

# NEC Smart Hospitality Solutions - Deploying OMOTENASHI or the Unique Japanese Way of Entertaining Guests

KOMIBUCHI Tomoyuki, KAMIYA Kenichi, IGARASHI Miwa

## Abstract

As the number of tourists increases around the world, new hotels are being built at a rapid clip. In Japan, NEC has gained considerable experience and know-how through the development and deployment of NEHOPS, a leading-edge backbone system for hotels. Now NEC is launching a global marketing effort to promote its hotel technology worldwide. The core of the business strategy is NEC Smart Hospitality Solutions. A one-stop solution for hotels, NEC Smart Hospitality Solutions facilitates comprehensive management and operation of hotels with a single, integrated system. By achieving efficient administration and enhancing hospitality with OMOTENASHI (the unique Japanese way of entertaining guests) or "smart hospitality," this system will increase the repeat rate and maximize the customer lifetime value (CLTV), helping hotel management grow their business by increasing profits.



NEHOPS, PMS, CRM, PBX, OMOTENASHI service, face recognition system, digital signage

## 1. Introduction

According to the long-term forecast made by the World Tourism Organization (UNWTO), it is expected that international tourism will increase from 1.087 billion in 2013 to 1.8 billion in 2030<sup>1)</sup>. The number of tourists from the Asia-Pacific (APAC) region in particular is estimated to grow quickly, at 4.9 percent every year. To meet this escalating growth, hotel construction is increasing worldwide, generating enormous demand for ICT systems to support operations and management.

Built on a solid foundation of basic technologies such as property management system (PMS) technology and private branch exchange (PBS) technology, NEC Smart Hospitality Solutions is a total dedicated solution for hotels featuring advanced solutions for both guests and staff while enabling them to collaborate with each other via customer information. NEC's role is not restricted to that of either a PMS vendor or a PBX vendor; instead, NEC serves as a total integrator, facilitating the provision of total hotel systems with one-stop service and at a single window.

NEC will provide an environment in which the hotel staff can concentrate on providing service for their guests, while reducing the hotel's IT operation load. Moreover, by facilitating

consistent and customer-focused OMOTENASHI service that surpasses the expectations of guests, NEC will help make it possible for the hotel to acquire and maintain loyal customers, thereby increasing profits in the short and long term.

## 2. NEHOPS Hotel Backbone System

The key component of NEC Smart Hospitality Solutions is NEC's original NEHOPS hotel backbone system, which is comprised of three subsystems: PMS, customer relationship management (CRM), and banquet service. Featuring high data linkage between the subsystems, NEHOPS allows hotel staff to check at a glance a guest's history of previous stays, browse banquet room usage information, as well as quickly access information about supplies that have been provided to the guests such as their preference for pillows. All of this makes it possible to effectively utilize the system to improve the quality of service for repeat guests.

This system can be used for many different types of hotels, ranging from large city hotels to accommodation only hotels, supporting effective implementation of management strategy.

## 2.1 PMS

In addition to the functions required for accommodation such as management of reservations and guestrooms, this sub-system features various sales control functions, with a complete array of management functions to optimize profit. For example, it is provided with functions to efficiently implement measures such as setting a higher room rate on days with higher occupancy and a lower rate on days with lower occupancy.

## 2.2 CRM

Integrated management of all data including the history of each guest's previous stays, usage histories of banquet rooms, and claim information and can be analyzed using the RFM method. The usage data is broken down into three main sections - R (recency), F (frequency), and M (monetary) - and displayed on the customer information screen. Because the staff can refer to this information from the accommodation system and banquet system, they can easily provide more courteous service to guests with higher RFM points. Moreover, the data segmented by the RFM analysis can be extracted to start intensive promotion.

## 2.3 Banquet System

This system provides total support for the operations performed by the sales division, from business negotiation management and venue management to payment and analysis. It supports provision of parties and meetings that will increase hotel sales and make the guests more impressed.

## 3. Communication Servers

NEC's hotel-dedicated communication servers combine various functions, including a telephony system proven in government agencies and various companies around the world, as well as all the basic communication capabilities hotels require.

NEC offers a communication system that can be customized to suit each hotel, whether it is a small-scale hotel or a large hotel with a few thousand guestrooms.

Because the servers are IP-based, usage is not restricted to a specific location, facilitating acquisition of data from different sites and linkage with other systems.

In addition to the robustness of PBX servers, the following hotel-exclusive functions are provided:

- Charging system
- Voice mail
- Wake-up call
- Room dial-in
- Guest message
- Emergency notification system

## 4. Hotel IT in a Box

Generally speaking, operation and PBX systems - which are critical to hotel administration - have to be procured independently of each other. At NEC, we have integrated these two solutions into one box which we call Hotel IT in a Box.

The Hotel IT in a Box allows hotels to significantly reduce the time and cost otherwise required for the introduction of the two separate systems because the connections and operations of all the applications and functions that comprise the systems have been tested before shipment.

What's more, since the Hotel IT in a Box is stored in a single server, it makes maintenance and management much simpler, as well as reducing costs.

Because the Hotel IT in a Box uses a standardized platform and has a simple configuration, it helps reduce the workload of IT staff members. Moreover, as NEC provides one-stop maintenance, customers will no longer be forced to try and locate or identify the causes of errors themselves.

## 5. Supporting Improvements in Service and Operational Efficiency

In addition to the basic technology discussed above, NEC Smart Hospitality Solutions incorporates the following solutions for guests and staff, linking them using customer information.

### 5.1 Display Solutions

The Hotel Touch Signage is a specialized signage system for the distribution of information required inside hotels (**Fig. 1**). It shows floor information, restaurant information, and other information on touch-panel displays installed in the lobby and at the entrance. Instead of making a personal inquiry to a concierge, guests can look for the information they want to know on their own, simply by tapping the display. The information is organized into templates for optimal display and to enable hotel staff to edit and distribute it after setting the details of their own hotels. The display language can be selected from five languages depending on the country and region.

When the signage is linked with the NEHOPS banquet

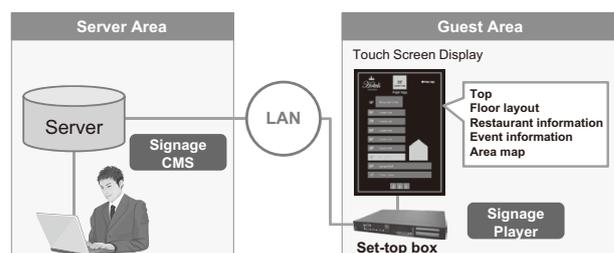


Fig. 1 Conceptual illustration of the Display Solutions system.

system, the banquet information can be efficiently entered, distributed, and displayed. Because the NEHOPS banquet information can be incorporated in the signage content management system (CMS) as event information, the additional labor and inconvenience of entering event data separately can now be eliminated. The data supplied by the NEHOPS can also be edited with the signage CMS.

### 5.2 Face Recognition Solutions

In order to provide each guest with personalized service, it is necessary to quickly identify the guest so that the most appropriate service can be provided. At the same time, to protect the safety of guests and ensure that they feel relaxed and at ease, firm action needs to be taken to deal with an undesirable guest (UG) and a report made to law enforcement when and as required. NEC's Face Recognition Solutions help to accurately and efficiently identify these two groups.

As soon as it recognizes the face of a guest captured by the cameras installed in the hotel, the Face Recognition Solutions correlates it with the registered customer information to determine whether they are a VIP or UG and alerts the hotel staff. Thanks to the alert, the hotel staff will know that a VIP has arrived even before they check in and will be able to respond more effectively. Likewise, they can take appropriate measures to deal with a UG, who may have the potential to cause trouble, as soon as they enter the hotel premises.

Through the linkage with the NEHOPS's customer information database, face recognition information can also be reg-

istered on one of the menus in the NEHOPS screen. It is also possible to display an alert on the NEHOPS screen when the guest is detected, together with detailed customer information. This notification capability is available without interfering the check-in operation on the NEHOPS. (Permission must be obtained from customers for usage of face image data and such usage must also comply with local laws and regulations.)

## 6. OMOTENASHI Service Achieved by NEC Smart Hospitality Solutions

Below, we describe what can be achieved with NEC Smart Hospitality Solutions, from the time the guest arrives at the entrance to the hotel to the time they leave. The upper section of Fig. 2 shows the services the guest receives, while the lower section shows the operations performed by the staff and by the systems.

When the guest enters the hotel, face recognition analysis of the camera image is performed. A quick reference to past usage history data enables the hotel to get ready to welcome the guest appropriately. Check-in can be executed smoothly with a tablet at any location, whether the guest is in the lobby or in the lounge. Digital signage interlocked with the backbone system and installed in various locations in the hotel displays the latest information such as event schedules and restaurant menus as well as the hotel's various facilities.

In their room, the guest can easily adjust room temperature/humidity and illumination, request room service and other services, and access a variety of information, simply by using the

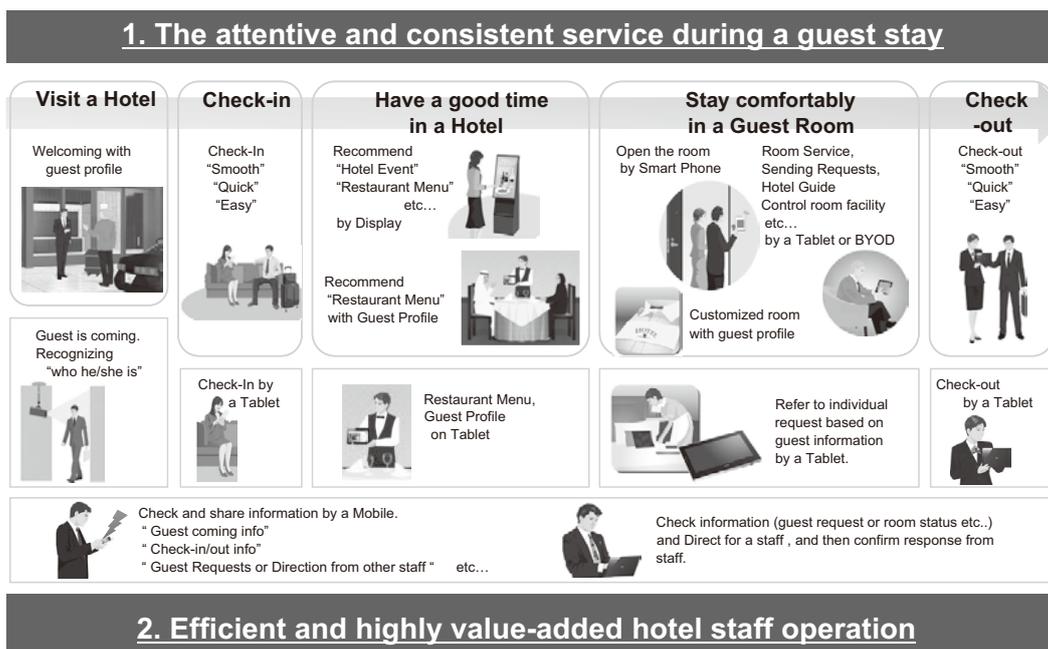


Fig. 2 Conceptual illustration of NEC Smart Hospital Solutions in practice.

tablet provided in the room. Payment can be made using the tablet when checking out, eliminating long lineups and waits.

As for the staff, they can share customer information and hotel operation information in real time via their smartphones, enabling them to respond appropriately to any situation such as an urgent inquiry and cancellation.

Guests who receive this kind of high-quality, smart OMOTENASHI will experience a high degree of satisfaction, making them much more likely to use the hotel again for special activities such as business meetings and dinners, as well as for family activities according to their life stages such as weddings, funerals, and other ceremonial occasions. In other words, CLTV can be maximized through the usage that extends the guests' lifetimes.

## 7. Conclusion

NEC has almost four decades of experience in providing hotels in Japan with IT solutions and knows all the ins and outs of hotel operations. The know-how we have gained through our experience in the development and introduction of systems has made us a leader in the field and our customers have rated our solutions very highly. NEHOPS has been deployed in more than 600 hotels in and outside Japan and our communication servers are operating in hotels in more than 50 countries around the world.

In April 2015, we established the Global Hospitality Group - a new organization that will be responsible for sales expansion, introduction, and support in overseas markets. This group will allow us to continue to contribute to ICT innovation and operational innovation in hotels, as well as to the improvement of guest experience. This group will begin its operations in China and Chinese-speaking regions, as well as other APAC countries. Depending on the success of these operations, we will examine the possibility of expanding our service into other regions.

### Reference

- 1) World Tourism Organization (UNWTO): Tourism Highlights 2015 Edition, 2015.6

### Authors' Profiles

#### **KOMIBUCHI Tomoyuki**

Department Manager  
Wholesale and Service Industries Solutions Division

#### **KAMIYA Kenichi**

Manager  
Wholesale and Service Industries Solutions Division

#### **IGARASHI Miwa**

Assistant Manager  
Wholesale and Service Industries Solutions Division

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