

Abstract: When the Field is Far Afield: Multiple-Country Observations of Complex System Use

Topic Area: Methodology

Length of Presentation: 90 minutes

Audience Level: Experienced usability professionals who have conducted or are interested in international usability projects

DESCRIPTION OF THE PRESENTATION TOPIC, WITH SESSION TIMELINE

This presentation describes a contextual inquiry study consisting of 24 individual user sessions at seven sites in four countries. Its goal is to review some of the challenges facing usability professionals who perform studies of complex systems which are used internationally, based on examples from this case study.

Study Background: To Travel or Not to Travel (10 minutes)

A major manufacturer of computer hardware and software wanted to identify major issues of concern for users of the main component of its enterprise-wide call management system. This component, a service order tool, is used daily by hundreds of people around the world to support a wide range of tasks.

It's possible to conduct international studies remotely, with both usability specialists and participants in the relative comfort of their own labs (with audio and video links) or offices (for phone interviews). When the presenters considered whether to do this study remotely or in-person, an overwhelming number of considerations favored in-person observation:

- Importance of the tool. The tool plays an important role in the company's effort to integrate worldwide staff, skills, and expertise at geographically dispersed offices.
- Differences in business practices from country to country.
- Differences in companion software from country to country.
- Necessity that all target user groups "buy in" to the tool changes that resulted from the usability study.

These factors, plus the desire to see the kinds of problems that different users encountered when using the tool, dictated an in-person contextual inquiry.

How Differences in User Behavior Affected the Study Design (20 minutes)

User groups and tasks—The service order tool supports a large number of target user groups in centralized answer centers and field offices. The user behavior of each group reflects its particular tasks. In centralized answer centers:

- Dispatchers take calls, summarize problems, and route each call to an appropriate engineer.
- Front-line and back-line support engineers accept, review, update, and close calls.
- Account management and support services staff provide administrative support to engineers and help ensure satisfied customers.

In field offices, hardware support engineers and their managers use the tool for some of these same functions.

However, because of business-practice differences, users in the “same” group have somewhat different responsibilities as well as different companion software tools from country to country (for example, to match customer problems to support specialties). We, therefore, needed to observe all the target user groups in the major countries actually using the service order tool. Our study comprised 24 participants, roughly half on the East Coast and West Coast of the United States, and the other half in the U.K., France, and Germany.

Study approach—We intentionally began the study in the U.S. so that we could concentrate on issues that were not internationally dependent, such as methodology and focus. We planned then to reflect on what we had learned and refine the methodology as we prepared for the European sessions.

Participant selection—We developed detailed participant selection criteria for each target user group, including time in current position, type of service order tool training (if any), and opinion of the tool. Our in-country recruiters tried to use the same screening criteria for all participants, and were successful in the U.S. and U.K.

In France and Germany, we confronted the language barrier that is a major challenge to international studies. Here we also required that participants speak English sufficiently well to be able to discuss their jobs—a reasonable prerequisite because the company’s employees use English on the job to conduct business between countries.

Study focus—Finally, we developed an individual focus or list of topics to guide the observation of and dialog with participants from each user group, adapting the focus as necessary for each country.

How International Issues Affected Study Management (20 minutes)

International team—An international usability study needs the buy-in and support of international managers. It also needs an international team to help carry it out, ideally representatives of all countries or locations where sessions will take place. Because of time zone differences, we tended to use email to communicate with team members, with occasional phone calls or group conference calls.

Cultural differences—Not only national culture but also corporate culture varies from setting to setting. We quickly learned about this as our international team members, our local “champions” for the study, were distracted by other concerns and agendas. In addition to this geo-cultural insight, international team members provided study-design feedback, topic-list ideas and edits, and in-country recruiting.

Logistical and survival issues—The travel between U.S. coasts and to Europe added time to the study schedule. Other logistical considerations included:

- How to get to our destinations, and from place to place once there.
- Where to stay, and its proximity to the study site.
- The “electrical compatibility” of tools such as laptop computer and audio and video equipment.
- Whether to carry supplies such as tapes, batteries, and photocopies, or plan to obtain them locally.

How Study Complexity Affected Data Analysis and Reporting (10 minutes)

Interim report—We used the six-week lag between the U.S. and European sessions to examine our U.S. data and prepare an interim report of findings. However, we were careful to draw no conclusions and make no recommendations at this point in the study.

Final report—After the European sessions, we developed a top-ten list of findings for a “quick-results” presentation that preceded the comprehensive written report. For that report, we also created a database to organize our abundant notes and quickly “slice” the data in different ways—for example, by target user group, by formal vs. informal training on the tool, and by features used. We found that not only did this approach jump-start our final reporting, but it was also instructive to see how often our gut-feel judgments overlapped with actual data.

Major study results—The contextual inquiry study resulted in more in-depth training for the service order tool users, along with some changes to the interface for improved usability. In addition, the numerous long-term recommendations for simplifying the system are being fed into specifications for the next version of the service order tool.

Audience Participation: Questions, Answers, and Other Experiences (30 minutes)

The presenters will solicit questions from the audience and also invite examples and discussions of attendees’ experiences in international usability studies. We may use the following probes to start the audience participation:

- What role can usability research play in localizing products and documentation? In creating global products and documentation?
- How do we convince global companies and institutions that international usability studies are important? What issues might we have to confront, and what arguments might we use to counter them? What costs can we reduce? What value can we add?
- How does using a translator affect the conduct of an international usability study? How can we prepare the translator or help the translator understand usability techniques and study goals?
- What special challenges are presented when you’re physically removed from international study participants—say, conducting phone interviews of users or usability testing at a remote lab with audio and video links?
- How does conducting usability research with different cultural groups within the same country compare with conducting an international project?

BACKGROUND OF THE THREE PRESENTERS

Presenter 1

Lori Anschuetz
Senior Usability Engineer, Tec-Ed, Inc.
Voice: 716-454-7440
Fax: 716-454-5124
Email: lori@teced.com

Lori Anschuetz is a senior project manager and usability engineer in Tec-Ed's Rochester (NY) office with more than 20 years of technical communication experience in corporate and consulting environments. In 11 years at Tec-Ed, Lori has planned, implemented, and managed usability research, user-interface design, and documentation projects for clients such as Xerox, Sun, Intuit, Thomas and Netscape.

With Stephanie Rosenbaum, Tec-Ed's founder and president, Lori coordinated the advanced usability progression at the 1997 STC conference and co-chaired the 1996 IEEE Professional Communication Society conference program. She has also written papers on whole-product usability research for IEEE PCS and ErgoCon conferences.

Presenter 2

Deborah Hinderer
Usability Specialist, Tec-Ed, Inc.
Voice: 313-995-1010
Fax: 313-995-1025
Email: deborah@teced.com

An experienced usability practitioner, Deborah Hinderer specializes in heuristic evaluation, usability testing, and customer and user interviews. Deborah also trains Tec-Ed clients and staff members in test administration and participant recruiting methodology. She has performed usability projects for Autodesk, Claris, IEEE, Intuit, Latitude Communications, Macmillan/McGraw-Hill, Netscape, PageMart, SkyTel, Sun Microsystems, and University Microfilms.

Deborah is a member of the Usability Professionals' Association (UPA), the Society for Technical Communication (STC), and the Michigan Technology Council (MTC). She co-presented the paper "Multiple-User Testing: When One Person Can't See Everything" at the UPA '97 conference.

Presenter 3

Janice Rohn
Manager of Usability Labs and Services
Sun Microsystems, Inc.

Janice Rohn is Manager of Usability Labs and Services at Sun Microsystems. She joined Sun in 1992, when she founded the usability engineering group and designed and built usability labs for Sun's sites in California and Colorado. Janice has been working on human-computer interaction (HCI) and strategy issues across Sun, and has led a number of efforts to improve the integration, usage, and efficiency of HCI methods. As a Quality Officer, she has worked on driving usability into the practices and processes across the company.

Prior to joining Sun, Janice was a usability engineer and designer for Apple. Prior to Apple, she was a research assistant at Stanford University in expert systems and medical informatics, where she blended her background and interests in psychology, computer science, design, and video to perform what is now known as usability engineering.

Janice has done a wide variety of presentations, including presentations and panels for CHI, UPA, and Interact, and guest lectures and courses for Stanford University, College of Notre Dame, Sun Microsystems, and Apple University. She has also produced a number of videotapes on HCI and written a number of publications, including articles and columns in journals, and book chapters and contributions. Janice has been President of the Usability Professionals' Association for the past two years, and is a founding board member of the organization. She is currently spearheading an effort to raise the awareness of usability and HCI in the press, public, and the government through a UPA Outreach program that she founded.