

## Usability Services at Compuware-Madison: Bringing Usability to Data Processing

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### ABSTRACT

This presentation describes the Usability Services group at Compuware-Madison. Compuware-Madison is part of the national Compuware Professional Services Division, which provides consulting services for the computing industry, primarily data processing divisions of corporations. The Usability Services group was developed to help clients who are moving from traditional mainframe environments to newer technologies that use graphical user interfaces (GUIs). A group organized specifically to address usability issues is atypical in the data processing area, both from the client corporation and the consulting provider's perspective. This presentation describes how the group came to be, its projects, the challenges it faces, and its successes.

### Keywords

Usability engineering, HCI education, HCI in organizations

### BACKGROUND

Many well-known usability labs are associated with large corporations that develop consumer products, such as Kodak, Microsoft, and IBM. These corporations have a long history of using human factors and usability engineering. However, myriad other corporations have data processing departments that develop software for in-house use, often referred to as IS (Information Systems). This software has a vast impact on the lives of thousands of employees who use the in-house software for their day-to-day tasks. Most of these corporations have no access to usability labs, research facilities, or human factors professionals. At an even more fundamental level, their corporate culture often does not acknowledge the role of usability in the software development process; the human factor of software design is still considered inconsequential compared to "hard" technical aspects.

Traditionally, Compuware has supplied programmers, systems analysts, and project leaders with particular technical skills to assist such client corporations in their transition to new technologies. It was apparent that some projects were failing or troubled, not due to technical

problems, but to poor user interface design, incomplete assessment of user needs, and lack of supporting methodologies; in short, lack of good usability practices.

The Usability Services group is an experiment in providing these services to clients, and teaching them to use these techniques on their own. Another goal is the education of Compuware consultants. The challenge is not only to provide the services, but to convince clients of the importance of usability issues.

### STRUCTURE

The Usability Services group consists of three Compuware consultants, with plans to expand to a total of five consultants during the second year. The group was started informally by a project manager who has a background in both computer science and human factors. During the first year, an additional consultant was trained in GUI design and HCI (Human Computer Interaction) evaluation techniques. The consultant has a background in technical documentation, which overlaps with many HCI skills including visual design and organization, audience analysis, and standards. The third consultant, who has a graphic design background, joined the group at the start of the second year.

### PROJECTS

In a 15 month period the Usability Services group has completed several projects for clients, and established long-term relationships with some clients. The projects included developing GUI guidelines for a large utility company, a national insurance company, and a national retail chain. These custom guidelines were created by starting with generic standards available on CD-ROM, and adding detailed topics for the client. The group also developed and taught several customized workshops to introduce programmers to the company guidelines. Other projects have included usability evaluations and assistance in managing the software design process to support usability.

During the first year the group found that their work was a combination of rehashing common issues (e.g., use of

white space) and customizing guidelines for corporate needs (e.g., choosing icons). For this reason, it developed a template set of guidelines, which is a framework defining decisions that need to be made. For example, there is a topic on toolbars, which has basic suggestions and guidelines but must be customized for the company's environment. Therefore, the first week of each engagement includes an analysis of work being done at the company and software currently being used. This presentation will include a brief demonstration of the template in an online format, which gives programmers easy access to the guidelines within their work environment.

During the second year, the group worked in conjunction with two local companies to develop a workshop. As work with the Usability Services group progressed, some clients began to realize that standards are not enough, and that HCI techniques must be integrated with the software lifecycle. The workshop stresses the *process* involved in user interface design, including steps such as user analysis and usability testing, and is customized for the company's methodology and standards. Clients own the workshop and can teach it as needed, making it highly accessible.

#### CHALLENGES

The Usability Services group has encountered, and continues to encounter, many hurdles. Some come from the nature of the consulting business within which the group operates; others originate from client perceptions. Some challenges have included:

- *"As long as it's profitable..."* Since the Usability Services group is part of a consulting company whose product is the sale of consulting services, the group must be profitable.
- *"No one will pay for this..."* Because the group must be profitable, clients must be willing to pay consulting fees for these services. Traditionally, data processing departments have outsourced programming jobs such as COBOL programming. Compuware-Madison was not initially convinced that clients would see the value of usability services, until several projects had been successfully completed, and led to other business.
- *"What's a Usability Analyst?"* When clients request a consultant, they usually do so by traditional job titles, e.g., Visual Basic Programmer or Network Administrator for NT. Sometimes GUI design is mentioned but this is interpreted to mean that the consultant has worked on a GUI project, not that they have HCI training. The group hopes to introduce Usability Analyst as a job title or skillset that is readily recognized and requested specifically by clients.
- *"Anyone can do it..."* Often both consulting companies and clients do not perceive HCI skills as a specific skillset that must be learned, developed, and maintained. The maintenance of GUI design skills is a

task comparable to keeping up with the latest development tool releases. Many managers assume programming experience with a GUI tool, such as Visual Basic, implies GUI design expertise.

The group is still in the process of crossing many of these hurdles. However, some of the techniques that have allowed the group to succeed so far include:

- **Training Compuware sales representatives.** The usability group gives presentations to Compuware sales representatives on the value of HCI skills to clients.
- **Combining technical and HCI skills.** HCI skills can "come in the back door" if a consultant also has traditional technical programming skills that the client is used to purchasing. This consultant can often pave the way to increased appreciation for usability issues. However, the group continues to develop specific HCI experts, and clients who have used these consultants tend to ask for them repeatedly.
- **Using terms clients can relate to.** Usability Analyst, HCI, and Human Factors are not familiar terms in data processing environments. Terms such as case-of-use and GUI are used to start with, and the other terms are introduced over time.
- **Making direct benefits obvious.** The most effective selling point for usability services has been successful projects. A project that produces a better user interface, and happier users, convinces the client of the value of the skillset. Similarly, the time saved by providing effective GUI standards is a direct benefit.
- **Working with the company's corporate culture.** Most clients have one or several individuals who are very interested in GUI design, and many more who just want the practical benefits: "Show me what to do so I can get this project done..." The Usability Services group always requests that the client form an in-house team of three to seven developers to work with the Compuware consultants and become usability evangelists for the company.

#### FUTURE

In the first year, the Usability Services group has been able to show clients how these services can help them, and show Compuware that clients are willing to purchase the services. In the future, the group hopes to formalize recognition for usability-related job titles and services. Expanding the role of Usability Analyst on project teams is an important goal. The group is also attempting to bring local companies together to share experiences. Sponsoring a user interface design user's group in the community is an upcoming project. The group feels that these efforts will continue to benefit corporations and the many employees who use in-house developed software.