

## AV and IT at a Crossroads

*Source: Pro AV MAGAZINE*

*Publication date: February 6, 2009*

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It may seem like a marriage of inconvenience, but it's for life. As it did to so many others, information technology—and in particular, Internet Protocol networking—has wedded itself to the audiovisual industry. And many professional AV firms are finding it hard getting used to the new living arrangements.

"The adoption of IT is the most dramatic change in this industry since audio-centric companies adopted video," says Dan Erickson, vice president and chief technology officer of General Communications in Salt Lake City and NSCA University's 2008 Educator of the Year. "Now we see AV firms that have been in business for years having to become network savvy. That has been a difficult transition for a lot of companies."

What's more, partly as a result of this convergence, AV pros now find themselves competing with companies they didn't share business with before. Pro AV wanted to know what it's like now at this industry crossroads. Here's what we're hearing, in two acts.

### **Act 1: The Thing With Two Heads**

*By Dan Tynan*

AV and IT are complex disciplines that, until a few years ago, had very little to do with each other. That's changed in a big way, says Rod Andrewson, manager of engineering for CCS Presentation Systems in Scottsdale, Ariz.

"AV and IT aren't converging, they've converged," says Andrewson. "Even four or five years ago almost no AV hardware came with any kind of Ethernet or IP capability. Now it's difficult to find equipment that isn't IP capable."

But while the devices have converged, the people who need to make them work together have not. Looking for the perfect tech who's equally proficient in IT and AV? Good luck.

"As smart as our AV engineers are, they don't have expertise in IT," say Kenneth Gisstennar, president of Spinitar, a custom AV company based in La Mirada, Calif. "It's very difficult to find one person who knows both."

But if you must choose someone with a single expertise, start with the AV wonk and teach him IT.

"It's harder to teach an IT guy audiovisual skills," says Peter Grosskopf, manager of multimedia solutions for IProLogic, a voice and data solutions firm in Albany, N.Y. "If they understood it, they'd be doing it already. But the migration path for AV pros says, 'Learn IT or you're dead. You're on an island, and it's sinking fast.'"

Those in the industry say that's easier said than done. Many AV techs are starting from ground zero when they enter the world of information technology.

### **AV is from Mars, IT IS from Venus**

"You'd be amazed by the number of AV people who don't understand what an IP address is," says General Communications' Dan Erickson, who teaches classes in networking issues for the National Systems Contractors Association University. "They know they have to have one to talk on a network, they may even recognize what one looks like, but they have no idea what it does."

Other alien concepts Erickson teaches in his classes include the differences between static IP addresses and reserved DHCP addresses, physical and logical networks, firewalls and VPNs, TCP and UDP ports, pinging and port sniffing—the list goes on. And as technology has grown more complex, Erickson's courses have grown longer: from two hours to four hours to an entire day. Now he says NSCA University is thinking about adding a second day to his networking class.

Paul Streffon, a staff instructor for InfoComm Academy, says most AV people don't possess the vocabulary to discuss technical issues with their colleagues in IT, let alone solve them. "A big part of what I teach is understanding the language," he says. "There's such a difference in language that the two groups are afraid to talk to each other for fear of sounding stupid."

But then again, IT folks who take courses to learn more about AV are equally bewildered by things like delivering audio and video across a data network, managing strange devices, and dealing with unfamiliar content.

"IT people who come to my classes say, 'These AV people want to put huge files on my network. What is that going to break?'" says Streffon. "They worry about bandwidth. They're very nervous about projectors that come with hard drives and the kinds of things that [the projectors] could introduce onto the network."

But the differences are more than just technical; they're cultural.

IT is built on standards, notes Spinitar's Gisstennar. AV is more custom, based on application needs. The way they map things out is different, says Streffon. AV pros tend to think of networks as linear, moving from left to right; IT guys see networks as star diagrams with signals going in every direction.

"IT managers have to manage all this sensitive data," Streffon says. "They tend to see their job as closing off access to the data and not letting anyone in unless a higher authority says it's OK. AV people believe their job is to take someone else's message and make it available to everyone, even people who aren't necessarily interested in hearing it. Their mindsets are totally opposed. Both sides have to appreciate the other's mindset and figure out how they're going to make it work."

### **Train in Vain**

The bottom line is, AV integrators need both AV and network expertise on the job. But that can translate into higher costs for firms that must maintain staff in both areas, or contract out for IT help.

"We assign a field engineer to every project to help our people with installations," says Andrewson. "Typically they have a huge background in traditional AV, but also training in configuring and setting up IT. The tough thing is how to get them effectively trained and allowed to apply what they've learned to real projects so that it sticks, but still be able to make money."

Training can be a significant investment. At AdTech Systems, a commercial and residential AV firm in Boston, pros attend annual IT-centric courses from manufacturers such as Crestron, as well as teaching academies like NSCA and Infocomm. AdTech systems designer Jim Ares estimates that sending a single person to one class can cost from \$1,500 to \$5,000 or more, including hotels and airfare.

Worse, once they're trained, techs sometimes leave for greener pastures. Ares says AdTech avoids this by being selective about who to send off for classes and penalizing employees for leaving early.

"You figure out pretty quickly who to train," says Ares. "There are company guys who want to be with you for the long haul, and they let you know that. Our people sign an agreement saying if they leave within a certain period of time after training, they have to pay back the cost. That's a pretty big disincentive."

Of course, many AV firms actually do have IT experts on staff—they're the folks who keep the firms' own computers up and running. AdTech relies heavily on its in-house IT staff to help out AV techs when they get stuck, either by phone or on-site. With particularly challenging projects the company brings in an outside IT contractor.

"The worst thing that can happen is to have your AV guys on hold with the manufacturer or with the manual open in front of them trying to solve basic networking problems," says Ares. "Your productivity just drops through the floor."

Similarly, Gisstennar says his company's internal IT department has become more customer-facing, taking a bigger role in its video streaming, digital signage, and network monitoring installations.

"At the end of the day you've got to have people who have fundamental responsibility to IT or who have fundamental responsibility to AV, and who will work together and learn from one another," Gisstennar says. "It's rare and perhaps unfair to think that you can have a bunch of individuals who know both disciplines at the level deemed necessary by either industry."

## Reconcilable Differences?

Type Unhandled.

Getting IT and AV pros to work together as a team presents its own problems. Turf wars, long held resentments, and an inability to speak each other's languages can lead to a rocky marriage.

"I don't think all IT people appreciate that AV is a discipline; that there is an actual science to what we do," says Streffon. "They think because they have a TV at home they understand AV. But they don't understand that we really do know what a good picture looks like and what good audio sounds like."

Andrewson agrees. "Right now it seems there's a lot of animosity between the two," he says. "You've got to check that at the door. When I lost my animosity five or six years ago I found it was a lot easier for me to work with people on both sides."

If you're an AV specialist in a large organization, you're probably reporting to the IT manager. That may rankle, but it's not necessarily a bad thing, says Streffon.

For one thing, it ensures that things the AV folks care about—like where to drop cables and place speakers and projectors—may get the same priority as networking cables and RJ45 jacks when planning new construction.

The key is communication. "You need to take your IT guy to lunch and talk about this stuff," says Streffon. "Sure, you should get online, take classes, learn more about basic networking. But that relationship is the important thing. You should both feel comfortable picking up the phone and asking each other questions. As long as there's a rivalry, neither side will benefit to the fullest."

And for old established AV firms that have so far resisted the digital revolution and are hoping for a divorce? It's time to tech up.

"We don't see a need for anybody who's strictly AV anymore," says IP Logic's Grosskopf. "There's not a client we meet who doesn't have a request that can't fit on the network. Everything is IP addressable now. Either you'll be an IT guy or you won't be anything at all. Companies that are strictly AV aren't going to be around much longer."