Learning Track 3: Wireless Applications for Customer Relationship Management, Supply Chain Management, and Healthcare

Wireless Applications for Customer Relationship Management

Major customer relationship management (CRM) vendors have enhanced their products to provide mobile support for sales and service activities. A growing number of sales professionals work outside the office and require up-to-date customer records and account information to help them close deals. The ability to deliver this information on the spot helps mobile sales staff act decisively at the point of customer interaction.

For example, Siebel Systems' Siebel Sales Wireless enables sales professionals to access customer account records and related information such as order status or recent service issues at any time or location. They can also enter the most current account and deal information data into their wireless devices to update the Siebel corporate customer database. The system will alert representatives to important events using wireless messaging.

Field service workers benefit from wireless applications that provide real-time access to critical information while they are servicing customers. Wireless CRM applications provide access to critical customer and service information while service representatives are working with clients. For example, a field service technician might use a wireless handheld to obtain information about the service history for a piece of equipment that must be fixed or whether parts required to fix the equipment are available. Some wireless CRM tools include capabilities for reporting field service staff time, expenses, parts availability, and details for follow-on work.

Pitney Bowes, a large vendor of postage meters and mailing systems, uses a wireless customer relationship management application for its Global Mailing Systems Division, in which 1,500 employees service its machines designed for low-volume distribution of mail. This system links Pitney Bowes field service representatives to the company's call center and service applications and enables them to access data from multiple back-end systems.

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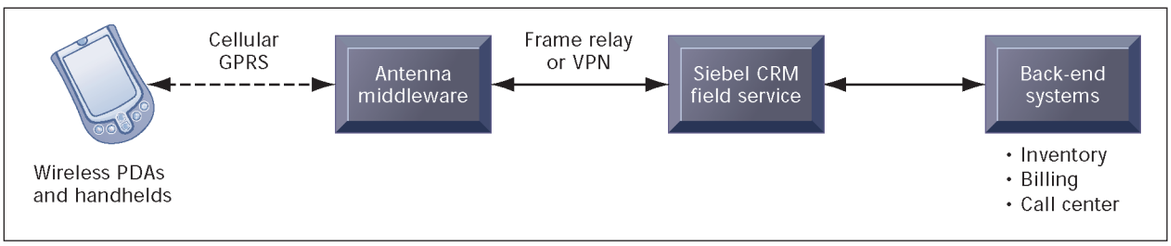
Figure 7-1 illustrates how this system works. When a customer calls to place a field service request, Siebel CRM software identifies the product needing repair, selects the field service representative to dispatch, and messages that technician's wireless device with the service request. The technician then acknowledges receipt of the order. Messages from the technicians' handhelds are routed to Antenna's wireless gateways, which translate the data into XML format and forward them over a frame relay or virtual private network (VPN) to Pitney Bowes's computer center for use by Siebel Systems' CRM field service software, which automatically updates inventory, billing, call center, and other back-end applications.

FIGURE 7-1 Pitney Bowes's Wireless CRM System.



The application uses Pocket PC PDAs, RIM 957s wireless e-mail handhelds and other wireless handhelds, field service software from CRM vendor Siebel Systems, cellular wireless data service from Cingular Wireless, and Antenna SmartClient and Antenna A3 middleware to link field workers using wireless handhelds to Siebel CRM software and Pitney Bowes's back-end systems.

The system delivers customer and service history data instantly to the field service technician's handheld. It also tells the technician whether the work is covered by contract or is billable and feeds data for billable work into Pitney Bowes's billing system. If parts are required, the Siebel field service application determines if the part is in stock and sends information on these parts to a legacy inventory application that is linked to the company's SAP supply chain management system. Information from this system has enabled Pitney Bowes's field service staff to solve problems faster and complete more service calls per day (Songini, 2004).

Wireless Supply Chain Management

Contemporary supply chain management (SCM) systems are a fertile area for mobile wireless technology because of the need to provide simultaneous, accurate information about demand, supply, production, and logistics as goods move among supply chain partners. SCM software vendors include capabilities for mobile support and wireless capture of data on movements of goods and other events.

mySAP Supply Chain Management software offers a number of mobile capabilities. Manufacturing employees can view work instructions on wireless handheld devices anywhere on the factory floor. Supervisors can use wireless handhelds to call up data from process control systems to monitor production-line behavior.

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A firm that needs to ship out goods can use mySAP SCM to create a shipment order and tender it to a selected freight forwarder. The forwarder can access this tendering application from a mobile device and accept, reject, or modify the planned order. If the forwarder rejects the tender or does not reply within an anticipated time frame, the supply chain management software triggers a text message alert to the logistics manager's mobile phone to expedite the search for another forwarder.

mySAP SCM also uses mobile technology for warehouse management tasks such as picking, packing, unpacking, freight loading and unloading checks, and inventory queries. Some of these activities use radio frequency identification technology (RFID) technology.

Wireless in Health Care

Another area in which wireless technology is having a major impact is health care. Health care systems have been hampered by inefficiencies from paper-based processes and gaps between information systems. Many hospitals have wired networks but still have problems getting essential information to the right place at the right time because most physicians and nurses are rarely in one place for long.

Mobile technology can provide some solutions. Hospitals are installing wireless LANs in emergency rooms and treatment areas, and are equipping staff with Wi-Fi-enabled laptop computers or wireless PDAs and smart phones. According to a study by consulting firm A. T. Kearney, about 50 percent of U.S. hospitals have adopted wireless technology, and that number will exceed 90 percent by 2010 (A. T. Kearney, 2004).

Table 7-3 provides examples of the efficiencies and improvements in patient care that result from using wireless technology.

TABLE 7-3 Examples of Wireless Health Care Applications

Wireless Application	Description
Electronic medical record (EMR) retrieval	Health care professionals can use wireless handhelds to enter and view medical records, including diagnostic information in real time. They can review data immediately and update patient records while making their rounds.
Wireless note taking for patient charts	Doctors and nurses can enter data electronically into wireless PDAs, smart phones, or laptops.
Lab test results	Doctors can immediately obtain data about lab tests from a wireless PDA, smartphone, or laptop.
Prescription generation	Health care professionals can use a mobile phone, wireless laptop, or handheld to send a prescription to a pharmacy, reducing delays and errors.
Medical databases	Health care professionals can check drug references and other medical information wherever they are working by connecting wirelessly to medicaldatabases.

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