1 INTRODUCTION

The merging of many existing networks and the use of the standard HTTP protocol for exchanging data on the Internet has opened for new ways of presenting information to its users. Distinct from e.g. database systems, the information system called the World Wide Web (or "Web" for short) are not structured and users often feel overwhelmed with information when navigating the virtual space at hand. Moreover, most online documents are static in nature, written once and for the average reader. Adaptive systems promise a new interactive user experience by accounting for the knowledge and preferences of each individual user or groups of users and tailor presentations accordingly. The process of turning existing documents into dynamic presentations is an expensive affair since it requires the system to learn the knowledge of both the users and the domain. In this thesis the goal is to identify methods for how the computer can assist a domain expert in the construction of a domain model of *high quality* for an adaptive hypertext system, requiring as little effort as possible from the expert. A domain model can be constructed in many ways. Due to different methods and various approaches, some models might represent the domain knowledge better than others. With "a domain model of high quality" we therefore mean that the model not only correctly captures the domain knowledge with respect to concepts and relations, but also describes it very well if judged by an human expert.

The thesis is organised as follows: Motivated by an increased need for building intelligent systems that can tailor presentations on the Web, we define the main goals of this research in chapter 2. Thereafter, related research exemplify some existing systems and important work from the field in chapter 3. Of the systems built by today, a characteristic is that all operate in closed, restricted domains. Chapter 4 explains why it is difficult to do otherwise, and furthermore places adaptive hypertext systems within the frames of intelligent user interfaces in order to prepare the reader of important terminology and knowledge from the field necessary to understand before moving on. Next, the identification of Heuristics is central in chapter 5 and provides the basis for ensuring quality to the adaptation phase. Finally, in chapter 6, we develop a prototype implementing the ideas, and evaluate the work. We also sketch how possible adaptation variants can be realised fairly easily when a model of the domain is completed.