



International Civil Aviation Organization

Fourth Meeting of the South Asia/Indian Ocean ATM Coordination Group (SAIOACG/4) and the Twenty-First South East Asia ATM Coordination Group (SEACG/21)

Hong Kong, China, 24 – 28 February 2014

Agenda Item 5: ATS Route Development

ATS ROUTE CATALOGUE

(Presented by the Secretariat)

SUMMARY

This paper presents the *Asia and Pacific Region ATS Route Catalogue* for review and update. This paper relates to –

Strategic Objectives:

C: Environmental Protection and Sustainable Development of Air Transport – Foster harmonized and economically viable development of international civil aviation that does not unduly harm the environment

Global Plan Initiatives:

GPI-7 Dynamic and flexible ATS route management
GPI-11 RNP and RNAV SIDs and STARs

1. INTRODUCTION

1.1 The most recent version of the *Asia/Pacific ATS Route Catalogue* (12, 26 June 2013) is available at the ICAO Asia/Pacific website (<http://www.bangkok.icao.int/>) under the menu ‘APAC eDocuments’. On-going updates had been undertaken by the Regional Office based on the information made available by States and airspace users, thus developing the draft of version 13. The Catalogue includes the current status of the international route requirements in the *Basic Air Navigation Plan* (BANP, Volume I of Doc 9673) approved by formal amendment.

1.2 The Route Catalogue provides two functions – it contains updated information from the Regional Air Navigation Plan (Doc 9673) until such time as this is in electronic form, and proposals for route changes that have not been agreed yet. The structure of the Catalogue is as follows:

- Chapter A: Routes in BANP
- Chapter 1, 2, 3 and 4: Future Requirements – Users & States

2. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) update any information in draft version 13 of the ATS Route Catalogue at **Appendix A.**

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ASIA/PACIFIC REGION ATS ROUTE CATALOGUE



INTERNATIONAL CIVIL AVIATION ORGANIZATION
ASIA/PACIFIC REGIONAL OFFICE

VERSION ~~12~~-13

~~26 June 2013~~ Aug 2013

Table of Contents

Table of Contents	i
Foreword	iii
Amendment to BANP and Catalogue	v
Amendment Record	viii
Chapter A: Routes in BANP	1
Chapter 1: Route Requirements Users and States (South Asia)	23
Chapter 2: Route Requirements Users and States (Southeast Asia)	35
Chapter 3: Route Requirements Users and States (East Asia/Russian Federation)	56
Chapter 4: Route Requirements Users and States (Pacific)	96

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.

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 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.

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 existing 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 presented, progressed and agreed or not agreed. The revision number and date shown on the cover page of the catalogue, which is posted on the ICAO APAC website (<http://www.bangkok.icao.int/>).

The Reformatted ATS Route Catalogue is now revised as follows:

Chapter A: Routes in BANP

Chapter 1, 2, 3 and 4: Future Requirements – Users & States

Chapter A lists ATS routes which have been contained in the BANP. Chapter A will be amended by the Regional Office subsequent to approval of an amendment to the BANP by the President of the Council. It is expected that Chapter A will become redundant when the electronic ANP (e-ANP) formats become available in 2013.

Note: — As the ATS Route Catalogue Chapter A 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.

Chapters 1 to 4 list ATS routes proposed by States and international organizations in accordance with their geographical disposition. These routes have not been included in the BANP or implemented, and have no specific status, other than having been presented as a proposal and subject to consultation and review.

Regional ATS route proposals affecting Asia/Pacific airspace should be presented as part of a paper to ATM coordination groups or other suitable bodies, and then may be entered into the Route Catalogue by the Regional Office. The Regional Office will periodically present to appropriate ATM coordination groups or other suitable bodies the proposals within their geographical area of interest for review. After review, the ATS Route Catalogue may be updated by:

- Amendment to transfer proposals to Chapter A that have been agreed after subsequent proposal for amendment of the BANP; or
- Deletion of the proposal when it has been decided that there is no possibility of implementation in the foreseeable future; or
- Amendment with the addition of supplementary information; or
- Addition of a new ATS route proposal.

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	Reviewed and updated the Catalogue.
3	19 May 2006	SEACG/13	Reviewed and updated the Catalogue.
4	26 January 2007	BBACG/18	Reviewed and updated the Catalogue.
5	23 May 2008	SEACG/15	Reviewed and updated the Catalogue.
6	15 May 2009	SEACG/16	Reviewed and updated the Catalogue.
7	27 May 2010	SEACG/17	Reviewed and updated the Catalogue.
8	10 March 2011	BBACG/21	Reviewed and updated the Catalogue.
9	6 May 2011	SEACG/18	Reviewed and updated the Catalogue.
10	22 September 2011	SAIOACG/1	Reviewed and updated the Catalogue.
11	22 June 2012	ATM/AIS/SAR/SG/22 APANPIRG/23	Reviewed, reformatted, and updated the Catalogue, approved by APANPIRG/23.
12	26 June 2013	SAIOACG/SEACG, ATM/SG	Reviewed, reformatted, and updated the Catalogue, approved by APANPIRG/24.
13	????	???	Reviewed subsequent to Easter Island being transferred out of the Region

Chapter A: Routes in BANP

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

LOWER ATS ROUTES			LUANG PRABANG
		A211	MANADO TARAKAN TAWAU
A1	LIMLA 1546.0N 09836.0E BANGKOK UBON DANANG BUNTA IKELA 1839.7N 11214.7E CHEUNG CHAU ELATO 2220.0N 11730.0E MAKUNG TAIBEI KAGOSHIMA MIYAKE JIMA (APAC01/2 – ATS)	A212	PUPIS PAGO PAGO NIUE
		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
A91	(KYAKHTA) SERNA 5018.5N 10628.1E ULAN BATOR	A218	HARBIN (EKIMCHAN) (MYS SHMIDTA) BARROW
A201	LASHIO AGARTALA RAJSHAHI MONDA 2521.00N 08626.25E PATNA LUCKNOW	A219	KARACHI NAWABSHAM KALAT 2902.0N 06635.0E SERKA 2951.0N 06615.0E KANDAHAR (TERMEZ)
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	A220	CLUKK 3605.0N 12450.0E TAHITI
		A221	GUAM ROTA IS TINIAN IS SAIPAN
A204	YOROI 4500.5N 14147.1E RISHIRI AKSUN 4545.1N 14054.3E (SEITI) (4713.3N 14013.3E)	A222	GUAM POHNPEI KOSRAE KWAJALEIN
A206	Proposed by Vietnam and Laos ASSAD VINH NONGT	A224	JOHOR BAHRU MERSING
		A325	PRARATAPGARH

	TASOP 2514.1N 07045.0E KARACHI JIWANI	A345	PYONGYANG GOLOT 4012.5N 12430.5E FENGCHENG KAIYUAN HAILAR KAGAK 4916N 11806E MANLI 4935N 11727E TELOK 4938N 11722E (CHITA)
A326	SHIGEZHUANG OKTON 3911.2N 11653.5E TIANJIN MAKNO 3827.6N 12110.0E SANKO 3814.2N 12228.4E DONVO 3734.0N 12320.0E AKARA 3130.0N 12330.0E	A346	HAMILTON IS AUCKLAND
A331	ZIGIE 2419.0N 15717.5W SEDAR 4530.4N 12643.0W	A347	MUMBAI BODAR 2236.3N 07413.3E PRATAPGAPH DELHI
A332	APACK 2402.8N 15619.3W AMITY 2626.0N 15229.0W HEMLO 4318.2N 12640.8W	A348	MELBOURNE EAST SALE NISEP 4146.6S 15601.5E
A334	HAT YAI KOTA BHARU	A364	SHACHE KASHI KURUM 4006.0N 07407.0E
A337	ADKAK 3354.0N 14210.0E TEGOD 2100.0N 14512.0E JUNIE 1132.5N 14706.3E KISME 0500.0N 14805.4E	A450	DENPASSAR HASSANUDDIN CAHYO 033000N 1333000E YAP IS GUAM WAKE KATHS 2104.6N 16123.4W
A338	CHRISTCHURCH APORO 5000.0S 17120.0E BYRD	A453	(KANDAHAR) (ZAHEDAN) (BANDER ABBAS)
A339	PERTH CURTIN ELBIS 0905.9S 12743.7E SHREE 0539.0N 13109.2E KEITH 2100.0N 13456.8E SABGU 2529.9N 13459.3E MAKDA 2716.0N 13551.2E TAXON 3000.0N 13714.5E MIYAKE JIMA	A454	KARACHI PARET 2527.2N 06451.5E TAPDO 2424.0N 06120.0E (VUSET)
A340	RAYONG BISOR 1221.0N 10247.0E PHNOM PENH	A455	PESHAWAR METAR 3406.0N 07128.0E KOTAL 3406.0N 07109.0E
A341	KOTA KINABALU SANDAKAN ZAMBOANGA	A456	AMRITSAR LAHORE MOLTA 3012.0N 07236.2E BINDO
A342	COLD BAY OLCOT 5125.8N 16533.3E	A457	HAT YAI TAMOS 0632.2N 10024.0E
A344	ROZAX 0245.6S 11140.0E SUMBAWA		

	ALOR SETAR PENANG KUALA LUMPUR JOHOR BAHRU		SANAM 3305.0N 07003.0E DERA ISMAIL KHAN JHANG 3116.0N 07218.0E SAMAR 3120.8N 07434.0E ASARI 3048.3N 07509.6E DELHI
A460	KUQA REVKI 4232.5N 8013.2E (KIRBALTABAY)	A467	BIRATNAGAR KATIHAR KOLKATA
A461	DAWANGZHUANG WEIXIAN ZHOUKOU HEKOU LONGKOU LILING YINGDE SHILONG BEKOL 2232.6N 11408.0E CHEUNGCHAU NOMAN 2000.0N 11640.3E MUMOT 1930.4N 11714.5E AVMUP 1843.3N 11808.3E SAN FERNANDO CABANATUAN MANILA SAN JOSE ZAMBOANGA AMBON DARWIN ALICE SPRINGS LEIGH CREEK	A468	KUQA KAMUD 4134.0N 07850.0E
		A469	HO CHI MINH CONSON IS
		A470	HONG KONG MAGOG 2217.3N 11549.4E SHANTOU XINGLIN FUZHOU YUNHE TONGLU HANGZHOU LISHUI BANTA PIXIAN
		A472	KOTAL 3406.0N 07109.0E METAR 3406.0N 07128.0E BAREV 3406.0N 07135.0E PESHAWAR
A462	KOLKATA DHAKA	A474	DELHI ASOVO MUMBAI MURUS 0600.0S 06319.7E (PLAISANCE)
A464	CHIANG MAI BANGKOK HAT YAI IPOH BATU ARANG KUALA LUMPUR SINGAPORE TINDAL TAROOM LORD HOWE IS AUCKLAND	A575	PYONGYANG GOLOT 4012.5N 12430.5E FENGCHENG DONGYANGJIAO DAHUSHAN CHAOYANG ANDIN 4106.0N 11843.5E GUBEIKOU FENGNING EREN INTIK 4341.5N 11155.0E SAINSHAND ULAN BATOR
A465	KOLKATA VISHAKAPATNAM CHENNAI COLOMBO		
A466	(KABUL)		

	(KYZYL)		SABNO 1859.1N 11550.7E
A576	MEDAN		MAVRA 1814.4N 11615.1E
	SINGAPORE		AKOTA 1706.6N 11651.6E
	DENPASAR		IBOBI 1354.4N 11832.6E
	CURTIN		REKEL 1324.1N 11848.3E
	ALICE SPRINGS		LEGED 1301.9N 11859.6E
	PARKES		TOKON 1142.0N 11940.3E
	SYDNEY		ZAMBOANGA
A577	SHIKANG	A584	TONGA
	KADET 2100.0N 11934.0E		NIUE
A578	TONIK 3200.0N 14600.0E		APIA
	PHONPEI		FUNAFUTI
	NAURU	A585	PALEMBANG
	TARAWA		JAKARTA
	NADI		PORT HEDLAND
	AUCKLAND		CEDUNA
A579	SYDNEY		ADELAIDE
	NADI	A586	INTOS 3722.00N 13120.00E
	CARRP 1904.4N 15935.0W		PUSAN
A580	AUCKLAND		CHEJU
	NAUSORI		ERABU
	APIA		NAHA
A581	BAGO	A587	SUMBAWA
	CHIANG MAI		ALICE SPRINGS
	CHIANG RAI	A588	DALIAN
	PONUK 2018.8N 10023.0E		WAFANGDIAN
	SAGAG 2111.5N 10137.4E		WANGBINGOU
	BIDRU		KAIYUAN
	KUNMING		CHANGCHUN
	MAGUOHE		HARBIN
	QIANXI		SIMLI 5017.4N 12722.1E
	HUAYUAN	A589	DELHI
	LINLI		BUTOP 2919.7N 07523.9E
	WUHAN		ASARI 3048.3N 07509.5E
A582	JOMALIG	A590	MANILA
	CHINEN		JOMALIG
	NAHA		MINAMI DAITO
	KAGOSHIMA		MIYAKEJIMA
	IKISHIMA		KAGIS 3549.0N 14234.0E
	BUSAN		PABBA 3700.0N 14400.0E
	SEOUL		PASRO 1417.1N 16040.5E
	(APAC13/09 – ATS)		(AMOTT) 6054.0N 15121.6W
			(APAC 01/2 – ATS)
A583	HONG KONG	A591	QINDAO

	XUEJIADAO		LAIBIN
	LATUX 3532.0N 12044.0E		GAOYAO
	MUDAL 3651.0N 12322.0E		PINGZHOU
	AGAVO 3710.0N 12400.0E		ZHULIAO
A592	PUPIS 1000.0S 17105.5W		WONGYUAN
	APIA		NANXIONG
	VAVA'U		GANZHOU
	TONGA		NANFENG
			SHANGRAO
A593	TANGHEKOU		TONGLU
	XILIUHETUN		NANXUN
	SHIGEZHUANG		SHANGHAI
	POTOU	A791	(IMLOT)
	PIXIAN		JIWANI
	WUXI		KARACHI
	SHANGHAI		PRATAGARH
	NANHUI		BHOPAL
	FUKUE		JAMSHEDPUR
A595	FUKUOKA		KOLKATA
	IKISHIMA	B200	ENKIP 3547.0S 17730.0E
	CHEJU		FICKY 3133.6N 12123.5W
A596	HUAIROU	B202	UBON
	HUAILAI		PAKSE
	TIANZHEN		PLEIKU
	LIANGCHENG		
	BAOTOU	B203	KATHMANDU
	DENGKOU		BAGDOGRA
	YABRAI		GUWAHATI
			SILCHAR
A597	GOBOH		IMPHAL
	KUSHIMOTO		LASHIO
	MONPI 2100.0N 14036.0E	B204	GOMES 1324.0N 10135.3E
	GUAM		SIEM REAP
	HONIARA	B205	RAYONG
	NOUMEA		BOKAK 1257.5N 10230.0E
	AUCKLAND		SIEM REAP
	(APAC13/9 – ATS)		
A598	BRISBANE	B206	URUMQI
	HONIARA		FUKANG
	NAURU		ALTAY
	MAJURO		GOPTO 4905.5N 08728.0E
			(AKTASH)
A599	CHITTAGONG	B209	JAMSHEDPUR
	LINSO 2322.5N 09855.0E		KHAJURAHO
	GENGMA		TIGER 2828.8N 07214.9E
	KUNMING		
	LUXI	B210	TASOP 2513.3N 07048.9E
	BOSE		NAWABSHAH

B211	MUMBAI EPKOS 1653.1N 07407.2E CHENNAI	TAMURTAI TIANZHEN NANCHENGZI WEIXIAN
B213	LHASA CHENGDU	
B214	NASAN LADON 2106.2N 10258.0E AKSAG 2049.1N 10027.3E	B329 PHNOM PENH PAKSE LEBAL 1630.2N 10556.7E VILAO 1722.0N 10605.0E NAM HA 2023.2N 10607.1E
B215	DAWANGZHUANG TAIYUAN YINCHUAN YABRAI JIUQUAN HAMI FUKANG URUMQI KUQA SHACHE HONGQILAPU PURPA 3656.5N 07524.5E GILGIT ISLAMABAD	APAC 13/18 – ATS B330 HONG KONG TAMOT PINGZHOU GAOYAO DOUJIANG QUIANXI FUJIACHANG JINGTAI YABRAI MORIT 4202.0N 10249.0E NIDOR 5029.4N 09125.8E (LIKAR)
B218	KUNMING SIMAO 2243.1N 16058.2E SAGAG 2111.5N 10137.4E VIENTIANE LOEI CHUM PHAE	B331 CHEUNG CHAU KAPLI 2110.0N 11730.0E HENGCHUN
B219	PENANG KOTA BHARU	B332 SANKO 3814.2N 12228.4E TOMUK 3843.0N 12400.0E PYONGYANG SINSONGCHON SONDO 3947.0N 12713.6E KANSU 3838.0N 13228.5E
B220	BRISBANE PORT MORESBY	B333 AUCKLAND PORT MORESBY
B221	NINAS 3100.0N 12215.0E PINOT 3125.2N 12214.2E SAGUT 3500.0N 12040.3E XUEJIADAO	B334 BEIJIN TANGHEKOU FENGNING TONGLIAO
B222	VINIK 0838.6N 11613.8E KOTA KINABALU	B337 (TAKHTOYAMSK) ANIMO 4508.3N 14337.8E ASAHIKAWA
B223	(DABUR 5147.1N 14235.9E) LUMIN 4545.0N 14150.3E WAKKANAI	B338 MERSING TEKONG ANITO 0017.0S 10452.0E
B326	HONIARA CHOKO 2022.6N 16053.0W	B339 ULAN BATOR
B328	EREN	

	POLHO 4447.0N 11315.0E FENGNING	B455	VAVA'U NISEX 1547.3S 17136.4W
B345	KATHMANDU BHARATPUR BHAI RAHAWA LUCKNOW	B456	WEWAK JAYAPURA
B346	LUANG PRABANG NOBER 1516.6N 10040.1E BANGKOK	B459	MUMBAI CLAVA 0134.0N 06000.0E (PRASLIN)
B348	HENGCHUN POTIB 2100.0N 12045.5E LAOAG SAN FERNANDO MANILA TOKON 1142.0N 11940.3E PUERTO PRINCESA OSANU 0741.4N 11717.6E KOTA KINABALU BRUNEI KAMIN 0235.1N 10855.7E SABIP 0209.7N 10750.5E TOMAN 0121.5N 10547.0E	B462	MACKAY HAMILTON IS. PORT MORESBY KADAB 0458.0S 14100.0E BIDOR 0400.0S 13130.0E TACLOBAN MANILA CABANATUAN LAOAG MIYAKO JIMA OKINAWA
	APAC 13/22 - ATS	B463	BAGO MANDALAY LASHIO
B349	BALI POTIP 2141.6S 12508.0E	B465	KOLKATA CHITTAGONG MANDALAY LUANG PRABANG HANOI
B450	SYDNEY LORD HOWE IS NORFORK IS PAGO PAGO	B466	JOHOR BAHRU BATU ARANG CHENNAI MUMBAI
B451	HAILAR QIQIHAR HARBIN BISUN 4314.0N 13111.8E (VLADIVOSTOK) IGROD 4139.0N 13647.0E KADBO 3914.0N 13745.0E	B467	KANGWON INTOS 3722.0N 13120.0E KANSU 3838.0N 13228.5E NULAR 4059.2N 13411.0E (TEKUK) 4241.0N 13527.4E
B452	TONIK 3200.0N 14600.0E HONIARA NADI	B468	DIENBIEN LADON 2106.2N 10258.0E LUANG PRABANG
B453	MIDDLETON IS KATCH 5400.0N 13600.0W DAASH 4226.5N 12600.1W	B469	SINGAPORE JAKARTA CARNARVON GERALDTON
B454	PAGO PAGO RAROTONGA TONYS 3019.9N 12249.2W		

	PERTH CAIGUNA WHYALLA GRIFFITH SYDNEY		LANGKAWI PENANG
B470	SINGAPORE PANGKALPINANG JAKARTA	B580	SYDNEY NOUMEA CHOKO 2022.6N 16053.0W
B472	LIPA ILO ILO COTABATO SELSO 0400.0N 12616.0E TOREX 0724.0N 13335.0E GOVE NORMANTON	B581	NADI FICKY 3133.5N 12123.5W
B473	LIPA ROXAS CAGAYAN-DE-ORO DAVAO SADAN 0400.0N 12805.0E CAIRNS	B583	BRUNEI DARWIN
B474	SYDNEY SANTO NANUMEA CHOKO 2022.6N 16053.0W	B584	DENPASAR ELANG 0056.0S 11449.5E KOTA KINABALU
B480	(RAZDOLITE) LETBI 5011.9N 10330.6E BULGAN MORIT 4202.0N 10249.0E	B586	NOUMEA SEKMO KAPKI PORT MORESBY GUAM OMLET 2100.0N 14259.2E TATEYAMA
B575	AUCKLAND TONGA PAGO PAGO	B587	ST GEORGE KOWANYAMA OPABA 0851.5S 13804.0E TIMIKA BIAK RENAN 0330.0N 13416.6E ENDAX 1415.0N 13000.0E ATVIP 2100.0N 12422.0E HUALIEN
B576	TAIBEI CHEJU SEOUL	B589	PORT MORESBY KAPKI 1014.9S 14817.7E BUKA MAJURO
B577	NADI WALLIS IS APIA PAGO PAGO FICKY 3133.5N 12123.5W	B590	NOUMEA PORT VILA NAURU
B578	BRISBANE NOUMEA TAHITI	B591	SHANGHAI TAIBEI HENCHUN (Partially implemented)
B579	PHUKET	B592	KOTA KINABALU JAKARTA
		B593	KOLKATA COMILLA AGARTALA

	GUWAHATI		G206	DILARAM KABUL SABAR PURPA
B595	TAHITI KONA			
B596	RAROTONGA DOVRR 1843.0N 15740.0W		G208	MUMBAI PARTY 2414.6N 07052.0E
B597	ERABU TANEGASHIMA SHIMIZU			KARACHI PANJGUR (ZAHEDAN)
B598	DARWIN THURSDAY ISLAND PORT MORESBY KAPKI 1014.9S 14817.7E		G209	LAERMONTH CHRISTMAS ISLAND PALEMBANG
	HONIARA PORT VILA NADI NAUSORI TONGA RAROTONGA		G210	PANJGUR KARACHI MUMBAI
B599	NOUMEA NADI TAHITI		G212	(KHABAROVSK) ARGUK 4753.5N 13439.4E HAIQING JIAMUSI HARBIN TONGLIAO GUBEIKOU QINBAIKOU NANCHENGZI TAIYUAN YIJUN SANYUAN XIAOYANZHUANG NINGSHAN WUFENGXI FUJIACHANG WEINING MAGUOHE KUNMING
B757	KATCH 5400.0N 13600.0W CAPE NEWENHAM NULUK 5822.9N 17706.1W			
B932	BAMOK 5625.5N 17249.3E (NETRI 4739.3N 15000.0E) ODERI 4439.0N 14515.2E MEMANBETSU			
G200	CHRISTMAS IS. COCOS IS (PLAISANCE)			
G202	(KANDAHAR) ZHOB RAHIM YAR KHAN		G213	BIAK BEKUB 0350.0N 13845.0E GUAM
G203	MIHO PUSAN		G214	JIWANI PANJGUR RAHIM YAR KHAN MOLTA 3012.0N 07236.2E
G204	ELNEX SHENGXIAN METAN SHANGHAI		G215	DUTCH HARBOR OLCOT 5125.8N 16533.3E
G205	HAMILTON IS. GURNEY JUNIE		G216	(DORAB) ALPOR 2404.7N 06120.0E

	LATEM 2431.7N 06449.7E KARACHI		POMOK NANTONG
G218	HOHHOT TUMURTAI POLHO 4447.0N 11315.0E SOLOK 4954.0N 11545.0E		GURNI 3209.2N 12058.5E PIMOL 3215.0N 11944.0E
G219	VIRUT 0230.8N 10402.7E TEKONG	G331	PHUKET PADET DAWEI
G221	PHUCAT BUNTA 1650.0N 10923.7E BAOLONG HAIKOU SAMAS SIKOU	G332	TANGHEKOU CHAOYANG
G222	SAPDA BROOME AYERS ROCK PARKES	G333	DELHI ESDEM TIGER 2828.8N 07214.9E
G223	TATEYAMA TONIK 3200.0N 14600.0E NAURU NADI NAUSORI NIUE AITUTAKI TAHITI (LIMA)	G334	KUALA LUMPUR TIOMAM BUNTO 0242.0N 10600.0E DOTAS 0201.1N 10820.5E SIBU
G224	NORFORK IS NADI PAGO PAGO TAHITI ISLA DE PASCUA (SANTIAGO)	G335	KATHMANDU JANAKPUR PATNA
G325	COLOMBO TIRUCHCHIRAPPALLI	G336	DHANBAD PATNA SIMRA KATHMANDU
G326	BALI TENNANT CREEK BRISBANE	G337	PERTH CHRISTMAS IS PEKANBARU
G327	NANHUI NINAS 3100.0N 12215.0E AKARA 3130.0N 12330.0E	G338	CHOIBALSAN KAGAK
G329	BRISBANE NORFORK IS	G339	PUSAN FUKUOKA KAGOSHIMA TANEGASHIMA PAKDO GUAM
G330	SHANGHAI	G340	QINGBAIKOU HUAILAI
		G341	CHANGCHUN WANGQING
		G342	CAIRNS HONIARA
		G344	COMFE 3624.0N 14618.0E CUTEE 4624.9N 16218.6E

	CUDDA	5647.9N 16018.1W		SURAT THANI
G345	UNTAN			PHUKET
	CHANGZHOU		G459	CAIRNS
	LISHUI			TIMIKA
G346	KIMCHAEK		G460	KUCHING
	NULAR	4059.2N 13411.0E		SIBU
	IGROD	4139.0N 13647.0E		BINTULU
G347	AUCKLAND			BRUNEI
	POPIR	2500.0S 17804.8W	G463	RAJSHAHI
	PADDI	1825.7N 15854.8W		DHAKA
G348	PARO			CHITTAGONG
	BAGDOGRA			BAGO
	MECHI			BETNO
	KATHMANDU			1505.8N 09812.7E
				BANGKOK
G424	(DAR ES SALAAM)		G464	PONTIANAK
	VUTAS	0912.0N 06000.0E		ROZAX
	ALATO	1340.7N 06344.0E		0245.0S 11140.0E
G450	(MOGADISHU)			BALI
	MUMBAI			KARRATHA
	NAGPUR			BALLIDU
	KOLKATA		G465	PERTH
				(PRASLIN)
G451	AHMEDBAD			MALE
	SASRO	2404.3N 07100.0E		COLOMBO
	PARTY	2414.6N 07052.0E	G466	HO CHI MINH
G452	(ZAHEDAN)			PHUCAT
	RAHIM YAR KHAN			HENGCHUN
	TIGER	2828.8N 07214.9E	G467	LUBANG
	DELHI			JOMALIG
G453	KUALA LUMPUR			GUAM
	KOTA BHARU		G468	PENANG
G454	(PLAISANCE)			MEDAN
	BOBOD	0600.0S 06941.1E	G469	PORT HEIDEN
	PADLA	0446.1N 07800.0E		ST PAUL IS
	COLOMBO			NYMPH
G455	SHANGHAI			5324.5N 16814.4E
	PINOT	3125.2N 12214.2E	G470	XIANYANG
	AKARA	3130.0N 12330.0E		FENGHUO
G457	DOVRR	1843.0N 15740.0W		CHANGWU
	ELLS	0500.0S 16704.1W		JINGNING
	PAGO PAGO			JINGTAI
	FAROA	2500.0S 17502.3W		QITAI
	DIVSO	3452.3S 17624.5E	G471	SHILONG
G458	BANGKOK			LONGMEN
				GANGZHOU

G472	KARACHI AHMEDABAD NAGPUR BHUBANESHWAR PATHEIN BAGO		MIYAKE JIMA
		G582	PUGER 0324.1N 10017.6E BATU ARANG PEKAN
G473	BAGO MAKAS 1649.7N 09830.0E PHITSANULOKE UBON	G583	EMMONAK BESAT 5945.0N 17925.1W (UST-BOLSHERETSK) BISIV 4456.3N 14412.3E MONBETSU
G474	BANGKOK MENAM 1357.3N 10247.7E SOURN 1345.5N 10600.0E ANINA 1359.0N 10725.0E PHUCAT	G584	KUALA LUMPUR PEKAN KUCHING
G575	TAHITI RANGIROA FICKY 3133.5N 12123.5W	G585	MIHO POHANG SEOUL
G576	CHEER 5310.0N 14000.1W SPONJ 4992.0N 13005.1W	G586	YINGDE ERTANG
G578	GURAG 2100.0N 12725.0E DILIS 1431.0N 12600.0E TACLOBAN MACTAN ZAMBOANGA DENPASAR PORT HEDLAND PARABURDOOD PERTH	G587	TAIBEI PABSO 2538.0N 12252.0E BULAN 2704.0N 12400.0E
		G588	MOOREN KHOVD TEBUS 4725.1N 09027.7E TESAN 4701.7N 08947.8E FUKANG
G579	JAKARTA PALEMBANG SINGAPORE JOHOR BAHRU	G590	SIMRA VARANASI KHAJURAHO BHOPAL INDORE BODAR 2236.3N 07413.3E
G580	TOMAN 0121.5N 10547.0E NIMIX 0124.9N 10759.2E ATETI 0125.7N 10830.1E KUCHING MIRI BRUNEI	G591	CAIRNS NOUMEA NORFORK IS AUCKLAND
G581	HONG KONG ELATO 2220.0N 11730.0E HENGCHUN MIYAKO JIMA BISIS 2647.0N 12633.0E ERABU	G593	FUNAFUTI NAUSORI NIUE RAROTONGA
		G594	TIAMU TAHITI RAROTONGA AUCKLAND SOLIT 2355.0S 07500.0E

	(PLAISANCE)		MANDALAY
G595	(TAHITI) SYDNEY MABAD 2648.4S 07500.0E (PLAISANCE)	R208	KUALA LUMPUR KUALA TRENGGANU KANTO 0649.9N 10348.3E
G597	DONVO 3734.0N 12320.0E AGAVO 3710.0N 12400.0E SEOUL KANGNUNG MIHO OTSU KOWA OSHIMA VENUS 3618.2N 14042.1E	R209	TATOX 0857.0N 09702.0E LANGKAWI
		R210	PORT MORESBY CAIRNS
		R211	KASMI 3601.3N 14040.3E DAIGO NIIGATA KADBO 3914.0N 13745.4E AVGOK 4336.0N 13815.0E VELTA 4529.0N 13710.0E
G598	LUCKNOW APIPU 2658.6N 08300.0E SIMARU	R212	(DIEGO GARCIA) GUDUG 0704.6S 07500.0E PIBED 0520.2S 09044.0E
G599	AUCKLAND TAHITI	R215	CHIANG RAI NAN LUANG PRABANG
R200	PINGZHOU LIANSHENGWEI BIGRO ZHANJIANG	R217	NODAN 4025.0N 14500.0E SENDAI NIIGATA
R201	BANGKOK UTAPAO	R218	DELHI DIPAS 2738.3N 07551.9E JAIPUR
R202	PHRAE TATEL 1729.1N 098 45.8E APAC13/07 - ATS	R220	DAIGO IWAKI NANAC 3854.2N 14313.9E NIPPI 4942.6N 15920.8E NODLE 6117.0N 15200.0W
R203	SAPAM 0804.6N 09733.0E PHUKET	R221	MERSING PULAU TIOMAN
R204	KEITH 2100.0N 13456.5E KALIN 0000.0N 14200.0E LIDIT 0918.0S 14220.0E HORN IS CAIRNS	R222	AVGOK 4336.0N 13815.0E (YEDINKA)
R205	ANARAK BIRJAND	R223	BRUNEI ELANG 0056.0S 11449.5E
R206	PORT HEDLAND CHRISTMAS IS JAKARTA	R224	YANJI VASRO 4227.8N 12944.4E KANSU (APAC 13/10 – ATS)
R207	VIENTIANE NAN CHIANG MAI		

					KOROR
R325	KATHMANDU JANAKPUR DUMKA 2411.0N 08721.3E KOLKATA PHUKET HAT YAI IPOH JOHOR BAHRU			R338	NOME NINNA 5455.7N 17158.8E
R326	NORFOLK IS CHRISTCHURCH			R339	SIKOU 2050.6N 11130.0E HUGUANG NANNING BOSE
R327	GISBORNE FAROA			R340	AMBON WALGETT
R328	DANANG HUE LEBAL 1630.2N 10556.7E SAVANNAKHET			R341	KODIAK NINNA 5455.7N 17158.8E
	APAC 13/18 – ATS			R342	MANADO BONDA 0200.0N 12451.2E PEDNO 0400.0N 12521.0E GENERAL SANTOS DAVAO
R329	KAGLU 1231.2N 07200.0E MALE GAN (DIEGO GARCIA)			R343	NANXIANG WUXI LISHUI HEFEI WUHAN LONGKOU LAOLIANGCANG DARONGJIANG LAIBIN NANNING
R330	SHEMYA POWAL 5024.3N 16530.8E			R344	KATHMANDU BIRATNAGAR KATIHAR RAJSHAHI
R332	MAJURO BONRIKI AKUMO 0614.9S 17535.5E ROTUMA NADI			R345	ROIET BIDEM 142153.57N 1034750.07E SIEM REAP
R334	RAYONG KOH KONG SIHANOUK PADMA 1025.8N 10402.3E PHU QUOC			R346	TOWNSVILLE PORT MORESBY
	APAC 13/18 – ATS			R347	NIIGATA SADO EKVIK 3944.7N 13636.5E IGROD 4139.0N 13647.0E (VELTA) 4529.0N 13710.0E
R335	VINH ALPHA 1832.6N 10319.7E VIENTIANE			R348	KADAP 0200.0S 08409.6E LATEP 0610.3S 07500.0E
	APAC 13/18 – ATS				
R336	ADAK CARTO 4840.5N 16847.0E				
R337	TACLOBAN				

	(DIEGO GARCIA)	R463	APACK	2402.6N 15619.2W
R349	LEMOK 1000.0N 10302.2E RASER 1000.0N 10506.0E HO CHI MINH	R464	ALCOA	3750.0N 12550.0W
R450	KIETA HONIARA	R465	BITTA BEBOP	2332.0N 15529.0W 3700.0N 12500.0W
R451	ADAK OGDEN 4929.2N 16102.3E	R467	CLUTS CLUKK	2300.0N 15439.0W 3605.0N 12450.0W
R452	SONDO 3947.0N 12713.6E HAMUN 3955.1N 12731.1E KIMCHAEK UAMRI 4217.6N 13041.8E (TEKUK) 4241.0N 13527.4E	R468	KUALA LUMPUR GUNIP 0429.9N 09931.9E	
R453	NADI APIA	R469	BANGKOK BOKAK 1257.5N 10230.0E PHNOM PENH SAPEN 1102.2N 10611.0E HO CHI MINH	
R455	PONTIANAK KUCHING	R470	PEKANBARU SINGAPORE	
R458	MUMBAI EPKOS 1653.0N 07407.2E BELGAUM	R472	VIENTIANE UDON THANI KHON KAEN	
R457	CHENNAI TIRUCHCHIRAPPALLI MADUDAI TRIVANDRUM MALE	R473	KOLKATA RAJSHAHI GUWAHATI	
R460	DELHI ALIGARH LUCKNOW VARANASI GAYA KOLKATA	R474	LILING NANXIONG WONGYUANG ZHULIAO PINGZHOU TAMOT 2221.5N 11352.0E	
R461	MUMBAI MABTA 1708.5N 07321.8E BELGAUM COIMBATORE COLOMBO MEDAN KUALA LUMPUR	R575	GAOYAO NANNING LONGZHOU HANOI VIENTIANE BANGKOK	
R462	(SEEB) DENDA 2442.5N 06054.8E JIWANI KARACHI UPAIPUR DELHI	R576	PAPRA 1546.0N 10711.0E KOH KONG UPNEP 0942.2N 10029.6E SURAT THANI	
		R577	DENNS 2222.0N 15353.0W DINTY 3329.0N 12235.0W	
		R578	EBBER 2143.0N 15309.0W ELKEY 3241.0N 12203.0W	
			FITES 2049.0N 15300.0W FICKY 3133.5N 12123.5W	

(R579 in Chapter 2)				PERTH
R580	OATIS	3800.0N 14345.0E	R594	LUCKNOW
	OMOTO	4859.7N 16000.7E		JALALABAD
	AMOTT	6053.9N 15121.8W		DELHI
R581	KOLKATA		R595	ANPU
	MONDA	2521.0N 08626.4E		MIYAKO JIMA
	SIMARA			KEITH 2100.0N 13456.5E
R582	NORFOLK IS			GUAM
	RAROTONGA		R597	CABANATUAN
R583	TAIBEI			SARSI 1642.0N 12316.9E
	BISIS	2647.1N 12633.1E		SKATE 1716.7N 12423.0E
	OKINAWA		R598	KOLKATA
	MINAMIDAITO			RAJSHAHI
	SABGU			SAIDPUR
	BUNGO			COOCH BEHAR
R584	OKINAWA			BOGOP
	AVLAS			PARO
	SALVA	2222.7N 13059.7E	R599	KIETA
	KEITH	2100.0N 13456.48E		GIZO
	GUAM			HONIARA
	TRUK			PORT VILA
	POHNPEI			WHANGAREI
	KWAJALEIN			AUCKLAND
	MAJURO			
	JOHNSTON IS			RNAV ROUTES
	CHOKO	2022.9N 16053.2E	L301	BANGKOK
	(APAC 13/09 – ATS)			DAWEI
R585	CITTA	2818.9N 14507.2W		VISHAKHAPATNAM
	GATES	3412.7N 12303.9W		BUSBO 1914.9N 07807.6E
R587	BRISBANE			NOBAT 2109.0N 06800.0E
	PORT VILA			RASKI 2303.5N 06352.0E
R588	PHUKET			(VAXIM 2319.0N 06111.0E)
	RELIP		L333	KHAJURAO
	PHNOM PENH			JAIPUR
	PLEIKU			TIGER 2828.8N 07214.9E
R590	AMBON		L500	(SANTIAGO)
	COTABATO			AUCKLAND
R591	CAPE NEWENHAM		L501	(RIO GALLEGOS)
	AKISU	4734.3N 16119.3E		AUCKLAND
	ABETS	3605.0N 14425.0E		
R592	BALI			L502 ISLA DE PASCUA
	ONSLOW			(LOS ANGELES)
				APAC 13/15 – ATM and SAM-B13/1

deleted as a result of Easter Island being transferred to SAM región (wef Aug 2013??)

AUCKLAND

L503	BRISBANE IGEVO 3636.5S 16300.0E CHRISTCHURCH	L625	LUSMO 0333.7N 10655.7E AKMON 0812.8N 11013.4E ALDAS 1056.9N 11212.3E ANOKI 1222.0N 11315.0E ARESI 1358.4N 11427.0E AKOTA 1706.6N 11651.6E AVMUP 1843.3N 11808.3E POTIB 2100.0N 12045.5E
L504	SINGAPORE MANADO		
L505	BUSBO 1914.9N 07807.6E KAMOL 1938.1N 07340.0E NOBAT 2109.0N 06800.0E		
L507	KOLKATA BAGO BANGKOK	L628	LUBANG IBOBI 1354.4N 11832.6E GUKUM 1356.8N 11637.2E ARESI 1358.4N 11427.0E MESOX 1358.4N 11427.0E DAMEL 1358.7N 11130.6E VEPAM 1358.0N 11000.0E PHUCAT
L508	RAROTONGA CHRISTCHURCH MELBOURNE		
L509	GAYA ASARI 3048.3N 07509.5E		
L510	IBANI 250000N 0764311E ELBAB 201333N 0815954E LEKIR 071632N 0965243E GIVAL 070000N 0980000E	L629	PEKAN DOLOX 0448.7N 10522.9E
L512	INTOS 3722.0N 13120.0E NIIGATA	L635	PEKAN MABLI 0417.3N 10612.9E
L513	PERTH HOBART AUCKLAND	L637	BITOD 0715.3N 10612.9E TANSONNHET
L515	OBMOG 1154.1N 09623.5E IKULA 1000.0N 09721.2E PHUKET	L642	CHEUNG CHAU EPDOS 1900.0N 11333.3E ENBOK 1833.4N 11329.5E EGEMU 1700.0N 11217.0E VEPAM 1358.0N 11000.0E PHANTHET CONSON IS ESPOB 0700.0N 10533.4E ENREP 0452.4N 10414.8E MERSING
L516	KITAL 2003.0N 06018.0E ELKEL 0149.0N 06911.0E (DIEGO GARCIA)		
L517	MIRI GULIB 0409.3N 11028.1E TERIX 0415.4N 10934.9E	L643	TANSONNHET CONSON
L518	HIA 171340.1N0782420.9E BBZ 163118.3N0804733.7E GOPNU 155112N0820224E EGOLU 141858N0844952E SADAP 120605.6N0884120.8E	L644	CONSON JAKARTA
L521	SYDNEY	L645	COLOMBO SULTO 0738.6N 08801.9E SAMAK 0758.7N 09425.0E SAPAM 0804.6N 09733.0E

	PHUKET		MAKUL	24 03.1N 100 34.6E
L626	KATHUMANDU		NIVUX	26 00.0N 100 00.0E
	ONISA 2858.1N 08005.5E		PEXUN	30 55.9N 100 00.0E
	DELHI		SANLI	32 00.0N 100 00.0E
			NOLEP	38 34.5N 088 42.5E
L756	CLAVA		SADAN	40 04.6N 086 00.0E
	MALE		KUQA	VOR (KCA)
			(APAC 13/13 – ATS)	
L759	DELHI		L894	KITAL 2003.0N 06018.0E
	POSIG 2713.0N 07734.9E			MALE
	AGRA			SUNAN 0028.7S 07800.0E
	KHAJURAHU			DADAR 0200.0S 07927.1E
	PHUKET			PERTH
L760	AGRA		L896	SAPDA 1200.0S 11125.6E
	GURTI 2743.8N 07747.8E			NISOK 0302.9N 09200.0E
	DELHI			DUGOS 0853.1N 08447.9E
L774	(PLAISANCE)			CHENNAI
	LELED 116.5S 07500.0E		L897	CHRISTMAS ISLAND
	ELATI 0200.0S 08957.7E			KETIV 0042.0S 09200.0E
	KETIV 0042.0S 09200.0E			COLOMBO
	MEDAN		L899	HANIMAADHOO
L875	VUTAS 091206N 0600004E			TRIVANDRUM
	MOXET 110146N 0645024E		M300	(EMURU 2215.6N 05849.8E)
	GOLEM 115739N 0672213E			LOTAV 2037.0N 06057.0E
	EGOGI 121100N 0690000E			CALICUT
	GOKUM 122025N 0701005E			MADURAI
	OLNIK 122850N 0711440E			SALAX 0212.4N 10133.7E
	BEDIL 123500N 0715958E		M501	GUAM
	DOLPI 124641N 0732711E			LIMLE 1639.7N 13000.0E
	MANGALORE(MML)			SKATE 1722.2N 12425.6E
				LAOAG
	PEXEG 130415N 0760230E			NOMAN 2000.0N 11640.3E
	BANGALORE (BIA)		M502	BANGKOK
	CHENNAI (MMV)			AKATO 1337.3N 09910.3E
	(APAC13/08-ATS)			LALIT 1252.4N 09225.1E
L888	BIDRU 2243.1N 10057.9E		M504	ALPOR 2404.7N 06120.0E
	NIVUX 2600.0N 10000.0E			NODER 2350.0N 06700.0E
	SANLI 3200.0N 10000.0E			TELEM 2402.0N 06846.0E
	TEMOL 3527.1N 09412.2E			
	TONAX 3745.5N 09011.3E			
	KUCA VOR (KCA)			
L888	BIDRU 22 43.1N 100 57.9E		M505	BUON MA THUOT
				MONDULKIRI

	SIEM RIEP		M646	HENGCHUN	
M510	CAN THO			AGVAR	1924.8N 12037.7E
	PHNOM PENH			LAOAG	
M512	COLOMBO			SAN FERNANDO	
	ANIVE	0540.9N 07800.0E		MANILA	
	MALE			TOKON	1142.0N 11940.5E
M520	SERNA	5018.5N 10628.1E		PUERTO PRINCESAKOTA	
	POLHO	4447.0N 11315.0E		KINABALU	
M522	VINIK	0838.5N 11613.8E		BRUNEI	
	KOTA KINABALU			DARMU	0401.7N 11240.6E
	MAMOK	0405.1N 11547.2E		KAMIN	0234.7N 10855.9E
	DENPASAR			SABIP	0209.7N 10750.7E
M625	MELBOURNE			ESPIT	0200.2N 10726.4E
	WELLINGTON			OBLLOT	0142.9N 10641.8E
M626	KOTA BHARU			TOMAN	0121.8N 10547.3E
	DAWEI			APAC 13/22- ATS	
	BAGO		M750	KILOG	2152.5N 11441.6E
M635	SINGAPORE			ENVAR	2159.5N 11730.0E
	RAMPY 0615.0 11320.8E			MOLKA	2639.5N 12400.0E
	CURTIN			MOMPA	3050.5N 12955.1E
M638	DOSTI	2558.0N 06503.0E		MANEP	3242.9N 13340.0E
	KARACHI			SOPHY	3327.2N 13721.9E
	MINAR	2350.0N 06800.0E		MIYAKE JIMA	
	SAPNA	2330.0N 06750.0E	M751	MERSING	
	NOBAT	2109.0N 06800.0E		PEKAN	
	MUMBAI			KOTA BHARU	
M639	IGEVO	3636.5S 16300.0E		REGOS	1200.0N 10035.1E
	WELLINGTON			BANGKOK	
M641	MADURAI		M753	ENREP	0452.4N 10414.8E
	BIKOK	0817.0N 07836.0E		BITOD	0715.3N 10407.3E
	COLOMBO			PHU QUOC	
	COCOS IS			CAMPU	1030.0N 10402.3E
	PERTH			PHNOM PENH	
M643	HOBART			APAC13/18 - ATS	
	CHRISTCHURCH		M754	BRUNEI	
M644	RAYONG			VINIK	0838.6N 11613.8E
	KOTA BHARU			TENON	0915.3N 11616.5E
				LULBU	1104.7N 11624.4E
				NOBEN	1234.4N 11631.1E
				GUKUM	1356.8N 11637.2E
				AKOTA	1706.6N 11651.6E
			M755	PHNOM PENH	
				KISAN	1032.3N 10440.5E
				BITOD	0415.4N 10407.1E

M758	PEKAN LUSMO 0333.7N 10655.7E TERIX 0415.4N 10934.7E OLKIT 0450.1N 11149.1E KOTA KINABALU	M771	MERSING DOLOX 0448.7N 10522.9E DUDIS 0700.0N 10648.6E DAGAG 0927.8N 10826.5E DOXAR 1222.0N 11022.7E DAMEL 1358.7N 11130.6E DONDA 1442.2N 11201.3E DOSUT 1702.0N 11340.8E DULOP 1814.2N 11432.6E DUMOL 1900.0N 11426.8E HONG KONG
M759	OLKIT 0450.1N 11149.1E BRUNEI	M773	BUBKO 1911.1N 08839.8E LEGOS 2138.0N 08805.3E KOLKATA
M761	PEKAN BOBOB 0222.1N 10706.1E SABIP 0209.7N 10750.5E AGOBA 0158.7N 10830.0E KUCHING	M774	SINGAPORE KIKEM 0952.9S 12607.4E
M766	COLOMBO JAKARTA INDRAMAYU MADIN 0617.9S 11023.0E CUCUT 0617.7S 11106.0E SURABAYA BALI DARWIN	M875	KAKID 2038.6N 08659.9E BUTOP 2919.7N 07523.9E GUGAL 3014.5N 07358.0E DERA ISMAIL KHAN
M765	KOTA BHARU IGARI 0656.2N 10335.2E BITOD 0715.3N 10407.3E CONSON DAGAG 0927.8N 10826.5E MAPNO 1013.1N 11020.1E	M890	LUCKNOW CHANDIGARH SAMAR 3120.8N 07434.0 ^E
M767	JOMALIG TOKON 1142.0N 11940.3E TENON 0915.3N 11616.5E TEGID 0857.2N 11551.6E TODAM 0631.7N 11235.4E	M904	BANGKOK U-TAPHAO DIPUN SIRAT TONIK TIDAR ODONO UPRON ENREP
M768	DARWIN BRUNEI DOGOG 0525.3N 11407.5E ASISU 0559.1N 11320.8E TODAM 0631.6N 11235.6E LAGOT 0716.5N 11132.7E AKMON 0812.9N 11013.1E MOXON 0849.5N 10921.3E DAGAG 0927.8N 10826.5E TANSONNHAT	N502	PARDI 0034.0S 10413.0E BOBAG 0102.5N 10329.9E
M770	KOTA BHARU RANONG BUBKO 1911.1N 08839.8E KAKID 2038.6N 08659.9E JAMSHEDPUR	N509	ELATI 0200.0S 08957.7E PORT HEDLAND
		N519	MUMBAI SAPNA 2330.0N 06750.0E MINAR 2350.0N 06800.0E KARACHI
		N563	(EMURU 2214.0N 05853.6E) REXOD 2112.5N 06138.5E BANGALORE

	MEDAN		LUSMO	0333.7N 10655.7E
	SALAX	0212.4N 10133.7E	LAGOT	0716.6N 11131.5E
N564	DUGOS	0853.1N 08447.9E	LAXOR	0949.6N 11448.5E
	AKMIL	1151.6N 08006.9E	LULBU	
				110936.07N 1163217.70E
N571	(RAGMA	2306.0N 06105.7E)	LEGED	
	PARAR	2226.5N 06307.0E		130113.24N 1190006.94E
	VAMPI	0610.9N 09735.1E	LUBANG	
	GUNIP	0429.9N 09931.8E	CABANATUAN	
N628	PEKANBARU		MIYAKOJIMA	
	BUSUX	0355.0S 06000.0E	N891	PAPA UNIFORM
	(PRASLIN)		ENREP	0452.4N 10414.8E
N633	KUALA LUMPUR		IGARI	0656.2N 10335.2E
	PEKANBARU		SAMOG	0800.0N 13014.6E
	POSOD	0329.5S 09409.9E	RAYONG	
	PEDPI	1316.6S 07500.0E	BANGKOK	
	(PLAISANCE)		N892	HENGCHUN
N640	TRIVANDRUM		KABAM	2100.0N 11925.7E
	BIKOK	0817.0N 07836.0E	MUMOT	1930.4N 11714.5E
	COLOMBO		MAVRA	1814.4N 11615.1E
	LEARMONTH		MIGUG	1516.4N 11400.0E
	MOUNT HOPE		MESOX	1358.8N 11302.7E
	ADELAIDE		MUGAN	1222.0N 11152.3E
N645	BRUNEI		MAPNO	1013.1N 11020.1E
	ELANG		MOXON	0849.5N 10921.3E
		005535.64S 1145003.10E	MELAS	0704.9N 10808.4E
	SURABAYA		MABLI	0417.3N 10612.9E
			MERSING	
N750	SYDNEY		N893	TELEM
	CHRISTCHURCH			2407.0N 06846.0E
N759	MELBOURNE			AHMEDABAD
	AUCKLAND		N895	BETNO
N774	AUCKLAND			1505.8N 09812.7E
	SYDNEY			PATHEIN
N875	DENPASAR			BHUBANESWAR
	PONTIANAK			NAGPUR
	ARUPA	0031.7N 10848.8E		BODAR
	NIMIX	0124.9N 10759.4E		2236.3N 07413.3E
	BOBOB	0222.1N 10706.0E		AHMEDABAD
	ENREP	0452.4N 10414.7E		PARTY
N877	LAGOG	0835.6N 09159.8E		2414.6N 07052.0E
	VISHAKHAPATNAM		P501	ARAMA
	NAGPUR			0136.9N 10307.2E
	PRATAGRAPH			BOBAG
N884	MERSING			0102.5N 10329.9E
				ANITO
				0017.0S 10452.0E
			P518	NOBAT
				2109.0N 06800.0E
				PARET
				2527.2N 06451.5E
				PANJGUR
			P570	(MIBSI
				2341.7N 05755.4E)
				KITAL
				2003.0N 06018.0E
				TRIVANDRUM

	KATUNAYAKE		NULAR	4059.2N 13411E	
	PEKANBARU		(KANSU)	3838.0N 13228.5E	
P574	(KUSRA)		UL425	(KUTVI)	
	TOTOX	2150.5N 06222.5E		ASPUX	1744.00N 06000.00E
	BISSET	1823.4N 06918.1E		DONSA	1434.14N 06511.32E
	BELGAUM			VANVO	1043.00N 07200.00E
	CHENNAI		UM551	DONSA	1435.3N 06511.6E
	PUGER	0324.0N 10017.5E		ANGAL	1614.1N 06000.1E
P627	PHUKET			(AVAVO)	1646.3N 05526.1E
	KADAP	0200.0S 08409.6E			
	KALBI				
	(PLAISANCE)				
P628	LANGKAWI				
	PORT BLAIR				
	RAHIM YAR KHAN				
P646	BANGKOK				
	JAMSHEDPUR				
	PATHEIN				
	VARANASI				
P648	KOTA KINABALU				
	JAKARTA				
P751	(ADEN)				
	ANGAL	1614N 06000E			
	MUMBAI				
P756	MALE				
	MEDAN				
P761	CHENNAI				
	PORT BLAIR				
P762	DAWEI				
	PORT BLAIR				
	COLOMBO				
P880	IGEVO	03636.29S 16300.00E			
	SLOPE HILL VOR				
		04459.03S 16846.57E			
P901	IKELA	1839.7N 11214.7E			
	CHEUNG CHAU				

UPPER ATS ROUTES

UB467	YEDINKA			
	VELTA	4529N 13710E		
	TEKUK	4241N 13527.4E		

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.

Chapter 1: South Asia

**(referred to: SAIOACG, BOBASIO, ASIOACG as appropriate
for review)**

ATS ROUTES	SIGNIFICANT PTS	COORDINATES	FIR	REMARKS
IND 1	BBS BPL	N2014.6 E08548.8 N2317.0 E07720.2	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
IND 09	TELEM BHU RKT BBB	N2407 E068 46 N2316.5 E06940.0 N2218.8 E07046.7 N1905.2 E072 52.5	MUMBAI	New Entry 1/1/13
IND 10	AAE MORVI RASKI	N2304.1 E07237.7 N2249.0 E07050.0 N2303.5 E06352.0	MUMBAI	New Entry 1/1/13
PAK 01	KC MELOM	N2454.6 E06710.6 N2505.0 E06632.0	KARACHI	New Entry 1/1/13
PAK02	INDEK CHG	N3246.0 E07316.0 N3040.1 E07648.3	LAHORE DELHI	New Entry M890 extension 1/1/13
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	
COL 1	KAT TNV	N0709.7 E07952.1 S1842.2 E04731.1	COLOMBO MADAGASCA R	
IND 8	VABB APANO WPT "X"	Details in chart	MUMBAI KARACHI	2 Route Options
HIMALAY A 1	KOLKATA NEPALGUNJ INDEK	2238.7N 08827.2E 2806.1N 08139.1E 3246N 7316E	KOLKATA KATHMANDU LAHORE	Moved from Chapter 4. Route requested by Nepal
HIMALAY A 2	KATHMANDU BAGHDOGRA GUWAHATI SILCHAR IMPHAL	2740.5N 08521.0E 2641.3N 08819.8E 2606.1N 09135.3E 2454.8N 09258.9E 2446.0N 09354.5E	KATHMANDU KOLKATA KOLKATA KOLKATA KOLKATA	Moved from Chapter 4. Route requested by Nepal

	KUNMING	2501N 10244E	KUNMING	
HIMALAY A 3	LELAX QIM FKG	N3223.5 E07737.9 N3809.1 E08532.2 N4410.0 E08759.0	DELHI URUMQI	New Entry 10/1/13
IRAN1	a. ALROT- BIRJAND-SOKIR -NH b. ALROT- BIRJAND- SOKIR-GASIR	?	IRAN KABUL PAKISTAN	Requested by IRAN and amended by IATA at SAIAOCG/3 Mtg.

ATS ROUTE NAME: IND1

REQUESTED BY: IATA

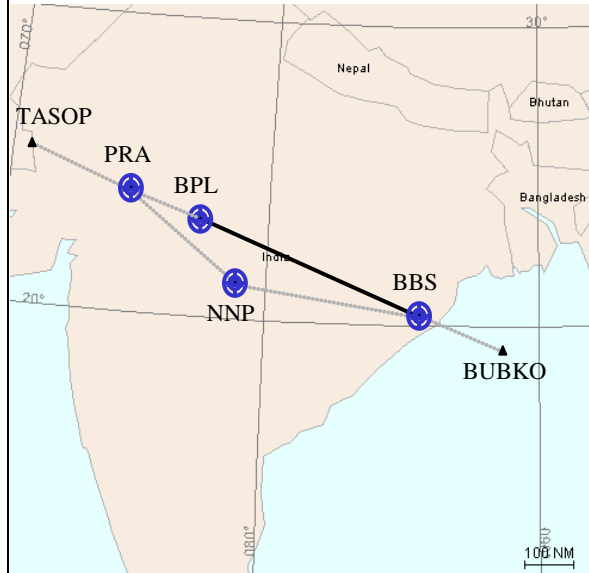
ENTRY/EXIT POINT
BBS / BPL

ROUTE DESCRIPTION
BBS .. BPL

FLIGHT LEVEL BAND
28000 – 46000 feet

PRIORITY: HIGH/MED/LOW

CHART



Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time	25nm /3 mins	
Fuel	406kg	148190 kg
CO ₂	1250kg	456250kg
No _x		

Remarks: Provides extension from N895 linking traffic from BKK and Northern Sub-continent and ME. Provides a 25nm reduction in track mileage

Potential City Pairs: Europe/South East Asia

ATS ROUTE NAME: IND 7 (N877 Extension)

REQUESTED BY: IATA

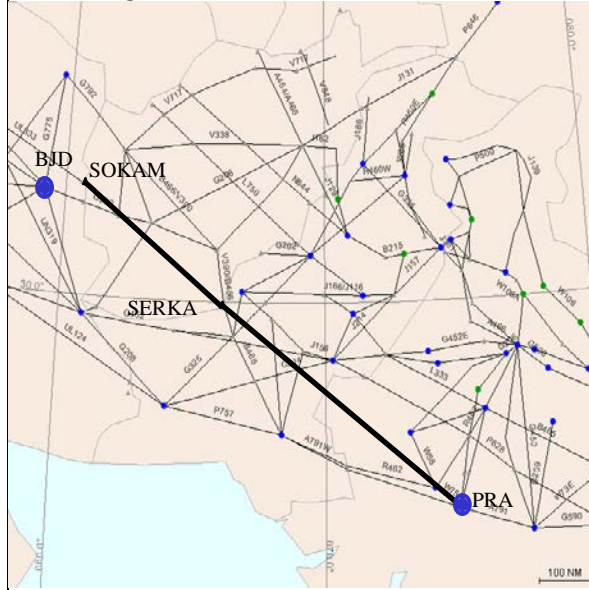
ENTRY/EXIT POINT
PRA - KAMAR

ROUTE DESCRIPTION
Direct Route Track from PRATAGARH
PRA – SERKA– SOKAM
FLIGHT LEVEL BAND

28000-46000

PRIORITY: HIGH/MED/LOW
HIGH

CHART



Action Required	IATA.
	ICAO

Saving	Per flight	Annual
Mileage / Time	294 nm/37 min.	
Fuel	4777kg	1,743 tonnes
CO ₂	147,000kg	5,365 tonnes
No _x		

Remarks: This proposal predates the extension of UL333 through Kabul FIR and has been under consideration for a number of years. The extension of UL333 is under utilised against other Kabul routes largely due the 45nm “penalty” in track mileage the current route structure requires. The routes primary benefit at this stage will be westbound and during BOBCAT traffic flow. As such a restricted route that accommodates this would be acceptable in the short term. *Update 08/02/13 PRA SERKA has been “approved” by India after lengthy consultation with the Military, complementary action from Pakistan awaited.*

Potential City Pairs: KUL/SIN – MID-EAST/EUROPE

ATS ROUTE NAME: IND 08
REQUESTED BY: IATA

Date: 25 June 2012

(ATM/AIS/SAR/SG-22)

ENTRY/EXIT POINT
 VABB-APANO-AAE-VIKIT-
 MURLI-BI

ROUTE DESCRIPTION

Option 1 Routing:
 VABB-APANO-
 W13N.AAE."WP1"
 (Mumbai/Delhi FIR waypoint)
 dct VIKIT

Option 2 Routing:
 VABB-APANO-
 W13N.AAE."WP1"(Mumbai/Delhi FIR waypoint) dct
 "WP3"(10Nm clearance from
 POKHARAN{VI(D)123}) dct
 VIKIT

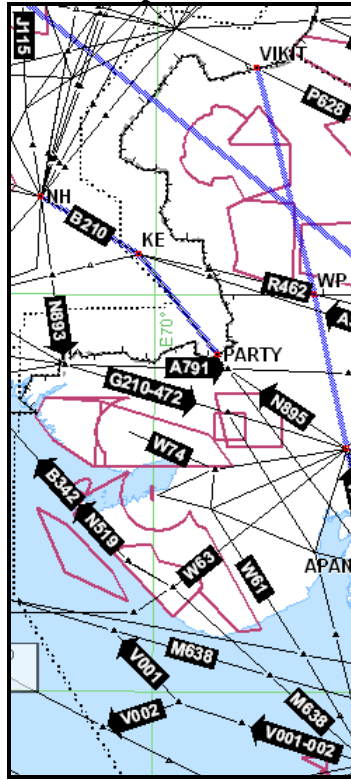
Pakistan Routing:
 VAKIT dct MURLI dct BI then
 via existing route network.

FLIGHT LEVEL BAND

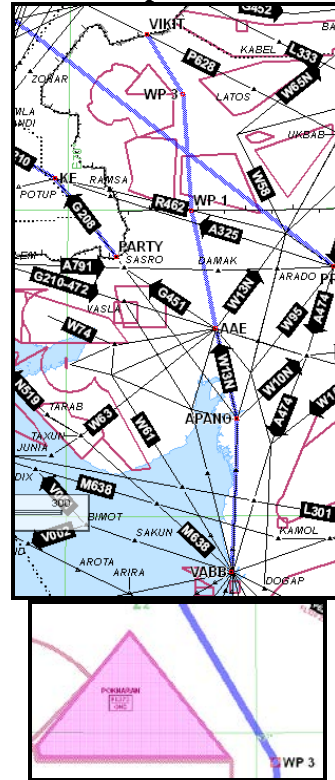
PRIORITY:
 High/Medium/Low

CHART

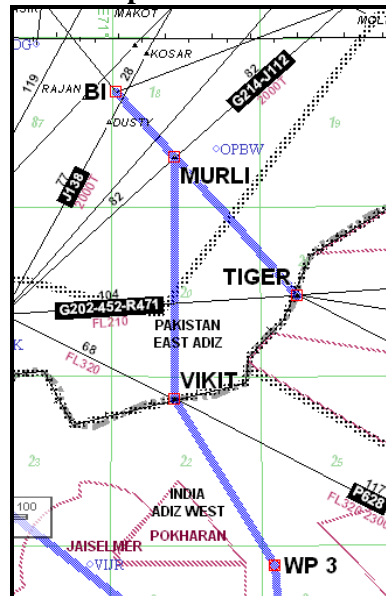
Option 1



Option 2



Pakistan portion



Action Required	IATA
	ICAO

Option 1

Saving	Per flight	Annual
Mileage / Time	62 nm / 6 mins	
Fuel	589 kg	
CO ₂	1826 kg	
No _x		

Option 2

Saving	Per flight	Annual
Mileage / Time	101 nm / 13 mins	
Fuel	1132 kg	
CO ₂	3510 kg	
No _x		

Remarks: Initial request time specific (1600 – 2359) to support late night operations to North America.

Potential City Pairs: Mumbai to North American cities

ATS ROUTE NAME: *IND 09*

REQUESTED BY: IATA

Date: 01/01/2013

ENTRY/EXIT POINT

TELEM – BBB

ROUTE DESCRIPTION

TELEM – BHJ (Bhuj) – RKT (Rajkot) -
BBB (Mumbai)

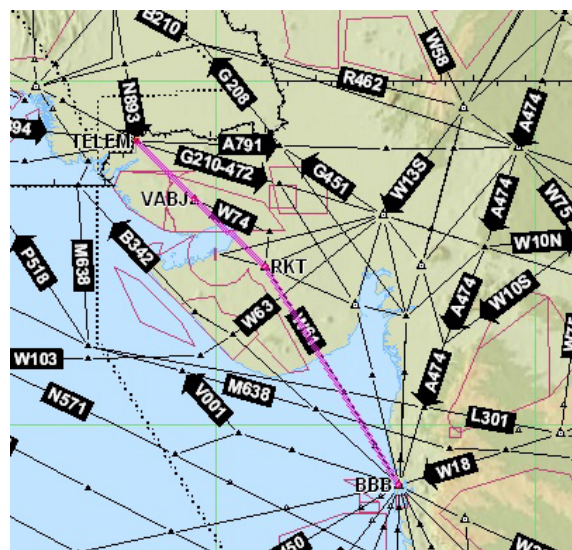
FLIGHT LEVEL BAND

29000 – 46000

PRIORITY: HIGH/MED/LOW

HIGH

CHART



Action Required	IATA
	ICAO

Saving	Per flight	Annual potential
Mileage / Time	35nm / 5 min	
Fuel	300 kg	4,954 Ton
CO ₂	945 kg	15,604 Ton
No _x		
SO ₂		

Remarks: Facilitates Arrivals in to Mumbai, Bangalore from Europe. Reduces congestion around AMD with respect to BOM DEL BOM busy corridor, will assist CDOs that will add further fuel savings. (Route proposed at ANSCG Delhi meeting on 28/11/2008.)

Potential City Pairs: Europe / BOM, BLR

ATS ROUTE NAME: <i>IND10</i>	
REQUESTED BY: IATA	Date: 01/01/2013

<p>ENTRY/EXIT POINT AAE- RASKI</p> <p>ROUTE DESCRIPTION AAE (Ahmadabad) – MORVI- RASKI</p> <p>FLIGHT LEVEL BAND 29000 – 46000</p> <p>PRIORITY: HIGH/MED/LOW HIGH</p>	<p style="text-align: center;">CHART</p>
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Action Required	IATA
	ICAO

Saving	Per flight	Annual potential
Mileage / Time	80 nm / 9min	
Fuel	765 Kg	8,800 Ton
CO ₂	2409 kg	27,700 Ton
No _x		
SO ₂		

Remarks: Facilitates From / To Ahmadabad Middle East and overflying traffic between Far East Asia to Middle East.

Potential City Pairs: AMD, DAC, HKG, PVG, BJS / Middle East

ATS ROUTE NAME: PAK01	
REQUESTED BY: IATA	Date: 01/01/2013

<p>ENTRY/EXIT POINT Karachi (KC) – MELOM</p> <p>ROUTE DESCRIPTION Direct KARACHI (KC) to MELOM</p> <p>FLIGHT LEVEL BAND 29000 – 46000</p> <p>PRIORITY: HIGH/MED/LOW HIGH</p>	<p style="text-align: center;">CHART</p>
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Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time	12 nm / 2 min	
Fuel	100 kg	380 Ton
CO ₂	307 kg	1168 Ton
No _x		
SO ₂		

Remarks: Supports traffic South Asia – Europe, Middle East region

Potential City Pairs: South Asia – Europe

ATS ROUTE NAME: PAK 02	
REQUESTED BY: IATA	Date: 01/01/2013

<p>ENTRY/EXIT POINT INDEK – CHG</p> <p>ROUTE DESCRIPTION INDEK .. CHG (Chandigarh)</p> <p>FLIGHT LEVEL BAND 29000 – 46000</p> <p>PRIORITY: HIGH/MED/LOW HIGH</p>	<p>CHART</p>
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Action Required	IATA
	ICAO

Saving	Per flight	Annual potential
Mileage / Time	10 nm	
Fuel	175 kg	320 Ton
CO ₂	552 kg	1008Ton
No _x		
SO ₂		

Remarks: Route will facilitate separating overflying traffic from Delhi ARR/DEP traffic, especially when L509 closes. Although small distance savings but it will help in reducing traffic congestion and facilitating Optimum flight levels.

Potential City Pairs: Europe / South East Asia/ South Asia

ATS ROUTE NAME: THA1

REQUESTED BY: IATA

<p>ENTRY/EXIT POINT KRT / DWI</p> <p>ROUTE DESCRIPTION KRT .. DWI</p> <p>FLIGHT LEVEL BAND 28000 – 46000 feet</p> <p>PRIORITY: HIGH/MED/LOW</p>	<p>CHART</p>
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Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time	15nm/ 2min	
Fuel	245kg	89,000kg
CO ₂	750kg	274,000kg
No _x		

Remarks

Potential City Pairs:

ATS ROUTE NAME: IDO1
REQUESTED BY: IATA

<p>ENTRY/EXIT POINT SJ / MABIX</p> <p>ROUTE DESCRIPTION SJ .. MABIX</p> <p>FLIGHT LEVEL BAND 28000 – 46000 feet</p> <p>PRIORITY: HIGH/MED/LOW</p>	<p style="text-align: center;">CHART</p>
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Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time	16nm/ 2min	
Fuel	260kg	95,000kg
CO ₂	800kg	292,000kg
No _x		

Remarks: This route supports traffic from SIN to CBI, TVM and an alternative to the Middle East. It provides a 10 nm reduction in track mileage (16nm if traffic route via MDN).

Potential City Pairs:

ATS ROUTE NAME: COL 1
REQUESTED BY: IATA

<p>ENTRY/EXIT POINT KAT / TNV</p> <p>ROUTE DESCRIPTION KAT .. TNV (ANTANANARIVO)</p> <p>FLIGHT LEVEL BAND 28000 – 46000 feet</p> <p>PRIORITY: HIGH/MED/LOW</p>	<p style="text-align: center;">CHART</p>
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Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time	130nm /16 min	
Fuel	2110kg	770,000kg
CO ₂	6,500kg	2,370 tonnes
No _x		

Remarks: This proposal supports traffic between THA/HKG/ South China and Southern Africa. A proposal already exists to establish a User Preferred Route (UPR) geographic area which will support the same traffic flow however this proposal needs to be retained in the short term.

Potential City Pairs:

ATS ROUTE NAME: Himalaya 1

Requested by : Nepal

<p>ENTRY/EXIT POINT XXXXX</p> <p>ROUTE DESCRIPTION Kolkata (CEA) .. Nepalgunj (NGJ) .. INDEK</p> <p>FLIGHT LEVEL BAND</p> <p>PRIORITY: HIGH/MED/LOW</p>	<p style="text-align: center;">CHART</p>
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Action Required	States to coordinate implementation.
	.

Benefit		
Cost		
Fuel Saving		
Emission	CO ₂	
	NO _x	

Remarks: Remarks: The route has been implemented except for Imphal to Kunming which China had undertaken to review (as per current remarks)

IATA Nth Asia Office approached China who have indicated this route will be considered as part of the overall China route review - no timeline was given.

The extension to L509 serves the purpose at present although is only available for limited hours daily. The availability of another route to the north will provide extra capacity but will need to be amended to link with a new transit route through Kabul.

ATS ROUTE NAME: Himalaya 2

Requested by : Nepal

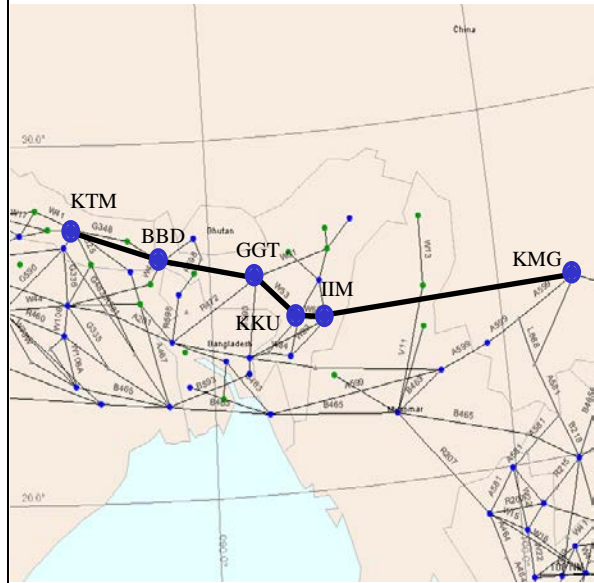
ENTRY/EXIT POINT
XXXXX

ROUTE DESCRIPTION
Kathmandu (KTM) .. Baghdogra (BBD) ..
Guwahati (GGT) .. Silchar (KKU) .. Imphal
(IIM) .. Kunming (KTM)

FLIGHT LEVEL BAND

PRIORITY: HIGH/MED/LOW

CHART



Action Required	States to coordinate imeplementation.
	.

Benefit		
Cost		
Fuel Saving		
Emission	CO ₂	
	NO _x	

Remarks: China advised that they would seriously look at the proposal and would coordinate with Nepal (ref. para 8.4of the SEA-RR/TF/4 report). This was also presented at the 22nd Meeting of the BBACG.

ATS ROUTE NAME: *Himalaya 3*

REQUESTED BY: IATA

Date: 10 January 2013

ENTRY/EXIT POINT

LELAX-QIM-FKG
(Or LELAX-QIM-POSOT-FKG)

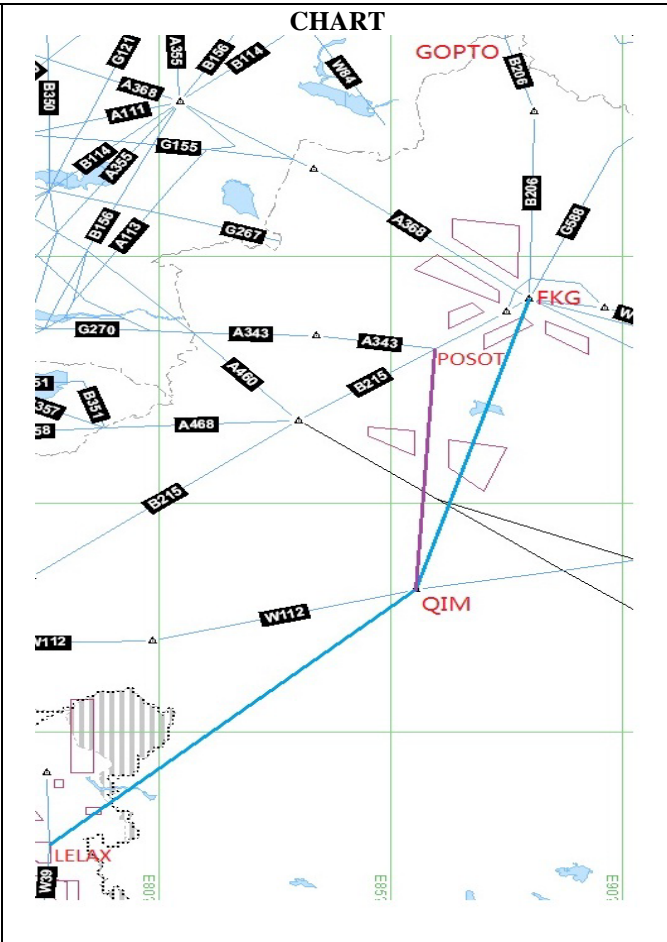
Connecting to FKG-TAI-GOPTO-LANBI

ROUTE DESCRIPTION

LELAX direct to QIM over the Himalaya to support a new route from India into China connecting to Russia onwards polar / trans polar gateways.

FLIGHT LEVEL BAND:

PRIORITY:
HIGH



Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time	257NM / 23 mins	
Fuel	3500 kgs	1,265 Ton
CO ₂	11 Tons	4,000 Ton
No _x		

Remarks: New 787 aircraft equipped with more than the standard cabin oxygen supply capable of operating at higher altitude longer in the event of depressurization over the Himalayas.

Potential City Pairs: India -North America

ATS ROUTE NAME: IRAN 1

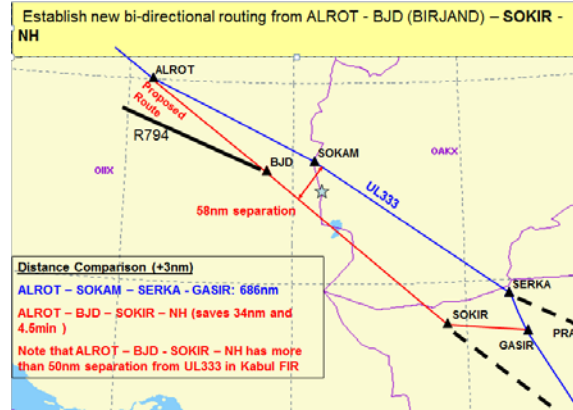
Requested by : Iran

ENTRY/EXIT POINT
XXXXX

ROUTE DESCRIPTION
a. ALROT-BIRJAND-SOKIR -NH
b. ALROT-BIRJAND-SOKIR-GASIR

FLIGHT LEVEL BAND

PRIORITY: HIGH/MED/LOW



CHART

Action Required	States to coordinate imeplementation.
	.

Benefit	
Cost	
Fuel Saving	
Emission	CO ₂
	NO _x

Remarks: Requested bu IRAN and amended by IATA at SAIOACG /3 meeting.

Chapter 2: Southeast Asia

(referred to: SEACG for review)

ATS ROUTES	SIGNIFICANT PTS	COORDINATES	FIR	REMARKS
SEA 2	DANANG SYX	N1603.2 E10811.9 N1818.4 E10910.4	HOCHIMINH SANYA	
SEA 6	PAKSE ASSAD	N1511.8 E10544.5 N1820.5 E10740.9	VIENTIANE ASSAD	
SEA 10	LENKO QUNGI SAMUI	N1507.0 E10848.0 N0932.8 E10003.7	SANYA HOCHIMINH PNOMPENH BANGKOK	New chart provided by IATA QUNGI- LENKO
SEA 12	ROT HUGUANG	N1607.0 E10346.7 N2107.9 E11020.2	HOCHIMINH GUANGZHOU	
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 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 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
Unnamed	NOIBAI KUNMING	2112.8N 10550.1E 2501.0N 10244.0E	HANOI KUNMING	Moved from Chapter 4. Route Requested by Vietnam
Unnamed	NOIBAI CATBI	2112.8N 10550.1E 2049.1N 10642.5E	HANOI HANOI	Moved from Chapter 4.

	SAMAS OR HUGUANG	2030.3N 11029.7E 2107.9N 11020.2	GUANGZHOU/ SANYA GUANGZHOU	Route Requested by Vietnam
SCS10	PHUCAT ASISU		HO CHI MINH SINGAPORE KOTA KINABALU	
PHI 5	ENDAX VJN		MANILA	
SEA 5	STUNG TRENG DANANG	N1331.5 E10600.9 N1603.2 E10811.9	PNOMPENH HOCHIMINH	Moved from Chapter 5 part A
SCS9	TOKON DILIS TOKON ENDAX	N1142.0 E11940.5 N1431.1 E12600.1 N1142.0 E11940.5 N1415.0 E13000.0	MANILA MANILA MANILA MANILA	Moved from Chapter 5 part A

ATS ROUTE NAME: SEA2

REQUESTED BY: IATA

<p>ENTRY/EXIT POINT DAN / XXXXX / SYX</p> <p>ROUTE DESCRIPTION DAN .. SYX</p> <p>FLIGHT LEVEL BAND 29000 – 46000 feet</p> <p>PRIORITY: HIGH/MED/LOW</p>	<p style="text-align: center;">CHART</p>
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Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time	739nm/93 mins	
Fuel	12090 kg	4,412 tonnes
CO ₂	37200kg	13,578 tonnes
No _x		

Remarks: Supports traffic Southeast Asia – Hainan Island and possible alternative routing for the Pearl River Delta area.

Potential City Pairs: South East Asia - Hainan

ATS ROUTE NAME: SEA 6

REQUESTED BY: IATA

ENTRY/EXIT POINT
PAKSE - ASSAD

ROUTE DESCRIPTION

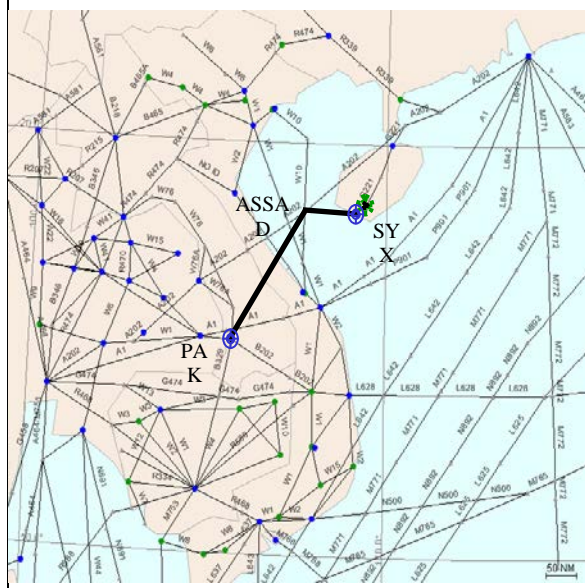
Direct PAKSE to ASSAD
FLIGHT LEVEL BAND

29000 – 46000 feet

PRIORITY: HIGH/MED/LOW

MED

CHART



Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time	126 nm / 16 min	
Fuel	2047 kg	747.338 kg
CO ₂	6300 kg	2299,500 kg
No _x		

Remarks: Supports traffic Southeast Asia – the Perl River Delta area/South China.

Potential City Pairs: KUL/SIN/Phnom Penh/JKT – Hainan/ Hong Kong

ATS ROUTE NAME: SEA 10 Alternative route proposed from QUNGI to LENKO by IATA at SEACG/20 mtg

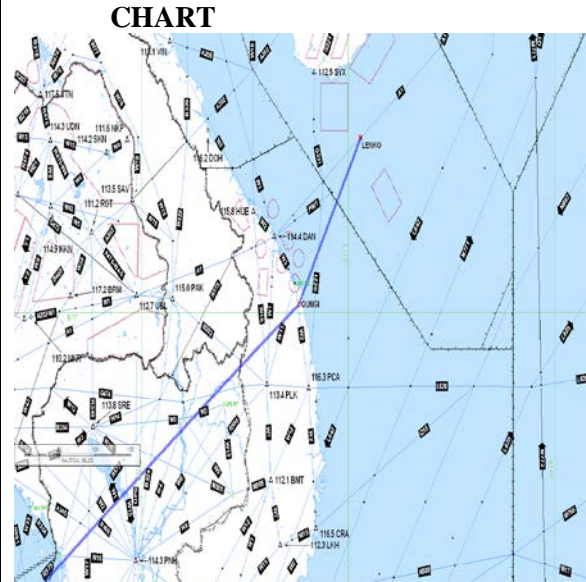
REQUESTED BY: IATA

ENTRY/EXIT POINT
XXXXX

ROUTE DESCRIPTION
~~CAVOI and IGNIS LENKO ..~~
Quangnai/QUNGI .. SAMUI (SMU)

FLIGHT LEVEL BAND
28000 – 46000 feet

PRIORITY: HIGH/MED/LOW



Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time		
Fuel		
CO ₂		
No _x		

Remarks: Supports traffic from Northeast Asia to Phuket and beyond. Will require linkages to/from QUNGI as original proposed points CAVOI and IGNIS no longer exist. **IATA propose to link QUNGI to LENKO**

Potential City Pairs: Colombo/ Phuket - Pearl River Delta

ATS ROUTE NAME: SEA 12
REQUESTED BY: IATA

<p>ENTRY/EXIT POINT ROT - HUGUANG</p> <p>ROUTE DESCRIPTION Direct ROT - HUGUANG</p> <p>FLIGHT LEVEL BAND 29000 - 46000</p> <p>PRIORITY: HIGH/MED/LOW HIGH</p>	<p style="text-align: center;">CHART</p>
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Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time		
Fuel		
CO ₂		
No _x		

Remarks: Provide parallel to the A202 route similar to proposal for uni-directional routes proposed through Southeast Asia Route Review Task Force.

Potential City Pairs: KUL/SIN/Phnom Penh/JKT – SANYA/HKG

ATS ROUTE NAME: SCS1
REQUESTED BY: IATA

<p>ENTRY/EXIT POINT DAMEL / CH</p> <p>ROUTE DESCRIPTION DAMEL .. CH</p> <p>FLIGHT LEVEL BAND 28000 – 46000 feet</p> <p>PRIORITY: HIGH/MED/LOW</p>	<p style="text-align: center;">CHART</p>
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Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time	35nm / 4mins	
Fuel	568kg	207594kg
CO ₂	1750kg	638,750kg
No _x		

Remarks: Proposed route shortening for M771 into the Pearl River Delta area. Similar proposals have been made through Southeast Asia Route Review Task Force. During SEACG/19 in WP09 Hong Kong China advised they had studied the proposal for track shortening and advised the proposed change would reduce capacity of A1/P901. It would also require an extensive change in the flight route system and ATC sectors in Hong Kong FIR. However Hong Kong, China would continue to study this proposal for the implementation of RNP4/2. . (**IATA – 5/02/2013- Remains as high priority in view of the savings impact for many airlines**)

Potential City Pairs: Singapore-Pearl River Delta Airports

ATS ROUTE NAME: SCS2

REQUESTED BY: IATA

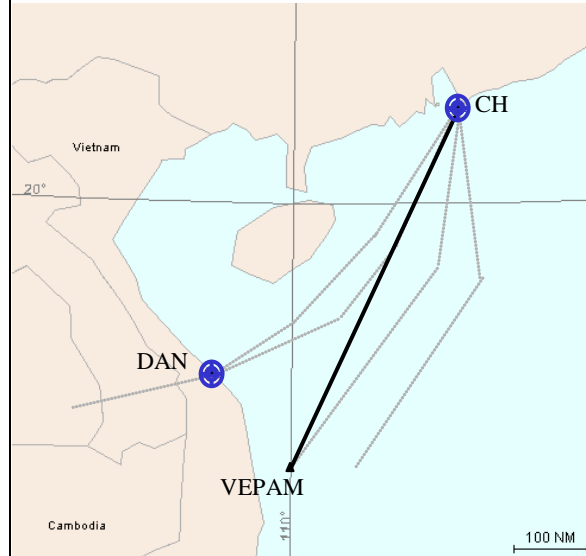
ENTRY/EXIT POINT
CH / VEPAM

ROUTE DESCRIPTION
CH .. VEPAM

FLIGHT LEVEL BAND
28000 – 46000 feet

PRIORITY: HIGH/MED/LOW

CHART



Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time	17nm/ 2 mins	
Fuel	276kg	100,831kg
CO ₂	850kg	310,250kg
No _x		

Remarks: Proposed route shortening for L642 out of the Pearl River Delta area. Similar proposals have been made through Southeast Asia Route Review Task Force. During SEACG/19 in WP09 Hong Kong China advised they had studied the proposal for track shortening and advised the proposed change would reduce capacity of A1/P901. It would also require an extensive change in the flight route system and ATC sectors in Hong Kong FIR. However Hong Kong, China would continue to study this proposal for the implementation of RNP4/2 ... (**IATA - 5/01/2013 - Remains as high priority in view of the savings impact for many airlines**)

Potential City Pairs: Singapore-Pearl River Delta Airports

ATS ROUTE NAME: SCS4

REQUESTED BY: IATA

<p>ENTRY/EXIT POINT CS / VKL</p> <p>ROUTE DESCRIPTION CS .. VKL</p> <p>FLIGHT LEVEL BAND 28000 – 46000 feet</p> <p>PRIORITY: HIGH/MED/LOW</p>	<p>CHART</p>
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Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time	18nm / 2.25 mins	
Fuel	292kg	106,763kg
CO ₂	900kg	328,500kg
No _x		

Remarks: Supports traffic to and from Kula Lupur from and to the northeast.

Potential City Pairs: Kuala Lumpur-Pearl River Delta Airports

ATS ROUTE NAME: SCS5

REQUESTED BY: IATA

ENTRY/EXIT POINT
EXOTO / MELAS / LUSMO

ROUTE DESCRIPTION
EXOTO .. DAMVO .. MELAS .. LUSMO

FLIGHT LEVEL BAND
28000 – 46000 feet

PRIORITY: HIGH/MED/LOW

CHART



Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time	76nm/ 9.5 mins	
Fuel	1235kg	450,775kg
CO ₂	3800kg	1,387 tonnes
No _x		

Remarks: Need to be considered in conjunction with developments with L642/M771 and possibly South China Sea ADS-B project.

Potential City Pairs: Jakarta- Pearl River Delta Airports

ATS ROUTE NAME: SCS7

REQUESTED BY: IATA

ENTRY/EXIT POINT
DULOP/ M772 / LAXOR / XXXXX / BRU

ROUTE DESCRIPTION
DULOP M772 LAXOR .. XXXXX .. BRU

FLIGHT LEVEL BAND
28000 – 46000 feet

PRIORITY: HIGH/MED/LOW

CHART



Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time	60nm/ 7.5mins	
Fuel	975kg	355,875kg
CO ₂	3000kg	1,095 tonnes
No _x		

Remarks: Supports traffic from Perth, eastern Malaysia and eastern Indonesia to the Perl River Delta area, China. Segment DULOP and LAXOR exists as M772.

Potential City Pairs: Pearl River Delta Airports-Bali/ Surabaya/ Perth

ATS ROUTE NAME: SCS 8

REQUESTED BY: IATA

<p>ENTRY/EXIT POINT</p> <p>1. DULOP / ELATO(ENVAR)</p> <p>2. DULOP / KAPLI</p> <p>ROUTE DESCRIPTION DULOP .. ELATO (A1)/ENVAR (M750) or DULOP .. KAPLI (G86)</p> <p>FLIGHT LEVEL BAND 28000 – 46000 feet</p> <p>PRIORITY: HIGH/MED/LOW</p>	<p style="text-align: center;">CHART</p>
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Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time	a.DULOP/ENVAR 140nm/17.5min b.DULOP/KAPLI 238nm/ 30min	
Fuel	a.2275kg b.3867kg	a.830,000kg b.1,411 tonnes
CO ₂	a. 7000kg b.11,900kg	a.2,555tonnes b.4,343 tonnes
No _x		

Remarks: Supports traffic Northeast Asia/Southeast Asia. Potentially problematic as will impact South China Sea’s traffic arrangements. IATA to review. During SEACG/19 in WP09 Hong Kong China advised they had studied the proposal for track shortening and advised that allowing flights to proceed from M771 DUMOL to ELATO/ENVAR/KAPLI will likely create a bottle neck at these points and result in flights not getting optimum levels or increase ground delay to departures from Hong Kong and Macao to East Asia. However Hong Kong, China would continue to study this proposal.

Potential City Pairs: SEAsia-North Asia Airports

ATS ROUTE NAME:

Requested by : Vietnam

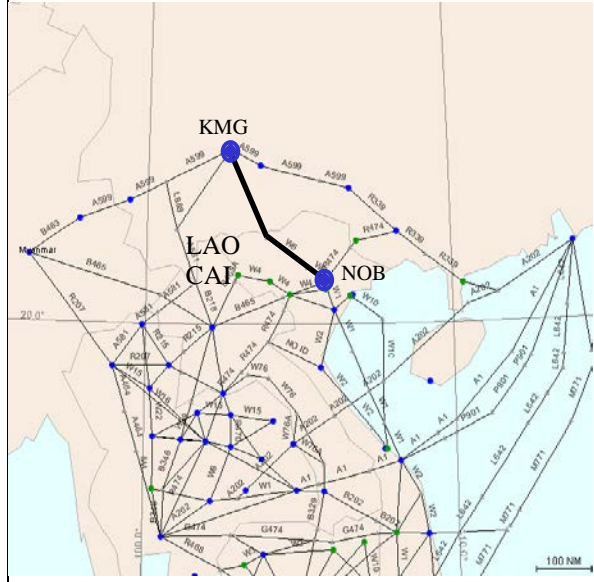
**ENTRY/EXIT POINT
XXXXX**

**ROUTE DESCRIPTION
Noibai (NOB) .. LAOCAI .. Kunming
(KMG)**

**FLIGHT LEVEL BAND
28000 – 46000 feet**

PRIORITY: HIGH/MED/LOW

CHART



Action Required	States to coordinate implementation.
	ICAO to circulate proposal for deletion from BANP.

Benefit		
Cost		
Fuel Saving		
Emission	CO ₂	
	NO _x	

Remarks: Because of small traffic demand and cost/benefit considerations, this route is impossible and can not be implemented at present.

ATS ROUTE NAME:

Requested by : Vietnam

**ENTRY/EXIT POINT
XXXXX**

ROUTE DESCRIPTION

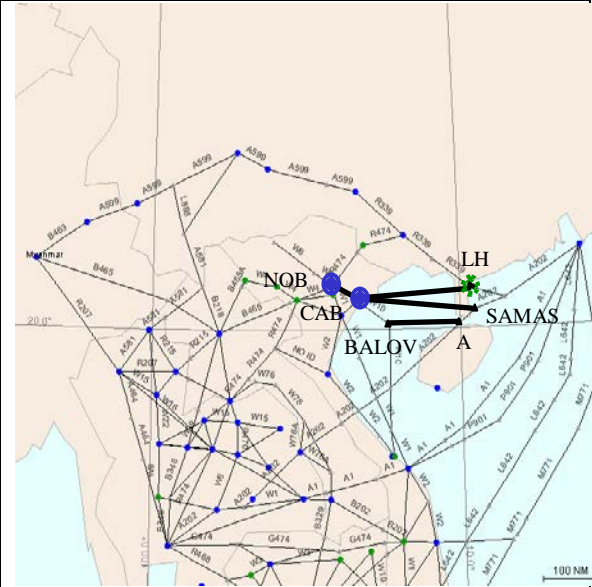
Three Options:

- A) Noibai (NOB) .. Catbi (CAB) .. SAMAS
- B) Noibai (NOB) .. Catbi (CAB) .. BALOV .. A .. SAMAS
- C) Noibai (NOB) .. Catbi (CAB) .. Huguang (LH)

FLIGHT LEVEL BAND

28000 – 46000 feet

PRIORITY: HIGH/MED/LOW



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: Because of small traffic demand and cost/benefit considerations, this route is impossible and can not be implemented at present.

Appendix 3

ATS ROUTE NAME: SCS 10 (Propose Route designator R321)		
REQUESTED BY: IATA	Date: 25 June 2012	(ATM/AIS/SAR/SG-22)

<p>ENTRY/EXIT POINT Phu CAT (PCA) - ASISU</p> <p>ROUTE DESCRIPTION PCA to ASISU</p> <p>FLIGHT LEVEL BAND</p> <p>PRIORITY: HIGH (VN commencing SGN-SYD service in October 2012) Plan for 3 flights per week.... Potential for other airlines to use?</p>	<p>CHART</p>
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Action Required	IATA
	ICAO

Existing 692.9
New PCA-ASISU = 541.6

Saving	Per flight	Annual
Mileage / Time	151nm / 22 mins	
Fuel	1827kg	kg
CO ₂	5664kg	kg
No _x		

Remarks

Potential City Pairs: SGN-SYD, any others

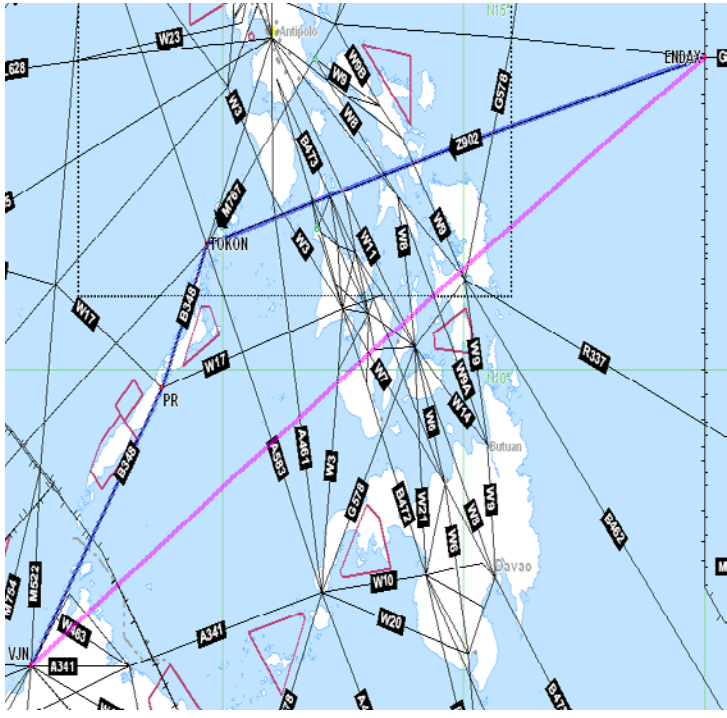
Appendix 2

ATS ROUTE NAME: PHI 05 (Propose Route ENDAX-VJN)

REQUESTED BY: IATA

Date: 25 June 2012

(ATM/AIS/SAR/SG-22)

<p>ENTRY/EXIT POINT ENDAX-VJN</p> <p>ROUTE DESCRIPTION</p> <p>FLIGHT LEVEL BAND</p> <p>PRIORITY: High/Medium/Low</p> <p>ENDAX-VJN 964.5NM ENDAX-TOKON-PR-VNJ 1033.7NM</p>	<p style="text-align: center;">CHART</p> 
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Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time	69.2nm / 8.65 mins	
Fuel	836kg	kg
CO ₂	2592kg	kg
No _x		

Remarks

Potential City Pairs:

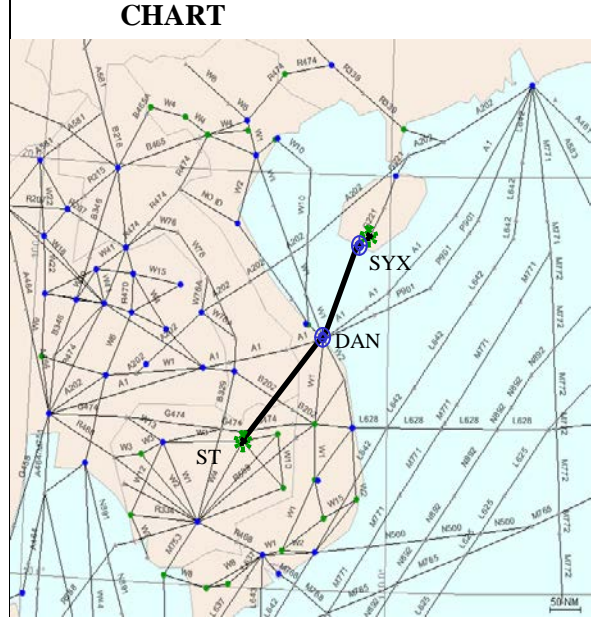
ATS ROUTE NAME: SEA 5
REQUESTED BY: IATA

ENTRY/EXIT POINT
 STUNG TRENG (ST) – DANANG (DAN)

ROUTE DESCRIPTION
 Direct STUNG TRENG (ST) to DANANG (DAN)

FLIGHT LEVEL BAND
 29000 – 46000

PRIORITY: HIGH/MED/LOW
 MED



Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time	64 nm / 8 min	
Fuel	1040 kg	379,600kg
CO ₂	3200 kg	1168 tonnes
No _x		
SO ₂		

Remarks: Supports traffic Southeast Asia – Hainan Island. Link with SEA2.

Potential City Pairs: Singapore/ KL –Hainan/Hong Kong

ATS ROUTE NAME: SCS 9
REQUESTED BY: IATA

<p>ENTRY/EXIT POINT</p> <ol style="list-style-type: none"> 1. ENDAX (FIR Boundary between Oakland and Manila FIRs) or DILIS on G467 2. TOKON on M767 (Manila FIR) <p>ROUTE DESCRIPTION ENDAX .. TOKON or DILIS .. TOKON</p> <p>FLIGHT LEVEL BAND 28000 – 46000 feet</p> <p>PRIORITY: HIGH/MED/LOW (Immediate request with DILIS – TOKON)</p>	<p>CHART</p>
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Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time	a.TOKON-DILIS 45nm/ 5.5in b.TOKON-ENDAX 110nm/14min	
Fuel	a.731kg b. 1788kg	a.266,906kg b.652,440kg
CO ₂	a.2250kg b.5,500kg	a.821,250kg b.2,007 tonnes
No _x		

Remarks this route has already been implemented as domestic route Z902, except that it is not a domestic route. It should be a regional route but has not been entered into the BANP and consultation with Oakland is unclear.

Potential City Pairs: SEA –San Francisco/Los Angeles

Chapter 3: East Asia/Russian Federation

(referred to: Russia/East Asian States, CPWG or EATMCG as appropriate for review)

ATS ROUTES	SIGNIFICANT PTS	COORDINATES	FIR	REMARKS
PHI 1	MIA CAB MEVIN	N1430.5 E12101.3 N1528.9 E12101.5 N2100.0 E12233.0	MANILA MANILA MANILA	
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	
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	
JAP 1	TIC R583 BISIS APITO		FUKUOKA INCHOEN	
RUS 1	SESUR XXXXX KAE	N4217.5 E13041.5 N3838.0 E12924.7 N3742.0 E12845.2	VLADIVOSTO K INCHOEN	
RUS 2	TEKUK XXXXX KAE	N4241.0 E13527.0 N3838.0 E12924.7 N3742.0 E12845.2	VLADIVOSTO K INCHOEN	
RUS 3	BG TELOD XXXXX KAE	N 4353.0 E13315.0 N4219.6 E13211.8 N3838.0 E12924.7 N3742.0 E12845.2	VLADIVOSTO K VLADIVOSTO K INCHOEN	
RUS 4	AVGOK-GTC			
RUS 5	SIBIR – LURED – EKVIK			
CHA13	FENGNING (GM) – DAILAN (DBL)			
RUS 6	NALEB - SIBIR			
RUS 7	DIKUT or SANAR - SAMON			
RUS 8	KANSU -			

	TOMMY			
RUS 9	RITEK- new waypoint 495025N 1182854E - HLD			
RUS 10	TIKUN - URILA - GINUR - GU			
RUS 11	SIMLI - new waypoint 492000N 1270600E - DIKUT			
RUS 12	HRB - 493236N 1281936E - AMERA - WZ			
RUS 13	SIMLI - HEK - 492000N 12706E - LEPNI - 422624.7N 1294454.7E - KANSU			
RUS 14	NEW WAYPOINT - KANSU			
RUS 15	LEPNI 435542N 1285030E - new waypoint 493236N			

ATS ROUTE NAME: PHI 1
REQUESTED BY: IATA

<p>ENTRY/EXIT POINT</p> <p>ROUTE DESCRIPTION Manila (MIA) .. MEVIN or Cabanatuan (CAB) .. MEVIN</p> <p>FLIGHT LEVEL BAND 28000 – 46000 feet</p> <p>PRIORITY: HIGH/MED/LOW</p>	<p>CHART</p>
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Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time	11nm/1.5min	
Fuel	179kg	59,300kg
CO ₂	550kg	200,750kg
No _x		

Remarks: Supports traffic between Manila and Japan/North America.

Potential City Pairs: Philippines-Japan/North America

ATS ROUTE NAME: PHI 3
REQUESTED BY: IATA

<p>ENTRY/EXIT POINT XXXXX</p> <p>ROUTE DESCRIPTION Shikang (TNN) ... XXXXX ... MUMOT</p> <p>FLIGHT LEVEL BAND 29000 - 46000</p> <p>PRIORITY: HIGH/MED/LOW HIGH</p>	<p style="text-align: center;">CHART</p>
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Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time		
Fuel		
CO ₂		
No _x		

Remarks: Supports traffic from TNN to Southeast Asia

Potential City Pairs:

ATS ROUTE NAME: PHI 4
REQUESTED BY: IATA

<p>ENTRY/EXIT POINT XXXXX</p> <p>ROUTE DESCRIPTION AKOTA... XXXXX ... Hengchun (HCN)</p> <p>FLIGHT LEVEL BAND 29000 - 46000</p> <p>PRIORITY: HIGH/MED/LOW HIGH</p>	<p style="text-align: center;">CHART</p>
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Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time		
Fuel		
CO ₂		
No _x		

Remarks: Supports traffic from Southeast Asia to HCN

Potential City Pairs:

ATS ROUTE NAME: TPE 1
REQUESTED BY: IATA

<p>ENTRY/EXIT POINT APU / XXXXX / MIKES</p> <p>ROUTE DESCRIPTION APU - MIKES</p> <p>FLIGHT LEVEL BAND 28000 – 46000 feet</p> <p>PRIORITY: HIGH/MED/LOW</p>	<p style="text-align: center;">CHART</p>
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Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time	40nm/ 5min	
Fuel	650kg	237,000kg
CO ₂	2,000kg	730,000kg
No _x		

Remarks: Supports traffic between APU and Japan.

Potential City Pairs: SEA/HKG/TPE-Fukuoka

ATS ROUTE NAME: CHA 1 (Renumbered from CHA5)

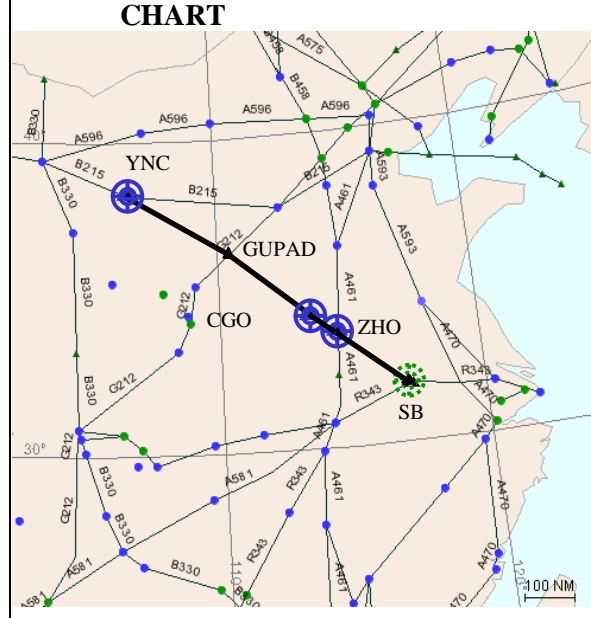
REQUESTED BY: IATA

ENTRY/EXIT POINT

ROUTE DESCRIPTION
 Yinchuan (YNC) .. GUPAD .. Zhengzhou (CGO) .. Zhoukou (ZHO) .. Luogang (SB)

FLIGHT LEVEL BAND
 8400 – 15000 meters

PRIORITY: HIGH/MED/LOW



Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time		
Fuel		
CO ₂		
No _x		

Remarks

Potential City Pairs: Europe-Shanghai

ATS ROUTE NAME: CHA2 (Renumbered from CHA 7)

REQUESTED BY: IATA

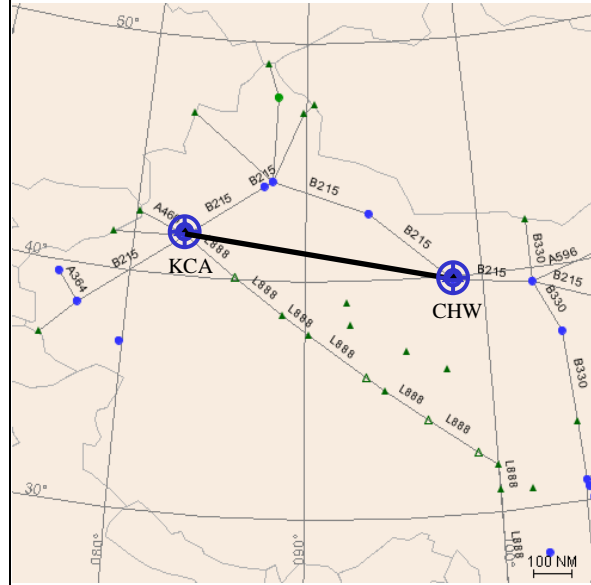
ENTRY/EXIT POINT

ROUTE DESCRIPTION
Kuqa (KCA) .. Jiayuguan (CHW)

FLIGHT LEVEL BAND
8400 – 15000 meters

PRIORITY: HIGH/MED/LOW

CHART



Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time	93nm/ 12min	
Fuel		
CO ₂		
No _x		

Remarks: There are exiting routes between KCA and CHW. Direct route is impossible.

Potential City Pairs: Middle East/Pakistan-China/Korea/Japan

ATS ROUTE NAME: CHA 3 (Renumbered from CHA 9A)

REQUESTED BY: IATA

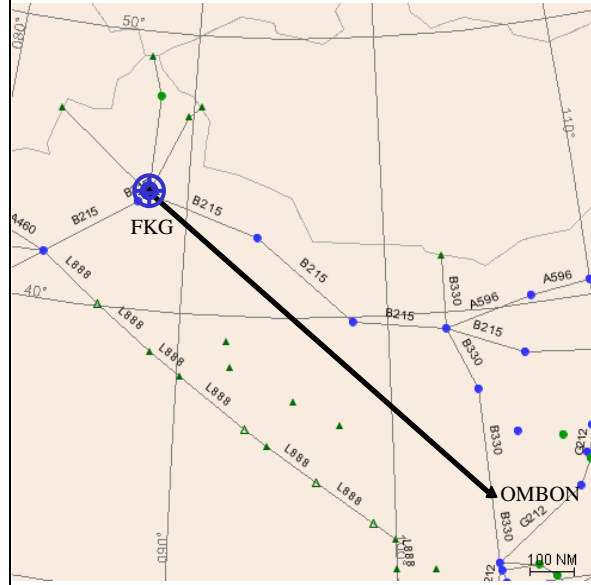
ENTRY/EXIT POINT

ROUTE DESCRIPTION
Fukang (FKG) .. OMBON

FLIGHT LEVEL BAND
8400 – 15000 meters

PRIORITY: HIGH/MED/LOW

CHART



Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time	123nm/ 15.5min	
Fuel	2000kg	730,000kg
CO ₂	6,150kg	2,245 tonnes
No _x		

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

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

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

REQUESTED BY: IATA

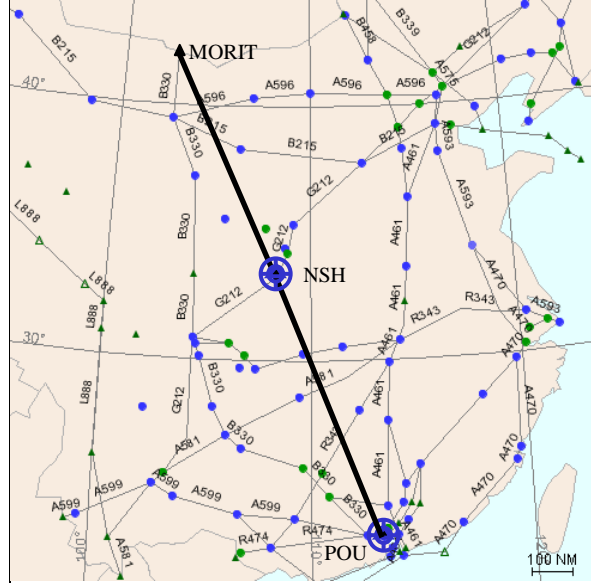
ENTRY/EXIT POINT

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

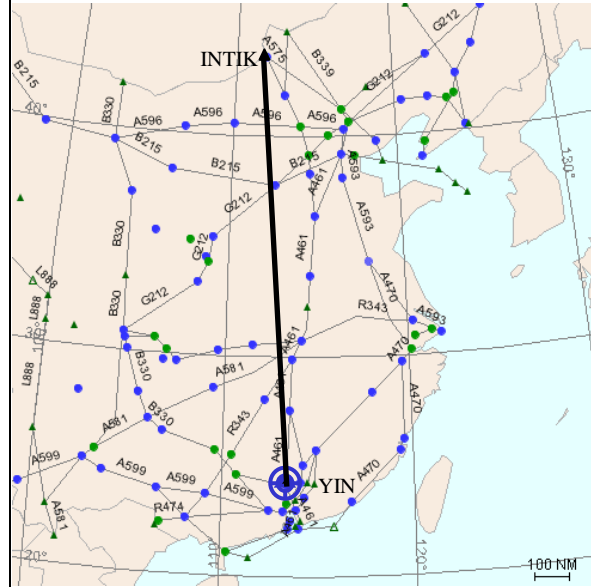
ENTRY/EXIT POINT

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 6 (Renumbered from CHA 14)

REQUESTED BY: IATA

ENTRY/EXIT POINT

ROUTE DESCRIPTION

OMBON .. Ningshan (NSH) .. OBLIK .. Luogang (SB)

FLIGHT LEVEL BAND

8400 – 15000 meters

PRIORITY: HIGH/MED/LOW

CHART



Action Required	IATA
	ICAO

	Per flight	Annual
Saving Mileage / Time		
Fuel		
CO ₂		
No _x		

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

Potential City Pairs: Europe-Shanghai

ATS ROUTE NAME: CHA 7 (Renumbered from CHA 15)

REQUESTED BY:IATA

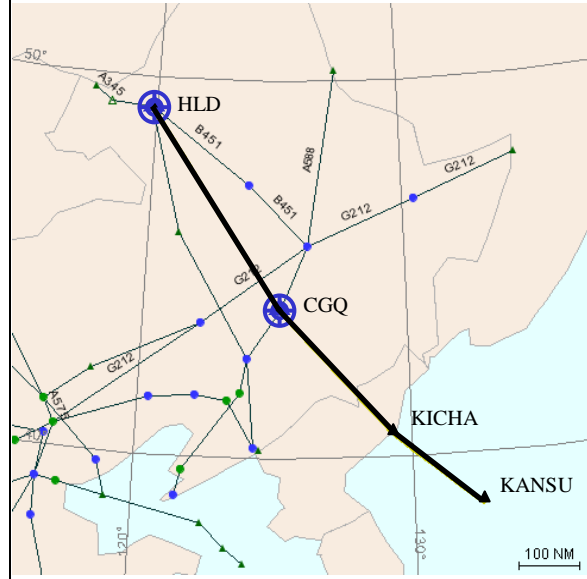
ENTRY/EXIT POINT
KANSU/XXXXX

ROUTE DESCRIPTION
KANSU .. KICHA .. Changchun (CGQ) ..
Hailar (HLD)

FLIGHT LEVEL BAND
8400 – 15000 meters

PRIORITY: HIGH/MED/LOW

CHART



Action Required	IATA
	ICAO

	Per flight	Annual
Saving		
Mileage / Time		
Fuel		
CO ₂		
No _x		

Remarks

Potential City Pairs: Europe-Korea /Japan

ATS ROUTE NAME: CHA 8 (Renumbered from CHA 16)

REQUESTED BY: IATA

ENTRY/EXIT POINT

ROUTE DESCRIPTION

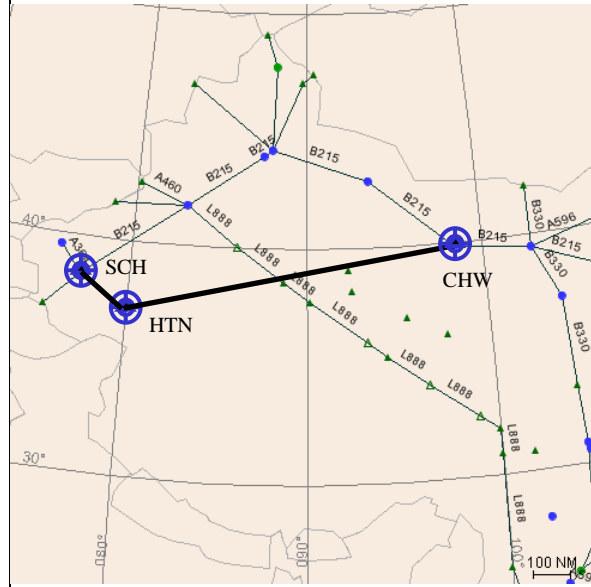
Shache (SCH) .. Hotan (HTN) .. Jiayuguan (CHW)

FLIGHT LEVEL BAND

8400 – 15000 meters

PRIORITY: HIGH/MED/LOW

CHART



Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time	69nm/9min	
Fuel	1121kg	409,000kg
CO ₂	3,450 kg	1,260 tonnes
No _x		

Remarks: Direct route between HTN and CHW is impossible and can not be implemented at present.

Potential City Pairs: Middle East /Pakistan-China/Korea/Japan

ATS ROUTE NAME: CHA 9 (Renumbered from CHA 17)

REQUESTED BY: IATA

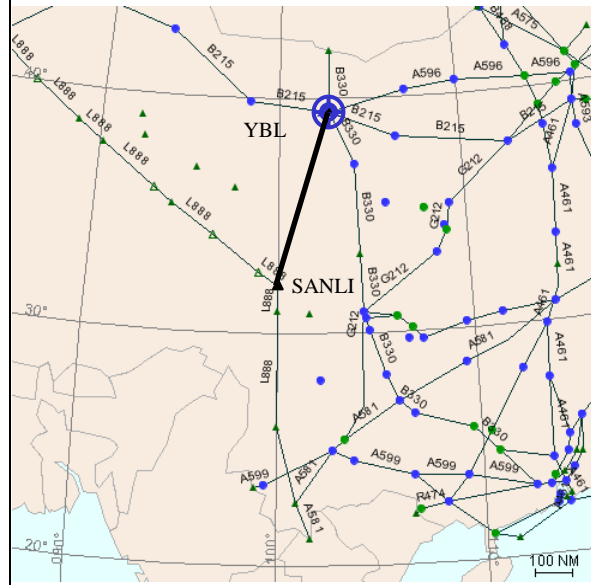
ENTRY/EXIT POINT

ROUTE DESCRIPTION
Yabrai (YBL) .. SANLI

FLIGHT LEVEL BAND
8400 – 15000 meters

PRIORITY: HIGH/MED/LOW

CHART



Action Required	IATA.
	ICAO

Saving	Per flight	Annual
Mileage / Time	48nm/ 6min	
Fuel	780kg	284,000kg
CO ₂	2,400kg	876,000kg
No _x		

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

Potential City Pairs: North America-SE Asia

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

REQUESTED BY: IATA

<p>ENTRY/EXIT POINT</p> <p>ARGUK/BEMAG</p> <p>ROUTE DESCRIPTION</p> <p>ARGUK/DALIAN/HEFEI/BEMAG</p> <p>FLIGHT LEVEL BAND</p> <p>8400-15000 metres</p> <p>PRIORITY: HIGH/MED/LOW</p> <p>HIGH</p>	<p style="text-align: center;">CHART</p>
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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 11 (Renumbered from CHA19 formerly SE2 in CTF/2000)

REQUESTED BY:IATA

ENTRY/EXIT POINT

DALIAN/(DLC) to XJT/B221

ROUTE DESCRIPTION

DALIAN/ XJT /B221

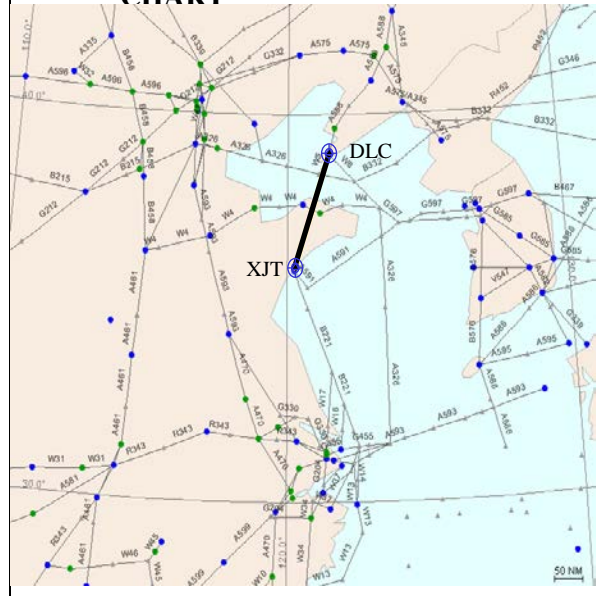
FLIGHT LEVEL BAND

8400-15000 metres

PRIORITY: HIGH/MED/LOW

HIGH

CHART



Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time		
Fuel		
CO ₂		
No _x		

Remarks: There are existing routes between DLC and XJT. Direct route is impossible.

Potential City Pairs: North America-Shanghai

ATS ROUTE NAME: CHA 12

Requested by : IATA

ENTRY/EXIT POINT

UNWW to WXI

ROUTE DESCRIPTION

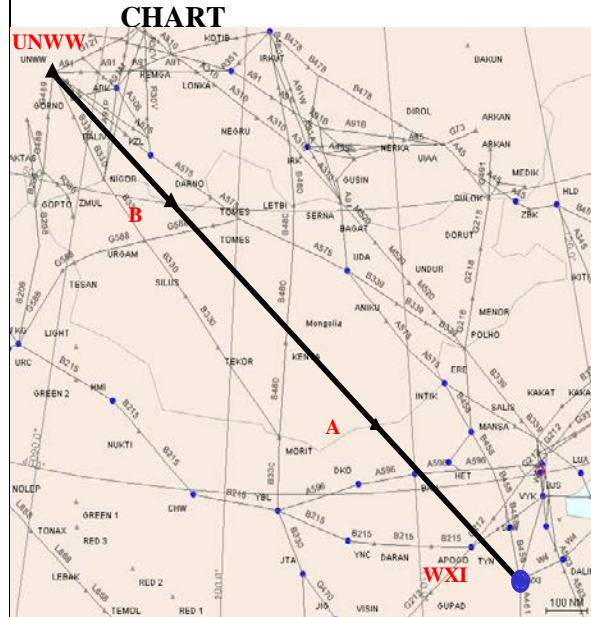
Weixian (WXI) .. A (ZBPE/ZMUB) .. B (ZMUB/UNKY) .. Novokuznetsk (UNWW)

Uni-directional

FLIGHT LEVEL BAND

28000 – 46000 feet

PRIORITY: HIGH/MED/LOW



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: IATA 2
REQUESTED BY: IATA

<p>ENTRY/EXIT POINT</p> <p>ROUTE DESCRIPTION</p> <p>FLIGHT LEVEL BAND 8400 – 15000 meters</p> <p>PRIORITY: HIGH/MED/LOW</p>	<p style="text-align: center;">CHART</p>
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Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time		
Fuel		
CO ₂		
No _x		

Remarks: There are existing routes between OMBON and RO. Direct route is impossible at present.

Potential City Pairs: Europe –Pearl River Delta Airports

ATS ROUTE NAME: IATA 3
REQUESTED BY: IATA

<p>ENTRY/EXIT POINT</p> <p>ROUTE DESCRIPTION</p> <p>FLIGHT LEVEL BAND 8400 – 15000 meters</p> <p>PRIORITY: HIGH/MED/LOW</p>	<p style="text-align: center;">CHART</p>
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Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time		
Fuel		
CO ₂		
No _x		

Remarks: There are existing routes between OMBON and SB; direct route is impossible at present.

Potential City Pairs: Europe-Shanghai

ATS ROUTE NAME: JAP 1
REQUESTED BY: IATA

Date: 25 June 2012

(ATM/AIS/SAR/SG-22)

ENTRY/EXIT POINT
 TIC - APITO

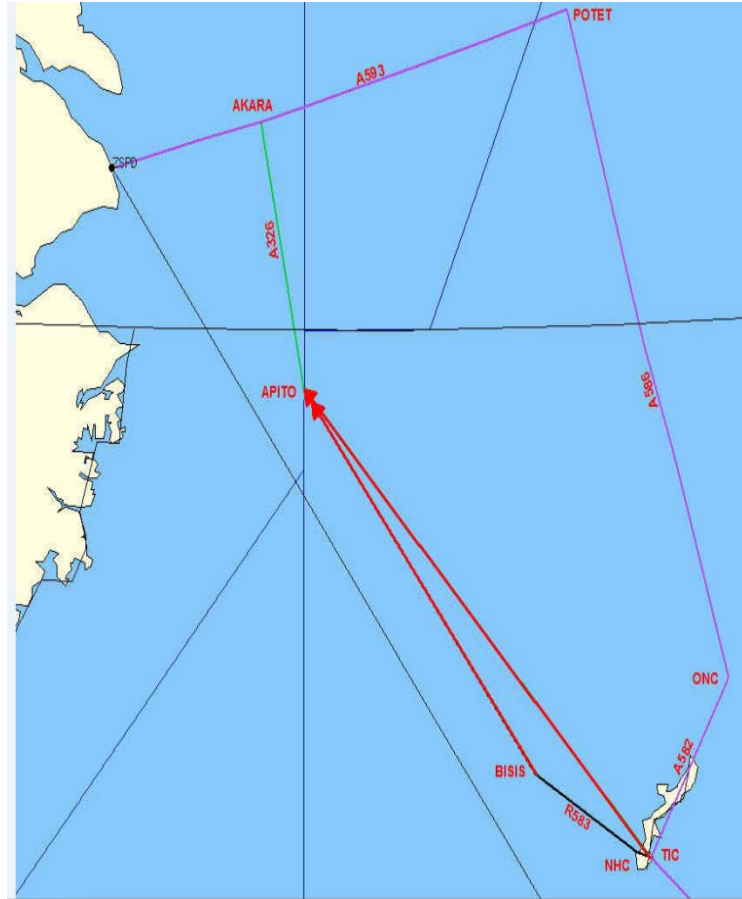
ROUTE DESCRIPTION
 PIC - APITO

Alternative:
 TIC – R583- BASIS – APITO

FLIGHT LEVEL BAND

PRIORITY:

CHART



Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time	19 mins/19 mins	
Fuel	3094kg/3021kg	kg
CO ₂	9591kg/9365	kg
No _x		

ATS ROUTE NAME: RUS 1

Requested by : IATA

ENTRY/EXIT POINT
XXXXX

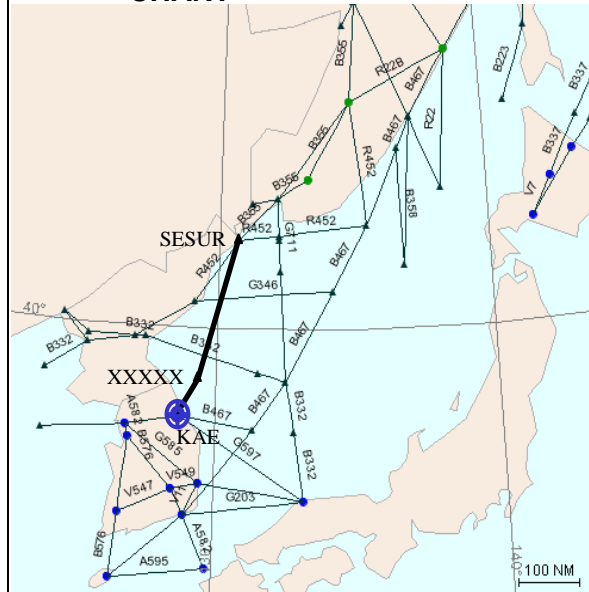
ROUTE DESCRIPTION
SESUR .. XXXXX .. Gangwon (KAE)

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

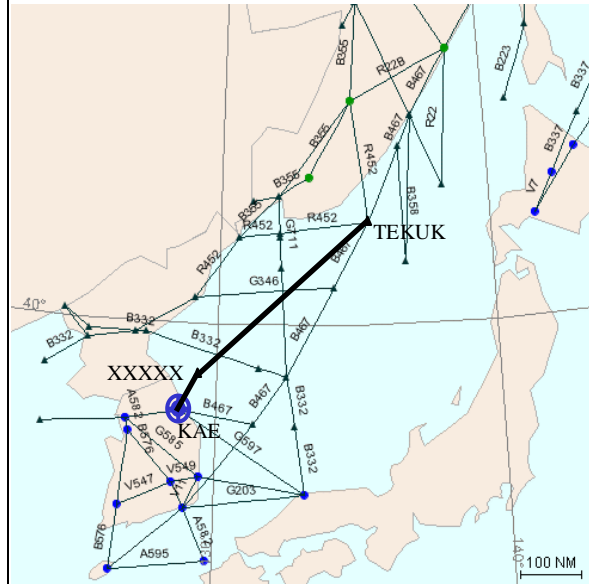
ROUTE DESCRIPTION
TEKUK .. XXXXX .. Gangwon (KAE)

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

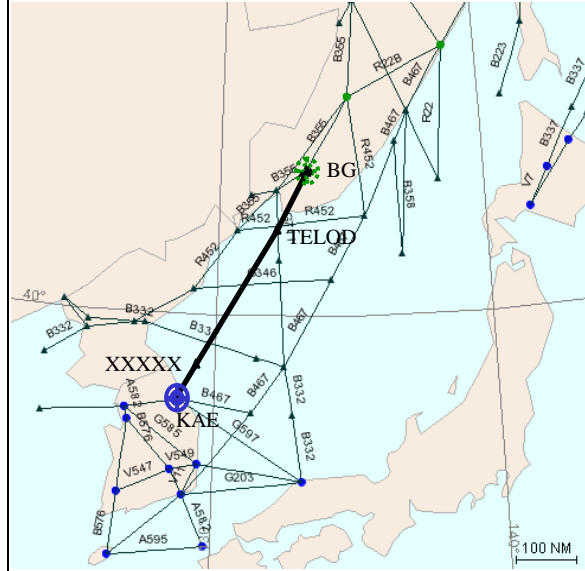
ROUTE DESCRIPTION
Muraveyka (BG) .. TELOD .. XXXXX ..
Gangwon (KAE)

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 4
REQUESTED BY: IATA

<p>ENTRY/EXIT POINT</p> <p>ROUTE DESCRIPTION</p> <p>AVGOK-GTC</p> <p>FLIGHT LEVEL BAND</p> <p>PRIORITY:</p> <p>States concerned</p> <p>JAPAN RUSSIAN FEDERATION</p>	<p>CHART</p>
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Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time		
Fuel		
CO ₂		
No _x		

Russian Federation: Further discussion with Japan required through the ICAO APAC Office.

Objective:
To reduce route distance of 13 NM as compared to current routing AVGOK-KADBO-RJSN.

ATS ROUTE NAME: *RUS 5*
REQUESTED BY: IATA /RUSSIA

ENTRY/EXIT POINT

ROUTE DESCRIPTION
 bidirectional ATS route **SIBIR**
 – **LURED** – **EKVIK**.

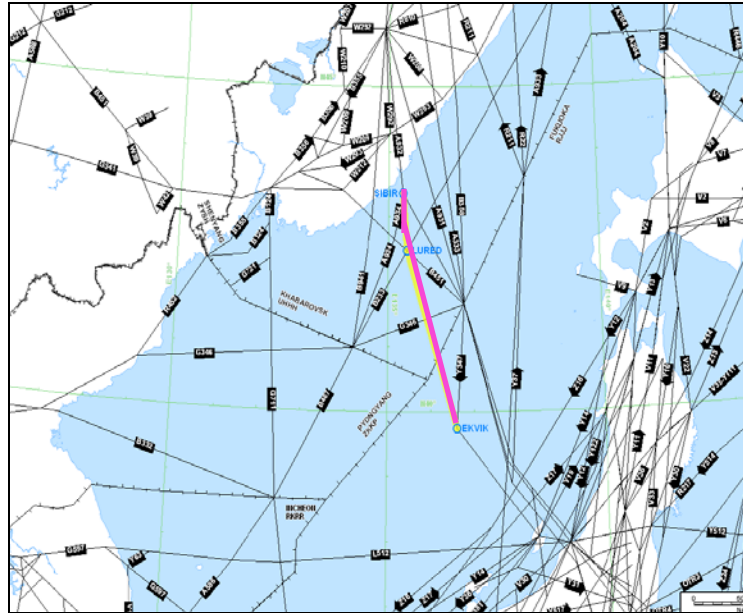
FLIGHT LEVEL BAND

PRIORITY:

States concerned

JAPAN
 RUSSIAN FEDERATION

CHART



Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time		
Fuel		
CO ₂		
No _x		

*Russian Federation: New waypoint needed 404751N1361021E (FIR Boundary), coordination with Japan (Fukuoka FIR) required.
 Alternative bi-directional route to EN15. Implementation planned for 2Q 2013.*

Objective:

To improve north-south traffic flows between Khabarovsk FIR and Fukuoka FIR.

ATS ROUTE NAME: CHA13
REQUESTED BY: IATA

<p>ENTRY/EXIT POINT</p> <p>ROUTE DESCRIPTION FLIGHT LEVEL BAND GM - DBL. PRIORITY:</p> <p>States concerned</p> <p>CHINA</p>	<p>CHART</p>
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Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time		
Fuel		
CO ₂		
No _x		

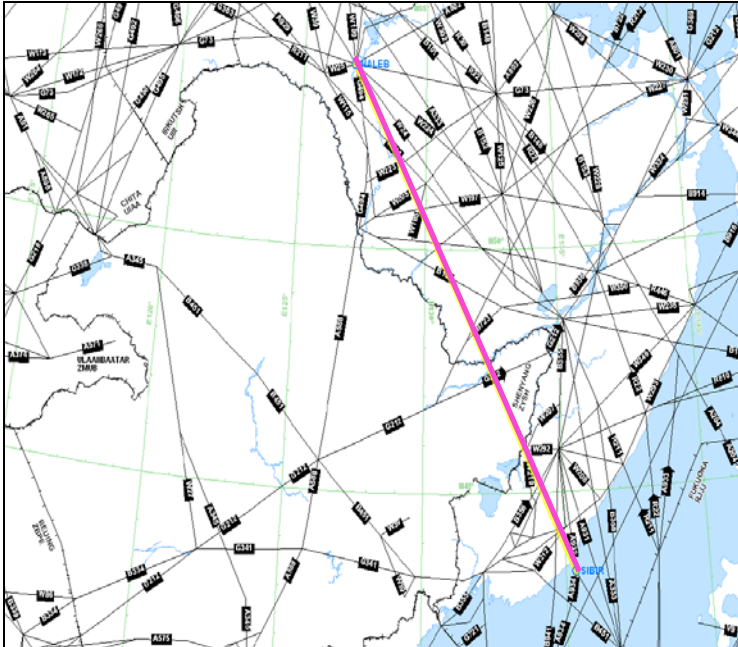
Part of IATA EUR-North Asia package - #EN13.

China: Further discussions required via ICAO APAC Office.

Objective:

To reduce route distance of 67 NM as compared to current routing GM-LADIX-MAKNO.

ATS ROUTE NAME: RUS 6
REQUESTED BY: IATA

ENTRY/EXIT POINT	CHART
<p>ROUTE DESCRIPTION FLIGHT LEVEL BAND NALEB - SIBIR. PRIORITY:</p> <p>States concerned</p> <p>CHINA RUSSIAN FEDERATION</p>	

Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time		
Fuel		
CO ₂		
No _x		

Part of IATA EUR-North Asia package - #EN6.

Objective:

To reduce route distance of 63 NM as compared to current routing LALIR-SOVIK-HAB-TD-SIBIR.

ATS ROUTE NAME: *RUS 7*
REQUESTED BY: IATA

<p>ENTRY/EXIT POINT</p> <p>ROUTE DESCRIPTION ATS route segment DIKUT or SANAR - SAMON.</p> <p>FLIGHT LEVEL BAND</p> <p>PRIORITY:</p> <p>States concerned</p> <p>JAPAN RUSSIAN FEDERATION DEM. PEOPLE'S REP. OF KOREA</p>	<p>CHART</p>
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Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time		
Fuel		
CO ₂		
No _x		

Part of IATA EUR-North Asia package - #EN9.

Russian Federation: Further discussion/studies required. Difficult to implement.

Objective:

To reduce route distance of 160 NM as compared to current routing DIKUT-KANSU-JEC.

ATS ROUTE NAME: RUS 8
REQUESTED BY: IATA

<p>ENTRY/EXIT POINT</p> <p>ROUTE DESCRIPTION KANSU - TOMMY.</p> <p>FLIGHT LEVEL BAND</p> <p>PRIORITY:</p> <p>States concerned</p> <p>KOREA JAPAN</p>	<p>CHART</p>
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Action Required	IATA
	ICAO

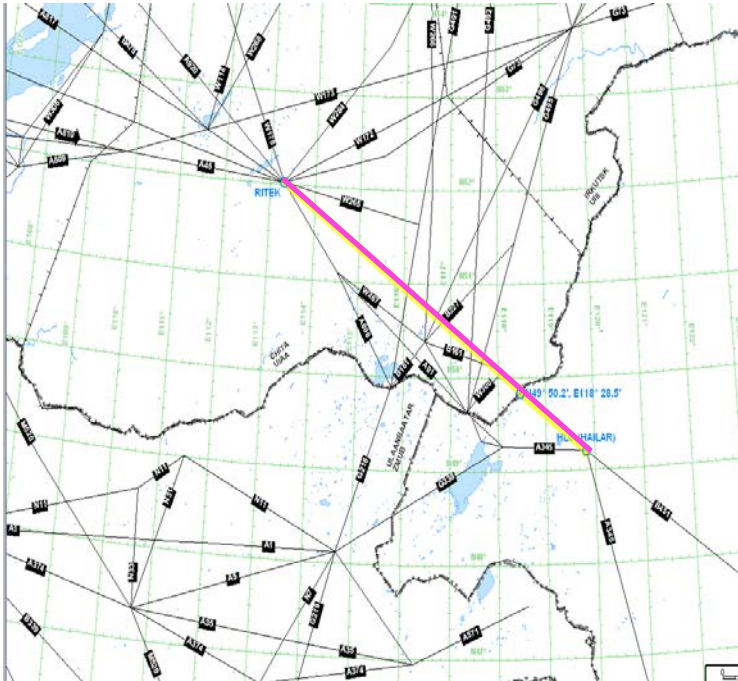
Saving	Per flight	Annual
Mileage / Time		
Fuel		
CO ₂		
No _x		

Part of IATA EUR-North Asia package - #EN14.

China: Further discussion between China and Korea also required via ICAO APAC Office.

Objective:
 To reduce route distance of 64 NM as compared to current routing KANSU-IGRAS-TOMMY.

ATS ROUTE NAME: RUS 9
REQUESTED BY: IATA/RUSSIA

ENTRY/EXIT POINT	CHART
<p>ROUTE DESCRIPTION</p> <p>RITEK- new waypoint 495025N 1182854E - HLD</p> <p>FLIGHT LEVEL BAND</p> <p>PRIORITY:</p> <p>States concerned</p> <p>CHINA RUSSIAN FEDERATION</p>	

Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time		
Fuel		
CO ₂		
No _x		

Further studies/coordination required. Updates will be given when available.

Alternative uni-directional eastbound route proposal for EN11, proposal 13.035 (deleted from catalogue).

Objective:

To reduce route distance of 159 NM as compared to current routing PTG-RITEK-HLD-DIKUT-KANSU

ATS ROUTE NAME: RUS 10
REQUESTED BY: IATA/RUSSIA

ENTRY/EXIT POINT	CHART
ROUTE DESCRIPTION	
TIKUN - URILA - GINUR - GU.	
FLIGHT LEVEL BAND	
PRIORITY:	
States concerned CHINA RUSSIAN FEDERATION	

Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time		
Fuel		
CO ₂		
No _x		

Part of IATA EUR-North Asia package - #EN10.

China: Proposal can partly be withdrawn due to lack of CNS capabilities for the segment URILA-492000N1270600E. Alternative proposal made.

Russian Federation: Further studies/discussion required.

Objective:

To reduce route distance of 150 NM as compared to current routing TIKUN-IVADA-TD-DIKUT.

ATS ROUTE NAME: *RUS 11*
REQUESTED BY: IATA/RUSSIA

<p>ENTRY/EXIT POINT</p> <p>ROUTE DESCRIPTION SIMLI - new waypoint 492000N 1270600E - DIKUT.</p> <p>FLIGHT LEVEL BAND</p> <p>PRIORITY:</p> <p>States concerned</p> <p>CHINA RUSSIAN FEDERATION</p>	<p style="text-align: center;">CHART</p>
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Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time		
Fuel		
CO ₂		
No _x		

Further studies/coordination required. Updates will be given when available.

Objective:
 To reduce route distance of 150 NM as compared to current routing TIKUN-IVADA-TD-DIKUT.

ATS ROUTE NAME: *RUS 12*
REQUESTED BY: IATA/RUSSIA

<p>ENTRY/EXIT POINT</p> <p>ROUTE DESCRIPTION</p> <p>Unidirectional Westbound route HRB - 493236N 1281936E - AMERA – WZ</p> <p>FLIGHT LEVEL BAND</p> <p>PRIORITY:</p> <p>States concerned</p> <p>CHINA DEM. PEOPLE’S REP. OF KOREA RUSSIAN FEDERATION</p>	<p style="text-align: center;">CHART</p>
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Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time		
Fuel		
CO ₂		
No _x		

Russian Federation: westbound ATS route is needed for unloading traffic from SIMLI

ATS ROUTE NAME: *RUS 13*
REQUESTED BY: IATA/RUSSIA

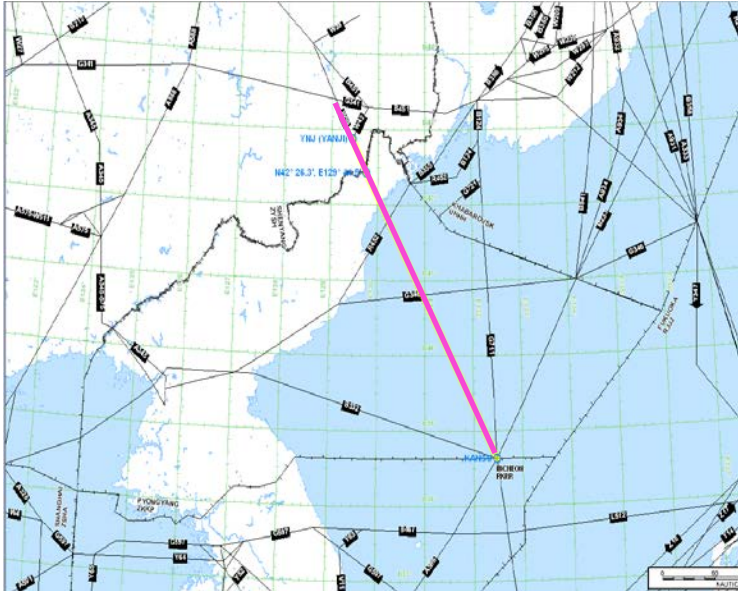
<p>ENTRY/EXIT POINT</p> <p>ROUTE DESCRIPTION</p> <p>unidirectional Eastbound route SIMLI - HEK - 492000N 12706E - LEPNI - 422624.7N 1294454.7E - KANSU</p> <p>FLIGHT LEVEL BAND</p> <p>PRIORITY:</p> <p>States concerned</p> <p>CHINA DEM. PEOPLE'S REP. OF KOREA RUSSIAN FEDERATION</p>	<p>CHART</p>
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Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time		
Fuel		
CO ₂		
No _x		

*Russian Federation: eastbound ATS route is needed for unloading traffic from SIMLI.
 China: Confirmation of interest in this ATS route but further studies/coordination are needed, updates will be given when available.*

ATS ROUTE NAME: *RUS 14*
REQUESTED BY: IATA/RUSSIA

<p>ENTRY/EXIT POINT</p> <p>ROUTE DESCRIPTION</p> <p>FLIGHT LEVEL BAND</p> <p>PRIORITY:</p> <p>States concerned CHINA DEM. PEOPLE'S REP. OF KOREA RUSSIAN FEDERATION</p>	<p>CHART</p> 
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Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time		
Fuel		
CO ₂		
No _x		

Alternative bi-directional route

Objective:

To reduce route distance of 159 NM as compared to current routing PTG-RITEK-HLD-DIKUT-KANSU.

ATS ROUTE NAME: *RUS 15*
REQUESTED BY: IATA/RUSSIA

<p>ENTRY/EXIT POINT</p> <p>ROUTE DESCRIPTION Westbound ATS route LEPNI 435542N 1285030E - new waypoint 493236N</p> <p>FLIGHT LEVEL BAND</p> <p>PRIORITY:</p> <p>States concerned</p> <p>CHINA RUSSIAN FEDERATION</p>	<p style="text-align: center;">CHART</p>
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Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time		
Fuel		
CO ₂		
No _x		

Further studies/coordination required. Updates will be given

Chapter 4: Pacific

(referred to: IPACG, ISPACG as appropriate for review)

ATS ROUTES	SIGNIFICANT PTS	COORDINATES	FIR	REMARKS
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	
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	Moved from Chapter 4. Route Requested by Tahiti

ATS ROUTE NAME: WPC 1

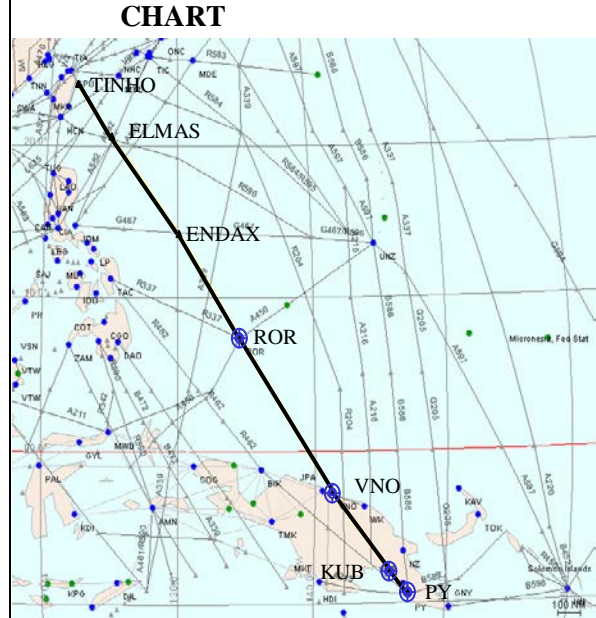
Requested by : IATA

ENTRY/EXIT POINT
PY-TINHO

ROUTE DESCRIPTION
Port Moresby (PY) Vanimo (VNO) ..
Koror (ROR) .. ENDAX .. ELMAS ..
TINHO

FLIGHT LEVEL BAND
28000 – 46000 feet

PRIORITY: HIGH/MED/LOW
HIGH



Action Required	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time	160 nm/20min	
Fuel	2600kg	949,000kg
CO ₂	8000kg	2,920 tonnes
No _x		

Remarks

Potential City Pairs: Auckland-Taipei.

Remarks Potential City Pairs: NZAA - ZSPD, YSSY - ZSPD

ATS ROUTE NAME: R582

Requested by : Tahiti

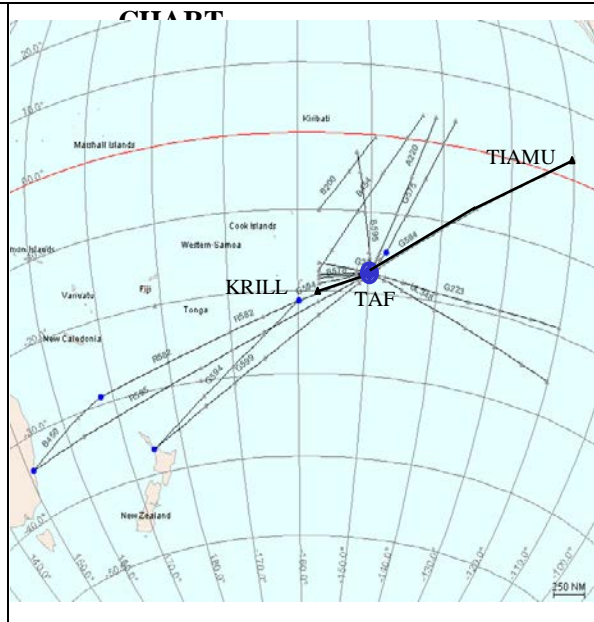
ENTRY/EXIT POINT

ROUTE DESCRIPTION

Decommissioned G594 and realigned R582 as KRILL .. MAITO .. Tahiti (TAF) .. PAERE .. TOLAB .. TAMUR .. TIERE.. TARAO .. TUNBA .. TIAMU

FLIGHT LEVEL BAND

PRIORITY: HIGH/MED/LOW



Action Required	States to coordinate implementation. ICAO to circulate proposal for deletion from BANP.
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Benefit		
Cost		
Fuel Saving		
Emission	CO ₂	
	NO _x	

Remarks: