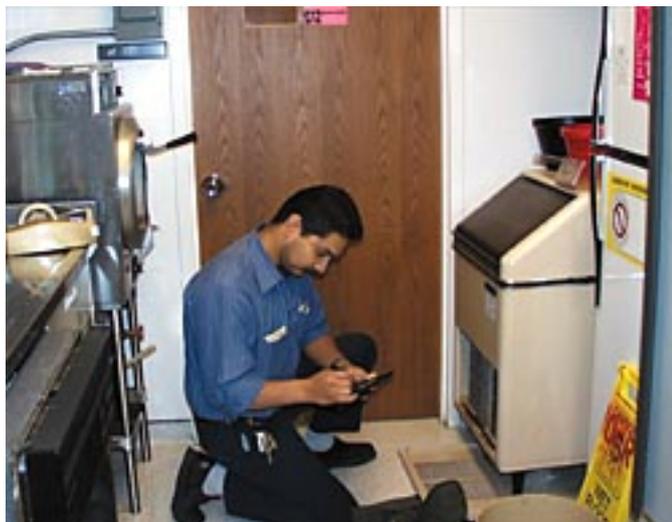


Wireless Technology Aids CMMS Data Collection

Written by MT Staff

Tuesday, 01 June 1999 14:27



The pressure on hospitals to reduce costs is felt everywhere from the operating room to the engineering department. With more than 3 million square feet in 28 buildings to maintain, Rush-Presbyterian-St. Luke's Medical Center in Chicago has a staff of 85 tradesmen that service everything from HVAC to critical patient care monitoring equipment.

In early 1997, Rick Marzec, director, medical center engineering, and Greg Kozlik, manager, mechanical services and engineering technology, at Rush began seeking a way to cut maintenance costs while increasing the productivity of technicians through the deployment of a computerized maintenance management system. They selected MAXIMO from PSDI, Bedford, MA, to control and manage their maintenance processes.

Like most maintenance organizations that use a CMMS, Rush was principally paper based. Marzec and Kozlik knew that the value of the software investment was a function of the quality and quantity of data that it housed. Faced with either staffing data entry personnel or training its tradespeople to divert wrench time to do their own data entry, Rush sought a solution to its data collection problem.

□ Our technicians were losing almost 2 hours a day picking up, handing off, and completing paperwork,□ Kozlik said. □ In fact, technicians had to stop accepting work 40 minutes before the end of their shift, simply so they could complete their paperwork. Multiply that 40 minutes by our 85 technicians, and we were losing nearly 300 hours each week to end-of-shift paperwork alone.□

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□ The paper chase didn't stop with our technicians,□ Kozlik continued. □ With over 120,000 work orders to process each year, our 7 person call center staff faced a constant 3-month backlog in closing out work orders. And, after all of that effort, we knew that we weren't tracking all of the work that was actually being performed in the field. Add to the equation countless radio calls between the technician and the call center, and it becomes clear that a manual system is a drain on the technician, the dispatcher, and the office staff.□

Integrated solution

To address the need for data collection automation, Rush teamed with Barrington, IL-based Syclo Corp., a provider of mobile computing solutions. Syclo's mobile companion to the software, called S.M.A.R.T., allows technicians to use Windows CE-based handheld computers as their electronic clipboard, automating every aspect of data collection and dissemination. Using this technology, Rush planned to eliminate its paper-based work orders, thus reducing the load on the call center and increasing the productivity of the technicians.

In addition to going □ paperless□ Rush also needed to move information in real-time to and from its technicians. For this reason, Rush needed not just a handheld solution, but a wireless one.

For hardware, Novatel's Contact with a fully integrated wireless modem was selected. The computer includes a full keypad, a back-lit touch-screen, and weighs less than 22 ounces. In addition, it offers built-in power management software for longer battery life.

The final element of the solution was the wireless network. Rather than deploy its own wireless infrastructure, Rush teamed with Ameritech to use its Cellular Digital Packet Data (CDPD) network. CDPD is a wide-area wireless IP network that exists in over 3000 cities across the United States. Since CDPD is sold on a per kilobyte basis (as opposed to connect time), Rush found it to be the most economical solution, with a monthly cost of only \$20 per technician.

Rush first deployed the solution among its 14-member response team, a unit that handles unscheduled corrective and emergency maintenance calls. The response team has immediate access to critical work order and equipment information. Because information flows wireless to and from the CMMS, the call center also sees the exact status of every assigned work order--dispatched, started, held, or complete. After the completion of each service call, the technician transmits work completion information over the CDPD network, immediately updating the CMMS, and then receives any new work assignments or changes. The technician proceeds to the next assignment, without ever having to return to the call center or fill out a piece of

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paper; at the end of the shift, the technician simply drops off his unit for use by the next shift.

□ With S.M.A.R.T., we have increased the productivity of our response team by nearly 30 percent, reducing technicians assigned to the team from 14 to 10,□ Kozlik said. □ We also eliminated our paperwork backlog completely and reduced our call center staff from 7 to 3 dispatchers. We were able to reassign employees to other tasks, including PMs, administrative support, and new customer service projects. Deploying the technology was the equivalent of gaining 10 staff.□

With the increase in technician productivity and the decrease in clerical costs, Rush estimates that the system paid for itself in only 4 months.

□ Our new system has offered a number of improvements that enhance our patient care,□ Kozlik said. □ A very simple, but significant, example is the 95-percent reduction in our two-way radio calls. Those loud, blaring calls from dispatch to technician were very disruptive to patients, particularly those in critical care wards. Now, we need to use the two-way radio only in true emergencies.

□ Perhaps the most important benefit, in terms of quality of patient care, is our improved ability to perform proactive maintenance,□ Kozlik concluded. □ Now, if a technician spots a potential problem in the field, he or she can quickly enter it into the palmtop, and it is immediately available for approval and scheduling.

□ Our ultimate goal has been to gain better control of our maintenance processes by becoming proactive, not reactive. It all adds up to better service, longer equipment life-span, and better quality of care for our patients,□ he added. **MT**

Information supplied by Syclo Corp., 101 Lions Dr., Suite 118, Barrington, IL 60010; telephone (847) 842-0320; email info@syclo.com; Internet www.syclo.com and Novatel Wireless, Inc., 6540 Lusk Blvd., Suite C-170, San Diego, CA 92121 telephone (888) 888-9231; Internet www.novatelwireless.com

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