



## Meru Networks Enables the World's Largest All-Wireless Enterprise

Osaka Gas Co., Ltd., Japan's second largest utility company, supplies natural gas and a variety of other businesses in the Kansai region, one of Japan's largest economic zones. Osaka Gas imports natural gas in the form of liquefied natural gas (LNG), distributing it to about 6.6 million customers, or about 25% of the total number of customers in Japan. Its service area covers 69 cities and 41 towns in six prefectures. Osaka Gas received industry-wide attention in 2005 with the announcement of its plan to install 6,000 wireless IP phones across its 49 offices.



### Challenge

Deliver on company's vision for the "All-Wireless Enterprise" by providing its employees with anytime, anywhere access to reliable wireless voice and data services.

### Solution

- Meru Wireless LAN System consisting of 800 AP200 Access Points and 72 MC1000 Controllers
- 6,000+ dual-mode FOMA/Wi-Fi N900iL phones and NTT DoCoMo's Cellular/Wi-Fi service
- Meru Voice Service Module (VSM), which enables advanced VoIP services over the wireless networks, such as call admission control and load balancing of calls based on the resources available

### Benefits

- Total wireless VoIP solution is expected to save an estimated ¥450,000,000 JPY (\$4M USD) per year
- True one-number access, with voice calls running over the corporate wireless LAN indoors, and handing off to NTT DoCoMo's cellular service when roaming outdoors
- Single converged WLAN infrastructure for toll-quality voice and high-density data services
- Effortless access point (AP) deployment with no need for channel planning or complex site surveys

### True Business Efficiency Calls for a New Way of Working

Osaka Gas had a vision to create the ultimate "address-free" office environment, where employees could work anytime, anywhere with their wireless laptops. Osaka Gas realized, however, that true organization-wide efficiency could not be achieved through data access alone. To truly impact the speed of business communications, employees also needed telephony on-the-go. "We cannot expect organization-wide efficiency by just using Excel," explained Mr. Takahara and Mr. Izuno, the team leaders responsible for rolling out the company-wide "Change Our Work Style" technology initiative. Under this initiative, the company's Information & Communication Systems Department was responsible for the deployment of what would eventually become the world's largest wireless voice and data fixed mobile convergence solution.

### Delivering on the Vision of the "All-Wireless Enterprise"

To create the "All-Wireless Enterprise," Osaka Gas first needed to deploy a pervasive WLAN infrastructure capable of supporting multiple data and voice applications, all with the quality and reliability that its employees have come to expect from their wired network. Having already invested in IP PBX infrastructure for each of its offices, voice over WLAN was a clear next step. However, the quality of wireless voice over IP (VoIP) service was of particular concern for Osaka Gas. "As a lifeline industry, we cannot permit any delay in responding to calls at times of emergency," noted Mr. Takahara.

After an extensive comparison of WLAN systems, including Cisco, NEC/Airespace, and Aruba, Osaka Gas selected Meru Networks to enable the "All-Wireless Enterprise," featuring Meru AP200 Access

Points, Meru MC1000 Controllers, and 6,000 dual-mode FOMA/Wi-Fi N900iL phones. Osaka was particularly impressed with the advanced VoIP features afforded the Meru Voice Service Module (VSM). The Meru VSM enables enterprises to deploy wireless VoIP in the largest environments with guaranteed optimal service quality, accomplished without any dependence on proprietary extensions to the client or proprietary signaling from the IP PBX. Mr. Takahara explained that "Meru was the only solution that was able to control over-the-air, upstream traffic without any client-side software."

In addition to exceeding expectations for voice quality, Meru also provided Osaka Gas with the following benefits:

- **Support for seamless VoIP mobility:** With the Meru Virtual Cell feature, which enables all physical APs to appear as a single virtual AP, voice clients experience seamless roaming with no loss in quality or dropped calls.
- **Simplified deployment eliminating the need for complex RF site surveys:** Meru supports single-channel operation of APs so that enterprises can deploy a wireless network without expertise in complex RF management.
- **Unmatched scalability:** The Meru Air Traffic Control™ technology delivers intelligent contention management and load balancing to deal with the bandwidth demands of high-density deployments.

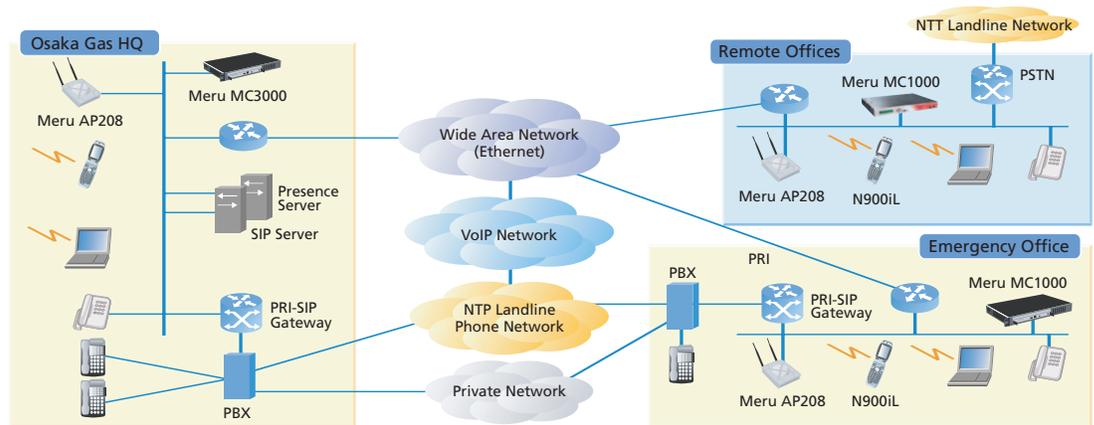
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### The World's Largest Wireless VoIP Deployment is a Success

In May 2005, Osaka Gas began the WLAN installation process, and the network was fully deployed in all of its 49 offices by the end of March 2006, as originally planned. At completion, Osaka will have 800 Meru AP200 Access Points and 72 Meru MC1000 Controllers installed. In addition to 6,000 wireless N900iL phones, Osaka Gas will continue to support wired extension phone lines at 17 out of 49 offices for emergency communications.

The company expects a total cost savings of ¥450,000,000 JPY (\$4M USD) per year from its wireless VoIP solution. In addition to the huge cost savings, Osaka Gas' new convergence solution is speeding up communications and promoting work efficiency across the board. Now its employees can answer extension calls anytime, as if they were at their own desks, and even when they are in other offices. Similarly, business-critical documents stored on the central server are now accessible anywhere, empowering employees to deliver the best possible service to their customers.



The Meru Networks "All-Wireless Enterprise" WLAN infrastructure enables Osaka Gas to support multiple data and voice applications.



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