

Teaching Advanced Communication via Integrated Web Technologies



A Proposal to the College of Liberal Arts and Sciences'
Computer Advisory Committee
May 31, 2009

Submitted as part of the call for technology-based
instruction proposals by the English Department

This document requests \$9,401 to support the integration of
the EServer Technical Communication Library, a web
resource in professional communication based in the
College of Liberal Arts and Sciences, into 117 sections of
English Department 'Advanced Communication' courses.

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Abstract

Many disciplines have created database-driven web-based indexes for research in their fields: arXiv.org (physics), Voice of the Shuttle (literature), EDUCAUSE Library (education), and many others. But no such site currently offers a plan for integrating its use into undergraduate teaching and learning.

This document requests \$9,401 to support the integration of the EServer Technical Communication Library (a Web 2.0 site for technical and professional communication based in LAS), into 117 sections of the English Department 'Advanced Communication' courses. This integration will strengthen the teaching of contemporary issues, permit the students to feel more actively engaged in learning about the discipline, and update the course for 21st-century issues.

Project Objectives

The EServer TC Library has been very successful as a web resource for the profession of technical and professional communication, but its value as a teaching resource has been limited. In most situations, students learn more traditional scholarly indexes (which are unfortunately rather complex to use for research in a field such as technical/professional communication, whose research spans diverse indexes rather than being covered by any one), or teach themselves to use far simpler and less appropriate resources, such as Google or Google Scholar.

However, significant recent scholarship in the field of computers and composition has encouraged faculty to employ Web 2.0 technologies into their courses, such as blogging, podcasts, and collaborative writing/editing technologies such as Google Docs, Facebook and Wikipedia. Integrating such resources has become quite complex, however, with RSS and Ajax-enabled web courseware tools such as WebCT and Moodle offering numerous capabilities sometimes ill-understood by individual faculty members.

Iowa State offers a 117 sections of 300-level advanced communication courses per year, which currently rely primarily on textbooks as their primary source of information about the fields of professional and technical communication. This project seeks to develop a means of integrating the EServer TC Library website into the teaching of English 302 and 314, using technologies such as RSS syndication, Ajax dynamic list generation, and Web 2.0 technologies such as shared bookmarking of particular resources for students.

Background and Significance

Advanced Communication

The English Department's "Advanced Communication" courses are composed primarily of two classes: English 302 (Introduction to Business Communication) and English 314 (Introduction to Technical Communication). In the 2007-08 academic year, the department offered 117 sections of these courses, to an estimated 2,574 students combined.¹ The courses are supervised by Professor Donna Kienzler, Director of Advanced Communication. Professor Kienzler is a strong proponent of this project.

Each of these courses tends to use one of several textbooks available in the field. However, textbooks in technical and professional communication have numerous limitations in the contemporary upper-division classroom.

One of these is a lack of clearly-defined standards within the field. A textbook with a chapter on creating effective PowerPoint presentations might find its authority contradicted by other voices the student will hear, including professors who use innovative PowerPoint styles in other courses. A chapter on résumés and cover letters might find its authority undermined by advice the student receives from his/her college adviser. A textbook's unitary (and necessarily simplified) representation of current thinking within the field endangers its credibility with students who encounter complex, multifaceted and multidisciplinary perspectives on practices in the rest of their life.

Teaching with Web-Based Primary Sources

One possibility to make courses more sophisticated would be to

¹ These data were provided by Jeslyn Jackson, the English Department's secretary in charge of course enrollment/scheduling. She found 40 fall and 35 spring sections of English 302, and 23 fall and 19 spring sections of English 314, with an average initial enrollment for each of 24 students and an average enrollment by end-of-term at 22 students.

complement the clear representations of various chapters/topics with a set of ‘further readings,’ which might make more complex (and therefore sophisticated) the clear, simple representations students find in the textbooks. Having students find primary sources to complement each week’s topics might lead to a more dynamic and interesting classroom experience for students.

Why Google Doesn’t Work

Neither Google nor Google Scholar quite provides the sort of options that would be preferable for such a pedagogy. If one currently searches Google for ‘technical communication,’ the number five result is a work entitled ‘Sexy girls Online on webcam.’² Google results also fail to differentiate between single primary texts and large sites which contain thousands of works; the first result for searches for ‘technical communication’ is the STC—the Society for Technical Communication—rather than any of the 2,500 papers open to the public contained within that site (some of which might be appropriate to any week’s topics, but all of which are hidden four levels deep within the site). This is further problematized by the fact that works in Google are ranked based upon their popularity, rather than by more nuanced or disciplinary criteria. Google isn’t ideal for students to find primary sources in technical/professional communication themselves.

Google Scholar might be a better choice, but its attempt to index peer-reviewed scholarly works makes its resources better suited to a graduate-level course than a 300-level introductory survey of the field. Many of the areas covered in 302 and 314 are topics better described in trade journals such as the STC’s *Intercom*, rather than in peer-reviewed scholarly journals.

An Alternative: The EServer TC Library

The EServer Technical Communication Library is a website first created in 2001 by a professor and three undergraduate students at the University of Washington-Seattle (now located here in LAS). The students were learning about library research into the fields of technical, scientific and professional communication and were surprised to learn how difficult such research could be.

² See <http://www.google.com/search?q=technical+communication>. The results reported above were retrieved on October 29, 2007.

They proposed developing a database-driven website that would index writings currently available online in these fields, and within months the site was online, with catalogue of 1,000 works.

EServer TC Library
a cooperative library for tech communicators

Sunday, October 28, 2007
13,650 items in catalogue.

find items containing

About this Site | Advanced Search | Site Maps

Home Page

The EServer Technical Communication Library is an open access index of published works available online for professional, scientific and technical communicators (such as technical writers).

Our goal is to provide tech comm practitioners, students, teachers and managers a comprehensive single location from which to access the complete body of knowledge in our field. [More »](#)

Please consider linking to us.

- Careers**
Consulting, Freelance, Internships, Interviewing, Job Listings, Outsourcing, Portfolios, Résumés, Technical Communication, Usability, Web Design
- Content Management**
Databases, Intellectual Property, Metadata, Knowledge Management, PHP, RSS, Server-Side Includes, Single Sourcing, SQL, XML
- Design**
Document, Graphic, Information, Interaction, Prepress, Printing, Screen Captures, Technical Illustration, Typography, User Experience, User Interface, Visual Rhetoric, Web
- Documentation**
Agile, DITA, DocBook, Government, Multimedia, Policies and Procedures, Online, Specifications
- Editing**
Controlled Vocabulary, Diction, Grammar, Indexing, Localization, Organizations, SMEs, Style Guides, Technical Editing, Translation
- Education**
Bibliographies, Certification, Courses, Instructional Design, Journals, Materials, Online Education, Reference, Reviews, Scholarships
- New Media**
Audio, CD, DVD, Flash, Podcasting, Video
- Organizations**
Accessibility, Educators, HCI, IA, Linguists, Mailing Lists, Regional, Science Writers, Tech Comm, Usability, Web Design
- Software**
Acrobat, CMS, Dreamweaver, Flare, Flash, FrameMaker, InDesign, MS Word, OpenOffice, Open Source, Photoshop, PowerPoint, RoboHelp
- Standards**
CSS, HTML, Section 508, Web, XHTML, XML, XSL
- Usability**
Accessibility, Experience, Eye Tracking, Human-Computer Interaction, Interaction Design, Methods, Testing, User-Centered Design, Web
- Web Design**
Accessible, Adaptive, Ajax, DHTML, Hypertext, Information Architecture, Intranets, Journals, Metadata, Search, Wireless Web
- Workplace**
Biomedical, Collaboration, Ergonomics, Ethics, Humor, Management, Mentoring, Presentations, Project Management, Proposals
- Writing**
Blogging, Business Communication, Marketing, Plain English, Rhetorical Theory, Science Writing, Technical Writing, Writing for the Web

Authors (5,025) | Categories (249) | Languages (24)
New This Week (47) | Publishers (1,722) | Years (50)

Add a Site | Localization | Site Preferences | Habitués

Since relocating in 2003 to the ISU English Department, the site has been very successful. Today it indexes more than 13,600 works, and because it permits users to add new resources directly to the catalogue (subject to later approval by an eight-member editorial board), it now averages approximate six new works per day, and has relationships with major publishers such as Sage and Baywood, who add new works to the TC Library catalogue automatically as new issues of their peer-reviewed scholarly journals within the field are published.

When one chooses one of the categories from the home page, or enters a search term in the upper right corner, the resulting page displays:

EServer TC Library Documentation
a cooperative library for tech communicators 931 found. Page 1 of 38.

find items containing

About this Site | Advanced Search | Site Maps

Refine search. Preferences.

sort by rating

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 NEXT PAGE »

- 1. Grappling with Distributed Usability: A Cultural-Historical Examination of Documentation Genres Over Four Decades** Best
 #29049
 Traditional models of usability assume that usability is a quality that can be designed into a particular artifact. Yet constructivist theory implies that usability cannot be located in a single artifact; rather, it must be conceived as a quality of the entire activity in which the artifact is used. This article describes a distributed approach to usability, based on activity theory and genre theory. It then illustrates the approach with a four-decade examination of a traffic accident location and analysis system (ALAS). Using the theoretical framework of genre ecologies, the article demonstrates how usability is distributed across the many official and unofficial (ad hoc) genres employed by ALAS users.
 Spinuzzi, Clay. *Journal of Technical Writing and Communication* (2001). [Articles>Documentation>Usability>History](#)
- 2. What Managers Need to Know About DITA** Best
 #28773
 Product documentation is expensive—often, much more expensive than it needs to be. With DITA promising savings of 50% in product documentation preparation costs, and 80% in translation costs, managers need to know what DITA is and if it can work for their organization. This white paper distills the information that managers need to know about DITA.
 Reichman, Katriel. *Method M* (2007). [Articles>Documentation>Standards>DITA](#)
- 3. Evaluating the Effect of Iconic Linkage on the Usability of Software User Guides** Best
 #29126
 This study investigates whether Iconic Linkage—the use of the identical wording to present the same information recurring in a text—can improve the usability of user guides. Iconic Linkage is a writing strategy that potentially allows users to work more quickly and effectively and which promotes better retention of information. The usefulness of Iconic Linkage was tested in a laboratory-based usability study that combined: 1) objective task-based evaluation; and 2) users' subjective evaluations of a software program used in recording parliamentary debates. A post-test survey designed to test subjects' retention of information contained in the user guides was also administered. The study shows that Iconic Linkage significantly improved usability of the user guide: in all tasks, subjects worked more effectively and made fewer mistakes; while in the three timed tasks, subjects completed the tasks much more quickly. Subjects also gave higher ratings for the software and their retention of information was noticeably improved.
 Byrne, Jody. *Journal of Technical Writing and Communication* (2005). [Articles>Documentation>Software>Usability](#)
- 4. John Daigle on RoboHelp 7** Best
 #28789
 Daigle, an Adobe community expert for RoboHelp, shares his reaction to the RoboHelp 7 sneak peak, and also explains the main features RoboHelp 7 will have: drag-and-drop functionality across the topics, double-byte language support for translation, the ability to have multiple topics open at the same time, snippets with

Results may be sorted by date published, by title or author, or by 'rating' (the average of 1-5 stars submitted by other site users).

Clicking any work in particular takes the visitor to the 'detail' page for that item, which shows the complete abstract, all available metadata about the work, and links to other works in the same category, by the same author, or published by the same publisher.

EServer TC Library Added by Geoff Sauer on Jul 13, 2007.
a cooperative library for tech communicators Average rating: 5.00/5.00 (n=1)
 Best

find items containing

About this Site | Advanced Search | Site Maps

Home > Articles > Documentation > Usability > History

View all works in 'Documentation'

View all works in 'Usability'

View all works in 'History'

mail to a friend

View all ten works by Spinuzzi, Clay

View all 174 works published by *Journal of Technical Writing and Communication*

Grappling with Distributed Usability: A Cultural-Historical Examination of Documentation Genres Over Four Decades

<http://baywood.metapress.com/link.asp?target=contribution&id=8GBCJ04RVKCFNJP>

access restricted (by the publisher) to members/subscribers/customers only

peer-reviewed

Spinuzzi, Clay
Journal of Technical Writing and Communication
 2001

Abstract:
 Traditional models of usability assume that usability is a quality that can be designed into a particular artifact. Yet constructivist theory implies that usability cannot be located in a single artifact; rather, it must be conceived as a quality of the entire activity in which the artifact is used. This article describes a distributed approach to usability, based on activity theory and genre theory. It then illustrates the approach with a four-decade examination of a traffic accident location and analysis system (ALAS). Using the theoretical framework of genre ecologies, the article demonstrates how usability is distributed across the many official and unofficial (ad hoc) genres employed by ALAS users.

Please share your rating/opinion of "Grappling with Distributed Usability: A Cultural-Historical Examination of Documentation Genres Over Four Decades".

Poor Excellent

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The 'detail' page also permits users to post ratings or lengthier written reviews, and provides direct links to the works in question, all of which are available directly online.

The site permits users anywhere to add new items to the catalog,

to update the entry for any particular work (using a forms-based interface), to rate any of the works on a five-star scale, or to write a detailed review of any work.

EServer TC Library
 a cooperative library for technical communicators
 eserver.org

Monday, October 29, 2007
 About this Site | Advanced Search | Site Maps

Find items containing
 About this Site | Advanced Search | Site Maps

Update this Site

Feel free to update this listing if you see incomplete or incorrect information.

Site Name:

URL:

Author: Publisher:

Year:

Categories: > > >

Language:

Short Description:

Full Description:

Membership: not required peer reviewed available required not peer reviewed offline

Enter the code to the left, to verify that you are not an evil computer program:

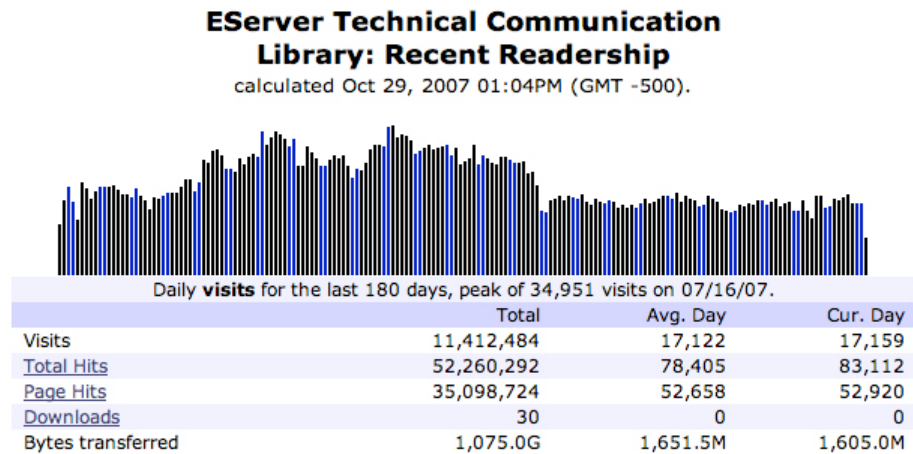
[if you can't read the code, click to reload.](#)

[Add a Site](#) | [Localization](#) | [Site Preferences](#) | [Habitués](#)

It employs a 'CAPTCHA' random-text image at the bottom of each page to prevent 'spam' software from vandalizing the index, and has a system of editorial review to correct errors introduced into the listings. However, the site has had remarkably little difficulty with such vandalism in the past.

Significance: Current Usage

The EServer TC Library currently serves a broad readership, averaging just over 17,000 visitors (about 83,000 'hits') *per day*.³



³ Complete statistics for TC Library usage since January 1, 2006 are generated hourly, available at <http://tc.eserver.org/about/recent.lasso>.

The site supports an committed user base, with duration of visit statistics for the site from January 1st, 2006 showing users stay at the website a significantly longer period of time than similar sites.

The Need for Funding: Speed Concerns

The current EServer workstations consist of two computers (on the far left and far right below). The system on the left, a 2003 Dell GX260, runs FileMaker 6, which currently stores the site's catalog. The computer on the right, a 2004 Mac G5, is the webserver.



Alexa, the division of Amazon which tracks website performance and readership, currently rates the TC Library website as 'slow'⁴ (although also rating it among the most popular websites in the world in 'technical writing' and 'human-computer interaction').

The current system infrastructure is reliable, but not powerful enough to be used reliably in 117 sections of an ISU course.

⁴ See <http://alexa.com/data/details/main?url=tc.eserver.org>.

Progress

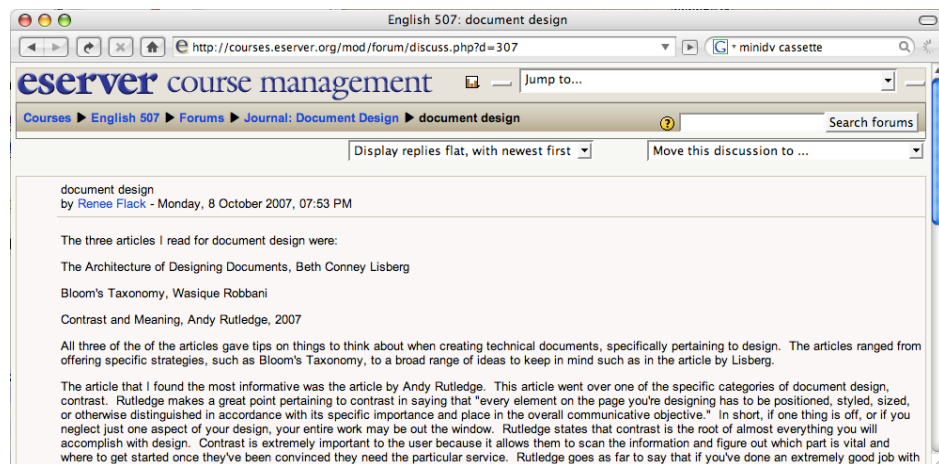
No part of the EServer TC Library nor its parent EServer website have ever previously been funded by LASCAC or CAC funds.

Project Plan

The plan for this project will take three semesters. It has already begun to some degree, with a graduate seminar currently being taught this term by Geoffrey Sauer. If funded, it will proceed with work in several sections of English 302 and 314 in the Spring 2008 semester. Heavy web development work will then follow in Summer 2008, and testing of a prototype interface will follow in numerous sections in Fall 2008.

Fall 2007

First efforts toward developing a pedagogy using the EServer TC Library were undertaken in a fall 2007 section of English 507. This course, a graduate introduction to technical and professional communication for new MA students in the Rhetoric, Composition and Professional Communication program, used Moodle 1.8 for its course website. Students were given a 'journal' assignment each week, which involved each student finding and reading from the TC Library three primary sources on each week's topic:



Students were asked to post short discussions about their readings, particularly discussions about similarities or differences between the perspectives taken by the various authors. The 'journal' assignment permitted students to read and comment on one another's posts. All posts were due by the beginning of class, and in class time was always reserved for discussion of what the

students learned from their readings. This discussion tended to be far more productive than some of the readings based upon the more conventional reading assignments, and several of the students expressed a wish that they could use a version of this assignment in their own teaching of English 150 and 250 courses.

Spring 2008

In the spring semester, the project plans to recruit two or three graduate students to assist in the planning and testing of various interfaces for the TC Library into courses that use traditional paper syllabi, ISU's WebCT, and the English Department Course Website system (which hosts about 175 courses per year, and is based upon Moodle).



Work in the spring will build upon the work from Fall 2007, working primarily to investigate how successfully such a reading assignment might be incorporated into a few weeks' curricula for both English 302 and 314.

Summer 2008

The summer of 2008 is when most of the development work necessary for producing customized interfaces for the TC Library website would be developed. If supported by the findings from the spring, the graduate students would assist the team in PHP, SQL, Lasso and FileMaker Pro development to produce a Web 2.0 interface for custom 'reading lists,' which would permit instructors anywhere in the world to select a superset of readings to recommend for students in their class, and the website will generate XHTML pages which display these lists and RSS (XML) feeds to permit these lists to be incorporated easily into course websites.

Fall 2008

In Fall 2008 the system developed in the summer would then be tested in a large number of Advanced Communication courses. Donna Kienzler has agreed that a module on how to incorporate this technology into 302 and 314 courses could be presented within the annual week-long training in Advanced Communication before the beginning of the fall semester. The faculty and graduate student project team would track and support usage of the system throughout the semester, gathering data for a larger, future study.

Future Funding

The project team would then endeavor to develop a FIPSE grant proposal to extend this work done with the advanced communication courses at ISU to a larger, multi-university study.

Anticipated Usage of COLL Resources

This project may not require significant use of COLL resources. A representative from this project met with Tom Ingebritsen to discuss an early draft of this proposal to ask about any resources in the COLL which might be of particular use to this project, but because this project requires only computer hardware, and the software necessary for this sort of web development is already available in all computer classrooms, it should not represent any significant effort or resources from the COLL.

Budget and Budget Justification

In summary, the requested funding is as follows:

Item	Cost	Rationale
Macintosh Pro Server Workstation	\$5,175	To enable the website to run the current (10.5) server OS and modern (Intel-based) versions of needed server software.
AppleCare Protection Plan	\$199	Three-year protection for the server workstation.
OS X Server 10.5 Unlimited	\$499	Current version of the server operating system to permit the workstation to provide high-speed web application services
FileMaker 9 Server Advanced	\$528	To upgrade the TC Library database to support Unicode character sets and automated XML import features.
PhD student assistance	\$3,000	Hourly funding for two graduate students to integrate the prototype site into their Engl 302 and 314 courses, and provide support for integration of the site into all sections of the course.
Funding Request	\$9,401.00	

Almost the entire budget would be used for new hardware and software for the system.

This budget would purchase an 8-CPU workstation to replace the current 2-CPU webserver workstation. The current webserver (the 2004 Mac G5) would then replace the single-CPU Dell database server, running the new FileMaker Pro 9 Server.

Matching Funds

The EServer (the larger project of which the TC Library website is one part) in 2006-07 received funding from an NSF-funded

research study to host a bibliography website about the representations in popular media about research in nanoscale science and technology. That grant provided \$750 in funds for EServer hardware which has not yet been spent. If this LASCAC grant is funded, the EServer will use the \$750 funding to purchase SATA2 hard drives inside the Mac Pro server to create a RAID 5 array for high-speed storage and disk access for the server.

ISU Professor Donna Kienzler, the Director of Advanced Communication, has agreed (if this grant is funded) to permit this project to present to the first meeting of the graduate students who teach English 302 and 314, and she has offered to help us to recruit two students from that meeting to participate in the development of this project. The \$3,000 in funding requested here would be to pay hourly wages to two doctoral students who would assist in the development of the pedagogy integrating the website into 302/314, testing of the new user interfaces developed for the website for this task, and the development of instructional guides so that other 302/314 instructors could use the resources in their sections of the course.

ISU Associate Professor Barb Blakely has agreed (if this grant is funded) to permit the research team to make a presentation to the Fall 2008 section of English 601, a course dedicated to Ph.D. student qualitative research. It is the hope of this project's investigators that doctoral students may be interested in pursuing research into this pedagogy, toward future funded studies by FIPSE.