

The Airport Development in The Metropolitan Area
and Its Effects on The Air Traffic Control
도쿄지역의 두개의 공항계획과 항공교통관제에 대한 영향

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1 Outline of The Airport Development

The Airport Development has been promoted by the government's financial crises and consequently expected to finish in the year of 2002. By the seventh plan, the top priority is given to the It is reported that) To put the Haneda),

the Narita), the Chubu International Airport which is network function city of over to

Today, Here in the metropolitan area in Japan, the operation of the airports are basically divided in the international lines and the domestic lines, and the former operation is assigned to Narita, and the latter is assigned to Haneda. This way of operation is quite different from the way of London, Paris and some major airports in foreign

countries, and also different from the way of the

With this work division, nowadays, aircraft movements at Haneda is about 280,000 a year, the one at Narita is about 135,000 a year. As far as Narita is concerned, in April 2002, a new runway starts to work and increases the numbers of aircraft movements at Narita by 20,000 a year. But this runway is only 2,150m long, and the flight distance from this runway is limited to about 3,000km, which includes China and Southeast Asian cities such as Beijing, Guam and Manila.

The policy was modified slightly in February 2001, even though confined to only midnight at Haneda, and place(The new runway)

But the policy is essentially maintained. This slight change of the operation has the metropolitan area such as Narita and Haneda ;

At least, the airport development plan should continue to give a priority to the development of these 2 major airports . And in the process of development in the metropolitan area, a new short runway is expected to open at Haneda in 2004, but there are no measures to solve all the congestion problems in the metropolitan area.

As a whole, we have 4 major concerns in the present development plan in the metropolitan area now : the first concern is about Haneda and Narita that I have already mentioned , the second is about so called the 3rd metropolitan airport . But this is still an armchair theory , and the third concern is about use of the military bases which are operated by the Japanese Self-Defense Forces or the U.S.Forces. One of the bases, Hyakuri Airbase which is located near Narita is to be a joint-use airdrome in the near future, but the others are not decided yet. The last concern is about the development of the small airfields located in the metropolitan area. Actually, small airfields are not important because of their capacity. And to increase the numbers of joint-use airdrome is not easy because of political issues between and the Defense Agency or U.S.Forces.

For the present situation in the metropolitan area , the development of congested airports , Narita and Haneda is still a top priority as far as the air traffic congestion is concerned .

2 The Improvement of Capacity of Narita and Haneda

In the case of Narita and Haneda , there are 2 means of improving airport capacity besides a new runway . The one is to increase the numbers of highspeed taxiway, the other is to amend a slots allocation. Of course, functionally, both means are related to each other in the end., In this connection usually , the noise pollution problem is taken in consideration, however in my opinion this should be separately deal with.

We could see a typical case of increase of the numbers of high speed taxiway at Narita. And we could find that a shape of taxiways at Narita is complicated. see attachment)

The principal reason why they are so, is that the construction of runway C

(for cross wind) has been interrupted by a movement against development of Narita, which has resulted in this complicated shape of the airport. And also You could see that a shape of A8 is not harmonized with other taxiway. The A8 was added in 2001 in order to reduce the occupation time of arrival aircraft on the runway, and also to increase maximum numbers of slots.

However, in general, at night or in a bad weather condition, the complicated taxiway may increase a possibility to cause an accident when aircrafts miss a taxiway or runway. see. (Flight Safety, No.138 Oct 2001 by Japan Airlines) Actually, we do not have any voices against this kind of opinion. We are reminded of the accident that happened by Singapore Airlines at Taipei in 2001.

As far as the Haneda is concerned, with its off-shore reclamation, the construction of the runway (3,000m length) in 1997, another one (3,000m length) in 1997, and additional one (2,500m length) in 2000 were completed. And in the process of off-shore reclamation, two old runways (2500m and 3150m) were abolished. But the airport capacity is much strengthened than before. However, in spite of these improvements,

Narita and Haneda find themselves congested already to the limit. The airplanes using these two airports are mostly heavy size, and new comers' participation is possible only in case of opening these new runways of Haneda. So, new airlines like Sky Mark Airlines hardly get slots of these congested airports in metropolitan area unless having support of the CAB.

3. The Influence of these development on the

Since its beginning, the Narita Airport has been dependent on single runway of 4,000m for its the slots have been increased year by year(see attachment) In year, being reinforced by a new runway of 2,150m maximum num-

ber of slot altogether per day.

In a this gradual increase of slots in the congested situation is making it difficult to accept a defense more than before, that primary responsibility for aircraft operation always lies with the pilots, but not with the air traffic controllers whose main function is to make suggestion to pilots.

The increase of slot at Narita require air traffic controllers to provide pilots with information of an imminent and clear danger, not only carrying out their duties which are described in a procedure of air traffic control.

The slots allocation which function is primary to adjust movement in the congested situation, were 30 per a hour and 79 at maximum per three hours, each hour having a fixed maximum. This rule was changed in 2001, and the three hours frame was abolished and the rule of a maximum per hour was introduced, and it was fixed to 32.

However, trying to alleviate the problems of congestion by the limited methods like improving taxiways which results in as shown above , creates additional tension between pilots and airtraffic controllers concerning job responsibility and prompts the tendency of subdivisions of slots on the part of airport operation.

To overall tension is predicted at the airports in the metropolitan area as congestion will get worse, owing to a lack of drastic solution like construction of a new airport.

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