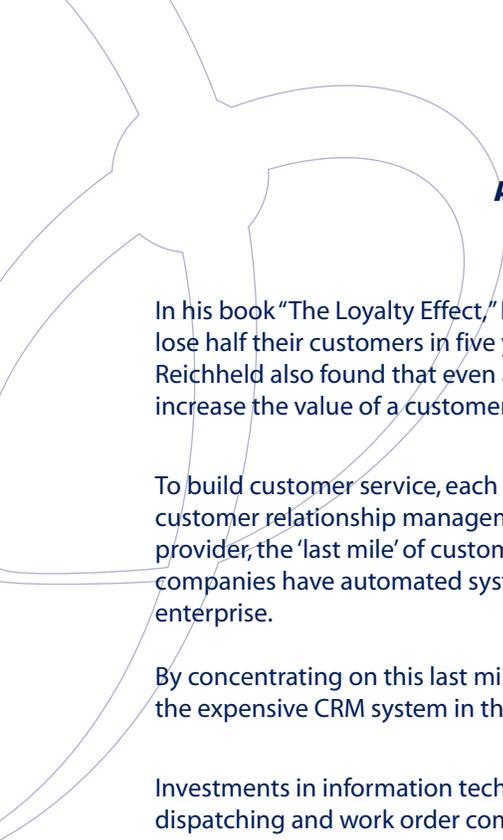




**White**  
Paper

THE LAST MILE OF CUSTOMER  
SERVICE: AUTOMATING FIELD  
SERVICE OPERATIONS

*Intermec*



## **THE LAST MILE OF CUSTOMER SERVICE AUTOMATING FIELD SERVICE OPERATIONS**

In his book "The Loyalty Effect," Frederick Reichheld of Bain & Company observed that US companies, on average, lose half their customers in five years. While customer disloyalty can hurt performance by 25 to 50 percent, Reichheld also found that even a small shift in customer retention - as little as five percentage points - can increase the value of a customer by 25 to 100 percent.

To build customer service, each year U.S. corporations invest billions to acquire, install and maintain electronic customer relationship management (eCRM) systems. Yet the critical link between the customer and the service provider, the 'last mile' of customer service - is, for most companies, still paper and pencil. Fewer than one in 20 companies have automated systems that will automate the link between the service technicians and the enterprise.

By concentrating on this last mile of customer service - outfitting the field force to be an effective extension of the expensive CRM system in the back office, companies can build a solid reputation for great service.

Investments in information technology for field service workers improve communications for more accurate dispatching and work order completion. Field service automation tracks each step of the service process, reporting it back to headquarters (often in real-time via a wireless connection) and even producing invoices and collecting for services rendered - at the front door.

The emphasis on service after the sale has shifted from a necessary cost center into the realm of a profit center. The reasons for this move are clear. Companies are learning that customers are willing to pay for services not previously offered, or for services that previously were not billed. As companies manage service revenues better, they often find that internal accounting methods may have been crediting revenues to products and not to service. Changes in these accounting practices help establish service as a profit center.

Mobile workers who have access to customer records during a service call and don't have to rely on multiple phone calls to a dispatcher to get the information they need to complete a job are more productive. Many companies find that service personnel operating with these tools can complete an extra call or more per day. In some applications, it's realistic for companies to generate up to 30 to 40 percent of gross company revenues from service and support, a largely untapped and profitable source of income.

Systems for mobile service technicians that let them feed work orders, parts, time, labor, mileage, customer comments and other information back directly to enterprise resource planning (ERP) or CRM systems provide a competitive edge. Such information can be shared across the enterprise within minutes when transmitted over a wireless network, or within hours via dock or modem on a wired network.

In addition, it raises the customer relationship to another level. A good customer service experience can lead to improved loyalty and repeat purchases. Service like this, at the doorstep, extends customer relationship management to both the personal "touch" and electronic levels.

With wireless configurations, the reduced time it takes the system to react or respond to an event, offers a competitive advantage. The organization is aware of events occurring in real time and can make decisions to maximize resource utilization or proactively deal with potential issues.

Just compare an instant two-way flow of information between the field and dispatch to a pen and paper system. In the latter, information must be gathered, then manually entered into the system. This can often take days. Which system would your customers prefer?

As the technology revolution delivers more powerful mobile computers at lower cost, along with the ability to run sophisticated field service software that integrates with ERP or CRM systems, even small organizations can see significant benefits. Today ruggedized, Windows®-based mobile computers are widely used for service applications because of their flexibility, open architecture, inherent wireless capabilities and the host of software applications developed for vertical markets. While Palm® has captured the attention of executives looking for PC companions with electronic address books and calendars, Microsoft has long been and continues to be the choice of IT managers for enterprise integration. The success of PocketPC® in the enterprise has led to a great demand in vertical business automation applications. This standardization and increase in development promises increased growth and adoption of mobile work force solutions.

What follows are examples of how four companies have strengthened their competitive positions and enhanced their customer relationships through a visionary use of automation and integrated data communications.

## **PHYSICIAN SALES & SERVICE**

### **Improving Revenues Through Automation**

Jacksonville, Florida-based Physician Sales & Service (PSS) operates 61 service centers that distribute medical products to more than 100,000 facilities in the U.S. and Europe. The company's motto is "The Customer is Everything." In an effort to balance its commitment to customers with a watchful eye toward revenues, PSS sought a more efficient way to do business. In particular, PSS wanted to eliminate the estimated \$5 million per year loss due to the communication inefficiency of the company's old, paper-based proof-of-delivery system.

Through customized product tracking software and mobile, pen-based computers that could actually be signed by the customer, the proof of delivery problem was solved.

Once a delivery is made and the signature obtained, the driver simply sets the mobile computer in a dock in the delivery truck and wirelessly sends all the customer data to the PSS central database. Instances of nonpayment because of disputes over deliveries have been virtually eliminated.



## **ORANGE MOBILE PHONE COMPANY, UK**

### **Asset Tracking in Real-Time**

As the operator of one of the United Kingdom's most advanced digital mobile networks, Orange Mobile Phone Company must keep track of millions of dollars worth of its own assets, as well as those of its various subcontractors. The installation of cell transmitter sites is not only a complex operation, it also is expensive and involves a number of specialized subcontractors.

Asset tracking is absolutely critical in the telecommunications industry, where the hardware is valuable and the ownership of assets by multiple sources creates additional tracking challenges, as it is important to know the whereabouts of their property for internal audits.

Orange had traditionally worked with its subcontractors by issuing parts from a central store to a virtual work-in-progress store based on an installation site project and timeframe. While electronically recorded in the store, assets were often removed and installed physically at the site without timely updates to their location. This supply process was cumbersome and meant that products could be untraceable for weeks.

The solution for Orange came in the form of a bar code system for assets and mobile computers with integrated scanning, as well as batch download and wireless capabilities over a GSM link. Both Orange and its subcontractors use the rugged mobile computers for real-time asset tracking to manage work-in-progress (WIP) and to track installations.

As goods are collected from the store, the asset is scanned so that both its departure from the store and its transfer to the relevant subcontractor are recorded. At the same time, details relating to the installation address of the asset, the date it is needed by, and so on, are automatically entered into the subcontractor's mobile computer. On site, once contractors have installed and tested the equipment, they can scan the bar code and enter any other pertinent information about the installation using an alphanumeric keypad.

All this data is transferred to an inventory management system over the Orange GSM network. Now, the value of assets trapped in the WIP "black hole" has been dramatically reduced.

## **MEDIAONE**

### **Zero Latency Enables Growth**

MediaOne, the nation's leading broadband services company, wanted to be much more than a cable services provider. The company provides basic and premium cable television services to more than 5 million subscribers in 17 states. Part of the MediaOne growth strategy was to incorporate the newest broadband technology into its menu of services, without significantly increasing their workforce.

Among the changes the Englewood, Colo.-based company had to make was replacing its inefficient, paper-based system its field technicians were using to make service calls. It chose to install a wireless communications system for technicians and dispatchers that includes two-way messaging, along with a wireless workforce management system.

MediaOne outfitted each of its 1,200 field service technicians with a mobile computer that provides immediate access to up-to-the-minute work assignments. Once work orders are completed, the service technician transmits the data wirelessly directly to the workforce management system for processing. Customer service no longer takes a back seat to the process of customer service delivery.

Following installation of the wireless computers and workforce management system, MediaOne found itself freeing up 25 percent of employees to take over the added work generated by its expanded broadband service offerings.

## **HYDRO TEXACO, NORWAY & DENMARK**

### **Invoicing at the Point of Service**

Providing maintenance to some 40,000 central heating oil boilers a year in Norway and Denmark was not difficult for Hydro Texaco. What made it tough was the paper-based system the company used to track all of the service calls made by its 60 service partners across the country.

In an effort to automate its service calls, Hydro Texaco came up with Compas™. Compas is a unique, customized system that ensures online communication and data exchange between the company and its service partners.

The brain of Compas is software with a graphical user interface developed by Hydro Texaco that resides on a Windows-based mobile pen computer.

That computer goes with the service engineer to the boiler room at every visit, ensuring that all necessary information about the customer - prices or spare parts inventory in the service van - is at hand.

At any time, the service engineer enters information about work performed and spare parts used. He also can see what an engineer did during a previous visit. The customer visit ends with an updated printed service report and an invoice.

As soon as the engineer puts the mobile computer into the docking station in the service van, the mobile phone automatically calls the central AS/400 server using the GSM network, and very quickly exchanges relevant information about work and data. The system also can operate on a landline telephone network via a dock.

Upon arriving at home at the end of the day, the engineer prints a complete daily report to Hydro Texaco. Prior to Compas, when the engineer arrived home he would start the paperwork with a pen and paper.

Now, Hydro Texaco can get statistics for continuous monitoring of its quality goals. GSM communications gives the company the ability to collect and transmit information about the condition of its customer's oil burners and furnaces more efficiently. That ensures the best customer service is provided for Hydro Texaco's 40,000 customers.

### **SUMMARY**

Implementing two-way, electronic data communications and computer technology for a mobile workforce, integrated with automated dispatch and work order management software, can enable growth and enhance service. Such installations can be wired or wireless, depending on the individual needs of the business.

Mobile automation extends customer service, and your company's reputation, all the way to the customer's front door. Automation technology makes it easier for mobile workers to access and exchange information with the enterprise and allows your technicians to manage the last mile of customer care.





## **ABOUT THE AUTHOR**

Kristi Urich is a Field Service Solutions Manager at Intermec Technologies Corp, specializing in automation technologies and services for mobile workforces, the application of wireless communication in mission critical environments, and deployment strategies for large-scale implementations. She has spent the last two years focused on service organizations in the manufacturing; third party service; gas and electric utilities; cable and telecommunication industries. Urich is a lead contact for ArciTech, a new mobile work order management package from Intermec comprising software, hardware, integration, business consulting and training services. Field service companies currently using a paper-based business process can now automate their mobile workforce easily and affordably with ArciTech. She is a member of the Association of Field Service Managers (AFSM) International and Geospatial Information Technology Association (GITA). Ms. Urich can be reached at [kristi.urich@intermec.com](mailto:kristi.urich@intermec.com).



**North America**

**Corporate Headquarters**  
6001 36<sup>th</sup> Avenue West  
Everett, Washington 98203  
tel: 425.348.2600  
fax: 425.355.9551

**Systems & Solutions**

550 2<sup>nd</sup> Street S.E.  
Cedar Rapids, Iowa 52401  
tel: 319.369.3100  
fax: 319.369.3453

**Media Supplies**

9290 Le Saint Drive  
Fairfield, Ohio 45014  
tel: 513.874.5882  
fax: 513.874.8487

**Europe/  
Middle East & Africa**

**Headquarters**  
Sovereign House  
Vastern Road  
Reading, Berkshire RG1 8BT  
United Kingdom  
tel: +44.118.987.9400  
fax: +44.118.987.9401

**Gothenburg**

Idrottsvägen 10  
P.O. Box 123  
SE-431 22 Mölndal  
Sweden  
tel: +46.31.869500  
fax: +46.31.869595

**Asia Pacific/  
Latin America**

**Hong Kong**  
26-12 Shell Tower  
Times Square  
1 Matheson Street  
Causeway Bay  
Hong Kong  
tel: 852.2574.9777  
fax: 852.2574.9725

**Singapore**

25-16 International Plaza  
10 Anson Road, 079903  
tel: 65.324.8391  
fax: 65.324.8393

**Australia**

15 Stamford Road  
Oakleigh, Victoria 3166  
tel: 61.3.9563.0000  
fax: 61.3.9563.4000

**South America and Mexico**

2572 White Road  
Irvine, California 92614  
tel: 949.975.1905  
fax: 949.975.1913

**Worldwide  
Fax Document  
Retrieval Service**

800.755.5505  
(North America Only)  
tel: 650.556.8447

**Internet**

[www.intermec.com](http://www.intermec.com)

**Sales**

800.347.2636  
(toll free in N.A.)  
425.348.2726

**Service and Support**

800.755.5505  
(toll free in N.A.)  
425.356.1799

Copyright © 2001 Intermec Technologies Corporation. All rights reserved. Intermec is a registered trademark of Intermec Technologies Corporation. All other trademarks are the property of their respective owners. Printed in the U.S.A. 611060-01B 11/01

In a continuing effort to improve our products, Intermec Technologies Corporation reserves the right to change specifications and features without prior notice.