European and North Atlantic Office

TRANS-REGIONAL AIRSPACE AND SUPPORTING ATM SYSTEMS STEERING GROUP FIRST MEETING (TRASAS/1)

FIRST MEETING

(Paris, 2-3 May 2007)

Agenda Item 3: Review of work currently underway to enhance the ATS route network, using current and future technologies, and the need to plan for a transition towards a performance based navigation system

ADOPTION OF THE ASIA AND PACIFIC ATS ROUTE CATALOGUE

(Presented by ICAO Asia and Pacific Office)

SUMMARY

This paper informs the meeting that the ASIA/PAC Air Navigation Planning and Implementation Regional Group (APANPIRG) adopted the *Asia and Pacific ATS Route Catalogue* as a regional planning tool at its 16th meeting (August 2005, Bangkok). The ICAO Asia and Pacific Office updates the Catalogue at suitable intervals.

Action by the TRASAS/1 is in paragraph 3.

1. Introduction

1.1 APANPIRG ATS Route Network Review Task Force (ARNR/TF, disbanded by APANPIRG/15, August 2004) developed the draft *Asia/Pacific ATS Route Catalogue.* The Catalogue was intended to be an informal document that consolidated material from the Basic Air Navigation Plan (BANP) and related documents to serve as an aid to States and users for route planning purposes. As such, the Catalogue does not replace the BANP or provide material to be used in an operational context. It is primarily a one stop information document, showing which routes are contained in the BANP, the status of implementation and amendment of routes, and future route requirements of States and users.

1.2 APANPIRG/16 (August 2005, Bangkok), recognizing the value of a consolidated reference document for the regional ATS routes and future route requirements of States and users, accepted the Catalogue under Decision 16/9, and the Catalogue Ver. 1 was published. APANPIRG/16 also considered that the ongoing work to implement routes was a high priority of States and users, and therefore developed the following Conclusion:

Conclusion 16/10 – Review of ATS Route Catalogue by States

That, the States concerned study the routes in the Asia/Pacific ATS Route Catalogue *in respect to the feasibility of the route requirements, in order to consider their implementation with appropriate priorities, and to raise route implementation proposals at relevant ATS Coordination Meetings in the Asia/Pacific Region.*

1.3 The *Asia/Pacific Air Navigation Plan* (First Edition – 2006) was published in April 2006 and all the outstanding amendments of ATS route requirements approved up to that date had been incorporated into the First Edition. Consequently, a substantial update was made to the Catalogue Chapters 1 and 2 by the Regional Office bringing this document in line with the BANP, which was published as Ver. 4 in January 2007.

1.4 This latest version of the Catalogue Ver. 4 is now available from the ICAO Asia/Pacific web site (http://www.icao.int/apac/) under the menu "eDocuments"., or ICAO Asia and Pacific Office at this meeting.

2. Contents of the Catalogue

2.1 Chapter 1 lists ATS routes which are contained in the BANP. All the requirements in respect to the BANP should be developed and amended in accordance with established ICAO procedures. In this regard, Chapter 1 simply records the current status of the routes in the BANP and does not require any formal approval to be included in the Catalogue. This chapter is regularly updated by the Regional Office as amendments to the BANP are approved.

2.2 ATS routes implemented partially or not implemented totally are contained in both Chapter 1: *Routes in BANP* and Chapter 2: *Routes in BANP − Not Implemented*, and cross-references are indicated in Chapter 1.

2.3 ATS routes implemented not in accordance with the BANP are contained in Chapter 3: *Routes Implemented − Not in the BANP/or Not in Accordance with the BANP*.

2.4 ATS routes requested by States and users are contained in Chapter 4: *Future Requirements – States* and Chapter 5: *Future Requirements – Users*, respectively. Part A of Chapters 4 and 5 contains route requirements submitted by States and users that have been agreed by the parties concerned and are subject to amendment proposals for the BANP. Upon approval by the Council, the proposals will be transferred to Chapter 1. Other route requests submitted by States and users that have not been agreed to and are subject to further coordination amongst the parties concerned are contained in Part B of the respective Chapter.

2.5 As the original Catalogue is 120 page long, the Catalogue Ver. 4 is summarized to present particularly eleven route requirements which are relevant to the meeting' purview. The summarized Ver. 4 is at **Attachment** to this paper.

3. Action by the meeting

3.1 The meeting is invited to note that:

a) the *Asia/Pacific ATS Route Catalogue* has been accepted as a regional planning tool in Asia and Pacific Region; and

b) the latest Catalogue Ver. 4 is available at the Asia and Pacific Office website and ICAO Asia and Pacific Office.

ASIA/PACIFIC REGION ATS ROUTE CATALOGUE

INTERNATIONAL CIVIL AVIATION ORGANIZATION

ASIA/PACIFIC REGIONAL OFFICE

VER. 4

26 January 2007

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Foreword

The *Air Navigation Plan – Asia and Pacific Regions* (Doc 9673), Volume I, Basic ANP (BANP) contains ATS route requirements which were developed by the Third Asia and Pacific Regional Air Navigation Meeting (Bangkok, May 1993). The requirements have been revised from time to time to reflect current operational needs. There is also an ongoing need to revise and update these requirements and amend the BANP.

The fourteenth meeting of the ASIA/PAC Air Navigation Planning and Implementation Regional Group (APANPIRG/14, August 2004) under Conclusion 14/5 established the ATS Route Network Review Task Force (ARNR/TF) to review the Asia and Pacific ATS route network as contained in the BANP, determine present and future route requirements, and revise the BANP as appropriate. To facilitate the amendment process and keep track of route implementation and future requirements, and with the objective of providing more up to date information on route developments, ARNR/TF prepared the draft *Asia/Pacific ATS Route Catalogue* as a supplement to the BANP.

APANPIRG/16 (August 2005, Bangkok), recognizing the value of a consolidated reference document for the regional ATS routes and future route requirements of States and airspace users, accepted the Route Catalogue under Decision 16/9. The Route Catalogue is intended to be a living document supplementing the BANP and to be maintained by ICAO Asia and Pacific Office. Communication in relation to the Route Catalogue should be made via email to the ICAO Asia and Pacific Office at icao_apac@bangkok.icao.int.

The ATS Route Catalogue consists of five chapters as follows:

Chapter 1: Routes in BANP

Chapter 2: Routes in BANP − Not Implemented

Chapter 3: Routes Implemented − Not in the BANP/or Not in Accordance with the BANP

Chapter 4: Future Requirements − States

Chapter 5: Future Requirements – Users

Chapter 1 lists ATS routes which have been contained in the BANP. This chapter will be regularly updated as amendments to the BANP are approved and implemented.

Chapter 2 lists ATS routes which have been contained in the BANP but not been implemented in accordance with BANP requirements. This Chapter is intended for use as reference material to facilitate the resolution of any outstanding matters in order to fully implement or revise the routes.

Chapter 3 lists ATS routes which are not contained in the BANP but have been implemented by States. This Chapter contains information in relation to routes that have been subject to a BANP amendment proposal and implemented prior to the proposal being approved by ICAO. The purpose of this Chapter is to temporarily record route information, and States would be expected to take appropriate action to ensure alignment of implemented routes with the BANP.

Chapters 4 and 5 list ATS routes proposed by States and international organizations, respectively. These routes have not been included in the BANP or implemented. The material in these Chapters is intended to be used as a basis for developing BANP amendment proposals, and to provide information on route planning developments which would form the basis for future proposals.

The material in Chapter 4 is organized in two parts: Part A contains those routes that have been agreed among States concerned and to be processed as amendment proposals to the BANP. Part B provides information on States' route requests that would be subject to further coordination and agreement.

The material in Chapter 5 is organized in two parts: Part A contains those routes that have been agreed by States concerned and to be processed as amendment proposals to then BANP. Part B provides information on users' route requests that are subject to further coordination and agreement.

Note: — As the ATS Route Catalogue *is intended for use as a supplement to the BANP, it does not replace the BANP nor should it be used as an operational document. Its primary purpose is to assist States and airspace users by providing more up to date information, to develop and maintain the ATS routes in the Asia and Pacific Region.*

Amendments to the BANP and the ATS Route Catalogue

A Contracting State or qualifying international organization identifying a need for a new route requirement to be included in the BANP or to change an exisiting route contained in the BANP, may submit an amendment proposal to the Secretary General for approval by the President of the Council in accordance with established procedures summarized below.

Appropriately presented and documented proposals to amend the BANP are submitted to the ICAO Secretary General through the Regional Office and circulated to States and International Organizations for comment. Once all parties concerned agree to the proposal, the Secretary General will submit the proposal to the President of the Council for approval. The Regional Office will inform States and international organizations concerned of the approval and the BANP will be amended accordingly.

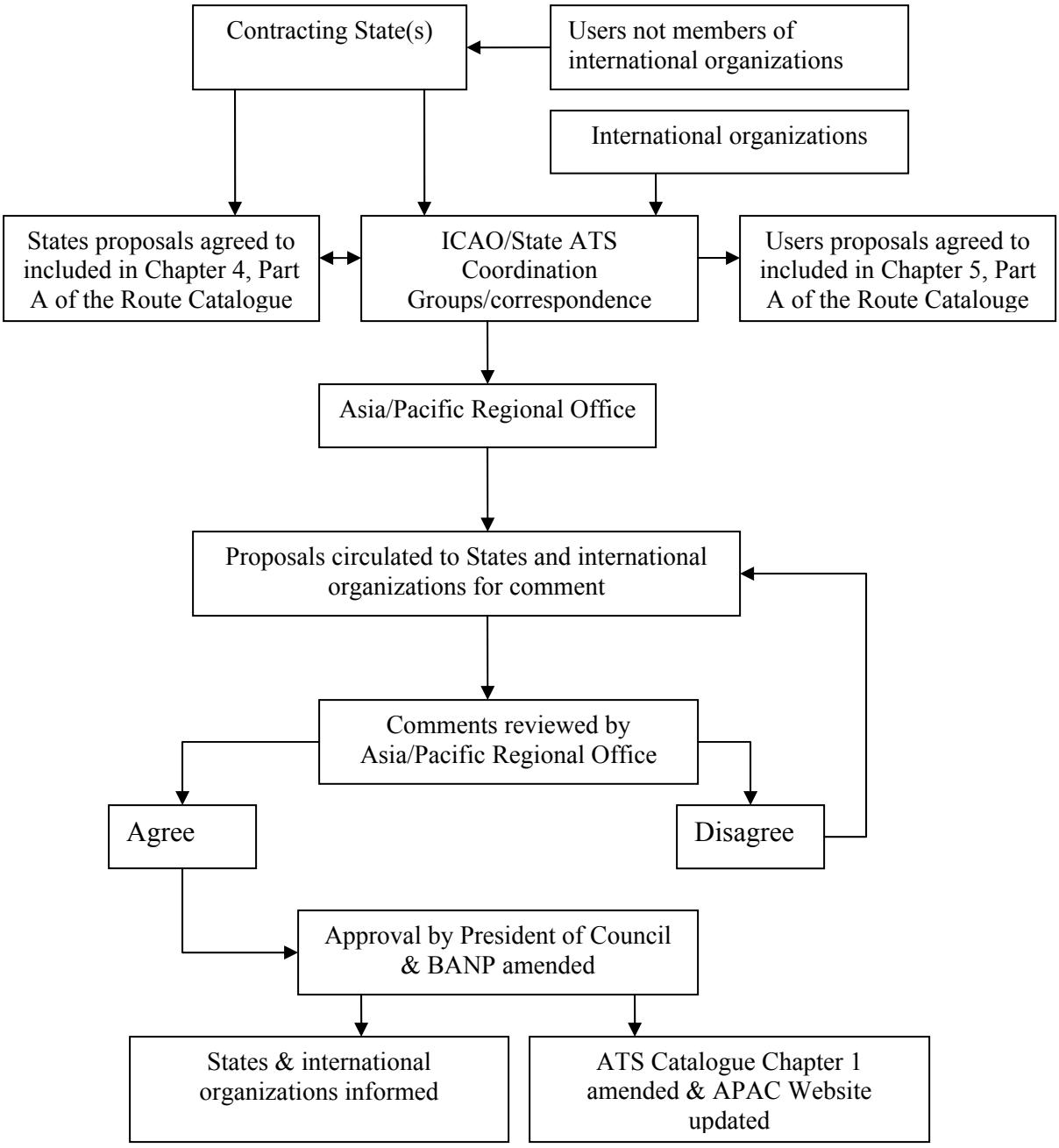
The Regional Office, which is responsible for maintaining the ATS Route Catalogue, will update the Route Catalogue from time to time as amendment proposals are progressed and appproved, and include new route requirements of States and users in the Catalogue. The amendment will be indicated by a vertical line in the margin of the Catalogue, and the revision number and date shown on the cover page of the catalogue, which is posted on the ICAO APAC website (http://www.icao.int/apac).

Chapter 1 will be amended by the Regional Office subsequent to approval of an amendment to the BANP by the President of the Council.

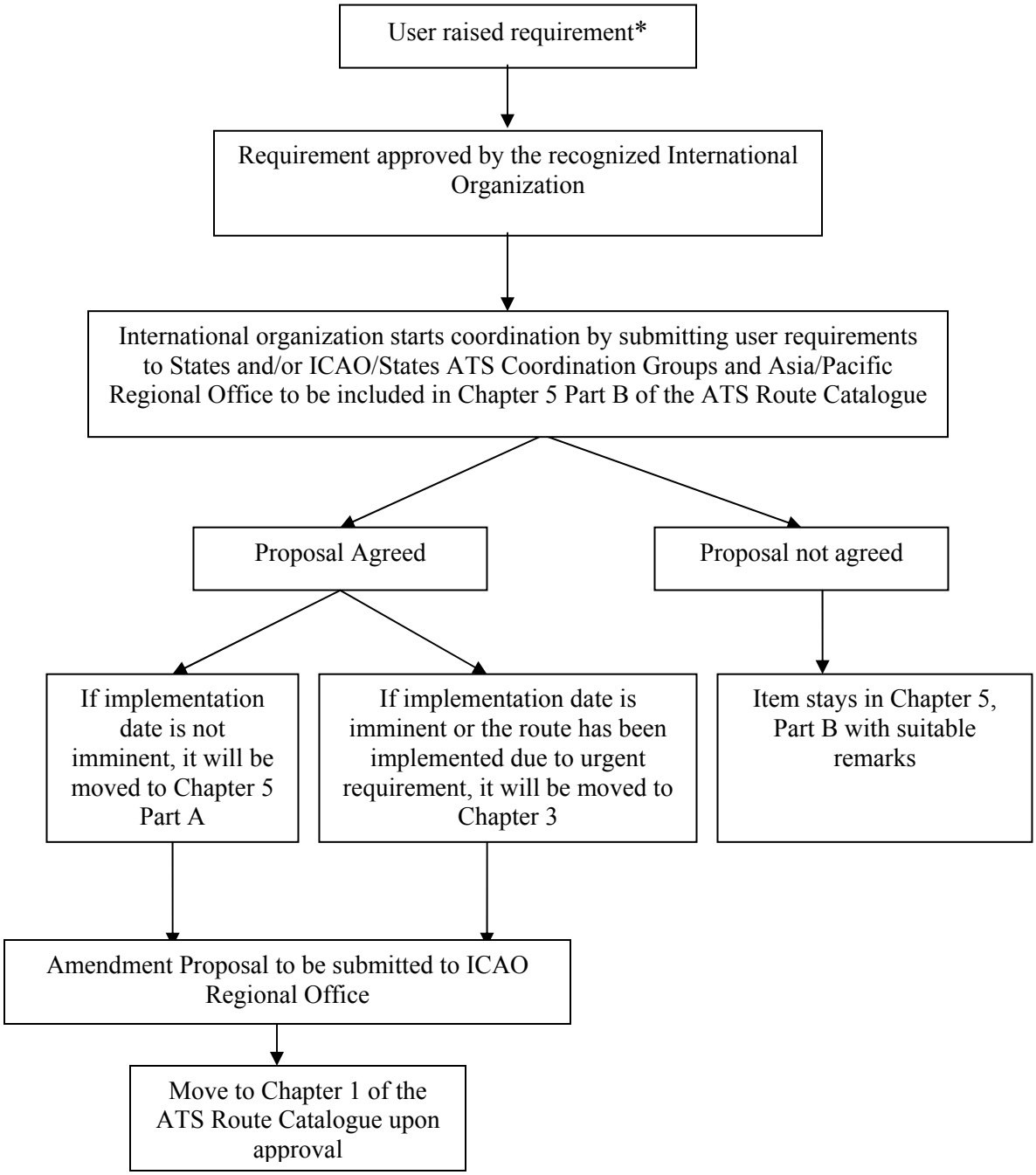
Chapters 4 and 5, Part A are amended based on route requirements submitted by States and international organizations, respectively, that have been agreed by the parties concerned to be included in the BANP and are subject to amendment proposals. Upon approval by ICAO, the proposals to be incorporated in the BANP would be transferred to Chapter 1. Other route requests submitted by States and users that have not been agreed to and are subject to further coordination between the parties concerned, are contained in Part B to the respective Chapters. These routes are normally coordinated between States or through ICAO/State ATS Coordination Groups and/or by correspondence. Users who are not a member of a qualifying international organization should submit their route requests to the appropriate State(s) and these would be recorded in Chapter 4.

The flow charts below describe the processes for amending the BANP and the Catalogue. Communication in relation to the Catalogue should be made via email to the Asia/Pacific Regional Office at icao_apac@bangkok.icao.int.

BANP AMENDMENT PROCESS



FLOW CHART FOR CHAPTER 5



*Note: — * Users who are not a memberof a qualifying international organization submit route requests to the appropriate State(s) (see BANP Flow Chart).*

Amendment Record

Version/Amendment Number	Date	Amended by	Comments
0.1	14 February 2005	-	ARNR/TF/2 developed the draft version.
0.2	5 May 2005	ARNR/TF/3	Finalized the format following contribution from the members.
0.3	29 July 2005	ATM/AIS/SAR/SG/15	Sub-Group concluded that the Catalogue be adopted (Draft Conclusion 15/3).
1	26 August 2005	APANPIRG/16	APANPIRG/16 decided that the Catalogue be accepted (Decision 16/9).
2	24 January 2006	BBACG/17	BBACG/17 reviewed and updated the Catalogue.
3	19 May 2006	SEACG/13	SEACG/13 reviewd and updated the Catalogue.
4	26 January 20007	BBACG/18	BBACG/18 reviewed and updated the Catalogue.

Chapter 1: Routes in BANP

The segments which have not been implemented are shown by **bold** significant points.

LOWER ATS ROUTES

A1
LIMLA 1546.0N 09836.0E
BANGKOK
UBON
DANANG
CAVOI 1713.5N 11000.0E
DAGON 1900.0N 11148.3E
HONG KONG
ELATO 2220.0N 11730.0E
MAKUNG
TAIBEI
KAGOSHIMA
MIYAKE JIMA

A201
LASHIO
AGARTALA
RAJSHAHI
MONDA 2521.00N 08626.25E
PATNA
LUCKNOW

A202
CHEUNG CHAU
SIKOU 2050.6N 11130.0E
SAMAS 2030.3N 11029.7E
ASSAD 182028N 1074053E
XONUS 1804.2N 10714.0E
DONGHOI
VILAO 1718.0N 10600.0E
SAVANNAKET
KORAT
BANGKOK

A204
TESIO 4454.4N 14146.9E
REBUN
AKSUN 4545.1N 14054.3E
(SELTI) (4713.3N 14013.3E)

A209
ELATI 0200.0S 08957.7E
PORT HEDLAND

A211
MANADO
TARAKAN
TAWAU

A212
PUPIS
PAGO PAGO
NIUE

A214
PEKANBARU
BUSUX 0355.0S 06000.0E
(PRASLIN)

A215
PORT MORESBY
MERAUKE
HASANUDDIN
KEVOK 0425.0S 11500.0E

A216
COOKTOWN
AKMIP 1200.0S 14448.6E
KIKORI
GUNNY 0500.00N 14400.00E
RICHH 1711.49N 14249.12E

A218
HARBIN
(EKIMCHAN)
(MYS SHMIDTA)
BARROW

(Partially Implemented. See Chapter 2.)

A219
KARACHI
NAWABSHAM
KALAT 2902.0N 06635.0E
SERKA 2951.0N 06615.0E
KANDAHAR
(TERMEZ)

A220
CLUKK 3605.0N 12450.0E
TAHITI

.....

Chapter 2: Route in BANP − Not Implemented

The segments which have not been implemented are shown by **bold** significant points, and indicated with coordinates and the FIR names.

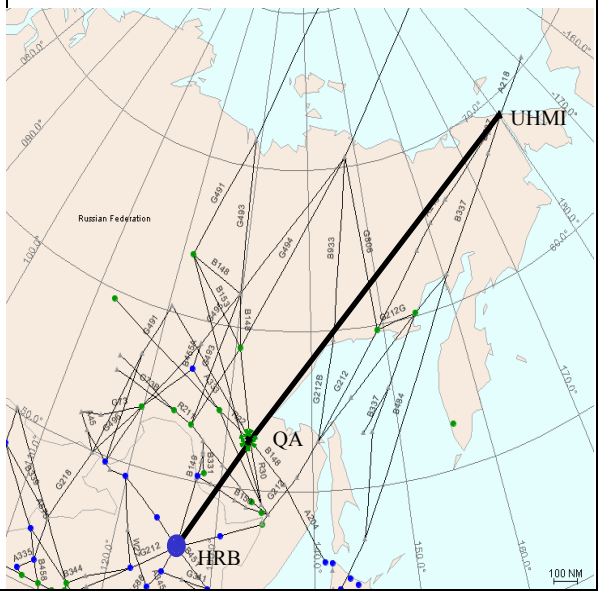
ATS ROUTES	SIGNIFICANT POINTS	COORDINATES	FIR	REMARKS
A218	**HARBIN (HRB)** **(EKIMCHAN) (QA)** (MYS SHMIDTA) BARROW	4537.4N 12615.6E	Shenyang	
A335	**TUMURTAI (TMR)** **ULAN BATOR (UDA)** (IRKUTSK)	4150.7N 11309.0E 4752.1N 10644.0E	Beijing Ulan Batar	
A469 (Implemented as L643, pending BANP Amendment)	**HO CHI MINH (TSN)** **CONSON IS (CS)**	1049.0N 10638.7E 0843.8N 10637.9E	Ho Chi Minh Ho Chi Minh	
A473* (To be implemented in June 2005 as L626)	**JALALABAD (JAL)** **NEPALGUNJ (NGJ)** **KATHMANDU (KTM)**	2741.7N 07939.3E 2806.1N 08139.1E 2740.5N 08521.0E	Delhi Kathmandu Kathmandu	
A584 (Proposed Amendment to be submitted to delete the segment not implemented)	TONGA NIUE APIA FUNAFUTI **NAURU (NI)** **KOSRAE (UKS)**	 0032.6S 16655.3E 0521.1N 16257.4E	 Nauru Oakland Oceanic	
B201 (Proposed Amendment to be submitted to delete from the BANP)	**NIUE (NU)** **AUCKLAND (AA)**	1904.4N 16955.0E 3700.3N 17448.8E	Fuji New Zealand	
B212 (Co-ordination on-going. Target implementation June 2006)	**KANGNUNG** **NIGATA (GTC)**	3757.5N 13906.9E	Incheon Tokyo	
B591*	**SHANGHAI (SHA)** **TAIBEI (APU)**	3112.0N 12119.9E 2510.6N 12131.3E	Shanghai Taipei	

ATS ROUTES	SIGNIFICANT POINTS	COORDINATES	FIR	REMARKS
(Consider for future implementation)	HENGCHUN			
G461* (Amendment Proposal to be submitted)	**JAKARTA (DKI)** **CIREBON (CA)** SEMARAN BLORA SURABAYA	0557.7N 10702.1E 0641.9N 10833.6E	Jakarta Jakarta	
G473* (Implementation on-going)	BAGO MAKAS **PHITSANULOKE (PSL)** **DANANG (DAN)** **LUBANG (LBG)**	 1646.2N 10017.5E 1603.2N 10811.9E 1351.2N 12006.4E	 Thailand Ho Chi Minh Manila	
R216*	**URUMQI** **(ALMA ATA)**	4354.4N 08728.5E	Urumqi	
R345*	**VIENTIEN (VTN)** **TAKHAEK** **PAKSE (PAK)** **STREUNG TRENG** **RUPED**	1800.6N 10232.4E ? 1511.8N 10544.3E 1331.5N 10600.9E 1111.0N 10548.2E	Vientiane ? Vientiane Phnom Penh Phnom Penh	
R459* (To be implemented as L504. Target implementation November 2005)	**MANADO (MWB)** **BALIKPAPAN (BPN)** **ELANG** **PONTIANAK (PNK)** **MINOS** **TANJUNG PINANG (TI)**	0119.4N 12457.3E 0114.7N 11656.4E 0055.6N 11450.1E 0004.7N 10922.5E 0000.0 10901.7E 0055.2N 10431.6E	Ujung Pandang Bali Bali Jakarta Singapore	
R466 (Implemented as R446. Subject to BANP amendment)	**(YUZHNO-SAKHALINSK)** **ANIMO**	4511.9N 14340.8E	Yuzhno-sakhalinsk/ Tokyo	
……..				

* Those routes were listed in the APANPIRG List of Deficiencies.

DETAILED DESCRIPTION OF ROUTES IN BANP – NOT IMPLEMENTED

ATS ROUTE NAME: **A218**
Requested by :

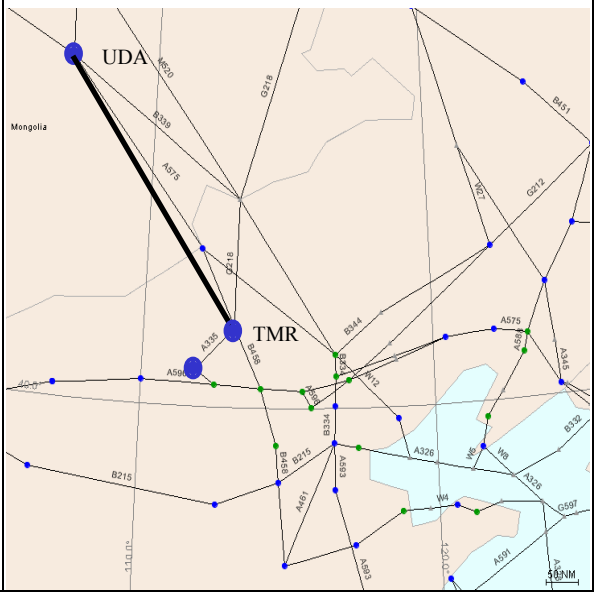
ENTRY/EXIT POINT **XXXXX** **ROUTE DESCRIPTION** **Harbin (HRB) .. Ekimchan (QA) .. Mys Shmidta (UHMI) .. Barrow** **FLIGHT LEVEL BAND** **PRIORITY: HIGH/MED/LOW**	**CHART** 

Action Required	Russia implements a segment between SIMLI and Ekimchan.

Benefit		
Cost		
Fuel Saving		
Emission	CO_2	
	NO_X	

Remarks: At the Special ATS Coordination Meeting Cross Polar and Russian Federation Far East ATS Routes (November 2005), Russia agreed to implement the requirement by conncting Ekimchan and SIMLI which is further connected to Harbin via A588.

ATS ROUTE NAME: **A335**
Requested by :

ENTRY/EXIT POINT **ROUTE DESCRIPTION** **Tumurtai (TMR) .. Ulaanbaatar (UDA) .. (Irkutsk)** **FLIGHT LEVEL BAND** **PRIORITY: HIGH/MED/LOW**	**CHART** 

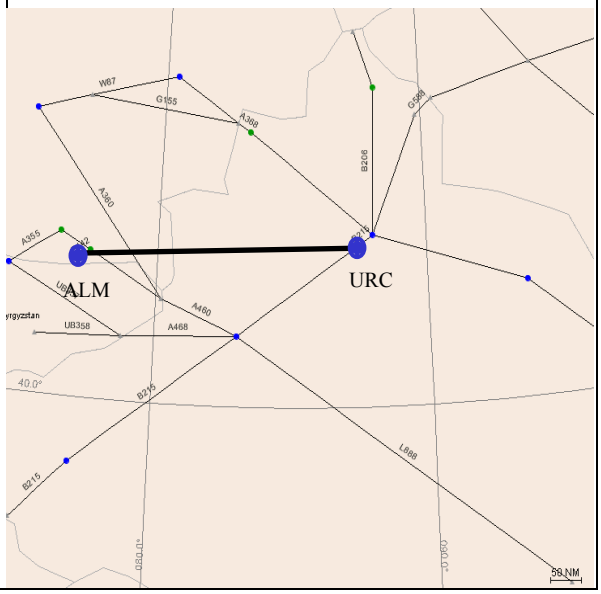
Action Required	

Benefit		
Cost		
Fuel Saving		
Emission	CO_2	
	NO_X	

Remarks: The route between Tumurtai and Ulan Bator is being served by other available ATS route.

ATS ROUTE NAME: **R216**

Requested by :

ENTRY/EXIT POINT **XXXXX** **ROUTE DESCRIPTION** **Urumqi (URC) .. Almaty (ALM)** **FLIGHT LEVEL BAND** **PRIORITY: HIGH/MED/LOW**	**CHART** 

Action Required	States to coordinate to submit proposal for deletion of the requirement.
	ICAO to circulate proposal for deletion from BANP.

Benefit		
Cost		
Fuel Saving		
Emission	CO_2	
	NO_X	

Remarks: The route between URUMQI and ALMA ATA is not possible and cannot be implemented at present. The requirement is being served by other available ATS route. The direct route requirement will be kept under review.

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Chapter 3: Routes Implemented - Not In the BANP/Not In Accordance with the BANP

ATS Routes	Route Description /Significant points	Coordinates	FIR	Remarks
A206	ASSAD VINH NONGT LPB	N1820.5 E10740.9 N1844.0 E 10540.1 N1930.0 E10359.0 N1954.0 E10209.6	HANOI HANOI VIENTIENE VIENTIENE	Implemented on 9 September 2005
L509	GGC ASARI	N2444.5 E08456.6 N3048.3 E07509.5	KOLKATTA DELHI	Implemented on 11 May 2006. Available 1630-2230 UTC.
M512 (on operational trial, target implementation date 12 May 2005)	KATUNAYAKE ANIVE DOPDO		Colombo Maldives	
M875	KAKID BUTOP	N2038.6 E08659.9 N2919.7 E07523.9	KOLKATTA DELHI	Implemented on 11 May 2006. Available 1630-2230 UTC.

Chapter 4, Part A: Route Requirements − States

(This section contains routes that have been agreed to be included in the BANP and will be progressed as BANP amendments)

PROPOSER	ATS ROUTES	SIGNIFICANT POINTS	COORDINATES	FIR	REMARKS
Inodonesia	M635	Tanjung Pinang SANOS RAMPY Curtin	0054.2N 10430.9E 0042.0N 10619.6E 0615.8S 11320.8E 1735.3S 12351.1E	Singapore Singapore/Jakarta Jakarta Brisbane	
	P648	Jakarta ATOSO AMBOY AKULA KIBON OSUKA OMEGA OKADA Kinabalu	0057.9S 10702.3E 0508.9S 10728.0E 0408.0S 10810.0E 0307.2S 10857.1E 0150.0S 11000.0E 0117.5S 11024.7E 0023.0S 11107.2E 0134.0N 11238.0E 0553.9N 11601.9E	Jakarta Jakarta Jakarta Jakarta Jakarta Jakarta Jakarta Jakarta Kota Kinabaru	
	M768	ELBIS PORAK LADOP MAMOK	0905.3S 12743.7E 0458.6S 12400.4E 0001.7N 11930.7E 0405.1N 11547.2E	Brisbane/U Pandang Ujung Pandang Jakarta Jakarta	

Chapter 4, Part B: Future Route Requirements – States

(The routes in this section are intended to be used as a basis for developing BANP amendment proposals, and to provide information on route planning developments which would form the basis for future proposals.These routes are subject to coordination and agreement.)

(Coordinates are indicative only, not for operational use)

PROPOSER	ATS ROUTE	SIGNIFICANT POINTS	COORDINATES	FIR	REMARKS
Nepal	Himalaya 1	Kolkata Nepalgunj INDEK	2238.7N 08827.2E 2806.1N 08139.1E 3246N 7316E	Kolkata Kathmandu Lahore	
	Himalaya 2	Kathmandu Baghdogra Guwahati Silchar Imphal Kunming	2740.5N 08521.0E 2641.3N 08819.8E 2606.1N 09135.3E 2454.8N 09258.9E 2446.0N 09354.5E 2501N 10244E	Kathmandu Kolkata Kolkata Kolkata Kolkata Kunming	
Tahiti	R582	KRILL MAITO Tahiti PAERE TOLAB TAMUR TIERE TARAO TUNBA TIAMU	2016.1N 15700.0E 1732.8S 14936.1E 1625.0S 14752.6W 1428.0S 14500.0W 1104.0S 14000.0W	Auckland Ocn/Tahiti Tahiti Tahiti Tahiti Tahiti Tahiti Tahiti Tahiti Tahiti Tahiti	

Chapter 5: Part A: Route Requirements − Users

(The routes in this section have been submitted by users and agreed to be included in the BANP, and are subject to an amendment proposal to the BANP)

ATS ROUTES	SIGNIFICANT POINTS	COORDINATES	FIR	REMARKS
(SEA 7) N502	BATAR PARDI	N0210.0 E10205.2 S0034.0 E10413.0	LUMPUR JAKARTA	UNIDIRECTIONAL ROUTE Implemented on 22 December 2005.
(SEA 8) P501	ARAMA BOBAG ANITO	N0136.9 E10307.2 N0102.5 E10329.9 S0017.0 E10452.0	LUMPUR SINGAPORE JAKARTA	Implemented on 22 December 2005.

Chapter 5: Part B: Future Route Requirements − Users

(The routes in this section are intended to be used as a basis for developing the BANP amendment proposals, and to provide information on route planning developments which would form the basis for future proposals. These routes are subject to coordination and agreement.)

ATS ROUTES	SIGNIFICANT PTS	COORDINATES	FIR	REMARKS
IND 1	BBS BPL	N2014.6 E08548.8 N2317.0 E07720.2	KOLKATTA MUMBAI	
IND 5	BUTOP JHANG	N2919.7 E07523.9 N3116.0 E07218.0	DELHI PAKISTAN	
IND 6	BBS PRA	N2014.6 E08548.8 N2401.8 E07445.0	KOLKATTA MUMBAI	
IND 7	PRA SERKA KAMAR BIRJAND	N2401.8 E07445.0 N2951.0 E06615.0 N3239.0 E06044.0 N3258.3 E05912.0	MUMBAI DELHI KABUL TEHERAN	N877 Extension
SEA 2	DANANG SYX	N1603.2 E10811.9 N1818.4 E10910.4	HOCHIMINH SANYA AOR	
SEA 3	BUT ENREP	N1240.0E10100.0 N0452.4 E10414.7	BANGKOK SINGAPORE	
SEA 5	STUNG TRENG DANANG	N1331.5 E10600.9 N1603.2 E10811.9	PNOMPENH HOCHIMINH	
SEA 6	PAKSE ASSAD	N1511.8 E10544.5 N1820.5 E10740.9	VIENTIANE ASSAD	
SEA 10	CAVOI/ IGNIS QUNGI SAMUI	N1713.5 E11000.0 N1721.0 E11109.0 N1507.0 E10848.0 N0932.8 E10003.7	SANYA AOR SANYA AOR HOCHIMINH BANGKOK	QUNGI TO CAVOI AND TO IGNIS
SEA 11	NANSHAN BUNTA/ SAMBO	N1818.4 E10910.4 N1650.0 E10923.7 N1616.8 EE108 42.5	SANYA AOR HOCHIMINH HOCHIMINH	NANSHAN TO BUNTA AND TO SAMBO
SEA 12	ROT HUGUANG	N1607.0 E10346.7 N2107.9 E11020.2	HOCHIMINH GUANGZHOU	
SEA 13	HAT YAI RANONG	N0656.0 E10023.3 N0946.7 E09835.0	BANGKOK BANGKOK	

SCS1	DAMEL CH	N1358.7 E11136.4 N2213.2 E11401.8	HOCHIMINH HONGKONG	
SCS 2	VEPAM CH	N1358.0 E11000.0 N2213.2 E11401.8	HOCHIMINH HONGKONG	
SCS 3	EXOTO IDOSI	N1521.5 E11103.0 N1900.0 E11230.0	HOCHIMINH HONGKONG	
SCS 4	VKL CONSON	N0243.5 E10144.3 N0843.8 E10637.9	LUMPUR HOCHIMINH	
SCS 5	EXOTO DAMVO MELAS LUSMO	N1521.5 E11103.0 N1106.5 E10932.7 N0705.3 E10809.2 N0333.7 E10655.6	HOCHIMINH HOCHIMINH HOCHIMINH SINGAPORE	
SCS 6	LUSMO MELAS DAMVO	N0333.7 E10655.6 N0705.3 E10809.2 N1106.5 E10932.7	SINGAPORE HOCHIMINH HOCHIMINH	
SCS 7	BRUNEI LAXOR DULOP	N04 52.5E11453.1 N0949.6 E11448.5 N1814.2E11432.6	KINABALU SINGAPORE HONGKONG	TO JOIN M772 AT LAXOR
SCS8	DULOP ELATO ENVAR DULOP KAPLI	N1814.2E11432.6 N2220.0 E11730.0 N2159.5 E11730.0 N1814.2E11432.6 N2110.0 E11730.0	HONGKONG HONGKONG HONGKONG HONGKONG HONGKONG	EITHER DULOP/ KAPLI G86, OR DULOP/ ELATO& ENVAR
SCS 9	TOKON DILIS TOKON ENDAX	N1142.0 E11940.5 N1431.1 E12600.1 N1142.0 E11940.5 N1415.0 E13000.0	MANILA MANILA MANILA MANILA	EITHER TOKON/ DILIS OR TOKON/ ENDAX
PHI 1	MIA CAB MEVIN	N1430.5 E12101.3 N1528.9 E12101.5 N2100.0 E12233.0	MANILA MANILA MANILA	
PHI 2	MIA MYC	N1430.5 E12101.3 N2447.2 E12518.1	MANILA NAHA	
PHI 3	TKK MUMOT	N2308.1 E12012.4 N1901.7 E11747.4	TAIPEI MANILA	
PHI 4	HCN AKOTA	N2155.7 E12050.6 N1627.7 E11712.4	TAIPEI MANILA	
TPE 1	APU MIKES	N2510.6 E12131.3 N2935.2 E12544.9	TAIPEI NAHA	

THA 1	KORAT DAWEI	N1455.0 E10208.4 N1405.9 E09812.2	BANGKOK YANGON	
IDO 1	SJ MABIX	N0113.4 E10351.3 N0316.0 E09450.9	SINGAPORE JAKARTA	
IDO 5	PENANG GIVAL	N0516.8 E10015.7 N0700.0 E09800.0	KUALA KUALA	
COL 1	KAT TNV	N0709.7 E07952.1 S1842.2 E04731.1	COLOMBO MADAGASCAR	
KAB 1	HANGU GHAZNI	N33 29.1 E07100.4 N33 32.9 E06825.2	PAKISTAN KABUL	
WPC 1	PY VNO ROR ENDAX ELMAS TINHO	S0927.2 E14712.9 S0240.7 E14118.2 N0722.1 E13433.0 N1415.0 E13000.0 N2027.0 E12500.0 N2421.2 E12201.7	PT MORESBY PT MORESBY OAKLAND MANILA MANILA TAIPEI	
CHA 1 (CHA 5)	YNC GUPAD CGO SB	N3819.4 E 10623.8 N3618.7 E11028.4 N3430.9 E11350.6 N3150.4 E11714.0	LANZHOU LANZHOU WUHAN SHANGHAI	
CHA 2 (CHA 7)	KUQA CHW	N4143.0 E08300.0 N3951.0E09821.0	URUMQI LANZHOU	
CHA 3 (CHA 9A)	FKG OMBON	N4410.0 E08759.0 N3238.5 E10420.0	URUMQI KUNMING	
CHA 4 (CHA 10A)	MORIT NSH POU	N4202.0 E10249.0 N3319.1 E10818.7 N2301.2 E11311.4	LANZHOU LANZHOU GUANGZHOU	
CHA 5 (CHA 11A)	YIN INTIK	N2412.4E11324.6 N4340.8 E11154.1	GUANGZHOU BEIJING	
CHA 6 (CHA14)	OMBON NSH OBLIK SB (LUOGANG)	N3238.5 E10420.0 N3319.1 E10818.7 N3218.0 E11432.0 N3146.8 E11718.1	KUNMING LANZHOU WUHAN SHANGHAI	
CHA 7 (CHA 15)	KANSU KICHA CGQ HLD	N3838.0 E13228.5 N4041.0 E12911.5 N4338.0 E12400.5 N4912.1 E11949.4	PYONGYANG PYONGYANG SHENYANG SHENYANG	

CHA 8 (CHA16)	SCH HTN CHW	N3825.7 E07714.4 N3702.2 E07952.3 N3951.0E09821.0	URUMQI URUMQI LANZHOU	
CHA 9 (CHA17)	YBL SANLI	N3925.7 E10246.3 N3200.0 E100.00.0	LANZHOU KUNMING	
CHA 10 (CHA18)	ARGUK DALIAN HEFEI BEMAG	N4753.0E13439.5 N3857.6 E12130.8 N3146.8 E11718.1 N2601.1 E11400.1	SHENYANG SHENYANG SHANGHAI GUANGZHOU	
CHA 11 (CHA19)	DALIAN XJT	N3857.6 E12130.8 N3557.7 E12014.4	SHENYANG SHANGHAI	
CHA 12	UNWW WXI	 N3621.8 E11455.0	 SHANGHAI	
IATA2	OMBON RO	N3238.5 E10420.0 N2546.1 E10936.4	KUNMING GUANGZHOU	
IATA3	OMBON SB (LUOGANG)	N3238.5 E10420.0 N3146.8 E11718.1	KUNMING SHANGHAI	
PRD 1	POU ZUH SIERA	N2301.2 E11311.4 N2213.3 E11328.0 N2159.1 E11333.2	GUANGZHOU GUANGZHOU HONGKONG	
PRD2	POU ZUH SIERA SIKOU	N2301.2 E11311.4 N2213.3 E11328.0 N2159.1 E11333.2 N2050.6 E11130.0	GUANGZHOU GUANGZHOU HONGKONG HONGKONG	
RUS 1	SESUR XXXXX KAE	N4217.5 E13041.5 N3838.0 E12924.7 N3742.0 E12845.2	VLADIVOSTOK INCHOEN	
RUS 2	TEKUK XXXXX KAE	N4241.0 E13527.0 N3838.0 E12924.7 N3742.0 E12845.2	VLADIVOSTOK INCHOEN	
RUS 3	BG TELOD XXXXX KAE	N 4353.0 E13315.0 N4219.6 E13211.8 N3838.0 E12924.7 N3742.0 E12845.2	VLADIVOSTOK VLADIVOSTOK INCHOEN	

Note1: Acronyms used for route names are only intended as a rough guide to the location of the routes. They are explained below:

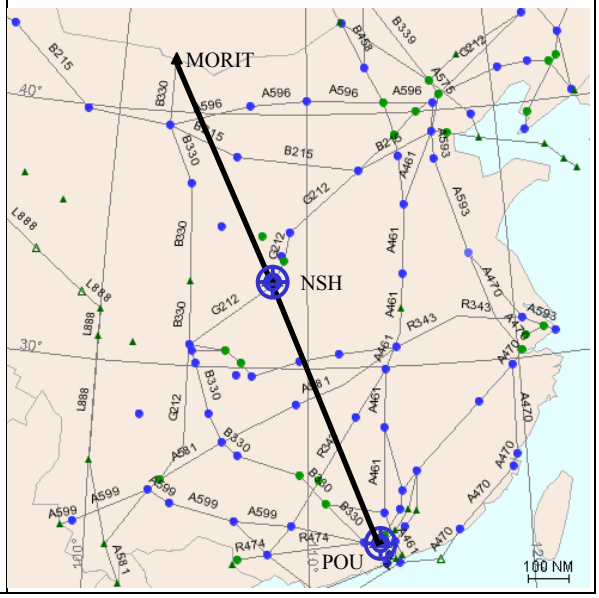
IND - India
SEA - South East Asia
SCS - South China Sea
PHI - Philippines
THA - Thailand

TPE - Taipei
PRD - Pearl River Delta
KAB - Kabul
IDO - Indonesia
COL - Colombo
CHA - China
IATA - earlier IATA requested routes in China
WPC - West Pacific Area

Note 2: Route names in parenthesis refer to the original names from an earlier route catalogue. They are renamed following consolidation of China routes and ARNR TF 3 meeting.

ATS ROUTE NAME: CHA4 (Renumbered from CHA 10A)

REQUESTED BY: IATA

ENTRY/EXIT POINT **ROUTE DESCRIPTION** **MORIT .. Ningshan (NSH) .. Pingzhou (POU)** **FLIGHT LEVEL BAND** **8400 – 15000 meters** **PRIORITY: HIGH/MED/LOW**	**CHART** 

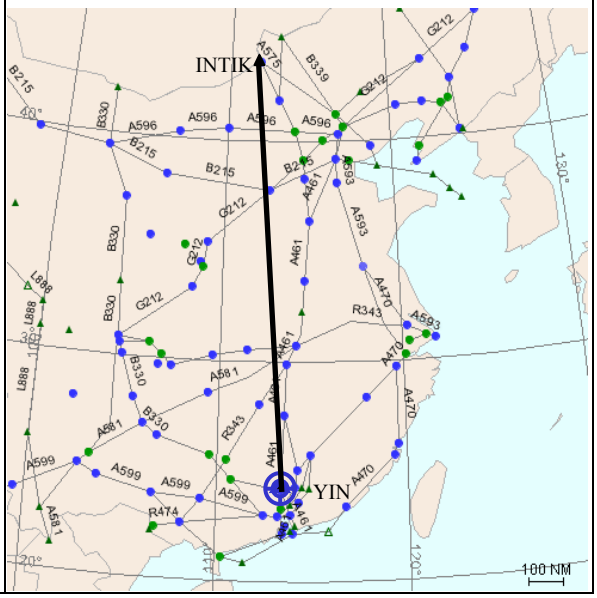
Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time	152nm/ 19min	
Fuel	2470kg	901,000kg
CO_2	7,600kg	2,774 tonnes
No_x		

Remarks: This direct route is impossible and can not be implemented.

Potential City Pairs: Europe Russia-Pearl River Delta Airports

ATS ROUTE NAME: CHA 5 (Renumbered from CHA 11A) REQUESTED BY: IATA

ENTRY/EXIT POINT **ROUTE DESCRIPTION** **Yingde (YIN) .. INTIK** **FLIGHT LEVEL BAND** **8400 – 15000 meters** **PRIORITY: HIGH/MED/LOW**	**CHART** 

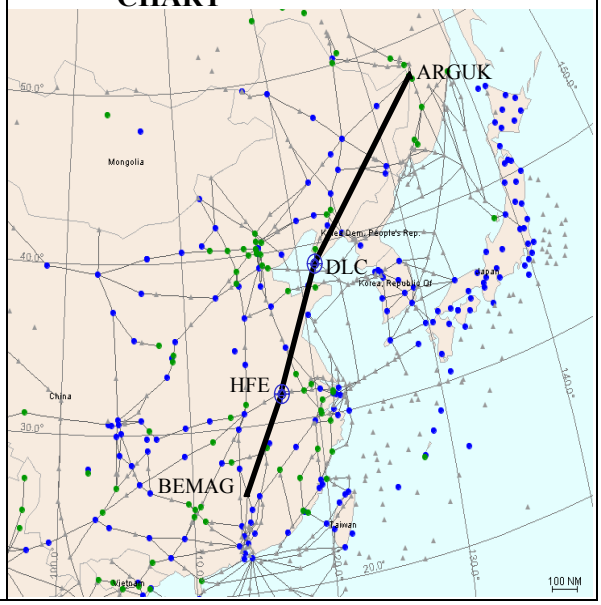
Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time	140nm/17.5min	
Fuel	2275kg	830,000kg
CO_2	7,000kg	2,555 tonnes
No_x		

Remarks: This direct route is impossible and can not be implemented.

Potential City Pairs: Europe/Russia –Pearl River Delta Airports

ATS ROUTE NAME: CHA 10 (Renumbered from CHA18-formerly SE1 in CTF/2000) REQUESTED BY: IATA

ENTRY/EXIT POINT	**CHART**
ARGUK/BEMAG **ROUTE DESCRIPTION** ARGUK/DALIAN/HEFEI/BEMAG **FLIGHT LEVEL BAND** 8400-15000 metres **PRIORITY: HIGH/MED/LOW** HIGH	

Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time		
Fuel		
CO_2		
No_x		

Remarks: There are exiting routes between ARGUK-DLC-HFE-BEMAG. Direct route between ARGUK-DLC-HFE-BEMAG is impossible.

Potential City Pairs: North America- Pearl River Delta

ATS ROUTE NAME: CHA 12

Requested by : IATA

ENTRY/EXIT POINT

UNWW to WXI

ROUTE DESCRIPTION

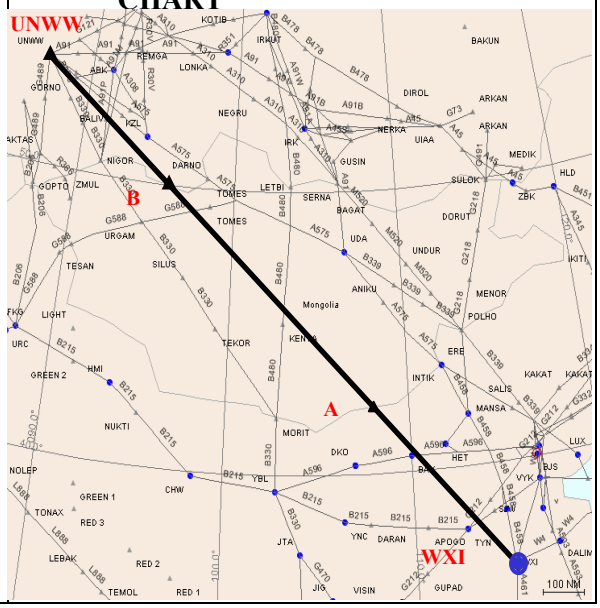
Weixian (WXI) .. A (ZBPE/ZMUB) .. B (ZMUB/UNKY) .. Novokuznetsk (UNWW)
Uni-directional

FLIGHT LEVEL BAND

28000 – 46000 feet

PRIORITY: HIGH/MED/LOW

CHART



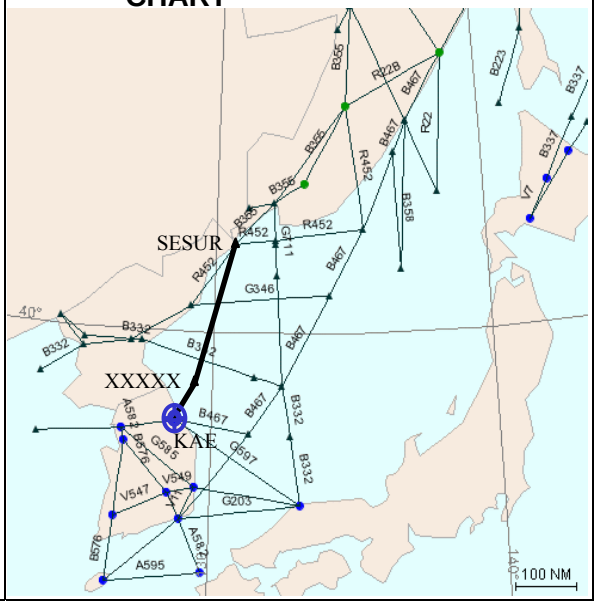
Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time	166nm/20min	
Fuel	2620kg	956,000kg
CO_2	8070kg	2,944 tonnes
No_x		

Remarks: This would allow following city pair flights to avoid the congested airspace around the Beijing Capital Airport.

Potential City Pairs: Pearl River Delta – Europe and Shanghai – Europe.

ATS ROUTE NAME: RUS 1 Requested by : IATA

ENTRY/EXIT POINT **XXXXX** **ROUTE DESCRIPTION** **SESUR .. XXXXX .. Gangwon (KAE)** **FLIGHT LEVEL BAND** **28000 – 46000 feet** **PRIORITY: HIGH/MED/LOW** **"XXXXX" Approx N38 38.0 E129 24.7**	**CHART** 

Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time	121nm/15min	
Fuel	1966kg	717,000kg
CO_2	6050kg	2,208 tonnes
No_x		

Remarks

Potential City Pairs: North America- Inchoen

ATS ROUTE NAME: RUS 2

Requested by : IATA

ENTRY/EXIT POINT
XXXXX

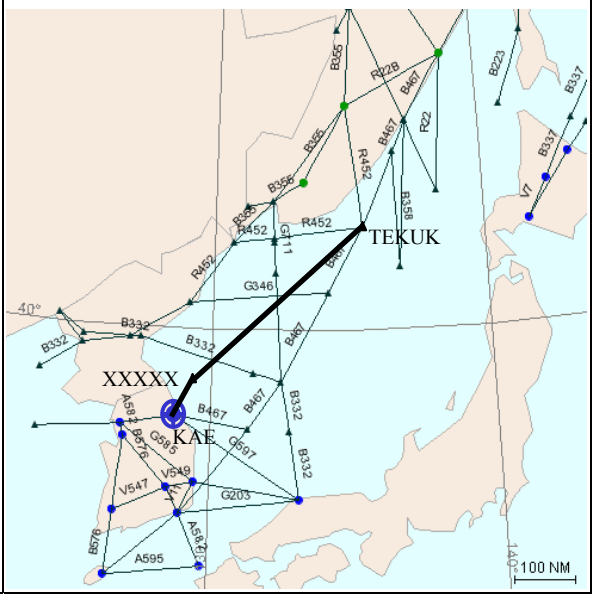
ROUTE DESCRIPTION
TEKUK .. XXXXX .. Gangwon (KAE)

FLIGHT LEVEL BAND
28000 – 46000 feet

PRIORITY: HIGH/MED/LOW

"XXXXX" Approx N38 38.0 E129 24.7

CHART



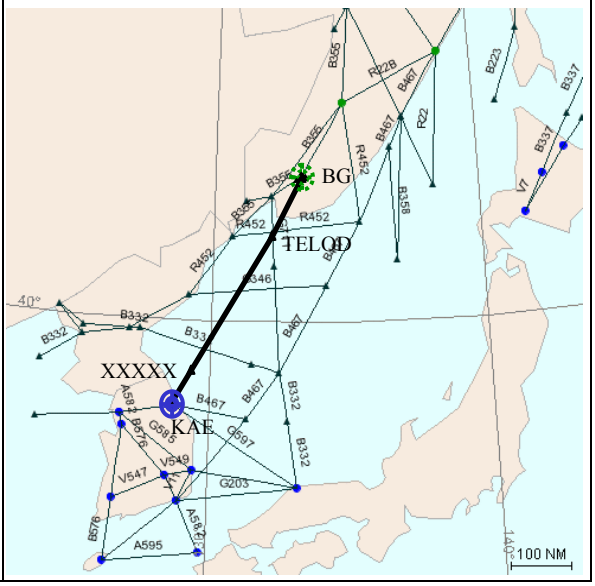
Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time	67nm/8mins	
Fuel	1088kg	1,222 tonnes
CO_2	3350kg	397400kg
No_x		

Remarks

Potential City Pairs: North America- Inchoen

ATS ROUTE NAME: RUS 3 Requested by : IATA

ENTRY/EXIT POINT **XXXXX** **ROUTE DESCRIPTION** **Muraveyka (BG) .. TELOD .. XXXXX .. Gangwon (KAE)** **FLIGHT LEVEL BAND** **28000 – 46000 feet** **PRIORITY: HIGH/MED/LOW** **"XXXXX" Approx N38 38.0 E129 24.7**	**CHART** 

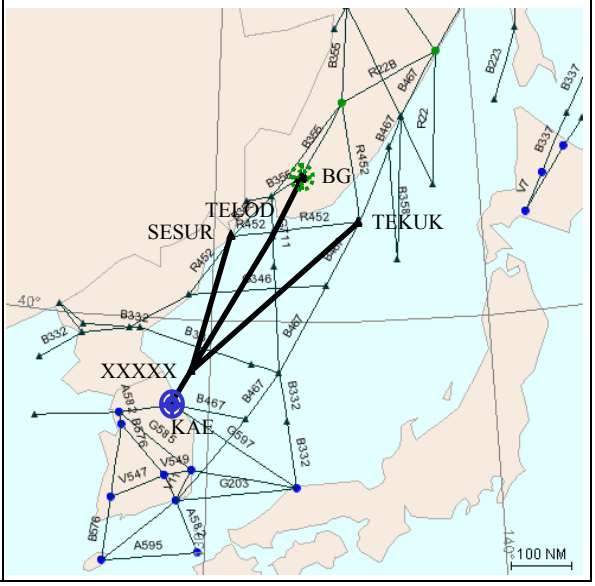
Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time	136/17mins	
Fuel	2,194kg	800,000kg
CO_2	6750kg	2,464 tonnes
No_x		

Remarks

Potential City Pairs: North America- Inchoen

ATS ROUTE NAME: RUS 1, 2, 3 Requested by : IATA

ENTRY/EXIT POINT **XXXXX (N38 38.0 E129 24.7)** **ROUTE DESCRIPTION** **1. SESUR .. XXXXX .. Gangwon (KAE)** **2. TEKUK .. XXXXX .. Gangwon (KAE)** **3. Muraveyka (BG) .. TELOD .. XXXXX .. Gangwon (KAE)** **FLIGHT LEVEL BAND** **28000 – 46000 feet** **PRIORITY: HIGH/MED/LOW** **"XXXXX" Approx N38 38.0 E129 24.7**	**CHART** 

Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time		
Fuel		
CO_2		
No_x		

Remarks

Potential City Pairs: North America- Inchoen

CONSOLIDATED CHART OF USERS REQUESTED ROUTES IN CHINA