identify themselves as guardians of the library's materials. When the institution embarked on the American Memory project—an initiative designed to push materials out rather than guard them within—an internal debate arose about mission, tradition, and roles. Over the years the library has continued to place materials online (it currently offers approximately14 million online items), but the tension between tradition and the transformations engendered by the digital world continues. Marcum spoke in particular about the library's curators and subject specialists, who make scholarly resources available to small, highly specialized communities. They now face pressures to go beyond these communities. The challenges here are twofold: determining how to turn these subject experts and curators into generalists (in the sense that they can translate their knowledge to wider communities) and convincing them of the value of making their resources available more broadly.

Marcum strongly agreed with Edson that if cultural institutions fail to address the needs of online audiences today, they will not have audiences tomorrow. She felt it is the responsibility of all staff to help in the process of transitioning their institutions to accommodate this reality. Marcum concluded by

18 See American Memory at http://memory.loc.gov/ammem.

turning the provocation over to the audience, asking, "How do we deal with the staff we have in place, knowing that this transition simply *must* take place, and how do we engage *all* staff…[not] just a small band of believers?"

Moderator Simon asked Marcum what she was doing at the Library of Congress that might serve as a model for change in other institutions. Marcum discussed a voluntary program under way at the library called Knowledge Navigators in which curators and subject specialists are teamed with technologists to find ways to get materials online. Although she sees this program as an important start, she cautions that programs of this nature may reinforce the false divisions that people make between what is termed "regular work" and "Web work." For true transformation to occur, there has to be massive change that eradicates such divisions.

Building on Marcum's discussion of how the Library of Congress initially chose to focus on a K–12 audience, Simon asked the panelists if there were other audiences that were "low-hanging fruit" that could be readily engaged. Edson wants to find audiences who can use the Smithsonian's collections to increase and diffuse knowledge (the Smithsonian mission) within the context of work they are already doing. By way of example, he described a friend who volunteers as a science teacher. In the course of her work, she develops curricula, purchases supplies, teaches courses, etc. He wants her to be able to find the things she needs to do this work from among the Smithsonian's collections.

An audience member mused that the panelists demonstrated very proactive leadership and asked what characteristics their bosses have that enable them to be so experimental and proactive. Edson praised his boss, the CIO of the Smithsonian, for being both audacious and risky in seeing the need for a Web and new media strategy at his institution. He felt organizations need someone who "can stick their neck out and say, 'Onward!'" Bernstein described her boss, the director of the Brooklyn Museum, as thoroughly supportive and visionary, seeing their online strategy as securely fitting within the mission of the institution. Marcum spoke of her boss, the Librarian of Congress, as having an incredible interest in making resources available. He often talks of "getting the champagne out of the bottle," and the library staff works hard to try to do all the things he envisions. And Simon, summarizing her experience working with many institutional leaders, said that leaders do not need to be innovators, but they do need to be visionary, willing to take risks, and willing to let their staff take risks.

A follow-up question from the audience addressed the difficulty of convincing museum boards or trustees of the merit of participating in social media projects. Bernstein suggested that institutions position their efforts within their institution's mission. Her board sees their work in social media environments as directly related to the Brooklyn Museum's mission, and so their efforts are not a hard sell. Simon suggested that "the pitch" to any board should be in the form of "this project will help us reach X part of our mission by Y date." Institutions have to avoid the "everybody is doing this" pitch and also not fall victim to promoting the "cool technology" factor. An audience member suggested that showing board members relevant examples from other institutions can also help bolster a case by providing a tangible sense of the possibilities.

A final inquiry about how to help audiences build exhibits from online collections was answered with practical suggestions about new software tools such as Omeka[19] and Open Museum.[20] However, Edson offered a suggestion that harkened back to an earlier statement ("the experts don't work at our institutions") and reinforced the sentiment expressed throughout this session about engaging online communities. He told the questioner to "ask your audience. They probably are already building exhibits with your collections and can tell you the best way to do it."

19 http://omeka.org.

20 http://openmuseum.org.

Moderator **Priscilla Caplan**, Assistant Director for Digital Library Services, Florida Center for Library Automation, characterized this session as an examination of outside forces that impinge on the mission and values of our institutions. While there are many such forces, the most critical ones may be those that occur within our legal and public policy framework. Legal structures can enable or constrain us, while the area of public policy shapes what Caplan called "that uneasy border between technology and the law."

The first speaker, **Maria Pallante**, Associate Register for Policy and International Affairs at the U.S. Copyright Office, reviewed the legal framework for cultural organizations. Quizzing the audience about elements of copyright law, she summarized the exclusive rights guaranteed in the law (i.e., reproduction, display, distribution, public performance, derivative works)[21] and the various international copyright treaties to which the United States is a signatory (i.e., Berne, TRIPS [Trade-Related Aspects of Intellectual Property], and a host of bilateral treaties).[22] She also discussed copyright law's various exceptions and limitations, such as fair use, the first sale doctrine, and the exception that allows libraries and archives to make copies for preservation and other limited uses.[23] The exceptions and limitations in U.S. copyright law are quite liberal compared to other countries, and we often find ourselves running afoul in the international arena as a result.

Pallante also urged cultural institutions to be aware of copyright law's liability provisions.[24] Although people rarely sue libraries or museums (the "doctrine of neversue"), understanding legal liability allows institutions to more carefully assess the risks assumed when using copyrighted works.

Surrounding the rights and exceptions of copyright law are a broader series of rights that cultural institutions can claim in their interactions with the law. For example, cultural organizations have the right to invoke any applicable exemptions and limitations of copyright law when making use of a copyright work. If, for example, an institution feels it can claim fair use of a work, it *should* claim it. There is a real risk that exemptions will be lost if they are not used.

Institutions also have the right to negotiate licenses. Pallante discussed two examples of creative licensing models that have emerged in the cultural community. One model addresses the preservation of variable media works—conceptual art, video, digital works, etc.—by having the rights holder and institution negotiate ways to migrate a work so it can be viewed, accessed, and used in the future.[25] The other model was developed by the Flickr Commons community to allow access to materials in The Commons. Institutional members of The Commons assert that they have conducted a risk assessment on the images they are making accessible and have found "no known copyright restrictions." The Commons' users are informed of this finding: should they choose to use any image, they do so at their own risk.[26] Pallante described this model as successfully "removing the logjam" that was preventing cultural institutions from making their images available.

Cultural institutions also have the right to assert, or not to assert, institutional ownership of copyright. Pallante acknowledged that this was a politically charged issue for many organizations. The only case law in this area, the Bridgeman decision,[27] suggests that modest changes to public domain works probably do not warrant a separate copyright by an institution. But

21 See 17 USC § 106, available online at www.copyright.gov/title17.

22 The Berne treaty is an international copyright treaty administered by the World Intellectual Property Organization (WIPO); see Berne Convention for the Protection of Literary and Artistic Works at www.law.cornell.edu/treaties/berne/overview.html. The TRIPS treaty is administered by the World Trade Organization (WTO); see www.wto.org/english/tratop_e/trips_e/trips_e.htm.

23 See 17 USC § 107, 108, and 109, respectively.

24 See 17 USC § 412.

25 See the variable media network at http://variablemedia.net/e/welcome.html.

26 See www.flickr.com/commons/usage.

27 *Bridgeman Art Library v. Corel Corp.*, http://en.wikipedia.org/wiki/Bridgeman_Art_Library_v._Corel_Corp.

even in situations where an institutional copyright may be warranted, Pallante urged museums to balance their public mission against any revenue-seeking efforts that might underlie a decision to assert copyright.

Turning to responsibilities, Pallante urged cultural organizations to conduct an intellectual property audit on their collections and develop a copyright policy to help guide their decision making (see the Conference Resources section of this book for Pallante's handout, *An Introduction to IP Audits*). She also urged greater involvement in the legislative debates that affect the community. A key piece of legislation—the **orphan works** bill—will likely pass in this congressional session, and it will greatly affect how cultural institutions can use such works.[28]

Other areas that merit involvement include efforts under way to examine whether copyright exceptions and limitations can be addressed more broadly in the international arena. (Current treaties deal largely with the exclusive rights of copyright but not the limitations to those rights.) In May 2009, the United States sent a delegation from the Copyright Office and the Patent and Trademark Office to a World Intellectual Property Organization (WIPO) meeting to discuss exceptions and limitations for the blind and visually impaired.[29] This meeting is an initial effort that may expand further into exemptions and limitations that more directly affect the cultural heritage community. Pallante urged cultural organizations to keep abreast of, and comment on, these continuing efforts.

Maura Marx, Executive Director of the Open Knowledge Commons, spoke of the changes brought about by mass digitization and how these changes are shifting the balance of power in areas of privacy, transparency, and business model development. Concepts developed in the analog world (e.g., first sale, privacy) are being abrogated in the digital world because "going digital" puts us in a realm where ideas are detached from the physical manifestation in which they originally were expressed. The novel *Pride and Prejudice,* for example, no longer has to be in a book form in order to be read. Unfortunately, the business models that have evolved around copyright attach payment to the physical manifestation. We buy a book, pay for a CD, or purchase a print. When there is no physical object (for example, a digital version of *Pride and Prejudice*), the standard business models no longer hold. To paraphrase the famous John Perry Barlow analogy,[30] copyright protects the bottle, but not the wine. This is the crux of the dilemma we face as we move into the digital world.

To further explore the ramifications of this dilemma, Marx discussed recent efforts under way in the area of mass digitization of books. Starting with open content projects, she summarized the influential players in various mass digitization efforts, such as Project Gutenberg, the Million Books Project, and the Internet Archive.[31] As impressive as these efforts are, mass digitization did not really gain traction until 2004, when Google announced its intention to digitize the book collections of some of the world's top academic libraries.

Shortly after Google embarked on this project (called Google Books), a class action lawsuit alleging copyright infringement was filed against Google by the Association of American Publishers and the Authors Guild. The nonprofit world was hoping that this case would go to court and be settled on the side of fair use, but that was not to be. In October 2008, a settlement was reached among the parties. If approved by the courts, the terms of the deal—and its implications—will be monumental. Some of the

28 See Marybeth Peters, *The Importance of Orphan Works Legislation,* September 25, 2008, www.copyright.gov/orphan.

29 See Federal Register Notice of Inquiry and Request for Comments on the Topic of Facilitating Access to Copyrighted Works for the Blind or Persons with Other Disabilities, http://frwebgate3.access.gpo.gov/cgi-bin/TEXTgate.cgi?WAISdocID=8013838586+1+1+0&WAISaction=retrieve.

30 John Perry Barlow, "The Economy of Ideas," *Wired*, 1993, www.wired.com/wired/archive/2.03/economy.ideas_pr.html.

31 See Project Gutenberg at www.gutenberg.org/wiki/Main_Page; Million Book Project at www.archive.org/details/millionbooks; Internet Archive at www.archive.org.

more prominent terms of the settlement include a $125 million payment to the plaintiffs, creation of a new organization (the Books Rights Registry) to facilitate payments between rights holders and Google, and a payment of $60 per book for the 7 million books already scanned by Google. In addition, Google is released from liability for the 7 million books it has already scanned.[32] The terms of the deal also prevent other entities from trying to negotiate similar arrangements with the authors and publishers.

The repercussions of the settlement are still being debated, but it is clear that we will now have a dominant book content licensor the likes of which we have never seen. Google will control access to approximately 70 percent of *all* printed books.

Putting access to so much content in the hands of one entity is worrisome enough, but Marx is also concerned about Google's attitude toward privacy issues for users who access Google Books. It is in Google's interest to amass as much personal data as possible about users so they can target sales, advertising, and services. The library model of scrubbing user records when a transaction has been completed simply will not hold under the demands of a commercial environment.

Marx believes that cultural organizations have a responsibility to build viable mass digitization alternatives by pursuing open and transparent partnerships. Libraries, museums, and other cultural institutions also must continue to set the standard for intellectual freedom and privacy rights, and they need to embrace new business models based on more open access. If we do not build the ideals of our organizations into the mass digitization projects of the future, we risk the erosion of basic rights and access to information, and the creation of business models that do not serve the public good.

Jeffrey Rosen, Journalist and Law Professor at Georgetown University, delved further into Marx's concerns about privacy in a talk that explored the future of privacy in the network age. He began by identifying a key concern that underlies the invasion of privacy: the fear of being judged out of context. If someone can review your sales receipts, the books you take out of the library, or your online browsing history, they form impressions of you based on only one aspect of your activities. People want to control their personal information so they are not judged in this selective manner.

Of late, Rosen has noticed a dissonance in our behaviors about privacy in the online world. People remain adamant about controlling their personal information while voluntarily revealing more intimate, personal information than ever before in social media spaces. He feels that the recent uproar over Facebook's attempt to change its terms of service[33] (to include a new policy about retaining data on its servers in perpetuity) is but a harbinger of what he called the "privacy Chernobyls" to come.

Rosen thinks privacy "time bombs" await us in three areas. The first is online tracking and Web monitoring, which could send a person's entire online "clicking" history to various advertisers or other interested (paying) parties. This type of tracking violates our right to read/browse anonymously and could result in a host of privacy incursions. A second area is the leaking or subpoenaing of search terms. We experienced our first instance of this in 2006 when AOL mistakenly posted 20 million Web search queries that, through a match of Internet protocol addresses with search terms, made it possible to

32 Marx recommended the following sources about the Google Books settlement and its ramifications: Jonathan Band, "A Guide for the Perplexed: Libraries and the Google Library Project Settlement," American Library Association, November 13, 2008, www.arl.org/bm%7Edoc/google-settlement-13nov08.pdf; Robert Darnton, "Google & the Future of Books," *New York Review of Books* 56, no. 2 (February 12, 2009), www.nybooks.com/articles/22281; James Grimmelmann, "How to Fix the Google Book Search Settlement," *Journal of Internet Law* 12, no. 10 (April 2009): 1, 11–20, http://works.bepress.com/cgi/viewcontent.cgi?article=1022&context=james_grimmelmann.

33 For information on Facebook's proposed changes in its Terms of Service and the subsequent backlash, see Brian Stelter, "Facebook's Users Ask Who Owns Information," *New York Times*, February 17, 2009, sec. Technology/Internet, www.nytimes.com/2009/02/17/technology/internet/17facebook.html?_r=3&emc=eta1; and Jessica A. Vascellaro, "Facebook's About-Face on Data," *Wall Street Journal Online,* February 19, 2009, http://online.wsj.com/article/SB123494484088908625.html.

identify searchers by name.[34] All sorts of information were revealed and confidences betrayed.

The third and potentially most daunting privacy breach will likely involve Google. Rosen said Google "fears the day when its mother lode of information about us" (our search history, our data stored in its cloud applications such as Gmail or Google Docs, etc.) is leaked or subpoenaed. Such a breach would mean the end of the Google brand and would invade privacy rights in unimaginable ways. The recent federal order imposed upon Google to turn over all of its YouTube data for examination of possible copyright violations[35] foreshadows the problems that may be down the road.

Rosen believes the only way to avoid these disastrous threats on our privacy rights is to insist on **data purging**. Indeed, fears about business scandals are leading companies to consider quicker purging schedules than ever before. Google, for example, now purges its data every eleven months. Yahoo does so every three months. In some countries, companies purge data instantly to preempt the effect of subpoenas by oppressive foreign governments.

Shorter purging schedules are a good thing for privacy rights. Rosen, who praised librarians as being "pit bulls" in their activism on behalf of privacy rights, urged us to use our persuasive energy to focus on this issue. We need to convince commercial entities that it is in their interests to keep less data, and that the data they do keep should be kept for shorter periods of time. Companies will argue that they need to store personal data to raise revenue through targeted marketing, but a business scandal in which personal data is leaked will have devastating results that well outweigh concerns about increased revenue opportunities.

Rosen also asked cultural organizations to take up the cause of exercising personal responsibility in choosing what we reveal about ourselves online. Citing examples of highly personal discussions on Facebook and studies by Jean Wenge about digital narcissism,[36] he notes that the technology is fueling changes in our sense of privacy. Information professionals not only have a role in helping people assert privacy rights but also in "helping them reflect thoughtfully about their responsibilities." In closing, Rosen put forth the Talmudic notion that if your neighbor puts up a window and views you in a common courtyard, that window should come down (even if you do not object) because "the injury caused by the seeing cannot be measured." This notion looks at privacy as an inalienable form of dignity that should not be lightly surrendered even if we are inclined to do so.

Following the individual presentations, session moderator Priscilla Caplan asked the panelists what arenas (the courts, the marketplace, the legislature, etc.) were most appropriate for resolving the major issues that threaten the public good. Rosen noted that Lawrence Lessig, a leading public policy figure, feels that the courts are most likely to render fair decisions, while the legislature is likely to succumb to political pressures. However, Rosen believes that the "courts *can* save us, [but] on many issues they *won't*." He cited the Supreme Court's ruling in favor of the Sonny Bono Copyright Term Extension Act[37] as an instance of the courts' *not* acting in favor of the public good. Rosen felt a better strategy may be imagining what reasonable solutions should look like, and then convincing the Obama administration of the need to move toward those solutions.

Pallante noted that the Google Books settlement still awaits approval in the courts, and the courts will likely look at it with commercial concerns in mind (i.e., issues of price fixing, barriers to entry for new

34 For information on the AOL search data breach, see "AOL Search Data Scandal," Wikipedia, http://en.wikipedia.org/wiki/AOL_search_data_scandal; and Kelly Martin, "AOL Search Data Identified Individuals," *Security Focus*, August 9, 2006, www.securityfocus.com/brief/277.

35 See Miguel Helft, "Google Told to Turn Over User Data of YouTube," *New York Times*, July 4, 2008, sec. Technology, www.nytimes.com/2008/07/04/technology/04youtube.html.

36 See www.psychology.sdsu.edu/new-web/facultystaff/TwengeVita2009.pdf.

37 For a summary of this act and its significance, see http://en.wikipedia.org/wiki/Copyright_Term_Extension_Act.

commerce, etc.). She believes the policy issues should play out in a more public sphere, noting that libraries initially may have been eager to work with Google in 2004 because there was no national focus, agenda, or appropriation model for mass digitization being discussed in the broader cultural community at that time. Both Pallante and Marx reminded the audience that Google Books, as gargantuan as it may seem, still deals with only one type of material, i.e., books. It does not include images, journals, videos, music, or a host of other types of cultural content. Google also is not concerned about preservation-quality scanning. Thus, there are still many opportunities for the cultural community to work together to create models, and model projects, that meet important needs and incorporate the ideals of cultural caretakers.

Collaboration has become a watchword for cultural institutions, particularly in lean economic times when it is proffered as a way to leverage resources. However, collaborations are not something to enter into lightly. Even under ideal circumstances, they can be difficult to achieve and sustain. Moderator **Joyce Ray,** Associate Deputy Director for Library Services, Institute of Museum and Library Services, introduced the three speakers on this panel as highly qualified to discuss the potential and pitfalls of collaboration from library, museum, and community perspectives.

James Neal, Vice President for Information Services and University Librarian at Columbia University, spoke about collaboration from a librarian's viewpoint, but much of what he discussed applies to other cultural institutions as well. In a presentation titled "Come By Here Lord: From Kumbaya to Radical Collaboration," he argued that cultural organizations must move from the "warm and fuzzy" cooperative approaches that pervade our communities (characterized as "kumbaya" efforts) to new strategies for coinvestment, consolidation, and reengineering of our relationships (radical collaboration).

Neal identified several arenas where this deeper level of collaboration is warranted, such as shared regional approaches to the mass production activities in libraries (i.e., backroom activities such as acquisition, cataloguing, or management of e-resources), shared infrastructure, and the creation of centers of excellence. He suggested that quality, productivity, and innovation should be the filters we use to determine whether an institution should collaborate or "go it alone."

One instance where libraries have been successful with collaboration is in the creation of digital libraries. However, Neal noted that the infrastructure built around these resources is not yet complete. Issues remain in the area of preserving and archiving content and marketing it (and libraries) to users. We also must address the broader arena of policy, where many issues that are critically important to our communities—such as copyright, education, intellectual freedom, and privacy—require our immediate advocacy. Together these needs comprise a huge, unfinished agenda that must be tackled through radical collaboration.

Neal identified several requirements for radical collaboration, starting with the number of partners. In his experience, collaborations that moved forward successfully began with only a few (two or three) partners. Enlisting more than this at the onset ("multilateral partnerships") resulted in cooperative "kumbaya moments" that never developed into relationships of coinvestment or integration. Neal also spoke of the human aspects of partnership, citing the work of Rosabeth Moss Kanter[38] about the importance of shared values and compatibility among partners, and the need for partners to bring tangible strengths, complementary assets, and something of value (including money) to the table.

Other requirements for radical collaboration include developing business plans, legal frameworks, and governance structures for the partnership, and securing risk capital to foster experimentation and innovation. A less tangible, but no less important, requirement is a competitive spirit. Partners must embrace a desire to win by setting ambitious goals and then working to reach them. Doing so renders the collaboration far more competitive than any individual partner could be on its own and uniquely positions a collaborative partnership in the broader universe of partnerships that are taking place in the community.

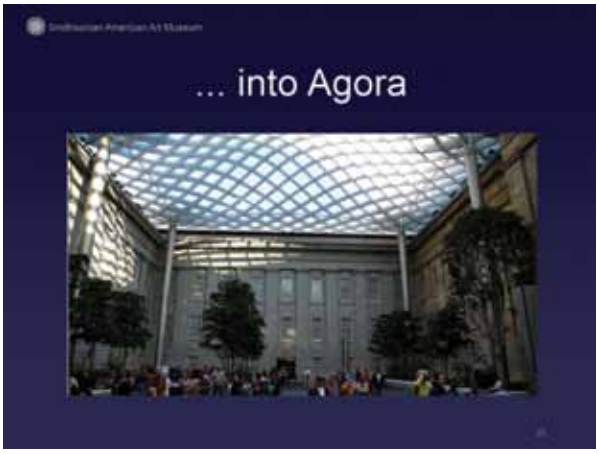
Neal feels the current economic climate requires us to pursue radical collaboration to leverage resources, change our organizations, and reposition ourselves to serve our communities in new ways. Unfortunately, he sees the exact opposite taking place. Libraries are becoming more insular, falling back on traditional approaches in the face of financial pressures. In part, he blames this retrenchment on the tendency of cultural organizations to always try to do more with less. Neal described this tendency as dangerous, and he believes it is responsible for making us lose our cutting-edge ambitions and qualities, rendering us "more common" as a result.

38 Rosabeth Moss Kanter, "Collaborative Advantage: The Art of Alliances," *Harvard Business Review* (July 1, 1994).

The current economic, social, and technological environment is also making librarians anxious and apprehensive. There is confusion and a sense of unpredictability about roles and how new technologies are changing our users and our user interactions. Neil urged the community to think about where we are headed in the long term and to identify how we can move toward more radical collaborations in order to get there. Quoting a Japanese proverb, "Vision without action is a daydream; action without vision is a nightmare," Neal concluded that radical collaboration will require both vision and action if we are to successfully address the challenges that face us.

Nancy Proctor, Head of New Media Initiatives at the Smithsonian American Art Museum (SAAM), moved the discussion from collaboration *among* institutions to collaborations *between institutions and audiences*. Simulating a game environment, Proctor asked the WebWise audience to derive clues from her presentation that could be used to identify the key elements required for successful museum/audience collaboration. The clues were embedded in examples of collaborations between the Smithsonian American Art Museum and its various user communities.

The first example Proctor described was Save Outdoor Sculpture,[39] a social networking project that existed before the term was even coined. Since 1989, more than 7,000 individuals have been collaborating with SAAM and with Heritage Preservation to catalog and report on the condition of outdoor sculptures across the United States. The project began in a largely analog manner and is now being brought into the twenty-first century by merging the database of information with Google Maps. To foster continued interest among the community and to broaden use of this resource, the museum has launched an online game called *Artful Abe,*[40] where users conduct a scavenger hunt that takes them from outdoor sculptures of Abraham Lincoln to related artworks in the museum's collection.



Slides from Proctor's presentation.

Proctor used this example and others to explore the potential of games in museums. She discussed the work of Jane McGonigal, a game designer and researcher[41] who believes that games can be generators of happiness and spaces where real-world problems are solved through creative play. In that spirit, SAAM also developed *Ghosts of a Chance*,[42] the first **alternate reality game** ever to be hosted in a museum. The game is a cross-platform experience that unifies online communities with onsite visitors by creating ad hoc communities who play the game

39 Save Outdoor Sculpture! www.heritagepreservation.org/Programs/Sos.

40 American Art Museum, *Artful Abe,* http://americanart.si.edu/exhibitions/online/artfulabe/artfulabe.cfm.

41 Jane McGonigal, Institute for the Future, www.iftf.org/user/46.

42 Smithsonian American Art Museum, *Ghosts of a Chance*, www.ghostsofachance.com.

together, using a host of technologies that range from paper and pen to cell phones and the Internet.

The museum also collaborates with audiences in social media environments. A project called Fill the Gap[43] asks the online photography community to help fill the spaces created in the museum's Luce storage facility when works are exhibited, loaned, or otherwise temporarily moved out of storage. Another project was inspired by a SAAM exhibit titled "1934: A New Deal for Artists" and invites the Flickr community to contribute images and engage in discussion about activities and events that occurred in 1934.[44]

Other museum collaborations are taking place in the wiki environment, such as Wikipedia Loves Art, an effort to get museum images into Wikipedia articles, and MuseumMobile, a project for professionals that examines the handheld and mobile environment.[45] SAAM also uses podcasts to engage the community, helping students develop their own podcasts about art and works in the museum.

After presenting these many examples of museum/audience collaboration, Proctor asked the WebWise audience to predict her summary slide, which answers the question "What is collaboration?" Audience responses varied from "mash-ups with people rather than applications" to "1 + 1 = 3." Proctor followed with her own answer, saying collaboration involves communities and sharing, dialogue and storytelling, integration and relevance of content, and fun and happiness. She also singled out museum challenges in collaboration. While there remain broad challenges such as managing intellectual property and brands, most of the challenges she identified are rooted in less salubrious aspects of museum culture: museums are "stingy" with their content, they fear risk taking and failure, and they do not consider priorities in light of new demands.

Proctor concluded by asking, "How does collaboration transform what we do?" From her experience at SAAM, she now views the museum as a distributed network consisting of the onsite museum, the website museum, the "museum elsewhere" (other Web spaces the museum does not control, such as Flickr and Wikipedia), and the mobile museum. Audiences are accessing SAAM through all these platforms. Looking more broadly, Proctor believes museums are transforming from Acropolis to agora—from sacred spaces that safeguard objects to spaces for community encounter and engagement. She concluded that the "museum as agora is a collaborative space, and one that is inherently fun."

Diana Rhoten, Director of Research, Digital Media and Learning, Social Science Research Council, provided another perspective on collaboration in her discussion of two efforts among community organizations to create youth-centered learning networks. These collaborations, which are under way in Chicago and New York, build on important research about digital media and youth that is emerging from many research projects being funded by the MacArthur Foundation.[46] Rhoten characterized these two new efforts as "institutional collaboration with the user at the center."

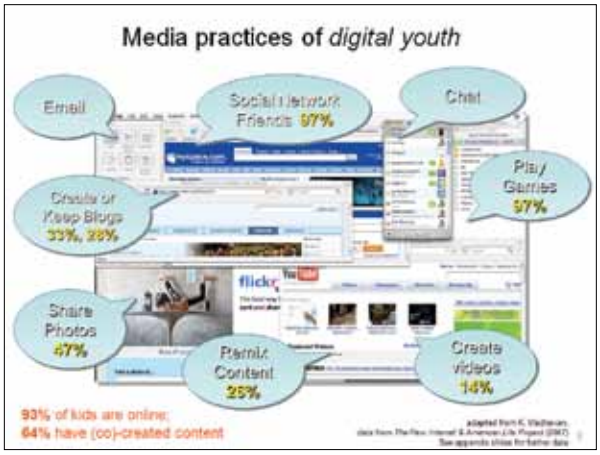
To provide some context for understanding the two collaborations, Rhoten briefly discussed how young people interact with digital media. Most people are aware of the social aspects of this interaction: young people communicate with one another through chatting, tweeting, texting, instant messaging, social networks, games, etc. Less well known is the amount of cultural production that takes place among teens when using these media. Their interactions involve a great deal of creation as well as communication.

43 Georgina Goodlander, "In This Case: Fill the Gap!" *Eye Level*, March 11, 2009, http://eyelevel.si.edu/2009/03/in-this-case-fill-the-gap.html; Smithsonian American Art Museum, Fill the Gap: Case 9B (supporting image for 9A, March 2009), March 21, 2009; Flickr, www.flickr.com/photos/americanartmuseum/sets/72157613328866883/.

44 Smithsonian American Art Museum, "Flickr: @1934," www.flickr.com/groups/1934.

45 Flickr, Wikipedia Loves Art, www.flickr.com/groups/wikipedia_loves_art/; MuseumMobile » Wiki, http://museummobile.info/wiki.

46 See "Digital Youth Research, Kids' Informal Learning with Digital Media," http://digitalyouth.ischool.berkeley.edu.



Slide from Rhoten's presentation.

In addition, young people go back and forth between physical and virtual communities many times during the course of a typical day. Rhoten displayed a pictorial representation that schematically traced a young person moving from home to school to after-school activities and back home again. The day is very complex, requiring the young person to delve back and forth into various communities that cut across both the virtual and physical at frequent intervals. Young adults tend to traverse this "back and forth" across physical and virtual worlds largely on their own.

As young adults navigate through their day, it is hard for them to make connections and interrelate information across all the communities they encounter. A teen may come across something about climate change in an online forum, but may not be able to (or consider) relating this information to his school science class. Rhoten believes institutions can help young adults make these connections by providing a scaffold—a term used in the education community for the various supports required to help students reach an educational objective. This scaffold may take the form of resources, content, and infrastructure that enable students to negotiate their day more effectively.

The two youth-centered networks being developed in Chicago and New York are testing the concept of learning networks and exploring how institutions can support and scaffold these networks. Of the two projects, the Chicago Experiment,[47] a collaboration between the Chicago Public Library and Digital Youth Network,[48] is further ahead in development. It involves a specially designed and equipped space where young adults can pursue a progressive technology program that starts with digital media production, moves into game design, then on to virtual world modeling, and eventually into computation modeling and simulation. The curriculum taps into the city's One Book, One Chicago Program,[49] an initiative in which the city promotes a variety of events designed to cultivate reading and discussion around a particular book. (Teens will work with various digital tools and develop creative works around aspects of the selected book.) Although this collaboration currently involves just two organizations, Rhoten envisions many other local organizations (museums, universities, etc.) taking part in the collaboration as it develops.

The New York project is taking a different approach toward the building of a youth-centered learning network. A dozen local institutions (libraries, museums, civic organizations, after-school programs, and youth development programs) are taking part in a **charrette** process to brainstorm on collaborative ideas. As part of the process, the organizations will consider various collaborative possibilities and will prototype them. Young adults will be brought in at various points in the charrette to test the prototypes that have been created. They also will take part in a special youth charrette where they will create their own prototypes of what they would like to have available in a learning network. If the institutions find worthwhile collaborative opportunities emerging from this process, an infrastructure will be developed to enable the supporting institutions to go forward.

47 YouMedia: Presented by the Chicago Public Library and the Digital Youth Network, www.youmediachicago.org.

48 Digital Youth Network, Empowering Youth through Media, http://iremix.org.

49 For information on the One Book, One Chicago program, see www.chipublib.org/eventsprog/programs/onebook_onechgo.php.

Rhoten concluded her presentation with a series of open questions to ponder and explore:

- What does it mean to shift from information to participation and from education to learning?
- What does it mean for a network to be youth centered versus institution centered?
- How does an organization think about collaborating in a youth-centered network that has both physical and virtual institutions?
- How do organizations experiment with and learn from each other?
- Is the idea of a learning network less viable, more desirable, or something altogether different in times of recession and retrenchment?

During the discussion period that followed the presentations, an audience member asked panelists how they factor institutional identity into their collaborations. How do Columbia University and the Smithsonian Institution address the need for maintaining their distinctive identity and brand in a collaboration with others who have their own distinctive identities and brands to consider as well?

Proctor suggested that our anxiety about institutional identity and brand may be symptomatic of old habits that we are having a hard time shedding in new digital environments. She believes some answers may be found by examining online models. For example, Wikipedia is really a huge collaboration that offers an enabling platform but does not subsume the identities or brands of its content providers nor of the content that resides in its entries. Proctor described the Smithsonian as rethinking the issue of identity in light of these models as it moves forward on various Web 2.0 initiatives.

Neal considered institutional identity in four distinct ways. First, there is identity linked to expectation: when users approach a collaboration, it is important that they see not just the collaboration but also Columbia's part in it. Another form of identity is related to branding, i.e., making sure that the labels, logos, and other markers of the institution are part of the collaborative process and product. He also considered identity in terms of experience. When users have a positive experience or interaction with a collaboration, he wants some of the credit and recognition of that experience to come back to his institution. Finally, there is identity in terms of the benefit and value as perceived by the institution itself. For example, it is important that Columbia University recognize that a particular collaboration benefits the university community in ways that the university could not achieve on its own. Ideally, Neal wants to ensure that all four of these aspects of identity are evident in any collaboration.

Rhoten expanded the discussion to consider the other side of the question—i.e., the identity that a collaboration holds among its partners, and the link between this identity and sustainability. If the work of a collaboration is considered an add-on for the partner institutions, the collaboration will not be sustainable. To be viable in the long term, the work of a collaboration must become "part of the DNA" of each institution, being subsumed fully into each partner's mission and activities.

Conference Day Two

Keynote Address: Born Digital: Understanding the First Generation of Digital Natives

John Palfrey, the Henry N. Ess III Professor of Law and Vice Dean for Library and Information Resources at Harvard Law School, spoke about a growing demographic known as "digital natives," young people who have grown up immersed in digital technologies and have interwoven them into their lives. Palfrey and his colleagues have been studying digital natives as part of an international research collaboration[50] whose purpose is to understand and support this community. Their research includes interviews and focus groups with digital natives from Boston to Beijing, and it reveals an emerging global culture of young people that offers rich opportunities for cross-cultural understanding.

Palfrey defined digital natives as individuals born after 1980 who have access to digital technologies *and* have the support structures (homes, schools, libraries, etc.) that enable their use of these technologies. They exhibit several key attributes that are important for understanding their engagement with the digital landscape:

Digital natives use technologies to express their identity. Although social life and identity creation play out in both physical and online worlds, digital natives see these worlds as one converged space. This perception contrasts markedly with older users of technology, who view their physical and online identities as distinct and separate entities.

Digital natives are fervent and expert multitaskers. They constantly move back and forth—what Palfrey more accurately described as task switching than multitasking—between one technology or application and another. While there are negative aspects to this behavior (such as inadequate concentration given to important tasks), multitasking is a critical skill in many contexts. Airline pilots, for example, must be able to communicate with air traffic control personnel while handling the aircraft, reviewing gauges, and altering course, speed, and elevation in response to multiple inputs.

Digital natives expect, indeed presume, that material is in a digital format where it can be shared. According to Palfrey, "Digital is the default mode" for this community.

Digital natives are creators as well as consumers of information and knowledge. They will take a photo with their digital camera, upload it to Flickr or MySpace, tag it with friends' names, create mash-ups that use it, etc. They also work well in groups in the digital sphere, using the tools of like wikis or Google Docs. Teamwork is an important life skill and one that is not frequently encountered in school environments, where emphasis is placed on the skills, work, and study habits of the *individual*.

Digital natives use technologies to form or extend communities. Palfrey offered the example of "couchsurfing,"[51] an online effort that connects travelers with local communities by helping individuals locate free accommodations ("a couch to sleep on") in their travels. In reality, couchsurfing expands the potential of a travel experience, paving the way for friendships, new opportunities, and richer, more meaningful experiences. Using online technologies to create, facilitate, and foster such efforts is perfectly natural for digital natives.

Palfrey was enthusiastic about the new forms of creative expression and community that digital natives engender, but he and his colleagues are also exploring the threats that affect this group. The most high profile concerns involve security issues such as sexual predation, exposure to unwanted content (e.g., pornography), and online bullying. Studies of online sexual predation show a decrease in occurrence since the late 1990s, while exposure to unwanted content remains about the same. However, the incidence of online bullying has increased greatly, for reasons that have yet to be adequately explained.

Privacy is another issue of concern. Digital natives eagerly share information about themselves online without fully understanding the implications of doing so. They do not consider the unintended

50 See Berkman Center for Internet & Society, "Digital Natives," http://cyber.law.harvard.edu/research/digitalnatives.

51 "CouchSurfing—Participate in Creating a Better World, One Couch at a Time," www.couchsurfing.com.

audiences who have access to this information, nor do they consider how easily it can be searched and replicated, or how long it may remain online. Young people who have been online longer than their peers do tend to be smarter about releasing personal information, and Palfrey believes that with proper education and support, all digital natives can be taught to be more judicious about sharing personal information online.

A third concern is a disregard for intellectual property rights. Young adults admit they take content without paying for it and they know that it is unlawful to do so: the message of infringement clearly has gotten through to them. However, they remain confused about remixing and have questions about how they can use copyrighted material when creating new content. Palfrey believes the issue of illegal use and the confusion about legitimate use (fair use) can be remedied in part by having young people engaged in producing and creating content online. Drawing from his own observations of young adults producing videos as part of the digital natives project, he spoke of how their perspectives on copyright and use change once they become creators and are engaged in the creative process themselves.

Another problem for digital natives is the volume and credibility of information they encounter online. Digital natives start and end their information search in the online world, but their ability to identify credible and noncredible information in this world is highly variable. They also are barraged with vast amounts of information in this world and are often uncertain how to process it. In the course of a typical day, digital natives "graze for information" because it is not offered in a structured way. What new skills do they need to work their way through this overload of information and to separate the reliable from the nontrustworthy?

Palfrey and his colleagues have found that, when given appropriate support and structures, digital natives can successfully navigate through all these issues in ways that create richer, more participatory learning experiences and interactions. Libraries, museums, and schools have an important role to play in offering this support and structure. In particular, they can serve as intermediaries, offering "handholds" that guide digital natives and help them recognize what information they should consider, what they should discard, and how they can help create a "digital Alexandria." Palfrey noted that digital natives have an amazing ability to use collective action to shape their world, and he urged cultural organizations to work with them to leverage this ability in ways that will result in a better online environment for everyone.

Palfrey concluded by discussing some of the outgrowths of the digital natives research project. He and a colleague wrote a book about digital natives[52] to help parents and educators understand the potential and pitfalls of a digital native's world, and to help support this group as it begins to make real the "extraordinary transition to a globally connected society."[53] They also have created a blog, wiki, and website to build on the research and continue discussions on this topic,[54] and the digital natives project and staff maintain an active presence in social media environments such as Facebook, MySpace, Twitter, and Delicious. The WebWise audience was invited to participate in all these environments to learn more about digital natives and to contribute their insights about how cultural institutions can provide supports and structures for this community.

52 John Palfrey and Urs Gasser, *Born Digital: Understanding the First Generation of Digital Natives* (Basic Books, 2008).

53 Palfrey and Gasser, *Born Digital*, p. 9.

54 See Digital Natives at www.digitalnative.org.

Session 4: Chasing the Edge and Maintaining the Core

This session examined the interplay between technological innovation and change in cultural institutions. Conducted as a three-way conversation among the moderator, panelists, and audience members, the discussion was framed by a concept referred to as "edge and core." Session moderator **Benjamin Stokes,** Program Officer in Digital Media and Learning at the MacArthur Foundation, began the conversation by describing the "edge and core" concept and noting that it offers a useful metaphor for exploring institutional dynamics during times of change.

The concept was significantly advanced by John Hagel and John Seeley Brown in 2005 as a way to understand innovation in business and global markets,[55] but it can be applied to other organizations and sectors as well. The "core" refers to an institution's principal capabilities, its major resources, and the bulk of its financial assets as they exist today. The "edge" represents a periphery around the core, and describes an arena where experimentation, innovation, and growth opportunities can occur. In terms of interaction and change, the edge transforms the core.

Stokes used the edge and core concept as a framework for the conversation. Posing a series of questions—"What are edge and core activities at cultural institutions?" "How are we connecting the edge and the core in our organizations?" "How are our perspectives on edge and core activities changing in the current economic climate?"—he asked the panelists to begin the conversation by describing their perspectives of edge and core as the concept pertains to their organizations.

David Ferriero, Andrew W. Mellon Director of the New York Public Libraries (NYPL), spoke of how libraries generally have treated technology and digital activities as separate and distinct from the rest of the organization. NYPL is no exception, having viewed its digital library more like a fifth research library in the NYPL system rather than integrated into the whole of the organization. Ferriero also described NYPL as having an insular attitude, despite its location in a huge, culturally diverse metropolis. He jokingly described "wooing Josh Greenberg from George Mason University" as his greatest effort in fostering edge thinking at his organization. Ferriero credited Greenberg (NYPL's Director of Digital Strategy and Scholarship) and the NYPL's Digital Experience team as being instrumental in changing attitudes and culture in the organization, and helping them focus on bringing the edge to the core.

Troy Livingston , Vice President for Innovation and Learning at the Museum of Life and Science in Durham, North Carolina, is getting his institution to pursue the edge by looking *outside* at the many opportunities available, and then deciding which of these opportunities they wish to pursue. Like most museums, his institution presents what Livingston called the "protected curatorial voice," but it increasingly recognizes that there are many voices and all merit inclusion. The museum is looking to edge work to help it become a more permeable institution.

Patrick Whitney, Dean of the Institute of Design at the Illinois Institute of Technology, spoke of the students in his program and their perspectives on edge and core in terms of design. The Institute of Design has an older student body (average age of twenty-nine years), half of whom are from other countries and from fields outside of the design industry. The diversity represented by these demographics helps the institute stay on the edge. Students are largely interested in redesigning organizations and looking at how organizational behavior and structure often obstruct this process.

Following these introductory comments, moderator Stokes guided the conversation with prompting questions and follow-up comments that wove back and forth across several areas of discussion. The themes singled out below are presented topically rather than in the chronological sequence in which the discussion occurred.

55 John Hagel and John Seely Brown, *The Only Sustainable Edge* (Harvard Business School Press, 2005).

Issues in Staffing the Edge

Noting the importance of staffing choices in edge and core dynamics, Stokes asked the panelists about their hiring decisions: "Do you recruit people who operate at the edge or at the core?" "Do you prefer to hire someone who can go back and forth between the two?"

Ferriero looks for people who are "edgy," which he defined as having both the technical and interpersonal skills to effect change. Livingston looks for "stars," or people who make a tremendous impression on him during their interview and who he senses will push him and the institution. Whitney described his two hiring guidelines as maximum diversity in ability and alignment with values and goals.

Hiring individuals who meet these requirements is a huge recruitment challenge. Livingston discussed the problem of attracting good candidates given the low salaries of cultural organizations, which he jocularly equated with taking a "vow of poverty." He also expressed frustration at the difficulties he encounters in attracting minority candidates. For Ferriero, the biggest roadblock to hiring is the high cost of living in New York. There is also the "Catch 22" of needing to have edgy people on staff in order to attract other edgy people to join your effort.

Discussions about the competencies of edge staff included some novel considerations. Ferriero was less enamored of technical skills ("many people now possess these") as he was of interpersonal skills that can bridge the gaps between the energies of younger staff and the more entrenched views of older staff. It is these skills that "bring along the organization" and are important in moving the edge to the core. Stokes suggested an "open source" attitude might also be an important asset. Individuals who possess this attitude are more favorably disposed to contributing and sharing outside the organization for broader community benefit.

An audience member offered her own experience as an illustration of the importance of interpersonal skills. Describing herself as the sole person working on an edge project at her institution, she spends a great deal of time educating core staff about the project (a skill that, she emphatically noted, was *not* listed on her nine-page job description). Her colleagues do not always understand the purpose of the edge project, the social media being employed, and the reason why the edge project is being funded when core staff positions are being eliminated. She described her efforts to connect with the staff and bring them along in their own professional development in parallel with her project. Livingston sympathized with her story, characterizing it as the "lonely life of a person on the edge" and warning organizational leaders that they must support "edgers" by pushing core staff to embrace their efforts.

Professional development for edge staff was another factor that was considered. How do you keep staff working at the edge? Do they have to look outside their institutions for continued training and expertise? For Whitney and his students, professional development in the university environment takes place in the course of conducting research. Livingston believes an analogous situation exists in the museum environment, i.e., the edge projects you work on provide the opportunities to develop new competencies. Ferriero feels that edge staffers naturally look outward for skill development because they are well connected with a larger community and sharing is part of edge culture. One positive development among NYPL staff who are experimenting with blogs and social networks is that they are creating their own outward-looking networks of colleagues because of the new skills they have developed using social media.

Convincing Board Members of the Value of the Edge

A common dilemma in cultural organizations is convincing board members and trustees of the value of edge activities as a way to highlight possibilities and avenues for change. Whitney notes that the senior executives he works with are exceedingly hard to persuade. He finds it best to convince by demonstration, giving examples or stories that help them to see things differently.

Ferriero makes certain that he knows his board members' "hot button" issues and avoids confrontations over them. He also notes that external influences sometimes can help sway sentiments, citing as an example a recent *New York Times* article about a gaming event held in NYPL's historic Astor Hall. The article reviewed the event in a very positive light and helped to change disapproving attitudes held by some staff around the issue of gaming. Continuing on this theme, Ferriero described gaming as a common hot button issue and recommended a MacArthur Foundation report on the subject (written by MIT professor Henry Jenkins)[56] for those who fail to see the value of gaming as a learning experience.

Livingston feels fortunate to have a board that is eager to learn about ways the organization can change. They *want* to hear from staff working on edge projects. Consequently, his strategy is to "hide in plain sight" and let the edge people talk to the board about what they are doing.

Audiences as Edge and Core

While youth are generally depicted as an edge audience for cultural organizations, the panelists presented contrary experience on this front. Livingston discussed the audience situation in the science museum world, where school groups and parent/child pairings form the core audience. For them, edge audiences are older youths and adults without children. Their challenge has always been getting people to come to a science museum at all stages of their life, not just when they are in elementary school or when they have a child in tow.

The New York Public Library serves more teens than any other constituency, which technically makes them NYPL's core audience. Ferriero thinks the newer communities they are serving—individuals in prison (adults, incarcerated teens, incarcerated mothers with babies) and those seeking job skills and services—comprise their current edge audiences.

An audience member questioned whether we are overlooking important edge audiences because of our focus on youth. By way of example, the "edgiest" audiences at his institution are genealogists and seniors. Ferriero agreed, and added that he believes there is great potential to be had in pairing teens and seniors in transferring technology skills and literacy. The NYPL gaming event that he referred to earlier had a huge number of teens who came with their grandparents/caregivers. This audience mix was an eye-opener for him, suggesting an important group that cultural institutions may be overlooking.

Funding Edge Work

Edge work is always a challenge to fund, and in times of economic stress it is often the first activity to succumb to budget cuts. What steps can cultural institutions take toward funding edge work in a more sustainable manner?

The Museum of Life and Science in Durham funds all its edge work through partnerships with other organizations. Livingston and his staff find people who want to do the same things as they do, and then they partner with them and seek grants for the partnership. Ferriero suggests a strategy used by NYPL for funding its Digital Experience group. Start-up monies came from an external source (The Mellon Foundation), but as the work of this group moves from edge to core, continued support comes from reallocated core resources. Whitney notes the funding strategy in the university world differs from what exists in other cultural and educational institutions. In the university environment, funders will only support work that is experimental, innovative, or novel—the very characteristics that define edge activity.

Evaluation

There was a general sense among panelists that evaluation has moved from an edge to a core activity. Ferriero described NYPL's recently created in-house strategy office that is building metrics to study the

56 Henry Jenkins, Kate Clinton, Ravi Purushotma, Alice J. Robison, and Margaret Weigel, *Confronting the Challenges of Participatory Culture: Media Education for the 21st Century,* Occasional Paper on Digital Media and Learning, MacArthur Foundation, October 19, 2006, www.digitallearning.macfound.org/atf/cf/%7B7E45C7E0-A3E0-4B89-AC9C-E807E1B0AE4E%7D/JENKINS_WHITE_PAPER.PDF.

impact of NYPL work. Livingston said that small to midsized science museums do not have evaluative competencies in house but now work with those who do (large science museums or university researchers) to assess their edge projects. Stokes has observed a shift from summative evaluations that take place at the end of a project to formative ones that occur *throughout* the project. And Whitney pointed out that as evaluation moves into the core, it is also getting more difficult to undertake. How, for example, do you evaluate your impact if you are a node on a visitor's network? It is much easier to measure audience impact at your own website than through social media spaces you do not control.

The flip side of evaluation is planning, and in this arena a key change is the shrinking time horizons that characterize today's planning efforts. Expectations about the pace of change have increased dramatically and are playing out in how cultural institutions plan. For example, a short while ago it was not unusual to develop plans that forecast outward for ten years. Today, most strategic planning is done for a two- to three-year time interval. Organizations can have aspirational ideas that extend for the long term, but action plans must be of a short duration if they are to be successfully implemented.

Bringing the Edge to the Core, or to an End

One critique of edge work is that it can become a fringe endeavor that never gets pulled into the core. To prevent this from happening, Livingston suggested that institutions constantly audit their edge work and make plans to bring it into the core or to end it. Unfortunately, organizations are not comfortable with letting edge projects "die" because doing so is perceived as an admission of failure rather than a critical learning experience. At the Museum of Life and Science, Livingston and his staff often discuss their "failure portfolios" to identify more effective opportunities and ways of working.

Ferriero emphasized the importance of careful monitoring so that fringe activity can be avoided at all costs. A fringe project at NYPL would seriously undermine efforts to change entrenched perspectives and roles that no longer serve the institution or its audiences. He wants NYPL to celebrate experimentation and innovation, opportunities that occur at the edge. For this to happen, the edge must consist of activities that offer what Ferriero termed "a sense of the possible," not the marginal.

The Edge and Education

An audience question about strengthening edge and core activities by partnering with schools opened a discussion about the role of cultural institutions as places for informal learning. There is a growing sense among educators, policy makers, and administrators that schools can no longer deliver everything our society needs in terms of education. The programs and collections of cultural organizations can help extend education beyond school curricula. In this sense, the place of informal learning environments in the educational process is moving from an edge to a core concept.

Marsha Semmel, Deputy Director for Museums and Director for Strategic Partnerships at the Institute of Museum and Library Services (IMLS), summarized this tenth annual WebWise conference by identifying the "take-aways" or lessons offered by the workshop, sessions, discussions, and project demonstrations.

The first lesson is that learners should be at the center of our institutions' activities. Referring to Diana Rhoten's talk about community learning networks and the ecology of learning, Semmel spoke of the informal learning that occurs throughout our lives in environments outside the classroom. A recent National Research Council report on learning science in informal environments outlines the importance of what Semmel called the "life-long learning, life-wide learning, and life-deep learning" that occurs in these environments.[57] Citing the Brooklyn Museum's Flickr Commons experience, she noted how informal learning environments attract people with knowledge, passion, and curiosity. At their best, these environments satisfy basic human desires that game designer Jane McGonigal identified as "time spent with people we like, a chance to be part of something bigger, satisfying work to do, and the experience of being good at something."[58]

To assume larger roles as informal learning environments, cultural institutions must address gaps in their skills and operations. New core competencies such as "socialness, openness, and 'edginess'" are going to be critical. Institutions will need to change perceptions of trust and control, and rethink and redeploy their assets. They also have to identify and use metrics that help determine which of their efforts are successful, and which are not.

Another lesson is to remember the key value that defines our organizations. Museums and libraries are first and foremost public service institutions, worthy of the public trust, and this mandate should govern everything they do. Michael Edson's blunt admonition (stated during his presentation) of "Whose stuff is it anyway?" was a powerful reminder of this fact. While an institution's mission may change with the times, its public service element should always remain in place.

Moving to the broader arena of communities, Semmel acknowledged the power of peer-to-peer learning and the need to better accommodate what she termed "passionate geeks"—individuals with special interests and expertise who want to engage with our institutions. We also must heed John Palfrey's message about the importance of understanding digital natives and adapting our efforts to serve their needs. An increasing amount of research is being conducted among this demographic, as evidenced by the MacArthur Foundation projects highlighted throughout this conference, and by other studies, such as the Sesame Workshop report that addresses the use of mobile technologies to promote learning among youth.[59]

The now-global nature and reach of our communities offer still more lessons. Cultural institutions have to rethink their ability to address audiences. How should libraries and museums strategically select the communities they wish to target? Is there a way they can leverage all communities? Semmel discussed how target audiences are being defined in increasingly novel ways. Nina Simon, for example, mentioned that the Holocaust Museum is discovering a new audience among military and law enforcement communities. David Ferriero spoke of NYPL's work with prison inmates and of the potential of mixed-generation (teen/grandparent) audiences. The Brooklyn Museum discussed the avocational specialists working with them in Flickr Commons.

57 Phillip Bell, Bruce Lewenstein, Andrew W. Shouse, and Michael A. Feder, *Learning Science in Informal Environments: People, Places and Pursuits,* Committee on Learning Science in Informal Environments, National Research Council (Washington, DC: The National Academies Press, 2009), www.nap.edu/catalog.php?record_id=12190#orgs.

58 Jane McGonigal, "Gaming the Future of Museums," presented at the Institute for the Future of Museums, December 2, 2008, www.slideshare.net/avantgame/gaming-the-future-of-museums-a-lecture-by-jane-mcgonigal-presentation.

59 Carly Shuler, *Pockets of Potential: Using Mobile Technologies to Promote Children's Learning,* The Joan Ganz Cooney Center at Sesame Workshop, January 2009, www.joanganzcooneycenter.org/pdf/pockets_of_potential.pdf.

And Rhoten and Palfrey considered the audience of digital natives.

Other lessons emerge from the technology and media arenas. Citing Eli Neiburger's workshop analogy between the Industrial Revolution and the Information Revolution (the hallmark of the former was exchangeable parts, the hallmark of the latter will be exchangeable data sets), Semmel discussed how exchangeable data sets will make it possible for cultural institutions to truly enable engagement and creativity through mash-ups, remixing, and shared social environments. At the same time, she reminded us of keynote speaker Michael Nelson's comment that we are witnessing the *beginning* of the Internet's potential. While we can only guess about the new and remarkable things coming down the road, we do know that we will increasingly rely upon the cloud for storing both our applications and our data, and for providing a convergence environment where everything becomes integrated online.

Semmel offered further lessons in the form of "advice and admonitions," which included practical suggestions ("write like a human") and strategic considerations. Among the latter was a call to leverage the current economic crisis for new entrepreneurial, proactive opportunities. Many speakers (Edson, Bernstein, Marcum, Neal) suggested that cultural institutions should jump-start the process with small, transitional projects that can lead to larger, systemic change. Semmel referred to such efforts as "predella projects," comparing them to the panels found below Renaissance altarpieces that served as areas of artistic experimentation.

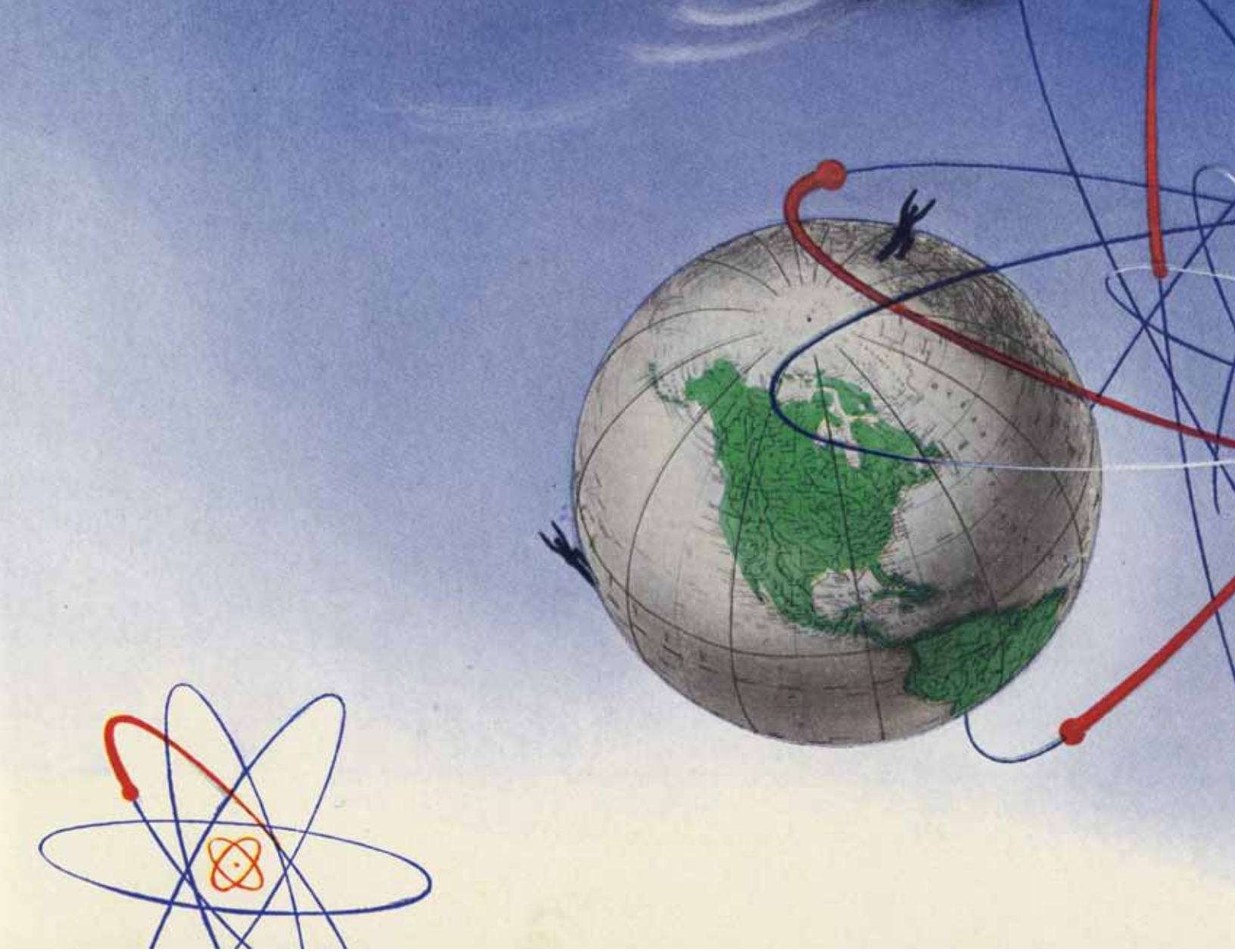
Collaboration was a prevalent theme throughout the conference and offered lessons of its own. Semmel's chorus of "collaborate, collaborate, collaborate!" was tempered with the caveat that institutions must enter into collaborations in a strategic manner, as a means to reach a commonly desired end. She urged cultural organizations to be transparent about processes, technologies, and choices, and to strive to understand the "shifting sands and minefields" surrounding issues of rights and responsibilities. Advocacy will be critical in these efforts. Several speakers (Neal, Rosen, Pallante, Marx) urged libraries and museums to engage in the key policy debates that are surfacing nationally and internationally in the arenas of privacy, intellectual property, and intellectual freedom. Cultural institutions have a respected position in public policy debates and must continue to leverage this reputation on behalf of the public good.

Turning to IMLS developments, Semmel discussed a new IMLS policy report and self-assessment tool issued in July 2009 that addresses the issue of new core competencies and skill development. The report, titled *Museums, Libraries and 21st Century Skills,* includes case studies and a strategic assessment tool for library and museum practitioners to assess their mastery of various skills. She also announced that the WebWise 2010 conference is in the planning stages and the site will be announced shortly. WebWise attendees can keep abreast of all IMLS's activities by subscribing to its newsletter, "Primary Source."[60]

Semmel concluded her wrap-up with a quote from André Gide: "One does not discover new lands without consenting to lose sight of the shore for a very long period of time."[61] While cultural institutions may feel as if they cannot see the shore, there is great learning to be had at this period of uncertainty. Semmel urged museums and libraries to continue sharing their experiences, both the successes and the failures, so that everyone can benefit from this learning.

60 Available for online subscription at www.imls.gov.

61 André Gide, *Les faux-monnayeurs* [The Counterfeiters] (France: Nouvelle Revue Française, 1925).



Resources

Pre-Conference Workshop Speaker Biographies

Dreyer, Lindy & Maddie Grant
Maddie Grant and Lindy Dreyer are "A-list" association/non-profit bloggers on social media strategy, social media marketing and innovation. Maddie worked as Administrative Director/COO for a professional membership association for several years, and Lindy was an agency marketer working for association clients, until they launched their social media strategy consulting firm, SocialFish (www.socialfish.org). They help associations and other membership organizations and non-profits navigate in social media waters.

Lankes, R. David
R. David Lankes is director of the Information Institute of Syracuse, and an associate professor in Syracuse University's School of Information Studies. Lankes has always been interested in combining theory and practice to create active research projects that make a difference. Past projects include the ERIC Clearinghouse on Information and Technology, the Gateway to Education Materials, AskERIC and the Virtual Reference Desk. Lankes' more recent work involves how participatory concepts can reshape libraries and credibility. This work expands his ongoing work to understand the integration of human expertise in information systems.

Lankes is a passionate advocate for libraries and their essential role in today's society. He also seeks to understand how information approaches and technologies can be used to transform industries. In this capacity he has served on advisory boards and study teams in the fields of libraries, telecommunications, education, and transportation including at the National Academies. He has been appointed as a visiting fellow at the National library of Canada, the Harvard School of Education and the first fellow of ALA's Office for Information Technology Policy.

Neiburger, Eli
Eli joined the AADL staff as a helpdesk technician in 1997 and has been managing AADL's IT program since 2000. In his role as Associate Director for IT and Production, he is responsible for overseeing AADL's web products, IT infrastructure and software development, and library events and marketing. Since the launch of the new aadl.org in 2005, Eli has spoken conferences throughout the US and Europe about blogging, web 2.0 and social networking, tagging and the catalog, and producing videogame events at libraries. His book, "Gamers... in the LIBRARY?!" was published by ALA Editions in 2007. Eli is also a member of ACM-SIGGRAPH and is the Gaming Events Chair for the 2009 SIGGRAPH conference in New Orleans.

Ryan, Joseph
Joseph Ryan is Digital Projects Librarian at North Carolina State University Libraries, where he works as a project manager for digital library projects and advocates for good user experience practices. Joseph specializes in bridging the gaps between end users and technology specialists. He is also a founder of Many to Many LLC, a firm focused on social networking application development and consulting. Joseph holds a Master of Science in Library and Information Science from The School of Information Studies at Syracuse University.

Schmidt, Aaron

In the past eight years Aaron Schmidt has been a circulation clerk, reference librarian, and library director. Shortly after completing his MLIS, Schmidt saw the potential of applying new media technologies to libraries and launched successful programs at his suburban Chicago public library. Helping the library connect to its community through things instant messaging, weblogs and social software lead to Aaron publishing articles in Library Journal, School Library Journal, Library High Tech News, Online, and others. He has presented on the topic of library technology and usability throughout the United States, and in Canada, the UK, the Netherlands and Spain. In 2005 Schmidt was named a Library Journal "Mover & Shaker."

Schmidt moved to Portland, Oregon in 2006 and became the director of a nearby public library. He helped the library grow and gain full membership in the Washington County Cooperative. During this time he continued to write, give presentations and workshops and work for other libraries as a consultant.

Currently he is the Digital Initiatives Librarian for the District of Columbia Public Library but still lives in Portland. He helps plan forward thinking, fun projects for the library, helping them connect to the community and teach them about the Read/Write Web. He also assists with website visioning, conducts usability testing, leads the library's Library 2.0 Interest Group and helps coordinate and generate ideas for the library's digital research and development project called DC Library Labs.

He is also a lecturer at the University of Washington's iSchool. You can find him online at his library technology and usability weblog www.walkingpaper.org.

Simon, Nina

Nina Simon is an independent museum exhibit designer with experience in participatory design, alternate reality gaming, and social technologies. She has worked with the International Spy Museum, The Tech Museum of Innovation, the Monterey Bay Aquarium, the Boston Children's Museum and other science, history, and art museums to develop exhibitions and strategic approaches to dynamic, flexible communication with visitors.

Nina runs the blog Museum 2.0 (www.museumtwo.blogspot.com), a top online resource on participatory museum design. She is on the board of the National Association of Museum Exhibitions (NAME) and her work has appeared in major museum magazines and journals including Museum, Museums and Social Issues, and ASTC Dimensions. She lives in the mountains of Santa Cruz, CA and spends her spare time building treehouses and climbing rocks.

Conference Speaker Biographies

Bernstein, Shelley
Shelley is the Chief of Technology at the Brooklyn Museum. Since 1999 she has worked to further the Museum's community-oriented mission through projects including free public wireless access, podcast subscription feeds, cell phone tours and handheld PDAs. She is the initiator and current administrator of the Museum's web initiatives on MySpace, Facebook, Flickr, YouTube, and Twitter. She drives a '74 vw super beetle and she organized *Click! A Crowd-Curated Exhibition.*

Caplan, Priscilla
Priscilla Caplan is Assistant Director for Digital Library Services at the Florida Center for Library Automation (FCLA). Previously she worked at the Office for Information Systems in the Harvard University Library, and as Assistant Director for Library Systems at the University of Chicago. At FCLA she is responsible for the PALMM (Publication of Archival, Library and Museum Materials) program of the state university libraries, and for the Florida Digital Archive, a long-term preservation repository. She is the author of the book, *Metadata Fundamentals for All Librarians,* and of numerous articles on metadata, standards for digital libraries, and digital preservation.

Edson, Michael
Michael Edson is the Smithsonian Institution's Director of Web and New Media Strategy. Michael has worked on numerous award-winning projects and has been involved in practically every aspect of technology and New Media for museums, including content development, digitization, blogging, gaming, public access to collections, information architecture, networking, place-of-business applications, programming, project management, graphic design, animation, audio and video production, mobile platforms, and citizen-created content. Michael helped create the Smithsonian's first blog, Eye Level (http://eyelevel.si.edu), and the first Alternate Reality Game to take place in a museum, Ghost of a Chance. Michael has a BA from Wesleyan University.

Ferriero, David S.
In a career spanning more than four decades, David S. Ferriero has served with distinction as a top executive at two of the nation's greatest academic libraries—MIT and Duke University. In those positions, he led major initiatives encompassing the expansion of facilities, the adoption of digital technologies, and a reengineering of printing and publications. This wide-ranging experience has served him well at the New York Public Library, where he serves in the position of Andrew W. Mellon Director of The New York Public Libraries. As the Mellon Director, Mr. Ferriero's charge is to transform the world-renowned system—encompassing four research libraries and 87 branch libraries—into a completely integrated whole that provides seamless service for its millions of users.

Mr. Ferriero joined the staff of the New York Public Library in 2004 as the Andrew W. Mellon Director and Chief Executive of the Research Libraries. In this capacity, he oversaw The Humanities and Social Sciences Library, which occupies the Beaux-Arts landmark at Fifth Avenue and 42nd Street; The Science, Industry, and Business Library; The Library for the Performing Arts, at Lincoln Center; and the Schomburg Center for Research in Black Culture, in Harlem. In his current position, Mr. Ferriero is unifying these great centers of research with the branch libraries that are a fundamental part of every neighborhood in the Bronx, Manhattan, and Staten Island. He is also responsible for overseeing the development of the New York Public Library's digital strategy, which currently encompasses partnerships with Google and Microsoft, a web site that reaches more than 25 million unique users annually, and a digital library of more than 700,000 images that may be accessed free of charge by any user around the world.

Leff, Cathy

Since 1996, Cathy Leff has served as director of The Wolfsonian–Florida International University, an internationally recognized museum and research center in South Miami Beach. The museum promotes the examination of modern material culture to enhance the understanding and appreciation of objects as agents and reflections of social, political, and technological change. The organization focuses on its extraordinary collection of North American and European decorative, design, propaganda, and fine arts of the 1885-1945 period, donated to Florida International University in 1997 by Mitchell Wolfson, Jr.

Leff was responsible for negotiating the gift agreement with Florida International University and worked with the university to secure annual recurring support from the Florida Legislature. She is responsible for the successful transition of what originally began as a private initiative into a fully public and reputable cultural and educational resource. The institution now enjoys broad-based support, and its collection has been strengthened by private donations and curatorial acquisitions.

For the past 16 years, Leff served as Publisher and Executive Editor of the critically acclaimed Journal of Decorative and Propaganda Arts, which fosters scholarship in the same pivotal period as the Wolfsonian collection. This publication was founded by Mitchell Wolfson, Jr. Now in its twenty-first year, it is published by The Wolfsonian-FIU.

Prior to joining The Wolfsonian, Leff was Vice President of The Wolfson Initiative Corp, and from 1976-87, assistant director of the City of Miami Community Development Department. She received her B.A. from Sophie Newcomb College, Tulane University, and studied one year at the University of Madrid. She did graduate coursework at the University of Miami School of Business, and has taken executive education courses at both Harvard and Stanford's University's Graduate Schools of Business.

Ms. Leff speaks Spanish, French, and Italian, and studies Japanese. She serves on the boards of the Louis Wolfson II Media History Center and Cintas Foundation. She is a member of the Association of Art Museum Directors and the International Conference of Museums.

Livingston, Troy

Troy Livingston is Vice President for Innovation and Learning at the Museum of Life and Science in Durham, NC. He is responsible for taking an outside-in view of the museum that informs and fosters a culture of purposeful, thoughtful change to promote learning for people of all ages.

Areas of current focus are using the internet to create and support learning communities and bringing researchers and the public together in mutual learning experiences about current science and technology.

Examples of leadership roles:

- "Take Two: A Study of the Co-Creation of Knowledge on Museum Web 2.0 Sites," an IMLS-funded collaboration with Science Museum of Minnesota, University of Washington Museology Department and Michigan State University's Writing in Digital Environments Center.
- The NSF-funded Nanoscale Informal Science Education Network's "Forums for Dialog and Deliberation" and NISENET.org's community building efforts.
- "Genome Diner: A Strategy for Community-Researcher Engagement in Genome Sciences," an NIH-funded research study examining changes in attitude and perception of both researchers and participants after an engagement experience that explores the societal and ethical implications of human genomics research.

Troy lives with his wife, Wendy, his son, Dylan (11) and daughter, Emma (8). He enjoys exercising, playing music and trying to satisfy his insatiable curiosity.

Marcum, Deanna

Deanna Marcum was appointed Associate Librarian for Library Services on August 11, 2003. In this capacity she manages 53 divisions and offices whose over 1,800 employees are responsible for acquisitions, cataloging, public service, and preservation activities, services to the blind and physically handicapped, and network and bibliographic standards for America's national library. She is also responsible for integrating the emerging digital resources into the traditional artifactual library–the first step toward building a national digital library for the 21st century.

In 1995, Dr. Marcum 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 (CLIR) in 1997 and served as president until August 2003. CLIR's mission is to identify the critical issues that affect the welfare and prospects of libraries and archives and the constituencies they serve, convene individuals and organizations in the best position to engage these issues and respond to them, and encourage institutions to work collaboratively to achieve and manage change.

Dr. Marcum served as Director of Public Service and Collection Management at the Library of Congress from 1993-95. Before that she was the Dean of the School of Library and Information Science at The Catholic University of America. From 1980 to 1989, she was first a program officer and then vice president of the Council on Library Resources.

Dr. Marcum holds a Ph.D. in American Studies, a master's degree in Library Science, and a bachelor's degree in English.

Marx, Maura

Maura Marx is the first Executive Director of the newly-formed Open Knowledge Commons (OKC), a nonprofit organization dedicated to the ideal of universal access to human knowledge. The OKC was born out of the Open Content Alliance and is funded by the Alfred P. Sloan Foundation. Before coming to OKC, Maura was responsible for founding the Digital Library Program at the Boston Public Library. She was instrumental in forming the Library's commitment to open principles.

Maura began her career in Europe, raising funding for and public awareness of cultural heritage initiatives for institutions like the Guggenheim Museum (Salzburg) and companies including Warner Bros. She's worked in strategic planning, fund-raising, technology planning and public relations for organizations at varying stages of growth. She holds degrees from the University of Notre Dame, Middlebury College and Simmons College.

Neal, James G.

Jim Neal is currently the Vice President for Information Services and University Librarian at Columbia University, providing leadership for university academic computing and a system of twenty-five libraries. His responsibilities include the Columbia Center for New Media Teaching and Learning (CCNMTL), the Center for Digital Research and Scholarship, the Copyright Advisory Office, and the Center for Human Rights Documentation and Research. He participates on key academic, technology, budget and policy groups at the University. Previously, he served as the Dean of University Libraries at Indiana University and Johns Hopkins University, and held administrative positions in the libraries at Penn State, Notre Dame, and the City University of New York.

Neal has served on the Council and Executive Board of the American Library Association and is currently Chair of the Budget Advisory and Review Committee (BARC); on the Board and as President of the Association of Research Libraries; on the Board and as Chair of the Research Libraries Group (RLG), and Chair of the RLG Program Committee of the OCLC Board. He is on the Board and past Chair of the National Information Standards Organization (NISO), and on the Board of the Freedom to Read Foundation. He has also served on numerous international, national, and state professional committees, and is an active member of the International Federation of Library Associations (IFLA).

Neal is a frequent speaker at national and international conferences, consultant and published author, with a focus in the areas of scholarly communication, intellectual property, digital library programs, organizational change and human resource development. He has served on the Scholarly Communication committees of ARL and ACRL and as Chair of the Steering Committee of SPARC, the Scholarly Publishing and Academic Resources Coalition, and currently on the Board of the Columbia University Press. He has represented the American library community in testimony on copyright matters before Congressional committees, was an advisor to the U.S. delegation at the World Intellectual Property Organization (WIPO) diplomatic conference on copyright, has worked on copyright policy and advisory groups for universities and for professional and higher education associations, and during 2005-08 was a member of the U.S. Copyright Office Section 108 Study Group. He was selected the 1997 Academic Librarian of the Year by the Association of College and Research Libraries and is the 2007 recipient of ALA's Hugh Atkinson Memorial Award.

Nelson, Michael

Michael Nelson is currently Visiting Professor of Internet Studies in Georgetown University's Communication, Culture, and Technology Program. Since January 2008, he has been doing research and teaching courses on "The Future of the Internet" and technology trends as well as consulting and speaking on Internet technology and policy.

Nelson is a member of the Board of Trustees of the Internet2 university research consortium and a Trustee of the International Institute of Communication. In February, 2008, he became the chairman of the Information, Computing, and Communications Section of the American Association for the Advancement of Science (AAAS).

Before joining the Georgetown faculty, Nelson was Director of Internet Technology and Strategy at IBM, where he managed a team helping define and implement IBM's Next Generation Internet strategy. His group worked with university researchers on NGi technology, shaped standards for the NGi, and communicated IBM's vision of NGi and the future of computing to customers, policy makers, the press, and the general public. He worked closely with governments around the world on next generation Internet technologies and applications.

Prior to joining IBM in July, 1998, Nelson was Director for Technology Policy at the Federal Communications Commission. There he helped craft policies to foster electronic commerce, spur development and deployment of new technologies, and improve the reliability and security of the nation's telecommunications networks.

Before joining the FCC in January, 1997, Nelson was Special Assistant for Information Technology at the White House Office of Science and Technology Policy where he worked with Vice President Al Gore on telecommunications policy, information technology, encryption and online privacy, electronic commerce, and information policy.

Nelson has a B.S. in geology from Caltech, and a Ph.D. in geophysics from MIT.

Palfrey, John

John Palfrey is Henry N. Ess III Professor of Law and Vice Dean for Library and Information Resources at Harvard Law School. He is a faculty co-director of the Berkman Center for Internet & Society at Harvard University. He is the co-author of "Born Digital: Understanding the First Generation of Digital Natives" (Basic Books, 2008) and "Access Denied: The Practice and Politics of Internet Filtering" (MIT Press, 2008). His research and teaching is focused on Internet law, intellectual property, and international law. He practiced intellectual property and corporate law at the law firm of Ropes & Gray. Outside of Harvard Law School, he is a Venture Executive at Highland Capital Partners and serves on the board of several technology companies and non-profits. John served as a special assistant at the US EPA during the Clinton Administration. He is a graduate of Harvard College, the University of Cambridge, and Harvard Law School.

Pallante, Maria

Maria Pallante is Associate Register for Policy and International Affairs at the U.S. Copyright Office, having previously served as Deputy General Counsel.

As Associate Register, she assists the Register of Copyrights in advising the U.S. Congress and executive branch agencies on matters of law and policy. She and her staff represent the Copyright Office in U.S government delegations to the World Intellectual Property Organization (Geneva, Switzerland) and in meetings and negotiations with foreign governments.

From 1999 -2006, Ms. Pallante served as the chief intellectual property counsel for the Solomon R. Guggenheim Foundation and worldwide Guggenheim Museums, where she advised on a range of business and programmatic initiatives, including Internet and digitization projects. She is a graduate of The George Washington University Law School.

Proctor, Nancy

With a PhD in American art history and a background in filmmaking, curation and art criticism, Nancy Proctor published her first online exhibition in 1995. She co-founded TheGalleryChannel.com in 1998 with Titus Bicknell, aiming to publish virtual tours of innovative exhibitions alongside comprehensive global museum and gallery listings. TheGalleryChannel was later acquired by Antenna Audio, where Nancy headed up New Product Development for nearly 8 years, introducing the company's multimedia, sign language, downloadable, podcast and cellphone tours. She also led Antenna's sales in France from 2006-2007. When Antenna Audio was acquired by Discovery Communications in 2006, Nancy worked with the Travel Channel's product development team and subsequently headed up research and development for the nascent Discovery Audio brand. She now works cross-platform again as Head of New Media at the Smithsonian American Art Museum (AmericanArt.si.edu), where she continues to teach, lecture and publish widely on museum interpretation for digital platforms including at http://MuseumMobile.info.

Radice, Anne-Imelda M.

On December 13, 2005, the President of the United States appointed Anne-Imelda M. Radice, Ph.D., a distinguished art and architecture historian, museum professional, and administrator, to be Director of the Institute of Museum and Library Services. The U.S. Senate confirmed Radice's nomination on March 13, 2006. IMLS, an independent United States government agency, is the primary source of federal support for the nation's 122,000 libraries and 17,500 museums. Her term extends to March 13, 2010.

During her tenure, Radice created and is providing leadership for *Connecting to Collections: A Call to Action* (see www.imls.gov/collections), a national conservation initiative designed to raise public awareness, inspire action, and encourage private sector support. The initiative includes a National Conservation Summit, four forums on conservation taking place across the country, the distribution of 3,000 Conservation Bookshelves, and collaborative planning grants that will advance every state's collective conservation goals. The initiative also includes the development of a resource-laden Web site and a conservation video that collecting institutions can use to raise awareness and funds.

Radice's enduring commitment to conservation and preservation was recognized in April 2008 when she was honored with the Forbes Medal for Distinguished Contribution to the Field of Conservation from the American Institute for the Conservation of Historic and Artistic Works (AIC) and received a resolution of appreciation from the American Association of Museums (AAM). In December 2008, President George W. Bush awarded Radice the Presidential Citizens Medal, the second highest honor that can be conferred on a citizen, in recognition of her exemplary service to the nation.

As a member of the U.S. Mission to UNESCO (United Nations Educational, Scientific and Cultural Organization), Radice has had the opportunity to

help shape international cultural policy. Under her direction, IMLS began the International Strategic Partnerships initiative to establish international strategic partnerships and make connections around the globe. In May 2008, she served on the faculty of the Salzburg Global Seminar in Austria, sharing her expertise on international exchanges of knowledge and objects, and recommending ways to overcome circulation obstacles.

Under Radice's direction, the agency has established the Office of Policy, Research and Communications to analyze trends, promote best practices, and evaluate programs. In December 2007, the agency published a study on effective youth programming in libraries and museums followed by guides for practitioners and policy makers on the best uses of this data. She also launched the first study of public funding for the nation's museums, which was released in 2008. In 2007, the agency made its inaugural release of nationwide statistics on state and public libraries.

In honor of the agency's tenth anniversary, Former First Lady Laura Bush awarded the inaugural National Medals for Library and Museum Service to ten outstanding institutions at a White House ceremony in January 2007. Radice recommended elevating this honor from an award to a medal and increased the number of recipients from six to ten.

In 2007, Radice established The IMLS Leadership Lecture, a national policy event established to inform policy, inspire new leaders and new leadership ideas, and spur innovation and action.

Prior to joining the IMLS, Radice had a strong record of public service. She was most recently Acting Assistant Chairman for Programs at the National Endowment for the Humanities. Before joining the National Endowment for the Humanities, she served as Chief of Staff to the Secretary of the United States Department of Education. In the early 1990s she served as the Acting Chairman and Senior Deputy Chairman of the National Endowment for the Arts. Radice was Chief of the Creative Arts Division at the United States Information Agency. She was the first Director of the National Museum of Women in the Arts and has been Curator and Architectural Historian for the Architect of the Capitol and an Assistant Curator at the National Gallery of Art.

Radice has a Ph.D. in Art and Architectural History from the University of North Carolina, Chapel Hill (1976), an MBA from American University (1985), and a BA in Art History from Wheaton College, Norton, MA (1969). Radice also has an MA from the Villa Schifanoia in Florence, Italy (1971), and did graduate coursework in northern Italian architecture at the Massachusetts Institute of Technology.

Ray, Joyce

Joyce Ray has directed the agency's discretionary library programs since 1997. An archivist by training, Joyce also has responsibility for agency-wide digital initiatives. Prior to joining IMLS, she held positions as Assistant Program Director for Technological Evaluation and Acting Program Director, National Historical Publications and Records Commission; Special Assistant to the Archivist, National Archives and Records Administration; and Head of Special Collections, the University of Texas Health Science Center at San Antonio.

She is a certified archivist and has a Master of Library Science from the University of Texas at Austin. In addition, she has a PhD in American history, with a specialty in the social history of women and medicine in the U.S., and has taught women's history at Georgetown University. She has presented at numerous professional meetings about IMLS and its programs, and about trends in libraries, archives and museums relating to technology, professional education, and convergence.

Rhoten, Diana

Diana Rhoten is director of the Knowledge Institutions program and the Digital Media and Learning project at the Social Science Research Council. With funding from the MacArthur Foundation, Rhoten is leading the Learning Networks pilot project in New York City, which uses a design-driven methodology to help non-formal learning institutions develop collaborative and interactive ways of crafting digital media and learning strategies. In addition to her role at the Council, Rhoten also spent the last two years as the founding program director of the Virtual Organizations & the CyberLearning programs at the National Science Foundation. Prior to coming to the Council in 2003, Rhoten was co-founder and research director of the Hybrid Vigor Institute, an assistant professor of international development and education policy at the Stanford University School of Education, and an education policy analyst and advisor on youth development and higher education for the Governor of Massachusetts.

Rhoten's research focuses on the social and technical conditions as well as the individual and organizational implications of different approaches to knowledge production and dissemination. Much of her recent work concerns the study of interdisciplinary and collaborative practices in science. She is particularly interested in the implications that geographically distributed and intellectually diverse networks pose for traditional institutions—particularly in light of the many emerging technologies. Recent publications can be found in Annual Review of Law and Social Science, Thesis Eleven, Science, Nature, Research Policy, Journal of Education Policy, and Comparative Education Research. She has also recently completed a co-edited volume entitled Knowledge Matters: The Transformation of Public Research University (with Craig Calhoun, Columbia University). In addition to publishing scholarly works on the topic, Rhoten works with various organizations on the design, implementation, and assessment of new organizational forms for research and training. Her earlier research focused comparative analyses of educational policies in North and South America, with attention to questions on systemic reform as well as assessment and accountability.

Rhoten was a Sigma Xi Distinguished Lecturer (2005 - 2007), an award that honors individuals at the leading edge of science. She has a Ph.D. in social sciences and educational policy and an M.A. in sociology from Stanford University, as well as an M.Ed. from Harvard University and an A.B. from Brown University.

Rosen, Jeffrey

Jeffrey Rosen is a professor of law at The George Washington University and the legal affairs editor of The New Republic. His most recent book is The Supreme Court: The Personalities and Rivalries that Defined America. He also is the author of The Most Democratic Branch, The Naked Crowd, and The Unwanted Gaze. Rosen is a graduate of Harvard College, summa cum laude; Oxford University, where he was a Marshall Scholar; and Yale Law School.

Professor Rosen's essays and commentaries have appeared in the New York Times Magazine, The Atlantic Monthly, on National Public Radio, and in The New Yorker, where he has been a staff writer. The Chicago Tribune named him one of the 10 best magazine journalists in America and the L.A. Times called him, "the nation's most widely read and influential legal commentator." Professor Rosen lives in Washington, D.C., with his wife Christine Rosen and two sons.

Semmel, Marsha L.

Marsha L. Semmel is Deputy Director, Office of Museum Services, and Director, Office of Strategic Partnerships, at the Institute of Museum and Library Services (IMLS), an independent federal agency dedicated to building the capacity of our nation's museums and libraries. In that capacity, she oversees the IMLS museum grant programs; contributes to agency policy development; and creates and maintains collaborations with other federal agencies and private/public organizations. Ms. Semmel has been president and CEO of the Women of the West Museum in Colorado and president and CEO of Conner Prairie, a living history museum in Indiana. She has served as Director, Division of Public Programs, at the National Endowment for the Humanities; Assistant Director, the B'nai B'rith Klutznick National Jewish Museum; and Associate Program Coordinator, the Smithsonian Institution's Resident Associate Program. A frequent speaker and writer on museums, cultural policy, and informal learning, Ms. Semmel has been a Fellow at the National Endowment for the Arts and served on the Board of Directors of the American Association of Museums and the Colorado Digitization Program. She began her career as curator and educator at The Taft Museum in Cincinnati, Ohio. Marsha received a BA from the University of Michigan (Phi Beta Kappa) in English and the History of Art and an MA in Art History from the University of Cincinnati.

Simon, Nina

Nina Simon is an independent museum exhibit designer with experience in participatory design, alternate reality gaming, and social technologies. She has worked with the International Spy Museum, The Tech Museum of Innovation, the Monterey Bay Aquarium, the Boston Children's Museum and other science, history, and art museums to develop exhibitions and strategic approaches to dynamic, flexible communication with visitors.

Nina runs the blog Museum 2.0 (www.museumtwo.blogspot.com), a top online resource on participatory museum design. She is on the board of the National Association of Museum Exhibitions (NAME) and her work has appeared in major museum magazines and journals including Museum, Museums and Social Issues, and ASTC Dimensions. She lives in the mountains of Santa Cruz, CA and spends her spare time building treehouses and climbing rocks.

Stokes, Benjamin

Benjamin Stokes is a program officer at the MacArthur Foundation in their portfolio on Digital Media and Learning. Benjamin is a co-founder of Games for Change (G4C), a nonprofit and national movement advancing the use of digital games for positive societal change. Prior to this, he was the e-learning architect and a program manager at NetAid's program on Global Citizenship. This work included the 2004 launch of the Peter Packet Game and Challenge in collaboration with Cisco Systems. He was the originator of NetAid's interactive VolunteerGuru guidance counselor and previously co-managed the developing world's preeminent online volunteering service in coordination with the United Nations Volunteers.

Before NetAid, Ben produced and edited virtual fieldtrips and online research products at Bigchalk/ProQuest, which serves more than 40,000 K–12 schools. He has taught in a number of contexts, including applied logic and wilderness survival for middle school students. Ben graduated from Haverford College in physics, and earned his French minor while studying in Senegal. Stokes has also worked with the CREA House to develop a living wage standard for the U.S.-Mexico border region.

Whitney, Patrick

Professor Patrick Whitney is the dean of the Institute of Design, Illinois Institute of Technology and is the Steelcase/Robert C. Pew Professor of Design.

Professor Whitney has published and lectured throughout the world about how to make technological innovations more humane, the link between design and business strategy, and methods of designing interactive communications and products. His writing has focused on new frameworks of design that respond to two transformations: the shift from mass-production to flexible production and the shift from national markets to markets that are both global and "markets of one."

He has been on the jury of numerous award programs, including the U.S. Presidential Design Awards, was a member of the White House Council on Design, and was chairman of the program of the 1978 U.S. Conference of the International Council on Graphic Design Associations (ICOGRADA), which was the first major meeting addressing the issues of evaluating design from the perspective of users. Professor Whitney was the president of the American Center for Design (ACD) and the editor of Design Journal, its annual publication. He is on several advisory boards in the U.S. and abroad and is a trustee of the Global Heritage Fund.

He consults and conducts executive workshops for numerous corporations and organizations. These have included Aetna, BP, Lenovo, McDonald's, Procter & Gamble, Steelcase, Texas Instruments, Zebra Technologies, and departments of the governments of Denmark, Hong Kong, India, Japan, and the UK.

In addition to speaking at major design conferences throughout the world, Professor Whitney frequently speaks at conferences beyond the design field, such as China Daily's CEO Summit, the Delhi Sustainable Development Summit, the 50th anniversary of the Aspen Institute, and the TED conference. He is the principal investigator of several research projects at the Institute of Design, including Global Companies in Local Markets, Design for the Base of the Pyramid, and Schools in the Digital Age. His work has received support from the John D. and Catherine T. MacArthur Foundation, the Joyce Foundation, the National Endowment for the Arts, and numerous corporations.

The Arts Network: The Arts Broadcasting System (TABS)

http://theartsnetwork.net
Homer Gutierrez, IT Director
Dallas Museum of Art

The Arts Broadcasting System (TABS) is the Museum's plan to use technology to connect the broadest audience with great works of art in diverse ways. By taking a comprehensive approach to content management, we create a physical system that is sustainable, and a program development model that targets audiences and engages previously siloed internal business units. By applying what we learn about our audiences through our ongoing Levels of Engagement with Art (LOEA) studies, and applying industry standards in our technology plan, the TABS project can enhance museum and on-line visits and better educate visitors through rich content and increased accessibility. Focus is on quality programming, not hardware.

Civil Rights Digital Library (CRDL)

www.civilrightslibrary.org
P. Toby Graham, PhD, Director, Digital Library of Georgia and Acting Director, Hargrett Rare Book & Manuscript Library
University of Georgia

The CRDL is the most ambitious and comprehensive effort to date to provide Web-based access to educational materials on the Movement. Its three components include: 1) a video archive of 30 hours of unedited news footage allowing users to be nearly eyewitnesses to key civil rights events; 2) a portal to nearly 150 collections of original documents and multimedia from libraries, archives, museums, public broadcasters, and other organizations across the nation; and 3) instructional materials for teachers. The CRDL is based at the University of Georgia and is an initiative of GALILEO, Georgia's virtual library.

Creating Communities: Digitizing Denver's Historic Neighborhoods

Jim Kroll, Manager, Western History
Denver Public Library

The Denver Public Library, in partnership with the City of Denver, the Colorado Alliance of Research Libraries, Denver Historical Society, University of Colorado at Denver Auraria Library, and University of Denver Penrose Library, will inventory, catalog, and digitize historic documents of the City and County of Denver, linking them to existing information about buildings and neighborhoods and preserving the digital files in the Alliance Digital Repository. This project will create a model of local public-private collaboration to preserve and provide access to cultural and historical materials.

Developing Advanced Technologies for the Imaging of Cultural Heritage Objects

http://c-h-i.org/featured_projects/feat_proj_imls.html
Marilyn J. Lundberg, Ph.D., Associate Director, West Semitic Research and Associate Editor, MAARAV
Mark Mudge, President
Cultural Heritage Imaging

The University of Southern California has formed a partnership with Cultural Heritage Imaging to develop technology that is capable of providing a three-dimensional, multi-view representation of cultural objects that will be downloadable and available over the Internet. This project is a modification of Reflection Transformation Imaging, which until now presented views of only one surface of the objects. The project should result in a tool that will simplify the technology for ease of use by almost any museum. It will also produce the complete process history for each digital object, enabling replication by scholars. The target audience includes museums of all sizes, scholars and students of material culture, cultural heritage professionals, and the interested public. This project has the potential to set a new standard of best practice for digital representations of cultural heritage material.

Explore Modern Art

www.sfmoma.org/explore
Dana Mitroff Silvers, Head of Online Services
San Francisco Museum of Modern Art

Explore Modern Art is an innovative online learning resource at the heart of the new San Francisco Museum of Modern Art website that seamlessly integrates and expands the institutions' interpretive multimedia resources, online collections records, and calendar of public programs. This highly visible, intuitive, and easy-to-navigate environment provides web visitors with a rich set of stories about the art and artists in SFMOMA's collection, with access to different levels of information aimed at users with varying interests and amounts of knowledge. The goal of Explore Modern Art is to create an interactive educational space designed to encourage chance discovery, contextualize the Museum's collection and exhibitions, and stimulate greater engagement with modern and contemporary art and with SFMOMA.

Homework NYC Widgets

Michael Lascarides, Digital User Analyst
The New York Public Library

The New York Public Library (NYPL) and its partners, the Brooklyn Public Library and the Queens Borough Public Library, are creating a set of digital tools for homework help that will be responsive to young people's information-gathering tendencies, research needs, and expectations. These activities are implementing the findings of a successful 2007 IMLS Collaborative Planning Grant awarded to the three library systems called, The Information-Gathering Techniques and Online Behaviors of Tweens and Teens. The suite of tools, called Homework NYC widgets, will take core homework support into the social platform realm (e.g. Facebook, mySpace, iGoogle), providing students with a method of getting authoritative online homework assistance that more closely matches their "normal" online behaviors. The final product will be a set of tools that can be easily implemented by other organizations seeking to engage young people with library resources in a virtual environment.

NJVid Project

www.njvid.net
Sandra L. Miller, Ed.D., Director of Instruction & Research Technology, NJVid PI
William Paterson University

William Paterson University's NJVid project will create and test a statewide digital video repository and portal with tools and services, providing "lectures on demand," licensed commercial videos, and locally owned videos for use by members of the partner collaboratives. Three major consortia representing most educational information organizations throughout the state—VALE (Virtual Academic Library Environment); New Jersey Digital Highway, the statewide cultural heritage consortium; and NJEdge.Net, the statewide Internet2 networking consortium—will incorporate and extend their video resources and services in this strategic initiative. William Paterson University, Rutgers University, and eight other institutions—including universities, community colleges, a high school, a county public library system, and a museum—will serve as initial testers of this model integrated resource.

Oral History of Illinois Agriculture

www.museum.state.il.us/avbarn
Robert E. Warren, Curator of Anthropology
Illinois State Museum

The Illinois State Museum is developing a new interactive Web module—the Audio-Video Barn—featuring digital oral-history interviews with people involved in agriculture and rural life in Illinois. Sixty-four interviews are being digitized from audio tapes archived at university libraries. We are also video-recording 50 new interviews with people of various ages who reflect the tremendous breadth of agriculture in Illinois. The audio and video recordings are being digitally indexed by theme, topic, and location so Web visitors will be able to search them interactively for subjects of special interest.

Our Americas Archive Partnership

http://oaap.rice.edu
Geneva Henry, Executive Director,
Center for Digital Scholarship
Rice University Fondren Library

The Fondren Library at Rice University, in partnership with the Maryland Institute for Technology in the Humanities (MITH) at the University of Maryland, will develop an innovative approach to helping users search, browse, analyze, and share content from distributed online collections through their "Our Americas Archive Partnership" (OAAP). OAAP will incorporate recent Web 2.0 technologies to help users discover and use relevant source materials in languages other than English and will improve users' ability to find relevant materials using domain-specific vocabulary searches. Two online collections of materials in English and Spanish, The Early Americas Digital Archive (EADA), and a new digital archive of materials to be developed at Rice, will provide an initial corpus for testing the tools.

Revolutionary City: Developing a Virtual Reality Model of Williamsburg in 1776

http://research.history.org/DHC/VW.cfm

Lisa Fischer, Director of the Digital History Center
The Colonial Williamsburg Foundation

"Revolutionary City" involves the creation of a 3D-computer model of Williamsburg's east end in 1776. The Colonial Williamsburg Foundation, in partnership with the Institute for Advanced Technology in the Humanities, will virtually reconstruct the Duke of Gloucester Street from Botetourt to Eastern Street (Waller Street today) to provide a fresh interpretation of an area of Williamsburg that served as the backdrop for critical events leading to the American Revolution. The project team will produce highly-detailed 3D virtual models, interior and exterior, of five unique sites: the Capitol, the Public Records Office, Charlotte Dickson's residence/store, the Raleigh Tavern, and the Douglass Theater. In addition, we will scan and model the façades of twentythree buildings and recreate the historic landscape within the project area. Aimed at both the general public as well as researchers, the interactive model will be linked to the disparate data sets—research reports, images, manuscripts, archaeological and architectural catalog records related to each site—presented via a "Documentation Window," so that the model will also be a 3D database interface for accessing the Foundation's rich digital resources.

Take Two: A Study of the Co-Creation of Knowledge on Museum Web 2.0 Sites

https://sites.google.com/site/taketwoinitiative

Jeff Grabill, Professor of Rhetoric and Professional Communication
Michigan State University

The "Take Two" project examines the impact of Web 2 technologies on knowledge creation and museum practice. The project has two parts. One part is an examination of knowledge building activities on a science museum blog (Science Buzz), and the second part is an examination of the impact that Web 2.0 technologies have on museum practice (Museum of Life Science in North Carolina). The study is shaped by the following questions: (1) What is the nature of the community that interacts through the Science Buzz? (2)What is the nature of the online interaction? (3) Do these online interactions support inquiry and learning for this user community? (4) Do these online interactions support inquiry, learning, and change within the museum—what is the impact on museum practice?

Voices for the Lake

www.echovermont.org/ourmission/vfl.html

Bridget Butler, Manager, Voices for the Lake
ECHO Lake Aquarium & Science Center
Leahy Center for Lake Champlain

Voices for the Lake (VFL) is ECHO's initiative to inspire Champlain Basinstewardship through conversations & connections enabled by social technologies like Facebook and YouTube. Through an outreach program which involves video capture, VFL will collect stories and concerns about the lake from different communities in the Lake Champlain Basin. These videos will be used online at the VFL website, on a dedicated YouTube channel and, ultimately, in an interactive exhibit at the ECHO Lake Aquarium and Science Center. The goal of the project is to raise awareness and build community around lake stewardship by using real stories from people who feel passionate about Lake Champlain.

Bettr@

Kevin Denney, Illinois Institute of Design

Bettr@ is a consumer internet application that helps groups of people who share a common interest get better together more effectively. Bettr@ is an outgrowth of the Electronic Learning Record project at the IIT, Institute of Design, funded by the MacArthur Foundation as part of their Digital Learning Initiative. Bettr@ helps individuals and groups track how they learn, plan how to get better, and gives them tools to get better together.

Common Sense Media: Engaging Parents in Young People's Digital Media Lives

Linda Burch, Common Sense Media

How can parents gain the understanding, skills and confidence to help young people grow and thrive in the new 24/7 media culture? With support from the MacArthur Foundation, Common Sense Media (www.commonsensemedia.org) has developed an online resource and comprehensive media education program for parents, organized by age and grade, that includes video and print materials on topics ranging from social networking to "how to twitter" to active gaming, as well as over 10,000 reviews and recommended lists of media titles that highlight what is age-appropriate, educational, and fun for kids. Last fall we launched a new Program for Educators section of our website that provides schools, after school programs, and libraries with a flexible program to educate and engage parents, and a vibrant online community to pose questions, share concerns and best practices. Our ultimate goal is to encourage parents and educators to embrace children's digital lives, understand both the perils and possibilities, and work together to guide a generation of young people to become safe, smart, and ethical creators and consumers of new media.

Digital Youth Network

Akili Lee, Digital Youth Network (University of Chicago)

The Digital Youth Network (DYN) is a hybrid digital literacy program that creates opportunities for youth to engage in learning environments that span both school and out-of-school context. The primary goal of DYN is to develop a model program that enables urban youth to become discerning new media consumers and fluent media producers. This model is one that explicitly combines the affordances of the different contexts where youth spend their time into one learning environment. In addition to extensive in-school and after-school programming, DYN has been developing a custom social networking platform used to provide extended mentorship and learning opportunities for students.

Global Kids: Digital Media Initiative and Philanthropy in Virtual Worlds Projects

Rik Panganiban, Global Kids

Over the past three years, Global Kids has been a leading educational institution exploring the affordances of virtual worlds for learning, civic engagement and youth development. Our approach is rooted in our work with teens in the New York City area that emphasizes constructivist learning and a strengths-based orientation toward youth development. Our virtual world activities can be roughly grouped under these categories: event simulcasting, youth media creation (movies, games, art, etc), youth dialogues, institutional capacity building and field-building among educators in this space. True to our name, our overall goal is to prepare youth to be 21st century citizens, able to engage with global issues, success scholastically, and become leaders in their communities.

Local and Mobile Games Lab

Kurt Squire, University of Wisconsin, Madison

Mobile Media are changing how we relate to information and place, making information and social networks available just-in-time and on demand. This research project is investigating how youth are using mobile media for learning and what kinds of pedagogies are effective with this emerging medium.

NYC Networked Learning

Diana Rhoten, Social Science Research Council

Colleen Macklin, Parsons the New School for Design

In the NYC Networked Learning project, we use design as a process for helping libraries and museums in New York City find collaborative and interactive ways of crafting social media strategies that meet their individual needs and leverage their collective efforts. First, the project seeks to help institutions understand the broad contextual shifts and institutional implications engendered by digital media and participatory culture. Second, by engaging in collaborative brainstorming and prototyping methods, the project will help institutions surface both opportunities and challenges to incorporating digital media and technology into their programming, as well as imagine new practices and innovate alternative products that could yield networked learning across multiple institutions.

Our Courts: 21st Century Civics

Dan White, Filament Games

Dan Norton, Filament Games

Eric Keylor, Arizona State University

Our Courts is a free, interactive, web-based program designed to teach and engage students in civics. As part of the program, students will be able to play a video game to explore civic and judicial concepts. The player is a Guardian of Law who must establish Rule of Law in a futuristic multicultural society inhabited by humans, alien species, and intelligent robots. Students will not only learn about American history and the American legal system but will also improve their literacy and argumentation skills. The project was conceived by retired Supreme Court Justice Sandra Day O'Connor and is being jointly developed by Georgetown Law, Arizona State University, and Filament Games (Madison, Wisconsin).

PETLab

Colleen Macklin, Parsons the New School for Design

Alex Quinn, Games for Change

PETlab is a joint project of Games for Change and Parsons The New School for Design in New York City. It is a place for testing prototyping methods and the process of collaborative design with organizations interested in using games as a form of public interest engagement. Through our work, we connect with scholars and designers in the field of digital media, practitioners working in the spheres of education and social issues, and people of all ages at play.

Project New Media Literacies

Erin Reilly, MIT

Project New Media Literacies (Project NML) is a research initiative under Comparative Media Studies program at MIT. Our central goal is to engage educators and learners in today's participatory culture. The project identifies some of the core social skills and cultural competencies that young people need to acquire and reflect on if they are going to be full participants in this new media environment. Project NML will showcase its new resource—The Learning Library—an application that collectively houses usergenerated media and thought-provoking, interactive challenges. The Learning Library will appeal to multiple users. It offers students a variety of ways to explore and practice the skills needed in the new media culture and offers teachers tools for applying New Media Literacies in learning contexts.

Scaling Out Virtual Worlds: Growing A 21st Century Curriculum

Sasha Barab, Indiana University

Through a grant from the MacArthur Foundation, we are systematically investigating the ways that a multiuser game-based curriculum both transforms, and is transformed by, its use in particular classrooms, and how these transformations differ across multiple classrooms, in different cultural contexts, and across the world. Our designed environment, called Quest Atlantis (QA), is a 3D multiuser virtual environment that has a user base of over 20,000 children and 1,000 teachers worldwide (see http://QuestAtlantis.Org). Though QA was designed to be used in classrooms and to support the learning of academic content, its game-based participatory structures, underlying pedagogical assumptions, focus on knowledge-for-use, and commitment to inspire engaged citizenship together provide a necessary contrast to the practices that currently dominate much of school.

Virtual Worlds & Learning

Constance Steinkuehler, University of Wisconsin, Madison

This project investigates the forms of thinking and learning that occur naturally in virtual worlds (such as online games) and how we might incubate those practices in the context of informal learning environments. Research studies focus on six main themes: collective problem solving, digital & print literacy, informal science reasoning, computational literacy, reciprocal apprenticeship, and pop-cosmopolitanism. Our after school program targets adolescent boys in particular and attempts to use online games to foster literacy learning.

WhyReef

Audrey Aronowsky, The Field Museum

Johanna Thompson, The Field Museum

In partnership with Numedeon, the creators of Whyville.net, Whyreef engages young people ages 8-15 in the virtual exploration of coral reef ecosystems. Whyvillians learn about coral reef biology and conservation by diving on the reef and interacting with a variety of modules including fast games and puzzles. Through these activities, whyvillians identify common reef species, monitor reef populations, and build a food web for the reef ecosystem. Whyvillians track their data, learn about species habits and biology, and record their thoughts using a reef journal. Periodically, the healthy reef is disturbed by a calamity such as coral bleaching or overfishing. The whyville community responds by working together to understand and solve these crises using a reef simulator, signing petitions, and writing management strategies. Whyreef will launch March 30, 2009.

Why Should an Institution Conduct an IP Audit?

- To create an IP policy that accurately reflects institutional assets and needs
- To highlight existing IP practices and make adjustments accordingly
- For the sheer joy of inventory: what do you have? Where did it come from?
- To trigger and facilitate creative projects using found "assets"
- To monitor compliance (for your use of third party IP and vice versa)

When should an Institution Conduct an IP Audit?

- Regularly
- Prior to a business dealing or new project, e.g. prior to digitizing the collection
- With introduction of a new rights or permissions employee
- As result of law suit

Who Should Conduct an Institution's IP Audit?

- Anyone dealing with or benefiting from the Assets in the Ordinary Course of Business
- Audit leader must be someone who knows what she/he does NOT know
- Often best to conduct department-specific audits, followed by larger inter-departmental reports

What Are You Looking For: The Immediate Goals of the IPAudit

- Documents and other Written evidence that rights are owned by Institution or some other 3rd Party
- Evidence that the rights have expired
- Evidence that claimed ownership is invalid

Where are the Answers?

- Know Your Institution's Work Load
  Evidence of Ownership will be found in employee agreements, acquisition documents, licenses, loan forms, gift correspondence, subscriptions, licenses, exhibition contracts, volunteer policies, shrink-wrap and click-wrap agreements, inventory slips, invoices, purchase orders, releases
- Know Your Institution's Processes
  Relevant Documents may be found in various departments, in whole or in parts: Curatorial, Registrars, Development/Major Gifts, Education, Information Technology, Press, Publications, Photography, Archives, Licensing, Director's Office, Museum store, Education

What Does it All Mean: Recognizing Relevant Language in Relevant Documents

- Work-for-hire
- Assignments
- Exclusive licenses
- Non-exclusive licenses (including oral and implied)
- Scope including right to sublicense
- Media
- Territory
- Duration
- Conditions or restrictions

Getting Started: Creating a Systematic Process

- Distinguish works created by full and part-time staff in their capacities as employees (no written documents necessary)
- Distinguish works created by freelancers or volunteers as work-for-hire (need written documents)
- Distinguish works created by third parties but not subject to work-for-hire (need written assignments, licenses, contracts or evidence of oral or implied permission.

Shooting Holes in the Findings and Double-checking the Conclusions

- Is the copyright expired?
- Has the copyright been forfeited for failure to observe legal rules?
- Does the content in question rise to copyrightability in the first place?
- Is the copyright valid in one country but not all countries?
- If the copyright is subject to restoration, has the owner fulfilled its notice requirements?
- Is there more than one copyright, e.g. in a photo of an artwork?
- Are there compilation copyrights, e.g. in a website of otherwise non-copyrightable facts?
- Are there layers of copyright, e.g. in the collective layout of a newspaper and in individual contributions?
- Are there contractual restrictions that may make copyright findings unhelpful, e.g. no photography of an artwork on loan?

The Results: Making Sense of the Audit and Creating Categories for Risk Assessment

- Copyright is clearly in the public domain
- Copyright is valid and clearly owned by the Institution
- Copyright is valid and clearly owned by someone else who is identifiable
- Copyright is valid and seemingly owned by an unidentified party
- The institution has partial copyright or specific usage rights but note restrictions and conditions
- A third party purports to own the copyright but further analysis may be beneficial to determine public domain, additional heirs, implied licenses and so forth

The Next Step: Managing Intellectual Property Assets Well and Assessing Value

- Review employment, independent contractor and volunteer agreements
- Polish forms and routine documents to clarify rights ownership
- Implement IP Policies
- Assess value: is it market based or of other value to the institution's mission?
- Create Staff Intranet, databases and info systems for tracking rights ownership and related facts

The Audit Summary: The Three Golden Rules

1. Knowledge Comes from Experience
2. Practice Makes Audits Easier
3. Clear Answers are Not Possible for All Situations

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Glossary

Alternate reality game (ARG)—A genre of games in which players interact with a fictional world by pursuing both online and real-world activities. ARGs are highly interactive, with players working together in groups or with other communities to solve mysteries or address challenges. For more information, see http://en.wikipedia.org/wiki/Alternate_reality_game.

Backchannel—A platform that allows people to maintain real-time, online conversations (in a chat-like forum) alongside live spoken remarks. Backchannel software applications are often used at conferences to allow audiences to share comments, questions, or opinions during a conference presentation. They also are being used in education to allow students to communicate with each other and with their teacher during classes. For more information, see http://en.wikipedia.org/wiki/Backchannel.

Charrette—An intensive, collaborative process in which groups meet with one another to draft specific solutions to a problem. The term originates from the design industry and is used to identify a quick, highly focused process that yields a set of design solutions. For more information, see http://en.wikipedia.org/wiki/Charrette.

Cloud—A metaphor used to describe a network of servers that store and process software applications, services, and data. (Use of this term harks back to the early days of the Internet when developers would draw the network as a cloud.)

Cloud computing—A model of computing where the services and tasks traditionally performed on a local computer or server are moved onto the Web. Users only need a laptop/desktop computer and an Internet connection to connect to any of the applications, data, or services they wish to use. Popular examples of cloud applications include Gmail, Google Docs, and Flickr. For more information, see Daniel Nations, "What Is Cloud Computing? Examining and Defining Cloud Computing," http://webtrends.about.com/od/enterprise20/a/cloud-computing.htm.

Crowdsourcing—A practice in which many individuals ("the crowd") contribute information or solutions via technological means. Originally coined to describe a novel type of outsourcing in the business community, the term now also refers to the online, community-based efforts that contribute information (such as Wikipedia) or help address large-scale problems (reCAPTCHA).[1]

Data purging—A computer system administration task in which data collected by a particular organization is deleted (usually at regular intervals) from the organization's servers.

Exabyte—A unit of information equivalent to one quintillion bytes.

Grid computing—A computing method that relies on the simultaneous use of many computers to address a single processing problem. Grid computing is most often used for scientific or technical problems that require massive processing power or that access large amounts of data. For more information, see http://en.wikipedia.org/wiki/Grid_computing.

Lightweight collaboration—In the technology arena, this refers to software tools that allow users to contribute in real time to a collaborative activity without substantial training or effort.

1 reCAPTCHA is a CAPTCHA (a program that can tell if a user is a human or a computer) service that helps digitize books, newspapers, and old-time radio shows; see *http://recaptcha.net/.*

Orphan works—Works whose copyright owner is unknown or cannot be located. Legislation pending in the U.S. Congress would allow good-faith users to proceed with the use of such works if they cannot locate the copyright owner after having conducted a diligent search.

Remixing—Rearranging and recontextualizing online content in order to create a new product or work.

Reputation systems—Automated systems that collect, combine, and distribute feedback about participants' past behavior. These systems are used to gauge trustworthiness, particularly in online communities where users have little prior experience with those with whom they wish to interact (e.g., eBay sellers) or in communities where user-generated content is posted (e.g., Flickr).

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