WAVE®

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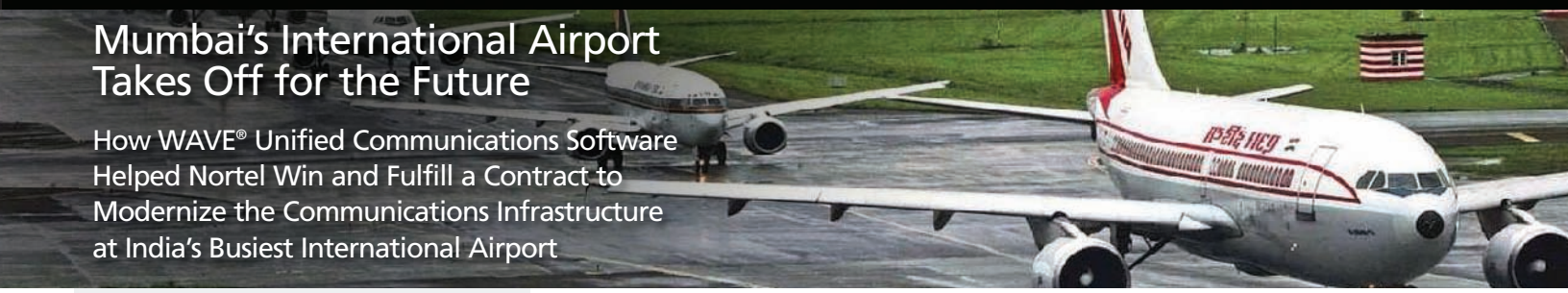
Mumbai's International Airport Takes Off for the Future

How WAVE® Unified Communications Software Helped Nortel Win and Fulfill a Contract to Modernize the Communications Infrastructure at India's Busiest International Airport



In Brief

Experiencing significant growth as the country's economy booms, Mumbai's Chhatrapati Shivaji International Airport (CSIA) is in the midst of a massive infrastructure upgrade. Aiming to establish itself as one of the world's premier airports, modernizing communications was a crucial aspect of their plans. As a bidder competing for the task, Nortel was asked to add a solution for incorporating radio interoperability into the IP backbone project. Nortel immediately turned to Twisted Pair Solutions for an interoperability solution in a class of its own. By leveraging standards-based software instead of expensive and proprietary hardware, WAVE created a communications system-of-systems that could be easily incorporated into Nortel's existing architecture. The WAVE-based system helped Nortel win the CSIA contract and is now a core component of its modern, standard-setting unified communications infrastructure.

The Challenge

Mumbai's Chhatrapati Shivaji International Airport (CSIA) is India's busiest. In 2007, 25.2 million passengers and more than 500,000 tons of cargo passed through the facility. At the beginning of 2006, a consortium known as Mumbai International Airport Private Limited (MIAL) was given the mandate to manage a massive infrastructure modernization at CSIA, with an immediate goal of nearly doubling the airport's capacity in only a few years.

A critical component of the upgrade was the installation of a sophisticated IP backbone to support a converged wired and wireless network. The system needed to be capable of consolidating data, telephony and video systems across the airport's entire footprint, from terminal buildings to outside maintenance areas. Given the scale and importance of the project, the bid went out to a number of world-class providers, including Nortel.

As the bid process progressed, MIAL came to recognize that there was still a component missing from their planned IP network. In order to fulfill their mission of achieving true 21st-century, best-of-breed unified communications, they needed a solution that also provided for the seamless integration of their existing radio equipment.

MIAL subsequently added this element to the project scope, requesting that bidders include this new capability in their proposals. In response, one leading competitor quickly offered its own interoperability solution. Unfortunately, the system could only be implemented using the company's proprietary hardware components. With hardware at its core, the solution required an initial investment that substantially increased the project's total costs. And in the end, MIAL would ultimately be purchasing a system wrought with limitations. Should MIAL wish to expand the number of radio channels in operation, as it expected to do, there would have to be further expenditures for the purchase of additional proprietary hardware.

The Solution

Nortel, a Certified WAVE Integrator, knew there was a better solution. A system based on WAVE was ideally suited to meet the numerous challenges presented by the request. Reliant on nothing more than standards-based software, WAVE could create a seamless communications system-of-systems without requiring a single piece of proprietary hardware.

Because they only needed to incorporate standards-based software on a PC running Microsoft Windows Server 2003, Nortel was able to integrate the WAVE-powered solution into their proposal quickly and easily.

The on-site demo of the system was something of a watershed moment for MIAL. Presented with the elegant combination of simplicity, flexibility and scalability, MIAL recognized that WAVE represented a game-changing approach to unified communications. For a markedly smaller investment than the alternate hardware solution, they could capitalize on a superior architecture and feature set. Not to mention guaranteed relevance and a lengthy track record of proven implementation at government and private installations around the world. MIAL awarded the contract to Nortel.

"The Indian aviation industry is poised for huge growth and to support such dramatic growth, the airport infrastructure needs to be scalable, resilient and future proof," said Ravi Chauhan, Managing Director, Nortel India.

With very little additional effort or cost, WAVE made it possible for MIAL to add immeasurable value and functionality to the new IP telephony network. The tight integration of the existing radio network, which currently consists of three channels and is expected to increase to 15, both simplifies the substantial day-to-day operations and improves critical emergency response of what is a large and complex facility.

By removing the disparate technology barrier and allowing real-time interaction, MIAL can apply new working practices to improve

Customer Pain Points

- **Lack of Interoperability.** Even with the completion of a new IP backbone, as proposed the system would still leave those using push-to-talk radios disconnected from other communication channels.
- **Pressing Timetable.** With a hardware-based system already proposed by a competitor, Nortel needed an interoperability solution that could be evaluated and demonstrated quickly.
- **Existing Plans.** Nortel had already fully developed their proposal, making it imperative that an interoperability solution could be seamlessly integrated without requiring any redesign.

Solution Features

- **System-of-Systems Architecture.** Uses standards-based software to work with existing plans and avoid the unnecessary complexity, limitations and expense of proprietary hardware solutions.
- **Extensive Interoperability.** Creates a tightly integrated communications environment, supporting interoperability with almost any communications device, including phones, two-way radio systems and PCs.
- **Easy Scalability.** Capitalizes on the power of software to scale to an unlimited number of users without requiring any additional hardware components.
- **Guaranteed Relevance.** With standards-based software as core components, upgrades are simple and it is ensured that the system will never be obsolete.
- **Cost-Effectiveness.** Uses only standards-based software to deliver highly affordable interoperability by incorporating existing communications devices without requiring any expensive new hardware.

business efficiency and provide a better traveling experience for passengers. MIAL also has plans to sell services based on the solution to tenant airlines and other businesses to generate revenue.

"This overhaul is part of MIAL's long-term program aimed at expanding the capacity at CSIA and making communications as seamless as possible for anyone who visits or works at the airport," said GV Sanjay Reddy, managing director, MIAL. "The state-of-the-art changes that this transformation will bring will help raise CSIA to global standards, equipping it with technology that meets or even exceeds what is currently present at top airports across the world."

Find Out More

If you would like to learn more about WAVE software technology and the innovative communications solutions built around it, visit us at ***www.twistpair.com****.*

About Twisted Pair Solutions

Twisted Pair Solution's award-winning WAVE software technology enables partners and customers to build and operate secure, highly scalable communications solutions in the world's most demanding environments. Recognizing that the best approach to solving the complexities of communications interoperability is to use standards-based software to unify diverse communications technologies, WAVE is trusted when communications is absolutely indispensable. Twisted Pair Solutions is headquartered in Seattle, Washington, USA with offices in the United Kingdom and Australia.

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