International Civil Aviation Organization

The Twentieth Meeting of the APANPIRG ATM/AIS/SAR/Sub-Group (ATM/AIS/SAR/SG/20)

Singapore, 05 − 09 July 2010

Agenda Item 11: Any Other Business

OPTIMIZATION OF AIR ROUTES IN THE HONG KONG FLIGHT INFORMATION REGION

(Presented by Hong Kong, China)

SUMMARY

With the successful application of PBN technologies in air navigation, Civil Aviation Department of Hong Kong, China (CAD) has taken the initiatives to review the arrival routes as one of its continuing efforts to enhance the operating efficiency of its air route system. On 22 October, 2009, the Standard Terminal Arrival Routes (STARs) for aircraft from the West and North of Hong Kong was revised and shortened.

1 INTRODUCTION

1.1 The STARs for flights arriving at the Hong Kong International Airport via A1/P901 IKELA, A202/SIKOU and R473 SIERA were revised at 0001 UTC on 22 October 2009. These STARs served flights from South East Asia, Mainland China, North America and Europe. When compared with the STARs before the revision, the revised STARs had significantly reduced track miles and facilitated flight operations.

2 BENEFITS OF CHANGE

2.1 The implementation of these revised STARs aimed at enhancing operating efficiency of the air route system in the Hong Kong Flight Information Region (FIR). After the adjustment, flights arriving Hong Kong International Airport from South East Asia Mainland China, North America and Europe via the new routes are able to save up to approximately 210 km, or 14 minutes in terms of flight time. Based on the traffic figures recorded in the first quarter of 2009, it is estimated that the new routes will enable annual savings of arrival aircraft by more than 10 million km in journey, or 12,000 hours in flight time.

2.2 With an average of approximately 150 flights using the new STARs daily, approximately 8 million passengers will benefit from shorter flying time. Airline operators will benefit from less aviation fuel consumption and the general public will also enjoy a greener environment through reduction of CO_2 emission from aircraft.

2.3 The revised STARs also further enhance ATC operations by reducing track crossings/conflictions in control sectors and hence facilitating uninterrupted climb and descent of aircraft in the sectors.

2.4 Taking this opportunity, tracks for flights transiting the Hong Kong FIR (Terminal Transition Routes, TTRs to and from airports in Guangzhou, Macao and Shenzhen were also adjusted to minimize crossing and to provide uninterrupted climb and descent as far as practicable.

2.5 One week after the implementation of the new routes/tracks when the Winter 2009 Scheduling Season commenced and taking heed of the operational benefits offered, airline operators began to schedule significantly more flights between Bangkok and Guangzhou transiting the Hong Kong FIR.

2.6 CAD will continue to work closely with the aviation community to further enhance the air route system in the Hong Kong FIR through the development and progressive application of more advanced aviation technologies.

3 ACTION BY THE MEETING

3.1 The meeting is invited to note the commitments of CAD in continuous enhancement/improvement of safety and efficiency of flight and ATC operations in the Hong Kong FIR.

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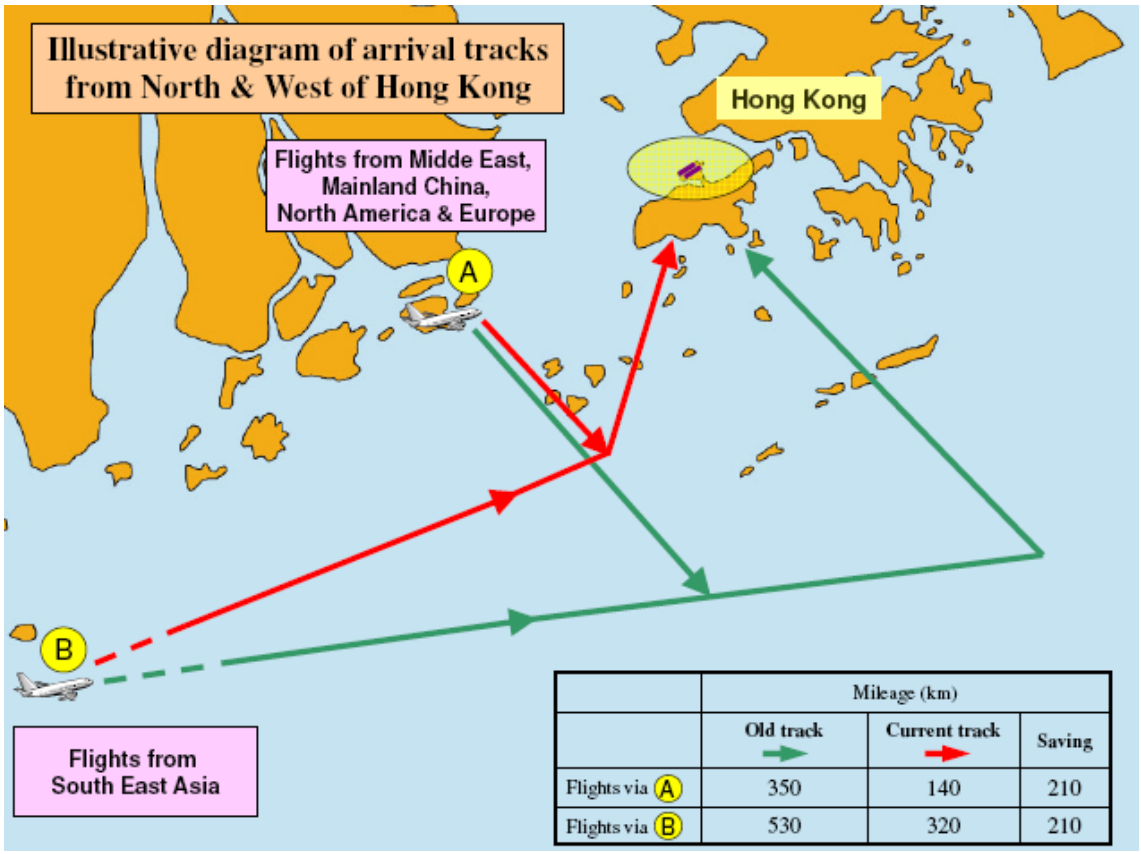

	Mileage (km)		
	Old track →	Current track →	Saving
Flights via (A)	350	140	210
Flights via (B)	530	320	210