Handheld Computing Optimizes Customer Relationship Management

Mobilizing e-business

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Introduction

Customers today expect rapid, personalized service in all interactions with a company. Handhelds enable sales, service and other frontline staff to meet these expectations even when they are mobile. Handhelds provide instant access from any location to the corporation's backbone of customer relationship management (CRM) and enterprise resource planning (ERP) applications. They enable e-business transactions to be performed on the spot at the customer's location. They are an essential link that allow corporations to meet growing customer demands for consistent treatment whether contact takes place on the phone, at a self-service Web site or face to face.

Maximize Profitability, Retain Customers

"Few if any technology investments can provide as much of an immediate impact as an investment in CRM."

Aberdeen Group 1999

The new world of e-business has companies competing ferociously to keep customers. Buyers of products and services have more choices than ever and, while not completely lacking in loyalty, are certainly demanding that their loyalty be earned. Marketplaces abound with fresh examples of the benefits of earning that loyalty and the wallet share it brings—whether it's the top-line boost from getting a book buyer to impulse shop for records, videos and toys; or the improved margins in getting corporate telephony customers to add Internet, wireless and paging to their service bundle.
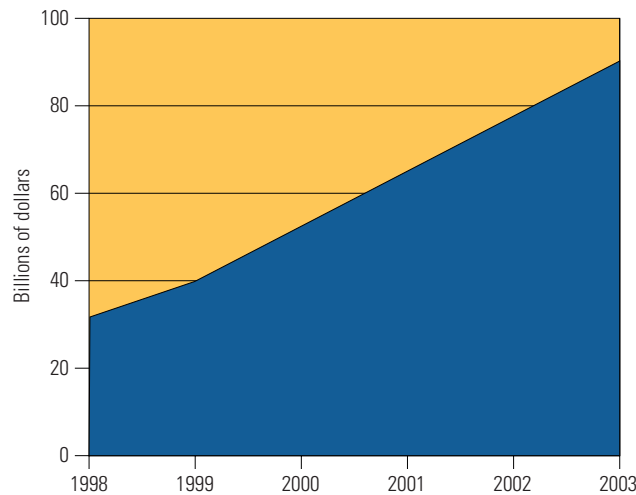
Customer relationship management, long viewed as a cost of sales, has moved to the core of revenue generation and business growth strategies. It's not just that it costs 10 times less to sell to an existing customer than to attract a new one, it's that you can probably sell 10 times more to the customer you keep—and much of that revenue will fall to the bottom line.

Source: International Data Corporation, 1999

Figure 1. Worldwide CRM Spending

As a result of this new emphasis on keeping customers, corporations are focusing IT spending (Figure 1) on frontline applications—sales force automation, customer support, professional services, marketing and business development—as well as internal functions such as fulfillment that impact the customer's experience.

Customer Relationship Management Gets Real

This surge of frontline spending partly reflects the fact that CRM, previously viewed as an ideal to be aimed for, has suddenly gotten real. In the past couple of years, new tools have made fundamental customer relationship management principles—such as knowing who your most valuable customers are and treating each customer as an individual—achievable. Web technologies, for example, enable call center staff to access any number of corporate databases from a single browser interface, giving them a complete view of a customer's value to the enterprise. Self-service Web sites automatically consult customer profiles before selectively displaying ads or making product recommendations.

At the same time, with the rise of e-business, the importance of customer relationship management has become ever more apparent. A study by BizRate.com (reported in the Wall Street Journal, July 12, 1999) showed that the number one reason customers return to consumer Web sites is quality of service. Expectations for service at

business-to-business (B2B) sites are equally high. The Internet is also dramatically increasing demand for choice and personalization while compressing service delivery norms. It is common today to have two to three delivery days, while a handful of startup companies offer 24-hour and even one-hour delivery service.

When customers have face-to-face interactions with representatives of a company, they bring with them this heightened set of expectations. They expect to receive at least the same level of service from a live person as they receive at a Web site or over the phone. However, those working closest with customers—sales reps, support technicians, professional services consultants, field project coordinators and marketing staff—are sometimes least prepared to deliver on these expectations. Away from their desks, they may not have access to the latest customer data or corporate information.

For increasingly mobile frontline workers, accessing corporate CRM and ERP applications has generally meant lugging around a laptop, plugging in and dialing up. That's cumbersome and often impossible when on the road. As a result, mobile workers are not only ill-equipped to provide immediate and excellent customer care, but are unable to share important information they gather from customers during onsite visits in a timely way with colleagues in the rest of the organization. Submitting an order, completing a trouble ticket, or distributing work assignments may mean spending hours on the phone or waiting until evening when there's finally a chance to get online.

Extending the Power of Customer Relationship Management to Mobile Workers

Handheld computing solutions help companies deliver excellent service across all interactions by extending customer relationship management data and processes literally into the hands of frontline staff. With the ability to synchronize handhelds to both desktop PCs and network servers, over wireless as well as wireline connections, mobile users can interact with CRM and other enterprise applications anytime, anywhere. Whether they're in a restaurant having a meeting with a prospect or under a desk diagnosing a faulty hard drive, handheld users have two-way communications with enterprise applications and databases and also have the ability to pull information from Web sites. They can access customer historical

data, decision support aids, and company policies with a few simple taps, just as if they were in an office.

The small size and true mobility of handhelds allow them to fit not only into palms and pockets, but also into work processes. Handheld customer relationship management solutions don't get in the way of interpersonal interactions, and they can be taken into places—up on a roof during a building inspection, into a crowded restaurant line of customers waiting to order—where laptops cannot easily go.
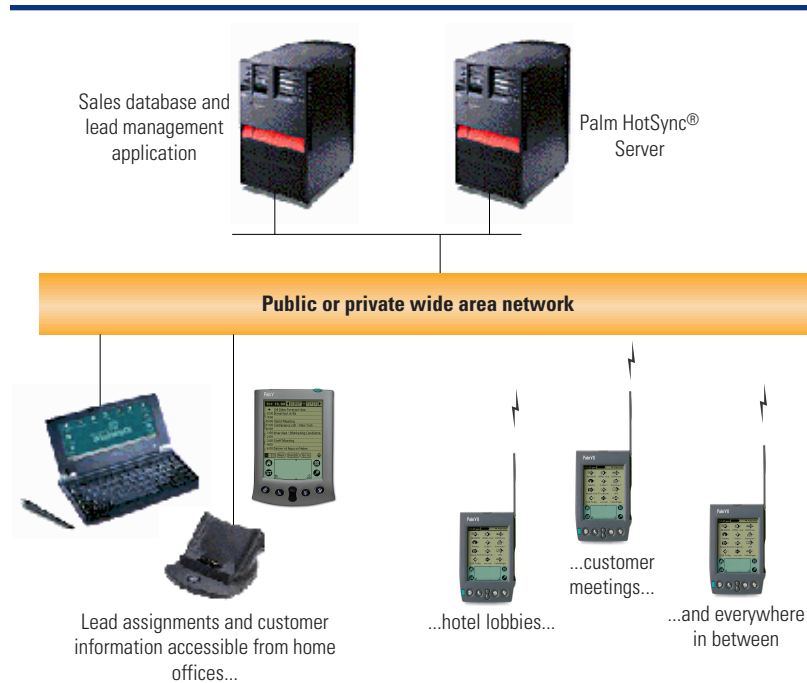
Because people use handhelds while they're doing their work, not just afterward to report about it, handhelds can improve the accuracy of data capture; guide decision making; and enforce corporate policies, standards and best practices. They also increase productivity by enabling mobile workers to recapture time previously wasted on paperwork and by eliminating redundant or inefficient data entry.

Behind the scenes, handhelds enhance customer service by improving organizational communication and collaboration. They enable field staff and travelers of all kinds to maintain uninterrupted access to e-mail, instant messaging and Web-based resources. They increase the effectiveness of marketing staff and business development executives who, though not face to face with customers every day, shape customer experiences by defining product and service offerings. For example, marketing people using handhelds can input ideas while walking a trade show floor. They can put their "feet on the street" to check out how merchandise is moving, what competitors are up to and whether customers are successfully using what they buy.

Customer Relationship Management: Where Work Gets Done

Sales

Handheld computing solutions enable account managers and sales representatives to arrive at meetings better prepared, perform more effectively and close business faster. Access to timely, accurate information from any location—including retail sales floors and other environments where laptops are cumbersome—allows sales reps to immediately answer questions as they come up, tailor deals to

Figure 2. Extending CRM into the field

Sales database and
lead management
application

Palm HotSync®
Server

Public or private wide area network

Lead assignments and customer
information accessible from home
offices...

...hotel lobbies...

...customer
meetings...

...and everywhere
in between

Application highlights:

• Order entry and inquiry

• Lead management

• Territory management

• Sales methods and best practices

• Route management

customer needs, compute totals, capture customer approvals and confirm orders and delivery schedules on the spot (Figure 2). The ability to input orders and point-of-sale data in near-real time eliminates manual data entry and rekeying, reduces opportunities for errors and makes information available sooner to the entire organization.

Handheld users can exchange information with a large, growing range of applications, including sales automation systems such as Siebel System's Sales Enterprise and Oracle Corp.'s Mobile Field Sales; CRM software such as Saleslogix from Interact Commerce Corporation, Goldmine Software, Janna Systems, Applix and Pivotal Corporation; groupware such as IBM Lotus Notes and Microsoft Exchange; and personal productivity applications such as the Franklin Covey Planner and TrekWare's StreetSigns. Through these and other applications, handhelds can provide access to leads, sales and commission tracking; contact management, customer databases, electronic product catalogs, quote generation, order entry and status checking; decision support and call and expense reporting; and templates for letters, mass mailings and contracts.

Figure 3. The Mobile Workplace

Labels in figure:
Tech support database — Palm HotSync® Server — Office help desk has instant access to customer information — So does mobile help desk — **Public or private wide area network**

Customer Support

Handheld computing solutions improve relationships with customers by accelerating the delivery of support services and decreasing time to problem resolution. You can create mobile help desks that extend the entire knowledge base of the support organization out to the customer location, enabling a higher percentage of problems to be solved immediately, on the spot (Figure 3). Support personnel—whether a computer technician working under a desk on a PC chassis or a construction project manager up on a roof searching for the cause of a leak—can access customer and product information where they stand and even query colleagues for help via e-mail or instant messaging as they perform support tasks.

By creating an all-digital help desk system that extends to the customer site, your organization can eliminate the distribution of printed work assignments, which can be misplaced, and remove the need for support personnel to manually input field data from paper forms into central tracking systems. Data entry takes place as a natural, almost invisible part of doing the job, rather than as a separate, onerous follow-up task. The ability to create tickets on the go and input ad-hoc requests also decreases the chances of something "slipping through the cracks" between the moment of problem occurrence and data entry.

Information can be exchanged between handhelds and a growing range of applications, including Peregrine Systems, Oracle's Mobile Field Service, TechExcel's ServiceWise, Remedy Help Desk Link and GWI Help! software. Through these and other applications, handheld users can download trouble tickets and case forms; access customer purchase records, product configurations and problem histories; submit tickets; perform routing and escalation; upload new and modified records; and perform asset management, change tasking, measurement and reporting.

Handheld Computing Power

Michelin North America—immediate capture of valuable customer data. Sales reps for Michelin North America continuously inspect the truck fleets of their customers to monitor tire performance and maintenance needs. The information they gather in the field—which is also strategic to Michelin product development and marketing—used to be recorded on paper forms, mailed to Michelin corporate offices, and manually entered into a database, creating a considerable lag time before reports could be generated and distributed. Today, that information is available immediately. Sales reps use Palm OS®-based IBM WorkPad handhelds running a new Tire Trax application using Puma Technology's Satellite Forms. They're able to perform a custom analysis of each customer fleet, while improving data accuracy, eliminating paperwork and gaining an hour a day to focus on more important sales activities.

Frontline Now!—customized sales reporting. Frontline Now!, which performs outsourced field sales for technology manufacturers, sends reps to computer retail stores all over the United States to check on-shelf inventory and collect information. The type of information needed varies; handhelds let field reps create unique forms for each client, which they then fill out on the retail floor. The result is a dramatic increase in both level of customiza-tion and timeliness, and thus the value of the service to clients.

Peapod—faster, more accurate order processing. Peapod, the country's leading Internet grocer, has achieved faster-than-expected ROI by using handhelds to cut order fulfillment costs and improve customer service. Initially, the company was struggling to handle rapidly expanding sales volume. To customers making purchases online, the company's Web site appeared highly automated and efficient; but backend order fulfillment relied on manual data entry—a system that was both not scalable and fraught with opportunities for error. Today orders are downloaded from an Informix database at Peapod headquarters to Palm OS®-based Symbol SPT 1500 handhelds used by fulfillment personnel at three distribution centers. As products are picked from warehouse shelves, they're scanned with the handhelds' built-in barcode reader—ensuring a perfect match between what the customer ordered and what Peapod ships. Peapod staff are more productive because they no longer enter data manually, and customers are pleased with the excellent service.

For additional stories of companies that have successfully deployed handheld CRM solutions and more information on handheld CRM, visit www.palm.com/enterprise.

Professional Services

Handheld computing solutions improve the productivity and performance of professional services staff, such as consultants, systems integrators and project managers. They enable employees who spend the majority of their time on the road or at client sites to stay in touch with the rest of the organization. They also speed service delivery by enabling users to transmit project information back to the office and distribute assignments to team members and subcontractors immediately while still in client meetings.

The ability to input project details as well as time and expenses as events occur provides the rest of the organization with near-real time project status while eliminating the need for field staff to spend hours each day doing paperwork and reporting. Input from handhelds can be directed automatically to managers for approval, then routed to the organization's accounting application, speeding the process of getting invoices out to clients and improving cash flow.

Handheld users can exchange information with a growing range of applications, including Changepoint, Strata Systems' Punch List, Interteam Software's Enterprise Link software and Chronos' Consultant. Through these and other applications, they can communicate through e-mail, faxes and paging; enter and manage work orders; match resources with commitments; track tasks; report errors; apply best practices; monitor progress; update project schedules; capture time and billing information; and generate custom reports. Some handhelds even let users access Web sites, including online services such as USA Today, UPS and The Weather Channel.

Marketing and Business Development

Handheld computing solutions enable executives who are responsible for creating new products and services to spend more time in today's fast-moving marketplaces. Corporations can disperse intelligence gathering teams to the far corners of the globe while keeping everyone project-focused and tightly coordinated. The ability to capture data, observations and ideas on the go prevents even small bits of information from "slipping through the fingers." At the end of a business trip, users can download information into Microsoft Excel spreadsheets or Word documents or other applications.

Traveling executives work more productively with the ability to download up-to-date appointment calendars and contact lists from the office at any moment of the day. They can input their own

changes, which can be automatically synchronized with those of administrative assistants and colleagues in multiple locations.

Handheld users can exchange information with a growing range of applications, including communications tools such as e-mail and paging; groupware such as IBM Lotus Notes; and personal productivity tools such as iambic Software's Action Names, Franklin Covey's Ascend Day Planner and DataViz's Desktop to Go. Through these and other applications, handheld users can enter and manage work orders, match resources with commitments, track tasks, report errors, drive best practices, monitor progress, update project schedules and capture time and billing information.

Handhelds with Web access capability also provide access to online business resources and traveling aids, including the Wall Street Journal Interactive Edition, the Merriam-Webster Dictionary and Travelocity flight information. Anyday.com, recently acquired by Palm, Inc., provides handheld users with Internet-based calendar and task management services, including the ability to share schedules with colleagues, coordinate group schedules and events and automatically e-mail meeting confirmations and reminders.

Putting Together a Customer Relationship Management Solution for Your Mobile Workforce

In today's competitive landscape, enabling your mobile workforce with the ability to move quickly and effectively is the key to the success of your organization. Mobilizing your enterprise handheld application can be your advantage.

To effectively bring customer relationship management into a mobile work environment, your organization will need a solution that combines a handheld platform with applications, peripherals and infrastructure that suit your organization and business processes. Here are the key features to look for and some information about how Palm™ handhelds stack up. At the end of this section we've also included a discussion of the types of support services that can help your organization move beyond out-of-box benefits to unique competitive advantage.

A Platform as Versatile and Dependable as Your Workforce

- **True mobility.** Handhelds need to be small enough to go everywhere work goes, including places where so-called "mobile" laptops become a hindrance. Palm handhelds are only a few inches in length and width, weigh less than half a pound and ride comfortably and unobtrusively in a hand, on a clipboard or in a pocket.

- **Simplicity.** To be effective, handhelds must be used. Palm handhelds, with instant "on" touch access and intuitive graphical interfaces, are simple to operate during work processes.

- **On-demand information exchange.** Handheld users should be able to interact with enterprise applications at any time, and anywhere. In addition, some users need access to the Web. Palm™ handhelds let users access enterprise applications on the go via two-way wireless communications or data synchronization between the handheld and application all at once either through a physically connected (HotSync® cradle or cable) PC or over TCP/IP to a network server. Palm™ VII handhelds also offer wireless Web access.

- **Centralized management and integration.** To be truly effective, handhelds must be part of the company's mainstream information management services. Palm HotSync® Server software offers a comprehensive solution for IT to deliver CRM applications and data to handheld users.

- **Multiple communications choices.** Handheld users need to have at their fingertips the most convenient mode of communication at any moment in time. Palm handhelds offer e-mail, paging and instant messaging capabilities.

- **Efficient modes of delivering information to handhelds.** There's a big difference between looking at information on a 20-inch display and on a 3-inch display. Handhelds need to be "efficiency experts" at retrieving and presenting information. Palm handhelds incorporate application partitioning and Web Clipping, two innovative ways of adapting large amounts of information to small handhelds.

- **Strong security.** The prospect of using handhelds for CRM and other mission-critical enterprise applications raises security issues. Palm handhelds support robust security, including the Password Authentication Protocol (PAP), Challenge Handshake Authentication

Protocol (CHAP), Microsoft Challenge Handshake Authentication Protocol (MS-CHAP), token-based user authentication (such as SecurID and MicroToken), Secure Sockets Layer (SSL) encryption and RSA BSAFE applications to protect privacy and data integrity. In addition, the Palm VII wireless handheld uses an advanced elliptic curve cryptosystem that enables it to provide the cryptographic strength of RSA 1024-bit keys using only 163-bit keys, thus minimizing message size and speeding up security functions.

- **Broad hardware selection.** Companies often need to match handheld characteristics to the type of users. Look for a platform that offers a range of handheld designs and a choice of features. Palm, Inc. and its strategic partners have turned the Palm OS® platform into a variety of products—rugged, expandable field handhelds with bar code scanning and other job-specific functions, hybrid phone/personal information managers (PIMs) and sleek, ultra-light handhelds for executives on the go.

- **Standards-based architecture.** Because the primary purpose of handhelds is to provide access to other systems and applications, it's important to choose a platform that is based on industry standards. Palm™ handhelds work with standard data communications protocols, and work seamlessly with desktop and enterprise applications across Windows, Java and Macintosh computing environments.

- **Market leadership and popularity.** Choose a platform that has the market pull to attract the ideas and resources of lots of other companies, and your organization will reap increasing value from your investment. With more than seven million Palm OS handhelds in use, the Palm OS platform accounts for more than 70 percent of the worldwide personal companion market (Source: IDC, 1999). With over 100,000 developers, Palm is becoming a magnet for new applications, hardware and peripherals.

A Choice of Ready-made Applications and Tools to Build Your Own

- **Loads of applications available now.** What can you do with your handheld right out of the box? Only a few platforms go beyond personal information management to encompass CRM and other mission-critical applications. Currently, over 5,000 applications are available for Palm OS. Of the more than 100,000 registered Palm OS developers, up to two-thirds offer business-oriented solutions. Palm

strategic partners and Business Alliance members include IBM, QUALCOMM, Symbol Technologies, Computer Associates, Tivoli Systems, Lotus, Siebel Systems, Oracle Corp., Peregrine Systems, Remedy, Sybase, Netscape, SAP, Sun, Alcatel, Aether Technologies and PeopleSoft.

- **Open Applications Programming Interface (API).** Given the speed with which handheld and wireless technology is advancing, you cannot afford to get locked into a proprietary architecture. The Palm OS® platform, open and standards-based, was designed from the beginning to support broad licensing and industry participation. It provides tools for developing not only handheld applications but conduits, which are software applications that performs two-way exchange of information between the handheld and either a desktop PC, a network server, or a Web server. The Palm HotSync® Server also offers a fully-documented API for conduit development that lets IT organizations add synchronization services to virtually any application, service and data source. Palm is also partnering with Alcatel to define an open, standard API between any handhelds and mobile phones or telecommunications terminals.

- **Choice of development tools.** Once you've deployed handhelds across your organization, to encourage innovation and make best use of available programming resources, make sure the platform you select offers tools usable by different types of developers. The Palm OS platform works with development environments for generating assembly language, C/C++, Java scripts, and database forms. It's compatible with popular third-party products, including Visual Basic, Java, Metroworks CodeWarrior, Oracle 8iLite, Pendragon Forms, IBM DB2 Everywhere, Satellite Forms and Sybase SQL Anywhere.

- **Access to solution providers.** To accelerate development and deployment of handheld applications, you may need to leverage your internal resources with outside experts. Dozens of solution providers are available to assist you, including Windward Group, Bear River Associates, Pen Computing and Whittman-Hart.

Handhelds and Peripherals to Perform Specific Purposes

- **Add-ons and plug-ins.** Think of your handheld as a starting place, and choose a platform that will allow you to expand functionality as needed. Currently there are more than 500 hardware accessories

and peripherals available for Palm OS® handhelds, including scanners, printers, keyboards, IP modems, card readers, pager boards, add-on memory, adapters and cables.

Infrastructure to Link Hand to Headquarters

- **Fast, easy data synchronization.** Encourage close coordination between handheld users and the rest of your enterprise by making synchronization extremely fast and easy. Just as PCs became more valuable when connected via LANs or remote links to backbone networks, allowing desktop data and applications to be integrated with corporate IT resources, so handheld devices become more valuable when synchronized with the rest of the computing infrastructure. Palm™ handhelds offer one-button two-way synchronization not only with databases and data warehouses, but with corporate email and scheduling software and applications such as CRM, supply chain management and ERP suites. Synchronization can be performed using HotSync® cradles or cables that attach to desktop PCs, as well as via TCP/IP to existing LAN, WAN or dial-in network servers. The Palm HotSync® Server delivers this same single-button synchronization via an IT-controlled server process running on Microsoft's Windows NT Server.

- **Tools for creating your own synchronization sessions.** For maximum flexibility, look for a platform that provides tools for creating synchronization sessions with your choice of applications, including legacy systems. The Palm Hotsync Server offers a fully documented API for creating custom synchronization services.

- **Extensibility.** Competitive advantage doesn't come out of any box. In the course of extending CRM to handhelds, you can leverage your organization's unique strengths—but only if you choose an open, extensible platform. Palm′s extensibility is demonstrated by the large number of systems integrators, value-added resellers and custom solution providers offering products and services for the Palm OS platform.

Training and Support, When, Where, and How You Need It

- **Training choices.** Handheld computing applications are often so easy to use that little or no training is required. Still, just the right sort of training at the right moment can greatly accelerate user acceptance, so you'll want to check out the educational programs available for your platform of choice. Palm offers both classroom

and on-site training through its Palm Training Alliance partners, including Franklin Covey, ExecuTrain, Twin Computer Training and Tech Resource Group.

- **As much support as you need.** Because handhelds are increasingly a platform for mission-critical applications, round-the-clock service and support is essential. Palm™ handhelds are backed by escalation services designed to aid your technical support team in supporting Palm handhelds within your business environment. Service and support offerings include training, 5x12 and 7x24 technical escalation support via phone or e-mail, advance hardware replacement and on-site hardware replacement units.

Protect Your Investment in a Fast-moving Market

Handheld computing technology is mobile in more ways than one. New developments are emerging rapidly. To maintain a competitive edge and protect your investment, choose the vendor you believe is most likely to consistently deliver innovation. Palm, Inc. took the market by storm when it introduced its very first handheld computer—a total departure from the products on the market at that time. Within less than two years the newcomers—small, smart, easy-to-use, totally connected Palm handhelds—have gained market dominance.

Since then, Palm and its partners have continued to drive the market with innovations, including the first successful wireless handheld to provide Web access. Palm handheld products have won more than 70 industry awards, including 21 "Best Product of the Year" distinctions. Today there is tremendous market momentum behind Palm, with massive industry-wide resources being applied to expand its adoption and advance its functionality. In the near future, look for innovations to improve wireless performance and increase the availability of mobile information appliances in such areas as messaging devices, data communicators and smart phones.

Conclusion

Just as the introduction of the Palm OS® platform in 1997 launched a new era in personal communications and productivity, the introduction in 1999 of new infrastructure products that link handhelds with corporate servers over networks has launched a new era in enterprise computing.

If your organization has not yet deployed handhelds among your mobile workforce, there has never been a better time to start. The investments your organization makes now will increase in value as you take advantage of the flood of new handheld enterprise applications beginning to appear in the market. Highly competitive companies are now building handheld platforms into their IT infrastructures and their strategic thinking about customer relationship management and e-business.

Customer relationship management is becoming indivisible from e-business. Leading competitors understand that to prosper in a world in which customers demand immediate and personalized service, CRM must be agile. It must be as effective on the road as it is in the customer care center. Handheld computing solutions untether people from their desks and put backbone applications and other powerful resources in the hands of those who work in the front lines of e-business.

More Information on Customer Relationship Management

Articles and Books
- "Customer Bonding: Pathway to Lasting Customer Loyalty," Richard Cross. NTC Publishing 1996
- "Customer Relationship Management: Making Hard Decisions with Soft Numbers," Jon Anton. Prentice Hall 1996
- "Delight Me... The Ten Commandments of Customer Service," Richard George and John Stanton. Raphel Marketing 1997
- "Enterprise One to One: Tools for Competing in the Interactive Age," Don Peppers, Martha Rogers. Doubleday 1999
- "Method Marketing: How to Make a Fortune by Getting Inside the Heads of Your Customers," Denison Hatch. Bonus Books 1999
- "One Size Fits One: Building Relationships One Customer and One Employee at a Time," Gary Heil. John Wiley & Sons 1999
- "Real Time: Preparing for the Age of the Never Satisfied Customer," Regis McKenna. Harvard Business School 1997
- "Strategic Customer Care: An Evolutionary Approach to Increasing Customer Value and Profitability," Stanley A. Brown. John Wiley & Sons 1999

- "The Customer Relationship Management Planning Guide," Dick Lee. High Yield Marketing 1999
- "The Loyalty Effect: The Hidden Force Behind Growth, Profits, and Lasting Value," Frederick Reichheld. Harvard Business School 1996
- "Up the Loyalty Ladder," Murray and Neil Raphel. Raphel Marketing 1995

Analyst Reports
- "Entering the Mobile Millennium," META Group, http://palm.com/enterprise/tools/mobile_millenium.pdf
- "All in Sync," IDC, http://palm.com/enterprise/tools/all_in_sync.pdf

Web Sites
- DCI
  http://www.dci.com/crm/
- Front Line Solutions
  http://www.frontlinehq.com/
- ITtoolbox Portal for CRM
  http://www.crmassist.com/
- Peppers and Rogers Group
  http://www.1to1.com/

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