The scope of web-based applications has grown enormously, encompassing now four general kinds of Web-based systems: (1) Intranets, to support internal work, (2) Web presence sites that are marketing tools with the goal of reaching consumer outside of the firm, (3) Electronic Commerce systems that support consumer interaction, such as on-line shopping, and (4) a blend of internal and external systems to support business-to-business communication, commonly called Extranets. Thus, the web platform has transformed itself in the few years from a mere marketing presence to a platform that can support all facets of organizational work. As a result, more important IS efforts are geared towards exploiting the benefits of this platform, leading to the development of information systems based on Web technology, what we call "Web Information Systems" (WISs) [1]. We believe that this type of systems will become as commonplace as client/server systems did a decade ago, but with an exponentially higher impact on our lives, if anything, simply because the WWW has the potential of reaching a much wider audience than client/server systems based on proprietary networks.

There is a clear difference between a set of web pages and a WIS. The latter supports work, and is usually tightly integrated with other non Web-based information systems such as a databases and transaction processing systems. WISs are also different from traditional information systems. They require new approaches to design and development, have the potential of reaching a much wider audience, and are usually a result of grass-roots efforts. These differences introduce managerial and technical challenges. A major goal of this minitrack is to raise the awareness among developers, managers and users that WISs indeed are a different kind of information system, thus requiring people to think about them much differently than for traditional systems. The minitrack’s four papers cover a broad range of aspects concerning WISs.

Hypermedia design methodologies provide systematic approaches to designing an application with significant links and navigation. In "Retrieval of Volatile Database Output Through Hypermedia Applications," Geert-Jan Houben and Paul De Bra concentrate on building navigational structures and presentation displays that dynamically generate hypermedia for ad hoc multimedia database queries. This paper extends their prior work to encompass user input when generating the navigational structures and presentation. To this end they extend SQL with new elements and explicit presentation directives. As part of describing their approach, they cover design heuristics, query preprocessing and presentation issues.

Dawn Jutla, Peter Bodorik, Shaohua Ma and Yie Wang present WebTP, a benchmark for measuring the performance of product ordering on the Web. Benchmarks are important for both, software developers in charge of fine tuning products before their deployment, and end-users to compare strengths and weaknesses of different products. Benchmarks for PC and database performance have been in use for many years. Yet, there is currently only one benchmark - of limited use - for Web-based systems, and that is WebSTONE, which measures the performance of HTTP servers. Although the Transaction Processing Council (TPC), an industry body in charge of establishing benchmarks, has announced intentions for a new benchmark for electronic commerce, name coded TPC-W, there is currently no such benchmark available. Jutla, Bodorik, Ma and Wang contribute to the TPC-W goal by exploring the issues that arise in the design of such a benchmark and propose a solution that works for a very important component of electronic commerce: Order Management Systems. These are the sub-systems responsible for enabling customers to make on-line orders and payments, check for delivery status, etc. The difficulties with such a benchmark lie in that not only do hardware platforms vary, but so does the type of data-base connectivity (JDBC, CGI or ASP) and the distribution of databases across several Web servers. Several clever architectural choices are made in the development of the WebTP benchmark, which is written in Java, to enhance portability.

In "Using Intranets: How Networks of Organizations Use Organizational Networking Technologies," Roberta
Lamb analyzes the development of intranets from a social constructionist vantage point. Instead of being coordinated strategically, intranets tend to be envisioned, developed and maintained by self-taught novices without guidance from the MIS department or purview of senior management. She puts forth two sets of intranet models to help explain why intranets look so different across an organization: owner/author models and service models. Lamb poses many important questions for future research in intranet development, use, social implications within the organization and strategy.

In their paper "Acquisition and Symbolic Visualization of Aggregated Customer Information for Analyzing Web Information Systems," Christian Bauer and Arno Scharl look at a specific set of WISs. These are systems that are used for business-to-consumer electronic commerce. The ability to advertise, promote, and sell on the WWW has resulted in a wealth of opportunities for gathering customer information. The authors discuss the various ways web-based businesses can access information about their customers and their behavior while at their sites. Gathering and analyzing this plethora of information can be a challenging task. The authors employ the Extended World Wide Web Design Technique (eW3DT) which can be used to model the process of gathering customer information as well as provide visual representations of the behavior of WIS customers. Companies who use WISs to reach their customers can use this important information to customize their content on a one-to-one basis. The result can be a dramatic increase in the value delivered to the customers that in turn can lead to store loyalty.

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