

Where IT is Having an Impact On the AEC Industries in The Post-Internet Boom

If you are like me, you are probably feeling some fatigue from the Internet boom and subsequent crash. Technology still has promise, but that promise seems a longer way off than it did just a few years ago. But just as I know of several firms that have limited new investment in information technologies, I also know of some examples that demonstrate that technology is making an impact on project practice. Thus when asked to compile this special edition for *Leadership and Management in Engineering*, I embraced the chance to review and reflect on what is happening with Information Technology in the AEC industry.

It is clear to me from talking with professionals that the most widely used Internet application is also the simplest: e-mail. Its use is now so common that it is easy to forget that e-mail is an innovation of the Internet era. That said, we are also finally seeing the use of 2-D CAD tools and related construction-specific applications become commonplace among subcontractors, suppliers, and vendors. It is becoming rare to find design details or construction documentation of any sort not originally generated or tracked in a computer. Changes and markups are also being increasingly noted in computer form as opposed to pencil-and-paper form, although the technology lags behind in facilitating easy capture of this information. My informal review of the state of practice does seem to indicate one thing: Despite the hype of the "next big thing," one of the most successful aspects of the Internet-boom era has been the wide-

spread adoption of computing tools to accomplish basic tasks. As an industry, we are perhaps in a better position now to capitalize on new capabilities than we were five years ago at the height of the boom.

Building upon this general step forward in adoption of basic tools, some projects are using information technologies to make a significant impact on practice. In this journal, Spiro Pollalis and Julie Walleisa describe how Internet portals help professionals build communities and provide a resource for solving problems related to specific types of project technologies. T.L. Teague, M.E. Palmer, and R.H.F. Jackson relate their efforts developing a shared computer vocabulary to facilitate procurement. Jessica Hastings, John Haymaker, Kathleen Liston, and Martin Fischer a case study of the use of 4-D CAD modeling tools to help multidisciplinary teams manage coordination tasks on projects. The advent of powerful Website management tools, new languages, and user-friendly 4-D modeling tools have made the use of the Internet and 4-D CAD much easier to deploy today than they were just a few years ago. However, Mike Walker and Ron Wakefield demonstrate that bleeding edge tools are not necessary to benefit practice: Using a scheduling application developed in-house, they show that the real impact of technology comes from close knowledge of management and communication problems on site.

The examples of where information technology is making an impact on practice related in this journal are not

unique. Several companies around the globe now regularly use 3-D/4-D CAD and there are significant efforts in defining data standards—shared vocabularies—to facilitate communication among computer applications. Of course, the real trick for any innovation is to provide the business case justifying its widespread adoption. Two papers address this issue: John Macomber explores the cost justification for collaborative tools while Martin Fischer and John Kunz advocate the use of performance metrics to direct choices of technology for projects.

Collectively, the experience of the authors contributing to this journal provides a hopeful message for the near-term impact of Information Technology on AEC practice. The time and energy spent by many in the Internet boom and bust has not been wasted. It is time to shake off our fatigue, learn from others, and make progress.

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