

EDITORIAL PREFACE

E-Commerce Web Development: Perspective from the Field

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Abstract
A crucial success factor in e-commerce is the development of an appealing, effective, and efficient Web site. Web development is evolving constantly with new tools, approaches, and methodologies. This editorial explores Web development trends and issues and discusses the gap between research and practice that exists in this domain. The perspective from the field is provided by Dr. David C. Poteet, President of New City Media Inc., a Web development firm.

Introduction
Web development has gained increasing attention in recent years, as the Web has become a global platform used by individuals, organizations, and governments worldwide. One of the questions often asked is whether Web development is different than traditional information systems development. Some researchers have listed a number of differences between the two: universal access, global availability of heterogeneous information sources, global distribution of information sources (Fraternali, 1999), time to market, and negotiability of quality as a goal (Glass, 2003). In order to obtain a perspective from the field on this and other questions and to explore trends in Web development, I interviewed David Poteet, President of New City Media Inc., a well-established Web development firm in Virginia.

Poteet agrees that there are some differences between Web development and traditional development. He said, “You don’t have as much version control as traditional software development and things are more fluid… subject to more incremental change.” But more importantly, he defines the role of Web development experts to include marketing and communication advising as much as technical software development. “They [clients] have an idea they can do something cool. [But] rarely do clients really understand what they can do [with the Web] that can take them further than what they can do in print.” He defines his company’s role as helping his clients to “communicate more effectively through their Web sites.”

The debate over whether Web development is different than traditional software development is bound to continue (Glass, 2003). Another interesting question, then, is whether developing a Web site for e-commerce is different than developing a Web
site for other purposes. While this question has not been debated in the literature, Poteet suggests that there are differences that lie along these lines: “[E]-commerce itself really isn’t that complicated, but the security and privacy issues are so much more important.” He suggests that Web developers have to be even more careful in the software design and must conduct more rigorous testing than for most general business applications, because e-commerce sites are dealing with individuals’ money and personal information.

**Web Development Trends**

It is particularly interesting to look at trends when viewed from a practitioner’s perspective. So, I asked Poteet for his opinion on a few key trends in Web development. He discussed three trends that have emerged in recent years. First, he highlights the recent change in ownership of Web sites within organizations. “Organizations are increasingly viewing the Web site as a communications function and believe that the ownership of the Web should be under some form of publications or communications function.” He goes on to explain that this affects his company’s work as Web developers: “[T]hat is an interesting organizational shift from our standpoint, because the types of people you are dealing with in a communications [function] are very different than people you deal with in IT departments.” He further explains that he enjoys working with communications or marketing people, because they tend to be less suspicious than IT people who are often worried that an outsider might cause problems to their systems.

A second major trend that Poteet discussed is with respect to Web development methodologies. “From a technical standpoint, there are things that are easier to do, more efficient.” He explains that integration is easier, because “we have better tools … we can better implement interoperability, really only since the increased popularity of Web services in the last 12 to 18 months, because there are open standards on making this [interoperability] happen with Web services.” He believes that remixing of content and information services can lead to new applications and solutions. He provides an example, discussing how someone used Google map and the craigslist real estate listings and combined them into a new service.

Finally, Poteet suggests that the Web finally is leading to some democratization of information. By this, he means that information gets “organically organized, with no one really in control.” He gives the example of del.icio.us, a shared bookmark page (http://del.icio.us/), on which individuals are providing new ways to organize links as they share their bookmarks with others. He uses the term he has heard before of this being the development of a *folksonomy*. Poteet predicts that the democratization of information should accelerate in coming years. He suggests that “keeping control of information will become harder … as information wants to be free.”

**Research and Practice Gap**

A constant concern that we read about in various academic journals is the gap between research and practice. For example, academics have noted the gaps between research and practice in database marketing (Hansotia, 2003), in human resources on the concept of team functioning (Hollenbeck, De Rue, & Guzzo, 2004), on usability research and education (Cooke & Mings 2005), on virtual work environments (Bélanger, Watson-Manheim, Jordan, & Shumpert, 2002), and on systems analysis and design (Lippert & Anandarajan, 2004).

Research on Web development often focuses on the concept of Web development rather than on practical issues relating to the technologies and platforms used. For ex-
ample, recent research has looked at metrics to estimate Web development costs (Mendes, Mosley, & Counsell, 2005), approaches to migrate from one Web development platform to another (Hassan & Holt, 2005), and international issues in Web site development (Seilheimer, 2004). There also have been some surveys of different approaches and tools used for Web developments (Fraternali, 1999). There are also several research articles actually focused on how to improve the teaching of Web development techniques to students (Greer, 2002; Lim, 2002; Lomerson, 2002).

Can these research results be of use to practitioners? Some might be, but often they are not. Typically, gaps exist, because academics take a longer-term view and tend to do research aimed at the prevention of errors, while practitioners take a shorter-term view in order to focus on completion of tasks and solutions to specific problems (Lippert & Anandarajan, 2004). So, I asked Poteet about whether he reads academic journals. “Not really, except the *Harvard Business Review* that I read fairly regularly. … I do read trade press articles … to keep up with trends and know about new technologies to some degree.” In order to search for information about a new technology, Poteet admits to using search engines and reading target sites. “Generally speaking, when I have read academic papers, they’re interesting, but I’m looking for things that I can use to make smart decisions and put into practice, like how I’m building something or how I can talk to clients about something.” He suggests that academic articles often go 85% of the way but fail to make practical applications and recommendations that can be used. He did provide a good example, though. He cited User Interface Engineering (http://www.uie.com/), a company that does research aimed at practitioners with findings that developers can use.

**Bridging the Gap**

Poteet, who has worked on joint research with academics before, suggests that academics should validate their research questions with practitioners in the domain of study: “If the research question is framed in a way that can provide an answer to a practical issue …” The research questions should be “simple, practical and understandable.” However, Poteet does recognize the danger of misuse of published information, so he understands how researchers want to verify everything before publishing their findings and suggestions. Other suggestions for bridging the gap between academic research and practice from the literature include: (1) make research work more accessible and easy to use for practitioners (which is really in line with Poteet’s comments); (2) team field practitioners, researchers, and faculty together in order to integrate theory and practice; and (3) create partnerships between organizations and universities in joint centers in order to create and disseminate knowledge (Lippert & Anandarajan, 2004).

On a final note, I could not let Poteet go without asking what skills he believes that graduating students who want to work in Web development should have. His answer was critical thinking, problem solving abilities, communication, and, most important, the ability to learn. “It [Web development] is changing constantly, and you can’t be somebody who wants things to stay the same in this business.” He suggests the students should have some good basic programming and database skills; it is more important to have the basic aptitudes than to know a specific language, as long as they can learn.

**Conclusion**

The perspective from the field presented in this editorial suggests that Web development is an exciting and challenging domain. The trends discussed by Poteet suggest that Web development is changing
organizational structures, helping to integrate applications and technologies, and even leading to changes in societal use of information. As with other domains, we, as academics, should strive to better integrate our research with practice. In doing so, we also need to look at our curricula and ensure that our students are properly trained for this highly dynamic environment.

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References


