

## microFlash® 2te/4te

### Ultra-Rugged Receipt Printers

The microFlash family offers the most rugged and reliable performance for route accounting, direct store delivery and field service workers. Frequent drops, extreme vibration, constant jarring, and excessive dust are just a few examples of the regular abuse mobile technology endures. Few printers thrive in the demanding mobile workplace better, longer, or more reliably than the microFlash family of printers.

The microFlash 2te is a rugged and reliable 50.8 mm (2 in) wireless portable printer available in addition to being one of the smallest. USB connectivity allows the 2te to integrate easily into new or existing applications and is also available with optional Bluetooth® for wireless communication.

With uncompromising standards, the 4te is engineered to withstand even the most punishing portable applications including multiple 1.8 m (6 ft) drops to concrete. The 4te prints outstanding quality 101.6 mm (4 in) receipts, proof of deliveries, labels, and invoices. The 4te is rugged and offers enhanced processing speed, greater memory capacity, USB connectivity power status lights, external charging, and optional Bluetooth® and 802.11b/g wireless connectivity.

The microFlash family will lower total cost of ownership. Save money on expensive extended warranties and repairs.

Everyone agrees that reliability is important. That is why Datamax-O'Neil by Honeywell stands behind their mobile printers with a standard two year warranty.



*The microFlash family is one of the most rugged and reliable printer series available with a design that helps keep mobile workers productive.*

## FEATURES & BENEFITS



RISC processor for faster processing. LED lights to indicate Bluetooth® and charging/power status and an external DC jack for easy charging.



Supports a wide variety of hand-held computers from leading manufacturers.



Battery is included. And when it's time to replace the battery, the microFlash printers use economical replacement batteries.



Lower cost of ownership with a two-year standard warranty.



Supports the printing of graphics, 1D bar codes, 2D symbologies and signature capture.



# Technical Specifications

## PHYSICAL CHARACTERISTIC

### Dimensions (HxWxD):

**2te:** 139.7 x 109.2 x 63.5 mm (5.5 x 4.3 x 2.5 in)

**2te:** 162.6 x 109.2 x 63.5 mm (6.4 x 4.3 x 2.5 in)\*

**4te:** 172.2 x 175.8 x 69.1 mm (6.8 x 6.9 x 2.7 in)

**4te:** 193.5 x 175.8 x 68.3 mm (7.6 x 6.9 x 2.7 in)\*

### Weight:

**2te:** 0.44 kg (15.3 oz); 0.79 kg (28 oz)+

**2te:** 0.48 kg (16.9 oz); 0.82 kg (29.1 oz)++

**4te:** 0.54 kg (19.2 oz); 1.1 kg (37.2 oz)+++

**4te:** 0.59 kg (20.7 oz); 1.1 kg (38.3 oz)++++

**Drop Specification:** 1.8 m (6 ft)

\*With card reader

+With battery

++With battery and card reader

+++With battery and paper roll

++++With battery and paper roll and card reader

## USER ENVIRONMENT

**Operating Temperature:** -20°C to 50°C

(4°F to 122°F)

**Storage Temperature:** -40°C to 70°C

(40° F to 158° F)

**Charging temperature:** 5°C to 40°C

(41°F to 104°F)

**Relative Humidity:** 10% to 90% non-condensing

### ESD Protection:

(4te) 15 kV Air, 8 kV contact

(2te) 8 kV Air, 4 kV contact

## PRINT TECHNOLOGY

**Printhead:** Direct thermal; 8 dots per mm

(203 dots per in)

**Print Mechanism Speed:** 51 mm (2 in)

per second

## COMMUNICATION

**Serial:** RS-232; up to 460.8 kbps

**USB:** 2.0 (full speed)

**802.11 b/g (4te only):**

**Frequency Band:** 2.4 to 2.4897 GHz

**Data Rates:** Standard 802.11b/g rates

**Network Standard:** IEEE 802.11b/g

**Wireless Access Modes:** Infrastructure and ad hoc

## Security protocols:

	WPA	WPA2
<b>Modes</b>	PSK/Enterprise	
<b>Security/Encryption</b>	TKIP/RC4	CCMP/AES
<b>Authentication</b>	EAP-FAST, EAP-PEAP, EAP-TTLS	

**Network Support:** DHCP, TCP, UDP, BOOTP

**Remote Management Support:** Compatible with the Remote Management Software and other remote management systems

**Bluetooth®:** Network environment: Ad hoc network environments

## MEDIA

**Media Type:** Direct thermal receipt paper (standard, premium, heavy duty, long-life, image protect, hi-temp, and all weather), synthetic media, UV coated media; labels: linerless labels (optional)  
*For optimum print quality and printer performance, use certified Honeywell media supplies.*

## AGENCY APPROVAL

*Contact your Honeywell sales representative for the most recent list of agency approvals.*

## BARCODES/FONTS/GRAPHICS

**Standard Fonts:** 5.5CPI, 7.2CPI, 10.2 CPI,

10.7CPI, 18.5CPI 20.4CPI, 22.6CPI & 34.0CPI

(additional fonts available)

**Optional Characters:** Arabic, Greek, Hebrew, OCRA, OCRB, Unicode subset including Latin & Thai; Asian (including Big 5, Simplified Chinese, Korean and Shift JIS) - additional international characters available

**Barcodes:** Linear: Codabar, Code 39, Code 93, Code 128, EAN-8, EAN13, Interleaved 2 of 5, MSI/Plessey, UCC/EAN-128, UPC-A, UPC-E;

**2D Symbolologies:** PDF417; AZTEC, QR, GS1, Datamatrix (available on wireless only)

**Graphics:** Supports storage of graphics/logos in Flash memory and transient "print once" graphics

## SOFTWARE/FIRMWARE

**Protocol:** Line Printer Mode, Easy Print®

**Device Management (for 802.11 models only):**

Remote Management Software (RMS), Wavelink Avalanche MC, Motorola MSP

**Drivers:** Windows® CE and Desktop

**Compatible Label Design Software:** NiceLabel, BarTender®, DP Designer

**Software Development Kit:** C++, Visual Basic, Microsoft Dynamics, Blackberry®

## OPTIONS

**External Charge Contacts (4te)**

**Linerless Label Capability**

**Magnetic Stripe Card Reader**

**Wireless Communication (2te/4te)**

## WARRANTY

**Standard Warranty:** 2 years\*

**Extended Warranty:** Contact your Honeywell sales representative for extended warranty options available through Honeywell Repair Services

\* Covers platen roller, printhead and installed options



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## Product Bulletin

### Two New Serial Configurations for the microFlash 4t<sup>e</sup>

Datamax-O'Neil has made available two new microFlash 4t<sup>e</sup> configurations that support RS232 Serial Communication. These two new configurations are based on the standard MF4t<sup>e</sup> platform and support both RS232 Serial and USB Serial connectivity. The same set of accessories associated with the existing microFlash 4t<sup>e</sup> product offerings are supported by these new configurations.

Part Number	Description
200600-100	<a href="#">PRINTER</a> , MF4TE, SWL
200601-100	PRINTER, MF4TE, CR, SWL

#### Timeline:

Orders Accepted	Orders were accepted after this date	April 30, 2013
First Shipments	Product availability for shipping	June 17, 2013





# Aetra Water Company Achieves “One-Second” Service with Datamax-O’Neil Printers

featuring microFlash® 4t portable receipt printer  
field service on-site billing ■ ■ ■



For more than a decade, PT Aetra Air Jakarta (formerly known as Thames PAM Jaya) has been supplying clean water to nearly 400,000 households in Indonesia’s capital city of Jakarta. It is one of the only two companies licensed by the government to manage the very complex task of treating, servicing, and supplying water to Indonesian families in Northern, Eastern and Central Jakarta.

## Problem ■ ■ ■

Aetra’s meter reading and billing previously involved a cumbersome 3-step process that included different contractors for meter reading, bill printing and bill delivery. At the first level, contractors were sent door-to-door to read meters for water consumption. These meter readers can typically capture data from 100 meter stands a day. The captured data would then be processed at the central data centre and the bills printed by another set of contractors. The last batch of contractors then deliver the bill statements to the right address. The entire process, from the initial capture of customer data to water bill delivery could take up to as long as seven days. In addition, as the process involved 3 contractors, the cost incurred for meter reading, bill printing and bill delivery was high.

These issues were a major concern for Aetra’s management. As a water service company, the ability to

*“The Datamax-O’Neil solution has given us the level of practicality and efficiency we were looking for. The entire procedure – from data input to the printing of billing statement now takes seconds.”*

- Margie Elise Tumbelaka  
Aetra Communication Manager

### SOLUTION OBJECTIVES

- Shorten the billing cycle
- Reduce the cost to generate a bill
- Increase customer satisfaction by reducing human errors

### SOLUTION RESULTS

- Reduction in the cost of billing
- Bills are generated on-site in a matter of seconds
- Human errors are almost non-existent
- Customer complaints have significantly declined

capture and process meter-reading data both accurately and efficiently was critical to the success of the company.

## Solution ■ ■ ■

In order to solve this problem, Aetra started to look for new ways to improve and modernize its entire water meter data capture and billing system. They began by doing some benchmarking against several water companies abroad to learn how things were done over there. To make sure they have the best solution, they invited several



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companies to bid for the project. After a series of careful and thorough comparisons, Aetra chose Datamax-O'Neil's printing solution which can support a billing system that integrates with a data input handheld device and printer through Datamax-O'Neil's authorized reseller, PT Printama Sukses. "Having weighed a variety of aspects from pricing to seamless turnkey solution, we selected Datamax-O'Neil. We were convinced that Datamax-O'Neil would meet our requirements," says Margie Elise Tumbelaka, Communication Manager for Aetra.

In fact, the modernization of Aetra's billing system was also driven by the company's Aetra-Sedetik ("Aetra-One Second") program. This program focuses on ensuring one single party can capture the meter data, print the bill on a 10x15cm thermal paper and deliver the bill statement directly to the customer all at once. "The

**The Datamax-O'Neil solution has enabled us to radically change our billing system and boosted efficiency through on-the-spot bill printing.**

Aetra-Sedetik billing program is the first for water company in Indonesia. The billing statement is the official final statement, not just a cost estimate," adds Margie further.

For this purpose, Aetra uses Datamax-O'Neil's MF4te mobile printers for spot billing. Out of the 330 units, 297 printers are actively used while the rest serve as backups. The spot bills include information on the volume of water consumed by customers, the monthly bill amount, the payment due date and the late payment penalty, including other charges if any. With the help of the new system, the data captured by the meter readers are now directly linked to Aetra's central data processing centre and with a push of a button, the billing information are downloaded to Datamax-O'Neil's MF4te printers via a Bluetooth connection for printing. These printed statements are then handed to customers on the spot. "The Datamax-O'Neil solution has given us the level of practicality and efficiency we were looking for. The entire procedure – from data input to the printing of billing statement now takes seconds," said



Margie. "The solution has enabled us to radically change our billing process and boosted efficiency through on-the-spot bill printing," she adds.

## Results ■ ■ ■

The use of Datamax-O'Neil's spot billing solution has brought about many benefits, including the reduction of cost of bill printing and delivery. While previously it took an average of seven days to read the meter, print the bills and dispatch the bills to customers, today everything is completed in just mere seconds. This is in line with Aetra-Sedetik, as Aetra strives to achieve "a second to read, a second to print and a second to deliver". Data accuracy has also improved substantially.

Customer satisfaction has also seen noticeable improvement since Aetra rolled out the solution. In the past, customers had to wait for the bills to arrive at their homes before they know their consumption level and how much they have to pay. The bills were also fraught with errors. Now, with one solution that integrates data capture with printing, customers enjoy instantaneous access to meter consumption and billing information with no waiting and error. The number of customer complaints has since reduced significantly.

Aetra is also very pleased with Datamax-O'Neil's after-sales service through PT Printama Sukses. "In addition to a 2-year warranty, PT Printama also provides great service and is very proactive. On a scale from 1 to 5, we do not hesitate to give Datamax-O'Neil's after-sales service a 5. Every two weeks, they call us to check if we have a problem with the printer. If we do, their engineer will come and solve the problem on site or bring the unit to their office for repair," concludes Margie.





## Mobile System Withstands Initiation By Fire

featuring microFlash® 4t thermal portable printer  
asset tracking in field service ■ ■ ■

For those “in the know,” it is easy to see when sugar cane harvest season begins – simply look for the smoke. Before harvesting the cane, workers must burn it, turning the fields and everything in them into a hot, dirty, dusty, ash-covered landscape. For four months, every day, around the clock, the workers toil, hand-cutting the cane so it can be transferred to the factory for weighing and processing.

It is difficult to imagine technology having a place in this world and yet it does. In ash-covered fields, workers rely on the Datamax-O'Neil microFlash® 4t and Symbol® SPT 1700/1800 terminals to accurately record just how much cane they cut. Their wages depend on it.

### Problem ■ ■ ■

Developed by Electronics Shop S.A. (ES), this solution is in use at five sugar cane growers in three countries: Guatemala, Nicaragua and the Dominican Republic. For 26 years, ES and their Sistemas Electronicos de Control (SEC) department have creatively met the needs of their customers, providing hardware, software and technical support throughout Latin America.

“Many challenges had to be met for this to work,” said Electronics Shop Alejandro Amézquita and Mynor Nájera, co-managers of the project. “First, tons of acres are planted and all must be harvested within four months. Workers must cut enough cane to fill a truck’s ‘wagon.’ The truck then makes its way to the factory and the load is weighed and tested while the driver waits. Finally, the worker heads back to the field and the cycle begins again, hour after hour, day after day. It’s pretty intense.”

The faster the driver returns, the more cane can be hauled and the more the workers can earn. The challenge with the

***“The Datamax-O’Neil 4t is a very strong machine. Most importantly, it can work for 24 hours reliably. We just swap out a battery every 12 hours when the shift changes.”***

**-Martín Juárez**

Compañía Agrícola Industrial, Santa Ana

old system was that the foreman, or “el caporal,” hand-recorded all worker information on separate sheets of paper. The sheets were then turned in at the weigh station and manually entered into a computer system. The process was time-consuming, the data was fraught with errors and the inevitable mistakes made through manual entry.

Compañía Agrícola Industrial Santa Ana, a large sugar cane grower in Guatemala explained: “We used so much paper,” said Martin Juarez, Assistant General Manager, “It took a long time to get all the information into the system, and there were many errors.” ES implemented its sugar cane solution for Juarez’s company in November 2000.

“We knew we needed a solution that reliably captured information right in the field and one that could quickly transfer data into the system at the factory. Most importantly, it had to be rugged,” said Amézquita.

Juarez emphatically agreed: “With the severe environmental challenges – the rain, the dust – we had to have a printer that could survive. Since there is no electricity in the fields, we also needed a printer that offered the highest battery capacity.”

ES immediately found the hand-held terminal it needed, a Symbol® SPT 1700/1800, but they struggled to find a printer that could hold up in the harsh environment. “The first printer we tried was useless in two weeks,” said Nájera, “With all the ashes and the dust, every unit we tested just shut down.”

### Solution ■ ■ ■

To their good fortune, the next printer tested was the



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Datamax-O'Neil 4t thermal printer. "The Datamax-O'Neil 4t has been a workhorse for us since the day we started using it four years ago," said Amézquita, "It's tough...very tough. Ash and dust doesn't bother it. It doesn't break. We had a truck run over one and all we had to do was change the case."

During the around-the-clock harvest, two shifts of workers handle the cutting; el caporal has the Symbol® SPT 1700/1800 strapped to his belt and the printer over his shoulder. On average, each installation uses 23 hand-held/printer combinations.

At the beginning of each shift, el caporal uses the hand-held to record his name, the worker location, the license plate of the picking machine, the truck number and how many wagons are attached. He then records the name of each worker.



Once the wagons are loaded and the truck is ready to return to the factory, el caporal enters the quantity cut, then initiates the printing of a receipt on the Datamax-O'Neil 4t. The receipt carries a single PDF417 two-dimensional (2D) bar code that contains all data related to the load, the names of the workers who produced it, el caporal and the driver. The driver takes the receipt and heads off with his cargo.

At the factory weighing station, where the driver used to hand over a stack of handwritten sheets to be keyed, he now delivers a single bar-coded receipt. Using a Symbol® P304 scanner connected to a PC, workers scan the bar code to enter important information, shortening the process to seconds and ensuring accuracy.

## Results ■ ■ ■

"The workers are saving hours at the weighing station and the information is accurate. They know for sure they are getting paid for exactly what they cut," said Nájera.

In the case of Compañía Agrícola Industrial Santa Ana, the improvement was astounding. "Processing information at the weigh station once took up to 30 minutes. Now it takes just two. Errors have substantially decreased," said Juárez. This time savings also translates into a reduction in force. 14 picking groups were each reduced by three workers; a

total of 42 less people. Now each group needs only four people to complete the same amount of work. "That is a huge help to our business," said Juárez.

Back at the sugar cane fields, the application is a great example of technology meshing with tradition as the little Datamax-O'Neil 4t produces receipt after receipt emblazoned with a crisp, clean, mysterious-looking symbol on it; 400 receipts in eight hours in the fields of Compañía Agrícola Industrial Santa Ana.

It's an achievement not lost on Amézquita or his customers. "Equipment is quite an investment. The customers need to know it will keep working. The Datamax-O'Neil 4t printer is incredibly rugged. Our workers drop it and it will keep on working," said Amézquita.

In fact, Electronics Shop uses the same printer for a very different but no less demanding application: meter reading. There the reliable Datamax-O'Neil 4t churns out an average of 600 10-inch-long receipts daily.

Amazingly, no special customization was done to the printer to dust or ash-proof it. "Some users put it in a leather case to protect it, some don't. It lasts either way," said Amézquita, "Maintenance is done once per month in the field, where a technician simply blows the dirt and ash out of the machine. It takes about 20 minutes. That's it. That's all we do."

"The Datamax-O'Neil 4t is a very strong machine. Most importantly, it can work for 24 hours reliably. We just swap out the battery every 12 hours when the shift changes," added Juárez. It's no doubt that these hard-working men never imagined that technology would enter their lives in such a critical way. Just like most of us could never imagine how that pairing provides us the sweet spoonfuls we put in our coffee every day.

***A 90 percent processing time reduction and a substantial decrease in errors allowed sugar cane grower Compañía Agrícola Industrial Santa Ana to reduce the number of workers in each cutting group from seven to four, a total of 42 less people. "That is a huge help to our business."***

**-Martín Juárez**  
Compañía Agrícola Industrial, Santa Ana

# Blue Rhino Links Propane Distributors With Retailers Through Durable, Portable System

featuring microFlash 3t thermal printers  
portable route accounting for retail ■ ■ ■



Blue Rhino Corporation supports a network of distributors which operate a propane cylinder exchange service for retailers such as Home Depot, Lowes and Wal-Mart. More than 400 field reps fan out daily to many of the 30,000 locations throughout the contiguous United States plus Puerto Rico to service cylinder cages located in the front of the stores. Based in Winston-Salem, NC, Blue Rhino provides marketing, financial and IT support to these partners so they can deliver their product.

An important part of this process is providing the drivers with a portable route accounting system that tracks all activity for the field service rep. Most critically, the rep must be able to produce a detailed delivery receipt for the retailer that also can serve as an invoice if required.

## Problem ■ ■ ■

Blue Rhino needed to make sure reps had the tools necessary to deliver that information reliably, accurately and in the right format to both their company's main database and the retailer. And, like most route accounting applications, cylinder exchange is rough work, so the tools reps use to get that job done need to withstand punishment. With reps hauling 40-pound cylinders in and out of trucks and cage, it's more than obvious any tools Blue Rhino provided its reps had to be portable and ruggedly reliable.

## Solution ■ ■ ■

Blue Rhino hooked up with another Winston-Salem company, Integrated Solutions International, LLC, to get the complete solution it needed. Integrated Solutions has specialized in providing workforce automation solutions since 1992. Its platform-independent Application Framework and MobileConX Communications Infrastructure products were used as a base to create a tailored route accounting solution for Blue Rhino. The field hardware solution features Datamax-O'Neil Product

*"Every one of the Datamax-O'Neil printers deployed six years ago is still out in the field. We've never replaced any."*

**-Bob Travatello, CIO**  
Blue Rhino Corporation

development's microFlash 3t 3-inch-wide thermal printers. "We use Datamax-O'Neil printers exclusively in our applications," says Mike Sweeney, Vice President of Sales for ISI. "They run forever. At Blue Rhino, and it's been six years."

When Blue Rhino distributors hit the road, their goal is to be as efficient as possible while meeting customer needs. The typical day for a driver involves going to approximately 10 stores, filling the store-front cage to capacity with cylinders. Then, using Hand Held Products' Dolphin 7400 portable terminal, the rep accesses the retailer's account and records all activity such as number of cylinders exchanged and amount charged. The driver then uses a Datamax-O'Neil microFlash 3t printer to create a receipt containing that information which serves as a bill of lading or an invoice when needed. At the end of the day, drivers dial into Integrated Solutions' MobileConX Central server, using MobileConX communications software to upload the day's data into Blue Rhino's billing system, completing the information loop. At the same time, electronic versions of the printed field documents are uploaded and routed to a Blue Rhino intranet Web site for archival, reporting and retrieval. The document images are created in the hand held at the time of transaction using Integrated Solutions' DocMaster software, eliminating the need for labor-intensive document scanning.

The Datamax-O'Neil printer is a critical part of the system, says Blue Rhino CIO Bob Travatello. Previously, drivers dealt with a full-sized printer installed in their trucks which posed an assortment of challenges, from security issues to the amount of time drivers spent walking from the front of a store, where the cages are, to the back of the store, where the receiving offices are. "We wanted a portable solution where the distributor could carry the printer with him," says



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Travatello. Also, they needed to deal with as few consumables as possible and knew they wanted thermal printing. Finally, ruggedness was essential. "After all," he adds, "these reps are hauling 40-pound tanks around. They're not exactly careful. The durable Datamax-O'Neil printers gave us the portability and reliability we were looking for."

## Results ■ ■ ■

The benefits are clear. Internally, Blue Rhino has gone paperless, and being able to transmit all the handheld's data directly into its systems means no rekeying of



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Integrated Solutions

information, saving more time. "[Drivers] are more efficient, without a doubt," says Travatello. "The time savings, the footsteps saved, that's immense. After all, a company doesn't go from 2000 locations to 30000 locations without improving their efficiencies. This solution has helped Blue Rhino become very efficient with their deliveries." With the hand held, printer, electronics and accessories tucked inside a custom case, all the tools go where the drivers go and are at their fingertips when they need them. Drivers can use what they need at the point of activity and know each time those tools will perform for them without fail.

In the demanding environment, the reliable 3ts have been up to the task from day one. They have withstood the pressure, literally. "Some of the 400-plus units out in the field have actually been run over, and yet they still worked," states Travatello. "Every one of the original printers deployed six years ago is still out in the field. We've added units because we are growing, but we've never replaced any. That's quite a testament."



# Coca-Cola Bottling Consolidated has high standards for its route

featuring microFlash® 4t thermal portable printer  
field service and route accounting ■ ■ ■

At the turn of the 20th century, Coca-Cola Consolidated founder J. B. Harrison introduced to consumers in North Carolina's Piedmont region the then-radical idea of drinking this widely beloved fountain drink from bottles. A desire to push the envelope with new innovations has continued for the country's second largest Coca-Cola bottler: Consolidated operates some of the world's most advanced bottling equipment, with some machines running at 2,000 cans a minute. Consolidated works closely with Coca-Cola in developing new drink products for its market. Last year, Beverage World named Coca-Cola Consolidated its "Bottler of the Year."

## Problem ■ ■ ■

The drive to reap the most benefit from technology extends to the company's field operations. Consolidated is well-respected inside and outside the bottling community for its ability to efficiently and effectively harness mobile equipment and software. The bottler has evolved with the industry, from early on-truck devices to batch equipment and now to wide area enabled technology. Consolidated currently employs 6,000 and maintains 5,000 mobile assets across its field organization — a clear indication of the importance of mobile technology to its operations. Consolidated's operation includes route delivery operations and vending machine service and repair that takes its drivers across 11 states throughout the Southeast, with drivers toting mobile equipment into and out of countless retail operations and distribution centers, in all kind of conditions, to reach a consumer base of 18.6 million people. Its product line has burgeoned to nearly 450 SKUs.

## Solution ■ ■ ■

All that history and experience makes consolidated a sophisticated buyer. So it was a feather in the caps of several leading vendors when the company replaced its Norand handhelds, Intermec printers and custom, in-house-developed software for its 1,700 route delivery drivers. Consolidated deployed Symbol Technologies 9060 handheld terminals, Datamax-O'Neil 4t direct thermal mobile printers and Global Beverage Group's Route Express application, which helps route drivers improve merchandising, delivery and reconciliation of routes. GBG has just been acquired by High Jump Software.

***"There is absolutely the most advanced technology in our handhelds, and at the same time there is the competitive pricing and reliability this kind of DSD business requires."***

**-Jim Hilton**

Director of Food and Beverage, Symbol Technologies

Consolidated chose Symbol "because of the value proposition," says Jim Hilton, director of food and beverage for Symbol's industry solutions group. "There is absolutely the most advanced technology in our handhelds, and at the same time there is the competitive pricing and reliability this kind of DSD business requires." Symbol recommended the printer as well.

## Results ■ ■ ■

"They gained productivity by moving to the Datamax-O'Neil printers," says Hilton. "Datamax-O'Neil makes printers that are so durable. Those things just don't break. They offer such reliability that folks like Consolidated can count on them." "Because of its importance to the mobile user and reseller communities, our entire brand promise is based upon reliability and our ease of doing business," says Jeff Osborne, vice president of branding and communications for Datamax-O'Neil Product Development.

Consolidated also brings its high standards in vendor selection to its VAR choices. In the midst of the implementation, following a change in its go-to-market strategy, Symbol recommended that Consolidated begin working with Stratix Corp. to source its mobile equipment. The integrator, based in Norcross, Ga., is known for its significant depth of knowledge, experience, and execution excellence in deploying AIDC and enterprise mobility solutions.

"We had a huge order pending and had to act fast," says Jamie Belongea, director, applications development, for Consolidated. "We established a relationship with Stratix within 30 days and it was a huge success," says Belongea. "Because of our experience with Stratix and the quick turnaround we chose to buy all of our equipment through Stratix."



They've stuck with the integrator even after the Coca-Cola system recommended another VAR. "Size-wise they're very comfortable for us," says Belongea. "We really mattered to Stratix and Stratix really mattered to us." Consolidated relies on Stratix for procurement as well as to consult and troubleshoot on many aspects of their auto ID, wireless and mobile solutions. Because of its deep mobile applications expertise, the company manages its own integration and rollouts. Damaged equipment is sent back to Consolidated before routing to a depot, for example, so the company can keep close tabs on equipment health.



"We're quite a demanding customer," says Belongea, setting high standards and insisting on weekly contact with providers, even if it's just to discuss industry

technology developments. Despite the scrutiny, Belongea couldn't name one thing she'd like Stratix to improve.

Consolidated's satisfaction is most evident in the fact that the same vendors were chosen for a major refresh of mobile technology for its technical services operation that will deploy in the first half of 2007. The project is linked to Consolidated's implementation of SAP as its ERP platform and a transformation of the company's business processes from conventional to predictive selling. The project includes an extensive supply chain redesign, expanding bulk delivery operations, greatly improving warehouse efficiencies and deployment of the redesigned ATLAS route delivery system.

"This will be our first use of cellular communications," says Belonged. "It will be exciting to have real-time communications." Customers with this level of technical sophistication represent a significantly different sale than mobility buyers with less depth of experience and expertise, and require a high level of excellence, value and reliability from the integrators and vendors that win their business.



# Dixon Marketing Takes Smart Logistical Approach To Stocking Military Commissaries

featuring microFlash® 4t thermal portable printer  
asset tracking for military ■ ■ ■

Dixon Marketing Inc. (DMI) of Kinston, NC, has kept America's military supplied since 1964. Not with bullets and tanks, but with something equally important: groceries.

## Problem ■ ■ ■

Since 1964, the company has represented manufacturers' products to commissaries and exchanges worldwide, offering an array of services from marketing and sales to promotion development and full customer service. Always looking for ways to streamline procedures and help reps maximize their in-store time, DMI recently began researching ways to eliminate a time-consuming, error-prone paper-based replenishment system in the 173 commissaries it services in the contiguous United States.

## Solution ■ ■ ■

The company discovered, through partnering with mobile solutions provider Integrated Solutions International (ISI, Winston-Salem, NC), an integrated, easy-to-use application that stands up to the demanding job and which features rugged, and reliable microFlash 4t 4-inch-wide thermal printers from Datamax-O'Neil Product Development. Now, 40 DMI sales reps spend half the time they used to on replenishment – time they now use for merchandising and customer service.

## Hitting The Front Lines To Replenish

DMI salespeople cover miles and miles to fulfill their duties, typically visiting one military commissary per day in their large region. Any equipment riding with them has to withstand all kinds of conditions as the rep makes his way

***"The printer had to be rugged, durable and lightweight because our people have to carry it into and out of the store. ISI recommended the Datamax-O'Neil printers, and they have not disappointed."***

**-Laura Dixon, CEO**  
Dixon Marketing, Inc.

to the store. Once inside, reps take stock of what's on shelves, order to replenish and make note if a bar-coded shelf tag is missing. Their old method involved bringing a computer printout to the store and hand-reconciling the list with the on-shelf product, then making a handwritten action list of orders to place and tags to replace. The whole process usually took 2 1/2 to 3 hours and was rife with accuracy problems.

To find a better way, Dixon partnered with ISI, which has specialized in automating mobile workforces since 1992. After a thorough analysis of the situation, the integrator, which deals exclusively in Datamax-O'Neil printers, recommended to DMI a combination of Datamax-O'Neil's microFlash 4t 4-inch-wide thermal units and Symbol Technologies 2800 handhelds to meet the tough demands of the on-the-road DMI sales team.

## Results ■ ■ ■

"The printer had to be rugged, durable and lightweight because our people have to carry it into and out of the store," says Laura Dixon, CEO of DMI. "ISI recommended the Datamax-O'Neil printers, and we have not disappointed." From experience, Integrated Solutions knew a less rugged printer would not hold up to the rigors of this type of field service application, bouncing along in vehicles mile after mile and then traversing the bumpy road from vehicle to back room, where it was still expected to produce impeccable printouts. The 4t was chosen because of its durability and also because the larger print area accommodated the amount of information needed for the various reports Dixon needs.



  
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In place for just a few months, the new system has already paid dividends in terms of speed and accuracy. Workers head into each store and reconcile shelf inventory with the account information downloaded onto the hand held through scanning and key entry. They also note if any shelf tags are missing. When finished, they hook the hand held up to the 4t to print one of three reports detailing what they have found. If needed, the reports can be printed with bar code, which can be canned to reorder products and/or shelf tags.

Not only have all the paper lists and tedious handwriting been eliminated, but workers now complete their reconciliation in half the time. Even in the larger stores, the job now takes just 1 ½ hours (better if you said “1/3 of the time” or similar). To complete the process, once a week, reps utilize ISI’s MobileConX communications infrastructure to sync up with the DMI AS/400 host to exchange information in another seamless, simple procedure.

### **Getting It Just Right, Now And In The Future**

For Dixon, the system, with its reliable Datamax-O’Neil printers, is exactly right. “The printers work. They do exactly what we expected it to do,” she says. “The reps have responded very positively. The system is helping them do a

***“Now, DMI sales reps spend half the time they used to on replenishment – time they now use for merchandising and customer service.”***

**-Laura Dixon, CEO  
Dixon Marketing, Inc.**

better job.” Time not spent on replenishment allows them to do more customer service-related activities such as merchandising, she adds.

In fact, DMI is so pleased with the system and what ISI has been able to provide them that the company is investigating how to expand the system to include the military exchanges it also services. “ISI has been very responsive. They put the system together in a very timely manner,” says Dixon. “Now we want to work with them to expand it to the exchanges to help our reps do a better job there as well.”



## Cops with Computers

featuring microFlash® 4t thermal portable printer  
parking enforcement citations ■ ■ ■

Cautionary words to those who park in New York City—obey the rules, or pay the price. A computerized parking citation system rolling out to the NYPD's parking enforcement division will effectively eliminate hand-written traffic tickets. The result: a more accurate, efficient and cost effective solution. City officials say the new system will significantly reduce errors associated with hand-written tickets and, according to some estimates; realize millions in unpaid fines owed the city.

The solution consists of Symbol Technologies' handheld computer, the PPT 2800, and Datamax-O'Neil's portable Microflash 4t thermal printer. The terminal's pocket PC platform and features, including bar code scanning and real-time wireless communications, allow officers to scan vehicle registration stickers, print tickets, and upload the information to a central database.

The solution works well in New York City, as New York State requires that all vehicles have their registration affixed to the inside of the windshield. The registration includes a 2-D barcode, which the parking officer scans using the handheld PC, and information about the vehicle is instantly and accurately captured. A traffic summons is printed on the spot by the wearable thermal printer, which is connected to the PC via a wireless LAN. The city expects the solution to close loopholes that have allowed more than one million tickets a year to go unpaid, and all but eliminate human error.

"The significant advantage is that we will go from a 13 percent error rate to less than 1 percent error rate," Police Chief Michael Scagnelli told the New York Post, which also reported that the city could reap \$17 million in extra fines.

Implementation began in January 2004 and is 65 percent complete. "We thought we'd be a little further ahead, but there was a delay with ESRA [Electronic Signature Records Act]," explains Jerry Scalpone, president of Integrated Parking Solutions (formerly Duncan Management Solutions), the Michigan-based reseller handling the implementation. ESRA requires that the citation system be tamper-proof and can prove the ticket is issued by the officer who's credited as having done so. "There was a delay while the city's lawyers reviewed ESRA to ensure that the new system was compliant," which Scalpone says, it is.

***"The significant advantage is that we will go from a 13 percent error rate to less than 1 percent error rate."***

**-Michael Scagnelli**  
Police Chief

Scalpone is confident that the combination of these two products will be a great fit for the city. "They were trying to accomplish accuracy of data," he says. "When officers

manually write the tickets, many never get sent to the tracking system because of errors. If an officer forgets to include a date or vehicle make, for example, it gets bounced from the system. With the handheld, the officer is prompted for every piece of information based on citation conditions and they can't continue until they enter all the proper information."

The printer, Scalpone insists, is perfect for the job as well. "It's simple—it's got no buttons. You put the paper in, line it up and go." Durability and reliability have played key roles, as these devices brave the elements, and parking officer

use, every day. "The printers have stood up to the punishment that these officers put them through—dropping them, whatever would happen out there." The only real challenge in the installation has been its sheer size. The city contracted for up to 2,000 units to be installed throughout 17 parking, enforcement command centers. Scalpone says organizing this has been a challenge. Setting up each command center to house the printers and handhelds, for example, took time and planning. And as for training the officers, "we've trained the trainers, and they've pretty much taken over," he says.

"For 20 years, this city has been trying to solve the problem that when parking agents make a mistake, we bill the wrong people and a lot of the fines never get collected," Mayor Michael R. Bloomberg told the New York Times. "Using this technology is an idea whose time has come. Finally, I think, we've got it right."



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# Omniciel Opens The Beer Market With DSD Solutions

featuring microFlash 4T thermal portable printers with wireless Bluetooth  
direct store delivery for the beer market ■ ■ ■

***“While the information transfer using our competitor’s solution took one minute on average, ours only requires 15 seconds. With 300 routes to synchronize each morning, that was important to Labatts,”***

**-Jan Lessard**  
Founder, Omniciel

When it comes to DSD solutions for beer producers in Quebec, Omniciel has cornered the market. The company secured system design, installation, and ongoing support with Labatts, Molson-Coors, and Sleemans. In addition, Omniciel sells solutions and support to multiple DSD vendors in other markets, such as dairy vendors. Founded in 1967 by Jan Lessard, 90% of Omniciel's customers are food and beverage distributors.

## Problem ■ ■ ■

While Omniciel doesn't specifically target breweries for new business, the successful implementation at Labatts attracted the attention of other regional distributors. Quebec is the only province in Canada where beer is sold in convenience and grocery stores. Elsewhere in Canada, the law requires that beer must be purchased in beer-specific stores, eliminating the need for DSD solutions. Ontario is close to adopting convenience and grocery store beer sales, and the other provinces typically follow along shortly thereafter. When the law changes in the other provinces (proposed in all), the potential for these route solutions could increase fivefold.

Labatts was the first beer producer to purchase Omniciel's complete DSD solution, which included a RoadManager back end system, Road Partner handheld software, and the Omnicom communication software. Intermec 740 handhelds with Datamax-O'Neil 8i printers were customized for hands-free printing, including development of a custom cradle to allow drivers to carry both units.

## Solution ■ ■ ■

The Molson-Coors project was rather large, a \$2,200,000 (Canadian) sale that included 325 routes across Quebec. The customer had chosen a different handheld computer than Omniciel had used previously, from DAP. “Rugged handheld units used to be too big and heavy for drivers to use, but the DAP ce3240 was very light [just under 16 ounces] with great processing speed,” said Lessard. Molson also requested that Omniciel use the Datamax-O'Neil 4T mobile printer with Bluetooth, a Windows-compatible device that generates a

ourish- wide printout. It activates when it receives a data signal, and hibernates when not in use.

Molson was the first customer to use the Datamax-O'Neil 4T with Bluetooth in DSD. Omniciel used a printer with a built in cradle for previous installations, but the DAP 3240 did not fit that design, so they went with a wireless printer and carrying case.

“We won the sale based on our driver and user training, the ease of operating the solution, and our communications software,” said Lessard. The handhelds have to communicate to the back end system and Omniciel's offline synchronization reduces the time of communication. “While the information transfer using our competitor's solution took one minute on average, ours only requires 15 seconds. With 300 routes to synchronize each morning, that was important to Labatts,” added Lessard.

The difficulty Omniciel faced securing the implementation deal with Molson-Coors was not technical, but competitive. “Molson is very competitive with the other beer vendors and, to prevent information sharing, the company rarely uses the same suppliers. In this case, they were impressed with our references in the industry and saw the benefit our solution could provide them,” said Lessard. Omniciel completed the implementation in March, 2006. The Molson-Coors (Quebec) Looks To Omniciel For New Solution project was simplified by Omniciel's extensive business experience with the other beer DSD solutions. When Molson Canada wanted to renew its invoicing tools in its DSD operation in the Province of Quebec, Omniciel was selected.



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### Results ■ ■ ■

Omniciel provided an integrated solution to Molson, including DAP CE3240 handheld computers, Datamax-O'Neil 4T 4-inch thermal printers, wireless Bluetooth for the handheld and printer, and Omniciel Route Partner and Route Manager software.

"We were thrilled by the performance and dedication of Omniciel with this project," said

Pierre Berthiaume, distribution principal director at Molson Canada. "The dedication demonstrated by Omniciel in testing and deploying the new technology was outstanding, specifically with 32 delivery sites converted and 540 employees trained in less than 6 weeks.

With only two companies providing DSD solutions in Montreal, one in the Maritimes, and another in Ontario, you get to know the competitors and have to continually assess their capabilities and systems. A software maintenance agreement option allows customers' drivers to call Omniciel's toll free line 24-hours a day for program support. If they have a problem at 4:00 a.m. (not an unusual time for

DSD employees to work), drivers can call to get their systems up and running. This support option allows customers to eliminate redundant costs. For example, Dannon (dairy operations) eliminated two tech support employees in Montreal when it switched from another provider to the Omniciel DSD solution with a service contract.



#### **ONE SOFTWARE PACKAGE WITH CUSTOM SETTINGS OFFERS FLEXIBILITY TO CUSTOMERS**

The Omniciel DSD solution is one standard package with more than 2,500 options and parameters built in. While the

same software is installed with each customer, the settings are changed to fit their particular needs. "Although our competitors have a core software package, they have to add options their customers want, which creates an orphan solution for each implementation. Our customers know they can change parameters at any time with minimal effort using a dashboard themselves, or with our help," added Lessard. Customers can also pilot varying parameters on a couple of route solutions before deploying changes to the entire fleet.

The software allows drivers to perform in store competitive product surveys or complete truck inspection reports. When customers begin using Omniciel's solution, they typically perform only sales and delivery (invoice, inventory) functions. Should they decide to do a survey (such as the number of competitive products in stock or how much inventory there is of each), they can have two or three drivers test it. Truck inspection reports occur in the same fashion. Customers can change variables between routes, such as weekly inspections on trucks over 100,000 miles and bi-weekly on those under that mileage.

#### **OMNICIEL SOLUTION STREAMLINES THE DSD PROCESS**

At each store, the drivers deliver the order of beer and pick up the returns, including empties and damaged product. They key in the returned units with the handheld computer, scanning by individual piece or inputting quantities. After the drivers ensure a delivery is complete, they finish the transaction and print an invoice.

Normally drivers enter the store with a dolly (manual or motorized) along with the handheld and printer case. Unlike older printers, the Datamax-O'Neil 4T units are not fixed in the truck. Drivers complete and print the final invoice in the store before heading to their next stop to repeat the process.





# Safelite technician uses the Datamax-O'Neil 4te thermal printer synced to his BlackBerry device

featuring microFlash 4te portable receipt printer  
field service on-site billing ■ ■ ■



For windshield replacement specialist Safelite AutoGlass, which sends its technicians to customers' homes or businesses to do repairs, a little cracked glass isn't a problem. But keeping track of mounds of paper-based work orders was a system the company knew needed repair.

Technicians routinely made as many as four calls to dispatch per repairs to verify work orders and call in credit card payments.

While it was more than ready to take the plunge to the paperless process, Safelite knew there was one piece of paper that was important to keep around: techs still had to be able to run credit cards and give customers printed receipts on-site in the field.

## Problem ■ ■ ■

Safelite wanted a complete wireless solution that included GPS-equipped devices, portable thermal printers, signature capture and credit-card processing capabilities. While Safelite had a strong internal application development team, the company had never developed mobile applications. For help with that, it used Dexterra's open development platform, Dexterra Concert, and Dexterra's full-service partner program, Dexterra DevNetwork Program.

Safelite knew it wanted to use BlackBerry handhelds, but the company had a harder time finding a suitable Bluetooth-enabled portable thermal printer.

"The printer had to read the credit card the first time and not provide any false reads," says Chris DeLong, Director of I.T. Field Systems at Safelite. It also had to be rugged, and be able to process the receipt to Safelite's exact specifications.

*The rugged Datamax-O'Neil 4te comes with Bluetooth and 802.11b/g connectivity, fast processing, external KED status indicators, an external charging port, and quick release battery clamps.*

## Solution ■ ■ ■

After testing multiple printers, Safelite went with Datamax-O'Neil's 4te printer. The rugged Datamax-O'Neil 4te comes with Bluetooth and 802.11b/g connectivity, fast processing, external KED status indicators, an external charging port, and quick release battery clamps.

When techs arrive at a site, they enter the required info into the BlackBerry, which triggers a work preauthorization form that includes a cost estimate. Customers sign with a Logitech Bluetooth-enabled optical pen. The form is printed on the Datamax-O'Neil printer for the customer, while the pen transmits the signature back to the BlackBerry to complete the work order.

When the job is complete, the tech hits a button to access the tendering screen. The customer's credit card is swiped for on-the-spot approval. The receipt prints for the customer, while the pen transmits the data back to the BlackBerry.

## Results ■ ■ ■

"We have standardized processes that we ask our technicians to follow, and this solution helps techs keep to that process," says Nate Beckman, Mobile Resource Management (MRM) Project Manager at Safelite parent company Belron. "It really helps clean up and insure all aspects of data collection."

-Teresa Von Fuchs



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# Drive Route Sales Revenue Growth With Additional Technologies

featuring microFlash 4T thermal portable printers with wireless Bluetooth  
route accounting and direct store delivery ■ ■ ■

***“We chose the Datamax-O’Neil 4t thermal mobile printers to give the route drivers print capabilities in the store, reducing the travel back and forth to the truck that’s required with the larger immobile units.”***

**-Bob Montana**  
Summary Systems

Integrator Summary Systems didn’t set out to develop and implement a route accounting and DSD (direct store delivery) solution for Natural Ovens when the specialty bakery’s executives first contacted the company. So how did Summary Systems end up with the sale and an eight-year relationship supporting the system? “While soliciting them for our other applications, Natural Ovens indicated the need for a handheld route accounting system,” said Bob Montana, president of Summary Systems.

## Problem ■ ■ ■

The integrator was experienced with fleet onboard computers, GPS (global positioning systems), and wireless communication applications, but had not yet developed a route accounting solution. Summary Systems was encouraged by the challenge of adding a new technology to its portfolio and assembled the hardware and software that Natural Ovens requested. The solution required a lot of customization, and the interface with the accounting system was exceptionally complex. However, Summary Systems was able to design a suitable system and ultimately secured the sale.

Natural Ovens makes high-end breads with ingredients such as omega threes and other nutrients, targeted to very health conscious customers. Located in Manitowok, WI, the bakery delivers its products to grocery stores in Minnesota, Wisconsin, Ohio, and Illinois. Because the bread contains fewer preservatives than traditional varieties, it has a relatively short shelf life. Therefore, Natural Ovens can only make deliveries within a certain radius from its one central bakery. The route sales drivers stock shelves in supermarkets and, before the solution was implemented, were counting inventory, ordering, preparing invoices, and manually issuing credits. Each driver had to calculate the proper amount of bread to leave at each stop by anticipating the sales of up to 30 items. “The company doesn’t want a lot of stale product being returned or a shortage of the bread customers want to buy. Ideally, Natural Ovens wants some of each product left on a store’s shelf when drivers make each visit,” said Montana. “ZAPs [zero available products] could signify a lost sale, so getting



the proper allocation on each store’s shelves is critical to meeting the bakery’s sales objectives.”

To improve the inventory and stale removal process, Natural Ovens wanted automated systems and processes with templates of how much bread to leave on the shelves at each store. Many route sales companies tell drivers exactly what to leave, but with Natural Ovens’ breads’ relatively short shelf life, that wasn’t very practical. The drivers are responsible for ordering product for their entire route each day, which can be a challenge with fluctuations in sales at each store and by season. It took training and experience for a driver to properly allocate the bread varieties among each day’s accounts without running out of the best-selling product before the last stop. Natural Ovens wanted the drivers to have access to the current truck inventory at any time in order to distribute the product lines and reduce the amount of stale bread and ZAPs.

## Solution ■ ■ ■

With the new application, Natural Ovens’ 100 route drivers enter and track their truck and store shelf inventory with Two Technologies Jett. The handheld software gives them a template outlining the amount of each type of bread to leave at each stop based on the entire route, so the product allocation maximizes sales and minimizes the out-of-date items. The driver still decides whether to accept or decline the computer’s recommended order — the application is merely a tool to guide the choices. The inventory and order



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software had to be configured to maintain a running inventory and account history to properly calculate the quantity of each bread variety to leave.

## Results ■ ■ ■

Summary Systems deviated from selecting the full page (8 ½ inch x 11 inch) printers found in most route accounting systems for its solution. “We chose the Datamax-O’Neil 4t thermal mobile printers to give the route drivers print capabilities in the store, reducing the travel back and forth to the truck that’s required with the larger immobile units,” said Montana. The 4-inch printer was relatively new when the Natural Oven solution was designed, but most units remain in operation after seven years of route use. The durability, flexibility, and print quality of the 4t have kept it as the printer of choice for Natural Ovens. “The Datamax-O’Neil units print out route information at the start of each shift, individual invoices for each delivery, and final reports at the end of the day, so they get quite a workout,” said Montana.



Summary Systems also designed a belt-mount for the printer and a holder/charger for the back of the truck when the drivers assemble their deliveries.

## Custom Software Allows Natural Ovens To Meet Their System Goals

Summary Systems assured the sale with its AAS (route accounting automation system) software. RAAS integrates with companies' existing accounting systems to streamline billing and accounts receivables. It also allows Natural Ovens managers to run sales reports by product and customer to help the drivers manage bakery order quantities. Each supervisor can create transactions (changes) that automatically update the corporate accounting system using RAAS. Inversely, the corporate system can update RAAS and each handheld computer when a change is input.

“We created additional tools for Natural Ovens, allowing its route supervisors to analyze how drivers are utilizing the inventory and delivery information,” said Montana. A route supervisor report tool charts the ZAPs that occur at each account. Since some drivers don’t come into the office to synch their data, Summary Systems added cellular and landline communications capabilities to the solution.

Drivers that do come in transmit their data (inventory, billing information) with a cradle (docking station). At the start of the day, the devices receive route information changes and order reconciliation (orders versus the product that was available in inventory). Other RAAS features include full invoice editing, flexible product pricing, custom invoice formatting, detailed sales histories, vehicle tracking, and DEX (in store data exchange). With the new system in place, Natural Ovens was able to improve daily product inventory tracking for production schedules and provide tools for reducing levels of stale bread removed from each account. Summary Systems continues to expand the capabilities of the RAAS solution with additional implementations and pilot projects using GPS and multiple wireless communication options.





# VAR Installs 1,800 Mobile Printers And Handhelds For Snack Foods Manufacturer

featuring microFlash 4T thermal portable printers with wireless Bluetooth  
direct store delivery in the snack industry ■ ■ ■



*"The handheld terminals also have SD expansion ports, allowing a Snyder's driver to back up information to removable media. In the event a terminal fails, the driver can swap the SD card into another terminal without losing the day's work."*

**-Darren Weiss**  
Ross Computer Systems Manager

## Solution ■ ■ ■

In the case of Snyder's, the VAR recommended its STORS software, running on Motorola MC-9090 handheld terminals. Since Snyder's uses JDE, the STORSLink middleware was included. "To allow drivers to print delivery tickets in the field, we opted to use Datamax-O'Neil 4t mobile printers with Bluetooth capabilities," says Darren Weiss, sales and marketing manager for Ross Computer Systems. In addition, Ross Computer Systems recommended some warehouse-side upgrades including Motorola WS-2000 wireless switches and AP-300 access ports (for each of Snyder's 70 warehouses across the United States). Snyder's accepted the VAR's proposal.

## Results ■ ■ ■

In all, Ross Computer Systems provided Snyder's with 1,800 handheld terminals running STORS software and the same number of mobile printers. Today, a Snyder's driver can use the handheld terminal to scan product information rather than manually key it. Also, the handheld communicates via Bluetooth to the Datamax-O'Neil mobile printer to print a receipt the driver can provide to the store. "The handheld terminals also have SD [secure digital] expansion ports, allowing a Snyder's driver to back up information to removable media," says Weiss. "In the event a terminal fails, the driver can swap the SD card into another terminal without losing the day's work." Once a

Direct store delivery (DSD) installations abound. If you're one of the lucky VARs already landing these sales, you know how lucrative a market this is. If you're not, perhaps you should consider investigating how your company can offer DSD solutions. For a good example of a successful DSD implementation, look no further than a recent installation at Snyder's of Hanover. Snyder's of Hanover, one of the largest manufacturers of pretzels and salted snacks in the United States, uses JD Edwards (JDE) as its ERP (enterprise resource planning) system.

## Problem ■ ■ ■

In the past, Snyder's delivery drivers used MSDOS- based handheld terminals to keep track of units sold. The terminals had no bar code scanners, which meant that drivers had to key in all product information and quantities using a keypad. In addition, end-of-day duties required the drivers to upload orders via cradles attached to PCs located in Snyder's warehouses. After researching DSD solutions, Snyder's called Ross Computer Systems and asked for a demo of the VAR's software and hardware solution.

Ross Computer Systems creates route accounting software for the DSD industry. Specifically, the VAR creates DSD solutions that reside on both sides of an ERP system. These solutions include the host software (where modules such as order entry, accounts receivable, warehouse inventory, sales analysis, and forecasting reside) and the software running on handhelds carried in the field. In the event a customer already is using an ERP system such as SAP or JDE, Ross Computer Systems has a middleware solution called STORSLink, which connects its handheld solution, STORS, with the ERP system.



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driver goes back to the Snyder's warehouse to load the truck for the next day, the handheld can connect to the access points and wirelessly send information to the JDE system, letting Snyder's know exactly and immediately what products need to be replenished in the warehouse. Snyder's and Ross Computer Systems currently are working together on plans to implement the VAR's merchandising handheld solution for Snyder's sales force. More handheld terminals and printers are on the way, as Snyder's hopes to further enable its mobile workforce to take orders at the store and get the information back to the plant in real time.

### **Use Customer References To Build Your Mobile Printing Clout**

You might be asking yourself how Ross Computer Systems landed this whale of a project. In this case, the VAR has a reputation in the route accounting industry that helped the company earn Snyder's business. As mentioned, Snyder's called them. To get to this point, the VAR employs marketing tools that any other VAR could be using. "To show instant credibility, we rely heavily on customer references," says Weiss. "We continue to work on building our reputation so prospective customers will know that we understand their businesses and that we can deliver a successful project."



# 4te Printer and Qualcomm OmniTRACS® Mobile Information System Refine Crude Oil Transportation

featuring microFlash® 4te portable receipt printer  
on-site receipt printing ■ ■ ■



Every day, millions of people drive into gas stations to refuel their cars without giving a thought to the process of how that fuel gets there when they need it. Genesis Crude Oil plays a central role in transporting fuel to gas stations in the Gulf Coast region of the United States, which encompasses the states of Texas, Louisiana, Arkansas, Mississippi, Alabama, and Florida.

Genesis Crude Oil is a division of Houston-based Genesis Energy, a growth-oriented company with a diverse portfolio of customers, operations, and assets, including refinery-related plants, pipelines, storage tanks, and terminals. The primary function of Genesis Crude Oil is moving crude oil, via trucks, from pumping stations to strategically located storage facilities, where the product is held until it's time to move it to a refinery.

To make sure its deliveries always flow smoothly, Genesis Crude Oil equipped its fleet of trucks with the OmniTRACS® Mobile Information System from Qualcomm Enterprise Services. This system allows Genesis dispatchers to maintain contact with all drivers at all times. "We can use the OmniTRACS® System to send messages to drivers in places that cell phones don't reach," says Terry Lincecum, Louisiana district manager for Genesis Crude Oil.

The system, which relies on satellite technology, also sends data about conditions on the truck—such as its current location or the temperature and weight of the product being carried—back to regional headquarters. "If there's a problem with one of our trucks after it leaves the pick-up location, we can find out about it before the driver reports it," Lincecum says. That's an important capability, because drivers are picking up crude oil from pumping stations in remote areas, and having to wait for drivers to be in cell phone range to learn about problems could delay finding solutions.

*"We don't have nearly as much downtime now. With our previous printers, when one went down, the driver would have to locate another truck nearby and wait for that driver to show up to print a receipt for the customer. We haven't had those issues with the Datamax-O'Neil printers."*

- Terry Lincecum

Louisiana District Manager, Genesis Crude Oil

## SOLUTION OBJECTIVES

- Ensure smooth flow of deliveries
- Reduced maintenance requirements
- Faster transaction processing

## SOLUTION RESULTS

- Reduced downtime results in additional deliveries
- Higher print quality increases customer satisfaction
- Ease of use improves efficiencies

## Problem ■ ■ ■

About a year ago, as the Louisiana region was adding new trucks to its fleet, Lincecum discovered a way to make the OmniTRACS® System even more valuable: he upgraded the printers they use with the system. Genesis Crude Oil drivers rely on wireless mobile printers to generate receipts confirming the contents of the loads they pick up from each customer. The driver also keeps a copy of the receipt to use



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as a manifest if a Department of Transportation inspector asks for documentation of the truck's contents.

The information on that receipt also is transmitted, via the OmniTRACS® System, to Genesis Crude Oil headquarters, facilitating accurate recordkeeping. "As we were adding the new trucks, we realized that the printers we were using were becoming obsolete," Lincecum recalls. One clue to this obsolescence was the increased frequency with which those printers were being repaired. After reviewing the costs of those ongoing repairs, Lincecum thought it was time to consider replacing them.

## Solution ■ ■ ■

At the suggestion of Systems Application Engineering, Inc. (SAE), a Houston-based value-added reseller and systems integrator, Genesis Crude Oil selected the microFlash 4te wireless portable thermal transfer printer from Datamax-O'Neil. The 4te is the latest version of Datamax-O'Neil's legendary 4t printer, the industry's leading portable thermal printer and the defacto standard for route accounting and field mobile printing applications.

To accommodate the need for faster transaction processing in the fast-paced world of mobile field applications, the 4te printer incorporates a new, 32-bit RISC ARM 9 processor that allows the printer to process complex applications up to ten times faster, and enables the user to enjoy exceptionally high print throughput. It can print up to 2,240, 6-inch receipts on a single battery charge with automated, power-saving sleep and wake-up modes.

That printing capability was a selling point for Genesis Crude Oil, which was getting complaints from drivers about having to replace the paper in the older printers too often. But the most attractive feature of the 4te, according to Lincecum, was the newly developed kit for pairing the



printer with the Qualcomm OmniTRACS® System. The kit made the transition to the new printer seamless. "Our drivers and customers really like these new printers," Lincecum says. "The drivers like them because they don't have to change the paper as often; that improves their efficiency. Customers like them because the print quality is much better. The receipts are much easier to read."

## Results ■ ■ ■

Lincecum says Genesis Crude Oil is pleased that the 4te is continuing the Datamax-O'Neil tradition for product reliability. After six years in the field, fewer than 10 percent of the units have ever been in a repair facility, even though they operate in harsh industrial environments.

"We don't have nearly as much downtime now," Lincecum says. "With our previous printers, when one went down, the driver would have to locate another truck nearby and wait for that driver to show up to print a receipt for the customer. We haven't had those issues with the Datamax-O'Neil printers."



# Results from Datamax-O'Neil microFlash 4te Printers Stand Up in Court for Sand Springs, Oklahoma Police Department

featuring microFlash® 4te thermal portable printer  
parking enforcement citations ■ ■ ■

Sand Springs, Okla. is a growing city of residential houses and small businesses just west of Tulsa. With a Police Department staff of 24, Sand Springs must use limited law enforcement resources efficiently to ensure the safety of its citizens and officers. The Sand Springs Police Department had recognized for some time that using handwritten tickets to issue traffic citations was due for a change. But only recently has technology capable of making real improvements become reliable and economical enough to be considered a practical option. Nearby Tulsa, as well as police departments in states such as Florida, Maryland, Arizona, and California, had implemented electronic citation processing—known as eCitation or eTicketing—with good results. In early 2009, the City of Sand Springs decided that it was time to do the same.

## Problem ■ ■ ■

Although not immediately apparent, writing a traffic citation is one of the more dangerous situations that a police officer routinely encounters. A 2004 study by the National Highway Traffic Safety Administration reports that being struck by another vehicle is the third leading cause of death for on-duty police officers. Too many of these deaths occur while writing routine roadside traffic tickets. Traditional paper tickets are part of the problem because they are slow to write and consume much of the officer's attention, thereby increasing the risk of an accident.

Paper tickets are also labor-intensive and error-prone. Time spent writing tickets is time subtracted from patrol duties. Poor penmanship, dark nights, bad weather, and human nature contribute to handwritten tickets that are ultimately dismissed in court as incomplete, erroneous, or

***"Our results with the Saltus/Intermec/Datamax-O'Neil eTicketing system have exceeded our expectations, both in reducing the time our officers spend issuing citations and in eliminating redundant internal operations. The overall result is better traffic enforcement, and we've already seen a decrease in our accident rate."***

**-Mike Carter,**  
Assistant Chief of Police, City of Sand Springs

unreadable—wasting everyone's time. Even when a paper-based system works perfectly, the effort to process a handwritten ticket is just beginning when the ticket is issued. Data entry clerks must then manually key the information on the paper ticket into one or more records management systems and update those systems indefinitely—tedious work that could add yet more errors.

## Solution ■ ■ ■

The fine edge of performance along which law enforcement moves is an aggregate of details. Every piece of equipment must function as expected, both on good days and when things become difficult, without introducing distractions that could interfere with an officer's judgment or responsiveness. Unless an eTicketing solution could meet such standards, the Sand Springs Police Department would not acquire it. With this in mind, Sand Springs evaluated several eTicketing solutions, finally selecting the design proposed by Saltus Technologies of Tulsa, Okla., a system integrator specializing in mobile applications.

The Sand Springs eTicketing solution consists of digiTICKET software developed by Saltus, the Intermec CN50 handheld computer, and the Datamax-O'Neil microFlash 4te wireless thermal printer. "Reliability and ease of use were the highest priorities for the Sand Springs system," says Shawn Sicking, a director at Saltus. "Reliability is always critical for law enforcement. The Sand Springs Police Department was particularly interested in ease of use because that's how you reduce the officers' roadside exposure time."



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To issue a ticket with the digiTICKET/Intermec/Datamax-O'Neil system, the officer first scans the offender's driver's license, accurately capturing all the information on it. The officer then selects statute violations from drop-down menus—again, fast and accurate. Using the handheld CN50 computer itself, the officer can take a picture of the offender, an accident scene, or documents as the situation requires. Finally, the offender's signature is captured via touch-screen, and the Datamax-O'Neil 4te—which is connected to the CN50 by a wireless Bluetooth radio connection—prints a hard copy of the ticket that is given to the offender. At the end of a shift, the officer docks the CN50 to a "cradle" back at the station and all the stored ticketing information is automatically uploaded to the records management system.

"For the overall system to succeed, the printer has to be rugged," says Sicking. "In the Sand Springs system, there is a strict up-time requirement of 99.9 percent for the printer. A prime reason for our choosing the Datamax-O'Neil 4te is that it allows us to satisfy this

customer requirement." The 4te's performance should come as no surprise. Datamax-O'Neil has been designing mobile printers for the most demanding environments since 1981, and the Datamax-O'Neil 4te is no stranger to law enforcement. On one occasion while being used in a similar eTicketing application in Oxnard, Calif., a 4te was dropped from a police motorcycle traveling at 45 mph and was subsequently run over by a passing motorist. The 4te experienced some external damage and required servicing, but was still able to successfully print a self-test ticket. The incident was well documented because every Datamax-O'Neil printer that receives servicing is subjected to a complete engineering review towards the goal of improving its design even more.

## Results ■ ■ ■

The Sand Springs Police Department began working with Saltus Technologies in March 2009. By May, the Saltus/Intermec/Datamax-O'Neil eTicketing solution was rolled out to a pilot group of seven officers. "We expected to see some improvement," says Mike Carter, assistant chief of police for Sand Springs, "but our actual results were better than anticipated." Most conspicuously, an eTicket—always completely filled out, always printed legibly—could be issued in about one-third of the time needed to issue a handwritten ticket. Because of its solid performance in pilot testing, the Saltus/Intermec/Datamax-O'Neil system was deployed to the full department by the end of 2009. Not one printer problem has yet been reported. The Datamax-O'Neil 4te printers continue to operate as expected—both on good days and when things become difficult.

### **Solution Objectives**

- Reduce overall time needed to issue a roadside traffic ticket
- Reduce cost of processing tickets once issued

### **Solution Results**

- Time needed to issue a single roadside traffic ticket reduced from approximately six minutes to approximately two minutes
- Redundant internal operations streamlined, thus reducing ticket processing cost

*The Datamax-O'Neil microFlash 4te wireless thermal printer has the reliability and ease of use necessary to print traffic tickets under roadside conditions that will support the prosecution of traffic statute offenders for the Sand Springs, Okla. Police Department.*



# Achieve Multiple Benefits From Mobile Route Accounting Solution

featuring the microFlash 4t thermal Bluetooth printers  
route accounting DSD ■ ■ ■



How are your customer satisfaction levels? Are they as high as you'd like them to be? If you're employing some type of paper-based data collection method for your field force, you'll probably never achieve your customer satisfaction goals. Why? Because mistakes happen. An employee in the field could write something down incorrectly, or a data collection clerk could misread a field worker's handwriting and the next thing you know, you've not only got an unexpected expense, you've got an unhappy customer.

Usually, companies will wait until these unexpected expenses and poor customer satisfaction ratings reach a critical point before overhauling their manual processes by implementing some kind of automated route accounting or field service solution.

## Problem ■ ■ ■

That wasn't the case with G&K Services, Inc., a \$930 million provider of branded business apparel (e.g. work uniforms) and facility services (e.g. floor mats, rest room hygiene solutions). G&K was proactive. "The catalyst for us to update our paper-based route maintenance system wasn't an excessive amount of errors, but our desire to improve our customer service levels. This is, after all, a very competitive market," explains Mark Billitteri, VP of information technology at G&K.

G&K has approximately 1,400 routes, which are each maintained by a different RSR (route service rep) and truck. Route maintenance refers to the service the RSR (i.e. driver) provides to each customer while on-site. For instance, an RSR could deliver cleaned uniforms, add new uniforms to an order, replenish consumables, or make credit adjustments to a customer's account. The company services over 160,000 customers (over 1 million people wear G&K uniforms every day). Each uniform or garment is

*"By implementing a new route maintenance solution, we didn't expect to eliminate hours from each RSR's [route service rep's] day. We simply wanted to streamline the RSRs' processes while reducing the possibility of errors. ..."*

**- Mark Billitteri**

VP of Information Technology, G&K Services, Inc.

allocated to a specific wearer via a serialized lot number printed on a bar code. That way, G&K can track each uniform's whereabouts and collect information on wearing patterns and cleaning history.

In the past, all of the documentation for these visits was performed on a multipart form, which also served as an invoice. Before leaving on their daily routes, RSRs would pick up these invoices, which pertained to the week's deliveries. As they visited customers, they would handwrite any adjustments and new orders. At the end of the day, the RSRs would return the forms to the front office for data entry into G&K's proprietary route accounting system.

"Although we didn't track errors as a core metric, we felt any error is one too many," says Billitteri. "Also, by implementing a new route maintenance solution, we didn't expect to eliminate hours from each RSR's day. We simply wanted to streamline the RSRs' processes while reducing the possibility of errors and improving customer service levels."

## Solution ■ ■ ■

In 2005, after making the decision to develop a new route maintenance system, Billitteri and his technical teams took the first step and chose Apacheta Corp.'s mobile workflow software as the basis of the solution.



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The customization of the software and development of the final application took nearly two years. "Our biggest challenge was integrating the Apacheta application with our legacy proprietary back end route accounting system," states Billitteri. "We wanted to create this integration with minimal to no changes to our legacy processes. We eventually achieved the integration by using TIBCO middleware."

The rest of the solution included Motorola MC9060 handheld computers, Motorola WS51900 wireless switches, Motorola Mobility Service Platform (MSP), and Datamax-Datamax-O'Neil microFlash 4t thermal Bluetooth printers. Each RSR is now equipped with a handheld (using the MSP) and printer. Wireless LANs (WLANs) consisting of the Motorola WS51900 wireless switches have been installed at each of G&K's 150 facilities.

The invoice and customer information for each RSR's daily route is wirelessly downloaded to the handheld each day prior to an RSR's shift. Route maintenance is achieved by using the handheld's integrated bar code scanner and touch screen for input into the Apacheta application (which resides on each handheld).

RSRs print a final up-to-date invoice on-site using the Datamax-O'Neil printers. At the end of day, the RSRs return to their respective G&K offices and upload the day's transactions to the network using the WLAN. The transactions are reviewed through a Web portal by the route manager and once approved, posted to the route accounting (i.e. billing) system.

As you can imagine, rolling out a solution like this to 150 locations with 1,400 users was a daunting task requiring a lot of coordination. "We drafted field and corporate employees to be on the deployment team and to help coordinate the whole project," explains Billitteri. "We developed a schedule of events that had to be completed weeks in advance of any equipment arriving at a location. For instance, we would send each site information on how to install the wireless infrastructure and assemble the boards for the handhelds' charging cradles."

Staging the equipment for shipping was also a big challenge. The company had purchased 1,400 handhelds, printers, and holsters plus enough for a spare pool. Additionally, there was the challenge of coordinating and shipping 150 WLANs. To help with all of the staging and deployment of this equipment, G&K used Stratix Corp., an integrator of AIDC (automatic identification and data collection) solutions and a large Motorola VAR.

G&K continues to use Stratix today for repairs, returns, and deployment of equipment to new locations. Training was another part of the new system's rollout that had to be coordinated. The team designed a train-the-trainer model to ensure training would be consistent. The deployment team developed a schedule and then visited with trainers from

The image shows the cover of the November 2007 issue of 'Integrated Solutions' magazine. The cover features a man in a blue shirt and glasses, identified as Mark Billitteri, VP of information technology at G&K Services, Inc. He is holding a handheld device. The magazine title 'Integrated Solutions' is prominently displayed in a large, stylized font. Below the title, it says 'FOR WIRELESS, MOBILITY & RFID'. The main headline on the cover is 'Mobile Route Accounting's Multiple Benefits'. A quote from Mark Billitteri states: '\$930 million G&K Services, Inc. eliminated errors, reduced labor, and improved customer service by deploying a wireless route accounting solution.' The cover also includes several smaller headlines: 'ASSET TRACKING' (Improves your company's profitability by tracking the right assets), 'FIELD SERVICE' (An software-based company increases field service efficiency 35% by upgrading to smartphone technology), and 'RUGGED HANDHELD' (Don't miss these tips on maximizing your staff's productivity with rugged, rugged mobile computers). The G&K Services logo and website 'gk-services.com' are also visible.

every location who then conducted training for every route driver. The local deployment team at each location then managed the launch of the new solution to make sure everything went smoothly.

When G&K Services, Inc., a \$930 million provider of branded business apparel (e.g. work uniforms) and facility services (e.g. floor mats, rest room hygiene solutions), decided to upgrade its paper-based route accounting system to a mobile version, it first turned to Motorola (formerly Symbol Technologies). G&K had used Motorola handheld computers in its warehouse for years and wanted to equip its field workers with similar rugged units. Motorola then introduced G&K to one of its ISV (independent software vendor) partners, Apacheta Corp. G&K chose Apacheta RouteACE mobile sales, delivery, and merchandising software as the foundation of its new mobile route accounting solution. "We felt that Apacheta's technology, especially with its wireless, printing, and data management capabilities, was better than anything we had seen and would help us accelerate the development of this application," explains Mark Billitteri, VP of information technology at G&K.

RouteACE offers customizable workflows for automating processes for delivery drivers. For instance, it can keep track of and validate what inventory was loaded onto a truck, it can be used for invoicing and payment processing, and it can automate the end-of-day settlement and mobile server update process.

G&K worked with Apacheta for nearly two years to customize RouteACE for its specific needs. "Apacheta did the actual development work," says Billitteri. "I can say that Apacheta was able to turn around requested modifications and enhancements very quickly, which was key to the success of the project."

## Results ■ ■ ■

Today, the application resides on the Motorola MC9060 handheld computers that G&K route service reps (RSRs) use in the field. The RSRs use the application for managing inventory, taking customer orders, making invoice adjustments, and printing final invoices using Datamax-O'Neil Bluetooth printers connected to the handhelds.

Mark Billitteri, VP of information technology at G&K Services, Inc., knew that developing a mobile route accounting application to replace the company's paper-based process was only part of the overall solution. The software application had to be used in conjunction with hardware that was intuitive and rugged, if the whole solution was going to be accepted by the company's nearly 1,400 route service reps (RSRs).

Ultimately, G&K chose Motorola MC9060 handheld computers and Datamax-O'Neil microFlash 4t thermal Bluetooth printers. The MC9060 has an integrated bar code scanner, a keypad, and touch screen. Its Bluetooth radio wirelessly connects the handheld to the Datamax-O'Neil printer, eliminating any cumbersome wires. G&K also uses the Motorola Mobility Service Platform (MSP) for managing and monitoring all its handhelds from one remote location.

The Datamax-O'Neil microFlash 4t prints direct thermal receipts and invoices. In fact, it can print a compressed 80-column receipt, which is important to G&K, since having this capability doesn't require an RSR to return to a delivery vehicle to use a large 80-column printer. Two lithium-ion batteries offer enough power for a full 8-hour shift, enabling almost 1,150 6-inch receipts to be printed on a single charge.

"With the new system, the customer immediately signs off on the invoice. ... That immediate approval greatly reduces the probability of errors happening." Mark Billitteri, VP of information technology, G&K Services, Inc.

In Spring 2006, the two pilot locations went online. "We conducted our pilot tests for two to three months to make sure our business processes still worked efficiently, our training programs were effective, and the technology was

***"With the new system, the customer immediately signs off on the invoice. ... That immediate approval greatly reduces the probability of errors happening."***

**- Mark Billitteri**

VP of Information Technology, G&K Services, Inc.

going to scale. We had no major surprises; everything went according to plan." Once the pilot was complete, the solution was rolled out during the next year to all of the locations. The final solution also includes a French language version for some of G&K's Canadian locations.

Since some of the G&K locations have been using the new route maintenance solution for only a few months, Billitteri says the company has yet to formally survey customers as to their satisfaction with the new system. However, he says informal feedback from customers during the rollout phase has been overwhelmingly positive. "We know we've already improved customer satisfaction," he says. "For instance, in the past, a data entry error could have caused a customer to not receive a garment or service credit they had expected, creating dissatisfaction.

With the new system, the customer immediately signs off on the invoice, which reflects any changes that had just been made. That immediate approval greatly reduces the probability of errors happening." He adds that customers have also expressed their satisfaction with their ability to view and print past invoices online through G&K's new Web portal.

From an operational standpoint, the new solution has helped G&K reduce its labor costs while improving its staff morale. In fact, the company was able to streamline its back office operations by eliminating approximately 90 positions pertaining to data entry. And despite the new solution involving a large amount of change management, the RSRs have adapted well.

"We engaged the RSRs early in the development of this solution, so they had a level of buy-in up front," Billitteri explains. "The response has been so positive and the technology has worked so well that our RSRs have said they'd never go back to a paper based system. As we gain more experience with this new technology, we expect to see even more productivity gains from employees and improved service levels to our customers." ■





# Staying on Top with Fresh-Baked Ideas

Bridgford Retools DSD with Datamax-O'Neil's MicroFlash® 4te Printers  
staying on top with fresh-baked ideas ■ ■ ■



Next year Bridgford Foods Corporation will celebrate its 80th anniversary. The NASDAQ-traded company (BRID) traces its roots to Hugh H. Bridgford's meat market in San Diego, Calif.; it has long since evolved into one of the nation's most honored meatpacking and frozen foods manufacturing organizations. Today the company's headquarters are in Anaheim, Calif., with additional facilities in Dallas, Texas, Chicago, Ill., and Statesville, N.C. Through its nationwide direct store delivery (DSD) system, Bridgford delivers, stocks, and replenishes microwaveable sandwiches, luncheon meats, pepperoni, sausage, beef jerky, and baked goods to thousands of retail stores in all 50 states.

By early 2008, it had become clear that the company's success in the field was placing strain on certain elements of its DSD processing system, specifically its printers and handheld scanners. DecisionPoint Systems, Inc., a leading provider of field-based workforce automation solutions, was asked to address the situation. Dale Hetherington, Senior Account Manager for DecisionPoint, explains the problem the company faced and how Datamax-O'Neil's microFlash 4te printers solved it comprehensively.

## Problem ■ ■ ■

"Bridgford was using old dot matrix printers, Okidata 390s, that had been in the field for more than a decade," begins Hetherington. "They were having a very

*"In the first three years since their deployment, the Datamax-O'Neil printers have paid for themselves six times over, a rate of return that I expect will improve even more over time."*

- Dale Hetherington,  
Senior Account Manager, DecisionPoint Systems, Inc.

difficult time getting these supported. They were also using an old DOS-based handheld model of Symbol Technologies, the PDT7500, and they could not get replacement parts for this. So we were called in to see if we could support their existing equipment, both the computers and the printers."

According to Hetherington, support proved to be just part of a more complex and more costly problem.

"The printers had many breakage problems, so they were constantly shipping them to service centers and back again," he says. "These dot-matrix printers were hammering pins and ribbons through a multipart form, and this resulted in a lot of additional overhead."

Even worse, as drivers would print out the receipts for deliveries, they often found the quality of printing lacking. The imagers couldn't read the receipts, and it was difficult to load data into the system. Proof of delivery was hard to obtain; as a result, cash flow slowed and suffered.

## Solution ■ ■ ■

Hetherington said it quickly became evident that Bridgford needed to transition to thermal printers, which were becoming the standard practice in the industry. "So I detailed to them why it was more costly to keep than



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replace the dot matrix printers, as well as the old Symbol handhelds,” he explains:

- Service costs: Bridgford was incurring excessive shipping and service costs because of the lack of support for the products, their physical size, and the frequency with which they were breaking down.
- Material costs: The design of the dot-matrix printer meant that ribbons were exhausted and replaced on a regular basis, and the three-ply paper was expensive.
- Labor costs: The non-mobile printers had to be kept on trucks at the point of service, which made the process highly inefficient. Personnel would go into the store, do their work, scan in the details, return to the truck to print, then return to the store to deliver forms to the personnel on site.
- Financial costs: System performance was compromised by printer performance, making proof of delivery and entry of accounts receivable information more difficult to execute; therefore, the collections process slowed down and cost Bridgford accordingly.

“I put together a plan for Bridgford that would alleviate all these concerns, based on the Datamax-O’Neil microFlash® 4te printer,” says Hetherington. The 4te is engineered to withstand even the most punishing portable applications, including multiple 6-foot drops to concrete. It is ideal for the rigors of DSD service. The 4te also quickly, easily, and clearly prints quality 4-inch receipts, labels, and invoices for proof of delivery. It features enhanced processing speeds, high memory capacity, USB connectivity power status lights, external charging, and optional Bluetooth and 802.11b/g wireless connectivity. “This printer solved all the problems that Bridgford was facing, and provided a rapid return on investment,” says Hetherington.

Drivers could now carry the printer on their hips, increasing speed, adding mobility, and empowering them to make more store calls each day. Material replacement costs decreased dramatically. There were no ribbons to replace, and paper was markedly less expensive than the multi-part forms previously used.



## The Fresh-Baked Idea Company®

### Results ■ ■ ■

Based on DecisionPoint’s recommendation, Bridgford purchased 350 microFlash® 4te printers in early 2008. Within nine months, the printers had paid for themselves.

“The ROI was spectacular,” says Hetherington, “and it reoccurs. In the first three years since their deployment, the Datamax-O’Neil printers have paid for themselves six times over, a rate of return that I expect will improve even more over time.”

According to Hetherington, the printers Bridgford purchased were Bluetooth-enabled, and now they’re in the process of rolling out new Motorola MC9500 mobile computers. This should take Bridgford to the next level of DSD service, eliminating all cabling concerns, increasing speed, and keeping the company where it always has been: on top of their market.

“Bridgford bills itself as ‘The Fresh-Baked Idea Company,’” says Hetherington. “You can see why they’ve been successful. They’re not only baking up fresh ideas on their own, but they recognize other’s fresh ideas. That’s what happened in this instance, and I know that they’re glad they’ve become familiar with Datamax-O’Neil.



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right by our customers ■ ■ ■

## Improve Cash Flow and Reduce Paperwork

The use of portable receipt printing in mobile computing is often used in the field. Companies such as Sears Roebuck are putting computers in the hands of field service technicians to make them more efficient and to streamline and speed basic functions, such as billing; and to save millions of dollars. The retailer's HomeCentral operation is the largest appliance repair firm in the United States, with over 13,000 technicians who make 11 million in-home repairs a year. The hardware used by the field service technicians includes sturdy laptops and portable printers; and Sears' service vans have been converted into wireless network base stations.

Another good example is Calor Service, one of Italy's most important companies working in the servicing of heating and air conditioning systems. Calor Service adopted mobile computing including portable printers to obtain better day-to-day performance by their service technicians. Calor Services is the Official Service Centre for Caldaie Beretta: one of the most famous Italian manufacturers of heating and air conditioning devices.



### **About Datamax-O'Neil**

*Datamax-O'Neil is a trusted global provider of stationary and portable label and receipt printing solution products that enable manufacturing and supply markets to capture the benefits of automated product identification and automated legal and financial transactions. Datamax-O'Neil is the barcode and mobile printing business group of Dover Corporation's Product Identification Group (PIDG), a global platform entity with products and services covering all the leading marking technologies and applications. The company's products address a wide variety of applications, including those in the industrial, healthcare, retail, automotive and ticketing market sectors. Datamax-O'Neil is headquartered in Orlando, Florida, and maintains key facilities in California, Illinois, and France, as well as sales and technical support offices around the world.*



## Improve Sales Force Productivity

The explosion of portable information devices and the increasing use of wireless technology have prompted more and more companies to connect their frontline workers to complete transactions at the point-of-sale or point-of-service. One example of this is with Route Accounting: beverage companies for instance take advantage of the benefits of route accounting to reduce the time needed to complete a sale, to improve sales force productivity and create more satisfied customers.

Examples are Nestle Water, Europe's leading water cooling company and Grupo Modelo, the eighth largest beer maker in the world and owner of the prestigious Corona Extra brand. Relevant statistical and historic data for each customer is stored on hand-held computers; data is read and updated with each visit and delivery notes or receipts issued. Each route is kept constantly up-to-date with inventory and sales data. Similar systems are currently being used in Nestlé Water and Kraft Foods.



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