



The DATA CAPTURE Report

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Psion Teklogix Offers Improved Wireless Performance

Due to a recently signed marketing agreement, **Psion Teklogix (PT)** will now be able to offer **Fidelity Comtech's (FC)** Phocus Array(TM) System. Phocus Array incorporates an outdoor, extended-reach, 802.11b/g phased array wireless access point that drastically improves outdoor wireless performance. The new wireless system reduces installation costs because fewer access points are needed.

Shortly after the agreement was signed, the two vendors—working with New Jersey-based integrator **Millennium Technologies**—installed their first system at **FAPS, Inc.** of Newark, NJ, one the largest automotive port processing companies in the United States. “The FC system saved us a lot of money on cables, antennas, and access points,” said Chris Heisman, FAPS IT director. “We were able to cover a 250 acre area with only 14 access points. The FC system enables us to aim a signal to handheld devices on the lot. Wireless systems using standard access points are challenged by long distances and multipath interference from reflective metal surfaces and other large obstructions.”

According to FC, the company's Phocus Array System incorporates patented dynamic beam steering technology which allows the shape and size of the antenna to be varied on a packet-by-packet basis. This flexibility allows the beam to be pointed instantly for increased signal range and improved network reliability, and directed to reach a specific geographic area.



Chris Heisman, IT director, FAPS Inc.

The Phocus Array System can support links of up to nearly 15 miles with a significant reduction in infrastructure for large area wireless coverage. In an extended outdoor network, the Phocus Array System extends the wireless reach of typical Wi-Fi devices by four times and can replace as many as 13 commercial wireless access points, significantly

reducing the number of supporting poles and network infrastructure requirements. FC's system also incorporates WPA and WPA2 wireless security with 3DES and AES encryption respectively, and features a new faster core computing platform based on **Intel's XScale** processor.

Obviously, the wireless network is only half the

solution. Commenting on the PT handheld devices, Heisman told *SCAN/DCR*, "PT's 7535 wireless handheld computers were selected after many months testing various devices on the market. We found the 7535s to be more robust. They had big buttons, which make them easier to work with when wearing gloves in the winter. In addition, they incorporated a great scanner. Things like sunlight and windshield glare are often problematic for scanners, but we had no problems with the PT product. We now have a truly mobile real-time inventory management system for our entire site and have since implemented the solution at other facilities."

"Our companies are known for high-performance and reliable mobile wireless solutions in environmentally-challenging applications, and we look forward to working with PT to bring our solutions to a number of new yard management customers."

**Joe Carey, president and CEO,
Fidelity Comtech.**

"Our companies are known for high-performance and reliable mobile wireless solutions in environmentally-challenging applications, and we look forward to working with PT to bring our solutions to a number of new yard management customers," said Joe Carey, president and CEO of FC.

A good relationship

So often, we hear about the importance of having quality partners, and this story couldn't emphasize that point more. If it weren't for partnerships, this installation would not have been accomplished so quickly. Consider the timetable. PT and FC sign a reseller agreement in mid-June. By August, their combined system has already been installed in a major port, and future installations are in the works.

This only happened because PT partner Millennium Technologies was able to approach one of its longtime customers with the new solution offering. "Over the years, we've had a great relationship with Millennium," said Heisman. "They're good people to work with. We had been looking for a new yard management system for four years. One company recommended 85 access points. As I said earlier, we used 14 access points with the PT/FC system. Yes, we have had some growing pains, but that's to be expected. We process 470,000 automobiles per year. But, even with the minor challenges we've incurred, the system is already saving us time and money."

John Templeton, Millennium Technologies president/owner, told *SCAN/DCR*, "Our relationship with FAPS goes back 17 years. There's an abiding trust between both our

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organizations. In looking at a solution to FAPS' needs, we wanted to bring the most value for the least amount of money. The access points and poles were approximately \$110,000. We used about 30 PT terminals and were able to connect to FAPS' already-installed, home-grown, AS400 computer system. Because we could use fewer access points, our engineering time dropped from 15 days to two or three days. The total cost of an installation can usually be estimated by figuring \$15,000 per access point."



John Templeton,
president/owner,
Millennium
Technologies.

On the subject of poles, Heisman noted, "We have an open yard, and it has to remain that way to move vehicles around. This severely limits how many poles we can put up. I can't even imagine putting up 85 poles in our yard."

Bar code-based

The system in place at FAPS is bar code-based. Given that so many of these types of applications are taking advantage of the long read ranges and other performance enhancements offered by RFID, we couldn't help but wonder why FAPS chose bar codes.

"It's a matter of money," said Heisman. "Eventually, we would like to use RFID, but it is simply too costly at the moment. On the plus side, if we ever need RFID readers, we can get them through PT. There are usually 40,000 vehicles on

our lot at any given time. RFID would certainly be a help, but bar codes are doing the job."

Is Phocus Array a cure-all?

Templeton told us FC ran a test in which they were able to wirelessly transmit streaming video over 13 miles using the Phocus Array System. He said it did very well, but was still affected by large objects. With this kind of performance—not to mention all we had heard thus far—we wondered why anyone would even consider a standard access point system. So is Phocus Array the answer to all wireless needs? We received mixed feelings when we posed the question to Heisman and Templeton.

"It's early in the game," said Templeton. "To date, most of FC's work has been for the government. In fact, they joke that 90% of their products are camouflage. The FAPS installation is one of the first times Phocus Array has been used in a commercial application. And, we certainly haven't had time to look at adjacent applications, although we believe the system might be valuable at college campuses and airports."

Heisman was much more confident. He told us, "Phocus Array is the best thing since sliced bread!"

For more information: **Fidelity Comtech**, Longmont, CO, PH (303) 678-8876, Web site: www.fidelity-comtech.com; **Millennium Technologies**, Butler, NJ, PH (973) 492-1608, Web site: www.millennium-tech.com; **Psion Teklogix**, Hebron, KY, (859) 372-4105, Email: Bree.Rosen@psionteklogix.com, Web site: www.psionteklogix.com. **SCAN**