

IBM and Sprint PCS team to develop Voice Command



Sprint acquired PCS (Personal Communications Service) in 1995. Today, Sprint PCS operates the nation's largest 100-percent digital, 100-percent CDMA wireless network, which now covers a population of nearly 244 million people or more than 85 percent of the U.S. population, as well as parts of Puerto Rico and the U.S. Virgin Islands.

But getting to this point wasn't without its challenges.

Overview

■ **The Challenge**

Develop a voice-based, value-added wireless solution for Sprint PCS to attract and retain customers and increase revenue sources for the company

■ **The Solution**

Naming IBM primary contractor on the project and utilizing a combination of IBM hardware and software, along with selected Original Equipment Manufacturer (OEM) components to create Sprint PCS Voice Command™

■ **The Benefit**

Measurable growth in revenue, customer loyalty and new customers, as well as having a platform in place upon which future advanced services and Third Generation (3G) offerings can be built.

This road began in Abilene

If they could have looked into the future from their 1899 vantage point, the founders of the Brown Telephone Company in Abilene, Kansas would have been astounded that 93 years later, the company would be known as Sprint, a global communications company serving 23 million business and residential customers in more than 70 countries.

Sprint, with stops along the way as United Telephone and Electric, United Utilities, and United Telecommunications, has secured its leadership position in the telecommunications industry through a diverse portfolio of local and long distance offerings. Sprint is also a key player in the burgeoning segments of optical and wireless telecommunications networks.

Getting engaged

In 1999, the telecommunications industry was experiencing increased customer churn, which impacts customer loyalty and minutes of use. Further, the wireless sector had become a crowded, highly competitive commodity environment. Sprint PCS sought to differentiate itself with value-added wireless applications running on a scalable platform that could support more advanced services and future 3G applications.

They were also interested in finding a wireless solution that could provide customers with alternative options to dialing in a more convenient and productive manner, and also be used while driving.

“We wanted to be the first in the market to introduce a technology that would enable people to simply dial using their voice and thereby accessing a large Web-based address book,” says Dennis Paschke, Vice President of Product Development in the Sprint PCS marketing organization. “By deploying a solution that uses natural voice recognition to store up to 2,500 phone numbers, our customers are able to use this service to enhance their productivity and make calls in a much safer manner than before.

“Evaluating wireless OEMs to help us achieve this goal was one of the most comprehensive vendor selection processes we’ve ever done. We picked IBM as the prime contractor because of their ability and vision to contribute to our strategic product architecture, as well as to meet our marketing objective of time-to-market,” adds Paschke.

The result of this collaboration was Sprint PCS Voice Command, a project that began in 1999, and went through an exhaustive field trial, followed by a national rollout a year later in the summer of 2000.

Voice Command: the application

Sprint PCS Voice Command is a network-based, voice-activated dialing service that enables customers to easily and quickly access people and information anywhere on the Sprint PCS all-digital network. It is intended primarily to provide mobile phone users with clear and easy access to phone numbers for customers who want a hands-free dialing option for safety and productivity reasons.

Sprint PCS Voice Command provides each customer with a personal Web page that allows them to manage, organize and enter phone numbers in an extensive address book, thus eliminating the need to voice train each entry. By using their voices, Sprint PCS Voice Command customers can dial, look up directory names, modify their address book entries and perform various speech-enabled, voice-independent functions, including accessing a Sprint PCS directory assistance operator while using any Sprint PCS Phone.

“Voice Command is currently a Sprint PCS exclusive service,” notes Paschke. “It’s network-based, so it can be extended to wireline as well. Further, Voice Command is highly scalable, which means it can grow as the demand for it increases. In that respect, it’s a product that positions us well to meet the immediate and future needs of our customers.”



Voice Command: the IBM solution

The IBM Resource Manager (RM) software platform was chosen by IBM to provide the infrastructure for the Voice Command application. Other components include Nebs-compliant IBM @server pSeries,[™] IBM WebSphere,[®] IBM WebSphere Voice Response with DirectTalk[®] Technology, DB2[®] and selected OEM hardware and software.

A number of IBM organizations worked together to provide:

- *Overall integration and development skills to address Sprint PCS product requirements*
- *Installation services that incorporate the IBM platform into the Sprint PCS network*
- *Hosting the Web interface to the user address books*
- *Providing a single point of contact for problem management and resolution.*

The network architecture is a distributed call-processing model based on ten service nodes located across the United States and a central database system located in Kansas.

"The IBM system design provides Sprint PCS the capability of extending voice services to other applications such as Voice Web access. This is achievable because the architecture of Voice Command is network-centric and not handset-dependent," Paschke states.



With a menu of wireless companies to choose from, over 40,000 IBM employees have picked Sprint PCS as their wireless provider of choice. Many of these employees also use Voice Command as a safer way to make calls on their wireless phone while in their vehicles.

A long-term relationship

While operational for a relatively short period of time, Voice Command is already paying dividends in a key growth area for Sprint PCS.

“The fact that we are first to market with a network-based voice-recognition solution that is reliable and easy-to-use means our customers have come to depend on it,” says Paschke. “As a result, we’re getting more of the higher-value customers — those who use our offerings on a regular basis and stay with us — thanks to Voice Command.

“IBM has been a strong alliance for us in this project. They’ve provided good advice on what’s realistic and what’s not. We have a great relationship and we look forward to continuing that relationship over the long term.”

For more information

To learn more about how IBM wireless solutions can help your business, contact your local IBM marketing representative or visit us at ibm.com/solutions/wireless.



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