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*Will new, open-platform hand-held computing empower a new generation of retail merchandisers?*

# The Body Electric

Patricia Franco, vice president information systems at Spar Marketing Force, is currently testing a $7,600 voice-activated rig for field merchandising, complete with wearable computer; wireless modem; handheld scanner; digital camera; and headset with display, mike and earphone.

JOHN AQUINO

# In the Store

# The Body Electric

By JAMES TENSER

Part-human, part-machine, a new retail merchandising force is preparing to invade retail stores throughout the country.

It is being driven by astonishing advances in portable computing power and equally astonishing reductions in hardware costs -- and is fueled by escalating demands from brand marketers for sharper execution and more timely and complete field reporting.

With huge sums being spent on category planning and promotion, both timely, high-quality retail execution and detailed, rapid information retrieval are critical to realizing a return on those investments. Retail merchandising services companies and food brokers are taking serious steps to empower their field organizations with advanced communications technology to meet these needs.

In an ambitious effort, Spar Marketing Force, Tarrytown, N.Y., has assembled a field merchandising solution that combines a wearable PC with hands-free voice-recognition software, a heads-up display, bar-code scanner, digital camera and wireless modem to link to the internet. The company has high hopes for the solution, which is now undergoing limited testing.

"We call it the 'Borg Project,' after the characters in Start Trek," says Patricia Franco, vice president of information systems for Spar.

"Instructions to our reps in the field can amount to an inch-thick packet of materials every week," she adds. "Our goal in our MIS group at Spar is to make the field paperless. Borg is just one avenue to get to the objective."

Advantage Sales & Marketing, a regional food broker based in Irvine, Calif., announced in December that it had firm plans to move its existing sales and field automation system to Internet-based communications.

The changes, beginning this month, are expected to lower data communication costs and permit two-way connectivity to be extended economically beyond Advantage's sales representatives to its field merchandisers, as well.

While Advantage began implementing its enterprisewide field merchandising system in January 1997, new modules based on Microsoft Windows CE software technology will permit further expansion this year, said Kevin Paugh, senior vice president and chief information officer.

He said the company was getting ready to test Pro/Pocket, a CE-based software module from Inactix International, Norcross, Ga., which is designed to run on the latest generation of handheld personal computers (HPCs). When fully realized, the system will permit field merchandisers, sales representatives, headquarters personnel and manufacturer principals secure Internet access to a common server containing category management, sales and field execution data.

Certified Marketing Services, Kinderhook, N.Y., a third-party retail merchandising services company, is also continuing to test and evaluate computer-based solutions for its field representatives, says Alan Strick, director of merchandising sales and service. Certified last evaluated handheld technologies about a year ago, he says.

"They seem terrific, but they can represent a gigantic cost and big logistics issue. If you have 1,500 people to deploy, you've got to upload code on very frequent basis."

The cost of deploying HPCs to a field force the size of Certified's could easily top $2 million once all hardware, software, training and ongoing costs are figured in, he says.

Price competition for merchandising contracts being what it is, Certified has for now chosen to remain with a combination of technologies to retrieve information from the filed with speed and efficiency.

Central to its approach is a simple paper "bubble" form, on which field reps blacken little circles to answer questions about shelf conditions in stores. But there is a high-tech twist:

"The field form becomes the tool," says Strick. "It is filled out, then transmitted back to us as an image, which can be scanned by the computer." The responses are added instantly to the project database, where they can be accessed by managers and client brand marketers.

By searching the responses for exceptions, the hybrid system allows Certified to alert customers about shelf problems such as out-of-stocks on the same day they are detected by the field merchandisers. This can be especially critical for closely timed new product releases, such as videos, where the standard of excellence is to place displays in 95% of authorized stores on the street date. It is becoming common practice to deploy teams to fix the other 5% the following day.

While such rapid-fire efforts may be expensive, the payoff for the studios is clear: The selling window for most video releases is brief, with new competitive titles always lurking around the corner. Missing even a few critical early days of sales can have a serious impact on volume and profits. Retailers rightly insist on on-time deployment of displays and new items for similar reasons.

These days, manufacturers and retailers are also demanding a strict accounting of performance, which poses a further challenge to merchandising services firms. Purveyors of handheld computer technology are stepping up to help meet that challenge.

"What field organizations want the most is to be able to have faster information turnaround," says Pelin Wood, business development manager at Wright Strategies, La Jolla, Calif., which markets field computing and communications solutions for the retail merchandising industry, "because it's being demanded of them by the manufacturers or by their own internal marketing groups.

"Second is they don't just want data, they want information from the field. They want predictive capabilities, so they will know how to plan future sales and marketing strategies. It's not just about reducing out-of-stocks, they also want to be able to figure out future planograms or how to beat competition."

An obvious barrier to Spar's unique approach is the price, which Patricia Franco says can approach $8,00 per user for hardware and software. Ongoing training and maintenance can be expected to add more cost.

But Franco sees less costly solutions just around the corner. She said that at the Fall Comdex computer industry trade show, much of the buzz surrounded the latest generation of HPCs, which are putting 586 processor power into packages that will cost $1,000 or less, depending on peripherals.

Many of the new HPCs -- from manufacturers like Casio, Sharp, Hewlett-Packard, and Novatel Wireless, are designed to run Microsoft's Windows CE, a pared-down version of the Ubiquitous desktop operating system, which has lower power requirements, but which also supports pen-based computing.

Units which run version 2.0 of the CE operating system, some with color screens, are expected to reach the mass market in early 1998. Several were demonstrated at Comdex, and also at the Association of Sales &

Merchandising Cos.' Business Forum in December. Some have built-in modems ore wireless connectivity. One even incorporates a digital camera on a plug-in module.

Already proven in the consumer market by such successful products as 3Com's Pilot organizer and others, pen-based computing offers a needed degree of utility for so-called "vertical" business markets like retail merchandising. Fast, drop-down menus are easily navigated and forms can be completed rapidly with a few strokes of the stylus.

software package, RW3 for Windows CE, was selected by Microsoft for its global Windows CE sales force, as part of a demonstration package Microsoft calls "Arcadia Bay."

Major food brokers, such as Marketing Specialists, Dallas, and Sell Group, Cincinnati, have recently run advertisements in Supermarket News touting the enhanced service capabilities they can provide using RW3 for Windows CE.

In its ad copy, Marketing Specialists promises, "Live database of your store conditions from

brand marketers are demanding high-quality information retrieval and accountability.

Two years ago, many retail merchandising firms were meeting such information retrieval requests by investing in interactive voice response technology, which allowed field reps to dial in their reports by responding to questions using the telephone keypad. Responses were then tallied on the headquarters server computer for rapid use.

Others invested in high-end, proprietary handheld solutions, from companies like



Patricia is wearing a SmartSlide A/V headset from Kopin Corp., which combines miniature, monocular color monitor, earphone and microphone in a single lightweight unit. Approximate cost: $1,500.

Megahertz-brand wireless modem from 3Com allows real-time, two-way connectivity from the field without a telephone wire. Approximate Cost: $500

Handheld bar-code scanner (various manufacturers) allows rapid gathering of accurate data on returns, out-of-stocks, etc. Approximate cost: $200

Digital camera from Ricoh allows point-and-shoot capture of shelf sets. Images can be sent to headquarters via e-mail. Approximate cost: $600.
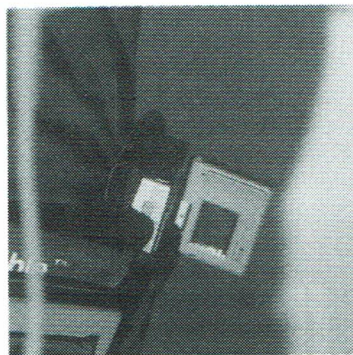
Wearable computer from VIA Computing features a 586-class processor in a 1.5 pound package that rides in a nylon holster. Voice-recognition software from Dragon systems allows user and computer to interact using audio cues and oral commands. Approximate cost: $4,800

Companies like Wright Strategies, Intactix, and RW Information Technologies Corp., are stepping up with pen-based applications designed for the CE platform.

Bruce Nagle, principal at San Ramon, Calif.-based RW, says his company has committed to CE and has worked closely with Microsoft to develop pen-based field merchandising solutions that are market-ready today. Its

coast-to-coast; Immediate access -- anytime, anywhere (thanks to RW3's open architecture); Instant visibility of new items, promotion execution, and more; Faster reporting than syndicated data."

Such service claims are clearly raising the competitive bar among field merchandising suppliers. No longer satisfied with inexpensive, "arms and legs" who can execute in-store tasks,

Telxon, Symbol Technologies, Fujitsu or Norand, but their costs generally limited their use to supervisory personnel.

While IVR is widely and successfully integrated into the operations of Spar and Certified and most other large retail merchandising firms, it is limited in scope, allowing for only one-way communications of relatively simple data sets.