

# The InfoTrace Effect

A new product poses probing questions about the way lighting systems work

By David Barbour

The PLASA Awards for Innovation are not given for incremental changes to existing products. They honor originality, new ideas, outside-the-box thinking. Even so, it's rare to find among the winners a product that has the potential to fundamentally change the way designers and technicians work.

Is InfoTrace is such a product?

Released by Wybron on September 5th, it promptly won a PLASA Award for Innovation a few days later, making it one of that show's top talking points. If you listen to some of the professionals who've had a good look at it, it's a potentially ground-breaking product, one that, in the long-term, could have a profound effect on the process by which lighting designs are implemented and maintained.

But will the industry embrace it?

InfoTrace is the umbrella name for a device—really, a series of devices—for the control and management of DMX-controlled lighting products. As such, it focuses on what may be a central issue in entertainment lighting: the need for some way of organizing the many product choices now available.

It's the brainchild of Keny Whitright, Wybron's president, the man who brought you the color scroller and Autopilot. In a press release, Whitright says, "InfoTrace simplifies the set-up, maintenance, repair, and integration of professional stage lighting. Time saved during load-in and pre-show checks translates into more time to create innovative lighting sets for stage, touring shows, architecture, and other spaces."

Is this a new way of looking at lighting—or is it a quixotic concept that's more interesting in theory than in practice?

## The product

The InfoTrace system breaks down into several components. At the center is InfoGate, a specialized software that uses the new protocol RDM (Remote Device Management) to facilitate remote addressing and diagnostics for, the company says, potentially every piece of equipment mounted on a rig. InfoGate works with all InfoTrace products and all RDM-compatible equipment from every manufacturer; non-RDM gear can be upgraded with the installation of a tiny device called the InfoChip legacy converter.

Here's how it works: Suitable pieces of gear (meaning, for the moment, Coloram IT, CXI IT, Eclipse IT, and Eclipse II units) are equipped with sensors that relay information about light, temperature, voltage, fan speed, and gelstring frame color. Users, working with Wybron's



The diagram above shows the relationship of the products that make up the InfoTrace system.

InfoGate hardware and software, can get specific product status information and can be warned of potential problems in advance. If a product problem is indicated, InfoGate displays an alert, detailing the nature of the problem and the exact location.

In addition, ColorExpress IT gelstrings from Wybron will have InfoTrace capability. In this system, every gelstring is built with an RFID (radio frequency identification) tag, which relays information to the sensors on the Coloram and CXI ITs. The tag contains individual frame information, as well as a unique job number, which, the company says, will make reordering colors an easy

task—you design a gelstring online, then have it sent to you ASAP.

In other words, if you have a lighting rig, you now theoretically have the ability to tell, at a glance, if units and their added devices (like scrollers) work correctly—even if they're ready to fail.

### Working with RDM

The basis of InfoTrace is in RDM, the standard that allows DMX devices to talk back to their controllers. It's a way of finding out if a dimmer is overloaded, the size of the current draw, and what the moving lights are doing. But, until now, the standard hasn't been adapted to the uses envisioned by Whitright.

"When RDM was proposed," Whitright says, "I thought it would be a great feedback standard and everyone could participate in it." The idea for InfoTrace came, he says, "about 18 months ago, when I went to an Apple developers conference. They have a product called WebObjects." The latter is described by the manufacturer as "a rapid application development environment with Web services, data access, and page generation capabilities....WebObjects gives you the ability to build or use standards-based Web services without writing low-level SOAP, XML, or WDSL."

"Prior to RDM," says Whitright, who often uses humorous exaggeration for effect, "we, along with every other stupid manufacturer, had come up with a talk-back system. Strand had one. ETC had one. High End Systems had one—in fact, the genesis of RDM was in something that the company had invented some time ago, a talkback system for Intellabeams and Cyberlights. We at Wybron shared a standard with Steve Carlson and Gordon Pearlman at Entertainment Technology for something called the IDS, the integrated diagnostic system."

The problem, says Whitright, was "everybody had their own standard, and nobody used any of them." Now, using the concept of RDM, he's positing a system that can track every brand of unit in a rig.

### InfoStore

However, adds, Whitright, "InfoStore is,

I think, the breakthrough part of this." InfoStore is a Web-based program that gathers the information sent from InfoGate, allowing one to supervise multiple lighting rigs from a distance. Complete status reports can be sent to InfoStore, allowing a designer or rental house to view them and make the necessary changes or repair orders. The company says that InfoStore can analyze combinations of readings, detect trends, and store unlimited amounts of information. Future versions will know the average life of a lamp or gelstring under various conditions.

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Discussing this function, Whitright imagines various scenarios—the designer with multiple productions of the same show, the director of entertainment on a cruise ship line, the rental house that needs to track numerous productions—where InfoGate will prove essential. "These people have terrific management problems and this is a solution," he says. "Lots of good stuff will come out of it."

The system, as conceived, doesn't add much to the size of a rig. Either a unit is IT-compatible or it bears a chip, which is quite small. The InfoGate box is a smallish device, and InfoStore is a Web-based program that can run on a laptop. In creating InfoTrace, however, Whitright is making several assumptions. Not least, he's

betting that RDM will be a long-lasting protocol and won't be superseded by, say, ACN. "Despite what the ACN guys think, I don't think we're going to be running Ethernet to objects onstage for the next 15 to 20 years," he says. "Even if we agreed that Ethernet was the way to wire gear, it's not handy onstage, because you can't daisy-chain it. And even if someone did come up with a way, how many millions of dollars of DMX gear is there out in the world? RDM is going to be with us, because people have all this legacy equipment."

But how much non-Wybron gear will come onboard the system and how quickly? Whitright acknowledges that manufacturers like Vari-Lite and Martin need to make RDM-compatible units for InfoTrace to become a must-have item. "That's why we made InfoChip, which you can put on legacy gear and get the benefits of InfoTrace," he says. Even then, however, rental houses will have to apply InfoChip in mass numbers; whether they will remain to be seen. Also, InfoChip doesn't promise—although Whitright says it may be able to provide—the full functionality that is possible from a system using InfoTrace and a full rig of RDM-compatible devices.

### Filling a need?

Still, it may very well be that, if you build it, they will come. That's because the idea for InfoTrace came partly out of a survey that Wybron commissioned last year at PLASA and LDI. "People wanted more simplicity in their professional lives," says Wybron. "What they were saying was 'Our lives aren't going to get easier, just more and more involved, as new products come along. We don't want it to get worse.' Ease of use was a really high-scoring idea."

Further research confirmed the desire for a product like InfoTrace. In a follow-up survey, says Marjorie White, of Acromatics, the company that conducted the poll, "We didn't discuss the product specifically. We gave scenarios, suggesting what it would be like using InfoTrace, and the results were overwhelmingly positive. We asked a number of questions about each scenario and the answers strongly suggested that

what we were looking at was valid. When we described the load-in scenario, 70% of the respondents said they were very interested. We looked into this and got the clear idea of why people were responding: time is money." She adds, "The main negative comment was, 'I don't believe that something like this will ever happen.'"

A number of industry players have seen the product and they offer varied comments. Lighting designer Dawn Chiang says, "I can't think of any downside to it. You can remotely address everything that used to require a dipswitch setting; the idea of not having to touch a dipswitch on each device is appealing. Especially if you have a big rig, with dimmers, foggers, scrollers, dowers, and moving lights, it'll make life much simpler." Also, she says, "RDM has just been approved by ESTA, and is an open protocol."

There's another side benefit to the IT system, she adds: "It's a tangent to the InfoTrace system, but Color Express, on the Wybron Web site, is terrific. If you need to order gelstrings while on tour, using the RFID tag, all you have to do is specify the number and you're ready to go. They've put in the gel colors of all the manufacturers, with the right chromaticities. That way, you don't get R32 when you meant R33—all of us have done that, and then you get gelstrings with the wrong gel in it, because of a little typo."

Preston Bircher, director of entertainment technology on Carnival Cruise Lines, has a number of reactions. "The auto-addressing feature is the best idea," he says. "Because, at Carnival, we mount a show for seven years or more, the seek-and-address feature is not as vital for us. But when we're two or three years into the run, and the entertainment lighting technician has information that's been handed down four to five times and the Colorams come down for a restring—then it could prove very valuable. When you have 170 Colorams in the rig and one loses its string, then the feedback and option of shutting it down prior to its killing itself, trying to scroll through a damaged gel string—that's gold."

For his purposes, Bircher says, however, other features are less relevant. For

example, there's the Web-based database for offsite backup and maintenance recording. "Our IT securities will not allow direct access and two-way communication of an onboard PC, via satellite, to a non-Carnival server. I'm also not sure how the lamp-hour calculation feature will fare in the cruise line environment. We operate with small crews and it's not realistic that we'll have the personnel and paperwork procedures to change out lamps, then go to InfoTrace and tell it which lamps you changed." He adds that running a local InfoStore on each ship would be very helpful to the onboard technician, without causing security problems.

His big worry, he says, is about "the complete elimination of the Coloram II. Carnival was the test theatre for Coloram Serial Number 000001, onboard the m/s Ecstasy in 1991. But Wybron has promised me that they will continue supporting the repair and parts of the Coloram II for the next ten years.

"All in all," he concludes, InfoTrace "appears to be a good product for tomorrow."

#### **Taking the long view**

But when will tomorrow come? InfoTrace does not really work at its optimum level until there's a critical mass of RDM lighting and effects units available. "Remote Device Management is here," says the August 16 edition of ESTA's *Standards News*. So when we can begin to see a rollout of RDM products? Consultant Mike Wood says, "It's difficult to know what will happen. It will probably happen in fixed installations fairly rapidly." On the other hand, he says, "It's less clear that rental houses, with large amounts of legacy equipment, will want to make the investment—even though the information [InfoTrace provides] would be very useful." It's also true that the application of InfoChip to an existing unit doesn't necessarily provide all the services found on an RDM unit; there's the danger of users not becoming fully aware of all that the product can offer. Wood adds that InfoTrace will be successful if top designers, who have real clout with the rental houses, start to demand it.

Ken Billington, who certainly qualifies as a top designer, echoes some of Wood's points, but also sees the tremendous advantages. "Conceptually, it's brilliant and ultimately it will revolutionize the way we do things in theatre," he says. "Getting everyone to agree that it's a good idea will take time, however. Remember, when DMX showed up, nobody wanted it. I also think there will be resistance from rental shops."

Although Billington agrees with Wood that the product will probably first find acceptance in fixed installations, such as performing arts centers and theme parks, he adds that it could prove extremely useful in situations where a show is running in several places simultaneously. A good example would be Billington's long-running hit *Chicago*, with companies in New York, London, and other cities.

"Let's say the bulbs in moving lights last 700 hours," he says. "We've done tech and used up 300 hours. Now the show is open, and the lights are on four hours per performance, eight performances a week. [Using InfoGate to track the system's performance], it would be great to know in advance that, on August 12, you've got to change the bulbs—or, to calculate that, since we cancelled a week of previews, we don't have to do anything for another week or two. It will help producers budget their shows more efficiently."

Still, he adds, "To get all the crews in all the cities to work differently will be difficult. There's a very strong learning curve there."

Whether or not InfoTrace succeeds in the marketplace, it's the first product to deal with the complicated reality of modern entertainment lighting design. Today's lighting rigs are monsters of complexity—an ever-growing mix of new units and add-on features that are increasingly difficult to control. It's a reality that makes the persistent talk of some kind of convergence between lighting and video—and even, as some claim, sound—seem laughable.

In other words, everybody thinks about individual units but nobody thinks about organizing them into a viable system. InfoTrace is a bold attempt at doing just that. At the very least, it's the beginning of a conversation that we need to have.

# *Innovation without boundaries.*

*Apparently, the whole world was waiting for someone to deliver on the promise of RDM.*

*Wybron's recently unveiled InfoTrace System does just that...and the applause has been thunderous.*

*Thank you, PLASA.  
Thank you, LIVE DESIGN.*

*Find out more at  
[www.wybron.com](http://www.wybron.com)*



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