ASIA/PACIFIC REGION ATS ROUTE CATALOGUE

INTERNATIONAL CIVIL AVIATION ORGANIZATION

ASIA/PACIFIC REGIONAL OFFICE

VERSION 17.0

September 2018

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Foreword

1.1 The *Air Navigation Plan – Asia and Pacific Regions* (Doc 9673) has been superceded, in electronic form by the electronic Air Navigation Plan (eANP), which contains a table of regional ATS routes in Volume II (*Table ATM II- APAC- 1 – Asia and Pacific Regions ATS Routes*).

1.2 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 to determine present and future route requirements. 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 Region ATS Route Catalogue.

1.3 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 ATS Route Catalogue under Decision 16/9. The ATS Route Catalogue is intended to be a living document, supplementing the BANP and maintained by the ICAO Asia and Pacific (APAC) Regional Sub-Office on behalf of the ICAO Asia and Pacific Office. Communication related to the ATS Route Catalogue should be made via email to apac-rso@icao.int.

1.4 A Contracting State or qualifying International Organization identifying a need for a new route requirement to be included in the eANP or to change an existing route contained in the eANP, may submit an amendment proposal to the ICAO APAC Regional Office in accordance with established procedures summarized below and the template provided on the ICAO APAC website.

1.5 Appropriately presented and documented proposals to amend the eANP are submitted to the ICAO Secretary General through the Regional Office and circulated to States and International Organizations for comment. If, in reply to the ICAO Regional Office's inquiry, no objection is raised to the proposal by a specified date, it will be deemed that a regional agreement (involving the relevant PIRG) on the subject has been reached. The Regional Office will inform States and International Organizations concerned of the approval and the eANP will be amended accordingly.

1.6 If, in reply to the ICAO Regional Office's inquiry, any objection is raised, and if objection remains after further consultation, the matter will be documented for discussion by APANPIRG and, ultimately for formal consideration by the Air Navigation Commission, if it remains unresolved. If the Commission concludes that the amendment is acceptable in its original or other form, it will present appropriate recommendations to the Council.

1.7 The APAC Regional Sub-Office, which is responsible for maintaining the ATS Route Catalogue, will update the ATS 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. The Asia/Pacific Region ATS Route Catalogue is posted on the ICAO APAC website at (https://www.icao.int/APAC/Pages/default.aspx).

1.8 The Asia/Pacific Region ATS Route Catalogue is now as follows: Chapter 1, 2, 3, 4 and 5: Future Requirements – Users & States.

1.9 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 ATS 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.

1.10 The Asia/Pacific Region ATS Route Catalogue contained proposals for route changes that had not yet been agreed and implemented.

1.11 States in APAC were required to reclassify the routes as:

- Priority A – Short Term i.e. it could be implemented within 12 months;
- Priority B – Medium Term i.e it could be implemented within 13 to 36 months;
- Priority C – Long term i.e more than 36 months; and
- Priority D - Cannot be implemented (reasons to be provided).

As some States were not represented, these routes were classified as Priority C and will be updated when more information becomes available.

1.12 IATA has also prioritised the routes in terms of efficiency and environmental benefits as:

- HIGH – one of top priorites for airlines; or
- MEDIUM – has significant benefits but can wait until high priority proposals are implemented; or
- LOW – the route proposal may be deleted if the State cannot implement within 36 months.

1.13 After review, the Asia/Pacific Region ATS Route Catalogue may be updated by:

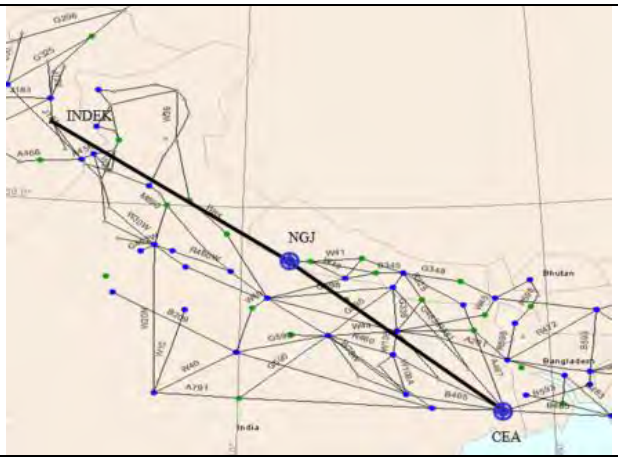
- deletion of the proposal when the proposal has been agreed and entered into the eANP; or
- deletion of the proposal when it has been decided that there is no possibility of implementation in the foreseeable future (i.e.: the proposal has had no progress in the past five years, or it is a Priority C or D and is assigned a LOW priority by IATA); or
- amendment with the addition of supplementary information; or
- addition of a new ATS route proposal.

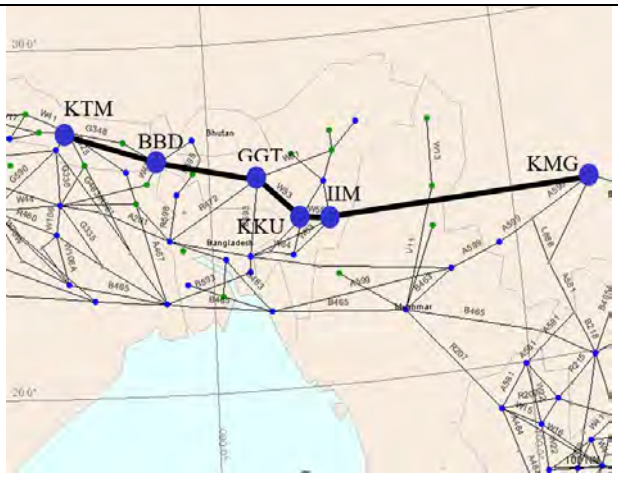
Amendment Record

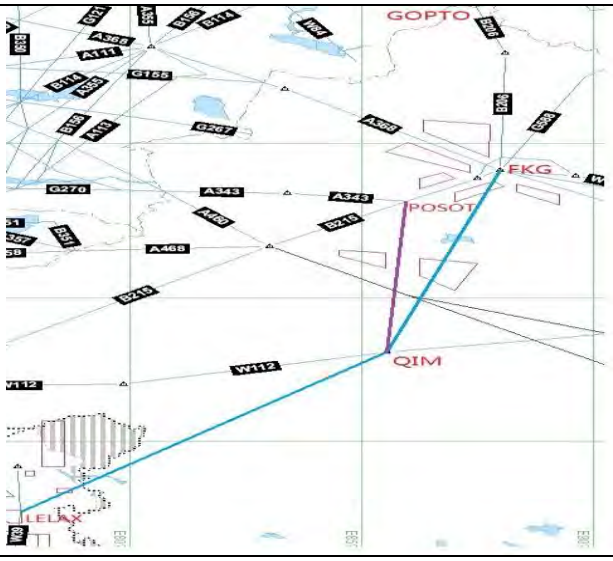
Version	Date	Amended by	Comments
0.1	14 February 2005	-	ARNR/TF/2 developed draft version.
0.2	5 May 2005	ARNR/TF/3	Finalized format following contribution from members.
0.3	29 July 2005	ATM/AIS/SAR/SG/15	Sub-Group concluded the Catalogue be adopted (Draft Conclusion 15/3).
1	26 August 2005	APANPIRG/16	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	11 September 2014	SAIOACG/SEACG, ATM/SG APANPIRG/25	Reviewed subsequent to Easter Island being transferred out of the Region; added trans-regional proposals
14	September 2015	SAIOACG/SEACG, ATM/SG APANPIRG/26	Removal of Chapter A (BANP routes)
15	September 2016	SAIOACG/SEACG, ATM/SG APANPIRG/27	Reviewed and updated the Catalogue.
16	August 2017	SAIOACG/SEACG, ATM/SG	Reviewed and updated the catalogue
17	September 2018	SAIOACG/SEACG, ATM/SG	Reviewed and updated the catalogue, incorporated IATA inputs, added State and IATA priority label

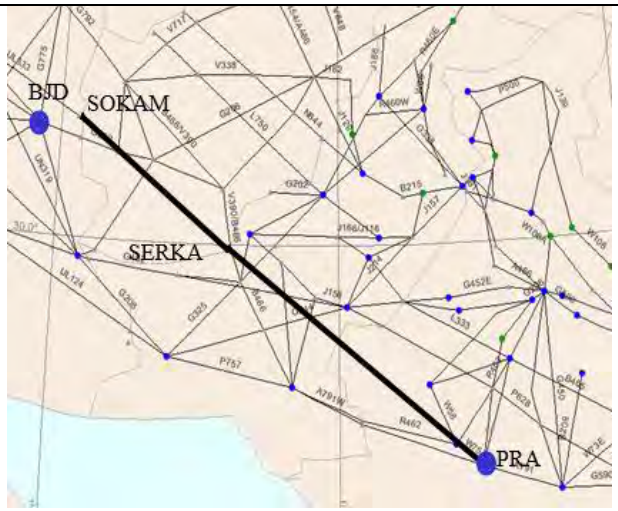
Chapter 1: South Asia

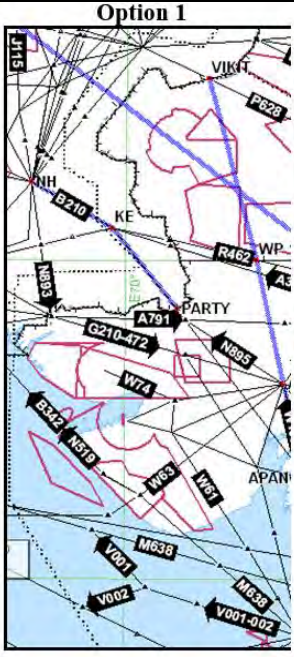
(referred to: SAIOACG, BOBASIO, ASIOACG as appropriate for review)

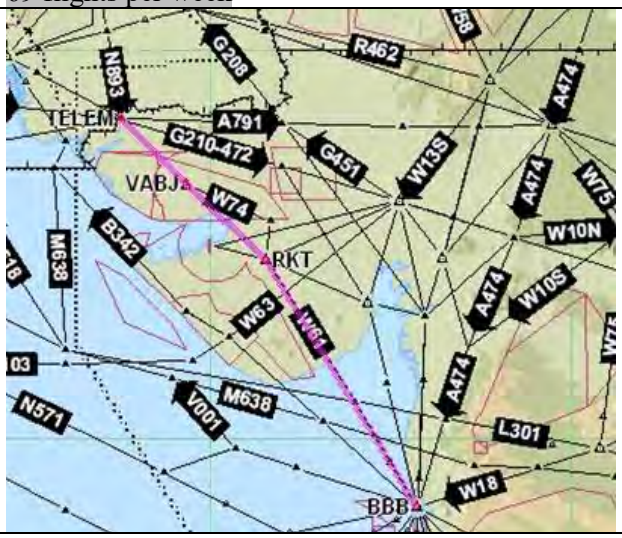
ATS Route Name	**HIMALAYA 01**
State Priority	C
IATA Priority	LOW
Requested by (when)	Nepal (01/09/2018)
States/Administrations Involved	India, Nepal, Pakistan (Kolkata, Delhi, Kathmandu, Lahore FIRs)
Route Description	Kolkata (CEA) 2238.7N 08827.2E – Nepalgunj (NGJ) 2806.1N 08139.1E – INDEK 3246.0N 7316.0E
Flight Level Band	
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency)	
Remarks: 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.	

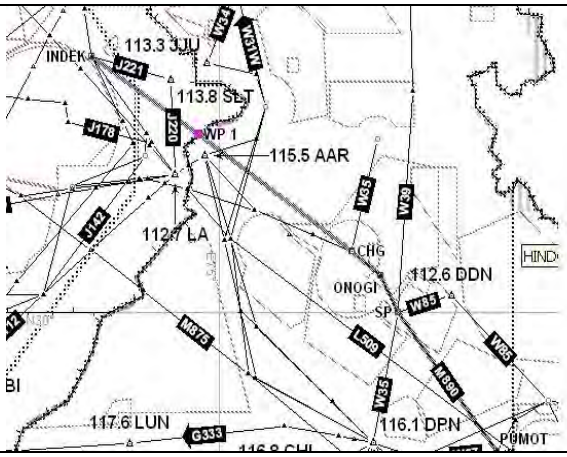
ATS Route Name	**HIMALAYA 02**
State Priority	**D**
IATA Priority	**LOW**
Requested by (when)	Nepal (01/09/2018)
States/Administrations Involved	Nepal, India, Myanmar, China (Kathmandu, Kolkata, Yangon, Kunming FIRs)
Route Description	Kathmandu (KTM) 2740.5N 08521.0E – Baghdogra (BBD) 2641.3N 08819.8E – Guwahati (GGT) 2606.1N 09135.3E – Silchar (KKU) 2454.8N 09258.9E – Imphal (IIM) 2446.0N 09354.5E – Kunming (KMG) 2501N 10244E
Flight Level Band	
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency)	
Remarks: The route has been implemented except for Imphal to Kunming which China had undertaken to review (as per current remarks). IATA North Asia Office approached China who have indicated this route will be considered as part of the overall China route review - no timeline was given. China advised that they would seriously look at the proposal and would coordinate with Nepal (ref. para 8.4 of the SEA-RR/TF/4 report). This was also presented at the 22nd Meeting of the BBACG. Myanmar unable to accept 28/4/17.	

ATS Route Name	**HIMALAYA 03**
State Priority	C
IATA Priority	MEDIUM
Requested by (when)	IATA (10/01/2013)
States/Administrations Involved	India, China (Delhi, Urumqi FIRs)
Route Description	LELAX 3223.5N 07737.9E – Qiemo (QIM) 3809.1N 08532.2E – Fukang (FKG) 4410.0N 08759.0E or LELAX 3223.5N 07737.9E – Qiemo (QIM) 3809.1N 08532.2E – POSOT 4311.0N 08558.4E – Fukang (FKG) 4410.0N 08759.0E
Flight Level Band	
Benefit (fuel, environmental)	257 NM / 23 minutes, 3500 kg fuel, 11,000 kg CO_2 per flight, 1,265 tonnes fuel, 4,000 tonnes CO_2 annually
Operational Information (potential airlines, flight frequency)	
Remarks: Direct to QIM over the Himalaya to support a new route from India into China connecting to Russia onwards polar / trans polar gateways connecting to FKG – TAI – GOPTO – LANBI. 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	**IND 07 (N877 Extension)**
State Priority	**D**
IATA Priority	**MEDIUM**
Requested by (when)	IATA (01/09/2018)
States/Administrations Involved	India, Pakistan, Afghanistan (Mumbai, Delhi, Karachi, Kabul FIRs)
Route Description	Pratagarh (PRA) 2401.8N 07445.0E – SERKA 2951.0N 06615.0E – SOKAM 3313.3N 06037.9E
Flight Level Band	28,000 - 46,000 ft
Benefit (fuel, environmental)	~~294 NM/ 37 minutes, 4777kg fuel, 147,000kg CO_2 per flight, 1,743 tonnes fuel, 5,365 tonnes CO_2 annually~~ 51 NM / 7 minutes, 835 kg fuel, 2,630 kg CO_2 per flight, 3,387 tonnes fuel, 10,668 tonnes CO_2 annually
Operational Information (potential airlines, flight frequency)	LH, KL
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 45 NM '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. Extension completed SERKA to SOKAM Potential City Pairs: KUL/SIN – MID – EAST/EUROPE.	

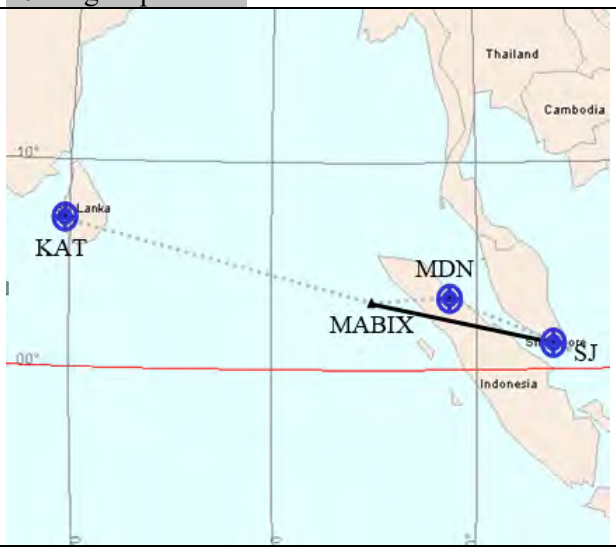
ATS Route Name	**IND 08**
State Priority	C
IATA Priority	MEDIUM
Requested by (when)	IATA, (25/06/2012: ATM/AIS/SAR/SG-22)
States/Administrations Involved	Pakistan, India (Mumbai, Karachi FIRs)
Route Description	Mumbai (BBB) – APANO – Ahmedabad (AAE) – VIKIT – MURLI – BINDO <u>India Portion:</u> Option 1: Mumbai (BBB) 1905.2N 07252.5E – APANO 2135.0N 07259.0E – W13N – Ahmedabad (AAE) 2304.1N 07237.7E – New Waypoint 1 (FIR BDRY between Mumbai and Delhi) – VIKIT 2752.2N 07125.5E Option 2: Mumbai (BBB) 1905.2N 07252.5E – APANO 2135.0N 07259.0E – W13N – Ahmedabad (AAE) 2304.1N 07237.7E – New Waypoint 1 (FIR BDRY between Mumbai and Delhi) – New Waypoint 2 (10 NM clearance from POKHARAN{VI(D)123}) – VIKIT 2752.2N 07125.5E <u>Pakistan Portion:</u> VIKIT 2752.2N 07125.5E – MURLI 2917.7N 07125.4E – BINDO 2940.8N 07101.9E then via existing route network.
Flight Level Band	
Benefit (fuel, environmental)	Options 1: 67 NM / 10 minutes, 700 kg fuel, 2,205 kg CO_2 per flight, 72,800 kg fuel, 229,330 kg CO_2 annually; Option 2: 101 NM / 13 minutes, 1,132 kg fuel, 3,510 kg CO_2 per flight Note: Savings based on HEL – GOI city pair.
Operational Information (potential airlines, flight frequency)	
Remarks: Initial request time specific (1600 – 2359) to support late night operations to North America. MURLI and BINDO is now connected via L750. Potential City Pairs: Mumbai – North American cities. **Pakistan portion** 	**Option 1**  **Option 2** 

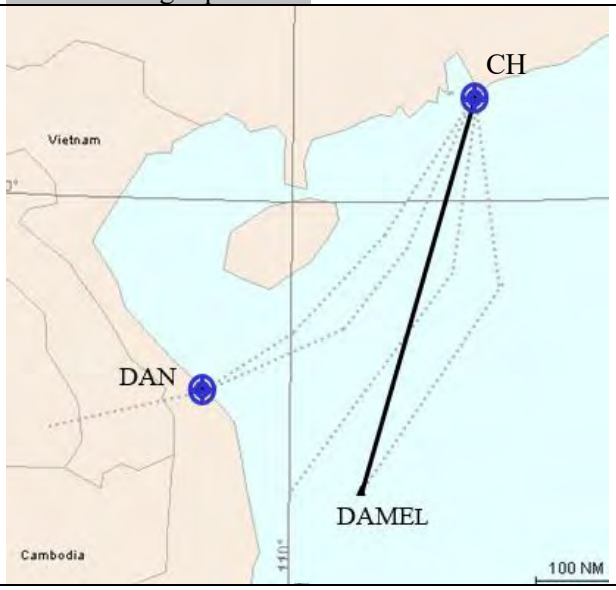
ATS Route Name	**IND 09**
State Priority	C
IATA Priority	MEDIUM
Requested by (when)	IATA (01/01/2013)
States/Administrations Involved	India (Mumbai FIR)
Route Description	TELEM 2407.0N 06846.0E – Bhuj (BHJ) 2316.5N 06940.0E – Rajkot (RKT) 2218.8N 07046.7E – Mumbai (BBB) 1905.2N 07252.5E
Flight Level Band	29,000 – 46,000 ft
Benefit (fuel, environmental)	~~35 NM / 5 minutes, 300 kg fuel, 945 kg CO2 per flight, 4,954 tonnes fuel, 15,604 tonnes CO2 annually~~ 50 NM / 8 minutes, 751 kg fuel, 2,366 kg CO_2 per flight, 2,695 tonnes fuel, 8,485 tonnes CO_2 annually
Operational Information (potential airlines, flight frequency)	9W, AI, BA, LH, KL 69 flights per week
Remarks: Facilitates arrivals into 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.	

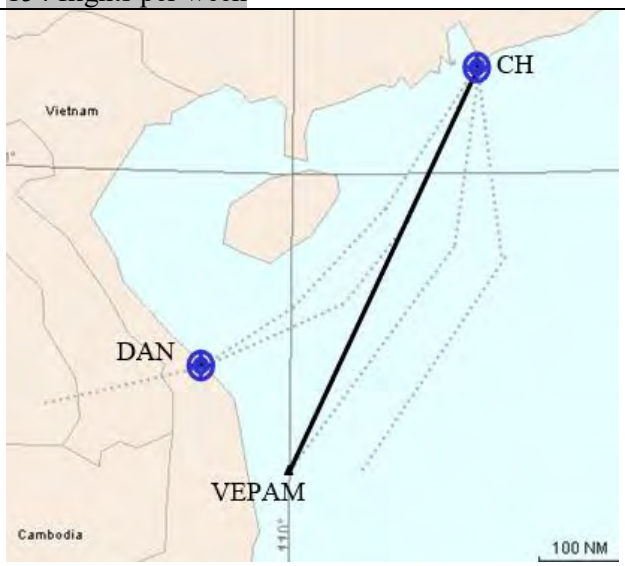
ATS Route Name	**PAK 02**
State Priority	**D**
IATA Priority	**LOW**
Requested by (when)	IATA (01/01/2013)
States/Administrations Involved	Pakistan, India (Lahore, Delhi FIRs)
Route Description	INDEK 3246.0N 07316.0E – Chandigarh (CHG) 3040.1N 07648.3E
Flight Level Band	29,000 – 46,000 ft
Benefit (fuel, environmental)	~~10 NM, 175 kg fuel, 552 kg CO_2 per flight, 320 tonnes fuel, 1008 tonnes CO_2 annually~~ 10 NM, 158 kg fuel, 498 kg CO_2 per flight, 156,000 kg fuel, 490,000 kg CO_2 annually
Operational Information (potential airlines, flight frequency)	
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.	

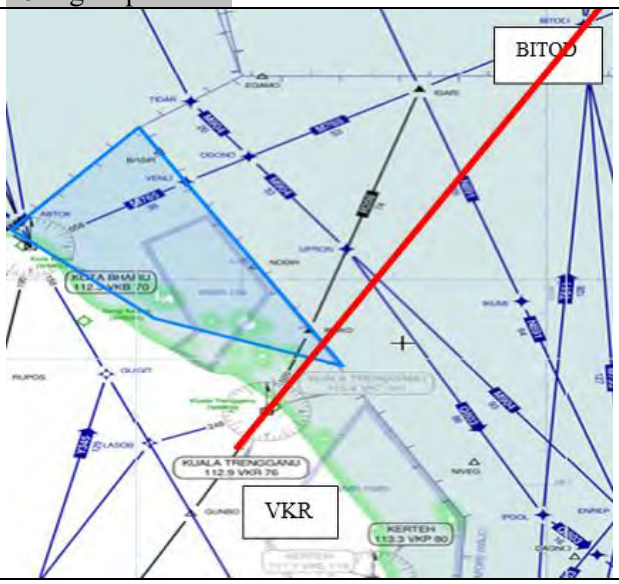
Chapter 2: Southeast Asia

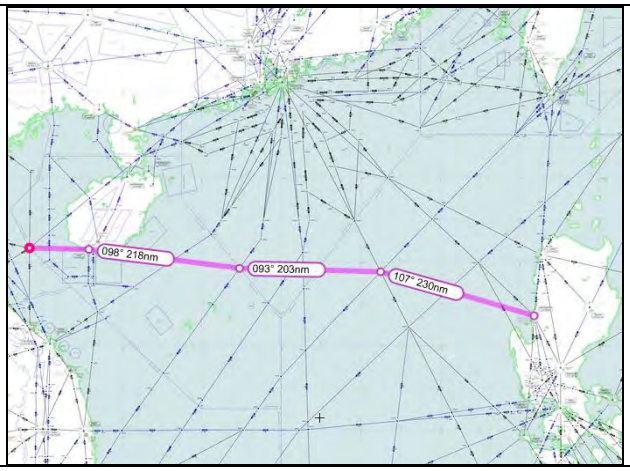
(referred to: SEACG for review)

ATS Route Name	**IDO 01**
State Priority	**D**
IATA Priority	**HIGH**
Requested by (when)	IATA (01/09/2018)
States/Administrations Involved	Indonesia, Malaysia, Singapore (Jakarta, Kuala Lumpur, Singapore FIRs)
Route Description	MABIX 0316.0N 09450.9E – Sinjon (SJ) 0113.4N 10351.3E
Flight Level Band	28,000 – 46,000 ft
Benefit (fuel, environmental)	~~16 NM/ 2 minutes, 260kg fuel, 800kg CO_2 per flight, 95,000kg fuel, 292,000kg CO_2 annually~~ 46 NM / 6 minutes, 500 kg fuel, 1,575 kg CO_2 per flight, 5,304 tonnes fuel, 16,708 tonnes CO_2 annually
Operational Information (potential airlines, flight frequency)	EK, EY, QR, SQ, UL 204 flights per week
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 (16 NM if traffic route via MDN). Not implementing due PfA on L762. However, airlines still see the proposal as priority particularly for Middle East traffic.	

ATS Route Name	**SCS 01**
State Priority	C
IATA Priority	MEDIUM
Requested by (when)	IATA (01/09/2018)
States/Administrations Involved	Viet Nam, China, Hong Kong China (Ho Chi Minh, Sanya, Hong Kong FIRs)
Route Description	DAMEL 1358.7N 11130.6E – Cheung Chau (CH) 2213.2N 11401.8E
Flight Level Band	28,000 – 46,000 ft
Benefit (fuel, environmental)	~~35 NM / 4 minutes, 568kg fuel, 1750kg CO_2 per flight, 207,594kg fuel, 638,750kg CO_2 annually~~ 52 NM / 8 minutes, 870 kg fuel, 2,741 kg CO_2 per flight, 2,714 tonnes fuel, 8,550 tonnes CO_2 annually
Operational Information (potential airlines, flight frequency)	CX At least 60flight per week
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. Potential City Pairs: SIN – Pearl River Delta Airports.	

ATS Route Name	**SCS 02**
State Priority	C
IATA Priority	HIGH
Requested by (when)	IATA (01/09/2018)
States/Administrations Involved	Viet Nam, China, Hong Kong China (Ho Chi Minh, Sanya, Hong Kong FIRs)
Route Description	VEPAM 1358.0N 11000.0E – Cheung Chau (CH) 2213.2N 11401.8E
Flight Level Band	28,000 – 46,000 ft
Benefit (Environmental)	~~17 NM/ 2 minutes, 276kg fuel, 850kg CO_2 per flight, 100,831kg fuel, 310,250kg CO_2 annually~~ 24 NM / 3 minutes, 190 kg fuel, 600 kg CO_2 per flight, 1,520 tonnes fuel, 4,790 tonnes CO_2 annually
Operational Information (potential airlines, flight frequency)	CX, MH, SQ 154 flights per week
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, 5/02/2013 – remains as high priority in view of the savings impact for many airlines). Potential City Pairs: SIN – Pearl River Delta Airports	

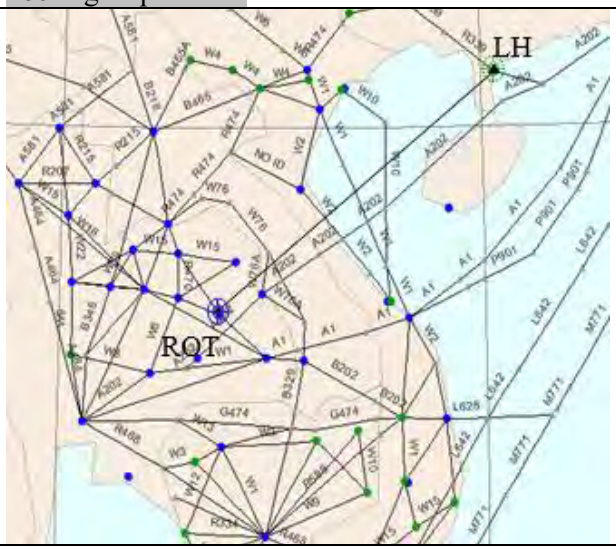
ATS Route Name	**SCS 11**
State Priority	**B**
IATA Priority	**MEDIUM**
Requested by (when)	IATA (10/03/2015: SEACG/22)
States/Administrations Involved	Viet Nam, Singapore, Malaysia (Ho Chi Minh, Singapore, Kuala Lumpur FIRs)
Route Description	Kuala Terengganu (VKR) 0521.6N 10304.9E – BITOD 0715.4N 10407.1E
Flight Level Band	
Benefit (fuel, environmental)	59 NM / 7 minutes, 1,035 kg fuel, 3,260 kg CO_2 per flight, 1,507 tonnes fuel, 4,747 tonnes CO_2 annually
Operational Information (potential airlines, flight frequency)	MH, VN 28 flights per week
Remarks: Potential City Pairs: KUL – SGN. Viet Nam AIC-A08/17 prevents potential use of traffic to HKG via this proposed route.	

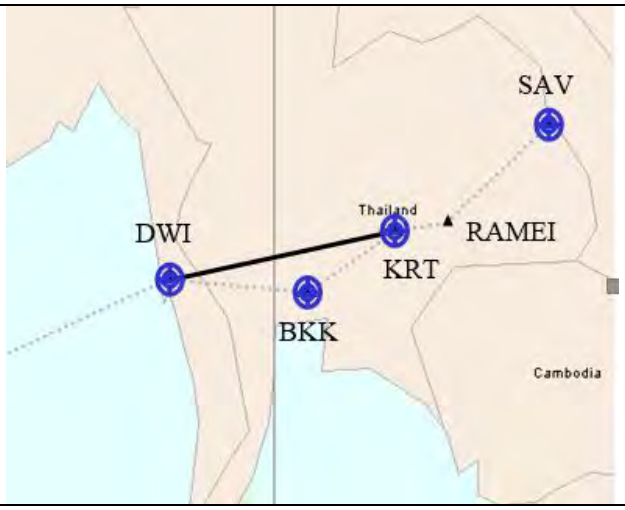
ATS Route Name	**SCS 12**
State Priority	
IATA Priority	**MEDIUM**
Requested by (when)	IATA (30/07/2018)
States/Administrations Involved	Viet Nam, China, Philippines (Ho Chi Minh, Sanya, Manila FIRs)
Route Description	ASSAD 1820.5N 10740.9E – Sanya (SYX) 1818.6N 10910.4E – EPKAL 1751.5N 11257.3E – MAVRA 1746.7N 11630.1E – San Fernando (SAN) 1643.7N 12021.5E
Flight Level Band	28,000 – 46,000 feet (8400 – 15000 meters)
Benefit (fuel, environmental)	114 NM / 10 minutes, 1,189 kg fuel, 3,745 kg CO_2 per flight, 5,207 tonnes fuel, 16,404 tonnes CO_2 annually
Operational Information (potential airlines, flight frequency)	QR (3), EK (8), EY (1)
Remarks: This proposal was previously named as SEA 13.	

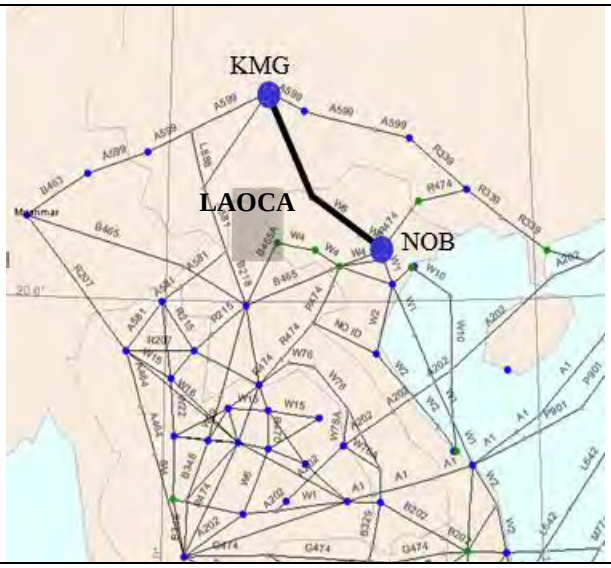
ATS Route Name	**SCS 13**
State Priority	
IATA Priority	
Requested by (when)	Malaysia (26/03/2018: SAIOACG/8 & SEACG/25)
States/Administrations Involved	Malaysia, Singapore, Philippines (Kota Kinabalu, Singapore, Manila FIRs)
Route Description	NODIN 081059.88N 1161142.00E – LAXOR 094936.84N 1144829.16E
Flight Level Band	30,000 and 38,000 ft (FLAS for M772)
Benefit (fuel, environmental)	39 NM / 8 minutes, 236 kg fuel, 746 kg CO_2 per flight, 1,550 tonnes fuel, 4,900 tonnes CO_2 annually
Operational Information (potential airlines, flight frequency)	9C, AK, CZ 63 flights per week
Remarks: Potential City Pairs: BKI – HKG/CAN/SZX/WUH	

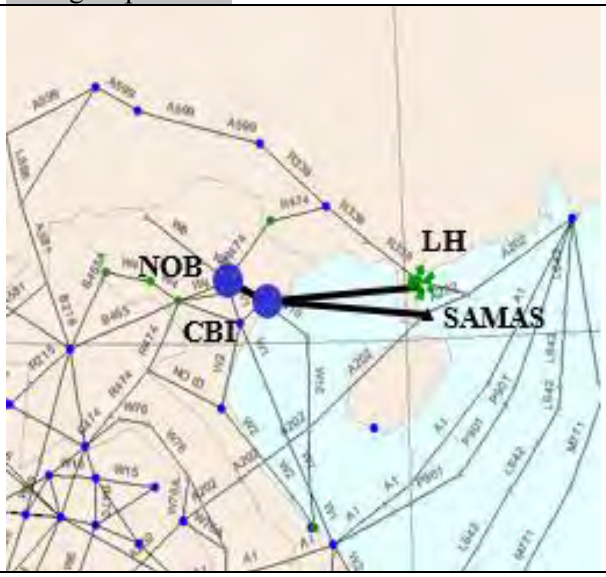
ATS Route Name	**SCS 14**
State Priority	
IATA Priority	
Requested by (when)	Malaysia (26/03/2018: SAIOACG/8 & SEACG/25)
States/Administrations Involved	Malaysia, Singapore (Kota Kinabalu, Singapore FIRs)
Route Description	ENREP 045223.88N 1041442.00E – OLKIT 045012.12N 1115118.00E or ENREP 045223.88N 1041442.00E – TERIX 041520.88N 1093455.92E
Flight Level Band	29,000 ft
Benefit (fuel, environmental)	107 NM / 12 minutes, 365 kg fuel, 1,153 kg CO_2 per flight, 266,450 kg fuel, 841,982 kg CO_2 annually
Operational Information (potential airlines, flight frequency)	
Remarks: Purpose is to circumnavigate major confluence of air traffic at VPK thus providing better efficieny for flight operating from/to KBR. Operation at 29,000 ft and below to avoid crossing traffic within the South Chia Sea airspace. Potential City Pairs: BKI – KBR	

ATS Route Name	**SCS 15**
State Priority	
IATA Priority	
Requested by (when)	Malaysia (26/03/2018: SAIOACG/8 & SEACG/25)
States/Administrations Involved	Malaysia, Singapore (Kota Kinabalu, Singapore FIRs)
Route Description	ENREP 045223.88N 1041442.00E – KAMIN 023441.88N 1085536.12E
Flight Level Band	29,000 ft
Benefit (fuel, environmental)	107 NM / 12 minutes, 365 kg fuel, 1,153 kg CO_2 per flight, 266,450 kg fuel, 841,982 kg CO_2 annually
Operational Information (potential airlines, flight frequency)	
Remarks: Purpose is to circumnavigate major confluence of air traffic at VPK thus providing better efficieny for flight operating from/to KBR. Operation at 29,000 ft and below to avoid crossing traffic within the South Chia Sea airspace. Potential City Pairs: BKI – KCH	

ATS Route Name	**SEA 12**
State Priority	C
IATA Priority	HIGH
Requested by (when)	IATA (01/09/2018)
States/Administrations Involved	Thailand, Lao PDR, Viet Nam, China (Bangkok, Vientiane, Hanoi, Sanya, Guangzhou FIRs)
Route Description	Roiet (ROT) 1607.0N 10346.7E – Huguang (LH) 2107.9N 11020.2E
Flight Level Band	29,000 – 46,000 ft
Benefit (fuel, environmental)	14 NM / 2 minutes, 208 kg fuel, 655 kg CO_2 per flight, 1,731 tonnes fuel, 5,451 tonnes CO_2 annually
Operational Information (potential airlines, flight frequency)	CX 160 flights per week
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.	

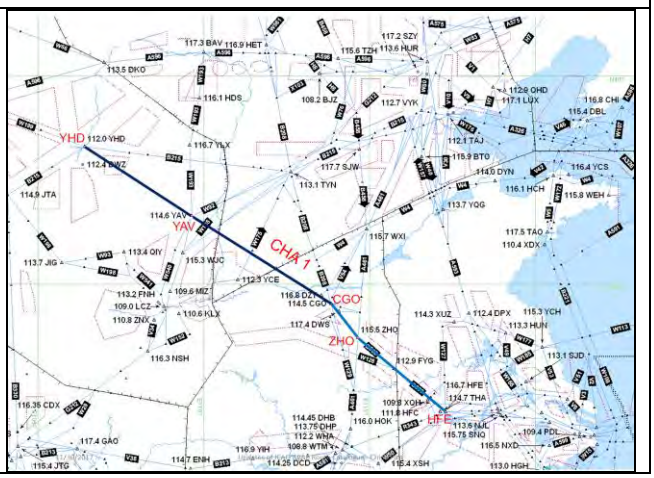
ATS Route Name	**THA 01**
State Priority	**D**
IATA Priority	**LOW**
Requested by (when)	IATA (01/09/2018)
States/Administrations Involved	Myanmar, Thailand (Yangon, Bangkok FIRs)
Route Description	Khorat (KRT) 1455.0N 10208.4E – Dawei (DWI) 1405.9N 09812.2E
Flight Level Band	28,000 – 46,000 ft
Benefit (fuel, environmental)	~~15 NM/ 2 minutes, 245kg fuel, 750kg CO_2 per flight, 89,000kg fuel, 274,000kg CO_2 annually~~ 15 NM / 2 minutes, 260 kg fuel, 819 kg CO_2 per flight, 946,000 kg fuel, 2,981 tonnes CO_2 annually
Operational Information (potential airlines, flight frequency)	
Remarks: Thailand updated the SAIOACG/7 meeting that Bangkok ACC had been tactically routing aircraft direct between KRT and DWI when traffic permitted. However, due to ATC automation transition, the route proposal may need to wait for completion of ATC automation transition to be considered. Myanmar unable to accept 28/4/17	

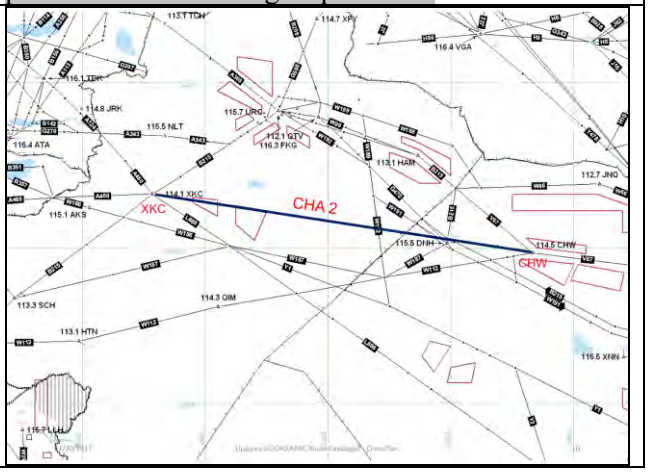
ATS Route Name	**VIET NAM 01 (previously unnamed)**
State Priority	**D**
IATA Priority	**LOW**
Requested by (when)	Viet Nam (01/09/2018)
States/Administrations Involved	Viet Nam, China (Hanoi, Kunming FIRs)
Route Description	Noi Bai (NOB) 2112.8N 10550.1E – LAOCA 222912.00N 1035755.00E – Kunming (KMG) 2501.0N 10244.0E
Flight Level Band	28,000 – 46,000 ft
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency)	
Remarks: ~~Because of small traffic demand and cost/benefit considerations, this route is impossible and can not be implemented at present.~~ Awaiting BANP Amendment. Reported at SEACG/22 as having already been implemented as a domestic ATS route intercepting the regional ATS route network at a point within the Hanoi FIR.	

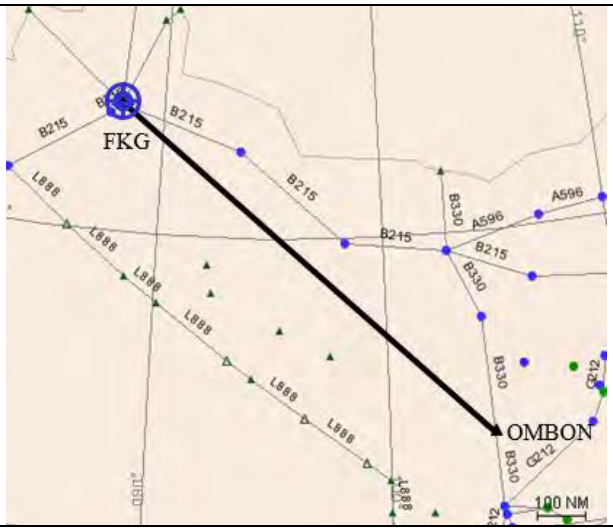
ATS Route Name	**VIET NAM 02 (previously unnamed)**
State Priority	**D**
IATA Priority	**HIGH**
Requested by (when)	Viet Nam (01/09/2018)
States/Administrations Involved	Viet Nam, China (Hanoi, Sanya, Guangzhou FIRs)
Route Description	Noi Bai (NOB) 2112.8N 10550.1E – Catbi (CBI) 2049.1N 10642.5E – SAMAS 2030.3N 11029.7E or Noi Bai (NOB) 2112.8N 10550.1E – Catbi (CBI) 2049.1N 10642.5E – Huguang (LH) 2107.9N 11020.2E
Flight Level Band	28,000 – 46,000 ft
Benefit (fuel, environmental)	48 NM / 6 minutes, 252 kg fuel, 794 kg CO_2 per flight, 576,576 kg fuel, 1,816 tonnes CO_2 annually
Operational Information (potential airlines, flight frequency)	CX 44 flights per week
Remarks: Because of small traffic demand and cost/benefit considerations, this route is impossible and can not be implemented at present. Retain proposal for long-term planing (Viet Nam). Retention discussed at SEACG/22.	

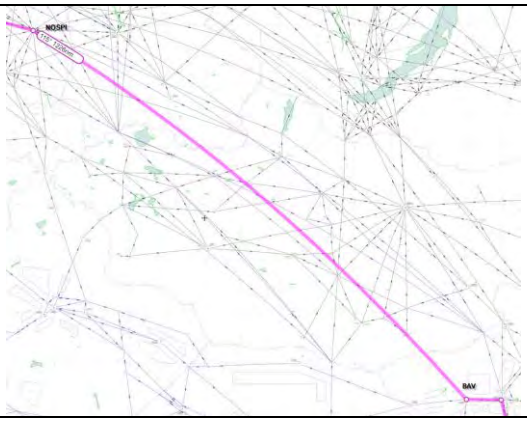
Chapter 3: East Asia

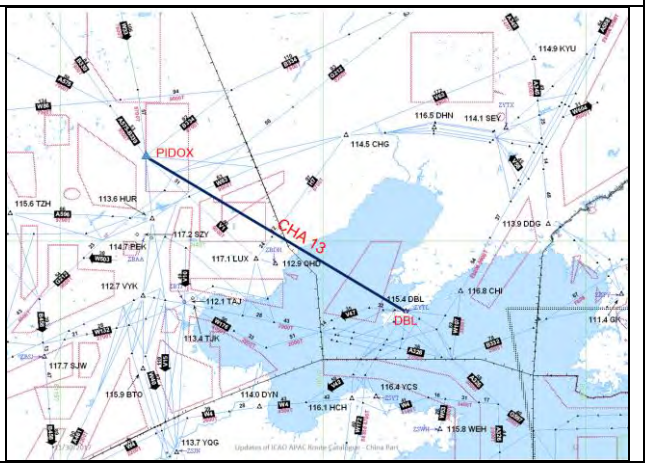
(referred to: States or EATMCG as appropriate for review)

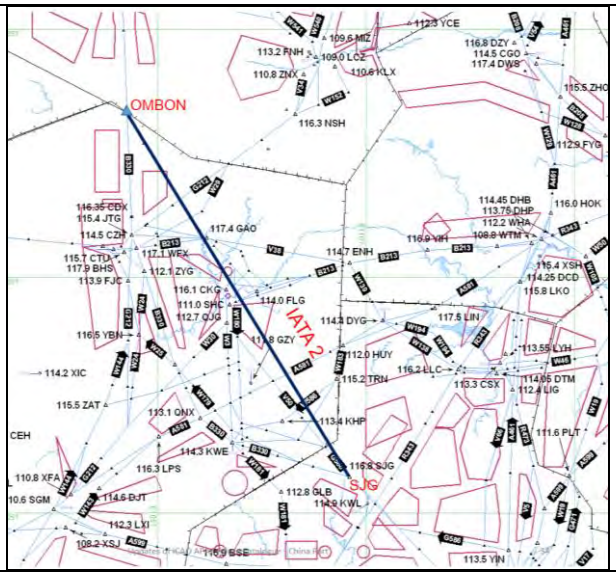
ATS Route Name	**CHA 01**
State Priority	C
IATA Priority	**HIGH**
Requested by (when)	IATA (01/09/2018)
States/Administrations Involved	China (Lanzhou, Wuhan, Shanghai FIRs)
Route Description	~~Yinchuan (YNC) N3819.4 E 10623.8 .. GUPAD N3618.7 E11028.4~~Yinchuan (YHD) 3820.8N 10624.6E – 3641.1N 10938.1E – Yanan (YAV) 3431.1N 11350.6E – Zhengzhou (CGO) N3431.1 E11350.6 – Zhoukou (ZHO) N3150.4 E11714.0 – Luogang (SB) 3150.5N 11714.0E
Flight Level Band	8,400 – 15,000 meters
Benefit (fuel, environmental)	73 NM / 9 minutes, 26,645 kg fuel, 825,995 kg CO_2 annually
Operational Information (potential airlines, flight frequency)	
Remarks: (Renumbered from CHA5). Potential City Pairs: Europe – Shanghai. Amended routing: YHD – YAV – CGO. The route segment between CGO – ZHO – HFE has been implemented as part of B208 since 2008. Therefore, the route description can be amended as YHD – YAV – CGO accordingly.	

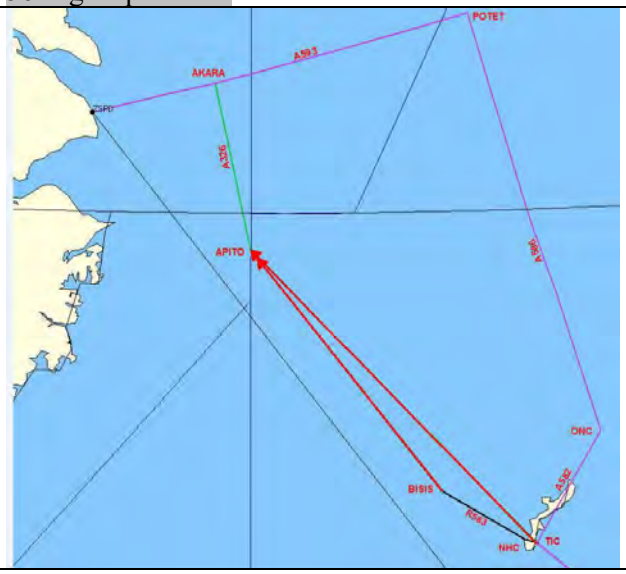
ATS Route Name	**CHA 02**
State Priority	**D**
IATA Priority	**HIGH**
Requested by (when)	IATA (01/09/2018)
States/Administrations Involved	China (Urumqi, Lanzhou FIRs)
Route Description	~~Kuqa (KCA)~~Qiuci (XKC) 4140.6N 08250.6E – Jiayuguan (CHW) 3951.3N 09821.0E
Flight Level Band	8,400 – 15,000 meters
Benefit (fuel, environmental)	93 NM / 12 minutes, 4,426 tonnes fuel, 1,372,202 tonnes CO_2 annually
Operational Information (potential airlines, flight frequency)	~~Only 9 flights considered but there could be more potential traffic.~~ 63 flights per week.
Remarks: (Renumbered from CHA 7). China comment: there are existing routes between XKC and CHW. Direct route is impossible. Potential City Pairs: Middle East/Pakistan – China/Korea/Japan.	

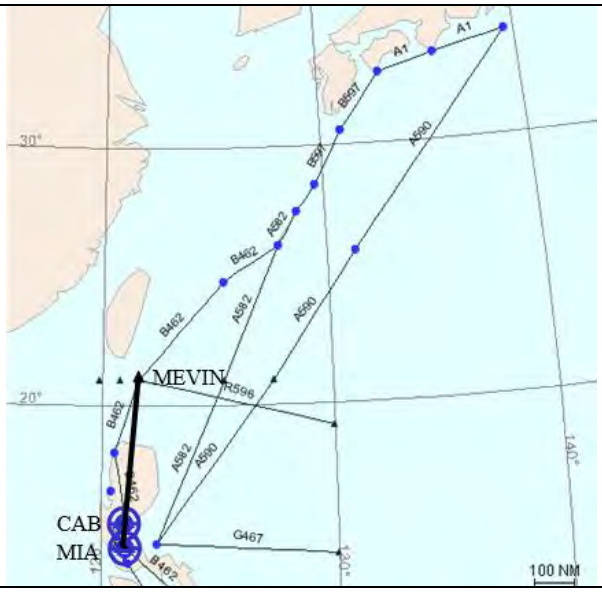
ATS Route Name	**CHA 03**
State Priority	**D**
IATA Priority	**HIGH**
Requested by (when)	IATA (01/09/2018)
States/Administrations Involved	China (Urumqi, Lanzhou FIRs)
Route Description	Fukang (FKG) 4410.4N 08759.0E – OMBON 3321.4N 10416.3E
Flight Level Band	8,400 – 15,000 meters
Benefit (fuel, environmental)	~~123 NM / 15.5 minutes, 2,000 kg fuel, 6,150 kg CO_2 per flight, 730,000 kg fuel, 2,245 tonnes CO_2 annually~~ 16 minutes, 5,824 tonnes fuel, 180,544 tonnes CO_2 annually
Operational Information (potential airlines, flight frequency)	56 flights per week
Remarks: (Renumbered from CHA 9A). China comment: this direct route is impossible and cannot be implemented at present. Potential City Pairs: Europe/Russia – Pearl River Delta Airports.	

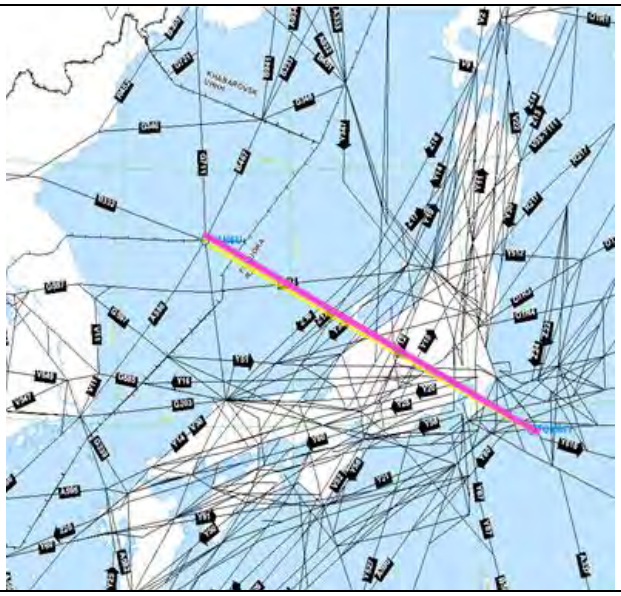
ATS Route Name	**CHA 12**
State Priority	C
IATA Priority	HIGH
Requested by (when)	IATA (29/08/2018)
States/Administrations Involved	Russia, Mongolia, China (Novosibirsk, Krasnoyarsk, Ulaanbatar, Beijing FIRs)
Route Description	~~Weixian (WXI) N3621.8 E11455.0 .. A (ZBPE/ZMUB) .. B (ZMUB/UNKY) .. Novokuznetsk (UNWW)~~ ~~Uni-directional~~ NOSPI 534912.00N 0865248.00E – yyyy – xxxx – Baotou (BAV) (New entry/exit point at N42 25E107 40)
Flight Level Band	28,000 – 46,000 ft
Benefit (fuel, environmental)	~~166 NM/20 minutes, 2,620kg fuel, 8,070kg CO_2 per flight, 956,000kg fuel, 2,944 tonnes CO_2 annually~~ 5 minutes, 6,090 tonnes fuel, 19,185 tonnes CO_2 annually
Operational Information (potential airlines, flight frequency)	85 flights per week
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.~~ New route proposal replacing the previous from Weixian to Novokuznetsk.	

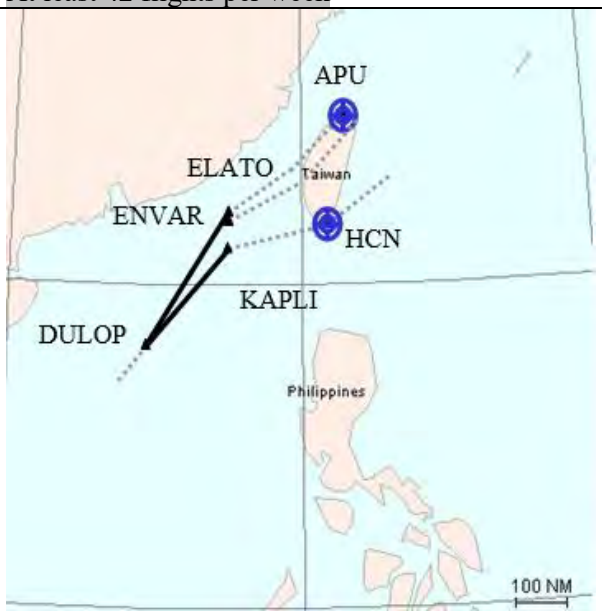
ATS Route Name	**CHA 13**
State Priority	C
IATA Priority	HIGH
Requested by (when)	IATA (01/09/2018)
States/Administrations Involved	China (Beijing, Shenyang FIRs)
Route Description	~~FENGNING (GM)~~ PIDOX 4114.1N 11637.5E – Dalian (DBL) 3857.7N 12134.2E
Flight Level Band	8,400 – 15,000 meters
Benefit (fuel, environmental)	9 minutes, 4,444 tones fuel, 14,000 tonnes CO_2 annually
Operational Information (potential airlines, flight frequency)	56 flights per week
Remarks: Part of IATA EUR-North Asia package – #EN13. This route proposal will reduce route distance of 67 NM as compared to current routing GM – LADIX – MAKNO. China comment: Further discussions required via ICAO APAC Office.	

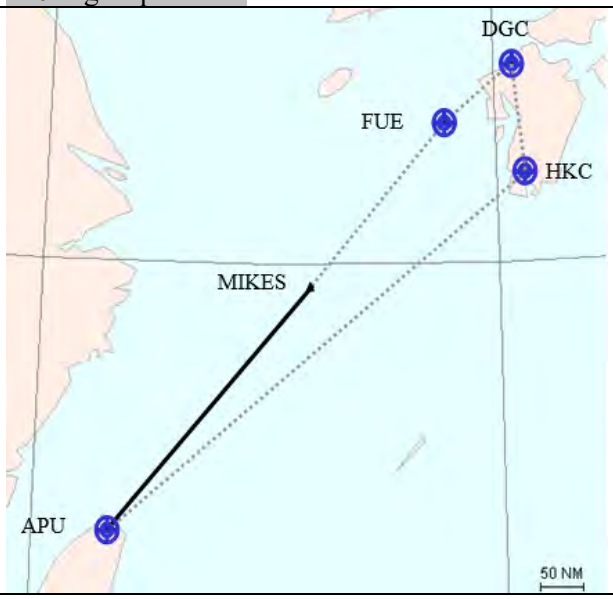
ATS Route Name	**IATA 02**
State Priority	**D**
IATA Priority	**HIGH**
Requested by (when)	IATA (01/09/2018)
States/Administrations Involved	China (Kunming, Guangzhou FIRs)
Route Description	OMBON 3321.4N 10416.3E – ~~SB (LUOGANG) N2546.1 E10936.4~~ Sanjiang (SJG) 2546.6N 10936.6E
Flight Level Band	8,400 – 15,000 meters
Benefit (fuel, environmental)	14 minutes, 6,657 tones fuel, 20,636 tonnes CO_2 annually
Operational Information (potential airlines, flight frequency)	56 flights per week
Remarks: China comments: There are exiting routes between OMBON and RO. Direct route is impossible at present. Potential City Pairs: Europe – Pearl River Delta Airports.	

ATS Route Name	**JAP 01**
State Priority	C
IATA Priority	HIGH
Requested by (when)	IATA (25/06/2012)
States/Administrations Involved	China, Japan (Shanghai, Fukuoka FIRs)
Route Description	~~PIC – APITO; Alternative: TIC – R583~~ APITO 2935.0N 12400.0E – BISIS 2647.4N 12633.0E – Naha (NHC) 2612.5N 12738.6E
Flight Level Band	
Benefit (fuel, environmental)	~~19 minutes, 3,094kg/3,021kg fuel, 9,591kg/9,365 CO_2 per flight~~ 62 NM / 14 minutes, 4,378 tonnes fuel, 13,788 tonnes CO_2 annually
Operational Information (potential airlines, flight frequency)	CA, MU, NZ, QF 56 flights per week
Remarks:	

ATS Route Name	**PHI 01**
State Priority	C
IATA Priority	MEDIUM
Requested by (when)	IATA (01/09/2018)
States/Administrations Involved	Philippines, Japan (Manila, Fukuoka FIRs)
Route Description	Manila (MIA) 1430.5N 12101.3E – MEVIN 2100.0N 12233.0E or Cabanatuan (CAB) 1528.9N E12101.5 – MEVIN 2100.0N 12233.0E
Flight Level Band	28,000 – 46,000 ft
Benefit (fuel, environmental)	11 NM / 1.5 minutes, 179 kg fuel, 550 kg CO_2 per flight, 59,300 kg fuel 200,750 kg CO_2 annually
Operational Information (potential airlines, flight frequency)	49 flights per week
Remarks: Supports traffic between Manila and Japan/North America. Potential City Pairs: Philippines – Japan/North America.	

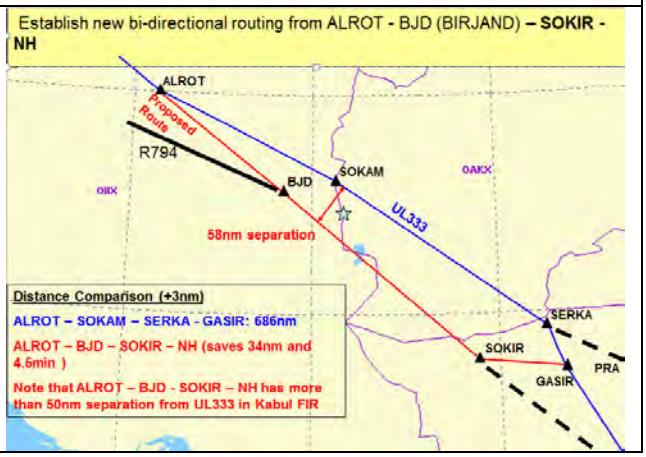
ATS Route Name	**RUS 08**
State Priority	C
IATA Priority	
Requested by (when)	IATA (01/09/2018)
States/Administrations Involved	Japan, ROK, DPRK (Fukuoka, Incheon, Pyongyang FIRs)
Route Description	TOMMY 591510.75N 1554908.64E – KANSU 383759.88N 1322830.00E
Flight Level Band	
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency)	
Remarks: Part of IATA EUR-North Asia package-#EN14. China comment: Further discussion between China and Korea also required via ICAO APAC Office. To reduce route distance of 64 NM as compared to current routing KANSU – IGRAS – TOMMY. This involves route within APAC and should be removed from EUR/FE catalogue.	

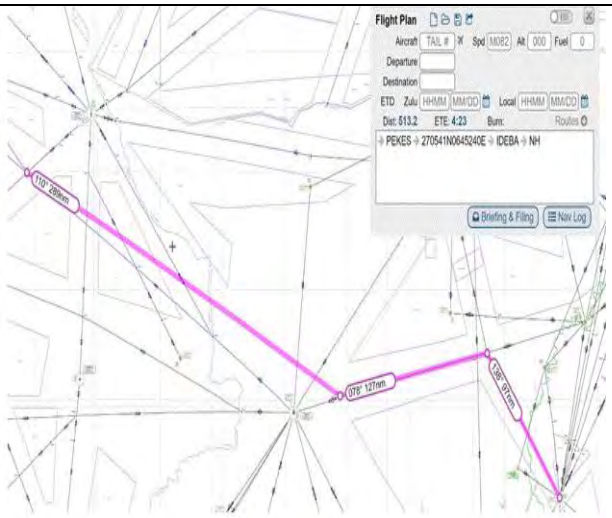
ATS Route Name	**SCS 08**
State Priority	C
IATA Priority	HIGH
Requested by (when)	IATA (01/09/2018)
States/Administrations Involved	Hong Kong China, Taibei ACC (Hong Kong, Taibei FIRs)
Route Description	DULOP 1814.2N 11432.6E – ELATO 2220.0N 11730.0E – A1 or DULOP 1814.2N 11432.6E – ENVAR 2159.5N 11730.0E – M750 or DULOP 1814.2N 11432.6E – KAPLI 2110.0N 11730.0E – G86
Flight Level Band	28,000 – 46,000 ft
Benefit (fuel, environmental)	~~DULOP – ENVAR 140 NM / 17.5 minutes, 2275kg fuel, 3867kg CO_2 per flight, 830,000kg, 1,411 tonnes annually; DULOP – KAPLI 238 NM / 30 minutes, 7000kg fuel, 11,900kg CO_2 per flight, 2,555tonnes fuel, 4,343 tonnes CO_2 annually~~ 6 minutes, 850 kg fuel, 2,687 kg CO_2 per flight, 1,863 tonnes fuel, 5,868 tonnes CO_2 annually Note: Savings based on DULOP – ENVAR.
Operational Information (potential airlines, flight frequency)	BR, CI At least 42 flights per week
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: Southeast Asia – North Asia Airports. Most preferred: DULOP – ENVAR.	

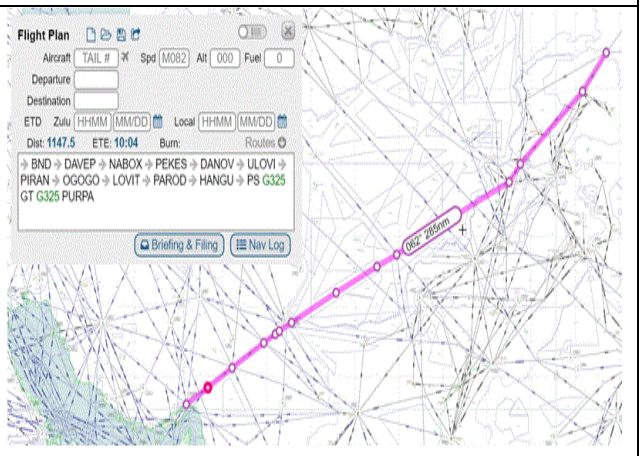
ATS Route Name	**TPE 01**
State Priority	C
IATA Priority	HIGH
Requested by (when)	IATA (01/09/2018)
States/Administrations Involved	Taibei ACC, Japan (Taibei, Fukuoka FIRs)
Route Description	Anbu (APU) 2510.6N 12131.3E – New Waypoint (FIR BDRY beween Taibei and Fukuoka) – MIKES 2935.2N 12544.9E
Flight Level Band	28,000 – 46,000 ft
Benefit (fuel, environmental)	~~40 NM / 5 minutes, 650 kg fuel, 2,000 kg CO_2 per flight, 237,000 kg fuel, 730,000 kg CO_2 annually~~ 16 NM / 2 minutes, 107 kg fuel, 337 kg CO_2 per flight, 1,168 tonnes fuel, 3,680 tonnes CO_2 annually
Operational Information (potential airlines, flight frequency)	BR, CI 210 flights per week
Remarks: Supports traffic between APU and Japan. Potential City Pairs: Souteast Asia/HKG/TPE – Fukuoka.	

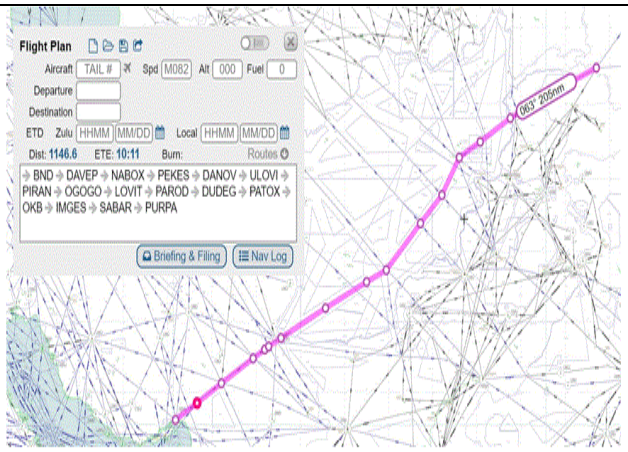
Chapter 4: Trans-Regional (South Asia)

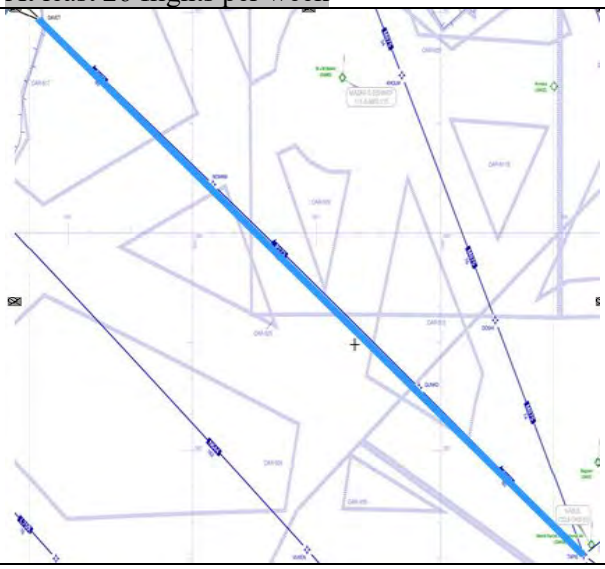
(referred to: States or AIRARD/TF as appropriate for review)

ATS Route Name	**IRAN 01**
State Priority	**D**
IATA Priority	**LOW**
Requested by (when)	Iran (01/09/2018)
States/Administrations Involved	Iran, Afghanistan, Pakistan (Tehran, Kabul, Karachi FIRs)
Route Description	a. ALROT 3511.3N 05541.6E – Birjand (BJD) 3258.3N 05912.0E – SOKIR 2908.0N 06425.0E – Nawabshah (NH) 2613.1N 06823.1E b. ALROT 3511.3N 05541.6E – Birjand (BJD) 3258.3N 05912.0E – SOKIR 2908.0N 06425.0E – GASIR c. ALROT 3511.3N 05541.6E – Birjand (BJD) 3258.3N 05912.0E – SOKIR 2908.0N 06425.0E – SHANG or BIMLA
Flight Level Band	
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency)	
Remarks: Requested by IRAN and amended by IATA at SAIOACG/3 meeting. IATA suggest amendment to BJD – KAMAR – DAVER – NH. Waypoint GASIR and SHANG need to be verified.	

ATS Route Name	**MID 01**
State Priority	**B**
IATA Priority	
Requested by (when)	AIRARD/TF/2 (04/05/2018)
States/Administrations Involved	Iran, Pakistan (Tehran, Karachi FIRs)
Route Description	PEKES 2859.5N 05952.3E – New Waypoint (270541N 0645240E) – IDEBA 2727.5N 06713.6E – Nawabshah (NH) 2613.1N 06823.1E
Flight Level Band	
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency)	
Remarks: Iran, Pakistan Contingency Route. Agreed upon during the Afghanistan Contingency Coordination meeting. Potential City Pairs: Europe to East through Teheran FIR	

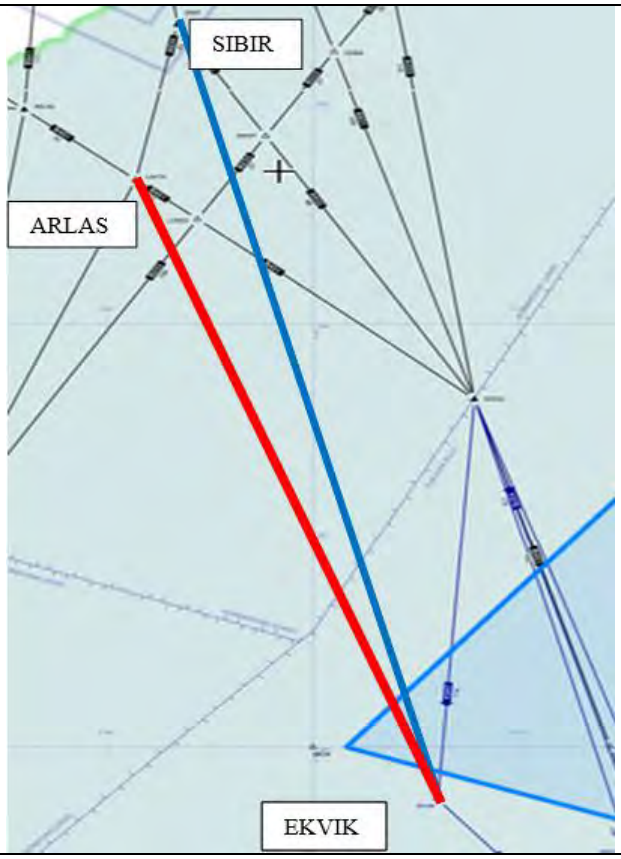
ATS Route Name	**MID 02 (a)**
State Priority	**B**
IATA Priority	
Requested by (when)	AIRARD/TF/2 (04/05/2018)
States/Administrations Involved	Iran, Pakistan, Afghanistan (Tehran, Karachi, Kabul, Lahore FIRs)
Route Description	Bandar Abbas (BND) 2711.8N 05622.0E – DAVEP 2742.4N 05720.1E – NABOX 2816.5N 05826.0E – PEKES 2859.5N 05952.3E – DANOV 2914.7N 06023.9E – ULOVI 2919.8N 06034.5E – PIRAN 2934.1N 06108.1E – OGOGO 3024.9N 06309.1E – LOVIT 3109.1N 06500.4E – PAROD 3129.0N 06554.0E – A453 – HANGU 3329.1N 07100.3E – Penshawar (PS) 3358.7N 07131.0E – G325 – Gilgit (GT) 3555.2N 07420.1E – G325 – PURPA 3656.5N 07524.4E
Flight Level Band	
Benefit (fuel, environmental)	72-84 NM per flight
Operational Information (potential airlines, flight frequency)	
Remarks: High Priority MID 02 (a) preferred over MID 02(b) if only one route is chosen. Potential City Pairs: Gulf traffic from/to Far East	

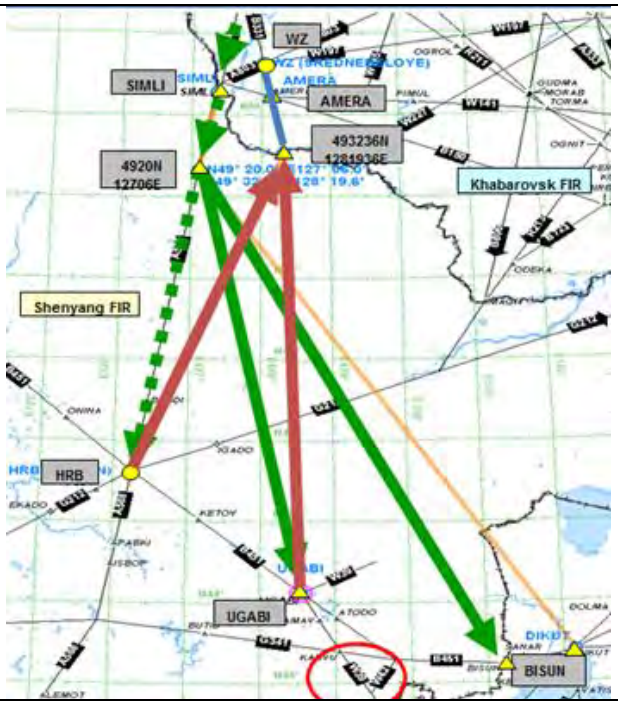
ATS Route Name	**MID 02 (b)**
State Priority	**B**
IATA Priority	
Requested by (when)	AIRARD/TF/2 (04/05/2018)
States/Administrations Involved	Iran, Pakistan, Afghanistan (Tehran, Karachi, Kabul, Lahore FIRs)
Route Description	Bandar Abbas (BND) – DAVEP 2742.4N 05720.1E – NABOX 2816.5N 05826.0E – PEKES 2859.5N 05952.3E – DANOV 2914.7N 06023.9E – ULOVI 2919.8N 06034.5E – PIRAN 2934.1N 06108.1E – OGOGO 3024.9N 06309.1E – LOVIT 3109.1N 06500.4E – PAROD 3129.0N 06554.0E – DUDEG 3246.5N 06727.0E – PATOX 3332.9N 06825.2E – Kabul (OKB) 3434.0N 06912.4E – IMGES 3459.0N 07009.1E – SABAR – PURPA 3656.5N 07524.4E
Flight Level Band	
Benefit (fuel, environmental)	90 NM / 12 minutes, 3,300 kg CO_2 per flight
Operational Information (potential airlines, flight frequency)	
Remarks: High Priority MID 02 (a) preferred over MID 02 (b) if only one route is chosen. Affecting Afghanistan. Potential City Pairs: Gulf traffic from/to Far East. Waypoint SABAR need to be verified.	

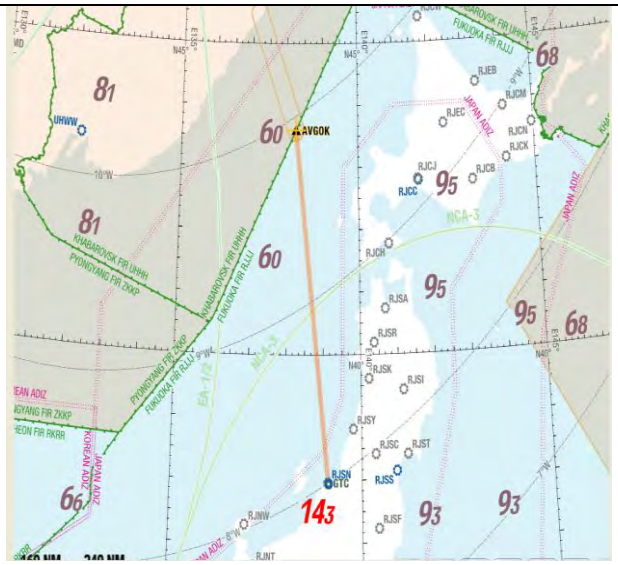
ATS Route Name	**P173**
State Priority	**D**
IATA Priority	**HIGH**
Requested by (when)	Turkmenistan, IATA (29/07/2018)
States/Administrations Involved	Turkmenistan, Afghanistan (Turkmenabat, Kabul FIRs)
Route Description	P173 (DAVET – TAPIS) change to bi-directional route
Flight Level Band	31,000 – 43,000 ft
Benefit (fuel, environmental)	21 NM / 4 minutes, 370 kg fuel, 1,150 kg CO_2 per flight, 500,000 kg fuel, 1,550 tonnes CO_2 annually
Operational Information (potential airlines, flight frequency)	AY, TG At least 26 flights per week
Remarks: Turkmenistan supports change to bi-directional route. At ATM/SG/6, Afghanistan advise they are unable to accept this route as bi-directional even if their surveillance is improved due convergance issues	

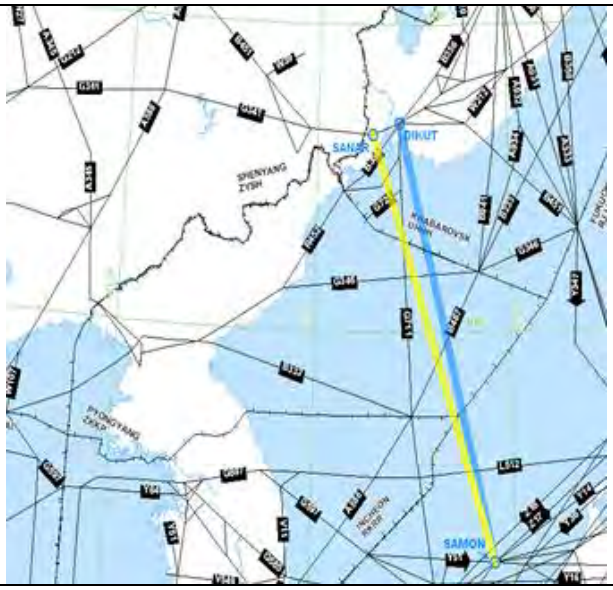
Chapter 5: Trans-Regional (East Asia)

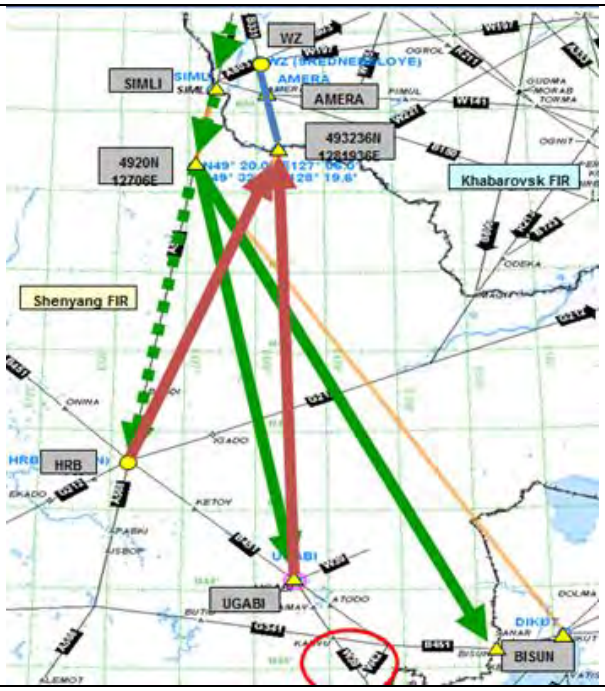
(referred to: AIRARD/TF, RDGE or EATMCG as appropriate for review)

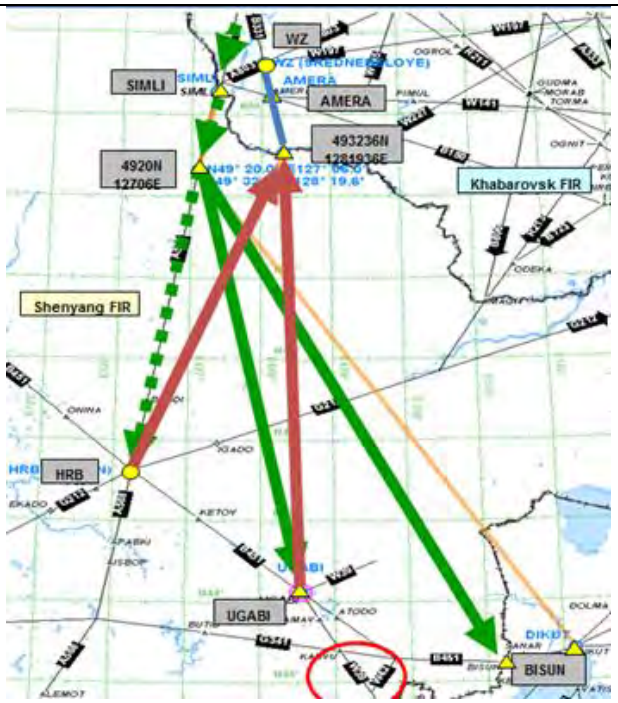
ATS Route Name	**FE0008 / RDGE 15.003 / APAC RUS 5**
State Priority	C
IATA Priority	
Requested by (when)	Russia, IATA (01/09/2018)
States/Administrations Involved	Russia, Japan (Khabarovsk, Fukuoka FIRs)
Route Description	Implementation of two new bi-directional ATS routes: a. SIBIR 432154.00N 1352024.00E – New Waypoint (FIR BDRY between Khabarovsk and Fukuoka) – New EKVIK Waypoint b. ARLAS 425906.00N 1343553.88E– New Waypoint (FIR BDRY between Khabarovsk and Fukuoka) – New EKVIK Waypoint
Flight Level Band	
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency)	
Remarks: To improve north-south traffic flows between Khabarovsk FIR and Fukuoka FIR, Original SIBIR – LURED – EKVIK proposal will be changed due to new position of EKVIK further east as a result of the planned airspace structure change in Japan, when both new ATS routes will be implemented the existing B451 ARLAS – NATEK – LURED – IGROD will be withdrawn. Based on the results from the coordination meeting between the Russian Federation and Japan in February 2017, the implementation could not be progressed as Japan indicated that no further airspace changes for the Fukuoka FIR are acceptable before the 2020 timeframe (RDGE/27 2017). Russian Federation: New waypoint needed 404751N 1361021E (FIR Boundary), coordination with Japan (Fukuoka FIR) required. Alternative bi-directional route to EN15. Implementation planned for 2Q 2013.	

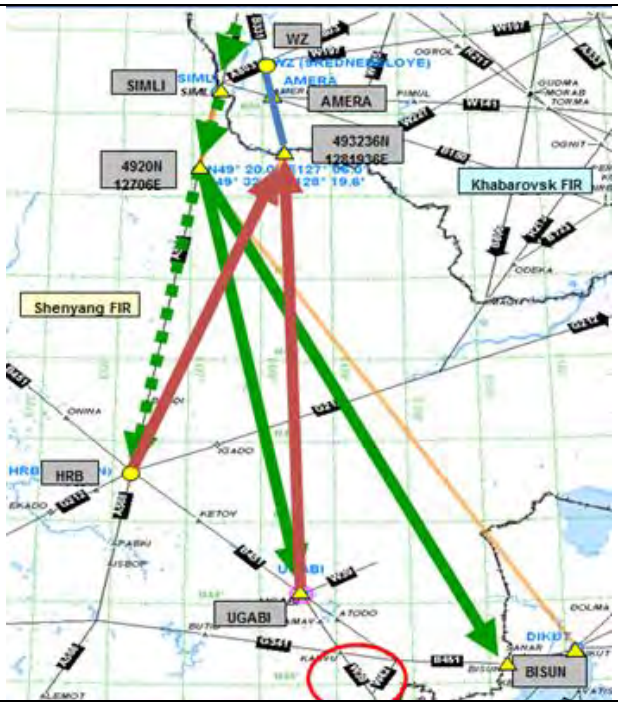
ATS Route Name	**FE0017 / RDGE 15.035 / APAC RUS12**
State Priority	C
IATA Priority	
Requested by (when)	Russia, IATA (01/09/2018)
States/Administrations Involved	Russia, China (Khabarovsk, Shenyang FIRs)
Route Description	Implementation of new uni-directional westbound ATS route: Srednebeloye (WZ) 503808.00N 1280207.00E – along G494 – SIMLI 501724.00N 1272205.88E
Flight Level Band	
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency)	
Remarks: SIMLI proposals are awaiting further development as per the outcomes of the bi-lateral meeting between China and Russian Federation conducted 25-26 July 2017, as reported to RDGE 27 by the Russian Federation. Implementation could not be progressed due to lack of information/response from China. Note: ATS route WZ A803 BLG G494 SIMLI has been implemented. RDGE to review should there be any need to retain this proposal.	

ATS Route Name	**FE0021 / RDGE 13.028 / APAC RUS 4**
State Priority	C
IATA Priority	
Requested by (when)	Russia, IATA (01/09/2018)
States/Administrations Involved	Russia, Japan (Khabarovsk, Fukuoka FIRs)
Route Description	Implementation of new bi-directional ATS route: AVGOK – Niigata (GTC) 375729.90N 1390653.60E
Flight Level Band	
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency)	
Remarks: During a bi-lateral meeting between the State ATM Corporation and the JCAB Japan (in Tokyo, November 2012), a difference in coordinates of the AVGOK waypoint was identified in the aeronautical information publications of Russia and Japan. The incorrect coordinates were confirmed by Japan and a decision was made to report this issue to the appropriate Regional ICAO Offices. The Russian Federation proposes the following coordinates (4336N and 13815E) for the AVGOK waypoint. Based on the results from the coordination meeting between the Russian Federation and Japan in February 2017, the implementation of the bi-directional ATS Route AVGOK – GTC requires further studies due to the involved military area. RDGE/27 meeting in 2017. Could become a conditional route. Further discussion with Japan required through the ICAO APAC Office. To reduce route distance of 13 NM as compared to current routing AVGOK – KADBO – GTC	

ATS Route Name	**FE0022 / RDGE 13.033 / APAC RUS7**
State Priority	C
IATA Priority	
Requested by (when)	Russia, IATA (01/09/2018)
States/Administrations Involved	Russian Federation, DPRK, ROK, Japan (Khabarovsk, Pyongyang, Incheon, Fukuoka FIRs)
Route Description	Implementation of new bi-directional ATS route: ~~DIKUT~~ SANAR 431254.00N 1312700.00E – RIVAT 412848.00N 1321612.00E – New Waypoint 1 (FIR BDRY between Pyongyang and Incheon) – New Waypoint 2 (FIR BDRY between Incheon and Fukuoka) – SAMON 361434.40N 1343011.90E or DIKUT – New Waypoint 3 (FIR BDRY between Khabarovsk and Pyongyang) – New Waypoint 4 (FIR BDRY between Pyongyang and Fukuoka) – SAMON 361434.40N 1343011.90E
Flight Level Band	
Benefit (fuel, environmental)	160 NM
Operational Information (potential airlines, flight frequency)	
Remarks: Revised proposal for bi-directional route from BISUN – TERNI – RIVAT in combination with the Vladivostok/Khabarovsk airspace structure changes. Implementation could not be progressed as there had been no exchange of information between ~~China~~ Russia, DPRK and Japan. RDGE/27 meeting in 2017. Waypoint DIKUT need to be verified.	

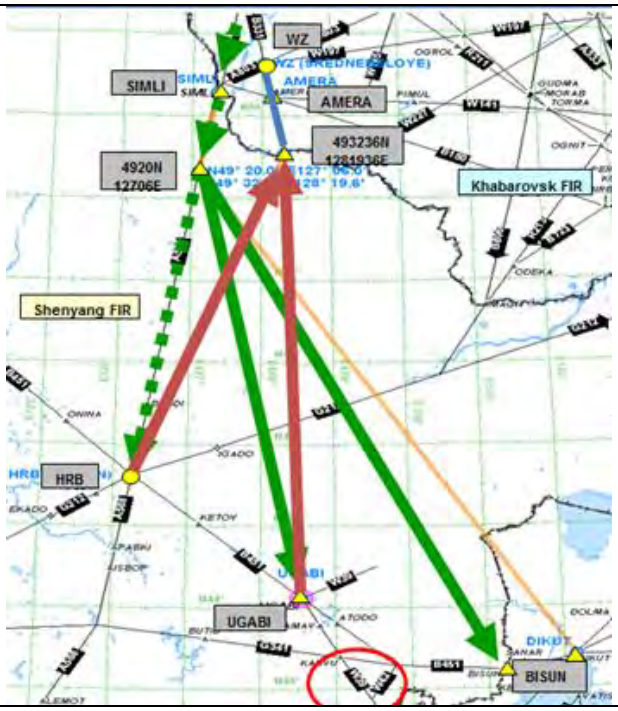
ATS Route Name	**FE0029 / RDGE 18.031 / APAC RUS13**
State Priority	C
IATA Priority	
Requested by (when)	Russia, IATA (01/09/2018)
States/Administrations Involved	Russia, China (Khabarovsk, Shenyang FIRs)
Route Description	Implementation of new uni-directional eastbound ATS route: SIMLI 501724.00N 1272205.88E – New Waypoint (4920N 12706E) – UGABI 440712.00N 1283311.88E
Flight Level Band	
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency)	
Remarks: SIMLI dualisation/ reorganisation project. SIMLI proposals are awaiting further development as per the outcomes of the bi-lateral meeting between China and Russian Federation conducted 25-26 July 2017, as reported to RDGE 27 by the Russian Federation. Implementation could not be progressed due to lack of information/response from China.	

ATS Route Name	**FE0030 / RDGE 18.020**
State Priority	C
IATA Priority	
Requested by (when)	Russia, IATA (01/09/2018)
States/Administrations Involved	Russia, China (Khabarovsk, Shenyang FIRs)
Route Description	Implementation of new bi-directional ATS route segment: New Waypoint UGABI – New Waypoint (493236N 1281936E) – AMERA 501318.12N 1280842E – Srednebeloye (WZ) 503808.00N 1280207.00E
Flight Level Band	
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency)	
Remarks: SIMLI dualisation/ reorganisation project. SIMLI proposals are awaiting further development as per the outcomes of the bi-lateral meeting between China and Russian Federation conducted 25-26 July 2017, as reported to RDGE 27 by the Russian Federation. Implementation could not be progressed due to lack of information/response from China. Note: this proposal is similar to FE0035 / RDGE 18.030 / APAC RUS15. Should the route be HRB – New Waypoint (493236N 1281936E) – AMERA – Srednebeloye (WZ)? In the chart, the only indication of bi-directional route (blue line) is between New Waypoint (493236N 1281936E) – AMERA – Srednebeloye (WZ). RDGE to review and identify the coordinates of New Waypoint UGABI.	

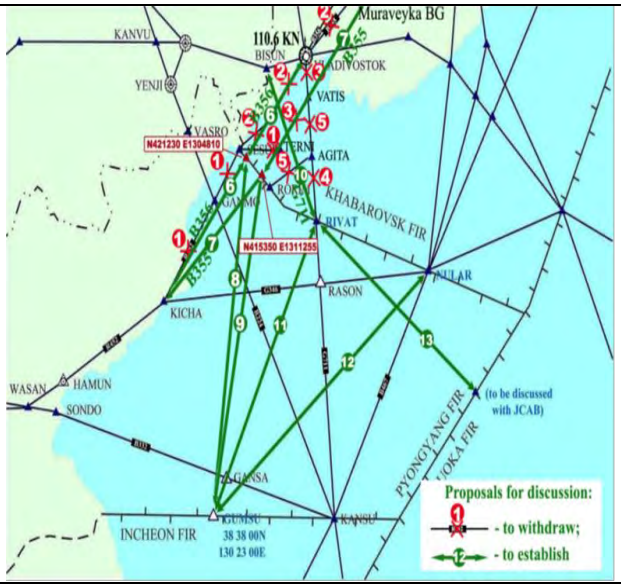
ATS Route Name	**FE0031 / RDGE 16.005 / APAC RUS11**
State Priority	**B**
IATA Priority	
Requested by (when)	Russia, IATA (01/09/2018)
States/Administrations Involved	Russia, China (Khabarovsk, Shenyang FIRs)
Route Description	Implementation of new uni-directional eastbound ATS route: SIMLI 501724.00N 1272205.88E – New Waypoint (4920N 12706E) – BISUN 431359.88N 1311148.12E
Flight Level Band	
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency)	150 NM
Remarks: SIMLI dualisation/ reorganisation project. SIMLI proposals are awaiting further development as per the outcomes of the bi-lateral meeting between China and Russian Federation conducted 25-26 July 2017, as reported to RDGE 27 by the Russian Federation. Implementation could not be progressed due to lack of information/response from China.	

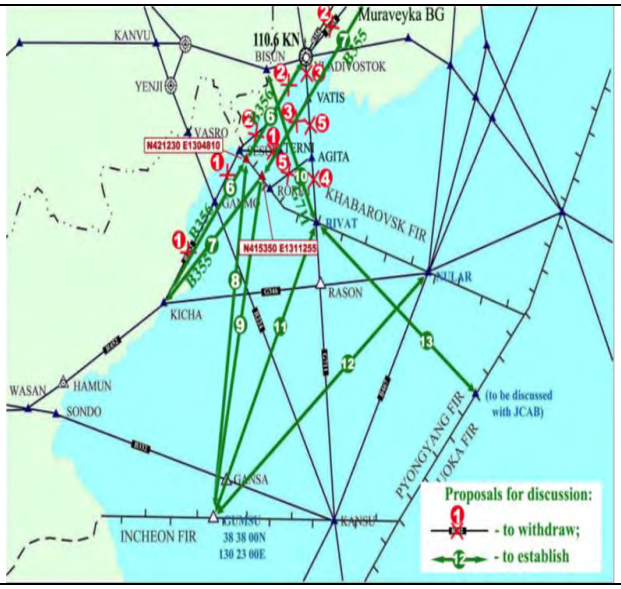
ATS Route Name	**FE0032 / RDGE 17.005**
State Priority	C
IATA Priority	
Requested by (when)	Tajikistan, IATA (01/09/2018)
States/Administrations Involved	Tajikistan, China (Dushanbe, Urumqi FIRs)
Route Description	Implementation of new bi-directional ATS route segment: TOPAZ – Shache (SCH) 382542.00N 0771430.00E or TOPAZ – Hotan (HTN) 370212.00N 0795206.00E
Flight Level Band	
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency)	
Remarks: Further improve ATS route network in the interface between China and Tajikistan. Waypoint TOPAZ need to be verified. RDGE to review and provide the missing data.	Image

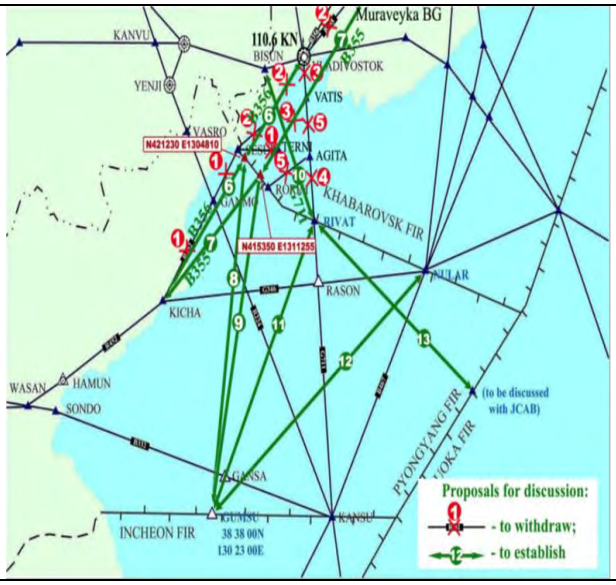
ATS Route Name	**FE0034 / RDGE 16.027 / APAC RUS 9**
State Priority	C
IATA Priority	
Requested by (when)	Russia, IATA (01/09/2018)
States/Administrations Involved	Russia, China, (Irkutsk, Shenyang, Khabarovsk FIRs)
Route Description	Implementation of new bi-directional ATS route segment: RITEK 421612.00N 1314348.00E – New Waypoint (495025N 1182854E) – Hailar (HLD) 491212.00N 1194918.00E
Flight Level Band	
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency)	159 NM
Remarks: No update at RDGE/27 meeting in 2017. Implementation could not be progressed as no information from China for RDGE/28. Note: should the route proposal be New Waypoint (495025.00N 1182854.00E) – Hailar/Hulunbeier (HLD) 491212.00N 1194918.00E – New Waypoint (FIR BDRY between Shenyang and Khabarovsk) – RITEK 421612.00N 1314348.00E? RDGE to review and provide the missing data. 	

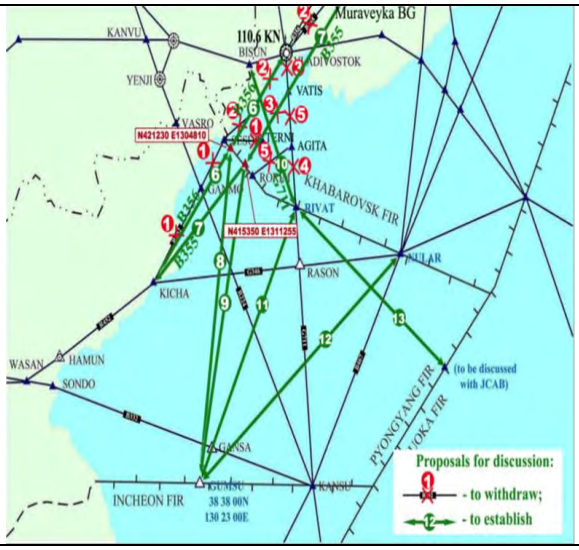
ATS Route Name	**FE0035 / RDGE 18.030 / APAC RUS15**
State Priority	C
IATA Priority	
Requested by (when)	Russia, IATA (01/09/2018)
States/Administrations Involved	Russia, China (Khabarovsk, Shenyang FIRs)
Route Description	Implementation of new uni-directional westbound ATS route: UGABI 440712.00N 1283311.88E – New Waypoint (493236N 1281936E) – AMERA 501318.12N 1280842E – Srednebeloye (WZ) 503808.00N 1280207.00E
Flight Level Band	
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency)	
Remarks: SIMLI dualisation/ reorganisation project. SIMLI proposals are awaiting further development as per the outcomes of the bi-lateral meeting between China and Russian Federation conducted 25-26 July 2017, as reported to RDGE 27 by the Russian Federation. Implementation could not be progressed due to lack of information/response from China.	

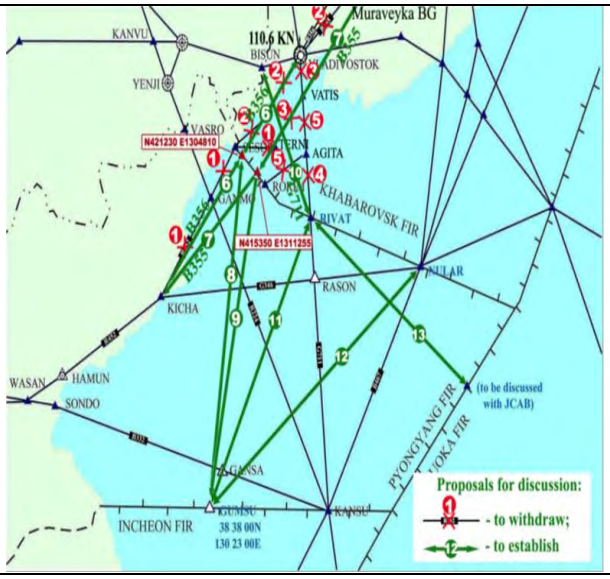
ATS Route Name	**FE0041 / RDGE 19.018 RUS 06**
State Priority	C
IATA Priority	
Requested by (when)	Russia, IATA (01/09/2018)
States/Administrations Involved	Russia, China, Japan (Khabarovsk, Shenyang, Fukuoka FIRs)
Route Description	Implementation of two new uni-directional ATS route: a. Eastbound uni-directional traffic via NALEB – SIMLI 501724.00N 1272205.88E – Heihe (HEK) 501006.00N 1271836.00E – New Waypoint (492000N 1270600E) – BISUN 431359.88N 1311148.12E – SANAR 431254.00N 1312700.00E – ARLAS 425906.00N 1343553.88E – New Waypoint (FIR BDRY between Khabarovsk and Fukuoka) – New Waypoint EKVIK b. Westbound uni-directional traffic via New Waypoint EKVIK – New Waypoint (FIR BDRY between Khabarovsk and Fukuoka) – ARLAS ARLAS 425906.00N 1343553.88E – SANAR 431254.00N 1312700.00E – BISUN 431359.88N 1311148.12E – New Waypoint (493236N 1281936E) – AMERA 501318.12N 1280842E – Srednebeloye (WZ) 503808.00N 1280207.00E – NALEB 534130.12N 1270517.88E
Flight Level Band	
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency)	
Remarks: SIMLI dualisation/ reorganisation project, further improvement of north-south traffic flows between Khabarovsk FIR and Fukuoka FIR, alternative proposal to APAC RUS6. SIMLI proposals are awaiting further development as per the outcomes of the bi-lateral meeting between China and Russian Federation conducted 25-26 July 2017, as reported to RDGE 27 by the Russian Federation. Implementation could not be progressed due to lack of information/response from China. Note: RDGE to identify the coordinates of New Waypoint EKVIK, review and provide the missing data.	Image

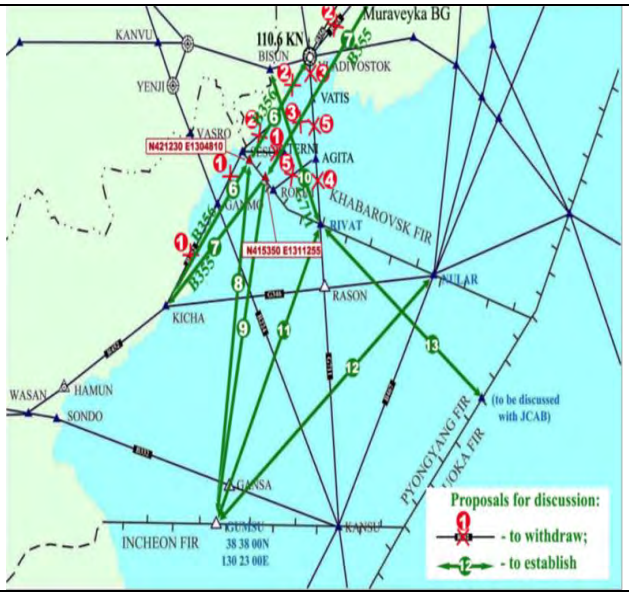
ATS Route Name	**FE0049 / RDGE 20.010**
State Priority	C
IATA Priority	
Requested by (when)	DPRK, Russia (01/09/2018)
States/Administrations Involved	Russia, DPRK (Khabarovsk, Pyongyang FIRs)
Route Description	Implementation of new uni-directional eastbound ATS route: KICHA 404103N 1291140E – ADNUR 421230N 1304810E – Vladivostok (KN) 432303N 1320708E
Flight Level Band	17,000 – 53,000 ft
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency)	
Remarks: Planned implementation date as part of project in 2015. Khabarovsk/Vladivostok airspace re-organisation project, (in map No. 6)	

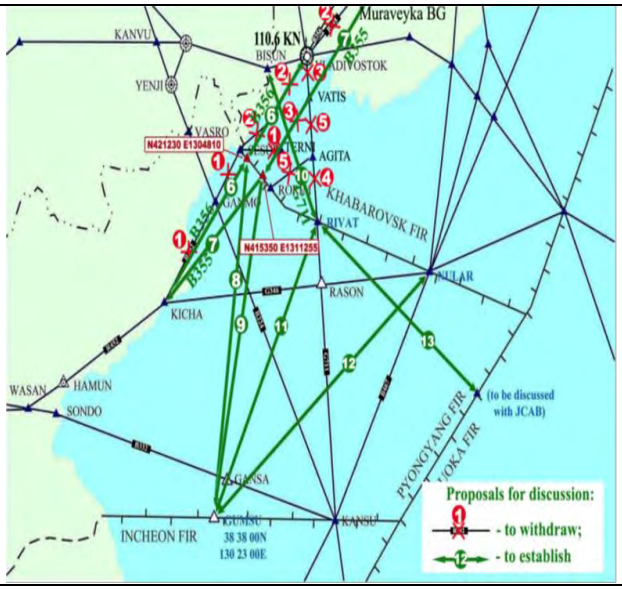
ATS Route Name	**FE0050 / RDGE 20.011**
State Priority	C
IATA Priority	
Requested by (when)	DPRK, Russia (01/09/2018)
States/Administrations Involved	Russia, DPRK (Khabarovsk, Pyongyang FIRs)
Route Description	Implementation of new uni-directional westbound ATS route for B355: Muraveyka (BG) 435303N 1331511E – VATIS 425143N 1320851E – TERNI 422213N 1314003E – BUMEP 415350N 1311255E – KICHA 404106N 1291140E
Flight Level Band	18,000 – 51,000 ft
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency)	
Remarks: Planned implementation date as part of project in 2015. Khabarovsk/Vladivostok airspace re-organisation project, (in map No. 7).	

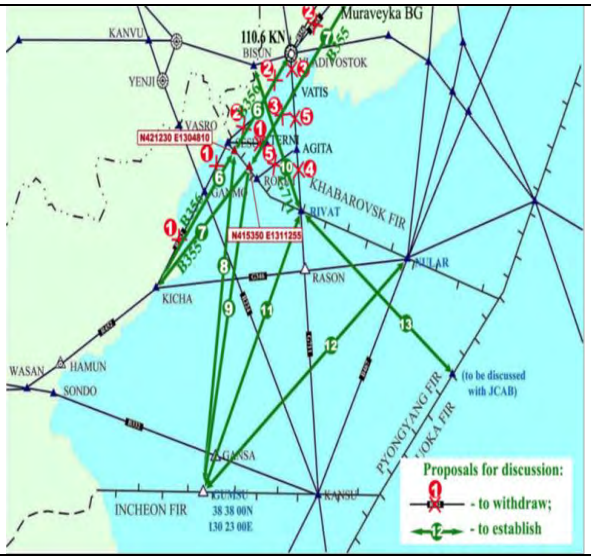
ATS Route Name	**FE0051 / RDGE 20.012**
State Priority	C
IATA Priority	
Requested by (when)	DPRK, Russia (01/09/2018)
States/Administrations Involved	Russia, DPRK (Khabarovsk, Pyongyang FIRs)
Route Description	Implementation of new uni-directional eastbound ATS route segment: ~~GUMSU~~ MESOV 383800N 1302300E – ADNUR 421230N 1304810E
Flight Level Band	29,000 – 53,000 ft
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency)	
Remarks: Planned implementation date as part of project in 2015. Khabarovsk/Vladivostok airspace re-organisation project, (in map No. 8). Implementation has not progressed as the connection/ continuation of this ATS route (implemented ATS routes end at FIR border over High Seas) into Incheon FIR still missing. No information was received from DPRK and South Korea (ROK) via the ICAO APAC Office. Implementation could not be progressed as no information from DPRK at RDGE/28.	

ATS Route Name	**FE0052 / RDGE 20.013**
State Priority	C
IATA Priority	
Requested by (when)	DPRK, Russia (01/09/2018)
States/Administrations Involved	Russia, DPRK (Khabarovsk, Pyongyang FIRs)
Route Description	BUMEP 415350N 1311255E – ~~GUMSU~~ MESOV 383800N 1302300E
Flight Level Band	28,000 – 51,000 ft
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency)	
Remarks: Khabarovsk/Vladivostok airspace re-organisation project, (in map No. 9). Implementation has not progressed as the connection/ continuation of this ATS route (implemented ATS routes end at FIR border over High Seas) into Incheon FIR still missing. No information was received from South Korea (ROK) via the ICAO APAC Office. Implementation could not be progressed as no information from DPRK at RDGE/28.	

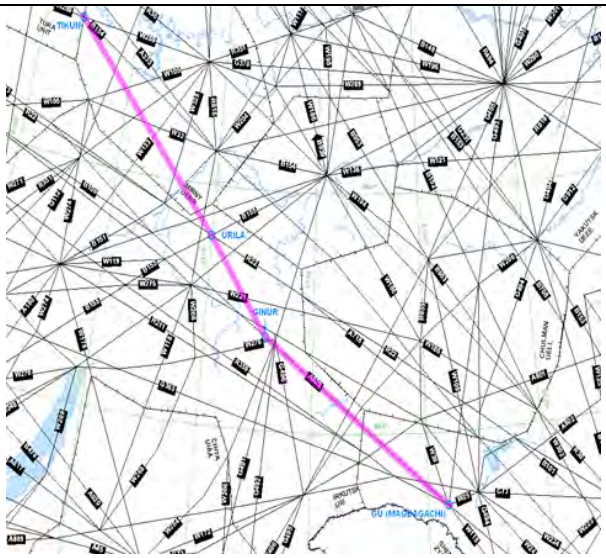
ATS Route Name	**FE0053 / RDGE 20.014**
State Priority	C
IATA Priority	
Requested by (when)	DPRK, Russia (01/09/2018)
States/Administrations Involved	Russia, DPRK (Khabarovsk, Pyongyang FIRs)
Route Description	New G711 BISUN 431400N 1311148E – TERNI 422213N 1314003E – RIVAT 412900N 1321600E
Flight Level Band	21,000 – 53,000 ft
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency)	
Remarks: Khabarovsk/Vladivostok airspace re-organisation project, (in map No. 10). Note: has this route been implemented as G705?	

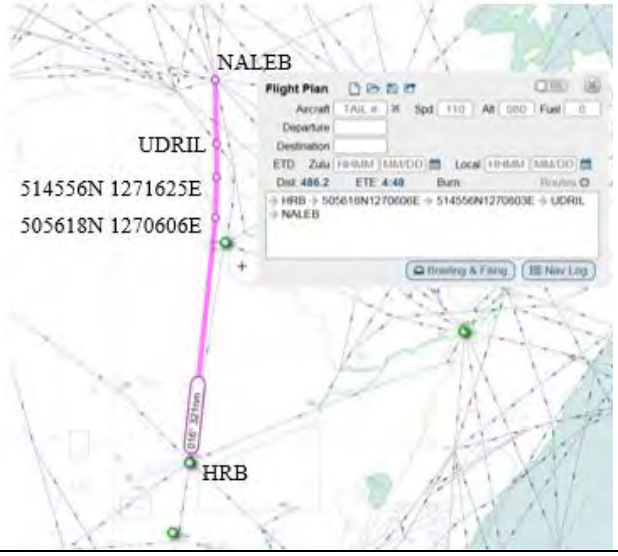
ATS Route Name	**FE0054 / RDGE 20.015**
State Priority	C
IATA Priority	
Requested by (when)	DPRK, Russia (01/09/2018)
States/Administrations Involved	Russia, DPRK (Khabarovsk, Pyongyang FIRs)
Route Description	Implementation of new bi-directional ATS route: RIVAT 412900N 1321600E – ~~GUMSU~~ MESOV 383800N 1302300E
Flight Level Band	21,000 – 53,000 ft
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency)	
Remarks: Khabarovsk/Vladivostok airspace re-organisation project, (in map No. 11). Planned implementation date 11 December 2014. Note: has this route been implemented as N513?	

ATS Route Name	**FE0055 / RDGE 20.016**
State Priority	C
IATA Priority	
Requested by (when)	DPRK, Russia (01/09/2018)
States/Administrations Involved	Russia, DPRK (Khabarovsk, Pyongyang FIRs)
Route Description	Implementation of new bi-directional ATS route: NULAR 405912N 1341100E – ~~GUMSU~~ MESOV 383800N 1302300E
Flight Level Band	28,000 – 53,000 ft
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency)	
Remarks: Khabarovsk/Vladivostok airspace re-organisation project, (in map No. 12). Planned implementation date 11 December 2014. Note: has this route been implemented as L771?	

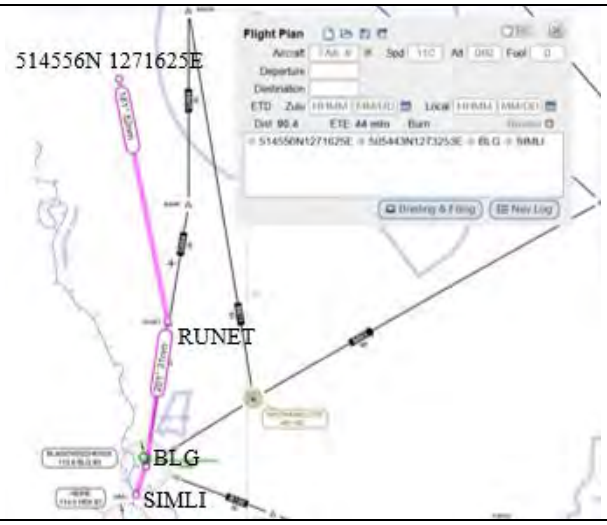
ATS Route Name	**FE0056 / RDGE 20.017**
State Priority	C
IATA Priority	
Requested by (when)	DPRK, Russia (01/09/2018)
States/Administrations Involved	Russia, DPRK, Japan (Khabarovsk, Pyongyang, Fukuoka FIRs)
Route Description	Implementation of new bi-directional ATS route segment: RIVAT 412900N 1321600E – New Waypoint (FIR BDRY between Pyongyang and Fukuoka)
Flight Level Band	
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency)	
Remarks: Khabarovsk/Vladivostok airspace re-organisation project, (in map No. 13), for further discussion with JCAB, Japan. Planned implementation date as part of project in 2015. Implementation could not be progressed as no information from China at RDGE/28.	

ATS Route Name	**RUS 03**
State Priority	C
IATA Priority	
Requested by (when)	IATA (01/09/2018)
States/Administrations Involved	Russia, DPRK, ROK (Khabarovsk, Pyongyang, Incheon FIRs)
Route Description	Muraveyka (BG) 435303.00N 1331511.00E – TELOD 421936.12N 1321148.12E – New Waypoint 1 (FIR BDRY between Khabarovsk and Pyongyang) – New Waypoint 2 (FIR BDRY between Pyongyang and Incheon) – Gangwon (KAE) 374202.70N 1284513.5E
Flight Level Band	28,000 – 46,000 ft
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency)	
Remarks: New Waypoint 2 (FIR BDRY between Pyongyang and Incheon) approximately 3838.0N 12924.7E. Potential City Pairs: North America – Incheon	

ATS Route Name	**RUS 10**
State Priority	C
IATA Priority	
Requested by (when)	Russia, IATA (01/09/2018)
States/Administrations Involved	~~China~~, Russia (Mirny, Irkutsk, Khabarovsk, ~~Shenyang~~ FIRs)
Route Description	TIKUN – URILA 585812.00N 1145812.00E – GINUR – Magdagachi (GU) 532814.00N 1254746.00E
Flight Level Band	
Benefit (fuel, environmental)	To reduce route distance of 150 NM as compared to current routing TIKUN – IVADA – TD – DIKUT.
Operational Information (potential airlines, flight frequency)	
Remarks: Part of IATA EUR-North Asia package-#EN10. China comment: Proposal can partly be withdrawn due to lack of CNS capabilities for the segment URILA-492000N 1270600E. Alternative proposal made. Russian Federation comment: Further studies/discussion required. Route segment inside the Russian Federation up to GU has been implemented, but implementation could not be progressed as no information from China was received for RDGE/26. RDGE/27 meeting in 2017. Waypoint TIKUN and GINUR need to be verified. Why is this in the APAC Route Catalogue if it doesn't affect APAC FIRs?	

ATS Route Name	**26.FE 01/APAC RUS 18**
State Priority	C
IATA Priority	
Requested by (when)	Russia (01/09/2018)
States/Administrations Involved	China, Russia (Khabarovsk, Shenyang FIRs)
Route Description	Harbin (HRB) 453736.00N 1261536.00E – New Waypoint 1 (FIR BDRY between Shenyang and Khabarovsk 505618.00N 1270606.00E) – New Waypoint 2 (514556.00N 1271625.00E) – UDRIL 522607.00N 1270803.00E – NALEB 534132.00N 1270522.00E
Flight Level Band	
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency)	
Remarks: New entry/exit point near SIMLI was discussed. The Russian Federation agreed with the China proposal regarding the opening of a new point with the following coordinates: 505618N 1270606E for the northbound flights. The Chinese side agreed to request ICAO APAC Office a 5LNC for the new point. Both sides agreed to exchange information on preparedness for opening of a new entry/exit point by the end of first quarter of 2018.	

ATS Route Name	**26.FE 02/APAC RUS 19**
State Priority	C
IATA Priority	
Requested by (when)	Russia (01/09/2018)
States/Administrations Involved	Russia, China (Khabarovsk, Shenyang FIRs)
Route Description	SIMLI 504724N 1272206E – PARIS 512001N 1300004E
Flight Level Band	
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency)	
Remarks: ~~New entry/exit point near SIMLI was discussed. The Russian Federation agreed with the China proposal regarding the opening of a new point with the following coordinates: 505618N 1270606E for the northbound flights. The Chinese side agreed to request ICAO APAC Office a 5LNC for the new point. Both sides agreed to exchange information on preparedness for opening of a new entry/exit point by the end of first quarter of 2018.~~	

ATS Route Name	**26.FE03/APAC RUS 20**
State Priority	C
IATA Priority	
Requested by (when)	Russia (01/09/2018)
States/Administrations Involved	Russia, China (Khabarovsk, Shenyang FIRs)
Route Description	New Waypoint (514556N 1271625E) – RUNET (505413N 1273328E) – Blagoveshchensk (BLG) 502336.00N 1272535.20E – SIMLI (504724N 1272206E)
Flight Level Band	
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency)	
Remarks: ~~New entry/exit point near SIMLI was discussed. The Russian Federation agreed with the China proposal regarding the opening of a new point with the following coordinates: 505618N 1270606E for the northbound flights. The Chinese side agreed to request ICAO APAC Office a 5LNC for the new point. Both sides agreed to exchange information on preparedness for opening of a new entry/exit point by the end of first quarter of 2018.~~	

ATS Route Name	**FE0063/25.011/APAC RUS 21**
State Priority	C
IATA Priority	
Requested by (when)	Russia (01/09/2018)
States/Administrations Involved	Russia, China (Khabarovsk, Shenyang FIRs)
Route Description	~~New waypoint east of SIMLI on FIR border between Shenyang FIR and Khabarovsk FIR as:~~ Harbin (HRB) 453736.00N 1261536.00E – New Waypoint (FIR BDRY between Shenyang and Khabarovsk 505618.00N 1270606.00E)
Flight Level Band	
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency)	
Remarks: SIMLI proposals are awaiting further development as per the outcomes of the bi-lateral meeting between China and Russian Federation conducted 25-26 July 2017, as reported to RDGE 27 by the Russian Federation. Implementation could not be progressed as no information from China at RDGE/28.	

ATS Route Name	**FE0064/25.012 APAC RUS 22**
State Priority	C
IATA Priority	
Requested by (when)	Russia (01/09/2018)
States/Administrations Involved	Russia, China (Khabarovsk, Shenyang FIRs)
Route Description	Implemetation of new uni-directional ATS Route: from China to New Waypoint HARBIN (505618N 1270606E) – New Waypoint (514556N 1271624E) – UDRIL (522607N 1270803E) to NALEB (534132N 1270522E)
Flight Level Band	
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency)	
Remarks: At the RDGE 27 the proposal was amended to reverse the traffic flow from China to NALEB. Implementation could not be progressed as no information from China at RDGE/28. Note: this proposal is similar to 26.FE 01/APAC RUS 18. Coordinates for New Waypoint HARBIN (505618N 1270606E) is actually the FIR BDRY between Shenyang and Khabarovsk. To be reviewed by RDGE.	Image

ATS Route Name	**FE0065/25.013/ APAC RUS 23**
State Priority	C
IATA Priority	
Requested by (when)	Russia (01/09/2018)
States/Administrations Involved	Russia, China (Khabarovsk, Shenyang FIRs)
Route Description	Implementation of new uni-directional ATS route: New Waypoint 1 (493236N 1281936E) – AMERA 501318.12N 1280842E – Srednebeloye (WZ) 503808.00N 1280207.00E – New Waypoint 2 (514556N 1271625E)
Flight Level Band	
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency)	
Remarks: SIMLI proposals are awaiting further development as per the outcomes of the bi-lateral meeting between China and Russian Federation conducted 25-26 July 2017, as reported to RDGE 27 by the Russian Federation. Implementation could not be progressed as no information from China at RDGE/28. Note: this proposal is similar to FE0030 / RDGE 18.020. To be reviewed by RDGE.	Image

ATS Route Name	**FE0066/25.014/ APAC RUS 24**
State Priority	C
IATA Priority	
Requested by (when)	Russia (01/09/2018)
States/Administrations Involved	Russia, China (Yakutsk, Khabarovsk, Shenyang FIRs)
Route Description	Implementation of new uni-directional ATS route: New Waypoint (493236N 1281936E) – PARIS 512001N 1300004E – RIDLO 535437N 1305710E – LUKUT 572708N 1323147E – TONPI 582002N 1325423E – BUMAD 602202N 1342605E – KURAK 624702N 1365106E – LURET 703729N 1475347E (Chokurdakh), and the further continuation on G494 to ORVIT.
Flight Level Band	
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency)	
Remarks: SIMLI proposals are awaiting further development as per the outcomes of the bi-lateral meeting between China and Russian Federation conducted 25-26 July 2017, as reported to RDGE 27 by the Russian Federation. Implementation could not be progressed as no information from China at RDGE/28.	Image

Chapter 6: Pacific

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

ATS Route Name	**WPC 01**
State Priority	C
IATA Priority	HIGH
Requested by (when)	IATA (30/07/2018)
States/Administrations Involved	Papua New Guinea, Indonesia, USA, Philippines, Japan, Taibei ACC (Port Moresby, Ujung Pandang, Oakland Oceanic, Manila, Fukuoka, Taibei FIR)
Route Description	Port Moresby (PY) 0927.2S 14712.9E – Vanimo (VNO) 0240.7S 14118.2E – Koror (ROR) 0722.1N 13433.0E – ENDAX 1415.0N 13000.0E – ~~ELMAS~~ BISIG 2027.0N 12500.0E – TINHO 2421.2N 12201.7E
Flight Level Band	FL250 – FL430
Benefit (fuel, environmental)	163 NM / 15 minutes, 1,604 kg fuel, 5,053 kg CO_2, 5,000 tonnes fuel, 15,700 tonnes CO_2 annually
Operational Information (potential airlines, flight frequency)	60 flights/week
Remarks: BISIG replaces the waypoint that was published in the ICAO route catalogue as that waypoint no longer exists. Potential City Pairs: Flights between Taipei and beyond to Papua New Guinea, Australia and New Zealand. May also be useable as an offload route for flights between Manila and Australasia. At ATM/SG/6: PNG positive, Indonesia positive, Japan are reviewing, Philippines and Taipei yet to be discussed.