

## CAROL: Students Working on Real-World Projects Empowering Local Cultural Non-Profits

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In the Rochester Institute of Technology graduate course "Topics in Interactive Multimedia," students build Web sites for CAROL (Culture and Arts of Rochester Online). Sponsored by the local arts and cultural council, CAROL currently showcases the sites of over 20 local arts and cultural institutions and includes an online events calendar and a database of local artists.

Several factors make the Topics course a unique experience for students, faculty, and the organizations that participate. The CAROL consortium and Web sites are an outgrowth of the class. The course draws students from disciplines and departments within the university to work together as a cross-disciplinary team that works with representatives of the arts organizations whose sites are being developed. The representatives attend the class as both clients and students to support development of their sites and to learn to maintain and manage them after the class is over. Community investment in CAROL extends to a local service provider who donates shell accounts and Web hosting to the non-profits free of charge.

A pro bono local arts marketing campaign will use [www.carol.org](http://www.carol.org) as its focus. The campaign will include not only Web marketing (such as banners and the like) but newspaper ads, billboards, and other traditional advertising media.

Real-world learning requires real-world problems. The Topics course is less about implementing "cutting edge" technology and more about building a site that matches the needs of the clients and their audiences. The course content, while it generally focuses on advanced Web building tools and techniques, also changes to meet the needs of the clients. The subtext of the

course is collaboration. Building Web sites requires not only technical and artistic proficiency but content. Our students have the skills, and the cultural and artistic organizations have the content. The blend of providing a service for these non-profits while creating real Web sites fires the student's enthusiasm; they end up pouring their hearts into the project. Everyone wins.

As instructors, we're able to provide our students a top-flight, exciting, and engaging learning experience. At the end of the quarter, the students have significant portfolio pieces that demonstrate not only technical proficiency but teamwork and client relationship skills as well. The cultural organizations end up with not only a new and/or improved presence on the Web, but with staff members increasingly able to carry on the work and continue the institution's growth onto the net.

This paper summarizes:

- The history of our students' projects and their evolution from building individual sites to becoming the center of an organization that supports the efforts of local organizations on the Web.
- The process of running a course like this.
- The lessons we've learned in working with arts and cultural organizations and with students from different departments, disciplines, and cultures.
- Future plans.
- Some suggestions for implementation and adaptation of our model.

### The History of Topics and CAROL

The history of the CAROL project is a description of process. It illustrates both conscious decisions and fortuitous circumstances that enabled the CAROL consortiums to come into being and flourish.

### First Steps: Individual Museum Sites

In 1994, the Web was a fairly new and novel place. RIT did not have a campus Web server, and faculty did not have browsers installed on their computers. As he taught students to model virtual museums using hypermedia, Professor Goodman found that his assignments succeeded because they required real content and a touchstone for evaluating success. The course also provided technical challenges in terms of design, presentation, scale, and communication that transcend the individual screen. But the fruits of the class efforts were rarely seen outside of academic presentations. Moving the paradigm to the Web seemed a natural extension of the class efforts.

The first Web site experiment was done with the Genesee Country Museum in conjunction with one of their staffers, using Professor Goodman's desktop Macintosh as a server. While the site never really made it onto the Web full time, due to multiple factors including a lack of support at the administrative level of the museum and a departmental move to laptop computers, it was still a success. The success came from seeing that the goals of the project could be achieved in one quarter and that the students had an exhilarating and effective learning experience.

The next time Topics was offered, the project was a Web site for The George Eastman House International Museum of Film and Photography. This was a

large-scale undertaking shared by Topics, taught by Professor Goodman, and a second course Project in Interactive Multimedia, taught by Stephen Jacobs. The institutional interest in the site's development came from Roger Bruce, the Museum's newly hired Director of Education Services and a documentary producer and media artist with a long history of NEA and NYSCA panel service. This made for a much more conducive relationship between our project and the administration in the beginning, but one that still provided some problems that we'll address later on.

Once the Eastman House site was online, it received positive press from most of the major photography publications. The Discovery Channel put a link on its Web site to ours, throwing RIT's Information Systems organization's into a panic, as they envisioned Web server gridlock. and our campus connection to the Internet was flooded by outside requests. As a result. we sought help from our community. The CAROL domain was moved to a local ISP, Service Tech (now Verio New York), which generously hosts the project, donating gigabytes of storage and considerable bandwidth.

**CAROL first steps: "If you build it, they will come."**

The success of the Eastman House site, and another casual remark by one of our museum clients that "a consortium to continue and expand this kind of stuff" would be a good idea sent us down the road to evolving CAROL. After a summer spent calling, and meeting with, the administration of large and small cultural organizations, two new organizations signed on to work with the Topics students. That fall, four organizations began working with the class. The Strong Museum (a fairly large museum in Rochester) and

Writers and Books (a smaller literary arts center) joined the fold. The Eastman House came back for more, and the Genessee Country Museum's original site materials were resurrected, updated and rebuilt. In addition, a top-level page serving as an entry way to the other four sites announced itself as the beginning of a new consortium (the four participating organizations agreed to support this). A newspaper article on the new consortium prompted a call from the Arts and Cultural Council of Greater Rochester inviting us to join them for one of the monthly meetings of the cultural CEO's to discuss the new consortium. That meeting led us to where CAROL is today, a collaborative organization that fits under the umbrella of the Arts and Cultural Council of Greater Rochester. The group meets monthly in the offices of the local PBS affiliate and counts the Vice President of the affiliate, the City of Rochester's Web master, curatorial and staff members from other local museums, the Rochester Philharmonic Orchestra (RPO), and others amongst its membership.

CAROL membership isn't restricted to the large organizations. Small organizations like Writers and Books, BOA Editions (a small press publishing poetry), the Visual Studies Workshop and others are also CAROL members. Some CAROL members have been our "clients," in that our students built their sites. Others, like the RPO, the PBS affiliate and the City of Rochester link to the CAROL page and collaborate on growing the domain in general. In addition to the marketing campaign, database, and calendar mentioned above, other collaborative projects, like an Art and Culture membership pass to all of the Arts Council's member organizations have gained greater momentum through the existence of CAROL.

**How a Class Works: Managed Anarchy**

In general, before every class begins, the professor teaching the class that quarter identifies the clients he and the class will be working with. In the earlier days of the class, we worked with the larger, more established organizations in order to get the ball rolling. At this point, we try to work with the smaller organizations that need the help more. These organizations are picked from the membership of the Arts and Cultural Council of greater Rochester. Generally, two or three new organizations are picked for a class, with additional work occasionally being done on an existing site of a previous client.

To participate, organizations must make a few commitments. First, they must agree to send a member of the organization to join the class as both client representative and fellow student. Organizations must also commit to keeping their own site current after the class is over. By following these rules, they become fully functioning members of the CAROL community. They take partial responsibility for the creation of their site, learn the skills required to maintain and upgrade their sites, and provide CAROL with another active, growing member of the community.

In the early days of the class, regular students and the organization members learned basic Web skills side by side, as part of the class. Now that our regular students are more experienced when they join the course, we often run quick two-day workshops for the outside members before the course begins to teach them the basics.

Students are divided into teams of 6-10 each. We are truly lucky in that we can open this course across departments at RIT. Normally, this brings us a mix of our own Information Technology

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students and Computer Science students for technical skills with students from the College of Imaging Arts and Sciences pursuing degrees in Computer Graphics Design, Industrial Design, Computer Animation, Film and Video, and Photography. In rare instances, we've also had students from Instructional Design and other fields in the class. While we don't always have this broad spectrum of skills to choose from, we can often assemble teams with a composition similar to those in industry.

As much as we can, we let student teams select the projects they'd like to work on while we balance the mix of skills in each team. The outside member becomes an integral part of the team, obtaining permissions for content and final sign-off on the site.

### Course Content

The content of the course (which runs four hours, once a week for 11 weeks) generally covers Web design and implementation, group discussions, design critiques, and team meetings. Issues of tools and techniques are steered, in part, to the client needs for the quarter's designs. The fluid nature of Web technology, and the different needs of different clients, ensure that much of the course is shaped "on-the-fly" during the academic period (not for the faint of heart).

In the early part of the course, students implement strategies and techniques on their own pages, as a "dry-run" for the client pages. At the same time, they're working with the clients through the design and content collection phases of the client Web site implementations. As the course progresses, the focus shifts to the client site implementation. In the end, students are evaluated on their early work on their

own sites and on the final group project. They also conduct peer reviews to evaluate each other's performance within the team. These reviews are a significant part of the grade, reducing, but not always eliminating, instances of individual load shirking.

This emphasis on real-world assignments, short production times, cross-disciplinary teams, and real-time client contact and education has proven very beneficial to the students. They end up with portfolio pieces that speak not only of their individual skills and creativity, but also their ability to succeed in an environment very much like the one they'll experience at work. It is not uncommon for students to continue to work with an organization on their site after the class has concluded. Sometimes, they finish working on aspects of the site that were not completed during the quarter, but just as often, they join the organization to extend the Web site. This real world experience within the class and after has proved enormously valuable to our students. A majority of employees within Kodak's Web Marketing Team and Xerox's Technical Documentation and Computer Based Training divisions are successful survivors of this course and the certificate and graduate programs of which it is a part.

### Lessons Learned

Curators have to "learn to stop worrying and love the Web." While conditions have improved somewhat since we first began, there are still plenty of curators and other administrators within arts and cultural organizations who view an announcement of an impending Web site as they would a terminal disease. They move through all five stages: denial, anger, bargaining, depression, and acceptance. Though museums are in fact public institutions that share col-

lections through public display, the display is under their control. The collection itself, and its representation, are the identity of the organization. Placing them in a position that appears to give control to a group of college student and/or the general public raises serious concerns on their part. Their concerns often include, but are not limited to the following:

- Piracy of assets
- Misrepresentation/amateur representation of the organization
- Concern that the Web site might lessen the public's desire to visit the actual museum

The Eastman House experience was especially instructive. Even though we had one administrator enthusiastically encouraging us to "have our way" with the site, it came at a time when the institution was between directors, and a long-time, technophobic curator was in temporary charge of the museum. This curator was not alone in her concerns of the "danger of placing digital copies of photographs" from their collections on the Web, where they could be downloaded and reproduced. We were able to overcome these objections by:

- Working directly with curators and giving them design and content approval.
- Educating the museum staff on the limited reusability of the images on their pages.
- Providing the museum the "safety net" of initially releasing the page as "a project by RIT students about the Eastman House," rather than promoting it as the official site.

This provided them with the deniability they felt they needed until they were satisfied that the site was worthy of

official sanction. In the end, the Eastman House reaped the benefits of the Web site, including increased educational outreach and an expanded audience in addition to the press mentioned above, and they made the site their own. Their original staff member participant, an employee of the exhibitions department, has now had 50 percent of his time dedicated to webmaster responsibilities for the Web site. Though their site has gone through several major rebuilds (some with our students and some on their own), it still retains some of the original content created by our students for the original site. The Eastman House has become one of our biggest advocates.

**Next Steps**

NEA and NYSCA funds have been granted to the local arts and cultural council to support the growth of the project. The funds were granted, in part, to fund a coordinator position to focus on providing technical support for non-profits as they continue to maintain their sites and acting as webmaster for the CAROL domain.

As this paper is written, we are embarking on a variation of the theme for our spring quarter. We are planning to develop a hybrid CD-ROM and Web site to support the Sesquicentennial for the Seneca Falls Women's Rights conference and the National Women's Heritage Trail that was proposed by local organizations and is being supported by a bill in Congress. The domain name we've reserved is [www.womensheritage.org](http://www.womensheritage.org), and the site should be active by the time this paper is published.