

## Chapter 79

# Usability Impact Analysis of Collaborative Environments

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### ABSTRACT

*This chapter will focus on the application of usability principles in a corporate collaborative environment in order to show improvements in utilization. Collaborative applications create a two-way communications structure as opposed to the one way communication method of traditional web environments. Collaboration applications can vary in the complexity from discussion forums to complex social software integration. Usability principles have been applied to web sites, but very little research has been done on the implications of usability in collaborative environments. Collaborative environments create a unique set of opportunities that create a different set of user goals. End users want a more collaborative environment that is easy to use and engaging. Organizations need to ensure the business goals stay at the forefront while improving the collaborative nature of the company.*

### ORGANIZATION BACKGROUND

AT&T Inc., together with its subsidiaries, provides telecommunications services to consumers, businesses, and other providers worldwide. The company's Wireless segment offers wireless voice and data communication services, such as local wireless communications services, long-distance services, and roaming services. This segment also sells various handsets, wirelessly enabled computers, and personal computer wireless data cards; and accessories, including carrying cases, hands-free devices, batteries, battery chargers,

and other items. This segment sells its products through its own stores, or through agents or third-party retail stores. Its Wireline segment provides data services comprising switched and dedicated transport, Internet access and network integration, U-verse services, and data equipment; businesses voice applications over IP-based networks; and digital subscriber lines, dial-up Internet access, private lines, managed Web-hosting services, packet services, enterprise networking services, and Wi-Fi services, as well as local, interstate, and international wholesale networking capacity to other service providers. This segment also offers

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voice services, such as local and long-distance, calling card, 1-800, conference calling, wholesale switched access, caller ID, call waiting, and voice mail services; and application management, security services, integration services, customer premises equipment, outsourcing, government-related services, and satellite video services. The company was formerly known as SBC Communications Inc. and changed its name to AT&T Inc. in November 2005. AT&T Inc. was founded in 1983 and is headquartered in Dallas, Texas.

## **SETTING THE STAGE**

This research will look into a large scale deployment of over 80,000 collaborative sites. Each site is unique in its design, development, and business function. Therefore, many of the user tasks are also unique. We will look to discover the impact of applying usability principles to the collaborative environment and the end user experience. The basic research question revolves around the idea that if we apply usability principles to the original design then does the collaborative environment shows an increased use from the community? Much like web site metrics of page views or transactions, we will review the number of document managed, the number of members of the community, page views, and several other base measurements in order to determine the impact of usability and design. Most information technology professionals push to deploy collaborative solutions out of the box with little effort to improve the usability of the application. However, we will show that this strategy actually limits the value-add opportunities. The goal is to show that the more usability principles and early design methodologies applied to the collaborative space the greater value the company will gain from the deployment.

## **BACKGROUND INFORMATION**

### **Usability Research and Frameworks**

The goal of this chapter is to ask the question does usability have an impact on a collaborative environment. Can you apply usability principles to a collaborative environment and see an improvement in end user engagement? First, we need to define what usability actually is or is not. The importance of usability is well documented. Lecerof and Paterno (1998) defined usability to include the concepts of relevance, efficiency, user attitude, learnability, and safety. The ISO organization defines usability as the extent to which a product can be used by specified users to achieve goals with effectiveness, efficiency, and satisfaction within a pattern of contextual use (Karat, 1997). Usability is the broad discipline of applying sound scientific observation, measurement, and design principles to the creation and maintenance of web applications in order to bring about the greatest ease of use, ease of learnability, amount of usefulness, and least amount of discomfort for the humans who use the application (Pearrow, 2000). All of these definitions focus on the ability of the user to leverage the application for value creation.

There are various schools of thought on which design elements make a successful web site. Scanlon, Schroeder, Snyder, and Spool (1998) collected qualitative and quantitative data on key design factors, which included: searching, content, text links, images, links navigation, page layout, readability, graphics, and user's knowledge. Each of these design elements makes an important contribution to a successful website. Websites are built to provide information or sell a product or service. Experts indicate that usability is about making sure that the average person can use the site as intended. Well chosen names, layout of the page, text, graphics, and navigation structure should all come together to create instantaneous

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