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ABSTRACT
                Working in a cooperative team environment across
libraries and job classifications, librarians and support staff at
the University of California at Irvine (UCI) have mounted several
successful web projects, including two versions of the Libraries'
home page, a virtual reference collection, and Science Library
"ANTswer Machine." UCI's team-based structure, stressing shared
responsibility and authority, makes its approach to these projects
novel. Intended for librarians and other library staff involved in
creating, designing, and/or maintaining library web sites, this paper
offers insights into both the intellectual and technical processes
that continue to inform the design and implementation of the UCI
Libraries' presence in cyberspace. The following issues were
discussed by three panel members: (1) "Background: The Who, What, Why
of the Teams," the context within which project deliberations and
decisions were made (Kathryn Kjaer); (2) "Campus Climate and Web
Redesign," the academic, social, and political factors that informed
the home page design (Ellen Broidy); (3) "Operationalizing: Look,
Criteria, Standards," the relationship between content and design
(Christina Woo); and (4) "Conclusion: Where to From Here?," a brief
overview of new projects and opportunities, examining how they fit
into ongoing initiatives and how new directions force reconsideration
of standards, guidelines, and criteria. (Author/SWC)

Untangling the Tangled Webs We Weave: A Team Approach to Cyberspace

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Abstract

Working in a cooperative team environment across libraries and job classifications, librarians and support staff at UCI have mounted several successful web projects, including two versions of the Libraries' home page, a virtual reference collection, and a Science Library ANTswer Machine. While on the face of it, UCI is simply another in the growing list of libraries to join the great web migration, our team-based structure, stressing shared responsibility and authority, make the approach to these projects novel. The panel outlined below offers insights into both the intellectual and technical processes that continue to inform the design and implementation of the UCI Libraries' presence in cyberspace. The intended audience is librarians and other library staff involved in creating, designing, and/or maintaining library websites.

The panel covers four broad areas:

1. Background: the who, what, and why of the "teams"

   In order to appreciate fully the work that went into the design and implementation of UCI's various web projects, it is important to understand the context within which we hold our deliberations and make our decisions. The critical elements include:
   The evolution of the projects (cooperative venture between libraries and Office of Academic Computing)
   Initial home page design and implementation (reliance on external assistance and working against very short deadlines
   The process of bringing responsibility into the library
   Confronting issues of maintenance/governance
   Learning to "publish" in a dynamic environment

2. The UCI campus environment: academic, social, political factors that informed our

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discussions/decisions.

This portion of the panel will address such issues as:

How the unique structure of a highly inter- and multi- disciplinary campus influenced our discussions about the content and format of the libraries' home page and virtual reference collection

How the attempt to define and refine "reference" altered the content and format of the Virtual Reference Collection

How best to insure participation from the widest possible range of library staff in the identification and placement of sources on the home page and Virtual Reference Collection.

3. Operationalizing: look, criteria, standards

If a picture is worth a thousand words, might not a number of pictures replace ten thousand words? This section addresses some of the difficult lessons we are still learning about the relationship between content and design, including:

What graphics or visual formats work and which ones make the user work.

Who can/should suggest new sites to add and who makes the final decision about enlarging or revising the "publication"?

What makes a site a good candidate for UCI's home page or Virtual Reference Collection?

How do we fight the quality versus quantity battle and still maintain a dynamic site?

4. Conclusion: where to from here?

A brief overview of new projects and electronic opportunities currently underway at UCI, examining both how these fit into ongoing initiatives and how new directions force reconsideration of standards, guidelines, and criteria.

Part I: Kathryn Kjaer, UC Irvine
Background: the who, what, why of the teams

Working in a cooperative team environment across libraries and job classifications, librarians and support staff at the University of California, Irvine (UCI) have mounted several successful web projects, including two versions of the Libraries' home page, a Virtual Reference Collection, and a Science Library ANTswer Machine. While on the face of it, UCI is simply another in the growing list of libraries to join the great web migration, our team-based structure, stressing shared responsibility and authority, make the approach to these projects novel. In these presentations, we hope to offer insights into both the intellectual and technical processes that continue to inform the design and implementation of the UCI Libraries' presence in cyberspace.

The UCI Libraries' venture into the brave new world of the world wide web began as a collaborative project between the Libraries and the Office of Academic Computing in November of 1993. The objective of the Internet Initiative, as it was called, was to expand the Libraries' use of electronic resources available through the Internet in order to enhance our support of research and instruction by faculty, staff, and students. As part of this initiative, the Office of Academic Computing loaned several X-Terminal computers to the Library to develop the Libraries' initial web projects, to train librarians in world wide web navigation skills, and, finally, to incorporate Internet resources into reference services. A small group of librarians representing humanities, social sciences, sciences, and government publications, as well as two Library Systems staff were appointed to spearhead the Internet Initiative.

The X-Terminal Committee, as this group was called, was charged by the Library Administration to do several things: first, to design a UCI Libraries' home page with links to Internet resources of interest to the UCI community; second, to learn to use the Mosaic web browser and basic HTML; third, to train library staff in world wide web navigation using X-terminal technology and Mosaic; and, finally, to conduct workshops for UCI faculty to increase familiarity with the world wide web. All this was to be done by the end of April 1994.

Faced with this very short timeline (approximately four months), the X-Terminal Committee secured the help of a graduate assistant (a student of English literature, not computer science) who already had some HTML skills and experience in mounting a home page. He took responsibility for the actual mark-up based on ideas generated by the committee members. The X-Terminal Committee members then concentrated on learning the fundamentals of Internet searching and spent a great deal of time surfing the Net to gain an awareness of the variety of academic resources available. They finally selected a small group of Internet sites to link on the Libraries' home page which would be of interest to the UCI campus across the broad spectrum of humanities, social sciences, and sciences. For this first phase of the Initiative, an X-Terminal was placed on each Committee member's desk to give them ready access to the web and allow them to hone their navigational skills.

The resulting first edition of the UCI Libraries home page which came up in April 1994 did employ the use of some graphics, had a large header with the Libraries' logo followed by a series of subject categories listed one after another necessitating scrolling through a number of screens to see the full list. While we now see several weaknesses in this design, it looked pretty good to us at the time, and we felt UCI Libraries was at least on the map.

With the Libraries' home page completed, the X-Terminal Committee conducted small group training sessions for library staff introducing basic windows and web navigation skills. As of April 1994, most UCI librarians did not have access to windows or a graphical web browser on their desktops, so this training opened-up new and uncharted territory for most of us. It may have been somewhat comforting to the Committee members who conducted the hands-on faculty Internet training sessions to find that the faculty who attended were also, for the most part, unacquainted with the world wide web. The sessions were valuable in that they taught people basic searching skills. On the other hand, many librarians and faculty were not yet convinced of the relevance of the Internet to their particular research and teaching functions.

After initial training of faculty and library staff was completed, the X-Terminals were placed at the Reference Desks at the Main and later the Science Libraries, and librarians were encouraged to incorporate Internet searching into reference service.

By the time the X-Terminal Committee submitted its final report and disbanded in June 1994, the UCI Libraries had become preoccupied with two major activities: the move into and opening of our new consolidated Science Library, and the implementation of a team-based re-organization plan. As a result, web development and work on the Libraries' home page receded to the background. No formal plan for regular maintenance, revision, or updating of the home page had been established.

By late 1994 we had settled into the new Science Library and had begun implementation of our team-based re-organization. At the same time, campuswide efforts were underway to upgrade and redesign the UCI campus home page (http://www.uci.edu/) and gopher. After remaining static since its first appearance in April 1994, the Libraries' home page clearly needed a face-lift as well. The Library was also feeling pressure from other campus sources to make our home page more relevant to UCI faculty and students. For example, we were encouraged to provide more useful local information about UCI Libraries' hours, services, and collections; and to enhance electronic access to reference resources available on the Internet.

Thus, early in 1995 three team-based efforts emerged in the UCI Libraries:

1. the redesign of the UCI Libraries home page (http://www.lib.uci.edu/) by the Electronic Publications Editorial Board (E-Pubs),
2. the creation of a Virtual Reference Collection (http://www.lib.uci.edu/home/virtual/virtual.html) by bibliographers and reference librarians,
3. and the spawning of a number of original web publishing projects with the help of Electronic Opportunity Grants offered by the University Librarian.

I should mention that by mid-1994, computer access in the Libraries had improved dramatically for librarians as well as for our faculty and students. All Research and Instructional Services librarians and bibliographers now had 486 PCs with windows and Internet access on their desktops. We had opened a state-of-the-art computing facility for our students and faculty, the Interactive Learning Center (ILC) (http://sun3.lib.uci.edu/~ilc/), at the new Science Library.

In the ILC, librarians have access to two classrooms with instructors' workstations and projectors, and a total of forty Mac and PC student workstations for electronic information literacy training. A multimedia and web development lab in the ILC also provides library staff with the resources needed to create web documents.

Ellen, who is Publications Officer for the UCI Libraries and Team Leader of the Electronic Publications Editorial Board (E-Pubs), will describe the redesign of the UCI Libraries home page and the role of E-Pubs in the Libraries.

While Ellen and Christina will also talk in greater detail about the design of the Virtual Reference Collection (VRC), let me explain how this resource, which is truly a team product, came to be. In 1994 one of the most frequently consulted UCI gopher resources was a site called the "Virtual Reference Desk" designed and maintained by a librarian who, at this point, was no longer affiliated with UCI, but who continued to maintain the gopher site from his new library. Given the high degree of traffic on this site, the Library was asked to create something like the Virtual Reference Desk for the Libraries' home page, as the world wide web had now eclipsed the gopher as the preferred platform for delivery of networked sources.

The assignment to put together this reference site was given to one of the new teams, the Cross-Site Electronic Resources Team, comprised of representatives from the four Research and Instructional Services Departments and Library Systems. I was the leader of the Electronic Resources Team during this period. Our goal was to mount a web site which would provide links to actual reference sources such as dictionaries, encyclopedias, tables, etc. Under the direction of the Assistant University Librarian (AUL) for Research and Instructional Services and the AUL for Collections and Access Services, the Electronic Resources Team was asked to make the reference site a "lean and mean" collection of the best ready reference sources we could find on the Internet. We began assembling the Virtual Reference Collection by pulling together a core group of quality resources found on the Virtual Reference Desk gopher site supplemented by other resources we thought were worthy of inclusion. We also successfully applied for an Electronic Opportunity Grant from the University Librarian and were able to link to Britannica Online (http://www.eb.com) (the only fee-based source on the VRC to date). The first incarnation of the Virtual Reference Collection was mounted on the Libraries' home page in April 1995 and was very primitive in its appearance. There was too much introductory text, too much reliance on scrolling, and no graphics.

In May 1995 a new group, the Virtual Reference Collection Design Working Group, was formed to "spiff-up" the look of the VRC, to develop a plan for its ongoing maintenance, and to develop criteria for collection development of the site. Christina, who was facilitator for this working group, will explain the evolution of the VRC in more detail later.

Also in the spring of 1995, the University Librarian, Joanne Euster, offered what she called Electronic Opportunity Grants to individual library staff and/or teams to be used to further the development of the Digital Library at UCI. A number of librarians and teams submitted proposals for a variety of projects, some of which involved creating or providing access to web resources. Successful proposals were funded to purchase equipment, software, and supplies, and to hire student assistants. In addition to the one-year trial subscription to Britannica Online mentioned a moment ago, other examples of web-oriented Electronic Opportunity projects included:

> the UC Irvine Critical Theory Resource (http://sun3.lib.uci.edu/~scctr/online.html), a collection of scholarly bibliographies created by librarian Eddie Yeghiayan,
> and the Science Library's ANTswer Machine (http://sun3.lib.uci.edu/~slriit/), a self-help guide to the Science Library building, services, and collections created by the Science Library Electronic Resources Team.

Since I was also team leader for this group, let me say a few words about the ANTswer Machine. Dr. Euster's call for Electronic Opportunity Grant proposals gave incentive to the Science Library Research and Instructional Services staff to use the web to deliver an electronic users manual for the Science Library, one of the newest, largest, and most complex buildings on campus. The award-winning building has a very unusual physical shape, and has required a major adjustment for users of the former science branch libraries which were smaller and more limited in scope.

The team consisted of three librarians and one library assistant. We also employed the talents of a student assistant (ours was a computer science major who was very savvy with graphics and tables) to create the basic structure and look of the ANTswer Machine. Our goal was to create a resource which would provide answers to the most common questions asked by new or inexperienced users of the Science Library. We wanted to avoid library jargon as much as

possible and also to avoid structuring the information in the ANTswer Machine according to the internal organizational hierarchy of the Library.

In our first brainstorming sessions, we decided that most basic questions about how to use the library begin with "How do I...?" or "Where is...?" Thus, we have two sections with these names in which we provide answers to such questions as "How do I obtain a library card?" "How do I find journal articles and scientific papers?" "Where are books and journals?" and "Where are the restrooms?" We also have a section called, "I'd Like a Tour" with pictures of the various service desks in the Science Library. We hope to build on the visual images and add video clips to this section. With the funds awarded for the ANTswer Machine project, we paid our student assistant and purchased a digital camera, a video camera, and a video capture board which will, of course, become part of the Libraries' inventory of staff resources.

Now that I have touched on some of the specific web projects going on at UCI, Ellen is going to talk about some of the social and environmental factors that informed our decisions about our home page and other resources.

Part II: Ellen Broidy, UC Irvine
Campus Climate and Web Redesign

My job this afternoon is to talk about the campus environment, focusing on the academic, social, and political factors that informed our discussions and ultimately influenced our home page design. I embark upon this with some trepidation since I am well aware that conference papers, no matter how they begin, frequently disintegrate into a "how we done it good" hype about an individual library's successful programs. As annoying as I find this tendency to advertise, I fear I must plead guilty to committing some version of this intellectually-suspect offense. While I do not intend to regale you with how well we've accomplished our appointed tasks, I will, by necessity, skirt the borders of a "why we done it at all" conversation. Bear with me in this because I think that UCI's experience with the redesign of its website is significant not only as a marker of the success or failure of one library's efforts but because an examination of our attempts may help to reveal the broader issues of the relationship of the concept of "disciplines" to the structure and organization of a library website.

Kathryn introduced some of the critical elements of our initial web design efforts, highlighting the cooperative and collegial nature of the endeavor. Similarly, my comments on the next phases of our web enterprise, the redesign of both the Libraries' home page and the Virtual Reference Collection or VRC, also revolve around the concept of teams. Rather than struggle to integrate comments about the development of these two electronic publications into one seamless narrative, I take a more chronological and linear approach, discussing first the home page design and redesign and then touching on some of the issues raised as we contemplated a new "look" for the VRC. I will rely on a discussion of the academic and organizational realities of UCI as a device to unite the two distinct yet inextricably bound threads of this talk.

Let me begin by examining some of the "environmental factors" that informed the whys, whats, and wherefores of web design at the UCI Libraries. Here I pay particular attention to the campus' unique constellation of academic, social, and political factors that render any effort to "publish," whether in traditional paper or technologically-enhanced format both a challenge and an opportunity. In addition to providing this very brief overview of the campus climate and culture, I will also touch upon how the structure of the academic programs directly influences the organization of collection development and, by extension, the participation of bibliographers in the creation of the Libraries' presence in cyberspace.

Given UCI's inter-, multi-, and trans-disciplinary nature (or perhaps "conceit" is a better term), any group assuming responsibility for redesigning the Libraries' home page ran a significant risk of becoming road-kill on the information superhighway before the project even began. The redesigners could hardly avoid doing something that would displease, underrepresent, or misrepresent somebody, including those responsible for (and possibly wedded to) the initial design. Kathryn has introduced our the prototype home page, indicating that it consisted of a long list of "Sources by Subject." While this structure illustrated our initial efforts to be comprehensive and inclusive (if, in fact, those terms possess any meaning on the web), it was only a partial attempt to reflect the academic organization and culture of the campus. More problematic, in terms of design, it was nothing to write home about (and, in fact, we also hear criticism about having fallen into the seductive "scrolling trap" soon after the site became public). In

spite of negative comments, those of us on the initial design team convinced ourselves that whatever the page lacked in graphic and conceptual elegance and sophistication, it more than made up for in ease of information organization, at least from the designers' vantage point. This bit of cheery self-delusion collapsed in the face of the necessity, both internally and externally imposed, to create a site with some personality, one that provided a more accurate representation of both the UCI Libraries and the campus. We decide to throw caution to the wind and launch an examination of what UCI was about, the good, the bad, and the postmodern.

The intricacies of UCI's academic organization wasn't the only reality with which the redesigners needed to contend. Other elements were at play that profoundly influenced our resolve to deconstruct and reconstruct our home page. The campus had also begun the search for a brave new look for the official UCI page. Now this was a decision of considerable import for us (as well as for any other unit on campus interested in publishing "official" UCI home pages). Adopting a gentle variation of the "what's good for General Motors is good for the nation" philosophy, the campus webmeister began, understandably enough, to develop guidelines for web creation (in all fairness, particularly after my nasty GM comment, these were framed more as discussion documents, not as mandates or directives). At any rate, as soon as design work kicked into full gear at the campus administrative level, the Libraries understood that whatever we produced needed to conform, or at least not clash, with the conceptual direction the administration was taking. Fortunately, the campus decided on a prototype "new look" fairly early-on in our process. This provided the design team both with a model to work from (or, if need be, read against) as well as an idea of where the Libraries would fit in the general scheme of the campus home page. UCI selected as its "look" a design that soon became known as the "bingo card," with the official campus "logo" situated in the center surrounded by ten labeled "buttons" that loosely resembled a telephone or calculator keypad (the idea being that the uninitiated would "intuitively" know to press the desired pad) [http://www.uci.edu]. While not conceived of as prescriptive, the organization of information and the intellectual "geography" of the page provided the Libraries with a clue as to what might be expected from us it terms of design. We interpreted our physical location on the page as a marker of our "status" as well as an indicator of how often we might expect to be "hit." We clearly held pride of place. As an aside, we have recently learned that the campus is considering redesigning the home page (influenced, no doubt, by the old "isn't it time for a change? It's looked this way for ages" -- an interesting concept in the rapidly changing world of the web). It remains unclear what implications, if any, a new campus home page might have for the library, either in terms of an expectation that we follow suit or with respect to the possibility that a redesign might result in the Libraries' occupying a less prestigious address. We can only wait and see -- and be ready to act/react.

The Libraries now had three compelling reasons for beginning the complicated process of redesigning the home page: aesthetics (a desire to kill the laundry list look); the advisability of reflecting more precisely the academic/intellectual "meaning" of UCI; and the design work nearing completion on the campus page. It should come as no surprise to anyone that even the best and most compelling reasons rarely translate into the easiest chores. In our case, where we began had little to do with actual design. The first hurdle was to determine which entity within the Libraries might reasonably take on the redesign task. Our newly-instituted team structure had resulted in the disbanding of most of the Libraries' standing committees, leaving no readily identifiable group in place with which to deposit this responsibility. To be perfectly honest, with respect to committees, prior to the Organizational Review and Design Project (OR&DP), the Libraries had a veritable embarrassment of riches and consequently, an organizational (and administrative) culture understandably gun-shy about the creation of a new working unit/committee with the potential for taking on a life of its own. Additionally, sailing into the relatively uncharted waters of home page design only exacerbated the queasiness about convening a committee to do the work. Since factors outside our immediate control (and at this earliest juncture, perhaps even beyond the realm of our expertise) could easily impact the timetable, it was difficult even to conceive of giving a committee (were such an animal allowed) a charge with a deadline. On the other hand, it was impossible to conceive of charging a group without one.

The Libraries ultimately solved the "who would do what when" quandary by creating not a committee but an editorial board, the Electronic Publications Editorial Board. More than a discursive strategy to avoid the dreaded "c" word, E-Pubs, as it is currently called, represented an effort to remain true to the functional "team" vision of the reorganization by gathering together people from across areas/divisions in the Libraries and more importantly, from across job classifications. Consisting of the Publications Officer, the Publications Assistant (who also happens to be the Library artist-in-residence), a senior member of the Libraries' Systems Department, a representative from the technical services division, and two members of the Research and Instructional Services Division, one from the Main Library and one from the Science Library, E-Pubs reflected a cross-section of the library community. Rather than ing a group with the limited (but potentially limitless) charge of redesigning the home page, the

responsibilities for redesign became integrated into a set of activities that encompassed a wide range of web and other electronic publications initiatives, including the initial effort to create guidelines for electronic publications.

Members of E-Pubs began their work on the redesign by simultaneously familiarizing themselves with a variety of library home pages (and for this we owe a tremendous debt of gratitude to Thomas Dowling, formerly of the University of Washington, whose library webservers home page literally opened the world up to us [http://sunsite.berkeley.edu/Libweb/]) and by thinking about UCI. Compared to the fun of webbing all over the country, sneaking around like cyberspace industrial spies, madly printing copies of classy library websites, undertaking a discussion of what made UCI tick proved to be a considerably more somber and sobering enterprise. We were compelled to grapple with fundamental questions about community and identity, trying to define what made UCI (and its libraries) unique and what possibilities existed for translating that identity and that uniqueness into the flat (yet of course dynamic) dimensions of our home page. We started our corporate soul-searching in our own backyard, by looking at the libraries. On the most obvious "you don't need to be a rocket scientist" level, "we" are three separate libraries, two housed on the main campus in Irvine and the third located several miles away in the City of Orange. At the earliest phase of our design negotiations, we realized that we needed explicitly to represent this tri-partite federation of libraries. This decision, one of our most straight-forward, contributed a essential piece in what was rapidly coming to resemble a picture puzzle, one in which the final image somehow needed to convey a message more meaningful than simply the sum of its component parts. The importance of representing the three libraries, combined with a growing affection for the campus' bingo card scheme, led us to the inescapable conclusion that the libraries' home page would be (can you hear the drum rolls and blaring trumpets?) square!

As ridiculous as this may sound (and trust me, it sounds most ludicrous to me), deciding to "square" our image turned out to be the liberatory moment in the entire redesign process. Once the E-Pubs Board agreed upon a conceptual framework (and gave ourselves permission to call a halt to experimentation with both the total anarchy of unanchored free-floating images or the rigid hierarchies implicit in a scrolling list), we were better able to focus our energies on what literally became the "big picture."

The "big picture" eventually encompassed eleven categories: the three libraries, a general library information link, separate links to "further internet searching" (search engines, Yahoo, etc.) and online library catalogs (MELVYL, UCI's own ANTPAC catalog, and the CRL catalog), local UCI sources, government resources, a link to the Science Library's Interactive Learning Center, and the two content and conceptual biggies, Collections and Resources and the Virtual Reference Collection. [http://www.lib.uci.edu].

Both the Collections and Resources and the Virtual Reference Collection "boxes" presented a range of challenges, not the least of which revolved around the academic organization of UCI, an organization which embodies the paradox of being both highly interdisciplinary and rigidly structured. Unlike other older and/or more traditional academic institutions, UCI does not have a college of letters and sciences. Divided, instead, into a number of quasi-autonomous discipline-based schools (occasionally referred to, with some justification, as "fiefdoms"), each of UCI's component parts nurtures a distinct institutional identity and fiercely guards its intellectual borders. The walls surrounding these quasi-independent states, however, have been crumbling under pressure from the increasingly inter- and multi-disciplinary research and teaching taking place within (and without) the frontiers of the fiefdoms. For the erstwhile group of web redesigners, this fluid state meant that we were faced with the necessity of determining whether the links from the Collections and Resources and VRC "blocks" would privilege scholastic tradition or acknowledge academic transgression or border-crossing. In other words, we needed to make some difficult conceptual decisions before we could proceed with our redesign.

The growing importance on campus of IDPs, interdisciplinary programs, whose very existence challenged the rigid administrative structure of the schools by revealing the fragmentation of intellectual allegiances, further complicated our task. As E-Pubs members stepped back from the redesign project to survey the social and intellectual geography of UCI, we were struck by the enormity of the job before us. Would we, in fact, be able to create a structure that reflected the complexity of the campus and, at the same time, hold true to our library mission to present information in a logical and rational manner -- to an extremely diverse audience? After this build-up, I am almost embarrassed to admit that we took the path of least resistance when it came to actually committing to a design. The school structure remains so much a part of UCI, inter-, multi-, and trans-disciplinary work notwithstanding, that we ultimately decided that somehow adhering to that structure in our design offered the best opportunity for an honest reflection of campus. We were also being incredibly pragmatic. Much of the campus community was removed, for better or

worse, from the debates around redrawing (or eliminating) disciplinary boundaries. While the redesign team may be found guilty of abrogating its responsibility to lead users into the brave new world of fluid boundaries, here was an instance where a clearheaded assessment of campus realities dictated exactly how much leeway we had for intellectual and social engineering.

The links established from the Collections and Resources box on the home page also had a significant relationship to collection development at the UCI Libraries. In addition to mirroring closely the familiar if embattled campus structure, the links reflected the organization of collection development. Each bibliographer at UCI belongs to one of three "pods," a homebase that consists of a constellation of closely-related academic disciplines: arts and humanities or the AHS Pod, social sciences/social ecology/education/management, the SSs, and engineering, medicine, and sciences, the EMS. By adhering to the school structure, the redesign created a natural bridge between the website and daily collection development activities. Bibliographers, knowledgeable about the literature of a particular discipline (or interdiscipline) and savvy about the information-seeking patterns of scholars in the field, assumed responsibility for "acquiring" web resources to build and enhance UCI's collections. Needless to say, in this as in any other facet of collection development, individual bibliographers bring different strengths and levels of interest to this endeavor, resulting in somewhat uneven distribution of resources across the disciplines. We expect that a combination of time, training, perseverance, and a certain measure of peer pressure will result in significantly improved web collections and access for our users.

The discussions about the redesign of the home page presaged a similar set of negotiations concerning the Virtual Reference Collection, with the addition of one major new element. The VRC redesign, undertaken by a entity with the unwieldy moniker of Virtual Reference Collection Design Working Group (VRCDWG), opened up the whole question of defining reference. Would we consider reference as some sort of overarching concept under which we could force everything, including the virtual kitchen sink or was it a more limited, constrained, and confined entity, distinct and recognizable? How did full-text enter into the equation? Did (or should) the virtual version mirror a traditional reference room -- and if not, what was expendable? What were the limits of "lean and mean;" how far could we go in differentiating between reference and virtual reference before rendering one or the other meaningless? A series of friendly if occasionally heated discussions ultimately produced a VRC that represents a rather narrowly defined vision of reference but one that we think allows for tremendous flexibility and incorporate the potential for growth for both the VRC and the subject-specific links from Collections and Resources. While one or two people have complained about the angle of the lettering on the graphic (claiming they were forced to tilt their heads to make out the words), feedback on content has been positive. Thus far we have managed to resist the temptation to add categories, preferring instead to provide ready as opposed to comprehensive reference service from the VRC box. As a final protection against unwarranted tinkering, the VRCDWG, its mission accomplished, disbanded.

Commitment to a new design and the inauguration of the new page is only part of the story. Our last speaker, Christina, raises some of the ongoing issues involved in maintaining an attractive, functional, and accessible website.

Part III: Christina Woo, UC Irvine
Operationalizing: Look, Criteria, Standards

If a picture is worth a thousand words, might not a number of pictures replace ten thousand words? This section addresses some of the difficult lessons we are still learning about the relationship between content and design, including:

a. What graphics or visual formats work, and which ones make the user work?

As mentioned already, the first and second editions of the UCI Libraries Home Page in general as well as its component sections featured tediously long, single-column lists that necessitated more scrolling than even we cared to undertake. At the time, the range of websites with widely different appearances was much narrower than it is today, and when we did find one with (by standards of only a few years ago) particularly sophisticated graphics or layout, we probably thought, "How in the world would we be able to come up with anything that 'advanced-looking' here?" It was as if we had seen a fair amount of home sitcoms a la "Leave it to Beaver" and "The Donna Reed Show" and--after seeing a color version of "Star Wars"--wondered what kind of incredible design talent and special software have taken to create such a masterpiece of technology. To make matters worse, we were under a very tight

deadline, so the "frills" of innovative layout and graphics were that much more of a luxury we could not afford. Fortunately, many (but not all) of our patrons were as Internetably unworldly as we with small, monochrome monitors and thousands--but not yet gazillions--of websites to explore.

Now that most of us at this conference have logged more screens of WWW cruising/searching/scrambling ("Why didn't I bookmark that great site I saw last week--or was it last month? WHERE IS IT???") than we ever imagined, and have seen the delightful, amusing, informative, good, bad, ugly, dumb, and dumber, not to mention incomprehensible, we have a much clearer idea of what good site design is, or isn't, or some of both. We've also discovered that on-screen information that requires reading 5 or more screens to get to the end does not get completely read, compared to information that can be presented in 3 screens or fewer. Those with screen-odometers even higher than ours agree on several elements common to good Internet page/site design:

> simplicity and consistency
> great design/appearance does not make up for lack of substantive information
> it is possible to over-design a page (i.e., not know when to stop)
> clutter, confusingly labyrinthine paths and bizarre color combinations are distracting and ultimately just plain irritating

More important, we have realized that this year's "look" may change next year--or even sooner, depending on small improvements--some new buttons here, an easier-to-follow path there--or another major overhaul. While change in itself may not necessarily be good, neither is a pointless adherence to the status quo. As long as there is a place/button for users to communicate with the Home Page, there will eventually be recommendations for improvements, suggested additions, if not outright complaints.

Then, too, What will HotJava bring to the WWW? Will home pages without its "nervous text" and other new features look dated and stale? Many of us tend to be impressed when we see websites that have been updated recently--as if the information shelves had just been restocked in anticipation of our visit. The University of Washington campus (not library) home page [http://www.washington.edu:1180/], for example, begins with a color photo taken that day, announces the day's temperature, wind status, barometric pressure, and phase of the moon. Ironically, there can be embarrassingly out-of-date or omitted information from a website, but if the "last updated" date is yesterday, most readers assume everything is current. This is analogous to the Spring Cleaning shortcut: if you sprinkle CarpetFresh around your front door and vacuum there, those who drop by and stand in the doorway think you've cleaned the whole house! In short, there are very few standards, but it is easier to measure how "new" information is as compared to how useful and easy to reach it is. Perhaps we need to learn all over again how not to judge a website by its first-screen cover.

The most important question could be "What arrangement serves our primary users best?" Beyond the aesthetics, cleverness, and bells, whistles, and inserted videos, our page should keep pace with users' increasing sophistication but not lose the novices whose presence helps define a college or university. As more and more faculty incorporate the Internet into their courses and assignments, the Libraries' partnership in supporting those efforts should be reflected in its Internet presence.

In addition, although all incoming UCI students are automatically given an e-mail address, only a small percent own higher-end/fast computers with color monitors and high-speed modems. Behind this leading (or bleeding) edge is a much larger group of students with significantly more modest equipment for whom websites dependent upon large, color graphics are irritatingly slow. Still others see the WWW through LYNX only. To avoid privileging the already-privileged user who can afford 486 and Pentium hardware and attendant accessories, "text-only" options are a must. Moreover, those who do not own computers must use campus computer labs--be they in libraries, academic departments, or dorms--which, if they do not have a networked connection, may not have the funding to put fast modems and large, color monitors at every station.

Finally, a definitive question eventually gave us a practical, conceptual framework. Setting aside notions (if not unrealistic aspirations) of appearing on the WWW as the comprehensive, multifaceted, A-Z library that our users would love and appreciate, easily and quickly answering all of their questions with only minimal pointing and clicking, aiming to accumulate as many useful links as possible and hoping to present them in the most user-friendly ment we could devise, we stepped back into reality. After all, it initially felt like the reference librarian's

dream of building the best possible collection without having to spend real money--only limitless time to link more and more useful sites. Instead, we asked ourselves, "Shouldn't our Libraries' website reflect the collection, which in turn reflects the UCI curriculum?" And, as Ellen described in more detail, from there grew the school- based orientation that mirrored the schools and departments at UCI, not some generic listing that, with a small amount of customizing, could be the library at University of YourTown--just plug in the campus map and scatter unique photos.

b. Next: who can/should suggest new sites to add and who makes the final decision about enlarging or revising the "publication"?

In its final report, the Virtual Reference Collection Design Working Group (VRCDWG) recommended that additions to the Libraries' ready reference site should go to the current bibliographers who oversee the Main Library general reference collection (in reality an arts, humanities, and social sciences collection) and the Science Library general reference collection-- mainstreamed as if they were books being considered for those collections. During one or two VRCDWG meetings the team mentioned the possibility of recommendations for added websites coming from library assistants or other support staff members, as well.

In a team-based environment designed to empower all grass-roots employees, new sites for the VRC could come from anyone. Given increasing worries on the part of management that employees may be spending too much time on the 'Net on non-work-related sites, however, I doubt that Technical Services department heads would be pleased if their staff members were encouraged to submit lists of "great sites" to the appropriate bibliographers for improving the Libraries' general reference site or the subject-specific "Collections & Resources" sites. Nevertheless, I know that these same bibliographers would welcome a recommendation for a significant link regardless of the status of the person recommending it. Our new team environment has made it easier for us to hear each other across reorganized divisions.

c. Finally, what makes a site a good candidate for the Libraries' home page or Virtual Reference Collection? How do we fight the quality versus quantity battle and still maintain a dynamic site?

What makes a BOOK a good candidate for the main stacks or the reference collection? For the home page or VRC, some paper-based considerations can be set aside; others hold well for both paper and electronic.

Is the suggested site better/more current than an existing one? How much does it duplicate/replicate an already-linked site?
How much does the suggested site cost to link?
Does the suggested site need a special helper or application that is not readily available or affordable?
Is the information valuable but very difficult to use and/or poorly laid out/just plain confusing?
What if the site can only be viewed from certain platforms?
Does the site reflect bias incompatible with collection policies?
Does the site take objectionably long to load?
Can the site be viewed in a text-only format and still be useful?
Even in such a relatively young "publishing" environment as the Internet, were there established webmasters with respected reputations for solid cores of information and/or conscientious updating that a bibliographer could "trust" for a stable, well-crafted and cared-for site?

Bibliographers used to a mostly-paper world have accustomed themselves to routines devised to spend limited funds wisely to select the best materials--be they books, journals, microforms, non-book media, etc.--to build good library collections. To the habits of reviewing approval books, paper forms, Choice cards, published reviews and lists, winnowing the best from appropriate listservs, chatting with publishers' reps and others at ALA and SLA exhibit areas, are added some electronic bases to cover:

Checking existing websites that attempt to keep up with the "new"
Attending more meetings, workshops and programs--the ones with an electronic bent
Attempting to figure out, if not keep up with, electronic journals and their pricing structures
Learning how to create and maintain websites that inform our users of new acquisitions and promote existing collections

Part 4: Conclusion: Where to from here?

I hope we have a few minutes left for a very brief overview of new projects and "electronic opportunities" currently underway at UCI, examining both how these fit into ongoing initiatives and how new directions force reconsideration of standards, guidelines, and criteria.

> Strengthening subject/discipline-specific areas within "Collections & Resources" on the Libraries' Home Page: The 3 bibliographer teams/pods (Arts & Humanities, Social Sciences, and Engineering/Medicine/Sciences) will be working on these this year.
> UCI Libraries' Electronic Library Opportunity projects: Of the nine funded, competitive, one-time, in-house creative proposals, four projects are web-based, and three are currently operational:
> Campus-wide access to Britannica Online via UCI Libraries' Home Page. Research & Instructional Services Electronic Resources Cross-Site Team.
> ANTswer Machine (hypertext guide to research in the Science Library) [http://sun3.lib.uci.edu/~slriit]. Steve Clancy, Tim Enguidanos, Kathryn Kjaer, Pat Lovett
> UC Irvine Critical Theory Resource (Scholarly Bibliographies for the Humanities: A World Wide Web Resource in Critical Theory, Philosophy, and Interdisciplinary Humanistic Studies) [http://sun3.lib.uci.edu/~scctr/online.html] Eddie Yeghiayan (Special Collections)
> LARGO: Libraries & Archives Research Guide Online--London. [Under construction] Lorelei Tanji

CONCLUSION

The evolution of UCI Libraries presence in cyberspace is marked by the contributions of a wide variety of individuals and teams. It is significant that at UCI, no one person or unit has been charged with creating or directing UCI web development. Rather, a cross-section of library staff have been involved in a number of very different web development efforts. Cumulatively, we have learned a lot about the Internet, its potential and its pitfalls. We have also learned a lot about building a library web site. Out of our various fits and starts we have built guidelines and models which will help us maintain our existing web pages, both technically and substantively and guide us in designing new pages as well.

Direct questions or comments about this page to webmaster@library.ucsb.edu .

Search "Untangling" Papers	"Untangling the Web" Home	InfoSurf Home

This is an official University of California, Santa Barbara Library web page.

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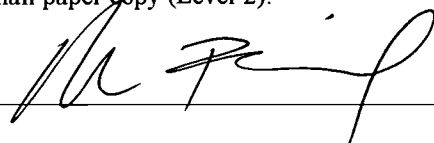of the following notices is affixed to the document.

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