

# Chapter 10

## Constructing and Evaluating Social Software: Lessons from Interaction Design

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### ABSTRACT

*The process of developing interactive systems necessitates designers to have a comprehensive understanding of the needs of the user and the context in which a device or system is to be used. Interactive systems are often designed through a series of iterations, guided by a sequence of evaluations. This chapter describes how the research and development techniques used within the field of Interaction Design (ID), a successor to the field of human-computer interaction, can be used to inform the development and evaluation of social software systems. Particular attention is given to the challenging area of end-user culture and how different evaluation paradigms and techniques can be applied. The chapter concludes by presenting pointers towards a number of international standards and highlighting a number of potentially useful research directions.*

### INTRODUCTION

Social software systems are interactive systems that enable users to share information and collaborate with each other. This chapter presents a very brief overview of a discipline called Interaction Design (ID). Interaction Design is a development of human-computer interaction. It represents a set of tools and techniques that can be used to guide the development of social software and

interactive systems. ID draws upon a number of different fields, ranging from computer science and software engineering, through to psychology, sociology, anthropology and design, each contributing useful theories and knowledge that to guide the design and development of interactive devices, systems and environments.

This chapter begins with a description of what ID is and is then followed with a presentation of some of the processes and techniques that can be used to explore product and user requirements, drawing upon the powerful notions of user profiles

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and task scenarios. The ‘culture’ and ‘understanding the user audience’ sections provide additional source of useful guidance. The culture section asks designers to consider differences between user groups. The ‘understanding the user audience’ section calls upon designers to consider the importance of accessibility and inclusion. The design section that follows explores the process of creating a prototype and points to other important design approaches, such as participatory design.

One of the central tenets of effective ID and user-centred design is the notion of evaluation. Evaluating a system, whether it be a low fidelity paper prototype or the first release of an interactive system enables designers to explore whether a system works in the way that we expect it to and ask whether there is anything else that needs to be done to make the system more suitable for its target audience. The evaluation section outlines a number of useful techniques that can be applied by the designers of social software systems. A section that describes a number of technical standards offers useful guidance to facilitate the development of usable and accessible social software systems can be found towards the end of this chapter. This is followed by a very brief example, taken from a current Interaction Design course that illustrates how some of the ideas can be applied. The chapter concludes by outlining a number of current and future research directions before summarising the main themes.

## **BACKGROUND**

Interaction Design can be described as a set of subjects and techniques that can be used to facilitate the design of ‘interactive products to support people in their everyday and working lives’ (Preece et al., 2002). Interaction Design has emerged from the field of human-computer interaction (HCI). HCI has a long history which encompasses diverse domains such as engineering psychology (Wickens, 1992), human visual and

auditory perception, product design and typography. It could also be said to embody a number of different conceptual approaches; an approach that seeks to explain how aspects of interfaces are perceived by users, and another approach that considers the processes that can be used to design effective interfaces.

The emergence of HCI as a subject in its own right has been facilitated by the development of high resolution computer graphics, the creation of new ways to interact with computer systems and increasing levels of computing power. The continual increase in computing power has inspired the creation of new ways in which desktop computer systems can be used. The challenge of HCI was to explore not only how to harness new levels of power but also to create systems that are understandable and comprehensible to different user groups and communities without users having to undergo extended periods of training. User interfaces, in essence, should match the experience and needs of those who need to use them.

As computing and digital communication technologies have evolved, the computer is no longer a tool that is constrained to the desktop. Instead, the notion of an interactive product, or more specifically interactive software system, has expanded considerably due to the emergence of innovations such as mobile phones, personal digital assistants and the ability to embed microcomputer technology into a myriad of different devices. An interactive system can now be thought of as an application found on a desktop computer or an application running on mobile devices. The term can also encompass systems found within public spaces, such as bank teller machines, travel ticket dispensers and so on.

Interaction Design places significant emphasis on the user, drawing upon the notion of user-centered design. The user, it is reasoned, is likely to be the expert of their own needs. Approaching design with the objective of solving a functional problem without understanding the user may yield a product or system that may ‘work’ in a functional

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