Editor's note: STC's Research Grants Committee recently awarded three grants to researchers whose studies have potential to impact technical communication. This fall, a team of researchers from Rensselaer Polytechnic Institute became the first recipient of a grant award under STC's pilot major grants program. The value of the grant is just over $138,000—the largest grant ever awarded by STC. On pages 26 and 27, principal investigator Cheryl Geisler explains the planned work of the RPI team.

During the past two years, STC also awarded separate $10,000 grants to Lynne Cooke of the University of North Texas and a team of researchers led by Angela Eaton of Texas Tech University. See the sidebars for information on these studies.

Tech-mediated Communication: Innovating the User Experience in a Mediated World

By Cheryl Geisler, *Project Principal Investigator*

STC has just awarded its largest research grant yet to support the Tech Mediated Communication (TMC) project at the Rensselaer Polytechnic Institute (RPI). Over the next three years, a faculty team consisting of Cheryl Geisler, Roger Grice, Audrey Bennett, Jan Fernheimer, Robert Krull, Patricia Search, and James Zappen will be developing a set of useful paradigms for the analysis, design, and testing of technical communication in a mediated world. Unlike direct or face-to-face communication, mediated communication is communication transmitted through technological means. Strictly speaking, even paper documentation represents a mediated—rather than direct—communication. In our contemporary world, however, mediated communication has come to involve a variety of computer technologies—to be tech mediated.

The TMC project is designed to explore the implications of inserting technological mediation into the traditional document mix. How are user experiences in graphics, interaction design, community networks, and performance support different from traditional technical communication documents? What makes this tech-mediated communication usable, and what does it take to design it?

The TMC project builds on a year-long planning project also supported by STC. In this work, three critical tradeoffs emerged in our search to understand what makes tech-mediated communication a good user experience. As shown in Figure 1, the first and most obvious tradeoff concerns the locus of control. In traditional documents like user documentation, the document designer is expected to be in control. In tech-mediated communication, however, control has been ceded to the user in some way, whether it be the modest navigational control we see in many Web sites, the intriguing control of interactive 3-D graphics, or the overwhelming control often found in games. Interactivity is a concept closely related to control. Tech-mediated communication often allows users to interact not only with content, but also with one another.

The second tradeoff emerging from our analysis was between high design and amateur design. Traditional documents prize high design, but we often see that with the emergence of user control comes an inevitable decline in design standards. In the literature on tech-mediated communication, little attention has been paid to this tradeoff. Indeed, much of the literature suggests that tech-mediated communication requires more design work than its document predecessors. These competing claims can be reconciled by noting that tech-mediated communication requires not so much a lowering of design standards as a shift in the locus of design work. In communication that invites

Eye-Tracking Study

By Lynne Cooke, *Senior Member*

In May 2006, I received STC's $10,000 research grant for my project, "An Eye-Tracking Study of Web Navigation Menu Placement and Organization." The main purposes of this study are to determine: (1) if navigation menu location (top, left, or center) influences people's link selection and (2) whether people prefer links organized by topic or audience. For instance, people interested in applying for a company position might choose a topic link, "Work for Us," or an audience link, "For Job Seekers," from the homepage.

Another exploratory purpose of the study is to learn about Web page elements that influence homepage search. This is where eye tracking enters the research picture. My initial analysis of the eye movement data has revealed two interesting trends:

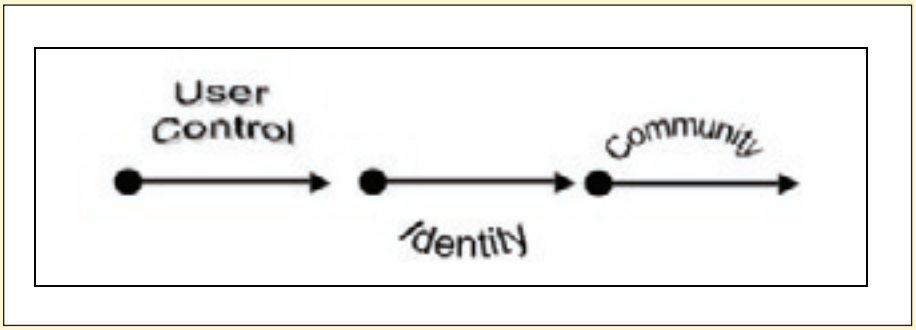
- Large pictures help structure the search process by directing people's eye movements toward navigation menus.
- People typically avoid looking at the right side of Web pages because they associate this area with advertising.

The results of my research study will appear in a future issue of *Technical Communication*.

I am currently an assistant professor of technical communication at the University of North Texas. I would like to thank members of the STC Research Grants Committee for their comments on my proposal, and the technical communication department at the University of Washington for the use of its laboratory for usability testing and evaluation.

Figure 1. Usability tradeoffs moving from a document-based world to a mediated world.

Figure 2. The process underlying tech-mediated communication.



user collaboration, many of the traditional areas of high design—text and graphics—are left to the user, and the work of the designer moves behind the scenes, to functionality that will allow that user input and the orchestration of an increasingly complex set of media.

The third tradeoff we encountered was between a universal, canonical path and a contextualized, often personal, narrative. In particular, digital storytelling is an emerging motif in tech-mediated communication: for example, consider a technology review that opens with a story of a friend's need to upgrade; an exploration of indigenous Australian culture that highlights the stories of in-

(continued on page 33)

A Rensselaer Polytechnic Institute faculty team has been awarded STC's largest research grant for its Tech Mediated Communication project. From bottom left going clockwise are Cheryl Geisler, Jan Fernheimer, Audrey Bennett, Jim Zappen, Roger Grice, and Pat Search. Not pictured is Bob Krull.

Editing in the Workplace

By Angela Eaton, *Senior Member*

Much has been written about editing in the workplace from the editor's point of view, but little is known about author preferences. Funded by a $10,000 STC research award in 2005–2006, a research project on the topic of author preferences included a survey of more than 350 authors who had been edited by STC members. Research project team members were Angela Eaton, Ph.D., Texas Tech University; Pamela Estes Brewer, Murray State University; Cynthia Davidson, Texas Tech University; and Tiffany Craft Portewig, Ph.D., Auburn University.

Respondents, both native and nonnative speakers of English, were asked about their experiences, including the best and worst attributes of their editors; their conceptualization of editing and the role of the editor; their preferences regarding the phrasing of comments and editorial modes; and the likelihood that they would accept comments based on time, phrasing, topic, and the position of the editor in the company hierarchy. Responses were then examined to determine if differences existed due to authors' native language, country of birth, or self-assessed English writing skills.

The results of the survey should help editors better understand their authors. Project findings are being submitted to *Technical Communication.*

Tech-mediated Communication

(continued from page 27)

dividuals; or a search for information about an ice-skating rink that brings you to a picture of your own daughter. Underlying this use of contextualized narrative is the growing prominence of identity and community in tech-mediated communication. If the underlying document process could be seen as involving the construction of a canonical path that will help the user avoid error, the tech-mediated communication process might be conceptualized quite differently, as shown in Figure 2.

Figure 2 articulates what seems to be a common underlying movement in tech-mediated communication. First, we need to begin by asking ourselves, Why do users want control? What will they do with it? The answers will involve an exploration of identity. The users of our exemplary tech-mediated communication are not so much engaged in getting information or completing a task as in using system-offered choices to explore their own identities.

Second, we need to ask ourselves, for what purpose are such identity quests supported by tech-mediated environments? The answer to this second question is clear: to build community. Motives for community building are various, of course. The designer of a nonprofit communication material might aim to help those suffering from neurological disorders. A distance-learning environment might be designed to provide a good educational experience to working professionals. A sociology Web site might be designed to offer "a window into the remarkably diverse worlds of indigenous peoples in Canada and throughout the world" (***www.aptn.ca/content/view/21/31***).

For whatever motive, the technical communicator who aims to create tech-mediated communication, moving users from *control* through *identity* and toward *community,* clearly faces a different task than traditional document design. Traditional metrics of usability—efficiency, accuracy, and satisfaction—no longer provide an adequate yardstick with which to measure the tech-mediated communication. Instead, we must ask questions like:

- How much control does this tech-mediated communication provide the user? Is it enough? Is it too much?
- In what ways does it afford the user's search for identity? How well does it succeed in allowing this exploration?
- How does this tech-mediated communication build community? What kinds of interactions does it allow? What kinds of networks are built?

These questions, meant to be suggestive, clearly require a new body of knowledge on what makes technical communication usable in a mediated world. Over the next two years, the TMC project will be working with STC to provide some answers.

Moving? Let Us Know!

If you will soon be moving, please remember to update your address with STC. The easiest way to do this is to access the address change form on the STC Web site at ***www.stc.org/formAddressChange.asp***.

To use the address change form, you'll need to enter your STC membership number—the same number you use to log on to the members-only section of STC's Web site. Your membership number appears on STC membership cards and on the address labels of all correspondence from the Society office. If you need to be reminded of your membership number, contact the STC membership department at (703) 522-4114 or ***membership@stc.org***.