

## **THE EDITOR'S COLUMN**

### **Why e-SJ?**

To use a Dickensian turn of phrase, these are the best of times and these are the worst of times for the Web. These are the best of times because the potential of the Web is just starting to emerge and the future holds a lot of promise. These are the worst of times if you are in the dot-com business and are simply trying to survive. In the midst of this tumultuous and chaotic period, why launch a new journal? This is the question we have tried to address in this editorial.

The noted scholar, Wilse B. Webb (1976) stated, “You should be able to disbelieve, be dissatisfied with, or deny the knowledge that you have ... Valued research seems to grow from dissatisfaction with the way things are, rather than agreeable perpetuation of present ways of proceeding.” It is this sense of creative dissatisfaction that fuels many new research ventures, and this journal is no exception.

Established outlets—including journals, conferences and proceedings—provide a valuable service to the research community in their efforts to disseminate knowledge. However, over time, these institutions, much like the humans that created them, tend to become set in their ways. When such rigidity sets in, knowledge creation takes on a

mechanical monotony: the same problems get studied (albeit from slightly different perspectives), the same people study them, and the same gatekeepers regulate what is disseminated. As “agreeable perpetuation of present ways” becomes the norm, new problems get ignored, new opportunities are lost and new participants in the knowledge creation process are excluded.

An exciting new area of study that needs new perspectives and new methods deals with the design, delivery and impact of electronic services (e-Services). The convergence of computing, communication and consumer electronics—at the product and industry levels—along with increased bandwidth and advances in mobile communications provide the backdrop for the emergence of e-Services. Vendors are scrambling to exploit the power of the Web more fully by offering a range of services to institutions and individuals. Traditional ways of conducting business in the private and public sectors are being augmented with, or even replaced by e-Services. The term e-Services is typically used to describe a variety of electronic interactions ranging from basic services, such as the delivery of news and stock quotes, to smart services, such as the delivery of context-aware emergency services.

Three themes characterize the current state of the field:

- The ubiquity of e-Services
- The integration of different e-Services and
- The transparency of e-Services

The first key aspect of e-Services relates to their ubiquity; no part of society is immune from their influence. In education, the face-to-face classroom environment—a mainstay for centuries—is starting to face the stirrings of competition from online learning. In the software sector, “killer apps” are being challenged by a variety of Web services. In the travel industry, a range of online services is threatening the dominance of travel agencies. In entertainment, online delivery of music has rocked the very foundations of the industry. In business, building customer relationships, checking inventory and managing the supply chain are all morphing into Web-enabled services. Even in the staid public sector, a variety of services are moving online: from electronic tax filing, to interactive zoning maps to online voting. (In this inaugural issue, an article on the ubiquity of e-Services written by scientists from HP Labs—a pioneer in the advancement of e-Service technologies—provides more details on this topic.)

The second key aspect of e-Services relates to their integration across diverse platforms. IT vendors are making big bets that integrating e-Services will pay off handsomely in the long run. IBM’s WebSphere, Sun Microsystems’s iPlanet and HP’s e-Speak represent notable investments in the infrastructure for e-Services. A common theme among these competing offerings is their ability to integrate different services with the Web. In a growing number of organizations, internal and external services that were traditionally separated by incompatible systems and proprietary technologies are being integrated and delivered via the Web. As the primary mode of Web access evolves from wired desktops to wireless devices, many of these e-Services are embracing mobile technologies as well.

New research aimed at how organizations can plan for and implement these integrated e-Services are needed.

The third key aspect of e-Services relates to its transparency (and the attendant ease of use.) When the full potential of e-Services is realized, many of the interactions that occur in a Web-enabled environment will be transparent to the average user. To paraphrase a scenario from HP's CoolTown, a completely Web-enabled e-Service environment, an individual driving an automobile equipped with e-Service components can enjoy all the benefits of the technology without actually invoking any commands. For instance, if the car were to break down, the embedded e-Service technologies would automatically hail a tow-truck and a cab to get the automobile and the driver to the nearest service station, which would already be aware of the motorist's problem (being notified via the appropriate e-Services.) While such a scenario may seem futuristic, some elements of this impressive infrastructure are already in place and more are being added at a furious pace by a variety of vendors. Profound paradigm shifts are likely to occur in the way users interact with the Web in general, and e-Services in particular.

As the race to more fully exploit the power of the Web heats up, vendors are scrambling to provide the vital links—application servers and related technologies—to organizations. A clear winner in this technological race is XML (Extensible Markup Language), a kind of semantic HTML. The new desire to adopt standards and be more open by middleware providers such as IBM, Microsoft, Sun, Oracle and HP will ultimately benefit the consumer. Integrated, open environments where information can be exchanged

seamlessly are critical for the growth of e-Services. Over time, as more and more people are connected to the Web using a variety of devices, many of which are likely to be wireless, e-Services will become more pervasive, transparent and ubiquitous.

E-services represent the next stage in the exploitation of the Web and have the potential to fundamentally transform how individuals and institutions function. Organizations in the private and public sectors are already starting to explore the potential of e-Services. If history is any indication of what to expect, the challenges in implementing and managing e-Services will be daunting. Since e-Services are composed of components that interact with each other, complexity is an inherent problem. How will the components interact? What language will they use to communicate? What controlling authority will be required? These are just a few questions that scholars and practitioners will have to contend with.

In a fully Web-enabled smart e-Service environment, the services are likely to be composed of many interacting components (perhaps from a variety of vendors) and have the potential for “combinatorial explosion” described in cybernetics and systems theory. E-Services are likely to push the limits of software engineering in terms of analysis, design, security, and testing. Moreover, in a competitive e-Service environment, the future may devolve into the oxymoronic state of multiple “open standards” thereby defeating the reason for standards in the first place. Also, the long-term impacts of e-Services on individuals, institutions and society are not fully known. In short, while we can speculate about the potential and problems of an integrated e-Service economy, there

is a lot we do not know about the technological or organizational issues involved. E-Services, like every new technology, provides solutions and challenges, along with a new set of research questions. The task of contributors to this journal is to provide some of the answers (and perhaps raise more questions in the process). That is the *raison d'etre* of the *e-Service Journal*.

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**Reference:**

Webb, W. "The Choice of the Problem," in Dunnette, M.D. (ed.) *Handbook of Industrial and Organizational Psychology*, Rand McNally College Publishing, Chicago, 1976, pp. 56-61.