



e-Airport

The Challenge of Implementing the e-Airport Concept
Harnessing IT to Provide More Comfortable Air Travel

e-Airport ✈️

The government of Japan adopted the promotion of IT as a national project and established the IT Strategy Council and IT Strategy Headquarters in July 2000. It is the IT Strategy Headquarters that drew up the e-Japan strategy with its goal being to ensure that Japan becomes the most advanced IT nation in the world within five years. The e-Japan 2002 Program was drawn up as a package of prominent policies for fiscal 2002 aimed at giving tangible form to the e-Japan strategies. The e-Japan 2002 Program comprises five basic policies:

- Encouraging widespread availability of high-speed and ultra high-speed Internet access
- Digitization of education and improved human resources development
- Improvement of network contents
- Gradual introduction of electronic central and regional government
- Greater involvement in international activities

In addition to this, e! Project was earmarked as the national, global showcase of Japan's achievements in becoming the most advanced IT nation in the world as represented by e-Airport, a broadband wireless LAN

environment in Japan's premier gateway, Narita Airport. The e-Airport concept comprises five key elements:

- e-Check-in (simplified passenger procedures)
- e-Information (Integrated public transport and flight information)
- e-Navigation (Tourism guides for inbound travelers with voice translation function)
- Airport Network (Airport Internet access)
- Baggage Free (Hands-free travel with door-to-door baggage delivery using RFID tags)

e-Check-in

There are numerous checkpoints at the airport. There is a baggage check, a passport check at the airline counter, followed by a security check. After that, there is the passport control counter and then finally, one more check at the boarding gate.

e-Check-in will be the launching pad in Japan for the global SPT drive to simplify these complex procedures. One of the key points in the system will be the introduction of biometric technology to simplify travel procedures and improve security. At the same time, all information required for travel will be in digital



format and one-stop check-in will provide centralized passenger processing. NAA carried out e-Check in proving trials in fiscal 2002 in conjunction with Japan Airlines with the backing of the Ministry of Land, Infrastructure and Transport. In fiscal 2003, it carried out trials with All Nippon Airways passengers on advance check in using mobile telephones and simplified procedures through the use of facial profile recognition, broadened the scope of the trials with Japan Airlines and worked with Incheon International Airport in Korea on international trials with non-Japanese participants. Although this trial stage is just the beginning, the ultimate goal is the ability to identify a person wherever they are in the world and to have on hand at all times all necessary information related to travel. Conventionally, passports have been used for confirming identities by means of the photograph affixed to the passport. However, in this age of terrorism, we must assume that there are people with ill intentions. When biometrics is perfected and available throughout the world, air travel will enter into a new dimension of safety.

Baggage Free

Paper tags with barcodes are attached to baggage but the barcodes can hold very little information such as the flight number, etc. If the barcode become soiled and cannot be scanned, it is possible for the baggage to go missing. RFID tags solve this problem. These have an IC chip embedded in the tag by a special method. Scanner antennas emit radio waves which read the information written to the chip and can also write new information. Because information is read by radio waves, the information can be recognized even if the tag is folded or soiled, as long as the chip is not damaged. By acting as radio wave receivers, the chips are able to store large amounts of information, such as the owner's name, address, and destination, rapidly and easily. The introduction of RFID tags will enable airports to reduce the incidence of lost baggage, cut sorting costs and improve safety.

Narita Airport has launched a "hands free travel" project which will use the RFID tags to consign baggage directly from home to the airport before

departing for abroad so that they can be collected at their destination. When this becomes operationally viable, it will be possible to travel abroad without being weighed down by heavy luggage and the result would be a centralized passenger baggage transport system of a type never before seen anywhere in the world. In August 2002, the Next Generation Baggage Management Study Group became officially operational with the Ministry of Land, Infrastructure and Transport representing the core of its membership, a model system was put together in 2003. Research activities are continuing in preparation for introduction of the system. Hands-free travel began on a trial basis in fiscal 2003. Participants have their baggage collected from home by a delivery company before traveling, check in at Narita Airport and board without seeing their baggage again until they arrive at the baggage carousel at their destination airport.

SPT

SPT is the abbreviation for Simplifying Passenger Travel and was first aired in February 2002 with the objective of simplifying the complicated travel procedures endured by passengers. The principal members of the project are the International Civil Aviation Organization (ICAO), the International Air Transport Association (IATA), airport founders, operators, airlines, immigration authorities, Customs, and aviation related businesses, etc.

"One Stop Check" is the phrase used to express the vision of the project. The principal component is simplified travel so that all necessary travel information is distributed simultaneously to the relevant organizations during one check-in procedure, thereby allowing all of the procedures to be completed more quickly and efficiently. However, since the terrorist attacks in the US, the spotlight has focused on the security improvements to be had through SPT. Biometric technology, which enables identification using unique physical characteristics of the individual, is a particularly important core element in this project. The perfection and widespread availability is, without a doubt, the key to the success of this project.



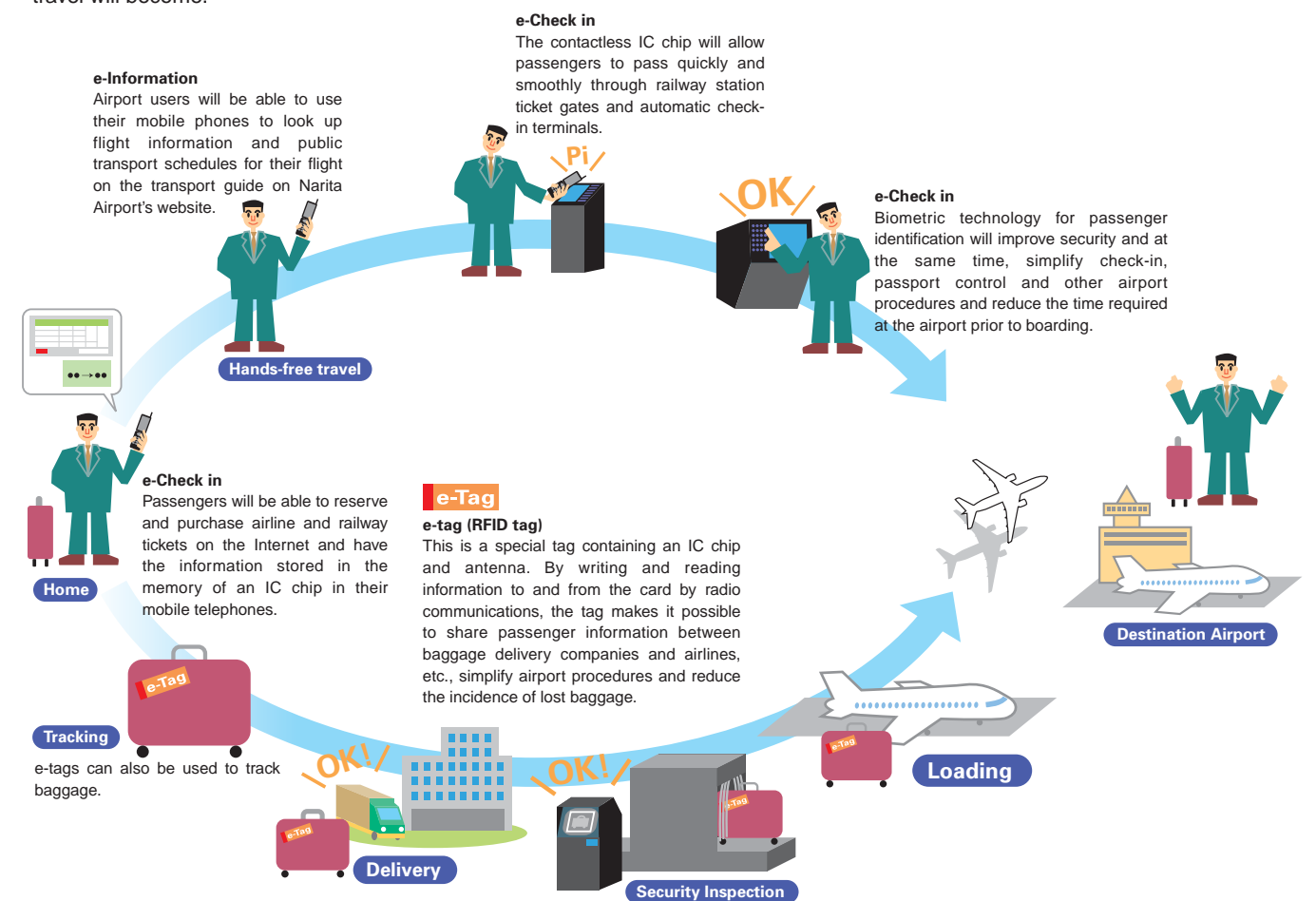
e-Airport Concept Becomes Even More Sophisticated

e-Airport Components

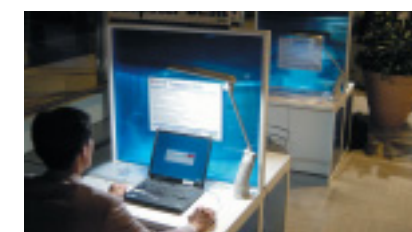
Airport Net	Airport Internet access
e-Information	Extensive public transport and flight information service
e-Check in	Automated electronic passenger processing
e-Tag	Advanced baggage handling system
e-Navi	Extensive information service via mobile terminals

The Future of International Travel

Information Technology will offer a brand new style of international travel in the very near future. The diagram below illustrates just how easy and convenient international passenger and baggage travel will become.



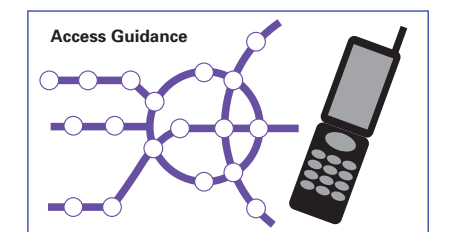
Using IT to Expand the Scope of Sophisticated Services



Wireless LAN
Antennas have been installed throughout the airport to provide an extensive wireless LAN Internet access environment with broadband connections in a wide area throughout the arrival and departure zones.



Airport Net
Narita Airport also has Internet cafes and coin-operated Internet terminals in various locations for the benefit of airport users who do not have their own laptop computers.



Access Guidance
e-Navi
As well as providing assistance with communicating in foreign languages via PDAs and other types of portable terminals, the e-Navi service provides information on airport facilities, public transport, accommodation and local tourist spots via the Internet.