

Communications Survival Tips for Today's Contractor

Ellen Parson, Senior Managing Editor - February 26, 2002

The growing market of technology tools is changing the way high-tech electrical contractors do business.

Before the dawn of the information age, an electrical contractor relied on three things for success: his truck, his tools, and his knowledge of electricity. But as communications technologies continued to emerge, this simple business strategy quickly became obsolete. Although resistant to change in the beginning, most contractors eventually bought into the computer reality, purchasing a few machines to supplement their operations. But change didnt stop there. Soon, the fax machine and two-way radio became staples. Next, the pager and cell phone became necessities. E-mail and the Internet followed, revolutionizing the business world and forever changing the way contractors work.

Armed with an already vast technological arsenal, the electrical contractor entered the 21st century with even more communications tools at his fingertips. Thanks to the high-speed modem, satellite technology, and various other new connectivity media, todays contractors are breaking new ground in the area of wireless communications, using laptops, handheld devices, personal digital assistants (PDAs), voice recognition systems, bar coding devices, and digital Web cameras to communicate with their home office and collaborate on projects over the Internet, transforming their traditional business of the past into a virtual construction office at home, on the road, in a plane, or in the field.

Ask the experts. To find out how electrical contractors can benefit from the growing market of communications tools, we spoke to a few industry software gurus. Jon Antevy, CEO and co-founder of e-Builder, a Web-based construction application service provider (ASP) based in Boca Raton, Fla., and Brad Mathews, vice president of sales and marketing at Dexter + Chaney, a software developer based in Seattle, offered their perspectives on how these devices are transforming the construction industry.

According to Antevy, the Internet is the most influential tool contractors can use to increase

communications and become more competitive. Through online project collaboration, Web sites are changing the way contractors build.

Antevy maintains that Web-based collaboration systems help contractors reap significant benefits, such as preventing delays from clogged fax machines, missed telephone calls, and communications breakdowns. Now, all parties including engineers, owners, architects, general contractors, subcontractors, and inspectors can view, complete, and execute reports, plans, and records through one central site. Depending on the program, he says information on the project Web site may include meeting minutes, general correspondence, and schedules. Furthermore, the site can accommodate graphic-rich data such as photos, CAD-based drawings and scanned-in hand-drawn sketches.

Although the Internet holds obvious cost and productivity benefits for contractors, Antevy points out that theres a multitude of communications accessories on the market that can complement the Web. Here are just a few examples.

Handheld devices. Palm-sized computers like the Palm Pilot and other handheld PCs that cost under \$500 are starting to pique contractors interest. These devices offer a host of customized features, including contract management, scheduling, spreadsheet functions, Web access, e-mail, and project management capabilities.

One of several software vendors introducing mobile computing alternatives, Dexter + Chaney has answered customer demand for wireless software solutions by offering a full suite of mobile computing software that can run on PDAs. The companys Forefront Payroll for the Palm operating system allows project managers and other field personnel to enter labor, payroll, equipment, and production data at the jobsite as well as generate daily productivity reports that keep project managers posted on job progress. The company is currently launching a mobile computing application for service that works with the software to connect field service technicians to the main office in real-time. Using a handheld PC, the user can see service calls scheduled for the day, including all work order information. Because everything is done online, the home office knows exactly when the technician has completed the call.

Although the wireless phenomenon certainly isn't sweeping the industry, Mathews says more contractors are starting to use handhelds to interact with construction management software. He estimates that close to 40% of his clients are currently using some kind of remote connectivity to communicate with the software via the Web.

You can take a Palm Pilot or any PDA that runs on the Palm operating system and do timecard entry as well as enter quantities, he says. So if you did 400 linear ft of conduit today, you could enter that quantity. You could also enter equipment hours and then synchronize that information with the home office. Then, you get back what we call a daily productivity report that goes right into the software.

This option not only helps contractors maximize time and efficiency as they travel from job to job, it also adds value to the data they're inputting.

When you can look at that Palm and see a productivity report that shows your costs per hour and per unit and how they compare to your estimate, but productivity was down today, it makes you think, What happened today? What did we do differently? Mathews says. Or if it's an invoice approval that's being routed to that project manager who is only in the office occasionally, he can get on a system via the Internet at a remote site and suddenly approve 20 invoices in just a few minutes without any faxing, FedExing, or anything. And he never touched a piece of paper.

According to Mathews, having that kind of instant feedback is a very powerful thing. Considering that contractors typically work on some fairly tight margins, it's worth money if they can make quicker and better calls out in the field.

Antevy agrees. Regardless of the method contractors choose to access the Web—a handheld device, modem, satellite line, or a DSL or T1 connection—he says this kind of connectivity helps them in several ways: It increases project profitability and productivity, enables clear and effective communications, establishes team accountability, reduces the frequency of meetings, and minimizes the risk of litigation by providing detailed, ongoing documentation.

In addition, he says travel to jobsites has been cut by an average of 40%, and the ability to automate the distribution of information allows companies to make better use of their trained personnel; some shops have reported increases in productivity of up to 70%.

The end result is that the team is getting jobs done weeks ahead of schedule, which saves them

tremendous amounts of money and allows them to bid or negotiate more jobs, Antevy says. It also greatly increases their potential for future income by establishing a reputation for working smarter and faster than the competition.

Digital and Web cameras. Antevy sees a growing demand for digital cameras in the construction industry similar to that of the PDA. Depending on the image resolution, optics, memory, and compatibility with operating systems/programs you want, these devices range from \$150 to \$1,000 and enable you to transfer digital images into a computer for editing, storage, and retrieval.

According to Antevy, the real advantages to using a digital camera are the redline and markup capabilities. The following scenario illustrates his theory. Imagine a sub has an issue in the field with a piece of equipment that's malfunctioned. He takes a picture of it. Instead of e-mailing the image to a bunch of people, he can post it to the project's Web site. The software notifies all applicable parties by e-mail that there's a new issue and provides a link to the Web site that takes them right to that photograph. They review the markups or redline comments the subcontractor made. If necessary, they can meet online at another time to discuss and resolve the problem. Although a lack of high-speed connections has prevented this kind of Web conferencing from happening very often, Antevy says some of his customers use real-time sharing of their screens.

You and I can be looking at the photograph in real-time on a conference call and I can be circling the exact spot on the piece of equipment in question, Antevy says. Think of the travel time people can save with this capability as well as the elimination of a lot of the errors that occur because someone thought you were talking about something else. Now, all that information is tracked.

Mathews and Antevy have also seen a recent surge in customer demand for construction Web cams.

We have it built into our project management system so if someone wants to note the condition of a particular aspect of the work on the jobsite, they can take a Web photo, Mathews says. As part of that imaging system, they can attach that photo right into the daily log so they've got a record.

Antevy says that although this trend is typically not driven by the subs, Web cams benefit all parties because they show general progress on projects.

Because you can control the camera from the browser in real-time, its only going to give you the outside or macro level shot, Antevy says. Its not portable like a handheld digital camera, but the advantages of them being mounted directly is that theyre always from the same location and theyre always live. You can even stitch all the photos together at the end to form a movie. Then youre able to see the project being built right before your very eyes over a 30-sec clip.

Looking ahead. Although theres no question members of the construction industry have been early adopters of wireless technology, analysts

predict this trend will continue to transform communications in other industries as handheld devices become less expensive, and more accessible and feature-rich. Despite all the unknowns in this ever-changing industry, one thing is certain: As contractors embrace the communications offerings outlined above as well as keep up with the latest breakthroughs in emerging technologies like Web conferencing and whiteboarding, they will inevitably stand out from their competitors by working faster, smarter, and more profitably.

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