



VERTICAL VARIATIONS

REGULATIONS, TECH ADVANCEMENTS DRIVE PRINTER NEEDS | BY LISA TERRY

END USERS' DESIRE FOR MORE features for less cash, faster speeds and smaller footprints are just a few of the inevitable markers in the evolution of printer technology. But regulatory requirements and evolving business practices are constantly spurring new printing needs.

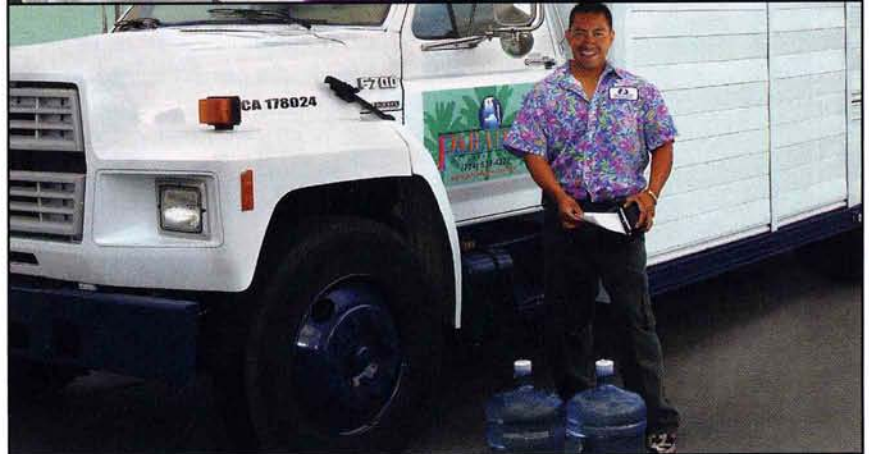
In this report, VSR uncovers the latest technology advancements from printer vendors, the vertical market trends they're designed to address and how VARs can draw attention to these features to create business-enhancing customer solutions.

HEALTH CARE

Privacy regulations and medical error rates are driving a movement to digitize medical records. These translate into the need to print ID bands, prescriptions and labels for everything from files to blood samples to prescription bottles to medical equipment. In many cases, this involves replacing costly laser printers that are ill-suited to their uses with smaller-footprint, application-specific thermal printers or printers with multiple trays for different media. Increasingly, these are generating 2-D barcodes to encode and protect patient data.

For example, pending Medicare requirements are driving hospitals to adopt Star Micronics' TSP800Rx, which features a locking mechanism and high security paper to safely print prescriptions, according to Christophe Naasz, Star's director of marketing.

Cognitive Solutions is replacing retail pharmacy laser printers and costly multi-part forms with its small footprint C/Rx thermal printer to generate



▲ Regulatory requirements and new business practices are constantly spurring new printing needs throughout all vertical markets.

medication labels and patient information sheets, improving workflow and lowering costs.

Mobility is enabling on-demand printing, eliminating the inaccuracy of batch printing or hand-writing. Venture Development estimates the global market for enterprise mobility solutions in health care, including mobile printers, will reach \$2.1 billion in 2007 and expects the market to

grow 18.8 percent through 2011.

"As health care organizations start to digitalize their records and update their IT infrastructure, the nearest-term opportunity for mobile application deployment will be centered on very basic processes such as charting and patient ID," according to VDC's Enterprise Mobility Solutions: Health Care Vertical Market Analysis, Sept. 2007.



SUPPLY CHAIN/ MANUFACTURING

RFID and wireless are the buzzwords in supply chain and manufacturing. Adoption of RFID encoders is growing moderately, but interest in future-proofing with RFID-ready industrial printers is rampant as users move toward distributed printing. Users want more printers, located close to area of application, running at lower volumes.

That means more users are seeking mid-range RFID-ready printers with

on the rise, so users can easily post documents online as well as print them in any environment, says Printronix's Scherz.

"Increasing compatibility with a variety of databases opens up opportunities for VARs to connect...to applications across vertical markets," says Dennis Cox, director of sales and marketing for Seiko Instruments.

USB-A ports are enabling VARs to create standalone applications. Via LCDs and plug-in input devices, users

receptacle for further action. Banking also continues its reliance on hybrid thermal and impact printers.

ATM mechanisms are evolving. Seiko's CAP9000 line, in use for kiosks and ATMs, offers printing as fast as 10 inches per second to minimize customers' waiting time, as well as a 50 percent improvement in total service life. "Banks see it as a safety issue," says Adam Ortlieb, associate marketing director for Seiko's Thermal Printing Division.

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**DENNIS COX, DIRECTOR OF SALES AND MARKETING,
SEIKO INSTRUMENTS**

features until recently found only on high-end models, such as on the Printronix SL4M, says Andy Scherz, the manufacturer's director of product marketing. A related trend is for remote management of these printers; Datamax, for example, released DMXNet Mobile, which enables management of its label, tag and ticket printers via handheld mobile devices. The ability to integrate with general IT remote management applications is becoming more important to users.

Adoption of wireless networking for industrial printers continues to grow, boosting interest in advanced security capabilities such as WPA, WPA2 and Extended EAP (Extensible Authentication Protocol) to protect the data.

Another growing demand is for Linux drivers and XML printing, to ease integration into host software. Printer vendors are also continually expanding their lists of printer language emulations. PDF printing is also

can tap locally installed software and easily load new formats via memory stick. One Cognitive auto lube customer, for example, uses the device to print oil change reminders.

FINANCIAL SERVICES

Check 21 is a major force in banking, driving the need for affordable, robust check imaging and printing hardware. Epson's TM-J9000 and TM-J9001, for example, include an optional check hopper; the teller stacks up to 25 checks on behalf of a small business customer, and the printer reads the check and MICR, images both sides and generates a receipt or validation. A related product, Capture One, is designed for use at the customer site; the unit creates the check images, then prints an electronic endorsement on the check verifying that it's been processed, says Barry Wise, senior marketing consultant for Epson. Problem checks get pushed out to a separate

RETAIL

Self-service and mobility are the watchwords in retail printing. As kiosk components become smaller and more modular, they're being incorporated into more places with more varied uses. That growth has prompted manufacturers such as Zebra to design kiosk printers to be smaller, jam-free and "consumer-proof," says Paul Vogt, the company's director of industry marketing.

Also within the kiosk realm, Fujitsu will unveil a mini version of its ftp627mcl series kiosk mechanism next spring that accommodates the shrinking size of self-service devices but still offers paper up to 3.25 inches.

Mobile business tools are also on the rise in retail, demanding a balance between the need for small, lighter form factors with sufficient paper stock and battery power, such as in Zebra's MZ 220 line. Of particular appeal to smaller retailers are mid-price units that handle receipts and labels, to maximize printer productivity.

Others require wireless printers closely tailored to specific tasks. O'Neil integrator Storeworks, for example, sold Shopko two models: the O'Neil Compact 3 belt-worn, ergonomic portable to navigate tight areas such as apparel, and the LP3 — O'Neil's high-volume portable label printer that mounts on a shopping cart for big labeling jobs.



Fujitsu will debut a label version of its semi-rugged mobile receipt printer in the spring, the ftp628WSL200 Series, which offers a compact size and small paper roll, says Jim Harrison, the company's project manager.

Outside the four walls, retail and service companies are seeking printers that work with cell phones, PDAs and Blackberries to close transactions on the spot. Samsung's SPP-R200 features a mag stripe reader and Bluetooth interface to these devices so users such as Mac Tools can generate receipts on the spot. Seiko is also working toward wide-area communications for mobile printing, says Sam Son, general manager of Bixelon Samsung of America.

See page 32 for further insights regarding receipt printers.

HOSPITALITY

Wireless mobility is the trend in hospitality, where tableside ordering and payment transactions are catching on. "The No. 1 complaint of restaurant customers, according to the National Restaurant Association, is when they want the check, there is no one around to give it to them," says Andre Nataf, strategic & multi-unit manager at Menusoft, which integrates Epson Mobilink printers into its solution. Lightweight mobile printers with mag stripe readers generate the check and process the payment, keeping wait staff out on the floor and available to guests. Security compliance is also essential in this environment. IP connectivity is also important, Nataf says, to ensure redundancy if the master server goes down; mobile terminals don't need to manually reconnect and transactions are not lost.

Another trend is the transition to a hybrid environment in the kitchen, where impact printers at some prep stations are complemented by display screens for incoming orders. Wireless and IP communications are also important, enabling staff to move printers as

workstations are reconfigured; printers must be kept away from ovens or heat lamps that can melt the housing.

Features such as easy loading, splashproofing, internal power supplies and communications options remain priorities for kitchen printer

and 2004 — especially in the areas of health care, public safety and education," said Chris Dixon, manager, state and local industry analysis at INPUT. "With the Census Bureau projecting an additional 60 million more U.S. residents by 2030, government leaders will

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ANDRE NATAF, STRATEGIC & MULTI-UNIT MANAGER, MENUISOFT

buyers, says Naasz of Star Micronics.

Larger chains enjoy remote diagnostic capability to head off printer issues before they impact operations, says Menusoft's Nataf.

GOVERNMENT

Government can be thought of as every vertical; the government maintains operations in retail, food service, health care, supply chain and so on. Despite the slowdown in IT spending growth by the U.S. Federal Government, growth opportunities still exist in Health Care and Intelligence Community related technology spending, according to the Federal IT Market Forecast 2007-2012, a report released last month by INPUT.

Total state and local information technology (IT) spending is expected to grow from approximately \$55 billion in 2007 to \$77 billion by 2012, representing a compound annual growth rate of 6.6 percent. "The recent budget recovery has allowed states and localities to make up for some of the program and technology cuts made between 2001

be looking to increase the productivity of their work forces."

Mobility is a major thrust for many avenues within government, particularly for field workers such as inspectors, military, traffic enforcement and emergency response. VARs serving government can take advantage of the same mobile form factor enhancements benefiting other markets, such as better batteries, smaller size, lighter weight and more paper capacity options.

The government vertical also includes education, a market that consumes printers for ID cards. Star currently offers rewritable cards, for example, as well as traditional office and logistics applications.

The rise of imaging is driving the need to print photos. Seiko has added digital camera support to some models so users can create photos of small parts inventory to enhance labeling of storage locations. The same capability is helping VARs create imaging applications for temporary and permanent ID cards across vertical markets, without costly card printers. **PH**