Usability Testing of an Interactive Online Movie Download Service: A HCI Study

Ashok Darisipudi, Kohl’s Departmental Stores, Menomonee Falls, WI, USA
Sushil K. Sharma, Miller College of Business, Ball State University, Muncie, IN, USA
Jeff Zhang, Miller College of Business, Ball State University, Muncie, IN, USA
Tom Harris, Miller College of Business, Ball State University, Muncie, IN, USA
Sheila Smith, Miller College of Business, Ball State University, Muncie, IN, USA

ABSTRACT

The Human-Computer Interaction (HCI) is gaining momentum as more and more people increasingly are using technology tools and devices for their daily activities. Users expect highly effective and easy-to-learn interfaces and developers and designers now realize the crucial role the users’ interface plays. HCI and System Usability design have greater significance in media use as the usability problems can adversely affect the large population of users depending on the overall usability of system design and the user interface design. This study is conducted to get rich and detailed feedback of users’ personal experiences and usability of a new movie download software application and subscription service. This is achieved by a different approach of using eye-tracking methodology in conjunction with usability software for usability testing. Study gave rich information of quantitative data from eye-tracking and usability software for better analysis of the product.

Keywords: Eye-Tracking, HCI, Human-Computer Interaction, Usability, User Interfaces

INTRODUCTION

Millions of users worldwide have been using variety of computational devices such as; desktop personal computers, laptops, PDAs, and LiveBoards, iPods and many others for their day-to-day personal and business related tasks. Latest trend in digital media and entertainment market segment is online video/music downloading/sharing and other related services such as YouTube, Blockbuster Online and Apple iTunes. This video mania is in full swing. More companies are in the conceptual development stage of offering products such as beaming movies from laptops to TV screens. Various broadcasting companies also started

DOI: 10.4018/ijea.2013100104
offering their introducing its TV shows and programs online for free with advertising. Thus the advertising around these products and services becoming major sources of revenue. By one estimate, video-related advertising online could exceed $2.3 billion within four years (S&P’s Special Report, 2006). Thus digital media and entertainment segment is expanding at a rapid pace and to build applications that can tap the huge market potential and revenue generated through advertising is toast of the media industry. Building such video download applications and subscription services to meet what the real users/customers want is a great challenge for developers and designers of interface design and its usability. The introduction of such devices presents a number of challenges to the developers and designers not only to design effective user interfaces but also to ensure that users use them comfortably for effective utilization and better productivity (Dix et al., 2004, Galletta & Zhang, 2006). Research through human computer interaction (HCI) and usability methods is important for testing and analyzing such latest technology products.

Human-Computer Interaction (HCI) or computer–human interaction (CHI) is the study of interaction between people (users) and computers/information systems. It is an interdisciplinary discipline, relating computer science with many other fields of study and research. The primary objective of HCI is to enhance the usability of systems (Zhang, Nah and Preece, 2004, Zhang & Dillon, 2003, Zhang & Galletta, 2006, Zhang & Li, 2005). It is concerned with the methodologies and processes for designing interfaces, methods for implementing interfaces, techniques for evaluating and comparing interfaces, developing new interfaces and interaction techniques and developing descriptive and predictive models and theories of interaction. Usability is a term used to denote the ease with which people can employ a particular product to achieve a particular goal. It is an approach to system design in which levels of usability are specified quantitatively in advance, and the system is engineered towards these measures. HCI has gained attention during recent years due to the rapid development and advancement in information and computer technology. HCI is an interdisciplinary field that has attracted researchers, educators, and practitioners from different disciplines such as; cognitive psychology, social psychology, computer science, communication, anthropology, cognitive science, ergonomics and many others (Bannon, 2005, Carroll, & Rosson, 1996, Cowen, Ball, & Delin, 2002, Galletta & Zhang, 2006, Hollan, Hutchins, & Kirsh, 2000). HCI is gaining momentum as more and more users all across the applications are using information and communication technology and systems. HCI is the study of how people design, implement, and use interactive computer systems, and how technology based systems and tools affect individuals, organizations, and society (Olson & Olson, 2003, Rogers, 1999, 2004). Users expect highly effective and easy-to-learn interfaces and developers and designers now realize the crucial role the users’ interface plays (Bannon, 2005). Various studies in literature indicate that nowadays over 50% of the design and programming effort on projects is devoted to the user interface portion (Barnard et al., 2000; Hollan et al., 2000; Kaptelinin, 1996; Sutcliffe, 2000). The human-computer interface is critical to the success of products in the marketplace, as well as the safety, usefulness, and pleasure of using computer-based systems.

There is substantial empirical evidence that employing the processes, techniques, and tools developed by the HCI community can dramatically decrease costs and increase productivity (Nielsen Report 2006). There are also well-known catastrophes that have resulted from not paying enough attention to the human-computer interface.

Usability testing of latest technology products demand rich and detailed information and feedback from users/customers for better product usability and tap the growing market segment. This study is conducted using eye-tracking methodology in conjunction with usability software for usability testing. Eye tracking tests make usability testing look really interesting, sophisticated, high-tech and
Related Content

Preventing Social Engineering and Espionage in Collaborative Knowledge Management Systems (KMSs)
Oluwafemi S. Ogunseye, Olusegun Folorunso and Jeff Zhang (2013). *Adoption of Virtual Technologies for Business, Educational, and Governmental Advancements* (pp. 108-116).
[www.igi-global.com/chapter/preventing-social-engineering-espionage-collaborative/72401?camid=4v1a](www.igi-global.com/chapter/preventing-social-engineering-espionage-collaborative/72401?camid=4v1a)

Electronic Customer Relationship Management and SME Marketing Practice: Exploring Potential Synergies
[www.igi-global.com/article/electronic-customer-relationship-management-sme/41927?camid=4v1a](www.igi-global.com/article/electronic-customer-relationship-management-sme/41927?camid=4v1a)
Developing a Hierarchy Model for Selection of Social Media Manager
www.igi-global.com/article/developing-a-hierarchy-model-for-selection-of-social-media-manager/129820?camid=4v1a

ICT and the Orang Asli in Malaysia
www.igi-global.com/chapter/ict-orang-asli-malaysia/23534?camid=4v1a