

Richard Jett and Jett Electric

Systems Integrator Richard Jett Uses Opto 22 SNAP Ethernet Systems at Work, at Home, and to Start His Own Business

At Work

In the late 1990's, Richard Jett was working as the Director of Solutions for a large energy company in the southwest. Among the broad and diverse responsibilities Jett was tasked with was to increase the visibility of and gather operational data from control systems, electric metering devices, and other utility systems and deliver that data to enterprise IT systems for remote system control, analysis and reporting purposes.

In accomplishing this, Jett, over time, became well acquainted with the myriad of control and data acquisition systems and components available from hardware vendors like Honeywell, Johnson Controls, GE Fanuc and Allen Bradley. But if there was one thing Jett had learned in his many years on the job, it was that when choosing systems of this type, many of the products out there are so similar in features and functionality that often it comes down to three simple things—cost, reliability, and scalability.

Jett thus found himself time and again deploying systems from Opto 22. Whether it was for acquiring meter data from a 40 Megawatt utility substation, or controlling refrigeration systems for large manufacturing facilities, Jett inevitably turned to Opto 22 systems.

“There were specific control features and capabilities I was looking for in the systems I would consider,” says Jett. “But that was more or less just to get your ticket punched. I needed systems that offered more than that—ones with higher levels of connectivity. Use of open protocols like TCP/IP was very important to me because it created easier opportunities to link the equipment being controlled back to an enterprise application or database of some type.” Jett, who has over 18 years experience with industrial electrical systems and controls, found that Opto 22 control hardware, particularly its flagship SNAP line of Ethernet I/O systems, were well suited for this task.

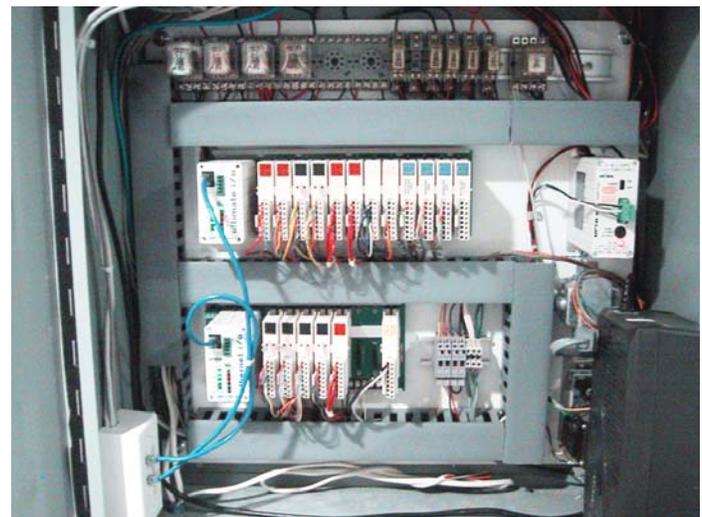


Opto 22's SNAP Ultimate I/O System

“The SNAP processors speak all of the industrial protocols—Modbus, Optomux, even OPC—but are also IP-based and can communicate via the more IT-oriented protocols like SNMP, which is great for report by exception applications, and SMTP, which is useful when you need email reporting or alerts. Any product that combines these different elements makes it easy for users to connect their down and dirty line of business equipment to off-the-shelf software packages on their corporate network or even to a custom web application.”

In late 2001, Jett’s employer was forced into reorganization, in the process, leaving many of its customers in the middle of automation projects in various stages of completion. Jett saw a common need amongst many of these customers—utility substations, refrigeration plants, and others—and seized the opportunity by acting as an independent consultant to help these floundering customers complete their projects. Often, these projects were 70-90% completed with Opto 22 hardware, but despite this, many of the plant managers that Jett encountered were planning to replace the Opto 22 systems with ones from Allen Bradley. Thus, Jett would often find himself having the same conversation.

“It seems that somehow I would always get into a discussion with the plant manager or maintenance manager as to how Allen Bradley is such a better system and all the other nonsense that seems to follow. I would explain to them the capabilities of Opto 22 systems and why they are, in fact, superior to not only Allen Bradley, but many other control systems. The clincher would be when I would start discussing pricing. The Opto hardware is about 25 to 30% cheaper than AB and then there’s the software, which AB charges you a ridiculous price for. And that’s for each machine you want the software on. By the time we’d finish our discussion, I would typically have the plant manager won over. They’d take my recommendation and finish the systems with Opto 22, and very often they liked the results so much, they’d start thinking about how they could expand their Opto systems.”



Jett says that after taking the time to familiarize themselves with the hardware, many customers quickly became enamored with the networking capabilities of the Opto 22 systems, particularly their ability to start streaming operational data by running a simple script.

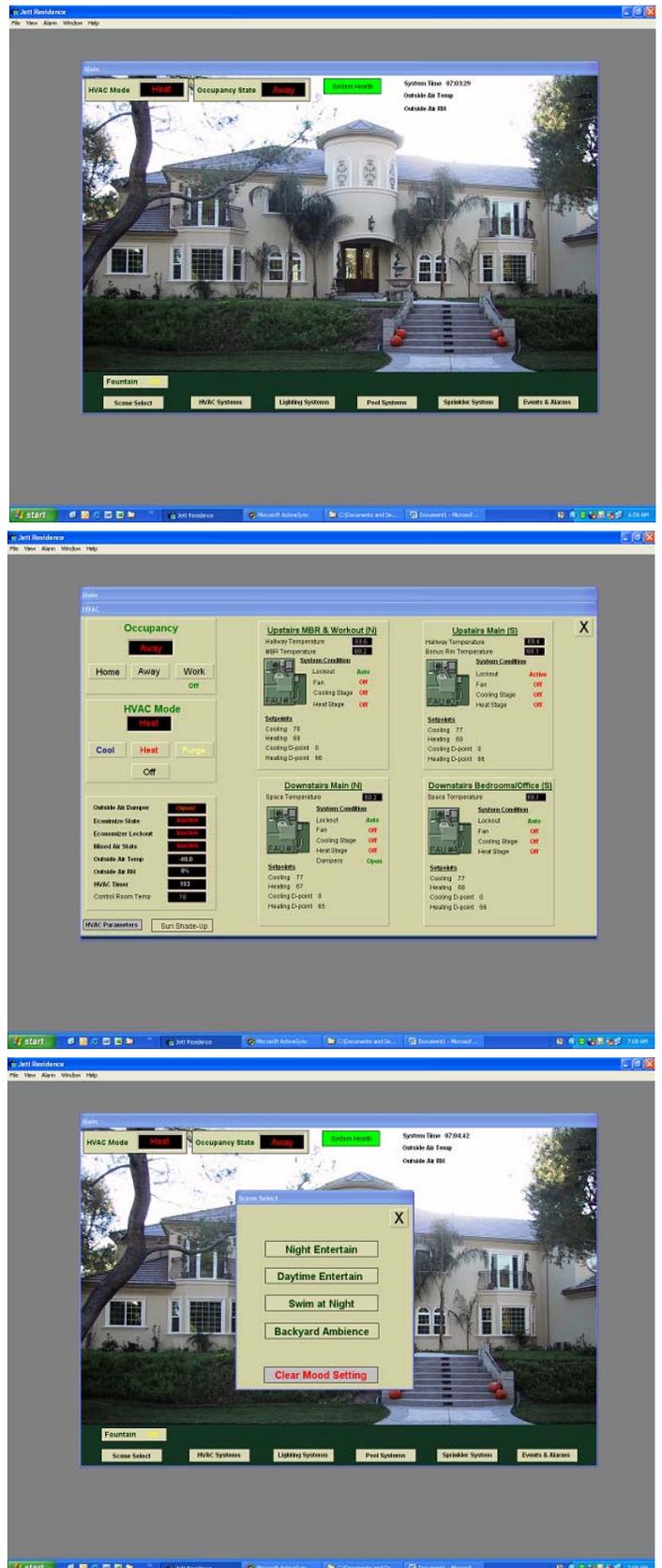
At Home

With a firm understanding of Opto 22 hardware and software and the full range of the products' capabilities and, most importantly, flexibility, Jett was next inspired to undertake a comprehensive automation project at his very own residence.

"It started relatively small, with my idea to control the 15 tons of HVAC equipment and outside lighting I was in the process of building. I wanted the efficient and economic operational capabilities offered by large commercial HVAC units, but no manufacturer offered what I was looking for exactly. So I set forth with Opto 22 to design the system myself and was very successful. But then, the scope of what I wanted to automate and control kept expanding."

As a result, Jett is now using an Opto 22 system to manage and control all of his heating, ventilation and air conditioning equipment, along with his stereo and home theater systems, outside lighting, irrigation valves, alarm systems, and pool controls. The Opto system is comprised of one SNAP Ultimate I/O unit, one SNAP Ethernet I/O unit, and two 8 position mounting racks populated with a combination of digital and analog I/O modules, used for on/off and variable control respectively. The two SNAP units exist on their own Ethernet network behind a router that allows for access from anywhere in the world via the Internet. Using ioDisplay, Opto 22's Windows-based HMI package, Jett can, among other things, turn his sprinklers on and off, change temperatures for his air conditioning, and operate his pool pumps and valves remotely.

Custom ioDisplay screenshots of Richard Jett's home automation application



“Opto 22’s SNAP system has given me very sophisticated control of my HVAC and other systems that I would never have been able to achieve with any other system on the market. And ioDisplay gives me a one stop HMI for all the critical systems in my residence and a simple point and click interface that even my wife can use.”

“My favorite is the “Scene Select” feature I’ve developed with ioDisplay. I have preprogrammed settings for the pool, yard lights, interior lights, stereo, etc., and I’ve labeled them “Day Entertaining”, “Night Entertaining”, and so on. So for parties and other occasions, I can, with a single mouse click, automatically adjust my entire home the way I want it. No more trekking through the house turning things on or off. Plus, I’m always coming up with new ideas of how I want things to work and I can make those changes quickly and easily using ioControl (the programming software for the Opto 22 system) and then just download to the controller.”

Jett sees a great deal of value in having this flexibility. “The ability to make changes easily is always a huge bonus. I looked at numerous systems designed for home automation and when all was said and done, choosing Opto put me light years ahead of any system on the market.”

For Business

Jett’s experience and success, both personally and professionally, led him take the next logical step and form his own company, Jett Electric, focused on complete systems integration for the home. Jett Electric’s particular expertise is in bringing all of the home systems—security, phone, audio-visual, etc.,—under one umbrella. Jett claims that Opto 22 hardware lets him accomplish this with the best combination of cohesiveness, scalability and, as Jett knows from his many years of experience with Opto 22 hardware, reliability. “Many of the Opto 22 components, including most of the SNAP modules are guaranteed for life, a fact that I often use as a selling point when I propose new systems for Jett Electric customers,” offers Jett.

Despite his many achievements, Jett remains modest. “Yes, I’ve had a lot of success in my many different endeavors. But I have peers who are doing some of the same types of things I’m doing. My story is just indicative of what can be accomplished by an experienced systems integrator who has a little creativity and powerful tools like Opto 22’s at their disposal.”

About Opto 22

Opto 22 manufactures and develops hardware and software products for applications in industrial automation, remote monitoring, and enterprise data acquisition. Using standard, commercially available Internet, networking, and computer technologies, Opto 22’s SNAP systems allow customers to monitor, control, and acquire data from all of the mechanical, electrical, or electronic assets that are key to their business operations. Opto 22’s products and services support automation end users, OEMs, and information technology and operations personnel. Founded in 1974 and with over 85 million Opto 22-connected devices deployed worldwide, the company has an established reputation for quality and reliability. Opto 22 products are sold through a worldwide network of distributors, partners, and system integrators. For more information, contact Opto 22 headquarters at 800-321-OPTO or visit our Web site at www.opto22.com.