

Microsoft® Case Studies

Sierra Wireless

Patients Get Faster Care with Mobile Aid From Sierra Wireless, WebMed Technology, HP Services and Windows Powered Pocket PCs

Published: January 3, 2003

Solution Overview

Company

Sierra Wireless

Customer Profile

WebMed Technology provides software solutions for the health care industry. Its newest product, PixaLere, allows homecare nurses and other field-based medical practitioners to transmit patient data and digital photos to consulting doctors and nurses at major medical centers and clinics.

Business Situation

WebMed Technology needed a robust yet affordable mobile computing solution equipped with wireless data transmission capability to allow practitioners to easily transmit both patient records as well as digital images.

Solution Description

WebMed deployed Microsoft® Windows® Powered Pocket PCs equipped with Sierra Wireless AirCard® 750 wide area wireless PC cards to homecare nurses, allowing them to easily transmit data to centrally located consultants.

Benefits

- Patient reports and color photos -- taken with color photos and transferred to the Pocket PC -- can be quickly and efficiently evaluated by doctors or consulting nurses at a hospital, with immediate treatment recommendations e-mailed or phoned back to the field-based practitioner.
- The PixaLere system resulted in fewer visits, an ROI that can be measured in months, shorter waiting lists, and improved care for patients.

Software and Services

- Microsoft Windows CE

Hardware

- Microsoft Windows Powered Pocket PCs
- Sierra Wireless AirCard® 750

Third Party Software

- WebMed Technology's PixaLere® software

Vertical Industries

Healthcare and Healthcare Insurance

Country/Region

Canada

To maximize the efficiency of its remote medical diagnostics software, WebMed Technology outfitted homecare nurses and physicians in British Columbia with Microsoft Windows Powered Pocket PCs equipped with wireless network cards from Sierra Wireless. The practitioners use the Pocket PCs to transmit patient reports and compressed digital photos to consulting nurses or doctors at a central facility, reducing or eliminating expensive and time-consuming trips by patients and cutting costs for the health care system.

Situation

Dr. Jonathan Burns works as an emergency room physician at the Matsqui-Sumas-Abbotsford General Hospital (MSA), located about 40 miles east of Vancouver, British Columbia. The MSA is like many other mid-sized metropolitan hospitals, where doctors such as Burns, nurses, and other health care practitioners tend to a large and geographically scattered patient population. They often treat patients such as nursing home residents for whom it can be difficult or expensive to travel significant distances to a hospital or clinic and be seen for a few minutes by a physician for relatively routine or common injuries and ailments.

In the summer of 2001, Burns was prompted to look for a mobile technology solution that could help reduce or eliminate costly hospital visits by patients with minor wounds, bedsores, burns and other conditions that could be treated locally by nurses – for example, at retirement homes where it may be easier and more efficient to treat a patient on-site. What sparked his quest was a weekend-long series of emergency room visits by a patient who spilled hot tea on her leg, resulting in second-degree burns. Each round-trip to the hospital cost the health system about \$900, and cost the patient an additional \$60 out of her own pocket. Burns felt there had to be a more efficient and cost-effective solution means of prescribing treatment using wireless technology.

Solution

Burns came up with a mobile solution that is under review for possible widespread adoption by British Columbia health agencies as well as other large health care organizations. The solution uses Microsoft® Windows® Powered Compaq Pocket PCs that run “Pخالere,” a Web-based wireless application developed by Burns’ company, WebMed Technology, which assists healthcare providers in treating and managing patients in a homecare setting.

The solution, which was deployed with integration and support services from HP Services in Canada, uses Pocket PCs are equipped with the AirCard 750, a wide area wireless PC Card modem from Sierra Wireless, a Microsoft Mobility Partner Advisory Council member. The AirCard 750 operates on the Rogers AT&T GPRS network and transmits patient reports and compressed color digital pictures of patient wounds and other conditions at approximately 56Kbps. The patient reports and color photos – which are taken with digital cameras and then transferred to the Pocket PCs – can be quickly and efficiently evaluated by doctors or consulting nurses at a hospital. Treatment recommendations are then emailed or phoned back to the field-based practitioner.

Benefits

“The solution allows the consulting nurse or doctor to review a patient’s information and make a recommendation in a matter of minutes – and also allows them to view data on several patients at once,” says Burns. “It also reduces or eliminates costly and often unnecessary ambulance rides or trips to a clinic that can be difficult for, say, elderly patients.”

As part of the implementation, Burns gathered data to demonstrate return on investment for presentation to the Fraser Health Authority, which is closely examining ways to use technology to reduce overall health care system costs. The data showed that implementation of the Pخالere system resulted in fewer visits, a ROI that can be measured in months, shorter waiting lists, and improved care for patients.

Burns says the success of the solution is attributable in large part to the end-to-end capabilities of building a wireless data solution using Microsoft technology, plus the technology offered by the Sierra Wireless AirCard.

"To make this work, we needed a secure and reliable high-speed wireless network card," Burns says. "From our perspective, Sierra Wireless offered the only product in town that could make this work." He also credits HP Services with providing the expertise that stems from HP's "global reach and scale, which helped in this multi-vendor, multi-technology solution, giving us the skills necessary to deploy an effective solution with a minimum of complexity and risk."

Making Web Services Available Wirelessly

In addition to the Sierra Wireless AirCard, the solution also uses Microsoft SQL Server™ for Windows CE, as well as the built-in Microsoft Pocket Internet Explorer Web browser, which serves as the interface for what Burns says is a "medium sized client that is robust enough in performance to handle all the information but small enough to fit into a practitioner's purse or briefcase."

WebMed Technology, which hosts the data on its servers, is also adding scheduling capabilities to the service so that field-based practitioners can log in and find out their schedules and view patient records at the start of each day. He says that practitioners can use laptops or desktop PCs for the Web-based solution, but that Pocket PCs provide the maximum flexibility and ease of use combined with relatively low cost.

"This healthcare application demonstrates the wide range of compelling mobile data solutions available to the medical field using wireless communications and the powerful computing capabilities of Windows-based mobile computing devices," says Jason Cohenour, senior vice president of worldwide sales and marketing for Sierra Wireless. "And as Web Services become more predominant in all fields, the combination of wireless modems and Windows-based mobile devices will create incredibly compelling solutions across every industry."

For More Information

To learn more about Microsoft products or services, call the Microsoft Sales Information Center at (800) 426-9400. In Canada, call the Microsoft Canada Information Centre at (800) 563-9048. Outside the 50 United States and Canada, please contact your local Microsoft subsidiary. More information via the World Wide Web is available at the following Web sites:

- Microsoft Pocket PC Enterprise Page <http://www.microsoft.com/mobile/enterprise/default.asp>
- Sierra Wireless <http://www.sierrawireless.com>
- WebMed Technology <http://www.webmedtechnology.com>

©2003 Microsoft Corporation. All rights reserved.

This case study is for informational purposes only. MICROSOFT MAKES NO WARRANTIES, EXPRESS OR IMPLIED, IN THIS SUMMARY.

Microsoft and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. The names of actual companies and products mentioned herein may be the trademarks of their respective owners.

Press contact: rrt@wagged.com
Mobile SIG