Audience-Driven Web Site Design

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INTRODUCTION

In the last few years, Web sites have evolved from a simple collection of hypertext pages towards applications supporting complex business processes. Although it is still easy to publish a couple of pages, more and more it is recognized that appropriate design methods are needed to develop more complex Web sites. In the past, Web sites were created opportunistically without prior planning or analysis, and without any regard for methodology, resulting in the classical maintenance problems and development backlog. At the same time, a new problem unknown in classical information systems emerged: competition for the visitor's attention. Especially for commercial Web sites, it is important to hold the interest of the visitors and to keep them coming back. As stated by usability expert Jakob Nielsen: “all the competitors in the world are but a mouse click away” (Nielsen, 2000). Much more than in "classical" software systems, the usability of Web sites is a primary factor for their success.

BACKGROUND

One way to deal with the usability of a Web site is by assessing the usability of the Web site and improving the Web site afterwards. There are different ways to assess the usability of a Web site. The techniques that can be used are mainly the same as those used in usability testing of classical user interfaces, for example heuristic evaluation, expert-based evaluation, experimental evaluation, interviews, questionnaires... (Nielsen & Mack, 1994). Another approach to enhance usability (and complementary to the first approach) is to use a Web site design method that ensures a higher usability. The first methods proposed for Web site design are HDM (Garzotto, Paolini & Schwabe, 1993) and its successors HDM2 (Garzotto, Paolini & Mainetti, 1993) and OOEDM (Schwabe & Rossi, 1995), and RMM (Isakowitz et al., 1995) were originally designed for hypertext applications or came from the database research community. These methods used database design methods like E-R (Chen, 1976) or OMT (Rumbaugh et al., 1991), and focused on the organization of the data to be presented on the Web site. These methods could solve to some extent maintenance problems, but they did not address usability. Essential for good usability in Web sites is meeting the needs of the (different) visitors. WSDM was one of the first Web site design methods to recognize this. This method was presented at the WWW7 conference (1998) as a “user-centered” design method for Web sites (De Troyer & Leune, 1998). The starting point in the approach is the set of potential visitors (audiences) of the Web site. The method recognizes that different types of visitors have different needs and that this should drive the design of the Web site rather than the organization of the available data. Later on (De Troyer, 2001), the authors renamed their approach from “user-centered” to “audience-driven” to avoid confusion with the term “user-centered” from the HCI (human computer interaction) field. In HCI, a user-centered approach refers to a design process in which users are actively involved (by interviews, scenario analysis, prototyping, evaluation...). This explicit involvement is not necessary in WSDM. Often, most of the Web site users will be unknown; they cannot be interviewed in advance and they cannot be involved in the development process. In the audience-driven approach as defined by WSDM, the users play a central role but it is not necessary to involve them actively in the design process.

APPROACHES TO STRUCTURE WEB SITES

When designing a Web site, there are two important questions to be answered:

1. What information and services should be provided?
2. How should all this information and services be structured?

There exist different approaches to answer these questions. One of them is the audience-driven approach. Two other possible approaches are the data-driven approach and the organization-driven approach.

In a data-driven approach, the data (and services) available in the organization (in databases, brochures, internal documents...) are the design’s starting point. Following this approach, the structure of the Web site will reflect the way the data are structured and maintained in
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