

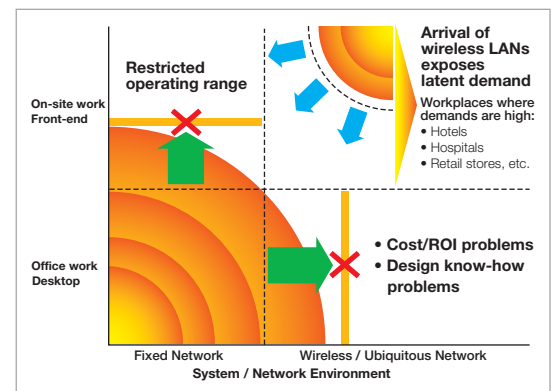
Pilot Project Using Mobile IP-Centrex to Build an Integrated Voice and Data Environment

Taking IT Solutions to a New Stage

With the economy improving, the number of companies initiating strategic and focused IT investments is beginning to grow. In this more flexible environment, corporate IT solutions are in the process of moving to a new stage at which IT is becoming more widely adopted in the workplace. In particular, workplaces involved in customer service activities are starting to show increased interest in utilizing IT solutions that can provide comprehensive support as a way of improving customer relationships and impacting business sales.

Against this background, Nomura Research Institute (NRI) and Intel Corporation are involved in a project to implement an integrated voice and data environment utilizing Mobile IP-Centrex and a wireless LAN (WLAN) at the Hyatt Regency Osaka (HRO). The project is part of the “Digital City Osaka Project” under way in the Cosmo Square district of Nanko in Osaka, Japan. With the help of Intel, HRO implemented a transformational solution with no similar systems to use as a guide.

Figure 1 Expanding the Scope of Enterprise IT Solutions That Utilize Wireless LANs



Source: NRI Nomura Research Institute

Overview of Hyatt Regency Osaka Project

The Hyatt Regency Osaka is an urban resort hotel of Hyatt International Corporation and one of 209 hotels operated by the company in 39 countries. The hotel has approximately 500 guest rooms and 19 function rooms spread over 28 floors, and it is adjacent to a range of facilities that include Kansai Airport, Universal Studios Japan, and the INTEX-Osaka convention center.

With the hotel industry becoming more competitive every year, HRO’s overall goal is to further improve its customer service to meet the increasingly diverse needs of its guests. The company hopes to provide a superior environment for guests and improve the rate of repeat visits, despite its less convenient location some distance from central Osaka.

HRO’s objectives in introducing this solution were:

1. Provide an environment where people can communicate anytime and anywhere
2. Provide an environment where people can share information anytime and anywhere
3. Provide guests with high-speed broadband connections

Their specific aim with the first objective was to facilitate communication between staff, while the second objective was to enable the sharing of business information.

HRO's plan, and what they have set about doing, is to use IT as a strategic tool to provide attentive service that is tailored to the preferences of all guests, both VIP and regular guests, while providing an accurate, prompt, high-quality service that will make guests want to return.

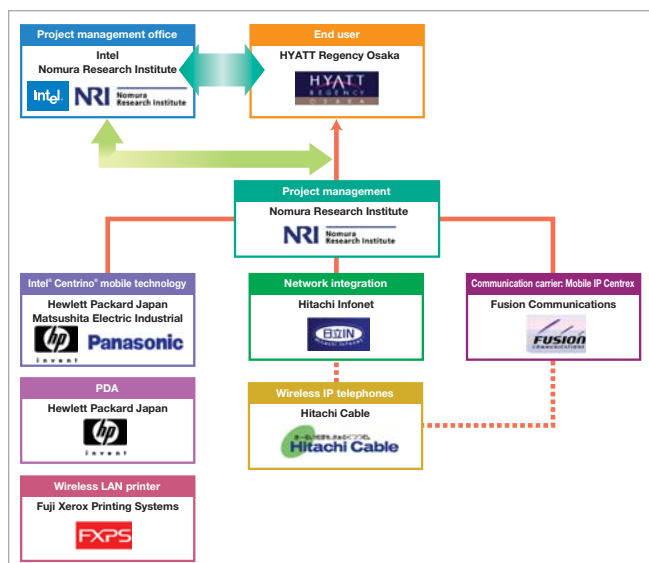
Selection of the IT Solution

Although HRO had a number of potential IT solutions available, the company ultimately chose to implement an integrated voice and data environment utilizing Mobile IP-Centrex and a wireless LAN throughout the hotel. Included in this solution was the initial deployment of 25 notebook computers based on Intel® Centrino® mobile technology along with 60 Intel XScale® technology-based handheld devices. More Intel technology-based notebooks and handhelds will be added to the solution over time. This selection was based on the solution's ability to meet HRO's needs, technology future-proofing, and total cost.

Project Organization

The project consisted of a management office formed by NRI and Intel, and project partners including the communication carrier, integrator, system vendors, and other suppliers (see Figure 2). The project management office was in charge of putting together this complex project, with responsibilities that included the overall plan and proposal, selection of partner companies, and project management.

Figure 2 Project Organization



Source: NRI Nomura Research Institute

Features of the HRO System Environment

HRO has a wireless LAN (IEEE 802.11b/g) that provides integrated voice and data coverage across the entire hotel. By using the Mobile IP-Centrex Service provided by Fusion Communications Corporation, the system was implemented with a simple configuration consisting of Intel processor-based mobile clients that support voice calls.

Initially, the clients used by staff will be predominantly Intel XScale technology-based PDAs, and use of smart-phone type devices is anticipated in the future.

Intel XScale technology-based handhelds and handsets provide ample performance and include Intel MMX® technology to enable a higher quality VoIP experience. Intel XScale technology also provides superior battery life with Intel SpeedStep® technology, which allows the processor to change its performance characteristics to meet demand—greatly increasing battery life while still providing excellent performance.

The current project has installed the “PPPPhone” mobile IP telephony solution (SoftPhone) from International Systems Research Co. for PDA voice communications via IP-Centrex.

User Benefits from Installing the System

Staff who use the system in their daily work overwhelmingly report how effective it is. The following list describes some of the specific areas in which benefits are achieved.

- Improvements in work efficiency and productivity provide more time and opportunity for interaction with guests.
- The ability to access information from anywhere in the hotel means every hotel employee can be a concierge.
- The ability to share information from anywhere in the hotel allows for one-to-one service tailored to the preferences of each guest.
- An improved work environment increases staff motivation, contributes to running the hotel, and creates new added-value services that the hotel can provide guests.

Improvements in work efficiency and productivity provide more time and opportunity for interaction with guests

An area where HRO expected to see benefits quickly from installing an integrated voice and data environment was in the provision of an infrastructure for inter-staff communication.

Prior to installing the system, inter-staff communication at HRO was limited to fixed-line telephones and pagers. Judging by the numerous positive comments from staff who work with the new system, further benefits can be expected from a wide range of other communication scenarios. The projected benefits of installing the new system are:

- Generate an additional 4,800 hours per year to be spent on providing personal service to guests (60 hours per year per staff member)
- Initially generate an additional \$90,000 USD per year worth of personal service

HRO aims to use the time and personnel cost savings generated by the improved work efficiency to give staff more time and opportunity to provide personal guest service. By making improvements first to communication activities, where the efficiency benefits are high, the company hopes to create an environment in which staff can find more time to spend helping guests and providing face-to-face customer service.

The ability to access information from anywhere in the hotel means every hotel employee can be a concierge

HRO is undertaking a range of measures aimed at improving guest satisfaction levels that utilize the new integrated voice and data technology. By making the integrated voice and data solution available throughout the hotel, HRO has created an environment that empowers the staff with the ability to provide accurate and prompt replies to guest inquiries.

For example, when staff such as bell captains, whose job involves a lot of moving around, are asked a question by a guest, they can access the information web site from their wireless PDAs and reply to the guest inquiry on the spot. This enables a much faster and more flexible response to guests than was possible in the past.

Getting a prompt and accurate reply to their questions is something that guests expect as a matter of course. Although this factor will not in itself bring a significant improvement in guest satisfaction levels, the risks associated with failing to get basic services right are high, and guests view such failures with a critical eye.

The ability to share information from anywhere in the hotel allows for one-to-one service tailored to the preferences of each guest

Spending additional time with guests is valuable because it helps build an understanding of their tastes and preferences. HRO's goal is to strengthen its ability to provide one-to-one service based on the individual needs of each guest in order

The features of the system

Common features for both voice and data communications

- Both high-speed wireless data communications (IEEE 802.11b/g) and wireless voice calls (050 number IP telephones) can be used simultaneously throughout the hotel building.
- Total number of WLAN APs in hotel = 149
 - For guest internet connections
 - For staff network connections
 - For staff IP telephones (internal and external calls)
- Planned number of mobile clients for staff = 80 (PDAs and IP telephones)
Will increase to more than 100 in the future.

Data-only communication features

- High-speed wireless network connections
 - Average 3 to 5Mbps approx.
- Separate guest and staff data communications systems
 - Guest-oriented system emphasizes convenience and ease-of-use.
- Provides a seamless data communications environment across the entire hotel.

Voice-only call features

- The IP-Centrex Service is used for all voice call control.
- Both internal and external (050 IP telephone) voice calls are supported via IP-Centrex.
- Incorporates a handover function for seamless communications.
As much hotel staff telephone use is conducted on the move, this feature is a critical
- Links to and coexists with the existing PBX-based analog telephone system.

to provide the sort of memorable service that will make guests want to visit again.

In many cases, the individual preferences and needs of guests can be ascertained by simply talking with them more. For example, on hearing from a guest that the hotel pillow was not the type desired, staff was able to check the guest's specific information immediately and provide the preferred choice on-the-spot. As such a simple example shows, HRO's employees can access the customer's preference information in real time and provide immediately tailored services for increased customer satisfaction. Utilizing the extra face-to-face time with guests made possible by the improvements in work efficiency, HRO staff can fine-tune their services. The expected result is to turn more guests into repeat visitors.

Staff motivation is increased through an improved work environment

HRO is in the process of enhancing and improving its work environment, starting with installation of the integrated voice and data environment. Making general improvements to the work environment tends to encourage higher levels of motivation by boosting the enthusiasm of staff as they go about their work. Improved motivation manifests itself in better customer service which leads to higher levels of guest satisfaction. Higher levels of guest satisfaction in turn favorably affect staff satisfaction (enthusiasm). This results in an ideal environment, creating a virtual circle of staff and customer satisfaction.

New services contribute to hotel operation and encourage hotel employees to provide new added-value features to guests

Demands for convenient and easy-to-use wireless internet connection services have been growing rapidly in recent times, primarily from foreign-owned companies, companies in the IT sector, and travelers on overseas business trips. Wireless LANs have become a normal part of the business scene in other developed countries, and guests expect HRO to provide such an environment.

The number of guests who bring a notebook PC with them when they use the hotel's facilities (for both accommodation and other uses) is on a steadily growing upward trend.

An increase is also apparent in the number of cases in which providing high-speed internet access in conference halls and rooms has been an essential requirement for corporate conventions and seminars. With the cost of convention space so high, installation of the new system can make a contribution to running the hotel.

Another new trend is the emergence of hotel services that did not even exist in the past, such as large corporations using HRO's facilities as temporary office space in the event of their Tokyo office being incapacitated by an earthquake or other emergency. Providing guests with the same level of high-speed internet access that they have in their own offices broadens the base of the hotel's business while meeting diverse corporate needs.

Conclusion

HRO is an early adopter of integrated voice and data communications using a wireless LAN and IP-Centrex. This solution will prove effective, not just in hotels, but also across many businesses where customer service is the primary defining factor, such as those in the health care industry.

The new HRO installation represents an important first step in the adoption of IT in the workplace. Many benefits can be achieved from installing such systems in similar industries and businesses. The integrated voice and data environment based on a wireless LAN will provide the platform for the next IT generation, with even greater progress as further successful examples of this technology appear.

Find out more about a business solution that is right for your company by contacting your Intel representative, or visit the Intel® Business/Enterprise web site at intel.com/business or the Voice and Converged Communications site at intel.com/go/voip.

Solution provided by:



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