Designing Web Sites and Interfaces to Optimize Successful User Interactions: Symposium Overview

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Abstract. Since the Web became widely available in the mid 1990s, it has come to be used by a range of people for many purposes. Effective user interactions are required for a Web site or product to accomplish its intended goals. Given the user-intensive nature of the Web and the many usability issues associated with performing tasks on the Web and with mobile devices, it is important for designers and researchers to understand issues that relate to how to optimize interfaces for the Web design and other systems involving human-computer interaction. This symposium is devoted to issues involved in the design of Web sites and interfaces to promote successful user interactions.

Keywords: Information Display, Input Devices, Mobile Devices, Organization of Information, Web Design.

1 Introduction

Since the World Wide Web became widely available in the mid 1990s, it has come to be used by a variety of people for many different purposes, including e-commerce, social networking, data display, information sharing and collaboration, and mobile transactions. Effective user interactions are required for a Web site or product to accomplish its intended goals. Given the user-intensive nature of the Web and the numerous usability issues associated with performing tasks on the Web and with mobile devices, designers and researchers need to understand issues relating to Web design and Web usability. There is often a tendency to pit academicians against practitioners, basic research against applied research, and theoretical knowledge against experiential knowledge. Yet, from our experience, we have found that an approach that emphasizes multiple perspectives and multiple methods is most beneficial for acquiring knowledge and advancing technology [1]. Communication among individuals with various backgrounds, interests, and training is essential for facilitating the development and transfer of knowledge between researchers and practitioners in the domain of human–computer interaction (HCI), among other applied domains. Because the most complete understanding of usability problems arises from combining the insights of practitioners and in industry and government with the knowledge of academicians gained from controlled research, we consistently strive to encourage interaction among experts from the different communities.
To that end, in 2005, we edited the *Handbook of Human Factors in Web Design* [2], in which we articulated the general view described above specifically for Web design, stating:

> It is our opinion that the handbook should reflect the varied backgrounds and interests of individuals involved in all aspects of human factors and Web design. Consequently, we have made a concerted effort to obtain contributions from a diverse group of researchers and practitioners. The contributors are an international ensemble of individuals from academia, industry, and research institutes. Furthermore, the contributors have expertise in a variety of disciplines. We think that awareness of the wide range of views and concerns across the field is essential for usability specialists and Web designers, as well as for researchers investigating theoretical and applied problems concerning Web use and design. (p. xv)

Consistent with this view, the book covered a full range of topics relevant to human factors in Web design, from historical developments and human factors principles in general to specific human factors applications in Web design. These content areas included content preparation for Web sites, search engines and interface agents, issues of universal accessibility, usability engineering, Web applications in academic and industrial settings, information security, and emerging technologies such as wireless communication and e-health.


All of the topics covered in the 2005 handbook and symposium are still relevant today, but technological and societal developments have fueled many changes in Web use since that time. Social networking was in its infancy, mobile computing was being developed, and 4G wireless was not available. Rapid developments in these areas, as well as others, have greatly changed the computing landscape, and all of the developments involve new human factors issues associated with use of the technology. To capture these developments, we have edited a second edition of the handbook, which was recently published [9]. Because most of the topics that were relevant in 2005 continue to be relevant today, many chapters of the second edition provide updated information on those topics. New chapters are devoted to topics that have emerged as important since the first edition. They include: Organization of Information for Concept Sharing and Web Collaboration, Web-Based Organization Models, Web Portals, Human Factors of Online Games, Accessibility Guidelines and the ISO Standards, Use of Avatars, and Mobile Interface Design for M-Commerce.

Much as the 2005 symposium was intended as an adjunct to the first edition of the handbook, this 2011 symposium is intended to be a companion to the recently published second edition, highlighting a subset of usability topics of interest to