Developing User Profiles for Interactive Online Products in Practice

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EXECUTIVE SUMMARY

The user profile is one of the tools that usability engineering designers use to focus their design efforts on a particular target population. This chapter presents a qualitative case study on the effectiveness of creating user profiles from data collected through questionnaires administered to target users as a basis for design. During a three-year period, computer science students in the final year of their undergraduate program who had an extensive background in programming and software engineering were asked to create user profiles for their graduating software development projects. This research found that designers must have the skills and experience to develop, administer, and interpret questionnaires that collected accurate data from respondents. A high investment in user profile questionnaire development only produced general usability requirements, which should be the goal of designers for every user interface. Therefore, these requirements were not effective and failed to provide the students (designers) with ideas on which to base their user interface designs. In his book, The Inmates Are Running the Asylum, Cooper (1999) argued that programmers and engineers actually in charge of software development create products and processes that waste significant amounts of money, squander customers' loyalty, and erode competitive advantages—a process that allows talented people to continuously design bad software-based products. Software engineers have their own techniques and tools for managing the software development process instead of integrating usability and its related engineering techniques into existing software engineering (SE) methods to maximize the benefits gained (Seffah et al., 2005).

SETTING THE STAGE

In standard SE lifecycle models, which are system-centered, each activity leads naturally to the next; the requirements are collected at the beginning and each subsequent phase is coded, integrated, and tested at the end of the cycle. According to Costabile (2001), the problems with traditional SE lifecycles are as follows:

- Usability is not addressed;
- Testing is conducted too late to enact radical design modifications to cope with possible discrepancies with the requirements; and
- Requirements are collected from customers who negotiate with designers about the features of the intended system and often differ from those who will actually use the designed systems.

Usability engineering (UE) is a discipline that provides structured methods for achieving usability in interactive computer products during the development lifecycle (Mayhew, 1999). Whereas traditional SE phases include goal-oriented requirement gathering, coding, testing, and maintenance, UE is more concerned with user analysis, task analysis, and testing the design through a series of prototypes.

In a survey of 8,000 software development projects, the Standish Group found that one third of the projects were never completed and one half succeeded only partially; the number one reason that projects succeed is because of user involvement during the development process. About half of the managers interviewed acknowledged poorly identified requirements as a major source of problems (Aurum & Wohlin, 2005).

To capture a comparative view of the maturity of UE around the world, the HFI UX Maturity Survey (2009) found that the most common challenges faced when developing usability practices today are as follows:

- No real executive champion, resulting in a lack of organizational recognition and funding;
- No centralized function in organizations and a lack of visible recognition that the usability/user experience represents a discrete skill set reinforce the myth that usability is just common sense; and
- No clear charter, governance, or accountability operated by established usability groups for an unanticipated number of organizations.

As a discipline, UE has come a long way since the 1990s because of the fierce competition among software vendors and the migration of most applications and services, whether commercial, educational, or governmental, to the Internet. A shift

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