Foreword

From a historical perspective, web engineering focused on information presentation of products and services via the Internet. Many of these early web sites made use of glitzy technology in order to draw attention to them. They had minimal or no search capabilities, and provided no means of customer interaction other than email capabilities. There was no need to link to existing legacy systems, as information sharing was unidirectional from the organization to the customer.

Then came the explosion of the e-commerce web sites, as companies rushed to “test the waters” for the online selling of products and services. The existing paradigm for web development didn’t prove successful as Internet savvy customers focused on the overall web experience and not the flashy technology. Many of these early web sites were poorly linked to the information infrastructure of the organization. Security and reliability became major issues. Many web site designs were viewed as “unusable” from the customer’s perspective in terms of search capabilities, navigation, design layout, performance, customer service, and other factors. As a result, many of the dot coms failed when customers failed to use them.

A lesson learned from the dot com crisis is that we need more effective tools, techniques, and practices for developing e-businesses that prove to be successful. This includes the development and integration of web applications, information architectures, legacy systems, and communication mechanisms, among others.

Web engineering and data warehousing are two integral areas for which technological advances are being made in the e-business arena. Web engineering tools and techniques are needed to help us design more user-friendly web sites that are secure, reliable, understandable, and easy to use. They are also needed to maintain design standards such that enhancements and modifications can be readily made without major redesign efforts. Web engineering plays an integral role in ensuring that the e-business information architecture supports existing and new data requirements.
Data warehousing is an important aspect of e-business as legacy systems have vast amounts of data ready for analysis and interpretation. This data, as part of the e-business information architecture, is important in gaining insight into financial, marketing, organizational, and other online success factors. Both historical and operational data are essential components in understanding e-business opportunities in local and international marketplaces.

New technological advances associated with the Internet are offering interconnectivity in a global marketplace like never before. Internationally, remote areas are being reached offering products and services that were previously unavailable. Wireless technologies offer the means for anyone to be online anytime and anyplace. New opportunities are being explored in health, education, government, as well as, in the commercial sector utilizing both wired and wireless technologies. Innovations in web engineering and data warehousing are needed to meet the challenges of this ever-changing environment.

Shirley Becker
Florida Institute of Technology, USA