



*International Civil Aviation Organization*

**Second Meeting of the Southeast Asia Route Review Task Force  
(SEA-RR/TF/2)**

**Bangkok, Thailand, 22 – 26 March 2010**

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**Agenda Item 4: Review Current Operations across South-East Asia and Identify Problem Areas**

**ANALYSIS OF ONE WEEK TRAFFIC SAMPLE DATA  
SUBMITTED BY STATES**

(Presented by Singapore and Thailand)

**SUMMARY**

This paper presents to the meeting the analysis of one week traffic sample data submitted by the States in the region to the Data Statistics and Analysis Working Group. It highlights the traffic loading of routes, city pairs and the PBN approval types of the aircraft flying on these routes.

**1. INTRODUCTION**

1.1 At the SEA-RR-TF/1, the meeting agreed to establish a Data Statistics and Analysis Working Group to collect traffic sampling data from States to determine areas where safety, capacity and efficiency could be improved. The data would also be used to identify problem areas such as chock points and major traffic flows. Singapore and Thailand through their respective Safety Monitoring Agencies namely the South East Asia Safety Monitoring Agency (SEASMA) and the Monitoring Agency of Asia Region (MAAR), volunteered to use their expertise to analyse the collected data.

1.2 Also as agreed for the Task Force to better focus its resources on specific work areas, States are required to submit Traffic Sampling data of the 3<sup>rd</sup> week of every month to the Data Statistics and Analysis Working Group. Traffic Sampling Data from 17-23 January 2010 were collected from 9 FIRs.

**2. DISCUSSION**

2.1 The initial findings from the Data Statistics and Analysis Working Group will be presented in a power-point presentation.

**3. ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) Note and discuss the information presented in;
- b) Note that the traffic sample data collection is on-going and one week data beginning from the 3<sup>rd</sup> Sunday of each month is required to be submitted to the Data Statistics and Analysis Working Group in the agreed format.

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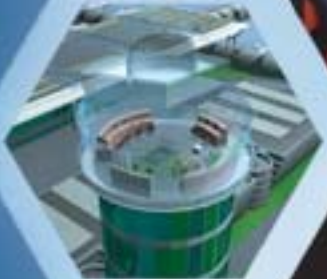
# **Southeast Asia Route Review Task Force**

## **Analysis of Data Collected**

**SEA-RR/TF/2**

**22-26 March 2010**

**Jointly Presented by  
Singapore & Thailand**



# Data Collection Participation



# Data Collection Participation



	January 2010	February 2010
<b>RPHI</b>	Yes	
<b>VHHK</b>	Yes	Yes
<b>VTBB</b>	Yes	Yes
<b>VVGL</b>	Yes	
<b>VVTS</b>	Yes	Yes
<b>WBFC</b>	Yes	
<b>WMFC</b>	Yes	
<b>WSFC</b>	Yes	Yes
<b>ZJSA</b>	Yes	Yes

# Data Elements: January 2010



January 2010	Registration	PBN Type	ETD/ATD	ETA/ATA	Entry Exit	Route/FL Changes
RPHI	N/A	N/A	N/A	N/A	Yes	N/A
VHHK	Yes	Yes	Yes	Yes	Yes	N/A
VTBB	Yes	N/A	Yes	Yes	Yes	Yes
VVGL	Most	N/A	All ETD Some ATD	All ETA Some ATA	Yes	N/A
VVTS	N/A	N/A	N/A	N/A	Yes	N/A
WBFC	Most	Yes	Most	Most	Yes	Yes
WMFC	Most	Yes	N/A	N/A	Yes	N/A
WSFC	Yes	Yes	No ETD All ATD	No ETA All ATA	Yes	Yes
ZJSA	Most	Yes	N/A	N/A	Yes	Yes

# Data Elements: February 2010

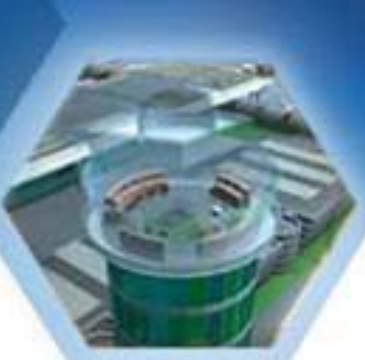


February 2010	Registration	PBN Type	ETD/ATD	ETA/ATA	Entry Exit	Route/FL Changes
RPHI						
VHHK	Yes	Yes	Yes	Yes	Yes	N/A
VTBB	Yes	N/A	Yes	Yes	Yes	Yes
VVGL						
VVTS	N/A	Yes	N/A	N/A	Yes	N/A
WBFC						
WMFC						
WSFC	Yes	Yes	No ETD All ATD	No ETA All ATA	Yes	Yes
ZJSA	Most	Yes	N/A	N/A	Yes	Yes

# PBN Readiness Assessment

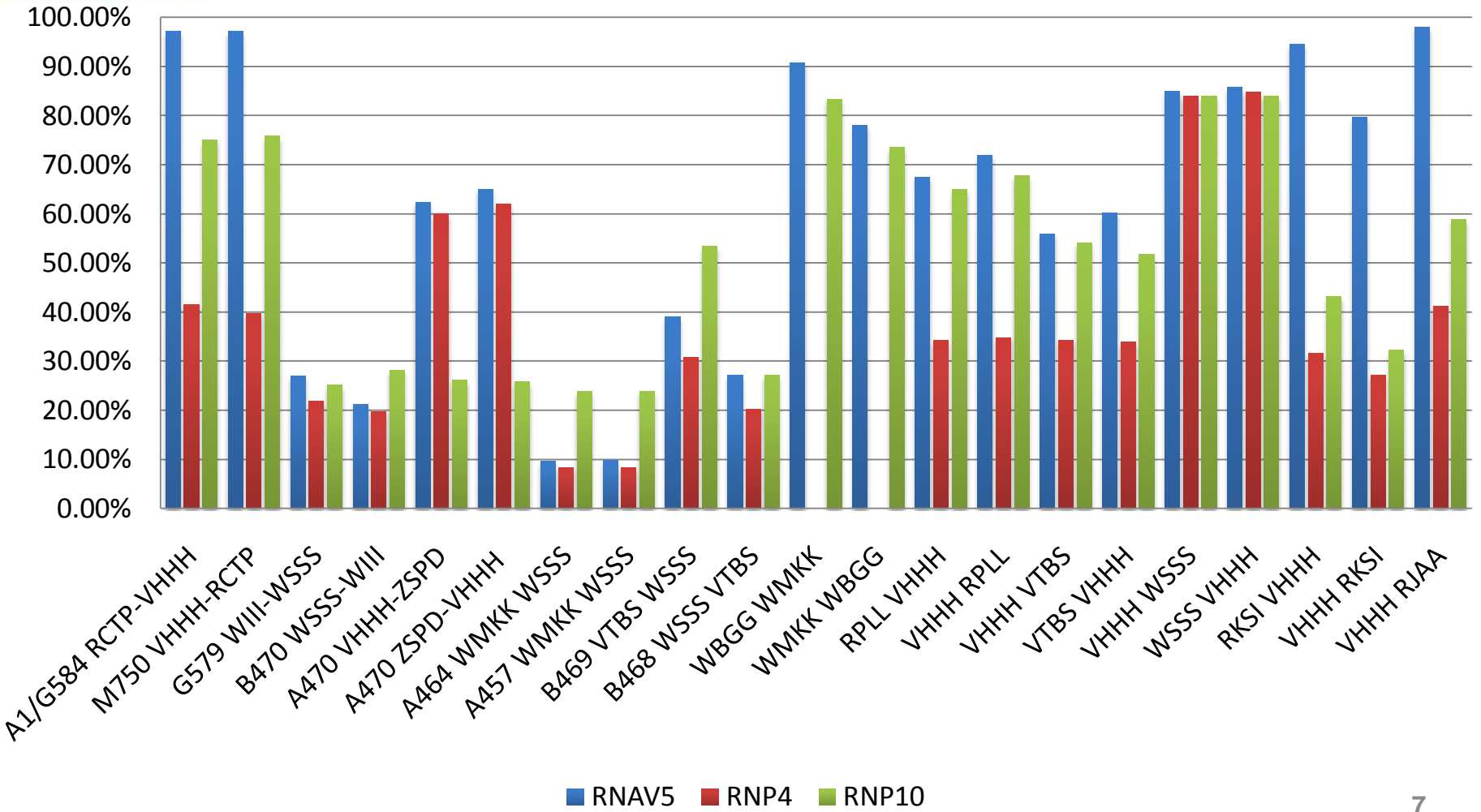
Source: January 2010 Data





# PBN Approval Type by City Pair

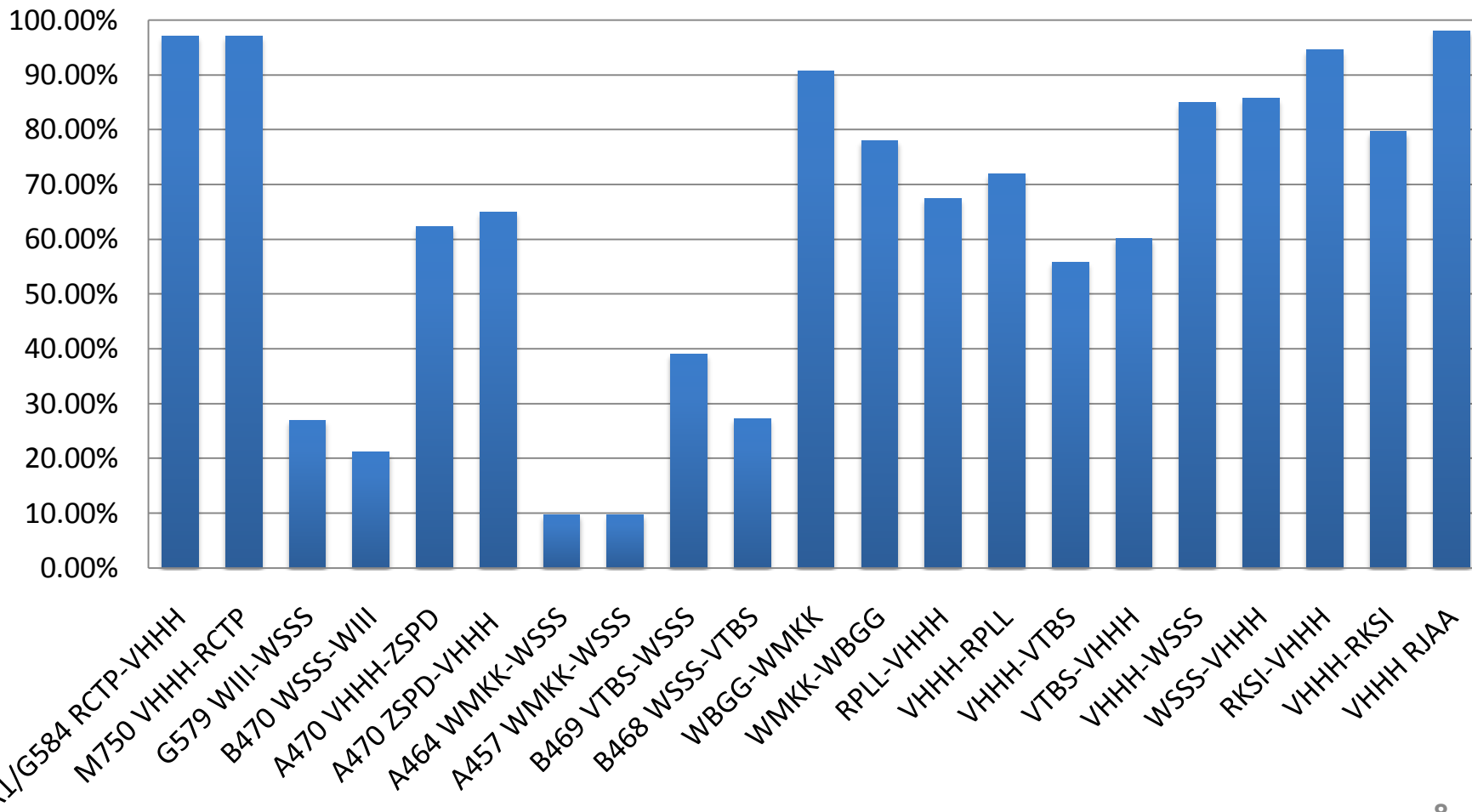
**PBN Readiness by City-Pair Route**  
**17-23 January 2010**

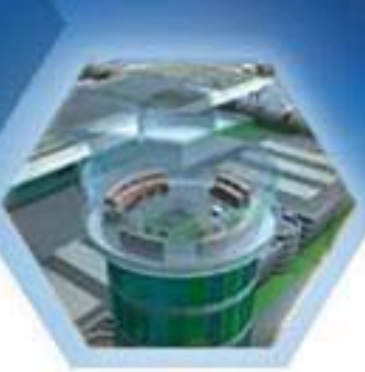




# RNAV5 Approval by City Pair

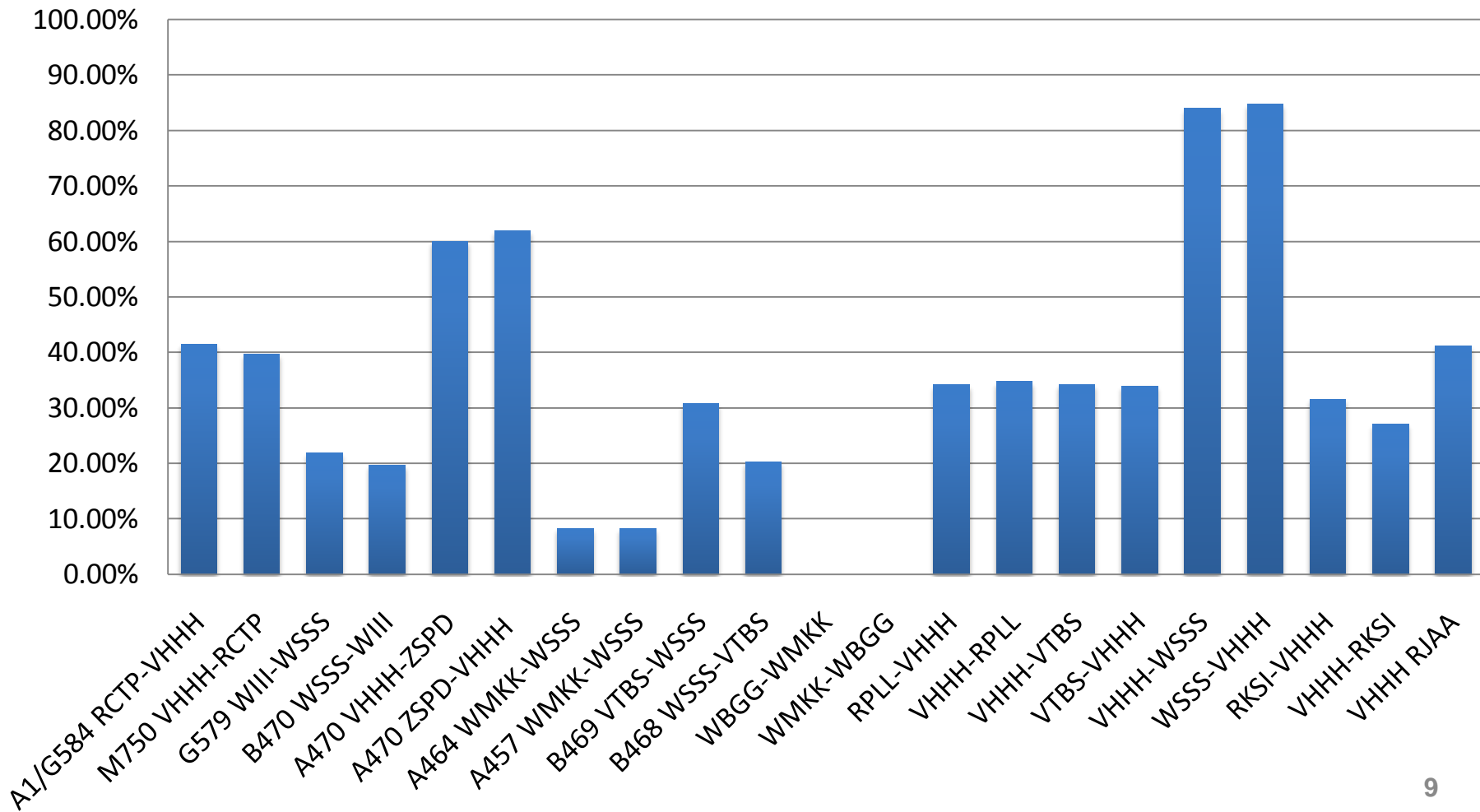
## RNAV5 Approval by City Pair 17-23 January 2010

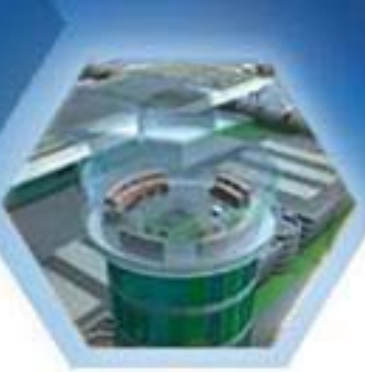




# RNP4 Approval by City Pair

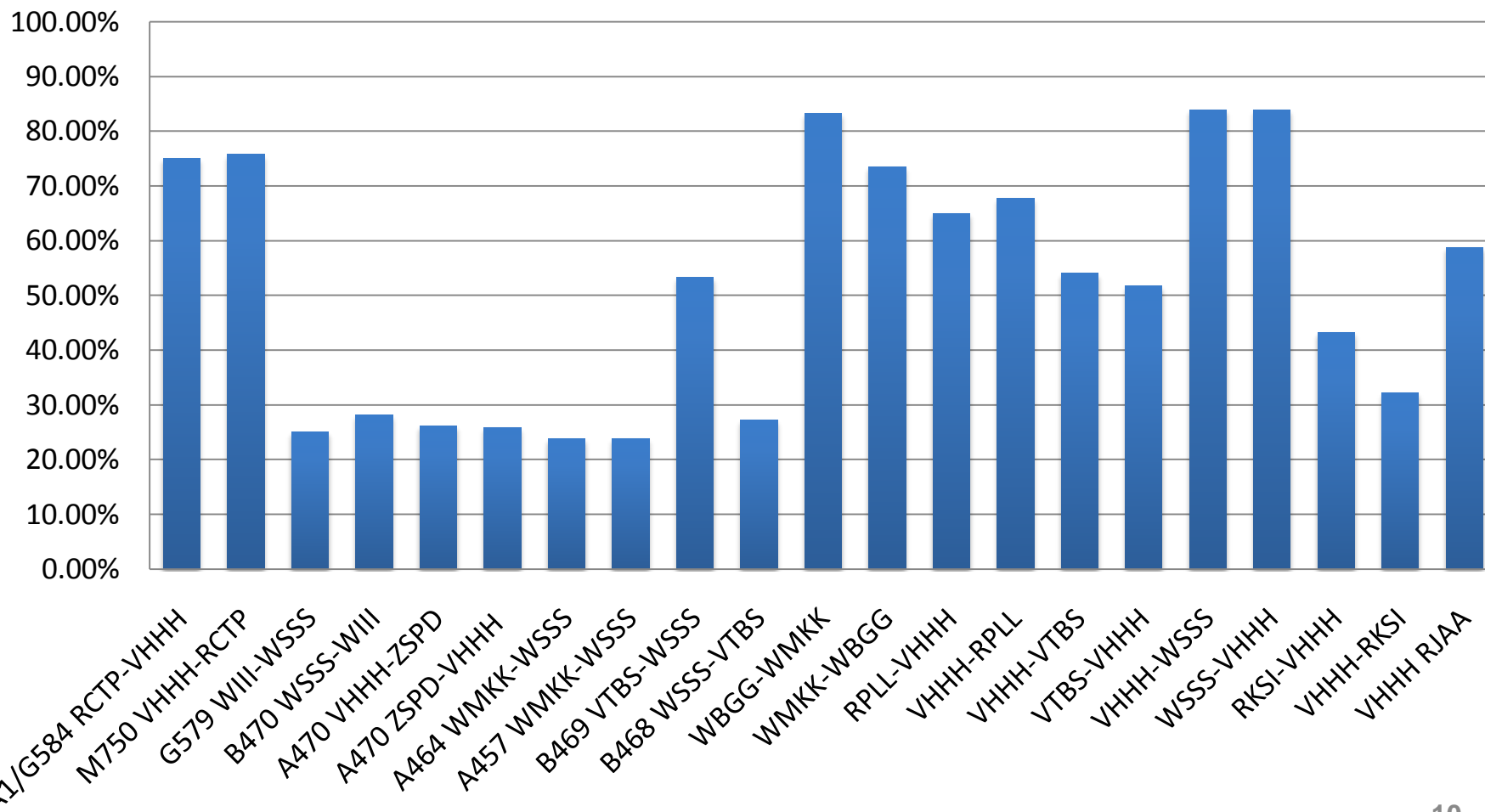
## RNP4 Approval Type by City Pair 17-23 January 2010





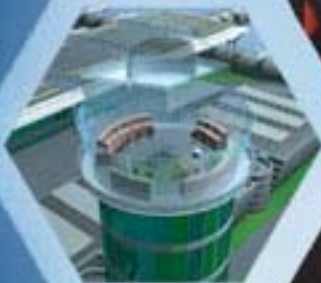
# RNP10 Approval by City Pair

## RNP10 Approval Type by City Pair 17-23 January 2010



# City Pair Traffic Distribution

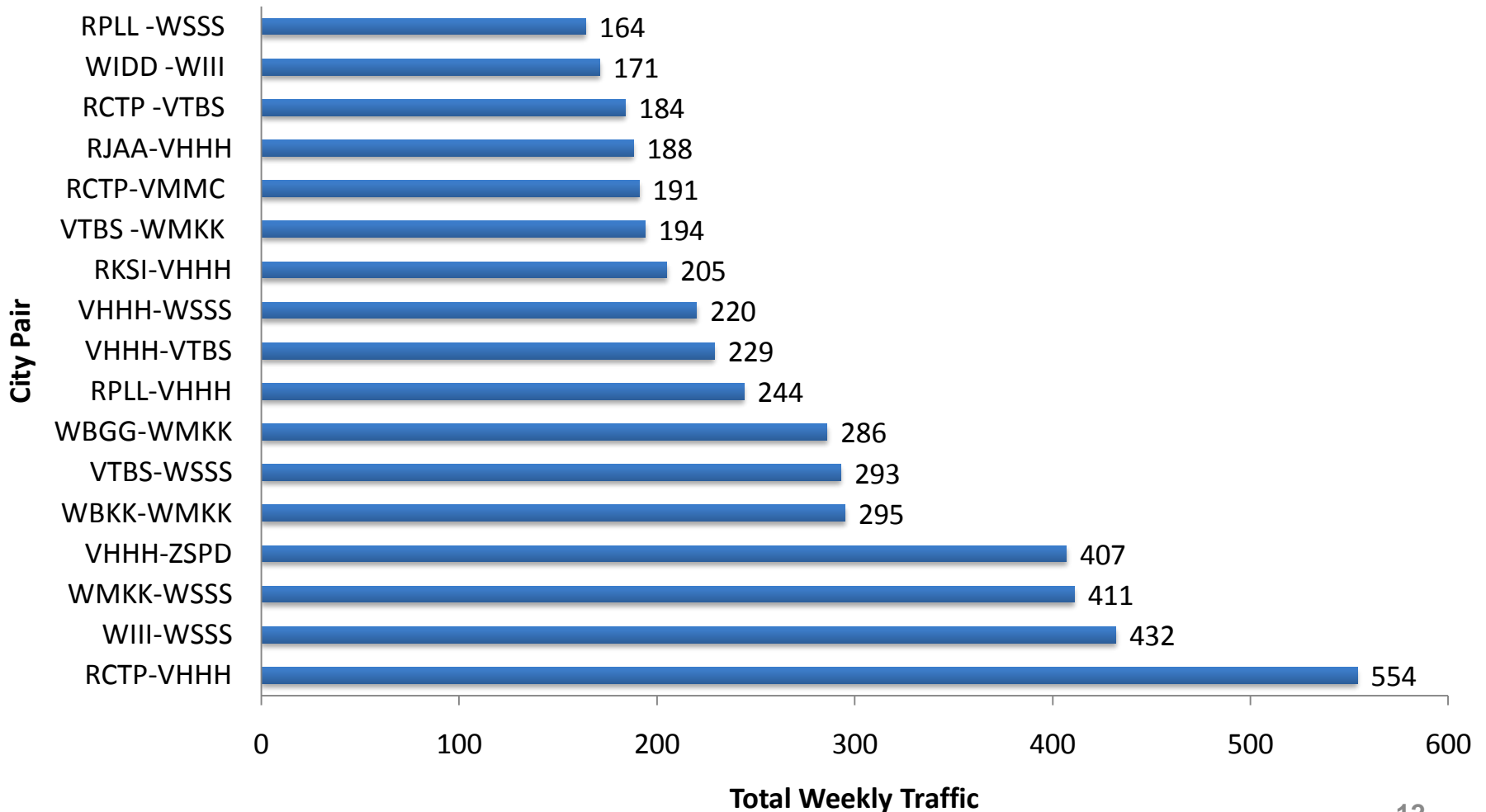
Source:  
January 2010 Data



# City Pair Traffic Distribution

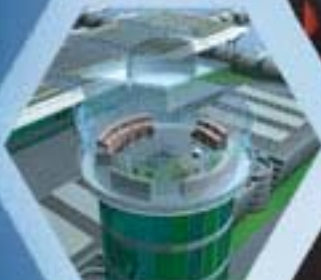


**City-Pair Weekly Traffic  
17-23 January 2010**



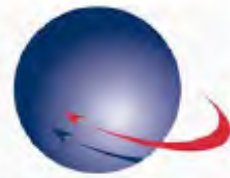
# Supplementary City Pair Traffic Distribution

Source:  
CANSO Global Benchmarking  
Workgroup



# Methodology

- **Select top 10 O-D pairs by Flight Count in 2009**
- **Two Grouping Methods**
  - 1) Force flight distance to 500 smi – 1000 smi and different country but allow the same region
  - 2) Allow any flight length, but force O-D pairs to be inter-region

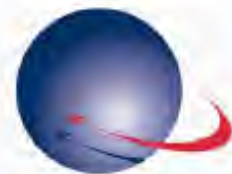


**canso**  
civil air navigation services organisation



**Federal Aviation  
Administration**

# Departure Region - Asia



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civil air navigation services organisation



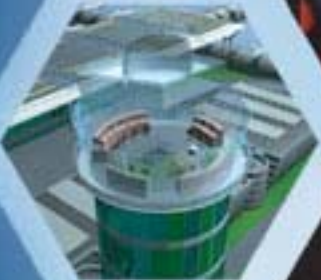
**Federal Aviation  
Administration**

Departure Airport Name	Arrival Airport Name	ICAO Departure airport	ICAO Arrival airport	OAG departure airport	OAG arrival airport
Taiwan Taoyuan International	Hong Kong International Air	RCTP	VHHH	TPE	HKG
Hong Kong International Air	PuDong Airport	VHHH		HKG	PVG
Changi Airport	Soekarno-Hatta International	WSSS	WIII	SIN	CGK
Changi Airport	Suvarnabhumi International	WSSS	VTBS	SIN	BKK
Incheon International Airpo	PuDong Airport	RKSI		ICN	PVG
Narita Airport	Incheon International Airpo	RJAA	RKSI	NRT	ICN
Ninoy Aquino International	Hong Kong International Air	RPLL	VHHH	MNL	HKG
Taiwan Taoyuan International	Macau Airport	RCTP	VMMC	TPE	MFM
Soekarno-Hatta International	Kuala Lumpur International	WIII	WMKK	CGK	KUL
Kansai International Airpor	PuDong Airport	RJBB		KIX	PVG

Departure country	Arrival country	Arrival region	Flights (CY2009)	Seats (CY2009)	Avg Seats/Flight	Distance (smi)
TAIWAN	HONG KONG	ASIA	14,869	4,336,007	323.6	519
HONG KONG	CHINA	ASIA	12,666	2,404,939	224.3	780
SINGAPORE	INDONESIA	ASIA	9,909	2,039,834	212.1	551
SINGAPORE	THAILAND	ASIA	7,812	1,608,959	242.6	880
SOUTH KOREA	CHINA	ASIA	6,427	971,418	222.2	507
JAPAN	SOUTH KOREA	ASIA	6,366	1,441,475	279.7	786
PHILIPPINES	HONG KONG	ASIA	6,105	1,518,318	261.8	713
TAIWAN	MACAU	ASIA	5,629	961,701	184.0	541
INDONESIA	MALAYSIA	ASIA	5,628	969,477	179.1	702
JAPAN	CHINA	ASIA	5,524	771,958	204.7	814

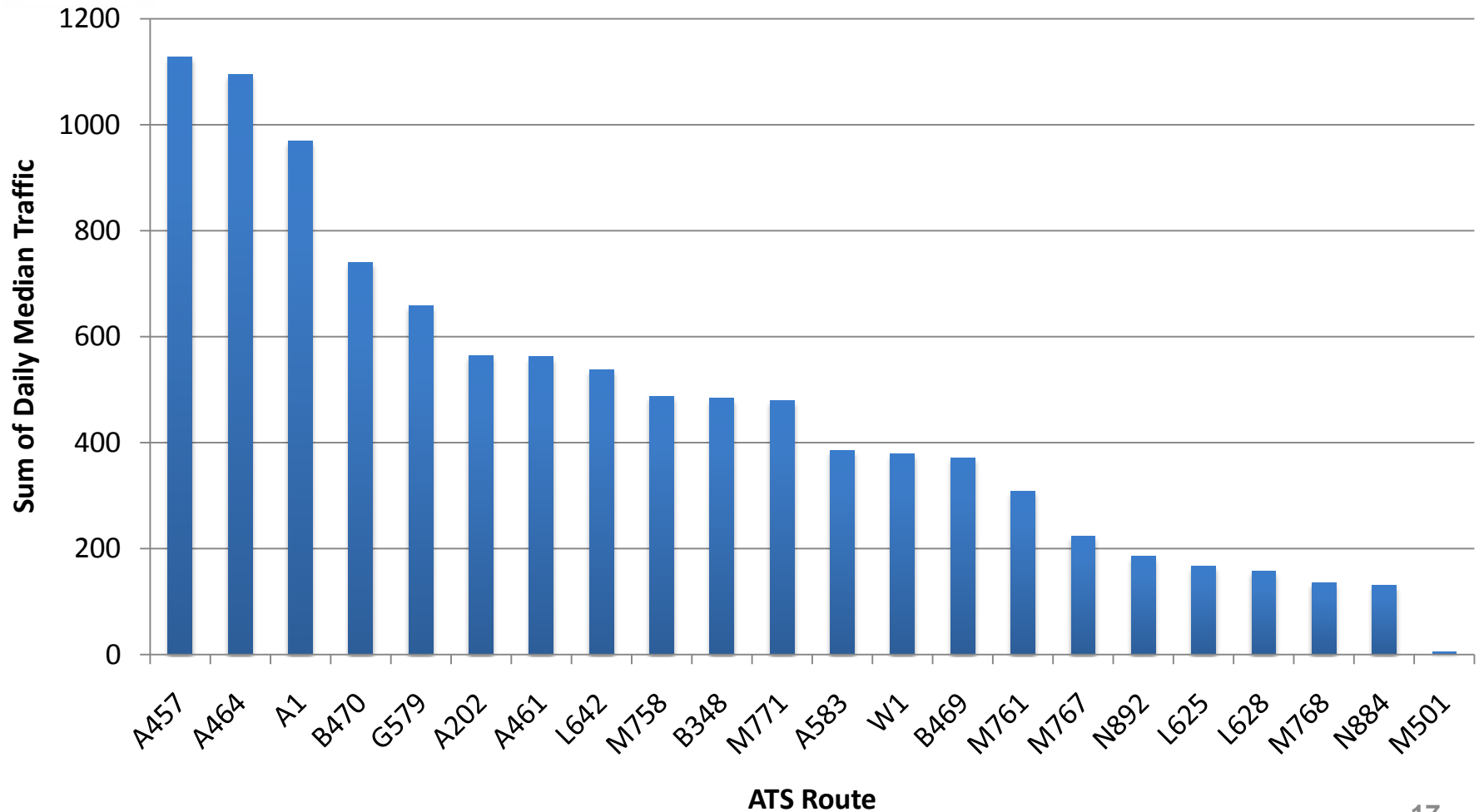
# Traffic Distribution on Current ATS Route Structure

Source: January 2010 Data



# Weekly Traffic on Routes

Weekly Average Traffic  
17-23 January 2010



# Q & A

