User Involvement in the Web Development Process

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ABSTRACT
While user involvement in necessary in building any type of information system, user involvement is especially important for designing in the web environment, where numerous usability challenges exist. The goal of this SIG is to provide a discussion area for those who are interested in user involvement in web development projects. SIG participants will be able to offer suggestions to further user involvement in web development projects, and to determine what challenges still exist. This SIG will focus on four important topics related to user involvement in web development projects. Those four topics are methods, accessibility, hand-held devices, and cost-justification.

Keywords
Web usability, requirements gathering, participatory design, user-centered design, usability testing

INTRODUCTION

It is widely accepted that user involvement is critical for the successful development of an information system. However, many web sites have been built, and continue to be designed and re-designed, without any user input in the development process. Information Architects and Usability Specialists agree that this is a missed opportunity for a high return on investment for web development projects. User involvement in the development process is necessary to ensure that the web site meets both the functionality and the usability needs of the users. However, user involvement is not merely a binary decision of cost justification. Just as there are many different types of web sites with very different user populations and missions, there are many different approaches to user involvement in web development projects.

The topic of web usability has certainly been expanding and getting a lot of media attention in conference and mainstream publications. One of the confusions is that web usability can sometimes be interpreted to mean a set of guidelines for user interaction in general. User involvement can also be interpreted as a much larger holistic approach to meet the user needs, by involving them throughout the development process.

The purpose of this SIG is to provide a forum and discussion for those who are interested in the incorporation of users into the web development process. It is expected that a number of different approaches for user involvement, as well as case studies of success, will emerge from this SIG session.

WHERE USERS ARE INVOLVED

When users are not involved at any stages of web site development, this is proven to be problematic, since there is no way of determining that the web site will meet the functionality and usability needs of the users. Measurement of user satisfaction will then be hard to measure, as will return on investment. Some possible methods of incorporating user involvement follow:

Requirements Gathering

Involving users in requirements gathering can be helpful, since it allows for a better understanding of who the users are, what their technological environments are, and what types of content they would be interested in. Typical approaches for requirements gathering with users include surveys, interviews, and focus groups.

Usability Testing

Usability testing is a general term that includes a focus on an easy-to-use interface. Traditional user testing takes place in a formal usability lab, where users attempt to complete tasks. Discount testing methods, including phone usability testing [6], are another less formal and inexpensive

technique for involving users. Experts also comment on the interface using techniques such as heuristic review, guidelines review, or consistency inspections.

Participatory Design

Participatory design is an ideal method for user involvement, since users become participating members of the development team. Participatory design has been successfully used for web site development [4]. Despite this success there are challenges to using the participatory design methodology for web development. The time that users must dedicate to the project can be prohibitive, especially for web sites that are used infrequently and for short time intervals.

Examples

There are a number of well-documented examples of web sites developed with user input. For instance, Eastman Kodak [5], Indiana University [3], Molecular Inc. [6] and the National Football League [2] all involved users in the development process for their web sites.

CURRENT TRENDS

There are a number of current trends that increase the importance of user development in web site development.

Accessibility

A number of countries now require certain types of web sites to be fully accessible to those with disabilities. For instance, the United States now requires that Federal government web sites be fully accessible to anyone using an assistive technology. Australia and Portugal also have similar guidelines for accessibility of web sites [1]. User involvement in the development process is one way to ensure that web sites are accessible.

Hand-Held Devices

Web content is increasingly available through portable, hand-held devices such as the Palm and mobile phones through protocols such as the Wireless Application Protocol (WAP). Numerous commentators have pointed out the inherent usability challenges of these devices. To ensure that users are able to successfully access web content on portable devices, user involvement and testing is essential.

Cost Justification

In an economic downturn, when dot.com bankruptcies are a regular occurrence, there is a need to cost-justify user-related involvement, to show that it adds value. Cost-justification of usability testing or any type of user involvement can be a challenge, because the costs are immediate and obvious, whereas the benefits are in the future and are harder to quantify.

PLANNED TIMELINE FOR THE SIG SESSION

1. Introductions of topic and session schedule (15 minutes)

2. Break out groups based on 4 topics (accessibility, hand-held devices, cost-justification, and methods for user involvement) (30 minutes). Each SIG co-organizer will lead one of the discussion groups

3. Each discussion group presents the issues and findings from their discussions (10 minutes each X 4 groups = 40 minutes)

4. Summary of overall findings and discussion of follow-up possibilities (5 minutes)

FOLLOW-UP PLAN

At the SIG session, a short five-question, one-page survey will be distributed, in order to learn more about current strategies for incorporating users into web development projects. This survey has already been developed and tested. The idea behind the survey is to assess current levels of user involvement in web development processes, and to determine which strategies are most widespread. After the CHI 2002 conference, the survey will be also distributed via listservers, to increase participation and the total number of responses. It is expected that the results of the survey will be published in a periodical like *Interactions*, which reaches the interaction design community.

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