

Displays Un-Plugged: Wireless technology provides unique display opportunities for OEMs

ISA FOLLOW-UP

By Joe Feeley, Editor-in-Chief

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If the recent ISA Expo created any significant buzz, it involved the emerging use of web-based wired and wireless technology to provide mobile and compact display of machine and process data. Our editors were on the case and here's a summary of what they found out about the subject. If you'd like to learn more about the underlying wireless technology online, you'll find a comprehensive report by Bob Waterbury in the accompanying archive, keyword Wireless.

Web technology is quietly being included in PLCs manufactured by the likes of Rockwell Automation, Schneider Electric, and GE Fanuc, and browser-based software is being offered by the major HMI vendors. These moves, say the analysts at AMR Research (<http://www.amrresearch.com>), are preparing us for web-based architectures, ready or not. Wireless HMI, via wireless Ethernet (IEEE 802.11) or emerging shorter-range spread-spectrum technology (Bluetooth), then begins to make a little sense.

There's little argument that wiring is not cheap and machine builders have better things they could be doing with resources besides tedious, time-consuming, and error-prone wiring tasks.

Several companies are promoting wireless via cell phone wireless application protocol (WAP) servers out and back from web servers.

Iconics (<http://www.iconics.com>), a developer of industrial automation software tools, recently introduced its futuristic MobileHMI wireless mobile telephone software product. The software provides instant access to manufacturing data anytime and anywhere it is needed.

"MobileHMI is the first product to integrate the plug-and-play OPC automation standard with mobile wireless web phone technology," says Iconics president Russ Agrusa. "Users can connect to their production line [machines] or control system simply by connecting via their wireless web phone. If you use it to check your stock quotes, it makes sense to leverage the technology and use it to access plant data as well." The OEM hook is that you can use this to remotely diagnose and troubleshoot customer problems all over the country without leaving home.

Iconics also introduced Pocket Genesis, which operates on a pocket PC or PDA and offers HMI/SCADA operator displays, reports, trends, and alarm management data via wireless communications.

PocketView, announced last year by GE Fanuc (<http://www.gefanuc.com>), is a hardware and software bundle that uses a wireless link to connect to an HMI server and display

data on a palmtop computer. It was the first to use new thin-client technology on Windows CE for display of process visualization graphics. Now, it is followed by TabletView, a bundled Windows CE tablet-style computer with an 8-in. diagonal screen, preinstalled industrial automation software, and a wireless Ethernet card. It allows operators and managers to view graphical automation screens from anywhere in the plant. Users can even mount a TabletView docking station on a machine or process line to allow a stationary workstation to become mobile.

WebStudio software from Indusoft (<http://www.indusoft.com>) lets a component vendor embed a CPU chip or single-board computer into a device to run a diskless version of Windows CE and WebStudio. The supplier can also develop compatible PC-based products for lab, control room, laptop, or palmtop devices that can access information from remote devices and then archive it and display it on-screen in various formats.

At the opposite end of the spectrum, Newport Electronics (<http://www.newportinc.com>) introduced tiny 1/16-DIN panel meters and controllers with embedded web servers. Hook 'em up to Ethernet, punch in their IP addresses, take a look at what they see, and adjust their setpoints, if you like.

Where is wireless web headed, you ask? "In the rush to ubiquitous access to data, business-to-business leads the way while industry and control learn to leverage the new technologies and products," says Phil White of ZoneWorx (<http://www.zoneworx.com>). "The wireless web allows one person to support more equipment and devices than ever before. When integrated with predictive maintenance techniques, it means that widely distributed devices can be monitored for proper operation and service while minimizing alarms and out-of-spec operating conditions."

New products continue to arrive in just about every size, shape, and user configuration imaginable. "The greatest need at this point is to embrace them, apply them, and see how they can make users more effective and productive," says Jeff Lund, vice president of business development and marketing, Echelon, Sunnyvale, Calif. Many wireless-web applications have already been validated in the building, transportation, and financial fields. It is now time, Lund feels, for the manufacturing industries to leverage what has been learned in these areas and profit from it.

As the technology begins to find suitable applications, its use will expand to all domains of operator interface activity. And while we can remotely, wirelessly, and effortlessly access the Internet for data and information, it will be a while before you'll be troubleshooting and diagnosing operating plant equipment from your living room. Just don't be too surprised when the day comes that you can do just that.