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Keywords

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Visual Resources
Association

New Challenges, New Directions

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Martin Schongauer, German, ca. 1450-1491, The Large Bearing of the Cross, ca. 1470. Engraving. Plate: 11 5/16 x 17 inches (28.73 x 43.18 cm). Mat: 16 x 21 1/4 inches (40.64 x 53.98 cm). Purchase: William Rockhill Nelson Trust, 33-1452. Image courtesy of the Nelson-Atkins Museum of Art.

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vra visual resources association

Association News

Lucas van Leyden, Dutch, 1494-1533. Esther Before Ahasuerus, 1518. Engraving, I/III. Plate: 10 5/8 x 8 11/16 inches (26.99 x 22.07 cm) Mat: 19 x 14 inches (48.26 x 35.56 cm). Purchase: acquired through the Nelson Gallery Foundation and the David T. Beals III Fund, F86-24. Image courtesy of the Nelson-Atkins Museum of Art.

Notes from the President

April 2010

The Atlanta conference felt a bit like a whirlwind and although the breeze has slowed to gusts, your new president is still weathering the storm! So, first I should thank the VRA Board members and leaders, past and present, for so capably helping me transition into this job and for their ongoing supportiveness. I plan on following the lead of Allan Kohl in communicating with you often through this journal and other channels. Although Allan is now an honorary, non-voting member of the Board, he continues to do wonderful work for this organization and I would like to acknowledge his thoughtful leadership over the last two years. Brian Shelburne and Heidi Raatz handle conference arrangements and program planning with such pizzaz, they almost make vice presidential work look easy. Long hours at the registration desk is just the tip of the iceberg for the Membership Services Coordinator Lise Hawkos, Secretary Marcia Focht, Treasurer Jane Darcovich and now Billy Kwan, and our omnipresent Destination Consultant Tom Costello. Mark Pompelia's conference Web site, publications, and signage were as aesthetic and informative as ever. He handed the public relations and communications baton to Robb Detlefs who has already run with it in a big way. The incoming Board members also handled pre-conference publicity with a fun series of "Welcome to Atlanta" messages. Thank you for your dedication and service to VRA.

Over twenty years of being an active professional in VRA and attending conferences is not enough to completely prepare a person for the insider view of board work and conference planning. I am even more amazed than I expected to be at the hard work, dedication, collegiality, and generosity of the VRA membership. This means YOU—from newbies to veterans, students to officers—VRA relies completely on your volunteer efforts. Without your participation, how could there be knowledge sharing, problem solving, dialogue, networking and the annual regeneration these activities induce? You are

so bright, capable, creative, and fun. Thank you to all the committees who do heavy lifting for the organization; the vendors who provide resources, tools, services, and support; the chapter chairs and members who organize activities at the regional level; mentors who help orientate new members and student attendees; vendor slam organizers and participants; the raffle performers and desk volunteers; special interest and user groups; the experts we can ask; the birds of feather luncheon flutterers; the registration desk volunteers; tour guides; hotel staff, the list goes on and on. Your wonderful efforts and spirit of volunteerism make the VRA conference and this organization as a whole a vital forum for information professionals. Thank you for all you do for VRA.

Although the economic downturn continues to impact conference attendance, almost two hundred people were able to participate this year in Atlanta. It was quite moving to see the twenty people donors and sponsors helped bring to the conference receive their travel awards. Our deepest appreciation goes out to the members, non-profit and corporate sponsors, VRA Chapters, and the Visual Resources Association Foundation for your support as well as for your generous raffle donations and contributions to the conference program. It was great to be in a geographical part of the country we have not visited often. Thank you to all the local arrangements committee members and the Southeast Chapter members for your great planning (especially Frank Jackson, Pat Cosper, Mary Alexander, and Shane McDonald) as well as for strutting out some good weather. Our meetings were in one of John Portman's fabulous hotel spaces—once the tallest hotel in the world with seventy-two floors. Many of us fell for this Atlanta architect's jaw-dropping interior spaces with several of his impressive architectural projects in walking distance. Although the lobby's indoor lake with pods is no longer there, you could almost always find VRA members networking in the comfortable social areas or braving the ear-popping elevator ride to the revolving restaurant and cocktail lounge at the top of this impressive 1976 structure. For those who could get to the High Museum, there was the added bonus of a special show about this native son, still a creative force in his nineties. Whether you could attend the conference or not, please complete the online surveys to evaluate your experience and help us improve our planning for future conferences. Next year you can get twice the bang for your buck with VRA and ARLIS/NA meeting together in Minneapolis—hope you can join us there!

The new compact schedule (72 hours) meant that everyone had to hit the ground running and ran themselves a bit ragged to attend everything. But, this resulted in a wonderful sort of conference energy and it was fun to follow the backchannel tweets (#VRA2010) to try and keep up with this frantic pace (now archived at http://www.twapperkeeper.com/hashtag/vra2010). The conference content was right on with pertinent themes such as strategic planning, advocacy, marketing, professional viability, safeguarding collections, transitioning to learning spaces, metadata interoperability, and, of course, new technologies. I'd like to make a special nod to our international colleagues who traveled so far (and Skyped in) to inform us about trends on the "other side of the pond." I feel fortunate to have had a delightful dinner out with many of them at Mary Mac's Tea Room where we had the opportunity to explore the culinary delights of southern cooking. Thank you to all the planners, organizers, moderators, speakers, panelists, and workshop facilitators for this pragmatic information and inspirational content. Please visit Slideshare regularly as the presentations continue to be uploaded at http://www.slideshare.net/event/vra-2010-atlanta and don't forget the images at http://www.flickr.com/groups/vra_events if you want to reminisce or feel like you were there.

I hope I am speaking for all of VRA when I say that one of the most exciting conference moments was when Murtha Baca and Patricia Harpring were honored with the 2010 Nancy DeLaurier Award for their work on the Getty Vocabularies. When it was announced at the members dinner, there were thunderous applause and such a outpouring of emotion/enthusiasm as is rarely experienced. The award honors distinguished achievement in the field of image management and this unparalleled body of work fit the bill in the biggest of ways. Letters of support for this nomination poured in from around the world and I was proud to be on the podium with Sherman Clarke reading excerpts from them to honor two such deserving people. The grateful recipients were seriously moved as reflected in their responses, but also cracked us up by pointing out that the "ice scrapers" emblazoned with the 2011 Twin Cities conference information raised a red flag for them since that term is not in the AAT!

The extraordinary plenary speakers bracketed the opening and closing of the conference. Peter Brantley from the Internet Archive enlightened us on the profound changes we are experiencing having moved from a relatively static world of information with content at the center to a dynamic one with discovery at the core and a process of networked mediated social interactions. The roles of information professionals in this world require reinvention since acquiring and exposing content in a passive way is not enough. We need to actively pull information from many sources, interact with it to generate interest and curiosity, and facilitate how our patrons use it. Jason Roy from the University of Minnesota provided pragmatic advice for how we can add value to the online community and build "collective collections." He suggested we think about the things that the high profile projects aren't doing and mind the gaps to set our priorities. Thankfully the Strategic Plan Task Force helped us to ground these inspirational presentations in a lively session where they shared the goals and recommendations of the Strategic Plan and entertained questions. The Board will be using this document to guide the work of the next five years and we encourage the membership to read through it and provide us with feedback. Thank you to our special guests and the hard workers on this task force who provided such creative suggestions for guiding our future.

On a lighter note, the Raffle Rousers outdid themselves again! Katie Scarlett O'Hara Hamilton Kennedy

Butler (aka Empress Patti) waltzed into the VRAffle wearing a flowing gown, not only made from curtains, but with the curtain rod still attached! While Mr. Rhett Allan Kohl Butler sacrificed his facial hair yet again to fit the part and keep the Raffle Rousers in line. If you didn't see the "Gone with the Slides" poster in the special events part of the conference Web site, go back and take a look as it can give you a good feel for what went on. Behind the laughter is a lot of hard work, so "brava and bravo" once again for a great event. I'm also excited to report that I won Scarlett O'Lizard after many years of trying for one of Eileen Fry's beaded creations.

I've gone on too long, but hope I've helped those of you who could not attend feel a little bit like you were there with us in Atlanta. Here's one final THANK YOU to all the VRA membership and best wishes for a great year ahead!

June 2010

There was so much great content from the Atlanta conference; it is great to see extended information being shared. Your President has managed to unpack, but has yet to complete all the follow-up work. The Board responses to your annual reports are in progress, so expect to see these letters later in June and let me know if you need any information sooner. This does not mean your Board has been dawdling, but we are directing our energy in unexpected ways.

Minneapolis conference, already? It's hard to believe, but we are hard at work on the 2011 conference, as you surely noticed with the recent call for proposals. The convergence of members from both the Visual Resources Association and Art Libraries Society in a joint conference means we have a larger pool of talent to draw upon and can mix it up in extraordinary ways. We hope you are excited by the prospect of coming up with ideas for individual papers, fully-formed sessions, or workshops. This combination of ways to propose and obtain conference content is being used in order to draw upon both organizations' past practices and to try something new (see http://vraweb.org/conferences/2011Minneapolis-proposal/proposal.php). You don't have to have a full slate of panelists (unless you want to) and can simply send in an idea for an individual presentation to be matched up with similar content. There will be plenty of opportunities for members to participate as organizers, speakers, or moderators. Please note that a call for moderators will come in the fall. In addition, a call for special interest/user groups, committee, and chapter meetings will come later. It is a July 1 deadline, so if you have any questions or want feedback, please don't hesitate to contact Heidi Raatz or Jessica McIntyre, Co-chairs for the 2011 Conference Program. I know that the Education Committee is also hard at work on conference content and appreciates suggestions from the VRA membership too.

The conference theme is "Collaboration: Building Bridges in the 21st Century" and we have some major construction in progress. The Twin Cities Local Planning Committee, with representation from both ARLIS and VRA, is doing an extraordinary job of brainstorming and planning. It looks like opportunities to visit the best of Minneapolis' cultural heritage institutions will be part of the program. There is power in numbers: ARLIS is twice the size of VRA and with additional resources come broadened opportunities. There will be the usual substantive programming, but also extended presentation formats, plenary speakers, exhibitors, tours, etc. This is only the second time that VRA and ARLIS have combined forces for a joint conference and we are finding that our mutual interests are creating a vibrant partnership. The timing couldn't be better with the current, flat economy. A joint conference provides members of the two organizations with an opportunity to get much more bang for their travel buck. So, mark your calendar for March 24-28 and stay tuned as the planning unfolds.

Trying to connect two different professional organizations with their own cultures and conference traditions is not without its challenges. The Boards and local planners are finding such a partnership requires flexibility, creative thinking, and a special nimbleness on the part of both organizations. Like any collaboration, there is a give and take to reach consensus that may involve some changes and compromises, but we are trying to insure that the attendees from both organizations will reap the benefits in the end. For example, there was debate about whether to go with a raffle or a silent auction. It was determined that the latter format works better for a variety of reasons, one of the most important being, that raffles are seen as a form of gaming in Minnesota adding many complicated ramifications. But, our own Empress, Patricia McRae Baley, has stepped up to do the honors as master of ceremonies, working in partnership with Janice Lurie from ARLIS. They plan to morph this format into something new, and of course, your usual creative donations will be most welcome.

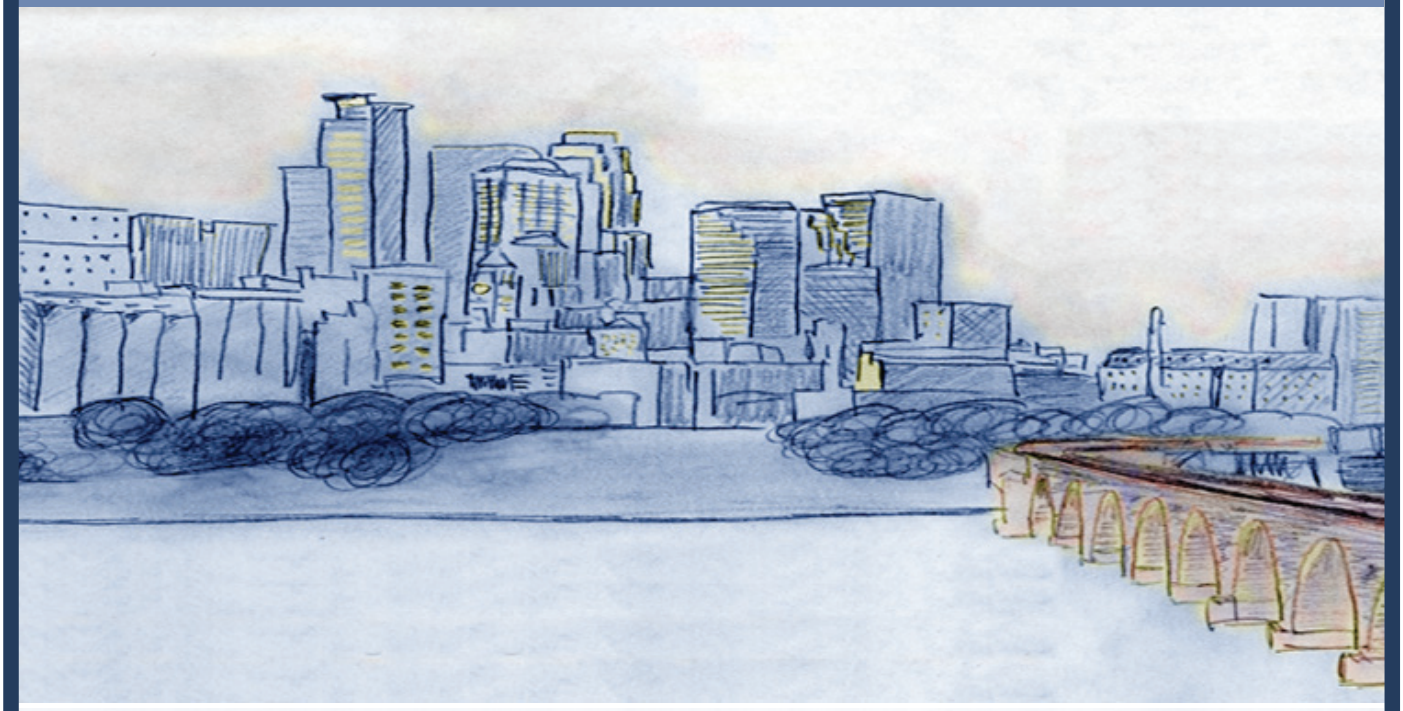
A joint conference is a different animal requiring us all to adjust our mindsets. It is much more complex than the simple addition of two separate events compacted into a handful of days. This new beast is more like an algebraic equation to study a special relationship. There is a synergy to strive for—the two organizations' combined conference should be greater than the sum of the separate parts. It provides us with a wonderful opportunity for meaningful collaboration with a like-minded group. This requires a mutual exchange of knowledge, experience, and ideas to maximize the benefits of such an interaction. So let's make the most of it! Please feel free to contact me, or any of the VRA Executive Board members, if you have any suggestions or questions, and expect to hear more about how you can participate as the planning progresses.

Maureen Burns
VRA President

VRA + ARLIS/NA 2011

2nd Joint Conference

March 24-28, 2011 • Minneapolis, Minnesota



Collaboration:
Building bridges in the 21st century

For more information, visit www.vraweb.org/conferences/

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Feature Articles

Master I. A. M. of Zwolle, Dutch, ca. 1440-1504. The Last Supper, ca. 1485. Engraving. Plate: 13 5/8 x 10 5/8 inches (34.61 x 26.99 cm). Mat: 21 1/4 x 16 inches (53.98 x 40.64 cm). Purchase: William Rockhill Nelson Trust, 35-44/2. Image courtesy of the Nelson-Atkins Museum of Art.

New Challenges, New Directions

Guest Editor:
John Taormina, Duke University

A Strategy for the Future: Campus Collaborations

Carolyn Caizzi, Visual Resources Collection Technology Specialist, and Barbara Rockenbach, Director of Undergraduate and Library Research Education, Yale University

Introduction

As academic visual resources collections have made the transition to digital format, the materials within these collections are more readily available across a broad range of academic disciplines. New technologies are emerging with the potential to support visual teaching and learning across

disciplines. Visual resources professionals are seeking ways to support these technologies and, perhaps more importantly, the new literacies and pedagogies that incorporate these technologies. By promoting the visual resources collection to new user groups, as well as educating them about how images can be incorporated into the curriculum, the visual resources professional fosters visual literacy and media literacy skills that are crucial to the twenty-first century student.

However, the visual resources professional cannot do this alone. Collaborations with other units on campus such as the library, instructional technology groups, teaching centers, and academic computing departments enable visual resources professionals to bring their expertise to a larger audience on campus. By partnering with other units on campus, the visual resources professional plays a vital role in supporting faculty use of institutional image collections, innovative teaching approaches, and new technologies.

The Problem

Professor Jones, teaching a new interdisciplinary course called Representing Justice, is looking around campus for materials to support her course. The course is cross listed in the law and literature departments and Professor Jones hopes to introduce students to both textual and visual representations of justice. She is a lawyer by training and her own education has prepared her well for textual analysis, yet she is concerned about finding images and possibly video to support the course and how to create assignments with the images that will engage and educate her students. She is uncertain where to go for this type of help so she begins by asking someone at the library reference desk, who first suggests Google Images as a standard response to questions involving images. Together the two find some interesting images that are limited to what a generic Google search offers, and this process does not help Professor Jones answer her bigger questions about integrating the images into her course in a meaningful way. A Google Image search will also retrieve images of various sizes, many of which are not large enough for projection in the digital teaching environment.

Professor Jones next approaches the technology group on campus, thinking they may have some ideas about how to deliver images and how to integrate them into course assignments. She discovers an instructional technology group that offers to build a course Web site for the images. The group also has some ideas about assignments to engage the students, but they are not sure of the best place to find content. They also think immediately of Google. Finally, she learns about the Visual Resources Collection, but only after spending several days with different groups on campus. And, after all of this she still has not encountered any of the pedagogical experts on campus who might help her with course assignments.

This situation, which is more common than we would like to admit, points to a need for cross-institutional support to better assist faculty members like Professor Jones. Yale has addressed this need through two mechanisms; the first is the creation of a position within the Visual Resources Collection that addresses faculty's digital teaching needs and the second is the formation of a library-based center to coordinate a team of support specialists from the library and instructional technology groups to assist faculty with the use of library collections, new pedagogical practices, and effective technology solutions in their courses. While many institutions may not have the ability to create a new position, we hope to illustrate that existing visual resources collections and library staff, as well as staff from associated units such as academic technology centers, could adapt their roles to incorporate outreach activities. Additionally, the center we will describe requires only the collaboration, time, and interest of entities on campus since the Collaborative Learning Center at Yale has no budget or dedicated staff.

Part of the Solution: Outreach in the Visual Resources Collection

In 2007, the Yale Usability and Assessment Librarian conducted faculty interviews to assess the services provided by the Visual Resources Collection (VRC); a collection administered by the Yale University Library.[1] The report noted that the Library, specifically the VRC, needs staff to help foster the adoption of digital tools such as presentation and image editing software that faculty utilize for teaching. As a result of these findings, the position of Technology Specialist for the VRC was designed as a dedicated technical professional who could offer specialized instructional support to faculty and teaching assistants pertaining to all aspects of the Library's digital image collections and teaching in the digital environment.

For most of its approximately sixty-year history as part of the library system at Yale University, the VRC focused on supporting the History of Art curriculum with a few faculty patrons from other disciplines such as Asian Studies, Classics, Divinity, and Anthropology, but the transition to the digital format opened the door to increased use in these disciplines and the arrival of faculty from academic areas who had not made use of analog visual materials. Not only do faculty and students in other disciplines need images from the VRC, they also need technical support for using those images. The Technology Specialist is able to provide reference services for navigating the complex world of local, vended, and other Web digital image resources especially for users new to finding and integrating digital images and other multimedia in the classroom.[2]

Additionally, the Technology Specialist is tasked with keeping current on issues of image management software, presentation software, and interesting Web 2.0 tools now vital to educational support. As the primary training and support person for the VRC, this position focuses on outreach and instruction rather than on duties of managing a digital image collection, such as acquiring new content and cataloging images. As with any outreach position, however, a thorough

knowledge about all aspects of visual resources curatorship is required since not all digital image collections are well served by sufficiently detailed metadata and search mechanisms. Outreach activities include individual one-on-one faculty training, fielding image reference questions, addressing image research in library instruction sessions for specific courses, and teaching specialized classes on image editing or ARTstor. This position blends the role of reference and instruction librarian, digital image specialist, and instructional technologist. As Mayer and Goldstein noted in their survey about libraries supporting visual culture, "this new demand for images has not only strengthened rationalization for subscribing to image databases, it has impacted library instruction and reference services." (Mayer et al. 2009, 16)

One example in which the Technology Specialist encountered a patron new to the VRC and to using media in the classroom was an interaction with a lecturer in the Women's, Gender, and Sexuality Studies program at Yale. Maria Trumpler, teaching a seminar called "Women, Food, and Culture," discovered that the VRC could scan print images for digital projection in class to spark discussion. Although this type of activity certainly occurred in classrooms before the digital age, most courses outside art and art history were historically rooted in analyzing and discussing text-based works. Access to digital visual media allows for new types of classroom pedagogies and assignments based on the visual rather than on discussions only about written texts. In addition to utilizing the scanning services, the professor also met with the Technology Specialist for an introduction to ARTstor, a library resource she had been unaware of before working with the VRC. She subsequently discovered other interesting images through this vended resource, such as images of charred walnuts from Pompeii. This professor noted that using images in her class increased student's enthusiasm to participate in classroom discussion.

This example illustrates one of the advantages of having a dedicated VRC staff member supporting faculty teaching; the professor was offered an in-depth session focused on integrating images into her course, including advice on resources and search strategies for finding relevant materials. A beneficial consequence of such meetings is that the faculty member then refers another colleague to the VRC. This type of faculty advocacy is invaluable to the future of visual resources collections as faculty support and interest is necessary for generating greater institutional support. Wood, in an article "Changing the Educational Program," articulates a need for faculty champions, "Those champions must be found in the faculty if an innovation is to be profound and long-lasting. Administrators should not be shy about seeking out faculty champions." (Wood 1990, 53).

Beyond developing individual champions, it is vital that visual resources professionals also develop a reputation as the image experts on a campus for all image collections, not just those contained or administered by their department. For example, visual resources collections administered by libraries are more apt to contain images relating to all aspects of visual culture such as anthropological images or advertisements since general library patrons are not constrained by the limits of a single discipline such as art history. The scope of visual resources collections are broadening in accordance to requests from patrons in fields outside of art and art history.
With the increased prevalence of images available online, Professor Matt Jacobson in American Studies noticed how he could use images as evidence in his lectures and rely not only on the texts that were assigned to students. However, he was unsure how best to incorporate multimedia into his classroom experience. With help from the Technology Specialist in the VRC, Professor Jacobson became confident in his mastery of finding and downloading images, as well as audio and video clips, and integrating them into PowerPoint presentations. He noted in an e-mail:

Working digitally has not only expanded the archive of my teaching immeasurably, but it has allowed me to elaborate certain historical and analytical points in ways unimaginable without the aid of such images. Just to take one example, images of Martin Luther King, Jr. being violently subdued by Birmingham police convey King's "outlaw" status and the hatred of him in his lifetime for a generation of students who have only known King as a loved and revered national figure. A true understanding of the civil rights era and the stakes involved is impossible without an understanding of this dimension, articulated so eloquently by a pictorial archive that was out of my reach before the availability of digital images online. I could make similar comments about each of the twenty-four lectures in my lecture set.[3]

Sometimes, having a visual resources staff member who can help faculty find resources (regardless of where they find it) and determine the best way to use it in an external software program is invaluable. Again, this facilitation of image use in teaching and learning, leveraging the skills and expertise of the visual resources professional, is key to supporting a range of faculty needs in the digital classroom.

Another Part of the Solution: The Collaborative Learning Center

In the last decade and a half, the Yale Library has been rethinking its core service model related to faculty and student support. As library materials have increasingly moved online, the library's physical space has undergone a radical re-envisioning, raising questions such as: What is the appropriate use of library space in a changing patron and resource environment, and what is the value of visual resources analog slide and photograph collections for that matter, when users no longer need to visit a specific office for their information needs? What do information professionals have to offer that cannot be acquired over the network?

The library literature is full of answers to these questions; the Yale Library's answer to these questions lies in effective collaboration across campus units in support of student and faculty information needs, and such collaboration

requires a dedicated physical space with suitable equipment to foster the creative use of digital media. The Collaborative Learning Center (CLC), established in 2007, was created to bring together the expertise and support services of units across campus engaged in teaching and learning activities. The Center is housed in the Bass Library but maintains a presence campus-wide since staff from across campus support the CLC's mission. Staff from the Graduate Teaching Center, the Center for Language Study, Information Technology Group, and the broader Yale University Library (including the Visual Resources Collection) all work together to ensure that faculty teaching objectives and student learning outcomes are supported and achieved.

This Center grew out of faculty support models tested during two grant projects; the Imaging America project funded by the J. Paul Getty Foundation and the Eli Project funded by the Davis Family Foundation.[4]

These grant projects responded to the emerging need to support faculty use of new media and technology in their teaching. The Getty Grant in particular was called Imaging America because it was implemented to help the campus determine how to support teaching with digital images. The Library knew that support for digital teaching objects would become increasingly important and this funding helped the Library establish a role as the leader on campus in this area.

A further goal of these explorations with faculty was to discover a new service model in the library whereby faculty learning objectives were supported by small teams of experts across the campus. For instance, an American Studies course support team might include an instructional technologist, a visual resources curator, a history librarian, and a staff member from the graduate teaching center well-versed in educational theory.

While these grant projects supported over twenty professors and Yale courses, the challenge was to create a sustainable model for this type of activity. In the fall of 2007, the CLC was established as an institutional home for these faculty support services. A year later, the newly-hired VRC Technology Specialist began to coordinate faculty outreach activities for the Visual Resources Collection and built a relationship with the CLC. To date, the Center has supported over thirty courses in its two-year existence.

The core of the CLC service model is course consultation. During this process, a team of experts from across campus including VR professionals meet with faculty about a particular course or instructional problem. Imagine Professor Jones' issue described above; this is the type of problem a course consultation is designed to address. During a consultation, the team explores the course objectives, assignments, and the particular content collections, technology, and new teaching approaches that would best support the course. We call the members of this team course supporters, as each individual brings his or her own area of expertise to the particular curriculum or pedagogical need. Because we are drawing on the knowledge and expertise of existing staff, we have not had to hire anyone to provide this new type of service for faculty. The glue that holds this service together is a willingness to collaborate and to establish strong relationships among departments who share common goals. We believe this process is one that institutions, regardless of their size or stature, could implement even with limited resources and may find that increased productivity and diminished duplication of effort is the result.

Through this course consultation process we have realized that our VRC staff and our art librarians are uniquely prepared to support courses because they bring a practical and theoretical understanding of visual literacy. VR professionals and art librarians have a skill set that has been finely honed over years of working with visual resources, to teach users across the disciplines about how to use images as both illustrations and as evidence. An abundance of visual materials has become available digitally in the last decade enabling humanists and social scientists to integrate these materials into their teaching and learning. Yet, most professors in these disciplines, as well as their students, do not have training in using visual materials effectively. Additionally, VR professionals and art librarians have discovered that there are conversations across their institutions about competencies and life-long learning skills that students need to acquire that involve critically thinking about the visual world in which they live. Visual literacy is a skill or set of skills that visual resources professionals are uniquely positioned to support and they are vital to almost every course involving use of new media or technologies. In turn, having visual resources professionals involved in course support of this nature allows the visual resources department to become involved in some of these larger, exciting conversations about the future of student learning.

Visual Resources Expertise: A Vital Component of the Collaborative Learning Center

In just over two years, the CLC and the VRC Technology Specialist have worked together on a variety of projects that have directly supported courses and have increased the use of images in teaching and learning across campus. Several examples will illustrate the range of our activities.

One such collaboration involved Seth Fein, an American Studies/History professor. Early in the consultation process, Professor Fein reflected, "I've always used media in the classroom, but it was cumbersome, changing VHS tapes to show clips from different sources, dragging out the overhead projector and the slide projector to show images and graphs... the transition to digital allowed me to use the media in a fresh way, visually juxtaposing images or clips from a video in ways I hadn't really been able to do so before."

However, he also noted that to learn multimedia management and presentation software that allowed him to seamlessly integrate various types of media took many hours and required assistance from technical professionals as well as subject specialists across different units like the

Library, Instructional Technology Group, and Visual Resources Collection.[5] The experience of this professor is an example of why collaborative efforts on campus are important; he was provided with a level of support that allowed him to expand his pedagogical tool set. The CLC provides the framework for support staff to come together in support of faculty from a range of disciplines with streamlined service that ultimately benefits the students. Collaboration with the CLC allowed the Technology Specialist to build important interdisciplinary relationships quickly.

Video became the focus of another course consultation arranged by the CLC with an American Studies professor, Matthew Jacobson. This case led to the creation of a video workshop series for faculty and graduate students in American Studies. It became apparent during the consultation that Professor Jacobson was not alone in his need for instruction on creating and editing video. As is true with many departments on campus, American Studies did not have access to video training through the department even though the students and faculty were increasingly recording video as part of their research and teaching. The Technology Specialist, who has a background in video production, was able to offer a three-part workshop for the department. The workshop consisted of how to plan, shoot, and edit with emphasis on the techniques and skills necessary to achieve a meaningful result for the student assignments. The workshop includes three classes totaling a six-hour time commitment. This series was intended to provide an overview and beginning hands-on skills. It also utilized and built upon a new media equipment service from the CLC.[6] The Technology Specialist has developed a condensed version of the video series catered to specific courses integrating student created video assignments into the curriculum. Before that initial course consultation facilitated by the CLC, course support staff did not recognize this need for video production training in the humanities. The CLC has thus provided a needs assessment mechanism for faculty to articulate ways in which course support staff on campus can work together to provide solutions to instructional problems.

Another outcome of collaboration between the CLC and other non-library support units on campus is an active outreach program called Teaching with Technology Tuesdays (TwTT). TwTT is a weekly series offered for those teaching at Yale (support staff, faculty, and graduate students) interested in innovative instructional activities utilizing new media technology.[7] The program was set up to introduce instructors to a range of technologies that might enhance their teaching. Each week a new technology is introduced such as Flickr, blogs, Facebook, Skype, or Twitter. A five- to ten-minute introduction is offered, followed by a professor describing the pedagogical benefits of a specific technology. The attendees engage in a discussion of how others might utilize this technology in their own teaching and share ideas as well as practical information. The results of these sessions are twofold: the instructors learn about technologies that their students are already using in other contexts and they develop the ability to implement technological innovations in their own classroom. In over two years of offering this series, 25 percent of the sessions have focused either on images or video, and those sessions tend to be the most heavily attended reflecting the broad application of visual materials in a variety of learning environments. These image-based sessions were possible due to close collaboration with VRC staff and their content and image expertise.

Conclusion

Despite the current economic climate and increasingly limited resources at most academic institutions large and small, we feel that the future of the visual resources profession lies in strong partnerships with others on campus to support curriculum-based needs and the academic institution's mission. We have found that through strong collaborations, we have been able to create a new service model for supporting faculty and scaling up our existing course support efforts. By embracing new technologies, supporting faculty learning objectives, and collaborating with librarians, technologists, and pedagogical experts, visual resources professionals can expand their scope within institutions. We believe that existing VR collections could explore the possibility of re-allocating staff time to outreach and collaboration activities. Even VR collections that are administered by academic departments will benefit by seeking outreach opportunities, collaborating with support staff from libraries and academic IT units, and making a case for engaging faculty beyond their traditional audience.[8] The connections made by the Technology Specialist at Yale are an example of how visual resource professionals can integrate their expertise and collections in ways that inform and ensure the future of the profession.

Bibliography

Mayer, Jennifer and Cheryl Goldenstein. "Academic Libraries Supporting Visual Culture: A Survey of Image Access and Use." *Art Documentation*, vol. 28, no. 1 (Spring 2009): 16-28.

Wood, R. J. "Changing the Educational Program." In *Managing Change in Higher Education*, edited by D. W. Steeples , 51-58. San Francisco: Jossey-Bass, 1990.

Notes

1. A note of thanks to Kathleen Bauer, the Usability and Assessment Librarian at Yale.

2. Noted in the introduction written by Robert Carlucci, Yale's VRC Manager, of the first-year assessment of the Technology Specialist position.

3. Reproduced with author's permission.

4. Both these grant projects involved support for visual materials and teaching. The Getty Grant, "Imagining America," was focused solely on supporting interdisciplinary

image use in courses. For general articles on these two grant projects see: Max Marmor. "Towards User-Centered Digital Image Libraries." *CLIR Issues*, no 20 (March/April 2001) http://www.imaginar.org/dppd/DPPD/82%20pp%20Scholars%20as%20Partners%20in%20Digital%20Preservation.pdf; Max Marmor and Barbara Rockenbach. "Image Matters: A Binocular View (Yale + Luna Imaging) of the Digital Marketplace.: *Library Hi Tech News*, Volume 18, Issue 7; Danuta A Nitecki, William Rando. "A library and teaching center collaboration to assess the impact of using digital images on teaching, learning, and library support." *VINE*. Bradford: 2004. Vol. 34, Iss. 3; pg. 119; or Eli Project, http://www.library.yale.edu/eli.

5. Printed with permission.

6. http://clc.yale.edu/media-equipment

7. http://clc.yale.edu contains the current schedule for TwTT. This outreach program is similar in nature and structure to one that Betha Whitlow, Washington University, has created: "Exploring the Impact of Web 2.0 on Our Faculty Constituents, & Present Strategies for Integrating Them Into a Web 2.0 Age Through the Use of Flickr, Facebook, RSS, Zotero, Google Docs and Other Technologies." This program was integral in inspiring and continuing our series.

8. Robert Carlucci, Yale's VRC Manager, supplied many edits, one of which pointed out that over half of the VR collections may still be department-based collections and not administered through the library.

Evolution of a Digital Collaboration: California's Local History

Trudy Levy, Digital Transition Consultant, Image Integration, and Adrian Turner, California Digital Library

In its announcement of California's 2008 Library Services and Technology Act (LSTA) grant applications, the California State Library (CSL) states that the California Local History Digital Resource Project (LHDRP) "seeks to address the need for more libraries to be conversant with the process of digitization of historical materials and at the same time create additional resources that will be available statewide." While the LHDRP has always sought to meet these objectives, it has actually evolved into much more. Through the implementation of this project, the participants have developed processes and a methodology for creating a centralized repository from diverse sources of material. To do this has required several levels and types of collaboration, sometimes occurring at the same time. First, there is the collaboration of the participating collections with the centralized repository. Secondly, there is the collaboration of the project management team, each of who bring various skills together.

It all began in 2000 as part of a Library Services and Technology Act (LSTA) grant from the Institute of Museums and Libraries Services, which is administrated by the California State Library (CSL). The CSL had begun to support a digital archival effort by the California Digital Library's (CDL)—the 11th "co-library" in the University of California (UC) system. As the UC digital library, it had been involved in CSL-supported projects to host the growing UC digital collection of historical objects. This included the UC-EAD project, which may not be catchy, but was descriptive. The UC-EAD project—later named the Online Archive of California (OAC)—was initiated in the late 1990s, comprising a union catalog of Encoded Archival Description (EAD) finding aids (or descriptions of collections) to historical and cultural collections for the whole state. With the inauguration of the LHDRP in 2000, the CSL and the CDL were able to assist additional institutions in making contributions of digitized primary source materials—and not just descriptions of collections—to the OAC.

The LHDRP has always been more then just a disbursement of grant funds. From the beginning, it included guidance and training, which have evolved into specific protocols. While some may only be seeking financial support of their digitization effort, many are also seeking the experience and education that comes from being a part of a carefully specifically managed digitization project. One participant has described the experience as "dipping your toe in to test the waters." He indicated that he might not continue to use all the protocols, but valued being able to go through an entire project using tested methodology without having to invent the wheels himself.

So how did this evolution take place? I think I can fairly say that it was not planned, but was permitted and welcomed. Both the CSL and CDL have constantly looked to improve their product.

The initial participants in this evolution of a digital collaboration were the CSL and CDL, whose representatives made up the management team, and the libraries who were contributing to the OAC. The libraries have been large and small, public and academic. Some have collaborated with historical societies and archives, or have been a special collection within a library. A few have been historical societies with librarians on staff or even private archives.

Beginning with the 2001-2002 LHDRP cohort, most project participants knew nothing about digitizing, little about information management, and even less about cataloging objects or photographs. The librarians—even though their facilities contained "History Rooms" or were the archival depository for their city's official material—discovered that their archival material was not cataloged. If it was cataloged, it was done according to archival standards, which do not require cataloging at the item level. In addition, the CDL discovered that their imaging guidelines, which had been developed within the context of the UC libraries, resulted in image files that were larger than many participants' computers could accommodate.

Thus began the learning and evolutionary process.

Like various digital libraries in the early 2000s, the CDL was striving to develop "ideal" image guidelines. In the initial LHDRP, participants were asked to scan each item at 600 pixels per inch (PPI). UC had been scanning manuscripts and small artifacts using this specification. This posed a potential problem within the context of the LHDRP: as each participant was responsible for creating their own digital images, many chose objects that could not be scanned easily in-house, e.g. oversized posters and maps. Scanning these large objects at 600 PPI resulted in such large image files that a few institutions discovered they did not have enough memory (RAM) to open the files. Others simply found they did not have computers with enough RAM for Adobe's Photoshop software. The first lesson learned: not all institutions have the same computing power. What to do?

The state of Colorado, who was also developing a statewide digitization project at this time, was dealing with this same problem. Colorado—which later developed the Collaborative Digitization Program (CDP)—chose to expand their training and guidelines, which has benefited many of us. The CDP developed standards that supported an infrastructure whereby member institutions contributed metadata to a centralized repository, but retained their image files on local webservers. Member institutions could comply with the standards, using their existing skills and equipment.

In contrast, the CDL began to develop standards that supported an infrastructure whereby member institutions contributed both metadata and image files to a centralized repository. The imaging standards, in particular, supported the

creation of archival master image files. In contrasting the two models, I believe that the California goal was not to digitize all the historical material in the state, but to create—and preserve—a digital collection of this material, which could then be available statewide.

The CDL realized that its imaging standard, while generally applicable to the material the UC libraries had been scanning, needed to accommodate the variety of materials that they were now encountering. To this day, after photographs, one of the most popular submissions is a fruit box label, whose dot matrix printing really does not need to be captured for posterity. Therefore, the CDL began to seek a more flexible and yet consistent standard. Fortunately, they were not the only ones looking for this. The National Archives and Record Administration (NARA) of the United States had been developing their own standards that were responsive to archival needs.

After careful research, the CDL decided that NARA's imaging standards best met the goal of creating preservation-quality image files (as close to the original as possible), which could be used to create derivatives for public access. The standards reflect a sliding scale of pixel dimension, dependent on the size of the original. Thus, they maintain a relatively constant rate of capturing visual information, which is also reflective of the size and material of the analog object. The CDL has tweaked NARA's specifications a little, but mostly for clarity of expression for their client base. They did not try to preserve their earlier standards.

The complete standards can be viewed online, http://www.cdlib.org/inside/diglib/guidelines/bpgimages, but for the LHDRP scanning specifications, we have developed the following distillation (see below).

Another lesson learned was that some skills were not necessarily useful in the long term to the library staff. From the beginning, the CDL had issued a "LHDRP Handbook" to guide the participants. Again, in contrast to the CDP's wide-scale regional approach, the CDL provides the handbook to LSTA-grant funded participants within the LHDRP, and it is written in terms of this project's needs.

CDL also contracted with Infopeople to provide a series of training sessions, again tailored for just the participants, to prepare them for the tasks involved in a digitization project. In this way, each year's class has been able to contribute their own lessons learned.

The first class received training in selection of material, determining rights to publish the image, scanning the object, collecting metadata, and creating the digital object. This was all covered in a few day-long workshops. From this training, the participants were expected to perform these tasks within their own project, including using crosswalks for entering their Dublin Core or MARC-formatted metadata. At the end of the project year, the CDL would package the metadata—along with image files received from the institutions—into Metadata Encoding & Transmission Standard (METS)-based digital objects. The CDL would then load the digital objects into its METS-based repositories for display in the OAC, and for long-term preservation.

How many of us understood crosswalks and METS eight years ago? How many of us even new what METS was then? These people were engaging with metadata specifications needed to support the creation of METS objects, while creating quite large digital collections—which they also had to manage. They were given suggestions of how they might do this and what software they might use, but it was

Text Documents, Graphic Illustrations/Artwork, Maps and Plans	
Bitone (all sizes)	6,000*
Grayscale and Color (all sizes)	4,000*
Photographs: Transmissive Originals (Film, Slide and Negatives)	
35mm	4,000*
4"x5" and up to 8" x 10"	6,000*
Photographs: Reflective Originals (Prints)	
Up to 8" x 10"	4,000*
8" x 10" and under 11" x 14"	6,000*
11" x 14" and larger	8,000*
Aerials: Transmissive Originals (Film, Slides and Negatives)	
70mm wide and medium format roll film	6,000*
127mm and up to 5" x 7"	8,000*
127mm and up to 8" x 10"	10,000*
Aerials: Reflective Originals (Prints)	
Up to 8" x 10"	4,000*
8" x 10" and under 11" x 14"	6,000
11" x 14" and larger	8,000*

* Number of pixels on the long dimension

up to them to chose and execute according to the image and metadata specifications that the CDL provided for collections destined for the OAC.

The grant recipients actually did fairly well, but the CDL and CSL began to see that it was labor-intensive for the institutions to deliver standardized metadata based on the specifications, given the heterogeneity of their cataloging tools. Moreover, it was labor-intensive for the CDL to create the METS files from heterogeneous sources. After three years, the CDL and CSL reexamined the structure of the LHDRP and came up with a new approach. As with the imaging standards, they did not make little changes.

In 2005, Susan Hildreth, the California State Librarian, announced a "solution in a box" approach that would constitute the LHDRP. The "Solution in the Box" proposed to more efficiently use funds and all of the participants' resources to produce a more consistent product. It would fit the largest institution or the smallest, the expert or the neophyte. It would do all this by outsourcing those services, which were not innate to library and archive services. More importantly, the distribution of funds would be dramatically altered. Now, the LSTA monies would fund the project, rather than the libraries' performance. The participants in the project would get services rather than cash. It also introduced a two-tiered collaboration approach.

The initial collaboration of the participants who were working with the CDL and CSL to build the OAC had also included a sharing of experience and solutions. There were quarterly telephone conferences between the participants, and an email listserv which all can use to communicate within the group. After 2005, a more defined level of managers of the project would be added. The team managing the process was now expanded to include Califa, a membership network of California libraries. Califa would manage a streamlined image digitization process, and contract with a vendor who would perform the outsourced services. Additionally, Califa would contract with OCLC to host a centralized instance of CONTENTdm, a digital object creation tool that would be used by all participants.

As the core management team, the CSL, CDL and Califa representatives communicate regularly to tweak the program. They also participate in quarterly telephone conferences with the participants. An additional big change was the inclusion of vendors as advisors and co-developers of LHDRP processes, including Northern Micrographics Technology (NMT). This also includes Infopeople and OCLC Western Service Center, which the CDL contracts with to provide targeted training sessions for participants.

The CSL, CDL, and Califa chose CONTENTdm as an easy to use, "off the shelf" solution for creating standardized digital objects. Also valuable was CONTENTdm's ability to support exporting digital object metadata and image files in format that could be transformed—in an automated fashion using open-source, XSLT-based tools—into a METS wrapper.

For the participants in the project, the CDL and Califa has configured CONTENTdm with specific metadata fields that standardize the way in which participants enter their metadata. The libraries enter their data using a CONTENTdm cataloging client application—an "Acquisition station"—which is installed on local workstations. The Acquisition Stations allow institutions to import digital image files (which are received on CD-ROM from Northern Micrographics), add metadata to the image files, and upload both the metadata and image files to a CONTENTdm server (hosted by Califa).

Califa originally issued a Request for Proposals (RFP) for scanning historical documents and photographs, based on one developed by Cornell and Research Libraries Group (RLG). It was a two-stage selection process, in which the short list was asked to submit a sample scanning. The RFP, essentially stated: "if the following material were submitted, what do you think the cost would be—and please give us an item break down so we can evaluate our final cost?" NMT of Wisconsin won the contract. It is currently entering the third year as the LHDRP digitization vendor and has become a valuable member of the team, contributing its own effort to improving the workflow for the participants and assisting in the training process.

One of several lessons learned from the image scanning process was that even when given specific instructions, individuals would do things in an individual way. NMT joined in the collaborative spirit of the LHDRP to develop more efficient ways to work with participants to produce high-quality image files. They developed an online Data Entry Tool (DET), which is entering its second year of use and still being refined. The online tool is also used by Califa to monitor the scanning workflow, for which it is responsible, which includes reviewing and accepting each digital image file. The form includes drop-down fields from which each participant selects the size and material of the object to be scanned. It also allows for the creation of compound objects and automatically generates the unique identifier/ file name. The LHDRP participants have proven to be great beta testers, sniffing out new bugs every year, so that this tool will continue to evolve. Once scanning is done for each participant's collection, NMT provides the institutions with a final set of image files on CD-ROM.

NMT also has and continues to contribute to the preservation discussion. At this time, the management team, with NMT's assistance, is working to improve the method of preserving accurate color information in the preservation-quality TIFF 6.0 image files. At this time it is being done with the incorporation of color targets and grayscales in the digital capture of the master scans. In addition, as part of its contract, NMT embeds preservation information such as scanner information, date, library and a title field in the master files. The files are validated against the TIFF 6.0 specification, using the JSTOR/Harvard Object Validation Environment (JHOVE) application. NMT also includes a checkSum file with each removable media.

All of these processes are recorded in the LHDRP Handbook, maintained by the CDL. For the 2007-2008 grant year, it includes project schedules and clearly developed workflow procedures for each phase of the project. It also provides references to other resources, which might benefit the participants, from shipping packages to other examples of digital standards. To give you an example of the detail to which this handbook describes each process here is an abbreviated Table of Contents:

3. Project Timeline
4. Project Workflow Procedures
    4.1. Selecting Materials for Digitization
        4.1.1. Criteria and Considerations for Making Selections
        4.1.2. Recording Preliminary Metadata for Selections
    4.2. Digitization: Working with Northern Micrographics
        4.2.1. Overview
        4.2.2. Shipping Schedule
        4.2.3. Specific Procedures
    4.3. Metadata Creation: Working with CONTENTdm
        4.3.1. Installation and Configuration Procedures
        4.3.2. Encoding Strategies
        4.3.3. Encoding Shortcuts
    4.4. Collection Description Creation
5. Wrapping it Up: Sending Your Digital Asset Submission Package to the CDL
6. Updating Your Digital Assets Submitted to the CDL
7. Help? Who to Contact for Project Assistance

- Appendix D. CONTENTdm Field Requirements: Summary and Crosswalk (qualified Dublin Core andMARC21)
- Appendix E. CONTENTdm Field Requirements: Data Entry Guidelines
    - o Identifier
    - o Title
    - o Creator
    - o Date Created / Date Published
    - o Subject (Topic)
    - o Type
    - o Form/Genre
    - o Physical Description
    - o Institution
    - o Collection Identifier
    - o Country of Creation
    - o Copyright Status
    - o Copyright Statement
    - o Copyright Holder
    - o Copyright Holder Info
    - o Copyright Date
    - o Copyright Notice
    - o Publisher
    - o Subject (Name)
    - o Subject (Place)

This is of course specific to participation in the LHDRP. The CDL surveys participants on a quarterly basis to learn more from the participants about their experiences, and works with the CSL, Califa, Infopeople, OCLC, and NMT to modify processes as necessary—and updates the handbook to reflect changes.

The CSL, CDL, and Califa continue to work to develop and improve this flow of data from the many collections around the state into a centralized repository, providing permanent public access to the content. The initial step of the LHDRP starting in 2000 was to develop this centralized infrastructure. The more recent steps—in a way—have stepped back towards supporting local infrastructures. There are now approximately fifty "graduates" of the LHDRP that have leveraged the grant to begin the process of digitizing their cultural and historical collection (and continue the effort on their own after the grant). The goal of the "Solution in the Box" approach is to develop a local framework whereby participants can continue to build their digital collections. For example, they can elect to continue outsourcing scanning, or, having gained experience from working with the professionals, do the work in-house with their own staff. As might be expected, several graduates began to ask the CSL if it would be possible to develop programs to assist them in continuing to use the outsourcing services that they had used while participating.

The first step to assist them was easy. Califa set up a scanning contract with NMT for its members. This was similar to other contracts that Califa routinely developed for its members. Califa does not intend to limit it to NMT if other vendors can offer comparable prices or services that NMT does not.

The next step was to do the same with CONTENTdm. Califa was well-poised—given its experience with licensing arrangements for its members—to arrange for a master license to host the CONTENTdm software. From 2005-2006, Califa did not host the CONTENTdm software—but contracted with OCLC to provide this service. Beginning in 2006-2007, Califa hosted the CONTENTdm software. This was a new step for Califa to take on, but seemed within their purview and so they did.

LHDRP participants leverage Califa's CONTENTdm service to create digital objects for the LHDRP. And post-grant year, former participants can continue to leverage Califa's services to outsource their scanning (via NMT), and use CONTENTdm—not only to create digital collections, but create customized local websites to their content. Califa charges a small fee to former-participants that elect to use their services, to cover the costs of storing data on their servers.

Outside of the context of the LHDRP, the CDL has also been taking steps to provide its preservation and access services to the broader, non-UC community of cultural heritage institutions. To date, the LSTA program has been

subsidizing some of the costs of these services. Looking to the future, the CDL has been examining cost recovery models for providing preservation and access services. This would potentially allow institutions to leverage CDL services beyond the terms of the LHDRP grant year.

Thus, we arrive at the current version of the LHDRP as described in the 2008 grant announcement.

Libraries in California collect a wide range of materials concerning the local history of their communities. Many of these items are historic photographs that illustrate the diverse nature of their citizenry and record many of the tremendous changes that have taken place in their community. The program seeks to address the need for more libraries to be conversant with the process of digitization of historical materials and at the same time creates additional resources that will be available statewide.

The program follows a "solution in a box" structure for libraries. The package include training, image processing services, metadata creation tools, preservation services, customizable Web pages and a small grant award for collection development and other purchases related to the program.[1]

The LHDRP has always been a program for which the goal was to educate libraries in the process of digitization and to create a statewide resource. It is the execution that has changed and will continue to change, as long as digital technology and our needs change.

Notes

1. MEMORANDUM January 19, 2008
To: California Libraries
From : Susan Hildreth, State Librarian of California
RE: 2008 /09 Local History Digital Resources Targeted Program

Madison Digital Image Database 3

Andreas Knab, Lead Software Developer, Center for Instructional Technology and Kevin Hegg, Assistant Director, Center for Instructional Technology, James Madison University

Background

The Madison Digital Image Database (MDID) is a freely distributed, Open Source Web application developed at James Madison University (JMU) to facilitate teaching with digital media online and in the classroom. The project started in 1997 in response to expanding curriculum requirements within the School of Art and Art History.

Initially, MDID supported a single catalog structure suitable for a collection of art history images. While this covered the immediate need of the School of Art and Art History, curators at JMU and other schools soon wanted to manage additional content that did not fit into this catalog structure. Consequently, JMU began developing a new version of MDID in 2001.

In 2004, the second version of MDID was introduced at JMU and released to the public. It supported flexible cataloging and multiple collections. Additional features were added to accommodate disciplines beyond art history.

In 2006, the Institute of Museum and Library Services (IMLS) awarded JMU a National Leadership Grant for Libraries to develop an Application Programming Interface (API) to facilitate interoperability between MDID and other digital image systems and tools. Around the same time, the availability of Internet bandwidth increased significantly and rich media became increasingly popular online. Not surprisingly, the MDID community began asking JMU whether MDID would support video and audio files in addition to images.

In 2008, the MDID development team decided to abandon the MDID 2 platform and redesign MDID from the ground up in order to meet new requirements such as multimedia support, flexible metadata structures, more sophisticated access rights, customizable page layouts and designs, and a full API. The team chose a development platform that is itself completely open source, that runs on most operating systems, and that provides significantly shorter development times. The MDID 2 architecture, while adequate in 2004, was not up to the challenges posed by these new requirements. The MDID development team agreed that it would be easier and faster to redesign the MDID than to significantly revise and extend the current MDID. Furthermore, MDID 2's user interface does not satisfy user expectations. For example, it does not offer bookmarking or direct access to open content.

Vision and Guiding Principles

The MDID development team revisited the vision statements for MDID and identified three main points:

- Allow students and faculty to manage, discover, and aggregate digital media for intuitive and flexible delivery and presentation;
- Affirm our commitment to support the use of digital media in the JMU curriculum through ongoing MDID development; and
- Continue to promote adoption of MDID beyond JMU.

The team adopted the following principles for guiding the design and implementation of MDID 3:

- Build MDID 3 using open source software;
- Share MDID 3 through an open source license;
- Embrace Web 2.0 and open access;
- Encourage content sharing between individuals, institutions, and the public;
- Leverage collective intelligence through comments, ratings, and tagging; and
- Engage students by allowing them to add, create, share, and manage content.

Progress

MDID 3 development started in late 2008, after JMU had begun working on the IMLS grant. In April 2009, JMU awarded a contract for software development services to create connectors between MDID and ARTstor, MDID and Flickr, MDID and PowerPoint, and MDID and Blackboard. Because JMU was not actively developing MDID 2 at that time, these connectors were built on top of the MDID 3 API.

While an outside software company built the connectors, the MDID 3 team forged ahead on MDID 3 development, using new technologies, a new architecture, and a host of open source libraries.

In January 2011, JMU started running MDID 2 and MDID 3 in parallel, using the migration tool to periodically copy MDID 2 data into MDID 3. Faculty and students are actively using MDID 3 in the classroom but have MDID 2 as a backup for critical course work in case problems arise. The version of MDID 3 that JMU is using is available for download by other institutions. A simple update process allows institutions to keep up with the latest MDID 3 version.

The new MDID, in conjunction with new connectors, allows users to search millions of Flickr images, bringing images of interest into the MDID 3 space. The ARTstor connector lets MDID users search ARTstor collections and link out to found content via the ARTstor Image Viewer. Other connectors allow MDID users to embed images and slideshows in Blackboard and to save presentations as PowerPoint files. Furthermore, MDID 3's API provides a mechanism for institutions to exchange data between MDID and other local systems or repositories.

Significant Features

Data Migration

To prepare for a migration from MDID 2 to MDID 3, administrators should document any customizations, including custom user authentication. Curators should clean up

collection metadata fields and map as many fields as possible to the relevant Dublin Core fields.

The MDID 3 migration tool will copy users, groups, collections, records, etc. Due to differences in data structures and permissions, the results of the migration need to be reviewed before the new system is put into production, but none of the user data stored in MDID 2 should be lost.

Content Discovery and Facets

Content discovery starts on the front page, which displays a selection of images accessible to the user. The user can see all available records in the explore interface, which is keyboard and facet driven. Facets are based on Dublin Core and by default are created by breaking up metadata into individual words. Using phrases for facets is also possible and makes most sense for controlled vocabulary fields such as Creator or Period.

Unauthenticated (anonymous) users can also use this interface to see all publicly accessible content.

The Role of Dublin Core

MDID now "knows" the meaning of some Dublin Core fields, including the Title, Identifier, and Relations fields. As many metadata fields as possible should be mapped directly or indirectly to the corresponding Dublin Core field to gain the most functionality in MDID.

Search Engine

MDID 3 uses Solr for all searching and facet creation. Solr is an open source tool built on Lucene, which is used by MDID 2 to provide searching. The search behavior of MDID 3 can be customized directly in Solr.

External Content

All searches in the explore interface are also run against certain external sources, including configured MDID shared collections, the public content in Flickr (and possibly private content of the current user), and ARTstor. Depending on the external source, it may be possible to include images directly into an MDID presentation; for example, Flickr images can be included, while ARTstor images cannot.

Multimedia Support

MDID 3 supports a range of multimedia and other files in addition to images. Thumbnails for most multimedia files are automatically generated. For videos, MDID extracts a still frame five seconds into the video as the thumbnail. For audio files, MDID creates a 30-second waveform sample.

MDID uses FFmpeg, an open source tool, to identify multimedia files and to extract information such as bandwidth, pixel dimensions, video frames, and audio samples. Therefore, MDID supports all FFmpeg-compatible formats on the backend, although commonly available client-side delivery tools may only support a subset.

MediaViewer

The new MediaViewer replaces MDID2's ImageViewer. It is completely rewritten using modern technologies. It will run in the browser as an Adobe Flash object and on the desktop as an Adobe AIR application. The browser version of the MediaViewer is almost complete and currently integrated with the MDID2 demo site (http://mdid.org/demo). This version of the MediaViewer is compatible with both MDID2 and MDID 3. Versions of the MediaViewer will be published on the new support site (http://support.mdid.org) as they become available. Documentation and installation instructions will also be placed on the new support site.

Accessibility

MDID 3 is set up in a way that allows content discovery and management in the browser without requiring a mouse, JavaScript, or Flash. However, certain viewers, including the MediaViewer, depend on JavaScript and Flash.

Social Networking Features and User Involvement

MDID employs stable URLs (permalinks) across all pages, meaning that any page in the Web application can be bookmarked or linked to from other websites, access permitting. Individual records and presentations can be tagged and commented on.

All authenticated users can use MDID to manage their content, including uploading metadata and files, creating presentations, and customizing metadata on records in existing collections. By default, these actions are invisible to all other users. File uploads can also be limited by quotas to prevent users from overwhelming the system.

Management Tools

Unlike MDID 2, all management tools are built into the Web application. It is no longer necessary to install tools on the client computer, and the tools are no longer dependent on the Windows operating system.

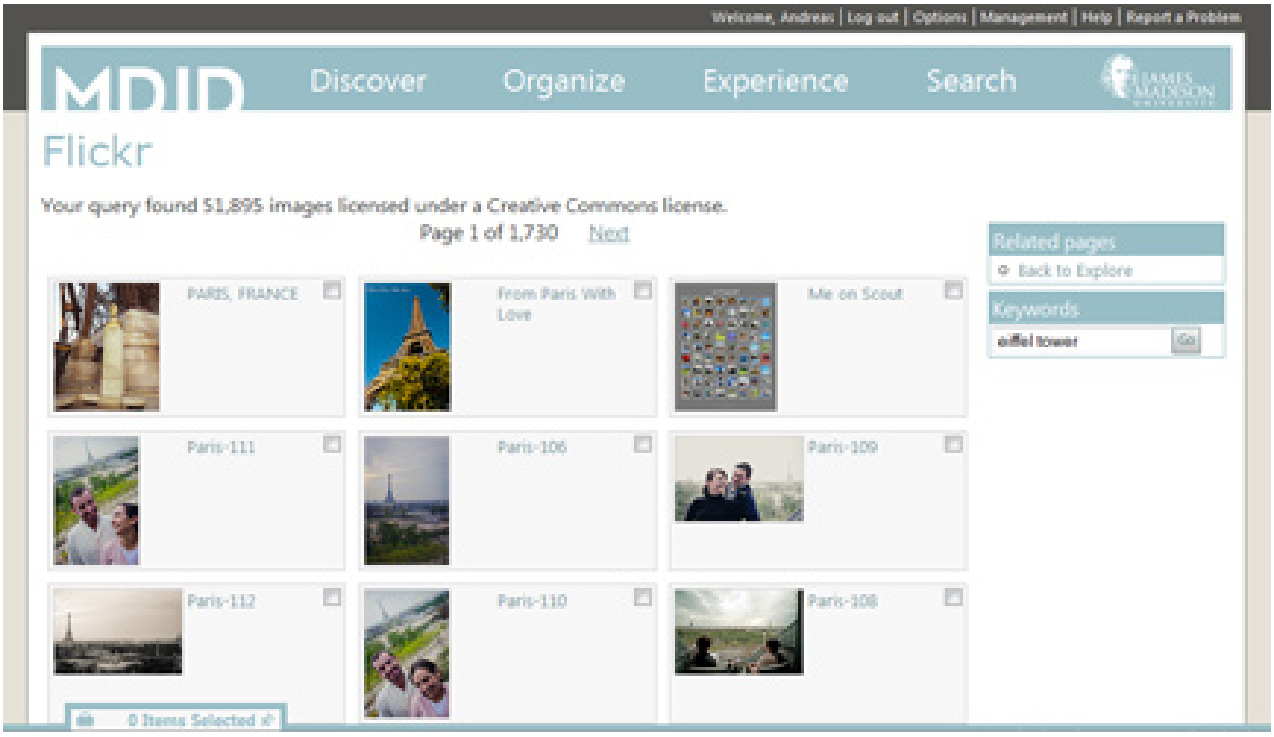
The metadata import tool will support VRA Core 4 XML file imports in addition to regular CSV spreadsheet imports.

All long running tasks (jobs) such as metadata imports are executed asynchronously. A user can view the status of his or her scheduled, running, or past jobs through the browser, while an administrator can monitor and control all jobs running or scheduled in the system.

Content Organization

While image files were directly assigned to each metadata record in MDID 2, metadata records and media files are now organized separately. Records are stored in collections; media files are stored in storage areas.

Collections can now contain other collections. This feature can be used to break up large collections into smaller logical parts without impacting the ability to search the whole collection, or to grant different levels of access to different parts of a collection. One collection can belong to several



other collections, so the content can be organized logically without requiring any duplication.

Multiple media files can be associated to a single record. This allows, for example, audio transcripts to be stored alongside the original audio file in the same record.

Records can be organized hierarchically, for example different detail views of the same building should be child records of the same parent record representing the building. One record can also belong to multiple collections, again to avoid duplication while organizing all content logically.

Storage areas in MDID define a physical storage area to hold media files. Collection files can be spread across multiple storage areas rather than being restricted to one physical directory. Conversely, storage areas can hold files that belong to different collections.

In addition to just holding files, storage areas can have functionality built in. For example, they can automatically manage ZIP archives, produce streaming media links, or physically organize files into subdirectories.

Permissions

The permission system in MDID 3 has been simplified greatly. Only three permissions (read, write, manage) can be set for users or user groups on collections, storage areas, or presentations.

Combined with the ability to join collections within each other, this allows administrators to set up collections that contain records with different levels of access for different users. It is possible, for example, to set up a collection that contains some records that are publicly available while others are restricted to authenticated users.

Viewers

Viewers are tools that display a single record or a whole presentation on the Web. Viewers support a variety of presentation types and delivery modes, including slideshows, video and audio playlists, flash card generators, slideshow handout generators, and more. More viewers will be added to MDID over time.

MDID dynamically determines which viewers fully or partially support an object or a presentation. Mixing media types in a presentation is possible, but may limit the number of viewers that are available. When multiple files are associated with a single record in a presentation, viewers can intelligently choose the appropriate file where possible.

MDID includes a viewer that converts a slideshow into a PowerPoint PPTX file. Users can choose from different pre-installed themes, with additional themes easily being added. Each slide in the PowerPoint file contains one image, an optional slide title, and all the image metadata in the notes area.

Customization

The Web interface template is completely based on CSS, with all colors configured in a single area of one file. Two master colors define the basic color scheme, so the basic look of MDID 3 can be changed by just changing the two color values. Logos can be switched out easily, and the HTML itself can be modified, for example to change the order or positioning of menu items or to add additional links to other sites.

System Architecture

MDID can be installed on any major operating system, including Windows, Linux, and MacOS. Components can reside on one or more servers running any major operating system. Components can also be duplicated on multiple servers for redundancy or to support more load.

MDID as an Application Platform

In addition to its familiar interface for discovering images, building and presenting slideshows, and managing collections, MDID 3 also serves as a powerful platform for building innovative, Web-based multimedia applications. Examples include showcases for special collections, specialized interfaces for compound multimedia objects, or simplified interfaces with unneeded functionality removed.

The MDID development team used the MDID platform to build JMUtube, a Web application that allows faculty to upload and manage video and audio files for delivery to students through a variety of venues, including class Web sites and Blackboard. JMUtube features a simple drag-and-drop playlist builder and is integrated with JMU's classroom recording system and Camtasia Relay. JMUtube takes advantage of the MDID 3 core to store video and audio files and associated metadata. It also uses MDID 3 to manage user accounts and create thumbnail derivatives for audio and video files. All data and content presented through the JMUtube interface is stored and managed within MDID.

Another project currently under development is the Shenandoah Valley Oral History Project, which is a collection of records with audio files and text transcripts attached, and a custom interface that presents scrolling text synchronized to the audio playback. All audio files and associated metadata and audio transcripts are stored and managed by the MDID 3 engine. A novel interface allows users to synchronize audio time lines with typed transcripts. A Web page for each composite record allows users to listen to the audio recording as the transcript automatically scrolls in step with the recording. Such functionality is beyond the scope of the traditional MDID Web application, since it is only applicable to a relatively small set of records.

JMUtube and the oral history projects exemplify the manner in which MDID can move beyond a single discipline into multiple disciplines. Imaginative faculty and skilled programmers will collaborate to create innovative and useful multimedia applications. Once completed, the applications can be easily shared with other institutions as add-ons to existing MDID 3 installations.

MDID3 Project Team

- Andreas Knab, Lead Software Developer, Center for Instructional Technology
- Kevin Hegg, Assistant Director of Systems and R&D, CIT
- Grover Saunders, Web Media Developer, CIT
- Christina Updike, Visual Resources Specialist, School of Art and Art History
- Grace Barth, Visual Resources Assistant, SAAH
- Mary Ann Chappell, Educational Technologies Librarian
- Sarah Cheverton, Director, CIT
- Sandy Maxfield, Associate Dean, Libraries & Educational Technologies

Implementing CollectiveAccess at the Bruce High Quality Foundation University Archive

Julia Weist, The New York Society Library

The Bruce High Quality Foundation University (BHQFU) Archive

In the summer of 2009, The Bruce High Quality Foundation—a New York-based artist collective—received financial and in kind support from Creative Time to realize an un-accredited University in TriBeCa. Appropriately titled The Bruce High Quality Foundation University, the project sought to create "...a university, a space for higher education and research, a community of scholars; and an alternative to the hegemony of critical solemnity and art market-mediocre despair." (http://bhqfu.org/Site/about.html) From its conception the school was to include a library with a reference collection of core texts as well as a university archive.

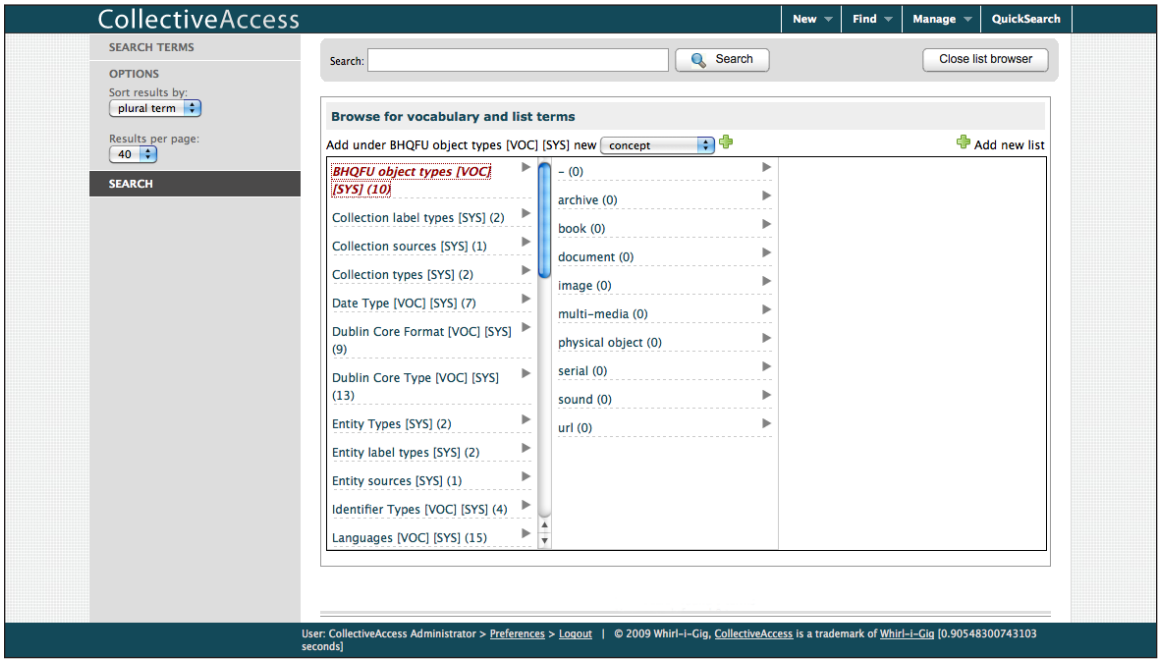
Because of the Bruce High Quality Foundation's international recognition (their work is in the permanent collection of the Whitney Museum of American Art, etc.) there was great and immediate interest in preserving and documenting the work collaboratively created by the University's facilitators, students, and visiting artists. When I was brought on as a consultant in September 2009, my primary goal was to implement a one-interface collection management system that could serve as an OPAC as well as a fully Web-hosted digital archive of the digitized ephemera, drawings, photographs, realia, unpublished essays, sound files, and video clips that were being produced. With such a wide variety of media (needing custom metadata standards) and without significant dollars to spend on software or staffing, we were looking at Web-based, open-source, highly intuitive programs with flexible standards and multimedia capabilities. I decided to implement CollectiveAccess primary because it met all of these criteria and because of the software's other desirable features, namely geo-spatial cataloging, a pan-and-zoom image viewer, and hypertext attribute system for locations and collection sets. Also, I expected that our enthusiastic but inexperienced volunteers would feel comfortable with the simple, visual cataloging interface.

Initialization

Since the University already had a Web site (http://bhqfu.org), we were able to install the CollectiveAccess software directly into the server's MySQL (version 5.0.x). All the additional requirements were either already included in the Web-hosting package, or were easily and freely accessible. They include:

- Apache (versions 1.3.x, 2.0.x and 2.2.x)
- PHP (version 5.2.3 or better)
- ImageMagick (http://www.imagemagick.org), an open-source graphics processing application
- MagickWand PHP extension (http://www.magickwand.org)
- Ghostscript (http://www.cs.wisc.edu/~ghost), for collections Web-hosting PDFs

Figure 1. A screenshot showing the Lists & Vocabularies manager (using the Dublin Core Metadata Element Set profile) within the Administrator dashboard.



Additional programs are required for MOV, MP3, AAC audio and Camera RAW formats

All of the customizable metadata profiles available from CollectiveAccess can be tweaked before installation to meet local specifications and needs. The user interface is so easy to use, however, that we saved ourselves the trouble and tailored the Dublin Core syntax using the Lists & Vocabularies manager in the administrator dashboard (Figure 1).

Other Metadata standards available "out-of-the-box" (in version 0.6 or later) include: Darwin Core, VRA Core 4.0, MuseumDat, SPECTRUM, CDWA-Lite, and more. We installed and modified the fifteen elements of Simple Dublin Core Metadata Element Set (DCMES) in collaboration with the CollectiveAccess Metadata specialist, Amber Billey, MILS.

Cataloging

CollectiveAccess uses an "attributes" system to create user-generated vocabularies of authority records for entities, objects, locations, collections, and events. Industry-standard vocabularies, such as the Getty AAT and other thesauri, can also be imported into the system for use in parallel to original vocabularies. Once an authority record has been saved into the system entity list, it will appear as a drop-down menu within the related form-field after the cataloger types the attribute's first few letters.

The system enables relationships between attributes to be defined hierarchically, facilitating navigation and cross references. Default syntax allows for attributed individuals to be:

- a contributor, creator, or publisher of objects
- related to, spouse, or child of another individual or organization
- related to events, places, and collections

After a catalog record has been marked complete, attributes become live hyperlinked text within record pages on the system's front end. When a user clicks any individual LOC subject heading, location, etc., the catalog navigates to a new records-display page for all the objects linked with that attribute. This feature has great potential for collection sets—our catalogers never had to name a donor in the notes or description field because the collection attribute instantly standardized the identifier and made the lot a one-click searchable group.

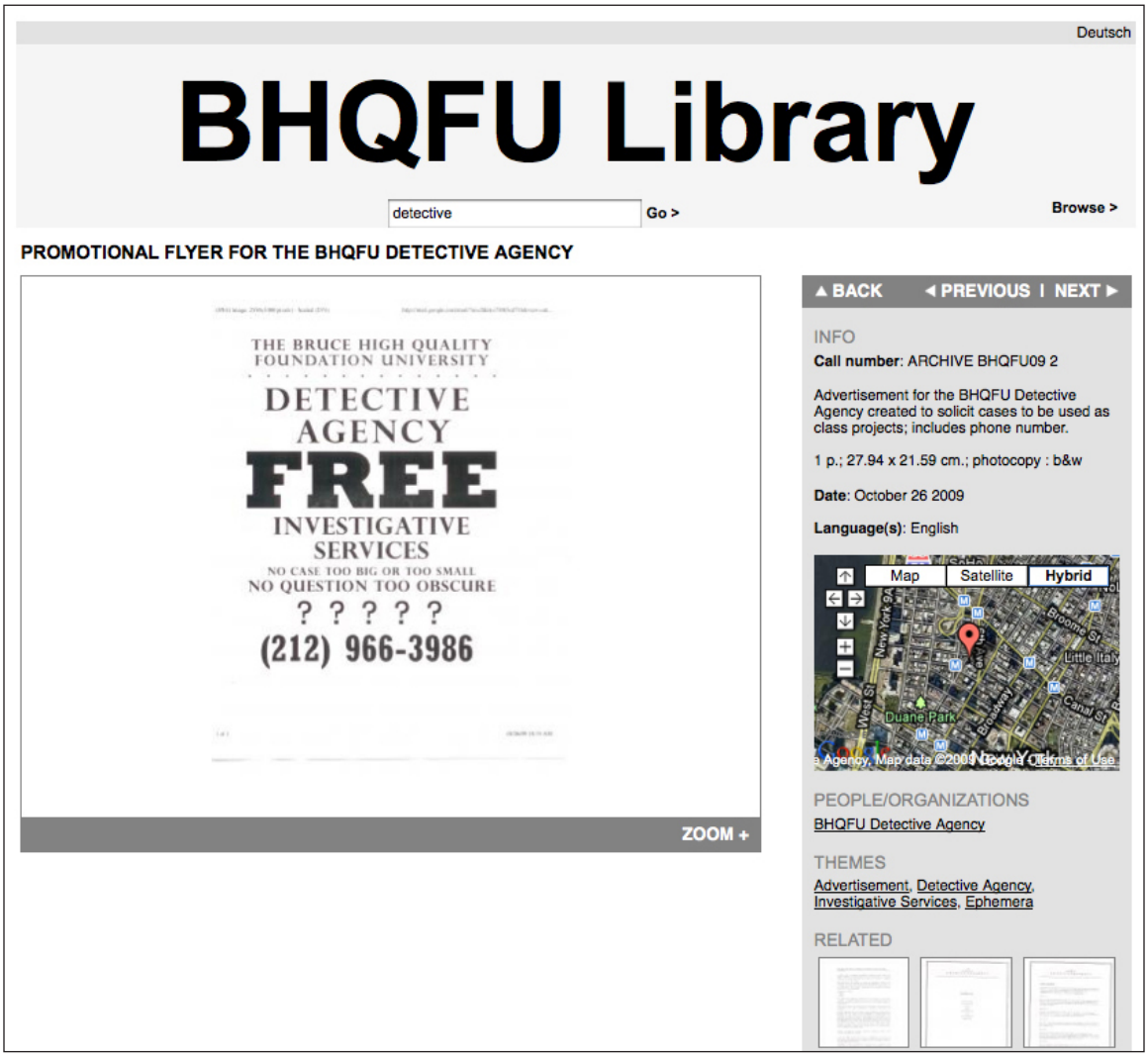
Figure 2. A screenshot of the Tilepic image viewer featuring ephemera from the collection—a business card created to promote a University project.

Unique log-in names for catalogers with customizable privileges were easy to create and, although the system allows for auto-generation of object identifier numbers, we chose to work with ranges. Because the database is fully Web-hosted, catalogers were often able to work remotely and upload digital files (scans, photographs, etc.) to the directory through the catalog's media tab. Since the software automates the image placement and linking process within the directory, and accepts a wide variety of image types without requiring intelligent file names, the cataloger needs only worry about the file's resolution. The software's "out-of-the-box" front-end "Tilepic" image viewer was designed by University of California Berkeley Digital Library Project. It allows a user to pan and zoom in magnifications of up to 600 percent. (Figure 2)

Software Features

Our project catalogers never tired of adding geo-references to objects, another intuitive aspect of the CollectiveAccess interface, which culls data from Google Maps for in-frame inclusion in a record's front end. When a user navigates to an object with geo-reference(s), he/she can choose to pan and zoom within the location square or see Map, Satellite, or Hybrid views (Figure 3). A location description field allowed us to identify a location's relevance. We chose to turn tagging and comments off, but many collections may find this feature useful, especially given that the administrator retains the right to moderate content on a comment-by-comment basis. We installed a CollectiveAccess German font-end interface translator, which is one of several languages available. More will be available soon—including Dutch, Serbian, and Czech—thanks mostly to users who are providing open source translation profiles.

Figure 3. A screenshot showing the BHQFU Library front-end interface with hyperlinked attributes, German translator, and geo-location feature



The next two versions of CollectiveAccess (0.6 and 1.0), available in 2010, include several invaluable features not currently available in the 0.5x version used by our team. These include increased automation for installation, time-based cataloging tools using Flash technology for audio and video assets, and full text search support for hosted media such as Microsoft Word and PDF files. Batch updating, data importing, and data exporting are also expected to improve.

Front End

With a Web-accessible directory, the CollectiveAccess Web-based installation of the system's front end is fast. We chose a universal keyword search for the splash page, primarily because most users would not be doing high-level research. The content of the archive is largely unknown and has little rhyme or reason beyond the scope of time and place—it was created by artists and students at the University from 2009 onward. To this end, a prominent "browse" option was also vital. We received support from CollectiveAccess developers who helped design our interface, but for those handy with CSS it is possible to tailor the default style template of the interface as you would for any other HTML-based Web site.

Conclusion

CollectiveAccess is undeniably a standout in the field of open source collection management systems. It provides fully downloadable industry-standard metadata profiles that are also fully customizable through an intuitive user interface. Authority lists, hierarchical vocabularies, and attribute relationships can be imported or user-generated to allow for maximum accuracy and flexibility. Software features such as geo-location cataloging, pan-and-zoom image navigation, tagging/comments capabilities, and multilingual user interfaces are "out-of-the-box" bonuses. As versions 0.6 and 1.0 are rolled out, and as users contribute to the development of the open source software, CollectiveAccess will only improve.

SAHARA: Innovation, Experimentation, and Collaboration for Digital Image Scholarship

Allison Benedetti, Project Librarian and Ann Whiteside Director of the Frances Loeb Library, Harvard Graduate School of Design

Background

The SAHARA (Society of Architectural Historians Architecture Resources Archive) project is in its third year of grant funding, and has made considerable progress towards the goal of building a shared collection of visual content for research, teaching, and publication. In its original conception other goals for SAHARA also included changing scholarly modes of analyzing architecture; developing new online publication types; helping to make digital publishing the equal of print publishing; and creating new kinds of editorial roles. As part of the overall effort, the Society of Architectural Historians developed new guidelines for promotion and tenure: SAHARA "contains features that allow for extensive textual commentary accompanying…images and it is hoped that new forms of academic publishing will emerge from these small texts, which, likewise will be peer-reviewed. Editorial service for SAHARA, therefore, also deserves recognition in the promotion and tenure process."

Further goals were to change the concept of an image collection from teaching collection to scholarly resource; change the ways libraries build image collections; eliminate redundancy in collection building; create a partnership between scholars and librarians in shared collection building; and develop a model for a shared collection that is scholar-driven.

The basic steps of the SAHARA project were to create an online visual archive of original photography by developing tools that allow scholars to contribute their own images and metadata and to develop editorial tools and processes that allow peer review of the visual images and other content that go into SAHARA. The first year was spent working with our technology partner, ARTstor, to design the upload tools. Simultaneously, we worked with scholars and librarians at three institutions - Brown, MIT, and UVa - to build the initial seed collection of approximately ten thousand images. The images are the scholars' own photography, taken during their research trips, and chosen based on the scholars' areas of expertise and research. The work to prepare the images for the seed collection focused on digitizing analog images, processing born-digital images, cataloging them in the image collection databases of the three institutions, and then exporting the data and images to ARTstor for inclusion in SAHARA. The scholars and librarians worked together to select the images for inclusion. The librarians managed the digitization and processing of the images, collaborated with the scholars for the metadata creation, input the information into their local cataloging systems, and also managed the export to ARTstor process.

SAHARA launched on April 1, 2009, at the SAH Annual Meeting in Pasadena, California. The initial ten thousand images were available for viewing and use. We held an open meeting to show SAH members SAHARA, and to hear their feedback and suggestions. We also held hands-on training sessions for SAH members wishing to contribute to SAHARA.

SAHARA is set up so that any SAH member can contribute his/her images to the collection. Images automatically go into the Members' Collection, and any SAH member can see and use the content. The peer reviewed collection is the Editors' Choice collection, which is added to through the editing of the content in the Members' Collection. Contributors may upload any image that matches a specification of an image size no smaller than 1024 pixels on the long side, and fill in the required metadata fields.

The upload tool itself has two pieces—a place for holding images and a cataloging template. Once an image is uploaded to the tool, a cataloging template appears. The metadata schema within the cataloging template was developed jointly between scholars and librarians in conjunction with ARTstor. The schema is, or one should say, ended up being, based on VRA Core 4; however, the datamodel is not hierarchical; it is a flat data model. There are two views of the schema—brief and full. There are a number of required fields and optional fields as well.

We find that the challenge is in finding the balance between enough metadata and too much metadata for scholars and librarians. When scholars are thinking about how they want to describe their images, the perceived need for more metadata is forefront. When scholars who did not participate in the thinking about SAHARA metadata fields are confronted with the cataloging template, they sometimes find it daunting. This is part of the SAHARA team's ongoing discussions.

Using the upload tool any SAH member can add content to the Members' Collection. Once images are in the Members' Collection, the size of the image and the geographical and time-based metadata fields set the editorial process in motion. If an image is 2,000 pixels on the long side or larger, then the image is automatically filtered towards the editorial process. If an image and associated metadata is deemed high enough in quality by an editor, it will be elevated to the Editors' Choice collection.

[See figure next page.]

Editorial Process

The concept of a peer reviewed image collection, based on images deemed to be of exceptional quality or value, is a new concept. Because this type of peer review had not been done before, one of the project's challenges was to create a mechanism and methodology to carry it out.

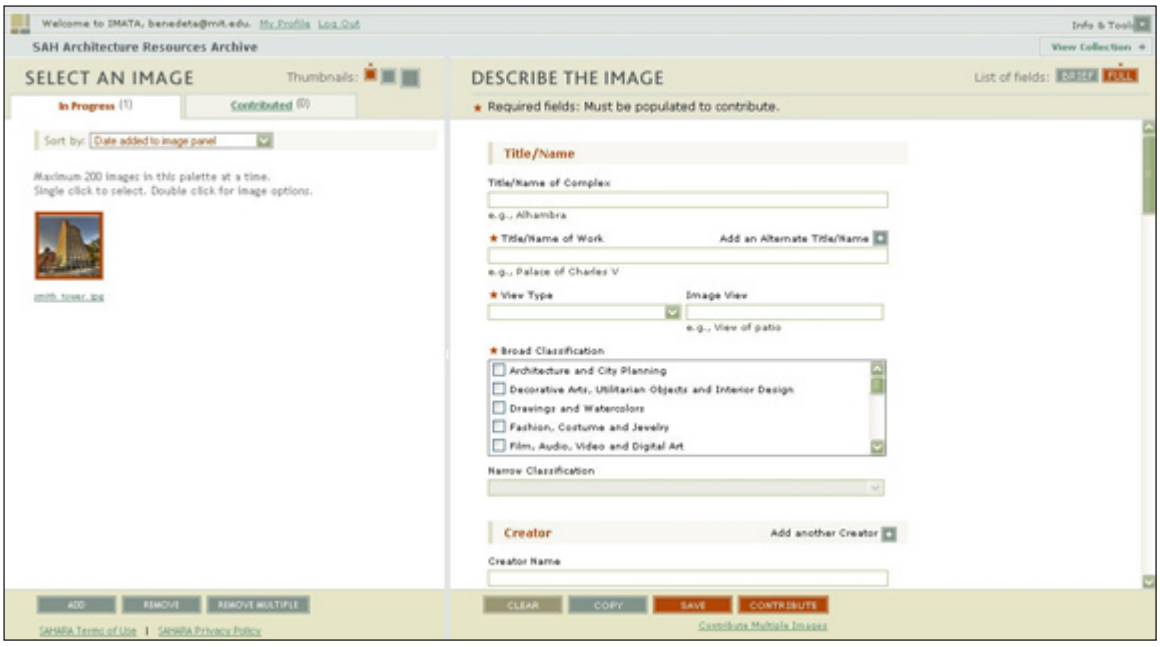
An Editorial Committee was formed with members representing colleges and universities nationwide and from a variety of specialties within architectural history (vernacular, modern, landscape, ancient, etc.). Committee members include librarians and scholars who had been involved with SAH's original Image Exchange, as well as the current editor of the Society's journal, and other interested scholars from within SAH. This breadth of experience is intended to inform the decision-making process to create a resource to meet the needs of a diverse community.

A unique and critical component in the development of the SAHARA editorial structure is a partnership between scholars and librarians. While journal articles and textual peer-review is a widely recognized component of scholars' work, the development and maintenance of image collections has been primarily the purview of librarians. SAHARA is developing a hybrid of these systems with both scholars and librarians working together on equal footing, with defined areas of responsibility based on their expertise.

The workflow as it has been developed has the scholars first review the images and select those they feel are of the highest value or quality, based on defined criteria. The librarians then review the associated metadata and make sure that it conforms to the appropriate standards and authorities. Because there are many more fields in a SAHARA image record than just the minimum required fields, it is also intended that the librarians will augment minimal records to contain the fullest amount of data possible.

While this may seem like a simple concept to describe, when one is designing tools that require programming logic, simple can become anything but. Rules had to be determined for how to filter and assign images from the Members' Collection to the various editors. An architectural historian might describe his or her area of expertise as modern European architecture, but a computer needs much more specific directions to define what that is. The only data that can be utilized are the minimum required fields in the SAHARA schema (title, date, country, broad classification—ARTstor's field to designate architecture rather than painting, sculpture, etc.—and narrow classification or work type, as it is more commonly described). Numerous discussions were held among the members of the SAHARA Editorial and Steering Committees and it was finally determined to use year (in 100-year increments) and country to define "editorial buckets" to match the common descriptions of a scholar's expertise as closely as possible. These more specific designations allow a computer to sort the images according to precise rules. Therefore, for a European Modernist, the bucket is defined listing each country in Europe individually along with the years 1900-2100. Not surprisingly, this is not a perfect solution. The subset of landscape specialists added an additional layer of complexity; however, after considerable debate, it was agreed that bucket overlap has to be permitted so that multiple editors can view the same images and select those most suited to their own field for review. For example, a landscape historian can review the available images in the modern bucket and select only those that depict landscapes for review, leaving all built work for the other editor or editors. Overlap also becomes an advantage for workload, so that buckets with particularly high volumes of images to be reviewed have a more distributed burden of responsibility.

SAHARA display screen



Another component of the editorial tools that required discussion was the workflow and privilege levels for each type of user. Editors wanted to be able to refer an image they were reviewing to another colleague for an additional opinion, but should there be a limit to the number of times this can happen between two or more people? Can a librarian also refer an image? What type of user can make the determination about whether or not an image can be promoted to Editors' Choice or kept in the Members' Collection? Should the librarian send the edited record back to the scholar for a final review before promotion? For the tool specifications, the committee ultimately decided that any type of editorial user could refer a record and that there would be no limitation as to the number of referrals. However, only the scholar, now termed "Content Editor" can make the decision about whether or not an image should be promoted. Librarian Editors only see images that had been referred to them for data normalization or augmentation, but this work is only done on images selected for promotion. If an editor decides to keep an image in the Members' Collection, its minimal data record is sufficient; the Editors' Choice Collection as a result being significant not only for its high quality images, but also for its high quality metadata.

With a workflow outlined, the editorial committee has been working during the last year to codify what criteria to use when evaluating an image. As one might imagine, this sort of determination can be fairly subjective. At an early editorial committee meeting, in order to facilitate discussion, editors reviewed the images that had been submitted thus far to the Members' Collection and selected examples that they each felt illustrated a high quality image and one that might not be promoted. Armed with these examples, the committee met in person for discussion with selected examples projected on screen for the group to view and comment upon. The committee's discussion further illustrated the assumption that this would be a difficult task. Certain members were concerned about being too selective and limiting access to photographs whose subjects might not be replicated in better quality in the near future. The challenge of the collection structure is that once promoted to Editors' Choice, images are not demoted if a better representation is submitted. Another faction wanted to keep standards high to ensure long-term quality. One quality control factor is already built into the editorial system; images must be larger than 2,000 pixels on the long side to be considered for Editor's Choice. Those that do not meet this requirement will be automatically excluded by the computer's filtering process. An argument against lowering standards was that all contributed images are available and searchable by SAHARA users. The only user-group that would not have access to Members' Collection images would be non-SAHARA subscribers who are viewing the collection through the ARTstor Digital Library; this collection is a selected group of Editors' Choice images that meet ARTstor's requirements for copyright and usage. Specific criteria have been difficult to codify and at this writing, the agreed-upon working guidelines are that editors should make a determination based upon whether or not they feel they could teach with the image.

In the planning stages the group discussed instances of specific images and how they would move through the system with referrals, promotion, etc. However, when the editors started working with the tools, they soon discovered several desired features that had not been anticipated or specified. When designing a brand new type of program, each and every desired action and function has to be spelled out, or it will not be built. This is one of the many lessons that we have learned along the way with SAHARA. Functions that might seem intuitive to be included can get left out inadvertently.

We have also discovered that workflows do not always work as planned. For instance, if a contributor discovers that they made an error in their metadata, they can contact the SAHARA administrators to request a change. However, if the administrator makes the change and publishes it to the public view of SAHARA, the image is also removed from the assigned editor's queue of images to be reviewed. As a result, at this time, updates can be saved, but not published until an image has been vetted.

The current SAHARA Editorial Committee is thirty members: seventeen scholar/content editors and thirteen librarian editors. A smaller, Editorial Executive Committee has been formed to focus on policy decisions, while the larger group's work will now solely focus on image editing, though feedback about improvements to the process and tools is continually provided to project staff members. There are still some editorial areas without coverage and unfortunately this does not necessarily coincide with areas of low contributor content. Recruitment is underway to fill the gaps. Editors represent colleges and universities across the United States and even a few abroad. With this distributed system, training of new members cannot be done in person and webinar technology is being used to orient editors to the tools and workflow. In-person training sessions have also been held at the SAH annual meetings for those able to attend.

One of the larger challenges of the editorial assignments has been recruitment of scholar editors. While the library community has been most enthusiastic about SAHARA and willing to participate in a new work model, scholars, though supportive, have expressed concern about the amount of work involved and the mounting demands on their time. Furthermore, certain editorial areas have a much larger pool of contributed content, necessitating a larger team. Because the actual editorial work began well into the year after the upload tool was available to scholars, there was already several month's worth of images to review once the editorial tools were launched in Spring 2010. This also affects success in recruitment of additional editors as the prospect of starting out with a 2,000-image backlog is daunting to say the least. And it seems that there is never a real downtime for academics, despite the proclaimed summer "break."

What has been continually surprising to the project staff is the amount of interest that the scholars have had in the image metadata. In the original conception of the editorial workflow, Content Editors would only review the images and pass on any metadata modifications to their librarian partners. However, several Content Editors expressed hesitancy to refer images to the librarians because they could fill in the required data themselves and it felt like more work to go through the referral process. Others also expressed a lack of clarity as to which Librarian Editor to work with. As a result, the project administrators created editorial teams, attempting to match content editors with librarian editors based on their areas of interest or expertise. Given the breadth of the collection and the people who were currently working on the project, some assignments were more of a stretch than others, meaning that some librarians were asked to work outside of their comfort zones. Hopefully as the project develops we will be able to give everyone work in their preferred subject matter.

Another part of the original intent of SAHARA was to incorporate collaborative collection building work into the regular duties of librarians so that their participation would be viewed as part of their job rather than volunteer work done in their free time. We thought it might be a challenge to convince administrators to sign off on this arrangement, but we have been pleasantly surprised to find that for the most part this has not been the case. (Interested librarian editors are asked to submit a letter from their supervisor affirming that they are approved to work on the project.) In general the library community has enthusiastically embraced the collaborative model we have proposed. However, we have not yet had the opportunity to really test how this will affect librarians' regular work responsibilities because the content editors have been struggling to work through the image backlogs and, to date, few images have been referred to the librarians. We imagine that there may be similar workload difficulties for librarians once they have their turn with editing responsibilities.

There remain many issues still to be addressed and without precise solutions. One of these is that of contributor expectations and editorial review timelines. How long should an image be expected to sit in the Members' Collection before it is evaluated? Should there be a mechanism for a contributor to appeal a decision? Right now there is not a notification system in place to alert contributors as to the status of their images or the results of the review process. If the academy does recognize the editorial work done by SAHARA editors, how do they cite this? By pointing to individual record ID numbers? How do we measure success? By the size of the collection and the breadth of coverage? By usage patterns? By the number of contributors?

The plan for SAHARA's sustainability is still undetermined. We are working on various scenarios, budgets, and revenue sources for long-term maintenance, but as of this writing, nothing has been decided upon. SAH is a small scholarly society with a staff of only six, relying upon volunteer work and grants for its many endeavors and recent large-scale expansion into digital publishing projects. In addition to SAHARA, the Society's journal has moved to an all-digital format and the book series *Buildings of the United States* is also being redesigned. As the universe of scholarship changes, SAH has positioned itself to play a central and groundbreaking role within the humanities. How all of these initiatives coalesce will be exciting to see.

SAHARA is an experiment, albeit one with lofty goals: to change modes of scholarly discourse and to create a peer review structure for images that would count toward promotion and tenure. It is still too early to tell if this concept will prove successful or sustainable, but in the digital world, we all know that things change quickly. As librarians and information technology practitioners, it is our responsibility to continue to try new ideas; to not fear experimentation and be willing to honestly evaluate our efforts when determining success and also failure. An idea as originally conceived may not work, but with a little creativity and adaptation to the changing environment, perhaps a new and better concept will emerge. SAHARA has met with many successes over the past two years, not the least of which has been the support of the library and visual resources community. We know that as we continue our efforts toward creating a sustainable resource, our colleagues will provide valuable insight and expertise.

It's Everywhere You Want to Be: Facility Conversion for the Digital Age

Carole Pawloski, Visual Resources Librarian, Art Department, Eastern Michigan University

Slide Libraries step aside. The Digital Age is here. This is a time of inescapable change for visual resources and an opportunity to redefine our role for the twenty-first century. Where do we want to be? How do we get there when so many of our people are working in isolation without the benefit of collegial dialogue and interaction that can result in new ideas, excitement, and interest over the latest pedagogical discoveries? How do we convince people that we are still important and necessary? We must transform ourselves not only to meet the technological needs of our clientele but to create an environment that does.

At Eastern Michigan University we have seized this opportunity to transform our Art Department's Visual Resources Library into a state-of-the-art Arts Media Center and Arts Media Services area.

When completed, the Arts Media Center will be an inviting place for faculty and students to congregate for training, experimentation, and preparation of digital resources. Not only will the Media Center layout foster interaction between students and faculty, it will include a full array of equipment and technology for their use.

The second transformed area will be Arts Media Services. It will be staffed and open for checkout of equipment and pay-for-use print services. This area will be designed to serve the entire university community.

As our Visual Resources Center evolves, we are considering a multitude of options, but we remain flexible in our choices. We recognize that all visual resources departments are unique, and what works for one may not work for another. This article details our journey at Eastern Michigan University as our visual resources area evolves and adapts to meet the challenges of the new millennium.

Initially, we conducted a survey to determine the needs of potential patrons. It is amazing how useful that information can be. Our first survey proved valuable on a number of levels. The art faculty had the option of completing the survey as hard copy or online—most chose hard copy. Many participants did not take time to elaborate, so the more expedient multiple choice or ranking format got the most participation. The information we did receive gave us direction and guidance as to where to go next and what to purchase. A second survey designed to assess the equipment and service needs of our students was next. The information gathered from these periodic surveys, along with ongoing communication between our faculty, students, and current patrons will help ensure that our visual resources areas can always meet the pedagogical needs of our patrons.

Our goal is to create an ongoing dialogue with each and every potential user. We continue to send emails and fliers, maintain a regularly updated Web site, and conduct recurring individual queries and workshops. To succeed, we believe it is important to communicate often with a variety of people. You cannot overdo this aspect.

At EMU, we have chosen to make the transition gradually. We have started with small changes, using equipment we already owned or purchased inexpensively. Furniture has been creatively rearranged to function better in the space. There have been some advantages to not having everything happen all at once. It has allowed for adjustment to the idea of change. At first, people just noticed there was something new; next they got a little curious and started asking questions; and now, they are beginning to express interest.

By slowly introducing new things and refining areas, faculty are not thrown off kilter or overwhelmed by removing everything that is familiar. By making ongoing modifications, no one is shocked; in fact they have barely noticed the difference. When they do, they might be ready to give the "new" a try. Faculty and students are starting to come back to the Visual Resources Center for help. Hopefully, after their initial curiosity has been satisfied, then the true creativity and ideas will start to blossom. Before we know it, the old will be passé and the new will be embraced.

In reconfiguring your space little by little, how do you make room for new media? We have decided to remove slides gradually, partially because we may be acquiring equipment funding piecemeal, and also because the slower transformation allows patrons to adapt to the idea. With the de-accessioning of slides, what do you do with the slides that remain? We plan to keep the best copies in drawers stacked floor to eye level in a small hallway between my office and the new Media Center. There are reasons to keep slides around and available, at least for the short term. It is likely that you will want to store archival copies indefinitely, but accessible ones have a purpose today. As long as there still is a way to project slides, faculty will continue to want to use them, at least when it is most expedient. Our faculty, for the most part, lecture exclusively with digital images, but if they want to speak on something that is not yet digitized, they often prefer to use the easily located and familiar slides. They put together a quick make-up exam by grabbing a few slides. Until digital becomes second nature, faculty may not want to abandon their old tried-and-true methods entirely. Whether it is in stages or all at once, we need to embrace the digital age and acknowledge it, providing a stimulating visual resource environment.

With moving the slides, our former Slide Library is evolving into our Visual Resources Media Center. It is time to introduce fun and useful tools for teaching. For the studio faculty, we plan to include a drawing tablet and possibly an animation station. Our department already owns a large drawing tablet, which formerly received very little use because

of its size (12 x 19-inch tablet) and former location. Now it is set up next to a computer in the Media Center, where people can come in and try it out without set-up time or much of a learning curve. Maybe it is just something to investigate between classes. Another possibility will be to bring in a couple students and try out ideas in a variety of colors and effects. The options are endless. After people have tried it out and demand increases, there will be a few smaller drawing tablets available for checkout. The tablets can be used as a sketch planning pad or to create digital art.

The inclusion of an animation center can provide a new approach or avenue for digital inventiveness. All that is really needed is a computer, a stand, simple lighting, software, and a few three-dimensional objects to get people started. This does not need to take up much space or require much monetary investment. Animation once was something only a specialist could do, but now it is easily accessible to the novice.

How do we serve beyond the physical space of the center? What about the art historians, who at our institution are still totally dependent on images for teaching? How can we assist them or are they just left to their own devices?

We use ARTstor and LUNA primarily for image database retrieval. ARTstor provides the majority of the images and the Offline Image Viewer (OIV) is the favored presentation tool for most. LUNA holds the more customized images that are not available in ARTstor. Those are restricted to only our faculty for copyright reasons.

In the beginning, we scanned slides like crazy. Many faculty members turned in their slides when they were done lecturing to have all those slides scanned. This was what was comfortable and a way to get them started. It created a group of digital images that they already knew. If the images were not available in ARTstor, we put them into LUNA. Of course, ARTstor has improved exponentially since then and is a much better resource now.

From ARTstor's inception in 2005 with 250,000 mixed quality images and very slow access, today they have over one million art images, faster access, better quality, and many useful features. ARTstor is also very good about listening to our needs. They provide a dependable service and resource that continues to improve.

LUNA Insight has recently updated its interface and has a number of excellent features. We are working on ways to improve our users' understanding of LUNA's functionality and effectiveness. One way to do this is to provide training and exposure, so faculty and students are comfortable using it. Small workshops and individual sessions can get people started. We encourage faculty to bring in books to scan with images that are either of better quality or unavailable in ARTstor. As experts in their own areas, they should be able to direct and inform us on what to include. Another resource will be to solicit faculty to contribute well-documented digital imagery from their travels. Of course, this means providing them with instructions for required image size and metadata. Unless this is done, you will just be making extra work for yourself and having an incomplete or inaccurate database.

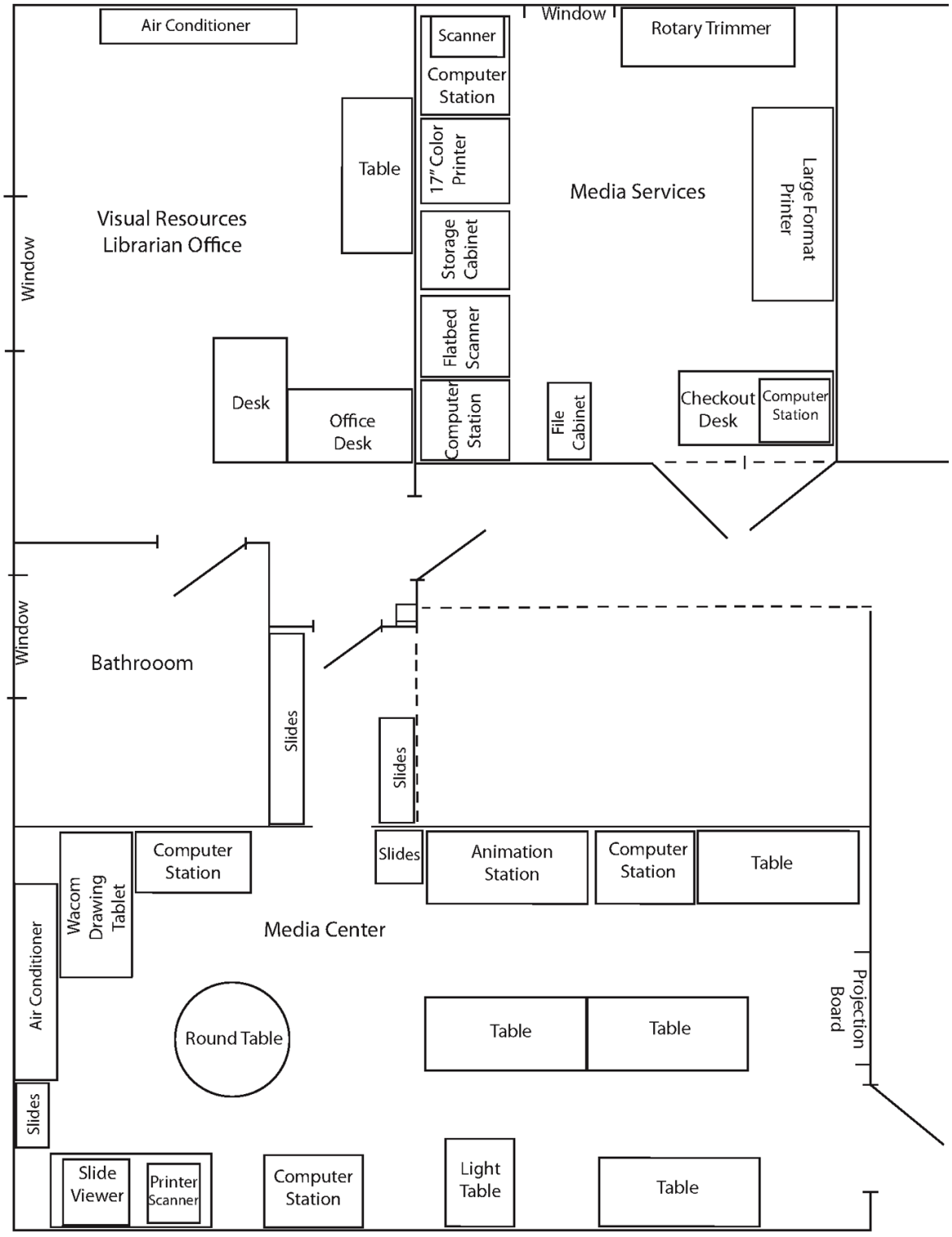
For the studio faculty, Visual Resources needs to encourage them to provide images that are unique to their own discipline. Their familiarity with recent advances in the field can help keep the resources current and relevant. The Art Department does have a public Web collection on LUNA that holds work of alumni graduate students. This of course is a great recruiting tool. The current work of faculty and students is kept on the Department's Web page. Perhaps a more comprehensive collection of faculty and student work can then be added to the Luna public site as well.

Near the Media Center will be the Media Services area, which will provide services for the entire university. This area will need to sustain itself to cover costs of staffing and supplies, and eventually generate a profit. By including a larger segment of the population as users, the expenses for staffing and materials will be more easily met. Control over access and availability, along with quality will be the main advantages for having an area nearby with these services. Especially at a commuter school like ours, there are a number of reasons for the university to be self-contained. Parking, time constraints, and quality control make on-campus facilities attractive and convenient.

But how much do we even want to take this on? It does after all require a great deal more responsibility and training. Do we really want to face the expectations and criteria of a buying public? Can the rotating staff of students really meet the same stringent standards of a business devoted to just this? Of course, students, especially those in graphic design and photography who get regular assignments that require large format printing, will welcome an on-campus facility for convenience alone. The need is there. Also if the price is reasonable or even competitive, that will keep the service in high demand throughout the department and university. I certainly have mixed emotions about handling or even managing something on this scale. It will ultimately need a skilled dependable assistant. Is this a student or a full- or part-time employee?

What about an intern? We have yet to request one, but this might be a good time to start. There might be more incentive for students to take their job seriously if they are getting credit for it. Since most internships require specific graded projects, the work must be more than mere busy work. We can present challenges to the intern that make the experience valuable to both the department and the student. Find out what the student's plans are, and customize a task or project that will serve you both. While the worker is carrying out repetitive tasks, such as equipment checkout, he/she can also be learning new skills and keeping useful records. Proficiency and knowledge of equipment, software, scanning, and databases can prove marketable later for them in a number of art-related fields. This can be a win-win situation for both you and the student employee.

Visual Resources Center: Media Center. VRL Office. Media Services. Floorplan.



Since internships only last for a semester or two, how is there continuity with the job? One way is to keep interns on as paid student workers past their allotted intern service; that way, they can assist and train the next person. Maybe they can work for a scholarship. This may take some coordination with a scholarship committee, but it is just another possible avenue for funds. If you provide them access and training that is unavailable elsewhere and pertains to their field of interest, you might even get them to volunteer. This experience contributes to their professional development and always looks good on a resumé.

We realize that staffing is a huge issue when you start to provide new services. Needs and training are a mix of the old and the new. What once allowed staff flexible hours, now requires more complete coverage in order to provide steady availability of services. In order to accommodate a greater number of people, regular comprehensive open hours will be necessary.

How do we pay for more employees to staff these areas? One way is to include pay-for-use services that generate enough money to cover staffing and cost of materials. Acquiring that capability is not always simple. Institutions may not want every department to be handling funds and therefore be reluctant to allow that capacity. Administrators think that services like these will be better handled in the main library or other areas that already serve the entire university. The main library presently has the ability to checkout and charge for overdue books, DVDS, and some equipment and services. So why not just continue that way?

How do we convince the powers that be that the art department and visual resources unit is a more natural and suitable choice for high levels of quality photo imagery? We deal with images all the time and know how to best produce standards acceptable in professional venues. As to why color and large format printing are better suited within the Art Department, this is where more expertise and understanding of visual images takes place. It prepares students to expect the best and provides them quality control that meets and requires professional monitoring. It provides the best model and standard to exemplify the university.

An important consideration as our plan unfolds will be new signage to build awareness for the center. Clear attractive signs outside the newly assigned rooms will be designed to let people know we are there. One thing we are considering is to solicit graphic design students to create something through a contest or class assignment for their portfolios. At the very least, we will purchase a plainly printed, legible, durable sign that is noticeable (even an LCD "Open" sign may be just the ticket).

Lastly, once our space is near completion, we plan to have a dedication, complete with demos, hands-on activities, and plenty of food. Our staff and volunteers will be on hand to show off what is new and improved in each area and to give demonstrations. Trained and ready, our personnel will be there to answer questions, provide handouts, and encourage signups for group and private sessions. Of course, a suggestion box is a must.

All of these plans are great, but can we really afford it? Due to cuts and miniscule budgets, we need to consider a variety of funding possibilities both on and beyond our university. Within our institution, there may be a number of avenues to approach, even during tough economic times. Grants or private donations may still be available. Creative thinking, consolidating resources, and positive rationale and energy can make it happen.

Grant writing does not just happen. It takes a lot of hard work, time, and focus. Most of us find it hard to stay on task over a long period of time, due to interruptions with our regular duties. One way that helped us stay focused was to assign a graduate assistant to work exclusively on proposals. By doing this, every time the GA came in, we were forced to set aside time and work toward this goal. Of course, it did help to have a hard working, dedicated graduate assistant with skills that compliment our needs.

There are several avenues to consider when looking for funding. We have chosen to first seek internal funding through our university's foundation, administration, and research departments. If seeking an internal grant, keep your ears open and tell all the right people at your institution what you want to do. The more you apply for money, the more word gets out and increases your chances. Stay positive even when others in your department might resist change. We all know how difficult the initial stages of introducing technology were when we first announced that slides needed to be replaced with digital images. Usually, it takes several attempts before anyone really takes notice and decides that what you are proposing is essential. Rejection is part of the game, and it is easy to get discouraged. When one plea for money does not work, try another avenue.

EMU has plans to create an Arts Village in the not-too-distant future. The Arts Village will be a centralized integrated facility of the Fine Arts, where Music, Art, and Theater will coexist. When this comes to pass, the changes made in the visual resources area will have served as a testing ground and stepping stone for a larger assemblage of all the fine arts and multimedia on campus. Interdisciplinary activities and courses will benefit from an expanded Visual Resources Center. This will also create a larger pool for employees and funding. When considering a grant, some corporations even prefer to come in at the initial stages of planning of a larger facility. It will give us more clout and lay the groundwork for something that will benefit the entire university. Grants are always more likely when they serve a greater population.

Recently, I attended the Visual Resources Association conference in Atlanta and was pleased to see we were not alone in our quest to transform our spaces. Others were making very similar changes from slide libraries to media centers. The session "Transition to Learning Spaces, Redefining Our Space for the Digital World" was especially appropriate (it is always good to know others are following similar paths

and you are headed in the right direction). The session panel of four prepared their talks independently, but were amazingly alike, each having slightly different innovations and approaches. This gave us plenty of ideas to add to our own.

One presenter was Elisa Lanzi from Smith College. Her groupings and flexibility of the space, making furniture moveable for a variety of uses, was of particular interest to me. This multi-use and flexibility is something we are also providing. We may even consider casters for the tables. Elisa also suggested a large screen monitor to accommodate small groups of three or four people at a time for training or discussion. Our space currently has a number of reservations for meetings and testing. When we interviewed candidates for faculty positions, the room provided a place to conduct interviews. We have posted a room reservation signup sheet on the door. The downside of this may be that many of these reservations are private and limit other use during these times. We should be able to work around this in order to accommodate various needs. Since the area was virtually empty before, it is good having it used again. Occupants can observe and be aware of the ever-changing space and functions.

Another presenter at the same session was Lauree Sails from the University of Maryland. One successful idea that she had, that we are definitely going to try, is something she terms "Tech Talks." These are weekly training sessions always at the same day and time (hers follow the graduate seminar) on a variety of topics. The groups are well attended and interactive. We have started a Facebook account to advertise the topics. We also intend to require graduates to attend a few of these as part of their Critique and Professional Preparation seminar.

Another idea that Lauree has incorporated is a large curved projection screen auditorium. The curved screen with three mounted projectors allows for multiple uses and high-resolution wide-angle viewing. Currently we do not have the space for this, but it does sound like a good option for our proposed Arts Village.

By transforming the former slide libraries into multimedia areas that face the challenges of the technological age, we can provide spaces to meet the needs of faculty and students. There needs to be new ways to approach and translate our ideas into the digital age. Our roles are still to provide content and quality, and then to direct people to the best resources. Visual resources centers can become a hub of creativity that brings everyone back to get rejuvenated and excited about new possibilities with technology in the world of visual media and resources.

University of California, San Diego, Arts Library Renovation

Trish Rose-Sandler, Data Analyst, Missouri Botanical Garden in St. Louis, and Leslie Abrams, Head, Arts Library, University of California, San Diego

During a period when library budgets and staffing were being greatly reduced and in some cases entire library buildings closed around the country, the UC San Diego Arts Library[1] was able to complete a $1.7 million renovation of its space in 2009. This resulted in a significant increase in service hours and improved access to arts reserves and media collections. Trish Rose-Sandler sat down with head of the UCSD Arts Library, Leslie Abrams, to discuss the renovation, and in particular how the building's program changed from 2000, when it was originally written, to 2008 when it was updated.

TR: Leslie, from the time the library renovation was planned until its completion was a period of about ten year's, right?

LA: Yes, the first building program was written in 2000 and the program was updated in 2008 right before the renovation began.

TR: A lot changed during that decade in terms of library technology, users, and resources. How did that affect the original building program written in 2000?

LA: The environment had changed radically from 2000 to 2008, especially an increase in patron demand for a robust technology infrastructure to support the use of media and digital content, as well as more collaborative public spaces. We had to reevaluate technology options every six months during the renovation since components (chips, wiring) and how digital media equipment interacts with other components were constantly changing. Another important difference from 2000 to 2008 was how we provided visual resources and associated services. By 2008 image delivery had been transformed at UCSD. Luckily, we had already introduced our faculty to the move from analog to digital images as charter members of ARTstor. With support from the Mellon Foundation we had completed the digitization of our slide collection in 2004. Removing the slide collection and the associated footprint from the building program freed up significant space to be used for other purposes.

[See Figure 1]

TR: How much space in the original building program was taken up by the production and storage of slides?

LA: A major footprint, both public and staff space, would have been required if we had retained the physical slide collection. Because space for a slide collection was no longer needed, we were able to double our production space for creating digital still images, upgrade our digital audio and film production studios, and create a film preservation studio. Expanding the digital studio enabled us to accommodate a digital camera, scanners (flatbed and slide), and computers, including a quality control station. In the past these technical operations were spread out in less-than-ideal spaces. As a result of the renovation, the functionality and security of our space was vastly improved. The Arts Library has become the primary in-house creator of digital media at the UCSD Libraries. We embraced digital production for images and audio over a decade ago, including acquiring equipment, promoting the development of necessary infrastructures, and most importantly, investing in the development of staff to assume new roles and acquire skill sets required for building the digital library. In addition to digitizing media materials held by the

Figure 1. Leslie Abrams at ribbon cutting ceremony.

Arts Library, we also have participated in pilots to create digital media from UCSD's Special Collections and International Relations and Pacific Studies Libraries.

TR: Besides the slide collection, what other parts of the building program changed during that period?

LA: Our users told us they wanted spaces for working collaboratively in groups, so we placed a greater emphasis on furniture layouts that would enable this. Another change was we constructed fewer walls than in the original plan, going to a very open floor plan for both the public and staff areas. Instead of providing a room for viewing film resources, we built multimedia workstations in a section of open space adjacent to our service desk. These changes have been very favorably received by our users.

Our patron's audio needs have also changed radically. We have provided streaming digital audio reserves since the mid-1990s (students do not need to visit the library to do course listening). The big change was being able to design a multimedia workstation that could be used for both high definition moving image and CD quality audio support. We also now license all the major academic digital audio services, so the once heavy use of our analog audio collections has been replaced by licensed and in-house digital audio content.

Some needs were still the same from the 2000 to the 2008 plan: a need for a film and tape vault (additional climate control and security), new digital production studios, additional compact shelving for all our print and media collections, the need for several group viewing rooms, and the single service desk.

[See Figure 2]

TR: How were users involved in developing the original building program?

LA: We conducted focus groups with students and faculty in 2000.

TR: Did you do further focus groups in 2008 since so much had changed?

Figure 2. Audio studio.

LA: No, we did not because we felt we had an effective communication channel to obtain additional input via the Arts Library Advisory Committee, which was made up of representatives from the core departments that utilize us including visual arts, film, literature, music, theater and dance, and history. We had an opportunity, and I believe the time was right, to retire the physical slide collection since the collection had been digitized and ARTstor had already been introduced as the primary platform and tool for images. We also needed to move quite quickly on the renovation since the budget challenges facing the University of California were looming.

TR: What other technology and space needs did the library have to accommodate with the increase in online digital resources?

LA: For the benefit of our users, we designed and built a multimedia delivery system including an equipment rack located behind our service desk. Digital media is delivered from this rack to the public multimedia workstations and group viewing spaces. This required HDMI and fiber cable running up to several hundred feet from the rack to the delivery points. This installation is unique among the UCSD Libraries.

[See Figure 3]

TR: My understanding is that one of the big opportunities in this renovation was to combine multiple service points into a single point of service. What was the impetus for this change and what are the benefits?

LA: Correct, we consolidated three separate service points from our former arts libraries (Art & Architecture, Music, Film & Video reserves) as well as an additional, non-Arts service point (Current Periodicals, Newspaper, & Microforms), which shares our public space, into a single service point. This consolidation gave us the opportunity to more efficiently use (and in some cases reassign) desk staff, but it also allowed us to increase the number of hours our desk could be open. We reoriented the staircase that serves as the major entrance into our library to face the single service desk. Our three previous service desks were quite hidden away, so this was a huge improvement for users seeking assistance. The desk has a

Figure 3. Media playback equipment rack (behind service desk).

circulation/transactions zone and a reference zone. Both zones are staffed, but we are currently evaluating our reference staffing model.

[See Figure 4]

TR: The projected cost of the building renovation in 2000 was estimated at $8 million but in 2009 it was completed for $1.7 million. How did you manage to reduce the costs so significantly and how did the building program change under the greatly reduced costs?

LA: The original projected cost was $8 million, but it included a full renovation of all arts library spaces as well as a full replacement of all the furnishings and building a media "cave." The final $1.7 million cost was the result of a scaled down renovation—we only renovated two-thirds of our space and only replaced a small number of furnishings. There were other factors that worked in our favor. At the time when the renovation went out to bid in 2008, the economy was such that contractors were anxious for work and we had multiple competitive bids on the project. The campus was able to choose a suitable contractor who came in under budget.

TR: $1.7 million is still a significant amount of money. How did you find the funding for this renovation?

LA: Our renovation was funded completely with internal library money. Our library administration set aside $500,000 annually from the Libraries' capital improvement budget for three years and I requested and received an additional $200,000, which supported building the new technological infrastructure, multimedia workstations, and group viewing rooms.

TR: Are many of your materials in off-site storage?

LA: A very small percentage. One of the great benefits of utilizing compact shelving is being able to have most of our holdings on-site. The largest collection off-site is our LP holdings. About 90 percent of our collection is in the building, which is critically important for our user's needs.

[See Figure 5]

TR: What role did compact shelving play in the renovation?

Figure 4. Single service desk on right, multimedia stations on left, colored art glass in middle separates public space from the staff areas behind it).

LA: A large role. The art book collection had been in compact shelving since the establishment of the Art & Architecture Library eighteen years ago, but the music and media collections were not. Additional compact shelving was not planned for in the original program in 2000 but in 2006 new compact shelving was installed in an area near the Arts Library to accommodate the Biomedical Library's collection for a year while their library was being expanded. Once the Biomedical collections were moved back, we proposed and were authorized to use this compact shelving for the music books and scores collections. So, it did not "cost" us, and it freed up public space for other priorities. Also, we are fortunate to be on the ground floor of an eight-story building and therefore do not have the load bearing issues to deal with had we been located on a higher floor. We also use compact shelving for our closed collections, all our media (CD, DVD, Blu-Ray, and vhs), controlled circulation books, and film and audio tape collections. The only collections not on compact shelving are the Arts Reference collection and extra oversize music scores.

TR: How involved were you in the planning process? Did you work directly with the architects?

LA: I was very involved as co-manager of the project; however my direct contact with the architects was limited because we have a seasoned Library Facilities director. He was crucial to the success of the project because he knew the building intimately, especially what was possible, or not, given the existing structural framework we had to work within.

TR: According to the 2010 Horizon Report,[2] within two to three years e-books will become mainstream resources within libraries. How do you see this playing out in arts libraries?

LA: Up to now we have not seen a huge demand for e-books, but the environment for the arts may be rapidly changing given new mobile devices and different e-book funding models, including those being piloted here at UCSD (EBook Library). It is not surprising that students choose ease of access and digital content because of convenience. We have seen this trend for over a decade with media, students are perfectly

Figure 5. Compact shelving used for media collections (behind service desk).

satisfied with a small digital image on a computer versus a slide being projected, or viewing a streaming film via the Web versus viewing a 16mm projected film print.

TR: Right, it is interesting that students do not seem to be as concerned with accuracy when it comes to viewing images or film.

LA: Students, especially lower division undergraduates, are often more interested in whether something is available 24/7 on a mobile device or laptop. Of course, the delivery of digital content (image and audio) has dramatically improved in quality and become almost ubiquitous. Faculty, however, still understand and emphasize the importance of the "quality" media experience and would prefer students view digital images and film either on large, Hi-Definition screens or from a projection of a film print. We do provide this support (film screening, high definition viewing) in the Arts Library, so hopefully we are meeting both the "quality experience" and "ease of access" required by these various constituencies.

TR: What other types of resources do you have in the Arts Library and what spaces have been built to accommodate them?

LA: We have a large media collection (CD, DVD, VHS) and a small collection of protected book format materials in compact shelving behind our service desk. LPs are stored off-site but can be paged and available for use with a four-hour turn around. LPs are not requested frequently, but they are an important legacy collection if there is a call for a specific sound recording only available on LP. We built a climate controlled and secure film and tape format vault that is used to house 16mm, 8mm, and other film formats, and various audio tape formats including reel-to-reel and DAT.

TR: I know exhibitions have been an important part of the Arts Library program. What were the needs for exhibition space in the renovation?

LA: Yes, we have a very successful outreach program that includes exhibits. This summer, we will lose an entire wall of built-in display cases. As a result, we will buy new display cases—both moveable and stationary. We still have not totally rationalized the best place to have events. I expect we will try out different options for another year. Ultimately, we may just need to be very flexible about using different zones of our space depending upon the nature of the event.

TR: What were the needs for the public areas?

LA: Our print music collection, especially scores, needed to be onsite and in public areas because users want to browse these. We have strong collections in contemporary art music and not many scores like these are available digitally. By moving the music print collection (books, scores, serials) to compact shelving we freed up public space for carrels, group tables, and lounge chairs. We have over thirty public computers with full Internet and Microsoft software access. We also have several stand-up computer stations for quick searching of our OPAC or online databases. We have twenty-six Hi-Definition multimedia stations that support viewing of film (DVD and VHS) and listening to audio (CD). Our multimedia workstations used to be contained in a separate room to minimize distractions but students prefer these stations to be in more open, public areas and will often sit in small groups to view films together. Other items in the public space include graduate student lockers and a large format flatbed scanner. We are just about finished building three, group viewing, listening rooms with 51" LED monitors and great sound systems.

TR: What were the needs for the staff areas?

LA: In addition to the three digital studios (still image, moving image, and audio), a film preservation studio, and a film and tape collections vault with special equipment and climate needs, staff mostly needed flexible cubicles and work spaces that we can easily reconfigure as needs change or evolve. We also added a small conference room.

TR: With still images becoming one of the first media to go digital how has that changed the use of still images?

LA: Interestingly with the move from analog to digital our contact with users changed. We spend a significant amount of time with some users (faculty) in helping them gain skills and feel comfortable and confident in using the digital resources and tools. But after that initial investment, they are mostly self-sufficient. Our visual resources curator and technical support staff take on this workload. There are many technical issues related to software and hardware configurations as well as proxy issues. Our faculty are not getting much support in their home departments, so we have seized the opportunity to step in and take on this role. The one-on-one approach with faculty has been the key to our success. For instance, a senior art historian who had taught with slides for over thirty years, and who we thought would never embrace digital images, was able to successfully make the transition.

In some cases users want more than we can provide. For instance, they wonder why we cannot stream all of our films. Part of the process is educating users about issues such

as copyright, technology, and staffing limitations. Once faculty become proficient in using technology and digital content, they can serve as informal peer resources to their colleagues. We do not hear much from students or teaching assistants because they are very independent, comfortable adapting to new technologies, and very satisfied with what we are providing in terms of content.

TR: Are faculty members using software other than ARTstor for classroom presentation?

LA: Faculty are using the ARTstor interface to present images, but they also download images and put them into other presentation tools such as PowerPoint. They can now import and export groups of images rather than one image at a time, which is tremendously helpful. ARTstor provides very high resolution and excellent tools for image presentation.

TR: How have the roles of reference librarians and visual resources curators changed with changes in technology and the research process?

LA: Our former visual resources curator now manages digital and technical services for all media including still and moving images as well as audio. She is very involved with building the UCSD digital library and is recognized as the libraries' digital media expert. She continues to make major contributions to arts reference service and instruction, and participates in the UC-wide chat service.
[See Figure 6]

TR: How do you prepare your staff for these major job transitions?

LA: We encourage them develop their skills and knowledge through professional meetings like the VRA conference or specialized workshops like the Summer Educational Institute for Visual Resources and Image Management. We also support their taking advantage of local workshops and other training

Figure 6. Opening celebration for renovated Arts Library.

opportunities. Our Libraries' budget provides our highest level library assistants with yearly professional development funding and we can request additional funds for training. The administrators of the UCSD Libraries understand the importance of professional development and training for all staff and librarians during these times of constant change and transformation. My staff's positive attitude about change also made a difference. They were highly supportive of the changes we needed to make.

TR: At the same time I know some staff here who have reached out to other organizations to do collaborative work.

LA: Yes, this can be valuable, and we assess such opportunities carefully to ensure it will benefit our library and our users. Since we have an extensive technological footprint (digital studios and state of the art media delivery infrastructure) our technical staff attend trade shows annually and talk directly to vendors. In some instances we have been able to influence vendors to customize their equipment or software to meet our specific technical needs.

TR: For any arts library considering a renovation of its physical space, what key factors should they be considering in the next five to ten years?

LA: Think about mobile furniture and more open (fewer walls), flexible, reconfigurable, and collaborative spaces. Also, take advantage of natural light sources and interesting interior elements to establish a unique sense of place.

TR: Were there other factors that you feel contributed to the success of the renovation?

LA: I totally restructured the Arts Library organization near the end of the renovation period. My staff were accepting and supportive in taking on new roles and responsibilities.

TR: Perhaps the physical changes helped with the psychological changes staff needed to make such a transformative change?

LA: Yes, I think there may be something to that!

TR: Lastly, I am curious to know if you read any articles or books at the time that influenced your thinking on planning the space?

LA: Yes, I was reading quite a few resources at the time, but the one that probably influenced my thinking the most was the 2005 CLIR report, *Library as Place: Rethinking Roles, Rethinking Space*.[3]

TR: Wonderful. Thank you for your time and sharing your process with us.

LA: You are welcome.

Notes

1. "The UC San Diego Arts Library, which supports award-winning faculty research and teaching in Music, Theatre and Dance, Visual Arts, and Literature, has been a leader and early adopter in the development and delivery of digital reserves for image, audio, and moving image. As the first major contributor to ARTstor, a digital library developed to support scholarship in the arts and other disciplines, the Arts Library was the first academic library in the nation to digitize their entire slide collection. The Arts Library is also known for its outstanding contemporary music collections, especially its holdings in experimental and twentieth-century music, and its lively and novel arts events, including toy piano concerts and not-so-silent film festivals." As cited from http://libraries.ucsd.edu/about/press/arts-library-open-house.html (viewed 2010/5/25)

2. Johnson, L., Levine, A., Smith, R., & Stone, S. (2010). *The 2010 Horizon Report*. Austin, Texas: The New Media Consortium. Available at http://wp.nmc.org/horizon2010

3. Council on Library and Information Resources (2005). *Library as place: rethinking roles, rethinking space*. CLIR publication 129. Washington, DC: CLIR. Available at http://www.clir.org/pubs/reports/pub129/pub129.pdf

Visual Resources Association Bulletin

Mission Statement

The Mission of the *Visual Resources Association Bulletin* is to serve the membership of the Visual Resources Association by providing a professional forum for the discussion and dissemination of ideas and information directly relating to visual resources and image management.

Content Guidelines

1. Contributions to the *VRA Bulletin* should conform to the journal's mission statement.
2. Authors should note that the views expressed in submissions to the *VRA Bulletin* are attributed solely to the author and not to the *VRA Bulletin's* editorial staff, Rhode Island School of Design, or the Visual Resources Association. Publication in the *VRA Bulletin* does not constitute an endorsement of the views expressed by the author of the submission. The editors and the Visual Resources Association disclaim responsibility and liability for any statements of fact or opinion made by contributors.

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2. Contributions should be submitted on a compact disc or via e-mail attachment using Microsoft Word for either the Macintosh or PC platform. A hard copy of the news item or article should accompany the disk; authors are encouraged to retain a hard copy of their original manuscript. Disks will be not returned to authors. When submitting a hard copy, it should be on 8-1/2 x 11-inch paper, double-spaced, in 10- or 12-point type. For all submissions, the author's name and institutional affiliation must appear at the top of the text. To facilitate communication with the editorial staff, authors must provide their name, address, telephone number, fax number, and e-mail address. Submissions by fax will not be accepted.
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