Chapter XII

Publishing Model for Web Applications: A User-Centered Approach

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ABSTRACT

This chapter defines a publishing model for Web applications starting from the analysis of the most well-known modeling methodology, such as HDM, OOHDM, WebML, Conallen’s method and others.

The analysis has been focused to verify the state of art about the modeling of Web application pages. In particular, the different types of elements that compose the Web page in the above models are taken into consideration.

This chapter describes the evolution of the HDM methodology starting from the first approach based on the definition of a LP concept up to the more structured and complex Conceptual page, based on the influence of “operations” on the modeling of the dynamics of navigation between pages.
INTRODUCTION

Design and development of WWW applications is quickly evolving to become more engineered products introducing powerful models of hypermedia applications. The entire lifecycle to obtain affordable outcomes must be considered as a complex process that should be supported by tools in order to help the designer in each phase.

Starting from a conceptual modeling makes it easier to manage the changes but it requires a well-engineered process to correctly drive the entire cycle from the model to the outcomes.

Our research activity is oriented to develop both a model to suit the complexity and a set of tools to support the designer from the analysis phase to a prototype of the Web application in order to have an effective test of model. These tools, based on a relational database, support also the multi-delivery feature to customize the application according to the user role (families of applications).

The main goal of this chapter is to define a publishing model for Web applications, starting from the analysis of the most well-known modeling methodology, such as HDM, OOHDM, WebML, Conallen’s method and others.

The analysis has been focused to verify the state of art about the modeling of Web application pages and to capture the different types of elements that compose the Web page in the above models.

BACKGROUND

In 1993 the Hypermedia Design Model (HDM) (Garzotto, Paolini & Schwabe, 1993; Garzotto, Mainetti & Paolini, 1995, 1996) was published, the first modeling approach oriented to the design of multimedia application that was enhanced to support the hypermedia applications (Bochicchio, Paiano & Paolini, 1999). In this environment a relevant aspect is represented by definition of Logic and Presentation pages. Logic pages have been introduced into the model to better design what the designer considers the unit of fruition of the specific WWW application (example: a painter and all his works, or the collection of all painters, and so on). The Presentation pages are a collection of logic pages that appear to the user into the HTML page (example: the home page and the previous logic page can appear in two frames of a unique HTML page), managing the dynamic behaviour.

In our research activity we developed the tools, starting from HDM concepts, to support the entire applications lifecycle through the prototyping using an engine that will be briefly described in the next section.

In the last months the Web environment has been oriented on the Web applications more than on Web sites, so the HDM model is evolving to its 2000
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