



► With a breakthrough Telcordia Technologies platform, Virgin Mobile USA becomes one of the world's fastest growing wireless companies, hitting 1 million subscribers in less than 15 months.

Virgin Mobile USA Teams with Telcordia on a First-of-Its-Kind Wireless Service for America's Hot, Youth Market

THE CHALLENGE

► In 2001, Virgin Mobile USA had a vision for an entirely new kind of wireless service for the U.S. youth market. The company also set “an incredibly aggressive timeline,” said Mike Parks, Chief Information Officer for Virgin Mobile USA. In fact, Virgin Mobile USA's joint venture partners, Sprint and the Virgin Group, were wary, advising Parks and his team that their time frame was tight. His team responded, “This is what we have to do.”

Virgin Mobile USA, a new entrant in the U.S. market, was proposing a unique wireless service model aimed at 15-30 year olds. It would break new ground in two key ways:

1. **Leveraging a Network.** Firstly, Virgin Mobile USA was establishing itself as the first Mobile Virtual Network Operator (MVNO) in North America. Instead of building and managing its own network, it would run entirely on Sprint's nationwide PCS network.
2. **Reinventing the Provider-Customer Relationship.** Secondly, to resonate with the youth market, the service would be entirely pay as you go, requiring no contracts or credit histories, and would be heavily oriented toward text messaging — essential for Virgin Mobile's young users — and self-service. Customers would be able to easily set up their own accounts and manage their balances on the Virgin Mobile USA Web site. And the service would feature cutting-edge offerings, including a wide range of applications known as “VirginXtras.” This suite of content includes music, entertainment, and youth-relevant lifestyle features like the “Rescue Ring” and the “Hit List” — as well as exclusive content from Virgin Mobile's strategic partner, MTV Networks.

Presenting a Complex Set of Requirements

The success of the venture hinged on finding technology vendors that could help the company deliver this unique customer experience. To serve customers who are technologically adventurous, easily bored, and very willing to switch providers, Virgin Mobile USA needed extremely robust and flexible technology that could interact seamlessly with the Sprint PCS network, perform reliably, scale with the customer base, and support a rich portfolio of pay as you go services.

“Selecting Telcordia Became a Very Clear Choice”

After completing a competitive assessment, Virgin Mobile USA selected Telcordia Technologies for both its expertise and the quality of the Telcordia® Prepaid Services Solution. According to Parks, “Three elements attracted us to selecting Telcordia — industry knowledge, functionally rich products, and a track record for 24/7, real-time support.”

THE TELCORDIA RESPONSE

► Teams from Telcordia and Virgin Mobile USA aggressively worked together to design a platform based on Virgin Mobile USA’s unique array of requirements. They developed a plan to adapt the Telcordia software components to produce an electronic switching solution combined with a prepaid application.

Combining the Right Experience with the Right Products

The teams were working on an incredibly tight schedule. Given that the entire solution needed to be up and running in six months and be able to support a half million subscribers in less than one year, the experience that Telcordia provided proved invaluable. Telcordia software engineers already had a thorough understanding of the technology in the Sprint network, having actually written some of the switch translation that would be integral to Virgin Mobile USA’s operations.

Telcordia mobile solution architects, who had been deploying prepaid solutions for several years around the world, were also versed in both North American and international mobile standards. They understood how to configure prepaid service software to support Virgin Mobile USA’s complex tariff structures, giving the company the flexibility to charge subscribers based on customized parameters such as the time of day and promotional activities.

In addition, Telcordia had the right Intelligent Network product base for an open, scalable, configurable platform for the Virgin Mobile USA business model.

The platform was composed of:

- **Telcordia® ISCP® System**, an intelligent service control point with an embedded Data Report System that captures call details and allows Virgin Mobile USA to post call data on its Web site
- **Telcordia® SPACE® Service Creation & Provisioning System**, which provides easy-to-use graphical service creation and modification capabilities
- **Telcordia® Open Services Platform**, which incorporates open Application Programming Interfaces (APIs) to enable real-time self-service like prepaid balance replenishment.

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Mike Parks
Chief Information Officer
Virgin Mobile USA

Delivering Another Technological First

Furthermore, Virgin Mobile USA looked to Telcordia to fulfill yet another key requirement. A critical need for Virgin Mobile USA was that it wanted a solution that would avoid “backhauling” calls.

Under a backhauling scenario, whenever a Virgin Mobile USA call came onto the Sprint PCS network, Sprint would have to transfer the call off the network and onto a Virgin Mobile USA switch. The switch would decide how to route the call and then return the call to the network for delivery. Routing calls by taking them on and off the network — a process currently employed by many MVNOs and other providers’ pre-paid solutions — tends to add time, costs, and a greater potential for error to call processing.

Instead, Telcordia engineers configured “software triggers” within the Sprint network, so that, when a call hit the Sprint PCS network, a trigger would automatically ask the Telcordia® ISCP® System how to handle the call. The ISCP System would examine the call data and instruct the network on how to complete the call. The entire process happens quickly and efficiently, computer-to-computer, so expensive trunking of calls is not necessary.

This controlling of operations costs was extremely important to Virgin Mobile USA. The company knew that it had to be able to offer its service at a reasonable price to attract its young target market.

This automatic call-routing capability is “a huge breakthrough for wireless carriers in terms of operating a more efficient, more cost-effective, more reliable network,” said Parks, “and it plays to the strengths of Telcordia. Telcordia engineers really understood how to make the triggers work well together, throughout the entire Sprint PCS network. That’s something only Telcordia could have provided. No other company could have given us that.”

THE RESULTS

▶ Virgin Mobile USA placed its first phone call on the Sprint PCS network in April 2002 — four months after its initial planning meeting with Telcordia. The service was ready for a nationwide test in the U.S., with all back-office operations in place by May, and the service launched coast-to-coast in July.

“We literally went from nothing to nationwide in seven months,” said Parks, “in time to hit two critical seasons — the 2002 back-to-school season and the holiday season. That was our goal.”

Since it went live in July 2002, the service has been running across the U.S. with no service disruptions. Virgin Mobile USA reports that the Telcordia platform has met every expectation for reliability and scalability. Subscriber rates grew from 0 to 500,000 in nine months between July 2002 and April 2003, and hit the 1 million customer mark in early November 2003.

“In fact, we may be the fastest growing, virtual network operator in the world,” said Parks. “When I look back on what we accomplished, I don’t think we would have made our timeline without Telcordia, and I sometimes think we wouldn’t have launched at all. Telcordia has been integral to our success.”

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