

TOUGHBOOK

Toughbook in action for the management of seat availability and quick delivery of accurate information under tough conditions

Airport limousine buses are a convenient means of transportation linking both Haneda Airport and Narita International Airport with Tokyo and major cities in the Kanto region. The company that operates these buses, Airport Transport Service Co., Ltd., has adopted the Toughbook CF-30 and CF-31 at the Haneda and Narita airport limousine bus terminal as part of a comprehensive seat availability management system similar to that used by airlines. They ensure smooth limousine bus operation and the delivery of accurate information to passengers.



Original limousine bus operator to take advantage of a seat reservation system similar to the system airlines use



Mr. Michihiro Kano, Deputy Director, General Affairs Department, Airport Transport Service Co., Ltd.

Airport Transport Service Co., Ltd. is well known as the company that operates the highway express airport limousine bus service that links both Haneda Airport and Narita International Airport with Tokyo and the major cities of the Kanto region.

Haneda Airport, located within the city of Tokyo, provides both international and domestic services, while Narita International Airport is Japan's primary international gateway, located some 60 kilometers away from the city center of Tokyo. Between 10,000 and 13,000 passengers travel from Haneda Airport by limousine bus on an average day.

"When the company was founded in 1954," explains Mr. Michihiro Kano, Deputy Director of the General Affairs Department, "we actually used real limousines. As the number of passengers increased, however, we had to start using minibuses to keep up with demand. At the time we called them 'limousine buses'. This term, which we coined, is now commonly used worldwide to describe the scheduled buses that link airports and cities." (Mr. Michihiro Kano)



Mr. Tomohiro Miyashita, Information Systems Section, General Affairs Department, Airport Transport Service Co., Ltd.

The biggest difference between regular buses and airport limousine buses is the fixed seating capacity of an airport limousine bus. Mr. Ikuki Minomo, Branch Manager of Limousine Passenger Service's Haneda Office and the person in charge of the company's airport information desk explained why.

"Since airport limousine buses use the expressway, passengers are not allowed to stand, which limits the number of passengers to the number seats on the bus. This makes seat management extremely important. Actually, the management of both seating and luggage is similar to the system used by airlines". (Mr. Minomo)



The airport limousine bus is an indispensable means of transportation for users of Haneda and Narita. Using a seating management system similar to that used by an airline, seating space can be found from any limousine bus stop.



Haneda Airport limousine bus stop. An average of approximately 10,000 people uses the limousine bus service each day.

Toughbook is an intelligent bus stop pole information terminal strong enough to withstand wind and rain.

In the days when Haneda Airport had only Terminal 1, reservations and ticketing were handled through a host computer. When customers bought tickets at the ticket office in the information center, the transaction was processed by the host computer at the head office in Tokyo's Hakozaeki. However, explained Mr. Kano, there were many issues with central control using a host computer.

"If the host computer ran down, we lost the ability to issue tickets. We had an experience that the air conditioning stopped working in the computer room. It raised the room temperature and the host computer stopped working." (Mr. Kano)

To address such problems, the system was renovated along with the completion of Terminal 2 in 2004. We migrated from central control system to distributed system. We diversify ticket issue system to head office in Tokyo's Hakozaeki, Haneda and Narita. If one of systems runs down, other system backs up.

In addition to this innovation, we changed the bus stop pole. Electronic signs were adopted so that destinations could be seen from a distance and the Toughbook PCs were installed to allow easy verification of ticketing and bus status at the limousine bus stop. Computerization created what could be called, 'an intelligent bus stop pole information system.' Mr. Tomohiro Miyashita of the Information Systems Section of the General Affairs Department explained why they chose Toughbook.

"One of the challenges we faced during innovation was that the bus stop pole at Haneda Airport has small overhead shelters, which meant that terminals would be directly affected on windy or rainy days. To overcome this, Meitetsucom Co., Ltd., the company we contracted for system development, suggested Toughbook, saying 'The model is ideal to fulfill your demand'." (Mr. Miyashita)

Furthermore, the Toughbook PCs were deployed for the bus stop pole information system at the new international terminal at Haneda, which opened in 2010. At the same time, the Toughbook PCs at Terminal 1 and Terminal 2 were upgraded to the latest models in preparation for the large increase in passengers that was expected.



Mr. Ikuki Minomo, Branch Manager, Haneda Office, Limousine Passenger Service Co., Ltd.



Ticket vending machine in Haneda Airport. As a risk countermeasure, tickets can be issued from three locations, Haneda, Narita, and Hakozaeki.



Even at bus stops exposed to wind and rain, thanks to the fully-rugged design and touch panel operation, a high level of service can be provided to customers.

Keeping up with limousine buses that arrive every 5 minutes and showing the time to each destination



Toughbook PCs at the bus stops provide ready access to information such as seat reservation confirmation, seat availability on the next bus, and expected arrival times.

At peak times, limousine buses arrive at stops every five minutes. Within that brief time, onsite staff must guide passengers to the bus and load the luggage. They also have the job of issuing tickets to passengers who arrive at the bus stop with prepaid ticket coupons.

Before Toughbook was introduced, staff had to contact the office each time to find out how many vacant seats were on the next limousine bus, which made the job extremely hectic. It was also difficult to tell passengers how long it would take to reach a specific destination because the staff had no way of knowing how busy it was on a given day. However, the Toughbook intelligent bus stop pole information system solved all these problems.

“With just a quick touch of the Toughbook touch panel, staff could know immediately how full the next limousine bus was.

What’s more, Toughbook also lists the time to each destination under current conditions.

Since all of airport limousine buses are equipped with GPS and because all routes are organized into small zones, it is possible to locate, for example, where the lead bus is currently traveling and how many minutes it is taking to cover each zone.

Using this information, it is possible to accurately calculate the time required to reach a destination at a particular time during the day.

Toughbook makes it possible to tell passengers promptly how long it will take to reach a destination when they asked because the information can be checked right at the bus stop.” (Mr. Minomo)

Expansion to Narita International Airport and further improvements to the limousine bus services

The company has deployed the Toughbook PCs at their Narita International Airport branch since August 2013.

Mr. Kano says “The challenge was to install PCs at the Narita International Airport bus stops to provide services as convenient as those we provide at Haneda Airport. We had to build a computer network connecting the bus stop poles to make them ‘intelligent.’ It was completed when the refurbishment of the North Wing of Terminal 1 was finished. Some bus stops are located in areas that can be exposed to rain and wind. We chose the Toughbook PCs based on their performance at Haneda Airport.”

They have four bus stops in two terminal buildings. The system allows the bus stop staff to see the number of tickets issued at each bus stop in real time. They can therefore forecast the total expected baggage count and prepare appropriate baggage allocation plans.

The staff provides better passenger service by knowing the current expected bus arrival time, displayed on the PC’s screen.

The airport business environment at both Haneda and Narita is changing greatly with the emergence of low-price airlines and bus services, and increasing competition from other airports. These changes are affecting Airport Transport Service as well.

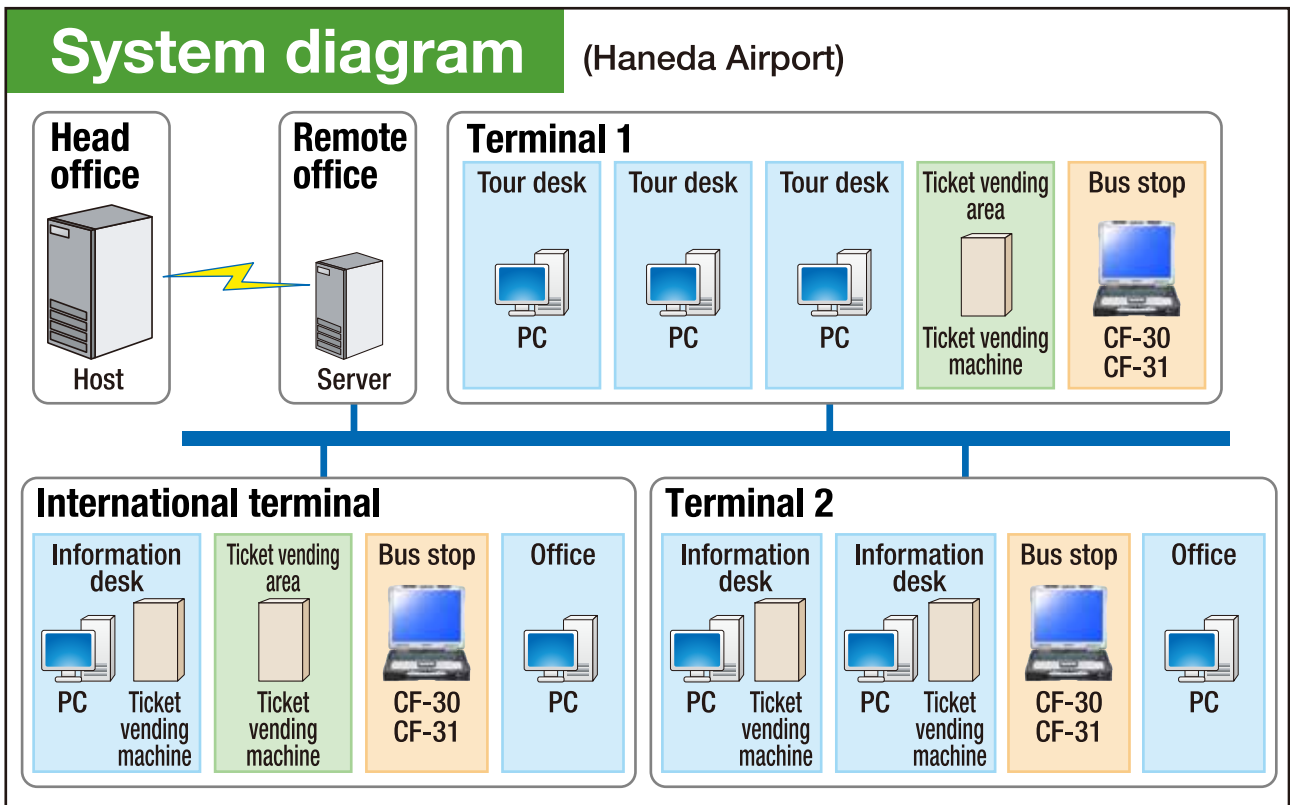



A limousine bus stop at Narita International Airport, where the Toughbook PCs are deployed for their splash-proof and dust-proof qualities.



Like Haneda Airport, some parts of Narita International Airport buildings have short eaves. During hard rains, the bus stop can be subject to splashing.

“Although the situation surrounding us is difficult, we will not cease improving our limousine bus service as a reliable means of transportation connecting Haneda and Narita airports to the center of Tokyo. We are confident that the Toughbook PCs will continue playing an important role in further improving our system.” (Mr. Kano)



<p>Customer : Airport Transport Service Co., Ltd.</p> <p>Address : Headquarters: 22-1 Nihonbashi-Hakozakicho, Chuo-ku, Tokyo</p> <p>Website : http://www.limousinebus.co.jp/en/</p> <p>System vendor : Meitetsucom Co., Ltd.</p>	 <p style="text-align: center;">Toughbook at a Haneda Airport limousine bus stop</p>
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