



International Civil Aviation Organization

**The Third Meeting of the APANPIRG ATM Sub-Group
(ATM /SG/3)**

Bangkok, Thailand, 03-07 August 2015

Agenda Item 5: ATM Coordination (Meetings, Route Development, Contingency Planning)

SAIOACG-SEACG OUTCOMES

(Presented by the Secretariat)

SUMMARY

This paper presents an overview of the outcomes of the Fifth South Asia/Indian Ocean ATM Coordination Group (SAIOACG/5) and Twenty-Second Meeting of the South-East Asia ATM Coordination Group (SEACG/22) meetings.

1. INTRODUCTION

1.1 The Fifth Meeting of the South Asia/Indian Ocean ATM Coordination Group (SAIOACG/5) was held at Bangkok, Thailand from 03 to 05 March 2015. The meeting was attended by 35 participants from Bangladesh, Cambodia, India, Indonesia, Lao PDR, Maldives, Malaysia, Nepal, Singapore, Thailand, United States, ARINC, IATA, and ICAO.

1.2 The Twenty-Second Meeting of the South East Asia ATS Coordination Group (SEACG/22) was held at Bangkok, Thailand from 09 to 12 March 2015. Due to the resignation of the incumbent from the SEACG Chair, nominations for a new Chair were called. No nominations were received; therefore the meeting was moderated by the Secretariat. The meeting was attended by 43 participants from Bangladesh, Cambodia, Hong Kong China, Indonesia, Lao PDR, Malaysia, Philippines, Singapore, Thailand, Viet Nam, IATA, IFATCA, and ICAO.

2. DISCUSSION

Relevant Meeting Outcomes

2.1 The SAIOACG/5 and SEACG/22 meetings noted that since 2013, States had reported their implementation status of Aeronautical Information Management (AIM) Transition Steps; however every State was behind the expected implementation progress in terms of AIS-AIM Phase 1 and 2, and some regions such as South Asia and Southeast Asia had made poor progress. The meetings noted that in addition to the APANPIRG Deficiencies that were issued in 2014 related to AIM Phase 1 elements, both Phase 1 and 2 would be subject to Deficiencies in 2016.

2.2 Moreover, the meetings also noted from the Third Meeting of the Future Air Navigation Systems Interoperability Team-Asia (FIT-Asia/3) that in the event that data-link services were implemented without a competent Central Reporting Agency (CRA) service and a robust program of post-implementation performance monitoring, the service did not comply with Annex 11; thus some States such as Indonesia, the Maldives, Myanmar, Malaysia, Sri Lanka and Thailand may have this recorded as an APANPIRG Deficiency if the situation remains the case at the time of APANPIRG/26 (7-10 September 2015).

2.3 The Air Traffic Services (ATS) interface issues in the Bay of Bengal and South China Sea (SCS) that had been analysed by the Nineteenth Meeting of the Regional Airspace Safety Monitoring Advisory Group (RASMAG/19) were highlighted. SAIOACG/5 and SEACG/22 States were urged to support the ATS Inter-facility Data Communications (AIDC) Task Force and other measures to improve safety. India agreed to provide a paper to the ATM/SG/3 meeting on its implementation plans for Automatic Dependent Surveillance-Broadcast (ADS-B) ATS surveillance and Very High Frequency (VHF) communications installations on Great Nicobar Island.

2.4 Participants at both the SAIOACG/5 and SEACG/22 were urged to review the draft material provided by ICAO on the new Asia/Pacific electronic Regional Air Navigation Plan (eANP). This paper contains the following eANP drafts for consideration by the meeting and APANPIRG:

- **Attachment A:** eANP Excerpts;
- **Attachment B:** Volume I, Part I Table Gen I-1 FIRS;
- **Attachment C:** Table ATM I-1 FIR Descriptions;
- **Attachment D:** Volume II, Part IV Table ATM II-1 SSR Codes; and
- **Attachment E:** Volume II, Part IV, Table ATM II-ASIAPAC-2 ATS Routes.

Note: it is recommended that the FIR boundary information contained in Attachment C will be considered as draft until APANPIRG/27 (2016) because the draft data needs to be loaded into the ICAO Geographic Information System (GIS) and then assessed for accuracy in terms of FIR overlap, etc.

2.5 The latest developments from the Second Meeting of the Ad Hoc Afghanistan Contingency Group (AHACG/2) were discussed. The necessity for Pakistan and Afghanistan's attendance at the AHACG/3 meeting (Muscat, Oman, 11-14 May 2015) was underlined.

2.6 Regarding Search and Rescue (SAR), SAIOACG/5 and SEACG/22 noted the States proposed for SAR APANPIRG Deficiencies at the Third Meeting of the Asia/Pacific Regional Search and Rescue Task Force (APSAR/TF/3). Participants were urged to ensure that States attended the critical APSAR/TF/4 meeting (6-10 July 2015).

Seamless ATM Planning and Reporting

2.7 Noting that the Seamless ATM Plan version 1.0 had been endorsed by APANPIRG in June 2013 (Conclusion 24/54), an overview of the Seamless ATM planning and reporting required by States was provided. The meetings noted that the ICAO Asia/Pacific Regional Office had developed a web-based tool in an effort to ease the submission of Seamless ATM reports from States at https://portal.icao.int/RO_APAC/Reporting/Pages/default.aspx.

2.8 The SAIOACG/5 and SEACG/22 agreed tasks for States involved in Air Traffic Management (ATFM), AIM and civil/military cooperation (priority Aviation System Block Upgrade elements B0-NOPS, B0-DATM and B0-FRTO respectively) to provide updates to the relevant contributing bodies of APANPIRG on their progress in these areas against the Seamless ATM Plan.

Infrastructure and Automation

2.9 India provided information to SAIOACG/5 on the safety, efficiency and environmental benefits of the upper airspace improvements within the Kolkata and Delhi Flight Information Regions (FIRs). These included ATS automation, improved ATS surveillance, data link communications, Performance-based Navigation (PBN) ATS routes and Standard Instrument Departures (SIDs) and Standard Instrument Arrivals (and STARs), and the amalgamation of Area Control Centres (ACCs).

2.10 The Maldives also provided an update on their AIDC testing and ATS surveillance enhancements. Importantly, the Maldives discussed technical problems they were having with their new ADS-B and ADS-C (Contract) systems. India offered assistance in resolving these issues.

2.11 Indonesia presented information on the progress of implementation of ADS-B. A total of 31 ground ADS-B stations (30 duplicated and one unduplicated test-bed ground station). The meeting discussed the use of 10NM separation by Indonesia, noting that if the surveillance equipment met required standards and controllers were appropriately trained, that States should plan for implementation of the 5NM PANS-ATM standard. SEACG/22 recognized that 5NM was a minimum separation which would not be used unless appropriate between any aircraft pairs, and that the enhanced flexibility of this more efficient standard brought significant benefits to users, especially in complex and congested airspace.

2.12 IATA asked about the ADS-B mandate that had been promulgated, stating that if the intent of the AIP SUP regarding the Indonesian ADS-B mandate on 25 June 2015 was not mandatory at FL290 or above, then this was not clear and the AIP SUP may be misleading. A SEACG/22 side meeting confirmed that the mandate would remain, but that Indonesia would survey locally-based operators and if any were having difficulty with the mandate, then consideration for specific exemption procedures would be made. This issue would be raised by Indonesia with the ADS-B Implementation Team Indonesia.

Civil/Military Cooperation

2.13 India updated the SAIOACG on developments in civil/military cooperation in India and in particular, on Flexible Use Airspace (FUA). India described their *FUA Manual-India Version 1.0* and its acceptance by the National High Level Airspace Policy Body (NHLAPB). Recognising the potential of this manual to assist other Asia/Pacific States in civil/military cooperation, the SAIOACG requested that India present the manual as a template at the ATM/SG/3 meeting.

ATS Route Catalogue

2.14 The Secretariat presented draft Version 14 of the *Asia and Pacific Region ATS Route Catalogue* for review and update. The meetings noted the transition of Chapter A (ATS routes that had been designated by the Council) was being moved into the eANP, and that the remaining proposals within the ATS Route Catalogue could be updated by the Regional Office without reference to an APANPIRG Conclusion in future (**Attachment F**). SAIOACG/5 and SAIOACG/22 agreed to the following Draft Conclusion for consideration by the ATM Sub-Group and APANPIRG:

Draft Conclusion SAIOACG5/SEACG22-1: ATS Route Catalogue Version 14

That Version 14 of the *Asia and Pacific Region ATS Route Catalogue* at **Appendix X to the Report** replaces Version 13 on the Asia/Pacific Regional Office's web site, noting that:

- Chapter A had been transitioned to the electronic Air Navigation Plan (eANP); and
- the remaining ATS route proposals in the ATS Route Catalogue may be amended by the ICAO Regional Office without reference to an APANPIRG Conclusion in future.

2.15 ICAO Headquarters has advised that there will be a moratorium on the processing of Proposals for Amendment (PfAs) to the Asia/Pacific Region Basic Air Navigation Plan (BANP) for the period 1 August to 31 December 2015, in order to maintain a stable BANP during transition to the new eANP.

2.16 Two PfAs are in the final stages of the approval process, and may be approved by the President of the Council of ICAO. The formal processing of several PfAs that are still being developed by the proposing States, in consultation with the Regional Office, will be deferred until after the moratorium. The States concerned should continue to develop the PfAs in order to ensure readiness for the earliest formal circulation and submission. A summary of PfAs in progress is provided at **Attachment G** to WP21.

ATS Route Development

2.17 Hong Kong, China proposed reconfiguration of conventional ATS routes A461 and A583 to RNP10 at SEACG/22 to relieve increasing traffic demand. With the significant increase of traffic on the two routes there was an urgent need to raise their capacity. Hong Kong, China stated that the longitudinal separation was ten minutes, so reconfiguration of the ATS routes to RNP10 would increase the capacity of the two airways by over 35%. Hong Kong, China clarified that the proposal was only for route portions extending south of Hong Kong, China.

2.18 ICAO stated that it was normal not to assign a specific PBN specification in the Asia/Pacific Region Basic Air Navigation Plan and that this was a matter for States to establish in their AIP if necessary. Moreover, ICAO noted that some States like Australia did not normally assign a specific PBN value to routes in order to apply the most appropriate separation on a tactical basis. Indonesia noted that the application of RNP10-based separation would require an amendment to the coordination letter-of-agreement between Australia and Indonesia.

2.19 A PfA to the Asia/Pacific Region BANP had been approved, adding ATS route L649 from Brunei (BRU) VOR to waypoint LAXOR on ATS route M772.

Terms of Reference

2.20 SAIOACG/5 agreed to the following Draft Conclusion regarding the minor amendment to the Terms of Reference (TOR, appended as **Attachment H** to WP21):

Draft Decision SAIOACG5-2: SAIOACG Terms of Reference

That South Asia Indian Ocean Air Traffic Management Coordination Group (SAIOACG) Terms of Reference be amended in accordance with **Appendix C** to the Report.

2.21 Recognizing the need for high capacity major traffic flow routes (MTF) between Southeast Asia and East Asia, and the effect of the current modified single alternate Flight Level Orientation Scheme (FLOS) that caused conflicts with crossing traffic, the SAIOACG4/SEACG22 combined meeting had established under *Decision SAIOACG4/SEACG21-2 – Establishment of a Major Traffic Flow Review Group* a MTF Review Group (SCS MTFRG).

2.22 Unfortunately, progress was limited at the SCS MTFRG/1 by the non-participation of China and the lack of a clear TOR for the group. Therefore, after a submission by IATA and discussion at the SEACG/22, the meeting agreed that the TOR needed to be more concise, to ensure implementation plans and recommendations would be provided to SEACG that dealt with the important task of meeting Seamless ATM Plan expectations. SEACG/22 agreed with the following Decision (note: the TOR are appended as **Attachment I** to WP21):

Decision SEACG/22-1: SCS-MTFRG Terms of Reference

That the South China Sea Major Traffic Flow Review Group (SCS-MTFRG) Terms of Reference be adopted in accordance with **Appendix C** to the Report.

Future of the APANPIRG ATM Coordination Groups

2.23 SAIOAG/5 and SEACG/22 discussed the future of the SAIOAC and SEACG meetings, noting that there were a number of ‘informal’ (non-ICAO) ATM coordination meetings in existence. The Regional Sub-Office had been building more capability in managing day to day implementation matters, including crucial areas such as BN, ATS route development, Air Traffic Flow Management (ATFM) and Airspace Organisation and Management (AOM). Therefore, from 2016 it appeared that the RSO was best placed to manage the SAIOACG and SEACG Secretariat.

2.24 IATA expressed the strong view that regardless of whether the Regional Office or the RSO provided the Secretariat service, the ATM Coordination meetings must continue to be held at the Regional Office in Bangkok, to continue to take advantage of the associated accessibility, cost and convenience that permitted all relevant States to more readily attend. The SAIOACG/5 and SEACG/22 agreed with this view. The RSO highlighted that their staff were seconded from States and mission travel costs borne by the seconded State, emphasising that available funding might not be able to support many missions out of Beijing.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) discuss Draft Conclusion SAIOACG5/SEACG22-1: ATS Route Catalogue Version 14;
- c) discuss Draft Decision SAIOACG5-2: SAIOACG Terms of Reference; and
- d) discuss any relevant matters as appropriate.

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Asia and Pacific Regions ANP, VOLUME I

PART IV - AIR TRAFFIC MANAGEMENT (ATM)

1. INTRODUCTION

1.1 This part of the **Asia and Pacific ANP** constitutes the agreed regional requirements considered to be the minimum necessary for effective planning and implementation of air traffic management (ATM) facilities and services in the **Asia and Pacific Regions** and complements the provisions of ICAO SARPs and PANS related to ATM. It contains stable plan elements related to the assignment of responsibilities to States for the ATM system requirements to be applied within the ICAO **Asia and Pacific Regions** in accordance with Article 28 of the *Convention on International Civil Aviation* (Doc 7300) and mandatory requirements related to the ATM facilities and services to be implemented by States in accordance with regional air navigation agreements.

1.2 The dynamic plan elements related to the assignment of States' responsibilities for the implementation of the ATM system mandatory requirements based on regional air navigation agreements related to ATM are contained in **Asia and Pacific Regions ANP Volume II, Part IV - ATM**.

1.3 The **Asia and Pacific Regions ANP Volume III** contains dynamic/flexible plan elements related to the implementation of air navigation systems and their modernization in line with the ICAO Aviation System Block Upgrades (ASBUs) methodology and associated technology roadmaps described in the Global Air Navigation Plan. The Aviation System Block Upgrades (ASBU) modules are aimed at increasing capacity and improving efficiency of the aviation system whilst maintaining or enhancing safety level, and achieving the necessary harmonization and interoperability at regional and global level. This includes the regionally agreed ASBU modules applicable to the specified ICAO region/sub-region and associated elements/enablers necessary for the monitoring of the status of implementation of these ASBU modules.

Standards, Recommended Practices and Procedures

1.4 The Standards, Recommended Practices and Procedures (SARPs) and related guidance material applicable to the provision of ATM are contained in:

- a) Annex 2 — *Rules of the Air*;
- b) Annex 6 — *Operation of Aircraft*;
- c) Annex 11 — *Air Traffic Services*;
- d) *Procedures for Air Navigation Services — Air Traffic Management* (PANS-ATM) (Doc 4444);
- e) *Procedures for Air Navigation Services — Aircraft Operations* (PANS-OPS) (Doc 8168); and
- f) *Regional Supplementary Procedures* (Doc 7030).

2. GENERAL REGIONAL REQUIREMENTS

2.1 The description of the current Flight Information Regions (FIR)/Upper Information Regions (UIR), as approved by the ICAO Council, are contained in **Table ATM I-1** and depicted in the **Charts ATM I-1** and **ATM I-2**, respectively.

2.2 States should ensure that the provision of air traffic services (ATS) covers its own territory and those areas over the high seas for which it is responsible for the provision of those services, in accordance with **Charts ATM I-1** and **ATM I-2**.

Regional ATS Routes and organized track structures

2.3 PIRGs are responsible for the optimization of the traffic flows through the continuous improvement of the regional ATS route network and organized track systems and implementation of random routing areas and free route airspace in the Region(s). Where applicable, details of the ATS routes within the Region(s) are contained in Volume II.

ICARD Global Database

2.4 The five-letter name-codes assigned to significant points should be coordinated through the ICAO Regional Office(s) and obtained from the ICAO International Codes and Routes Designators (ICARD) Global Database.

Aircraft Identification - SSR Code Assignments

2.5 The management of Secondary Surveillance Radar (SSR) codes is a key element of ATM in order to ensure continuous and unambiguous aircraft identification. The requirements related to the SSR code assignment system used in the Region(s) is contained in Volume II.

Performance-based Navigation (PBN)

2.6 PIRGs are responsible for the development of the Regional PBN Plan. States' PBN Plans should be consistent with the Regional PBN Plan.

Flexible Use of Airspace

2.7 States should implement civil/military cooperation and coordination mechanisms to enhance the application of the Flexible Use of Airspace concept, which will contribute to more direct routing with a commensurate saving in fuel and associated emissions. States should arrange for close liaison and coordination between civil ATS units and relevant military operational control and/or air defence units in order to ensure integration of civil and military air traffic or its segregation, if required. Such arrangements would also contribute to increasing airspace capacity and to improving the efficiency and flexibility of aircraft operations.

Reduced Vertical Separation Minimum (RVSM)/Regional Monitoring Agencies

2.8 The **Asia and Pacific Regions** Regional Monitoring Agency(ies) is (are) the designated Regional Monitoring Agency(ies) (RMA) responsible for monitoring the height-keeping performance and approval status of aircraft operating at these levels, in order to ensure that the continued application of RVSM meets the agreed regional safety objectives as set out by the **Asia and Pacific Regions** PIRG.

3. SPECIFIC REGIONAL REQUIREMENTS

3.1 TBD (if necessary)

Table ATM I-1 FLIGHT INFORMATION REGIONS (FIR)/UPPER INFORMATION REGIONS (UIR) IN THE (NAME) REGION(S)

EXPLANATION OF THE TABLE

Column:

1 Name of the FIR/UIR / Location Indicator according to Doc 7910

2 Description of FIR/UIR lateral limits;

a. Describe separately in the table the limits of the UIRs if they are not similar to the FIRs limits.

3 Remarks — additional information, if necessary.

a. Describe vertical limits if necessary.

ASIA AND PACIFIC ANP, VOLUME II

PART IV - AIR TRAFFIC MANAGEMENT (ATM)

1. INTRODUCTION

1.1 This part of the **Asia and Pacific** ANP, Volume II, complements the provisions in ICAO SARPs and PANS related to air traffic management (ATM). It contains dynamic plan elements related to the assignment of responsibilities to States for the provision of ATM facilities and services within a specified area in accordance with Article 28 of the *Convention on International Civil Aviation* (Doc 7300); and mandatory requirements related to ATM facilities and services to be implemented by States in accordance with regional air navigation agreements. Such agreement indicates a commitment on the part of the State(s) concerned to implement the requirement(s) specified.

2. GENERAL REGIONAL REQUIREMENTS

Optimization of traffic flows

2.1 The Planning and Implementation Regional Groups (PIRG), through regional air navigation agreement, are responsible for the optimization of the traffic flows through the continuous improvement of the regional ATS route network and organized track systems and implementation of random routing areas and free route airspace in the Region(s) through the set-up of appropriate mechanisms for regional and inter-regional planning and coordination.

2.2 Whenever practicable, States should, in close coordination with operators, establish the most efficient routings.

2.3 The requirements for regional ATS route network, in particular, for ATS routes over the high seas and airspace of undetermined sovereignty, should be agreed upon through regional air navigation agreement.

Note: States' AIPs and other States publications should be consulted for information on the implemented ATS routes.

Aircraft Identification-SSR Code Management

2.4 Within the context of air traffic management (ATM) and the provision of air traffic services (ATS), SSR code management is a key element of ATM to ensure continuous, unambiguous aircraft identification. The number of secondary surveillance radar (SSR) codes is limited and poor management of the assignment of SSR codes results in capacity constraints and aircraft delays. States and air navigation service providers (ANSP) should apply the SSR Code Allocation Plan approved by the APANPIRG. The SSR Codes Allocation Plan of the Asia and Pacific Regions is addressed in the Specific Regional Requirements of Volume II.

3. SPECIFIC REGIONAL REQUIREMENTS

Optimization of traffic flows

3.1 The ATS routes agreed through regional air navigation or bi/multi-lateral agreement as appropriate within sovereign airspace (including those not implemented for specific reasons) are listed in Table ATM II-APAC-XX/electronic database and reflected in the Chart ATM II-XX. Proposed ATS routes that have not been agreed are listed in the Asia/Pacific ATS Route Catalogue, available on the ICAO APAC Regional Office website.

3.2 Selection of designators shall be in accordance with Annex 11, Appendix 1 and can be made from the following allocation table (until such time as APAC ATS route designators are managed by ICAO International Codes and Routes Designators (ICARD)):

Letter	
Conventional (A, B, G, R - ref Appendix 2, Annex 11)	200-224, 325-349, 450-474, 575-599
RNAV (L, M, N, P)	500-524, 625-649, 750-774, 875-899

3.3 ATS route proposals shall be considered for designation as RNAV routes and not conventional routes wherever practicable. Three number designators should be used, but a zero ('0') shall not be the first number.

3.4 States must complete appropriate bilateral coordination with neighbouring States/FIRs before submitting a regional ATS route proposal, for change, deletion or addition, to the ICAO APAC Office. A Regional Air Navigation Plan 'Amendment Proposal Template' is available on the ICAO APAC website under 'APAC Electronic Documents'.

Aircraft Identification-SSR Code Management

3.5 The SSR Codes Allocation Plan of the Asia and Pacific Regions is in Table ATM II-APAC-2.

EXAMPLES FOR SPECIFIC REGIONAL REQUIREMENTS

Table ATM II - ASIA/PAC-2 - SSR Code Allocation Plan

EXAMPLE FOR SPECIFIC REGIONAL REQUIREMENTS

Table ATM II -ASIA/PAC- 2 (NAME) Region ATS Routes

TABLE GEN I-1 - FLIGHT INFORMATION REGIONS (FIR) OF THE ICAO ASIA AND PACIFIC REGIONS

Column		
1	State	Name of State
2	FIR/UIR	Name of FIR

STATE	FIR/UIR
Afghanistan	KABUL
Australia	BRISBANE
Australia	MELBOURNE
Bangladesh	DHAKA
Cambodia	PHNOM PENH
China	BEIJING
China	GUANGZHOU
China	HONG KONG
China	KUNMING
China	LANZHOU
China	SANYA
China	SHANGHAI
China	SHENYANG
China	URUMQI
China	WUHAN
Taiwan	TAIBEI
Democratic People's Republic of Korea	PYONGYANG
French Polynesia (Administered by France)	TAHITI
India	CHENNAI
India	DELHI
India	KOLKATA
India	MUMBAI
Indonesia	JAKARTA
Indonesia	UJUNG PANDANG
Fiji	NADI
Japan	FUKUOKA
Lao People's Democratic Republic	VIENTIANE
Malaysia	KOTA KINABALU
Malaysia	KUALA LUMPUR
Maldives	MALE
Mongolia	ULAANBAATAR
Myanmar	YANGON
Nauru	NAURU
Nepal	KATHMANDU
New Zealand	AUCKLAND OCEANIC
New Zealand	NEW ZEALAND
Pakistan	KARACHI
Pakistan	LAHORE
Papua New Guinea	PORT MORESBY
Philippines	MANILA
Republic of Korea	INCHEON

Singapore	SINGAPORE
Solomon Islands	HONIARA
Sri Lanka	COLOMBO
Thailand	BANGKOK
United States of America	ANCHORAGE OCEANIC
United States of America	OAKLAND OCEANIC
Viet Nam	HANOI
Viet Nam	HO CHI MINH

Table ATM I-1


FLIGHT INFORMATION REGIONS (FIR)/UPPER INFORMATION REGIONS (UIR) IN THE ASIA/PACIFIC REGIONS

EXPLANATION OF THE TABLE

Column:

- 1 Name of the FIR/UIR / Location Indicator according to Doc 7910
- 2 Description of FIR/UIR lateral limits;
 - a. Describe separately in the table the limits of the UIRs if they are not similar to the FIRs limits.
- 3 Remarks — additional information, if necessary.
 - a. Describe vertical limits if necessary.

FIR/UIR Location Indicator	Lateral limits coordinates	Remarks
1	2	3
Auckland Oceanic FIR	900000S — 1630000E 450000S — 1630000E 300000S — 1630000E 280000S — 1680000E 250000S — 1712500E 250000S — 1800000E 050000S — 1800000E 250000S — 1800000W 050000S — 1600000W 050000S — 1570000W 300000S — 1570000W 300000S — 1310000W 900000S — 1310000W 900000S — 1800000W	

<p>Auckland Oceanic FIR</p>	<p>S 30 00 00, W 131 00 00; S 90 00 00, W/E 00 00 00; (South Pole) S 30 00 00, E 163 00 00; S 28 00 00, E 168 00 00; S 25 00 00, E 171 25 00; S 25 00 00, E 180 00 00; S 15 32 45.1, W 175 40 31.2; (Niufo'ou) S 05 00 00, W 171 00 00; S 05 00 00, W 157 00 00; S 30 00 00, W 157 00 00; S 30 00 00, W 131 00 00.</p>	
<p>Bangkok FIR</p>	<p>095600N 0983300E</p>	
<p>Bangkok FIR</p>	<p>N 10 00 10.2, EASTING? thence following the national boundary to N 10 00 07.1, E 102 14 47.6; N 07 00 00, E 103 00 00; N 06 45 00, E 102 40 00; N 06 15 00, E 102 15 00; thence following the national boundary to N 06 30 07.9, E 099 29 48.9; N 07 15 07.9, E 097 59 49.5; N 10 00 06.9, E 096 29 50.1; N 10 00 10.2 EASTING?</p>	

<p>Beijing FIR</p>	<p>452500N — 1151900E 431500N — 1173100E 395400N — 1192100E 393000N — 1195200E 381500N — 1200000E 372900N — 1173000E 363200N — 1151800E 362100N — 1145500E 360600N — 1142100E 345400N — 1124700E 340000N — 1102900E 343200N — 1101500E 353200N — 1101800E 372800N — 1104400E 382200N — 1103600E 384400N — 1094100E 402000N — 1070100E 404300N — 1055500E 414400N — 1051300E</p>	
<p>Beijing FIR</p>	<p>N 45 23 17, E 115 21 15; N 43 14 42, E 117 31 00; N 39 54 00, E 119 21 00; N 39 30 00, E 119 52 00; N 38 15 00, E 120 00 00; N 37 29 12, E 117 30 00; N 36 40 00, E 115 24 00; N 36 04 00, E 113 48 36; N 34 32 00, E 110 15 00; N 35 32 00, E 110 18 00; N 37 28 00, E 110 44 00; N 38 22 00, E 110 36 00; N 38 44 00, E 109 41 00; N 40 18 42, E 107 00 12; N 40 43 00, E 105 55 00; N 41 44 51, E 105 13 45; thence following the national boundary to</p>	

	N 45 23 17 E 115 21 15;	
<p>Brisbane FIR</p> <p>120000S — 1143000E</p> <p>120000S — 1232000E</p> <p>092000S — 1265000E</p> <p>070000S — 1350000E</p> <p>095000S — 1394000E</p> <p>095000S — 1410000E</p> <p>093700S — 1410000E</p> <p>thence along COAST</p> <p>091600S — 1420300E</p> <p>091900S — 1424800E</p> <p>090800S — 1435200E</p> <p>092400S — 1441400E</p> <p>095700S — 1440500E</p> <p>thence along BARRIER REEF, to</p> <p>113000S — 1440200E</p> <p>114300S — 1440400E</p> <p>120000S — 1440000E</p> <p>120000S — 1550000E</p> <p>140000S — 1550000E</p> <p>140000S — 1611500E</p> <p>175000S — 1630000E</p> <p>300000S — 1630000E</p> <p>450000S — 1630000E</p> <p>443400S — 1500000E</p> <p>435100S — 1504000E</p> <p>430000S — 1510000E</p> <p>381100S — 1501900E</p> <p>365700S — 1504500E</p> <p>thence along the minor arc of a circle of 120.0NM radius centred on</p> <p>351900S — 1525600E</p> <p>342100S — 1514000E</p> <p>335900S — 1520100E</p> <p>333500S — 1515400E</p> <p>332800S — 1514800E</p>		

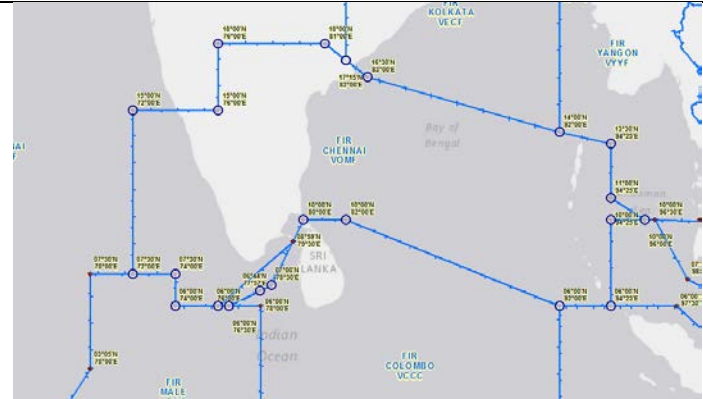
	<p> 331500S — 1512600E 331200S — 1511400E 332000S — 1504200E 332700S — 1503300E 320600S — 1485000E 290000S — 1463200E 290000S — 1433000E 261400S — 1382300E 221800S — 1363800E 212800S — 1360900E 211100S — 1313400E 215100S — 1305800E 231300S — 1282800E 232200S — 1262900E 232700S — 1241500E 215300S — 1222500E thence along the minor arc of a circle of 15.0 NM radius centred on 213300S — 1220100E 202600S — 1204500E 182300S — 1182500E 175300S — 1182200E 140800S — 1150900E </p>	
Brisbane FIR	<p> S 14 08 13, E 115 08 32; S 12 00 00, E 114 30 00; S 12 00 00, E 123 20 00; S 09 20 00, E 126 50 00; S 07 00 00, E 135 00 00; S 09 50 00, E 139 40 00; S 09 50 00, E 141 00 00; S 09 37 00, E 141 01 06; S 09 15 42, E 142 03 30; S 09 12 48, E 142 06 24; S 09 11 54, E 142 08 36; S 09 12 00, E 142 10 18; S 09 11 24, E 142 12 54; </p>	

	S 09 11 36, E 142 14 06; S 09 13 54, E 142 16 24; S 09 16 06, E 142 20 42; S 09 22 06, E 142 29 42; S 09 21 48, E 142 31 30; S 09 22 36, E 142 33 30; S 09 21 24, E 142 35 30; S 09 20 24, E 142 41 42; S 09 20 18, E 142 43 54; S 09 19 24, E 142 48 18; S 09 08 00, E 143 52 30; S 09 24 00, E 144 14 00; S 09 56 34, E 144 05 21; S 10 05 15, E 143 58 52; S 10 08 50, E 143 57 11; S 10 17 51, E 143 54 45; S 10 22 44, E 143 55 25; S 10 26 38, E 143 54 24; S 10 31 10, E 143 54 41; S 10 34 57, E 143 55 36; S 10 41 14, E 143 58 10; S 10 46 41, E 143 59 59; S 10 52 05, E 144 00 46; S 10 59 00, E 144 02 00; S 11 02 24, E 144 02 33; S 11 06 37, E 144 03 51; S 11 11 07, E 144 04 21; S 11 14 13, E 144 03 38; S 11 15 10, E 144 03 07; S 11 29 35, E 144 01 31; S 11 30 00, E 144 01 36; S 11 43 30, E 144 04 20; S 12 00 00, E 144 00 00; S 12 00 00, E 155 00 00; S 14 00 00, E 155 00 00; S 14 00 00, E 161 15 00;	
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	S 17 40 00, E 163 00 00; S 45 00 00, E 163 00 00; S 45 00 00, E 150 00 00; S 44 33 57, E 150 00 00; S 43 51 03, E 150 39 53; S 43 00 00, E 151 00 00; S 38 11 19, E 150 19 14; S 36 56 43, E 150 45 03; then along the minor arc of a circle of 120.00NM radius centred on S 34 57 00, E 150 32 00 (NWA/TAC) to S 35 18 59, E 152 55 50; S 34 28 22, E 151 49 29; then along the major arc of a circle of 45.00NM radius centred on S 33 56 38, E 151 10 57 (SY/DME) to S 33 25 39, E 150 31 47; S 32 05 40, E 148 49 51; S 29 00 00, E 146 32 00; S 29 00 00, E 143 30 00; S 26 13 31, E 138 23 24; S 22 17 51, E 136 38 07; S 21 51 32, E 136 22 25; S 21 29 59, E 136 19 44; S 21 12 09, E 131 50 24; S 23 13 13, E 128 27 49; S 23 23 49, E 126 03 32; S 21 31 19, E 124 33 04; S 20 03 18, E 121 40 22; S 19 00 00, E 120 15 00; S 14 08 13, E 115 08 32.	
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Chennai FIR

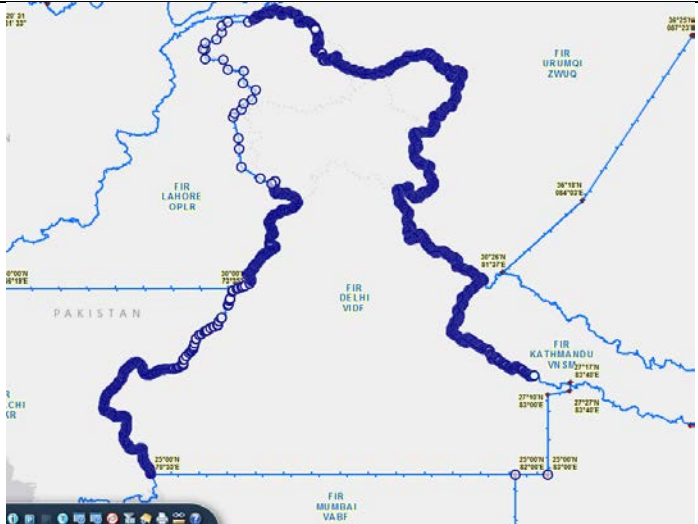
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133000N — 094250E
110000N — 094250E
100000N — 096000E
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060000N — 094250E
060000N — 092000E
100000N — 082000E
100000N — 080000E
070000N — 078300E
064400N — 077570E
060000N — 076300E
060000N — 076000E
060000N — 074000E
073000N — 074000E
073000N — 072000E
150000N — 072000E
150000N — 076000E
180000N — 076000E
180000N — 081000E



Chennai FIR

N 18 00 00, E 076 00 00;
N 19 19 00, E 076 00 00;
N 19 43 00, E 077 10 00;
N 18 43 00, E 082 00 00;
N 18 41 00, E 082 49 00;
N 15 42 00, E 085 54 00;
N 14 00 00, E 092 00 00;
N 13 30 00, E 094 25 00;
N 06 00 00, E 094 25 00;
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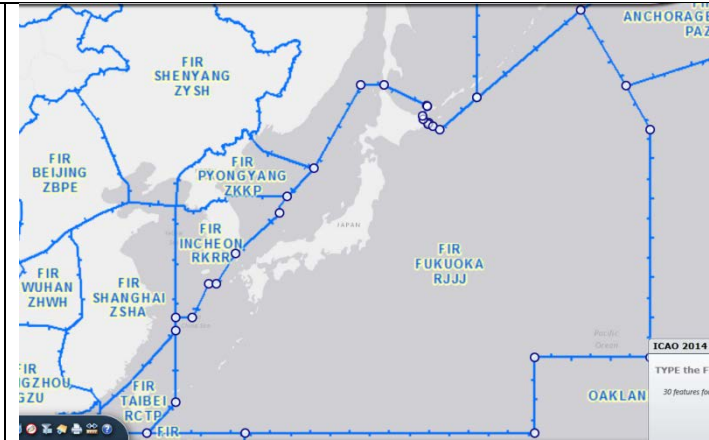
	<p>N 07 30 00, E 074 00 00; N 07 30 00, E 072 00 00; N 15 00 00, E 072 00 00; N 15 00 00, E 073 35 00; N 16 17 00, E 073 00 00; N 16 22 00, E 073 34 00; N 16 26 00, E 074 11 00; N 16 36 00, E 075 28 00; N 16 40 00, E 076 00 00; N 18 00 00, E 076 00 00;</p>	
<p>Colombo FIR (Coordinate correct as per the Sri Lanka Letter ref: DM/SD/5/1-2-2-2 (CA/15/0354) dated June 30, 2015)</p>	<p>N 06 44 00, E 077 57 00; N 07 00 00, E 078 30 00; N 10 00 00, E 080 00 00; N 10 00 00, E 082 00 00; N 06 00 00, E 092 00 00; S 02 00 00, E 092 00 00; S 02 00 00, E 078 00 00; N 06 00 00, E 078 00 00; N 06 00 00, E 076 30 00; N 06 44 00, E 077 57 00.</p>	

<p>Delhi FIR</p>	<p>250000N — 0830000E 250000N — 0820000E 250000N — 0705500E Along national boundary to (Pakistan/India) 300000N — 0733500E</p>	 <p>The map displays the Delhi FIR (VIDF) boundary in blue. It is situated between the FIR Lahore (OPLR) to the west and the FIR Kathmandu (VN SM) to the east. The boundary follows the national border with Pakistan to the west and south. Other FIRs shown include Urumqi (ZUWQ) to the northeast and Mumbai (VARF) to the south. The map includes latitude and longitude coordinates for various points along the boundary.</p>
<p>Delhi FIR</p>	<p>N 25 00 00, E 070 55 00; thence following the national boundary to N 27 25 00, E 083 40 00; N 27 15 00, E 083 40 00; N 27 10 00, E 083 00 00; N 25 00 00, E 083 00 00; N 25 00 00, E 070 55 00.</p>	

<p>Dhaka FIR</p>	<p>210000N — 0920000E 200000N — 0920000E 213800N — 0891000E 262200N — 0880200E 253800N — 0895200E 215700N — 0923200E</p>	
<p>Dhaka FIR</p>	<p>N 21 00 00, E 092 00 00; N 21 38 00, E 089 10 00; thence following the national boundary to N 22 09 00, E 092 37 00; N 21 00 00, E 092 00 00.</p>	

Fukuoka FIR

N 45 00 00, E 150 00 00;
N 50 05 00, E 159 00 00;
N 45 42 00, E 162 55 00;
N 43 00 00, E 165 00 00;
N 27 00 00, E 165 00 00;
N 27 00 00, E 155 00 00;
N 21 00 00, E 155 00 00;
N 21 00 00, E 130 00 00;
N 21 00 00, E 121 30 00;
N 23 30 00, E 124 00 00;
N 29 00 00, E 124 00 00;
N 30 00 00, E 124 00 00;
N 30 00 00, E 125 25 00;
N 32 30 00, E 126 50 00;
N 32 30 00, E 127 30 00;
N 34 40 00, E 129 10 00;
N 37 30 00, E 133 00 00;
N 38 38 00, E 133 39 00;
N 40 30 00, E 135 56 00;
N 45 45 00, E 140 00 00;
N 45 45 00, E 142 00 00;
thence following the national boundary to
N 44 30 00, E 145 40 00;
N 44 27 00, E 145 44 00;
N 43 20 00, E 145 50 00;
N 43 12 00, E 146 13 00;
N 43 00 00, E 146 50 00;
N 45 00 00, E 150 00 00.




Guangzhou FIR


212500N	1113000E
203000N	1113000E
203000N	1080300E
Along national boundary	
231100N	1053200E
243900N	1054800E
252500N	1075300E
264100N	1091200E
275300N	1091900E
293100N	1092400E
292300N	1130600E
290200N	1143400E
264200N	1135700E
260300N	1140700E
250700N	1141800E
244600N	1150100E
242200N	1164200E
234200N	1171100E
234100N	1171300E
Along national boundary	



<p>Guangzhou FIR</p>	<p>N 23 11 45, E 105 32 30; N 24 39 00, E 105 48 00; N 25 42 00, E 107 39 00; N 26 35 00, E 109 19 00; N 28 47 00, E 109 23 00; N 29 31 00, E 109 24 00; N 29 23 00, E 113 07 12; N 29 02 00, E 114 34 00; N 26 42 00, E 113 57 00; N 26 03 00, E 114 07 00; N 25 46 00, E 114 52 24; N 25 05 30, E 115 25 00; N 24 40 24, E 115 24 30; N 24 22 00, E 116 42 00; N 23 42 00, E 117 11 00; N 23 30 00, E 117 30 00; N 23 00 00, E 117 30 00; N 22 24 30, E 115 40 00; N 22 24 30, E 114 30 00; thence following the Hong Kong SAR boundary to N 22 21 30, E 113 52 00; N 19 30 00, E 111 30 00; N 20 30 00, E 111 30 00; N 20 30 00, E 108 03 00; N 21 12 35, E 108 12 31; thence following the national boundary to N 23 11 45, E 105 32 30.</p>	<p>Hong Kong AOR established within Guangzhou FIR, Altitude limit 3900m and below, the coverage as follows: N 22 21 30, E 113 52 00; N 22 09 34, E 113 41 53; N 22 13 44, E 113 39 57; N 22 24 34, E 113 49 44; N 22 26 29, E 113 54 44; N 22 24 05, E 113 52 00; N 22 21 30, E 113 52 00</p>
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<p>Hanoi FIR</p>	<p>N 20 30 00, E 108 03 00; N 19 57 00, E 107 56 00; N 19 16 00, E 107 11 00; N 18 20 00, E 107 41 00; N 17 25 00, E 108 43 00; N 17 13 00, E 108 00 00; N 17 00 00, E 106 34 00; thence following the national boundary to N 23 11 00, E 105 32 00; thence following the national boundary to N 20 30 00, E 108 03 00.</p>	 <p>The map displays the Hanoi FIR boundary (FIR HANOI VVWV) in blue. It is situated in northern Vietnam, bordered by the Gulf of Thailand to the south. Neighboring FIRs include Kunming (ZPKM) to the northwest, Guangzhou (ZGZU) to the northeast, Vientiane (VLLV) to the west, Bangkok (VTBB) to the southwest, and Ho Chi Minh (VVTG) to the south. The boundary is defined by a series of latitude and longitude coordinates, with a break in the line between 105°32'E and 106°34'E. A legend in the bottom right corner of the map area reads 'ICAO 2014 ALL PTS by F'. The map also shows the coastline of Thailand to the west and south.</p>
<p>Hanoi FIR</p>	<p>N 21 32 00, E 108 00 00; thence following the national boundary to N 21 32 00, E 108 00 00; thence following the national boundary to N 17 00 00, E 106 24 00; N 17 00 00, E 107 18 00; N 17 13 00, E 108 00 00; N 21 32 00, E 108 00 00.</p>	

<p>Ho Chi Minh FIR</p>	<p>N 09 00 00, E 102 40 00; N 10 14 00, E 103 38 00; thence following the national boundary to N 17 00 00, E 106 34 00; N 17 13 00, E 108 00 00; N 17 25 00, E 108 43 00; N 14 30 00, E 112 00 00; N 14 30 00, E 114 00 00; N 10 30 00, E 114 00 00; N 07 00 00, E 108 00 00; N 07 00 00, E 103 00 00; N 09 00 00, E 102 40 00.</p>	
<p>Ho Chi Minh FIR</p>	<p>N 10 22 00, E 103 44 00; N 09 00 00, E 102 40 00; N 07 00 00, E 103 00 00; N 07 00 00, E 108 00 00; N 10 30 00, E 114 00 00; N 16 40 00, E 114 00 00; N 17 00 00, E 114 15 00; N 17 00 00, E 111 30 00; N 17 40 00, E 109 40 00; N 17 13 00, E 108 00 00; N 17 00 00, E 107 18 00; N 17 00 00, E 106 24 00; thence following the national boundary to N 10 22 00, E 103 44 00.</p>	

<p>Hong Kong FIR</p>	<p>230000N — 1173000E 210000N — 1173000E 193000N — 1113000E 212500N — 1113000E Along national boundary with China 234100N — 1171300E 233000N — 1173000E 231000N — 1173000E</p>	 <p>The map displays the Hong Kong FIR (Flight Information Region) in blue, covering the area around Hong Kong. It shows the coastline and the surrounding FIRs: FIR GUANGZHOU ZGZU to the north, FIR SAHYA HA to the west, and FIR TAIPEI RCTP to the east. The map also includes latitude and longitude coordinates for various points along the FIR boundary. A legend in the bottom right corner indicates 'ICAO 2019 ALL PTS'.</p>
<p>Hong Kong</p>	<p>N 23 40 00, E 117 30 00; N 21 00 00, E 117 30 00; N 16 40 00, E 114 00 00; N 19 30 00, E 111 30 00; N 21 25 00, E 111 30 00; thence following Special Administrative Region boundary to 3NM off-shore and the northern boundary of Macao and the Hong Kong Special Administrative Region to N 23 40 00, E 117 30 00.</p>	

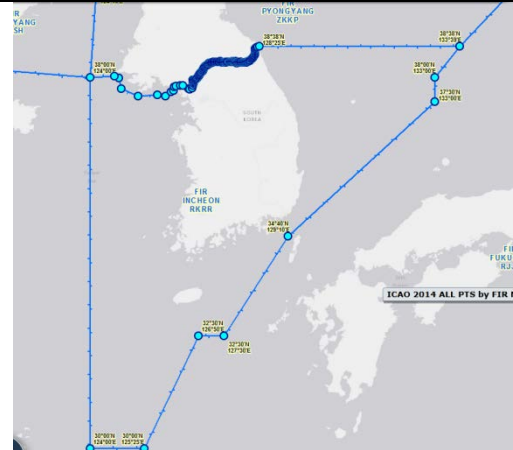
Honiara FIR



S 10 30 00, E 166 45 00;
S 11 48 00, E 166 52 00;
S 14 00 00, E 163 00 00;
S 14 00 00, E 161 15 00;
S 14 00 00, E 155 00 00;
S 12 00 00, E 155 00 00;
S 07 19 00, E 155 00 00;
S 06 56 00, E 155 36 00;
S 06 56 00, E 155 42 00;
S 06 51 00, E 155 55 00;
S 06 40 00, E 156 02 00;
E 06 33 00, E 156 02 00;
S 10 30 00, E 166 45 00;
S 10 30 00, E 166 45 00.



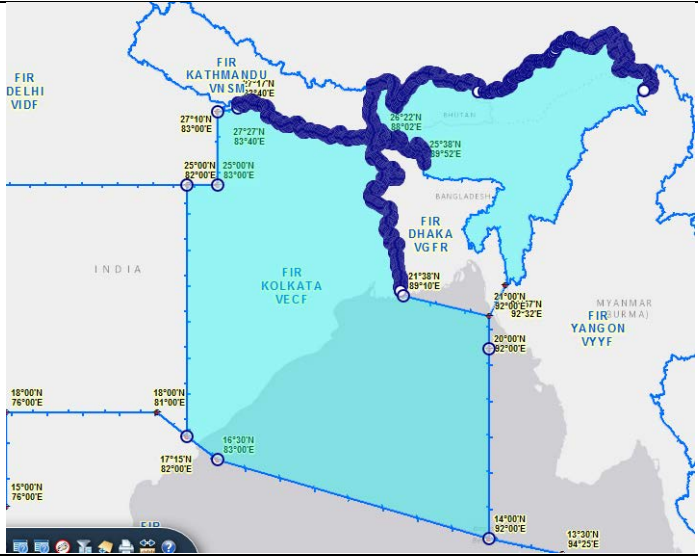
Incheon FIR

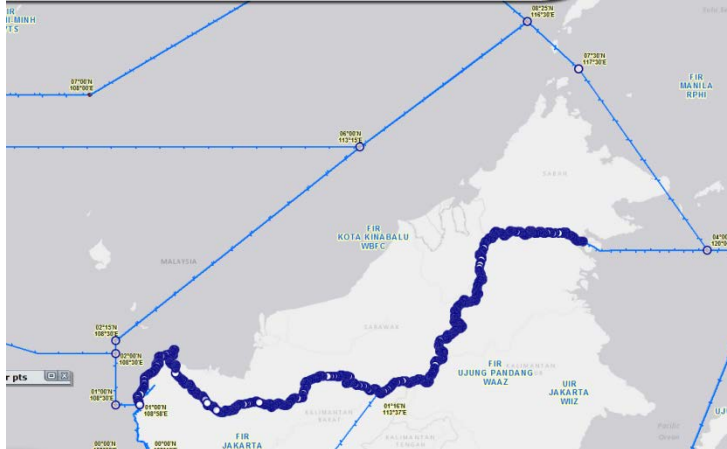
N 38 38 00, E 133 39 00;
N 38 00 00, E 133 00 00;
N 37 30 00, E 133 00 00;
N 34 40 00, E 129 10 00;
N 32 30 00, E 127 30 00;
N 32 30 00, E 126 50 00;
N 30 00 00, E 125 25 00;
N 30 00 00, E 124 00 00;
N 38 00 00, E 124 00 00;
N 38 38 00, E 128 25 00;
N 38 38 00, E 133 39 00.



<p>Jakarta FIR</p>	<p>N 01 38 00, E 102 20 00; S 00 50 00, E 106 00 00; N 01 00 00, E 108 58 00; N 01 16 00, E 113 37 00; S 03 00 00, E 110 23 00; S 08 20 00, E 110 23 00; S 12 00 00, E 114 30 00; S 12 00 00, E 110 00 00; S 12 00 00, E 107 00 00; S 02 00 00, E 092 00 00; N 06 00 00, E 092 00 00; N 06 00 00, E 094 25 00; N 06 00 00, E 097 30 00; N 01 38 00, E 102 20 00.</p>	
<p>Kabul FIR</p>	<p>N 30 00 00, E 066 19 00 thence following the national boundary to N 30 00 00, E 066 19 00.</p>	

<p>Karachi FIR</p>	<p>N 23 30 00, E 061 20 00; N 24 40 00, E 061 20 00; N 25 10 00, E 061 20 00; N 30 00 00, E 066 19 00; N 30 00 00, E 073 35 00; N 25 00 00, E 070 55 00; N 23 30 00, E 064 30 00; N 23 30 00, E 061 20 00.</p>	
<p>Kathmandu FIR</p>	<p>N 30 26 00, E 081 37 00; N 27 17 00, E 083 40 00; N 30 26 00, E 081 37 00.</p>	

<p>Kolkata FIR</p>	<p>253800N — 0895200E 262200N — 0880200E 213800N — 0891000E 200000N — 0920000E 140000N — 0920000E 163000N — 0830000E 171500N — 0820000E 250000N — 0820000E 250000N — 0830000E 271000N — 0830000E 272700N — 0834000E 271700N — 0834000E</p>	
<p>Kolkata FIR</p>	<p>EASTING? E 083 40 00 thence following the national boundary to EASTING? E 088 00 00; N 26 00 00 E 088 00 00; thence following the national boundary to N 26 00 00, EASTING? thence following the national boundary to N 21 38 00 E 089 10 00; N 21 00 00 E 092 00 00 N 14 00 00 E 092 00 00; N 15 42 00 E 085 54 00; N 18 41 00 E 082 49 00; N 18 43 00 E 082 00 00; N 25 00 00 E 082 00 00; N 25 00 00 E 083 00 00; N 27 10 00 E 083 00 00; N 27 15 00 E 083 40 00; then along EASTING?, E 083 40 00</p> <p>WHY IS THIS SPLIT INTO TWO</p>	

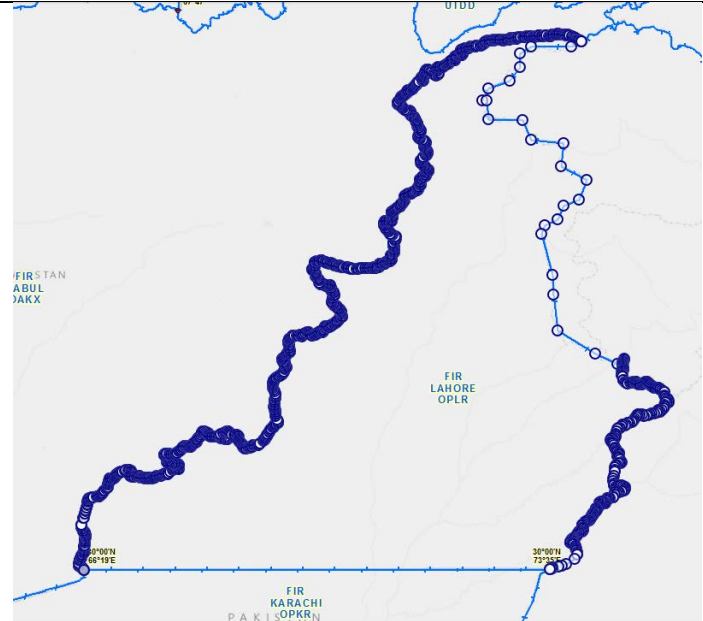
	<p>AREAS- IT NEEDS TO BE ONE POLYGON? EASTING?, E 088 00 00 thence following the national boundary to N 21 57 00 E 092 32 00; thence following the national boundary to N 26 00 00 E 088 00 00; EASTING?, E 088 00 00.</p>	
<p>Kota Kinabalu FIR</p>	<p>N 07 30 00, E 117 30 00; N 04 00 00, E 120 00 00; thence following the national boundary to N 01 16 00, E 113 37 00; thence following the national boundary to N 01 00 00, E 108 58 00; N 01 00 00, E 108 30 00; N 02 00 00, E 108 30 00; N 02 15 00, E 108 30 00; N 06 00 00, E 113 15 00; N 08 25 00, E 116 30 00; N 07 30 00, E 117 30 00.</p>	

<p>Kuala Lumpur FIR</p>	<p>N 10 00 00, E 094 25 00; N 10 00 00, E 096 00 00; N 10 00 00, E 096 30 00; N 07 15 00, E 098 00 00; N 06 27 00, E 099 36 00; thence following the national boundary to N 06 45 00, E 102 40 00; N 06 00 00, E 103 05 00; N 04 50 00, E 103 44 00; N 03 40 00, E 103 40 00; N 02 36 00, E 104 45 00; N 01 20 00, E 104 20 00; thence following the national boundary to N 01 13 00, E 103 30 00; N 01 38 00, E 102 20 00; N 06 00 00, E 097 30 00; N 06 00 00, E 094 25 00; N 10 00 00, E 094 25 00.</p>	<p>ICAO 2014 ALL PTS by FIR NAME: ICAO Council pts, Boundar</p>
<p>Kunming FIR</p>	<p>315400N — 1093100E 301700N — 1092900E 293100N — 1092400E 275300N — 1091900E 264100N — 1091200E 252500N — 1075300E 243900N — 1054800E 231100N — 1053200E</p>	

Kunming FIR	N 30 26 30, E 081 37 30; N 32 18 06, E 084 03 18; N 36 25 00, E 087 23 00; N 36 02 00, E 089 01 00; N 32 52 00, E 091 55 00; N 31 49 00, E 098 35 00; N 32 55 00, E 101 42 00; N 33 35 00, E 103 53 00; N 32 27 00; E 105 49 00; N 32 14 00; E 107 24 00; N 31 54 00, E 109 31 00; N 29 31 00, E 109 24 00; N 28 47 00, E 109 23 00; N 26 35 00, E 109 19 00; N 25 42 00, E 107 39 00; N 24 39 00, E 105 48 00; N 23 11 45, E 105 32 30; thence following the national boundary to N 30 26 30, E 081 37 30.	
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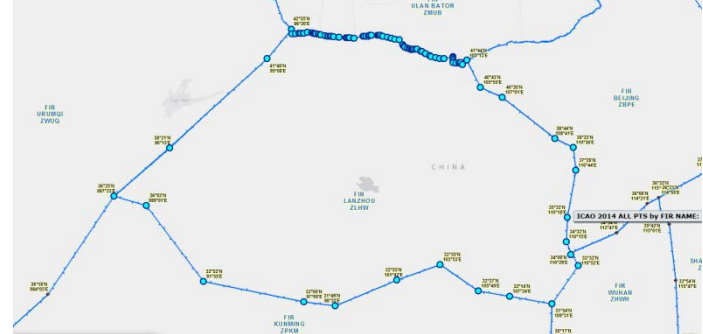
Lahore FIR

N 30 00 00, E 066 19 00;
thence following the national boundary to
N 30 00 00, E 073 35 00;
N 30 00 00, E 066 19 00.



Lanzhou FIR

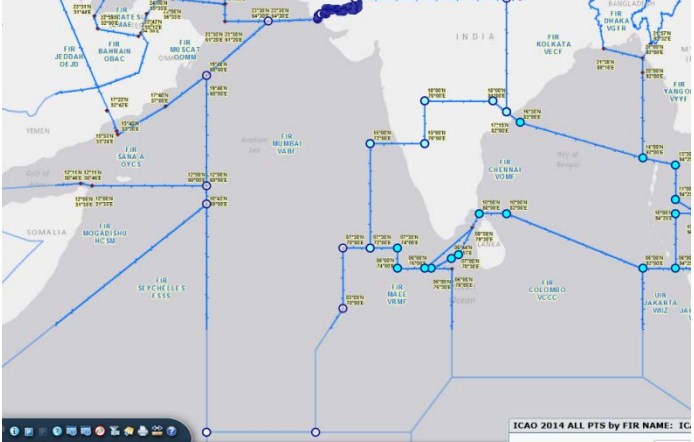
- 414400N — 1051300E
- 404300N — 1055500E
- 402000N — 1070100E
- 384400N — 1094100E
- 382200N — 1103600E
- 372800N — 1104400E
- 353200N — 1101800E
- 343200N — 1101500E
- 340000N — 1102900E
- 333200N — 1105200E
- 315400N — 1093100E
- 321400N — 1072400E
- 322700N — 1054900E
- 325500N — 1014200E
- 314900N — 0983500E
- 320000N — 0970000E
- 325200N — 0915500E
- 360200N — 0890100E



	<p>362500N — 0872300E 382100N — 0901300E 414800N — 0950800E 425500N — 0962000E 323200N — 1035300E</p>	
<p>Lanzhou FIR</p>	<p>N 41 44 51, E 105 13 45; N 40 43 00, E 105 55 00; N 40 18 42, E 107 00 12; N 38 44 00, E 109 41 00; N 38 22 00, E 110 36 00; N 37 28 00, E 110 44 00; N 35 32 00, E 110 18 00; N 34 32 00, E 110 15 00; N 34 05 00, E 110 29 00; N 33 32 00, E 110 52 00; N 31 54 00, E 109 31 00; N 32 14 00, E 107 24 00; N 32 27 00, E 105 49 00, N 33 35 00, E 103 53 00; N 32 55 00, E 101 42 00; N 31 49 00, E 098 35 00; N 32 52 00, E 091 55 00; N 36 02 00, E 089 01 00; N 36 25 00, E 087 23 00; N 38 21 00, E 090 13 00; N 41 48 00, E 095 08 00; N 42 55 00, E 096 20 14; thence following the national boundary to N 41 44 51, E 105 13 45</p>	

<p>Male FIR</p>	<p>N 06 00 00, E 076 30 00; N 06 00 00, E 078 00 00; S 02 00 00, E 078 00 00; S 06 00 00, E 075 00 00; S 06 00 00, E 068 00 00; N 03 05 00, E 070 00 00; N 07 30 00, E 070 00 00; N 07 30 00, E 072 00 00; N 07 30 00, E 074 00 00; N 06 00 00, E 074 00 00; N 06 00 00, E 076 00 00; N 06 00 00, E 076 30 00.</p>	
<p>Manila FIR</p>	<p>N 21 00 00, E 117 30 00; N 21 00 00, E 121 30 00; N 21 00 00, E 130 00 00; N 07 00 00, E 130 00 00; N 03 30 00, E 133 00 00; N 03 30 00, E 132 00 00; N 04 00 00, E 132 00 00; N 04 00 00, E 120 00 00; N 07 30 00, E 117 30 00; N 08 25 00, E 116 30 00; N 10 30 00, E 114 00 00; N 14 30 00, E 114 00 00; N 16 40 00, E 114 00 00; N 21 00 00, E 117 30 00.</p>	

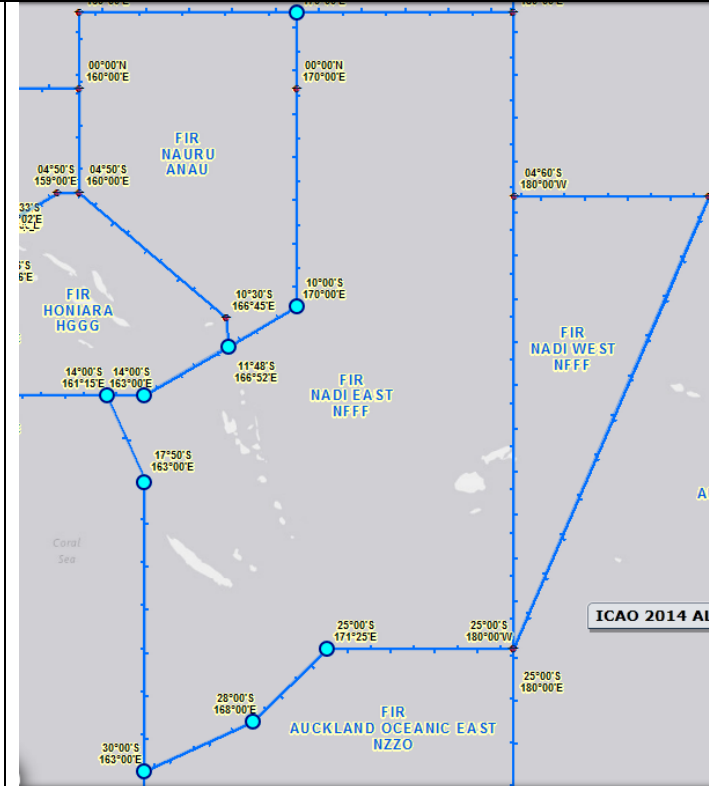
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Melbourne FIR	S 06 00 00 E 075 00 00; S 02 00 00 E 078 00 00; S 02 00 00 E 092 00 00; S 12 00 00 E 107 00 00; S 12 00 00 E 114 30 00; S 14 08 13 E 115 08 32; S 19 00 00 E 120 15 00; S 20 03 18 E 121 40 22; S 21 31 19 E 124 33 04; S 23 23 49 E 126 03 32; S 23 13 13 E 128 27 49; S 21 12 09 E 131 50 24; S 21 29 59 E 136 19 44; S 21 51 32 E 136 22 25; S 22 17 51 E 136 38 07; S 26 13 31 E 138 23 24; S 29 00 00 E 143 30 00; S 29 00 00 E 146 32 00; S 32 05 40 E 148 49 51; S 33 25 39 E 150 31 47; then along the major arc of a circle of 45.00NM radius centred on S 33 56 38 E 151 10 57; (SY/DME) to S 34 28 22 E 151 49 29; S 35 18 59 E 152 55 50; then along the minor arc of a circle of 120.00NM radius centred on S 34 57 00 E 150 32 00; (NWA/TAC) to S 36 56 43 E 150 45 03; S 38 11 19 E 150 19 14; S 43 00 00 E 151 00 00;	

	<p>S 43 51 03 E 150 39 53; S 44 33 57 E 150 00 00; S 45 00 00 E 150 00 00; S 45 00 00 E 163 00 00; S 90 00 00 E 135 00 00; S 06 00 00 E 075 00 00.</p>	
<p>Mumbai FIR</p>	<p>060000S — 0600000E 104200N — 0600000E 120000N — 0600000E 194800N — 0600000E 233000N — 0643000E 250000N — 0705500E 250000N — 0820000E 171500N — 0820000E 180000N — 0810000E 180000N — 0760000E 150000N — 0760000E 150000N — 0720000E 073000N — 0720000E 073000N — 0700000E 030500N — 0700000E 060000S — 0680000E</p>	 <p>ICAO 2014 ALL PTS by FIR NAME: IC</p>
<p>Mumbai FIR</p>	<p>N 19 48 00 E 060 00 00; N 23 30 00 E 064 30 00; N 23 40 00 E 068 10 00; Thence following the coast to N 23 30 00 E 068 23 00; thence following the national boundary to N 25 00 00, E 070 55 00; N 25 00 00, E 082 00 00; N 18 43 00, E 082 00 00; N 19 43 00, E 077 10 00; N 19 19 00, E 076 00 00; N 18 00 00, E 076 00 00; N 16 40 00, E 076 00 00; N 16 36 00, E 075 28 00;</p>	

N 16 26 00, E 074 11 00;
 N 16 22 00, E 073 34 00;
 N 16 17 00, E 073 00 00;
 N 15 00 00, E 073 35 00;
 N 15 00 00, E 072 00 00;
 N 07 30 00, E 072 00 00;
 N 07 30 00, E 070 00 00;
 N 03 05 00, E 070 00 00;
 N/S 00 00 00, E 068 00 00;
 S 06 00 00, E 068 00 00;
 S 06 00 00, E 060 00 00;
 N 19 48 00, E 060 00 00.

Nadi FIR

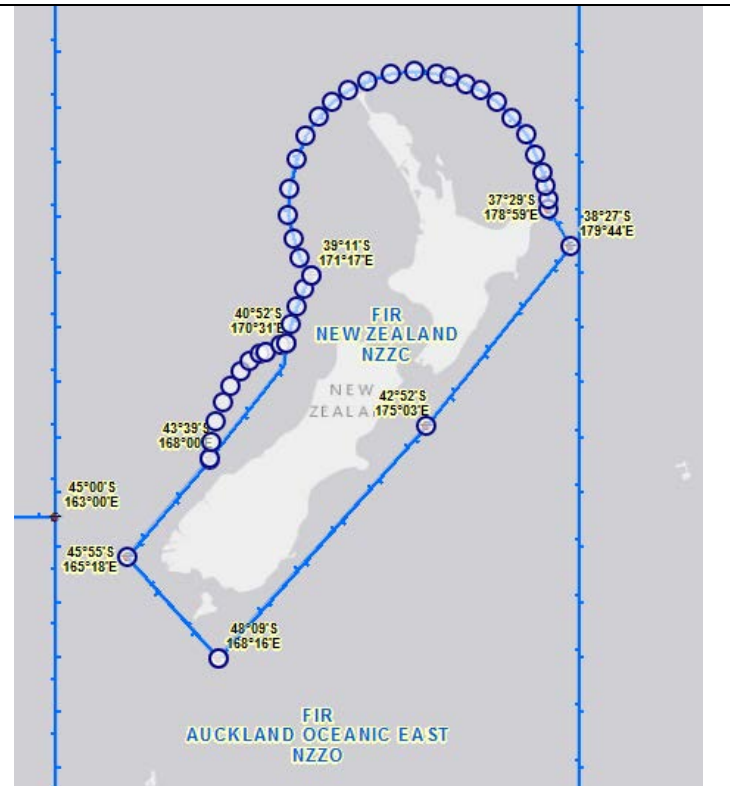
N 03 30 00, W/E 180 00 00;
 S 25 00 00, W/E 180 00 00;
 S 25 00 00, E 171 25 00;
 S 28 00 00, E 168 00 00;
 S 30 00 00, E 163 00 00;
 S 17 50 00, E 163 00 00;
 S 14 00 00, E 161 15 00;
 S 14 00 00, E 163 00 00;
 S 11 48 00, E 166 52 00;
 S 10 00 00, E 170 00 00;
 N 03 30 00, E 170 00 00;
 N 03 30 00, W/E 180 00 00;
 S 05 00 00, W/E 180 00 00;
 S 05 00 00, W 172 00 00;
 S 25 00 00, W/E 180 00 00;
 N 03 30 00, W/E 180 00 00.



<p>Nauru FIR</p>	<p>N 03 30 00, E 160 00 00; N 03 30 00, E 170 00 00; N/S 00 00 00, E 170 00 00; S 10 00 00, E 170 00 00; S 11 48 00, E 166 52 00; S 10 30 00, E 166 45 00; S 04 50 00, E 160 00 00; N/S 00 00 00, E 160 00 00; N 03 30 00, E 160 00 00.</p>	

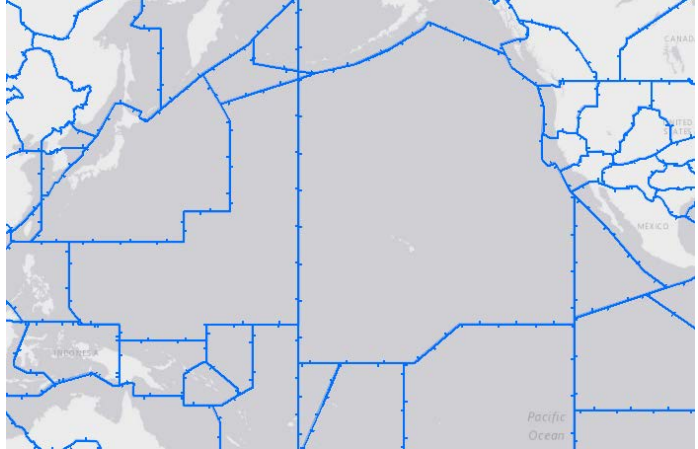
New Zealand FIR

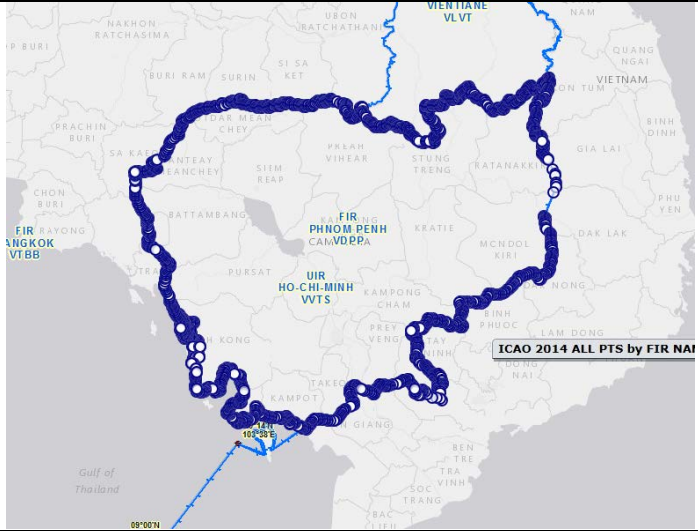
480900S — 1681600E
455500S — 1651800E
433900S — 1680000E
410500S — 1694900E
405200S — 1703100E
391100S — 1711700E
372900S — 1785900E
382700S — 1794400E
425200S — 1750300E



New Zealand FIR

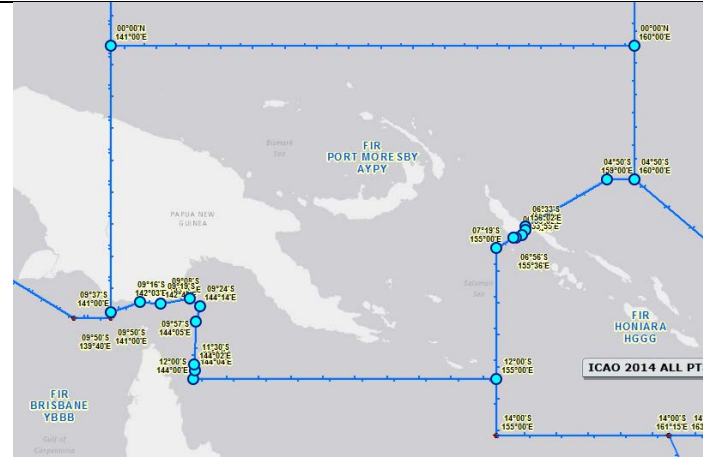
The arc of a circle of 200 NM radius centred on S 37 00 16.7, E 174 48 49.1, (Auckland VOR/DME) from S 39 07 38.1, E 171 33 21.7, clockwise to S 37 32 29.5, E 178 56 08.9, S 38 27 00.0, W 179 44 00.0, S 42 51 30.0, E 175 03 00.0, S 48 09 00.0, E 168 16 00.0, S 45 55 00.0, E 165 18 00.0, S 41 25 27.0, E 170 23 24.0, the arc of a circle of 200 NM radius centred on S 41 20 14.0, E 174 49 01.1, (Wellington

	VOR/DME) from S 41 25 27.0, E 170 23 24.0, clockwise to S 39 07 38.1, E 171 33 21.7.	
Oakland Oceanic East	<p>N 03 30 00, E 180 00 00; N 03 30 00, E 170 00 00; N 03 30 00, E 160 00 00; N 00 00 00, E 160 00 00; N 00 00 00, E 141 00 00; N 03 30 00, E 141 00 00; N 03 30 00, E 133 00 00; N 07 00 00, E 130 00 00; N 21 00 00, E 130 00 00; N 21 00 00, E 155 00 00; N 27 00 00, E 155 00 00; N 27 00 00, E 165 00 00; N 43 00 00, E 165 00 00; N 45 42 00, E 162 55 00; N 49 16 00, E 180 00 00; N 49 43 00, W/E 180 00 00; N 50 08 00, W 176 34 00; N 51 24 00, W 167 49 00; N 53 30 00, W 160 00 00; N 56 00 00, W 153 00 00; N 56 46 00, W 151 45 00; N 56 45 42, W 151 45 00; N 52 43 00, W 135 00 00; N 53 22 03, W 137 00 00; N 52 43 00, W 135 00 00; N 51 00 00, W 133 45 00; N 48 20 00, W 128 00 00; N 44 54 00, W 126 30 00; N 45 00 00, W 126 30 00; N 40 59 00, W 126 54 00; N 40 50 00, W 127 00 00; N 37 30 00, W 127 00 00; N 37 30 23, W 127 00 00;</p>	
Oakland Oceanic West		

	<p>N 36 27 43, W 126 56 00; N 35 30 00, W 125 50 00; N 36 00 00, W 124 12 00; N 34 30 00, W 123 15 00; N 30 45 00, W 120 50 00; N 30 00 00, W 120 00 00; N 05 00 00, W 120 00 00; N 03 30 00, W 120 00 00; N 03 30 00, W 145 00 00; S 05 00 00, W 155 00 00; S 05 00 00, W 157 00 00; S 05 00 00, W 160 00 00; S 05 00 00, W/E 180 00 00; N 03 30 00, W/E 180 00 00.</p>	
<p>Phnom Penh FIR</p>	<p>No information on record</p>	 <p>ICAO 2014 ALL PTS by FIR NAI</p>

Port Moresby FIR

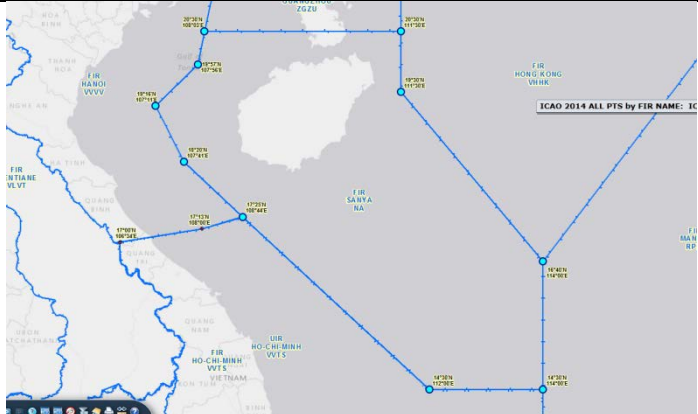
S 04 50 00, E 160 00 00;
 S 04 50 00, E 159 00 00;
 S 06 33 00, E 156 02 00;
 S 06 40 00, E 156 02 00;
 S 06 51 00, E 155 55 00;
 S 06 56 00, E 155 42 00;
 S 06 56 00, E 155 36 00;
 S 07 19 00, E 155 00 00;
 S 12 00 00, E 155 00 00;
 S 12 00 00, E 144 00 00;
 S 11 43 00, E 144 04 00;
 S 11 30 00, E 144 02 00;
 S 09 57 00, E 144 05 00;
 S 09 24 00, E 144 14 00;
 S 09 08 00, E 143 52 00;
 S 09 19 00, E 142 48 00;
 S 09 16 00, E 142 03 00;
 S 09 37 00, E 141 00 00;
 N 00 00 00, E 141 00 00;
 N/S 00 00 00, E 160 00 00;
S 04 50 00, E 160 00 00.



Pyongyang FIR

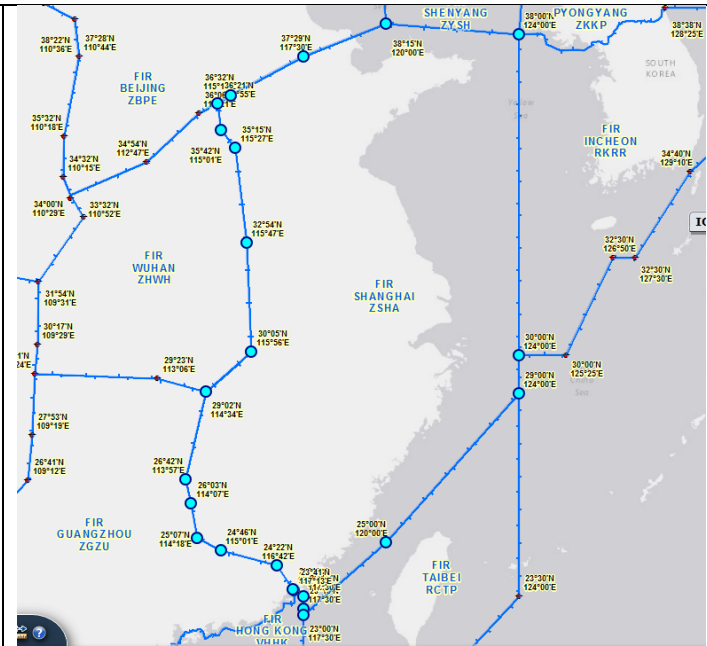
N 42 25 00, E 130 36 00;
 N 42 09 00, E 130 53 00;
 N 41 40 00, E 131 31 00;
 N 40 30 00, E 135 56 00;
 N 38 38 00, E 133 39 00;
 N 38 38 00, E 128 25 00;
thence following the national boundary to
 N 38 00 00, E 124 00 00;
 N 39 51 00, E 124 10 00;
thence following the national boundary to
 N 42 25 00, E 130 36 00.



<p>Sanya FIR</p>	<p>203000N — 1080300E 203000N — 1113000E 193000N — 1113000E 164000N — 1140000E 143000N — 1140000E 143000N — 1120000E 172500N — 1084300E 182000N — 1074100E 191600N — 1071100E 195700N — 1075600E</p>	
<p>Sanya FIR</p>	<p>N 20 30 00, E 108 03 00; N 20 30 00, E 111 30 00; N 19 30 00, E 111 30 00; N 16 40 00, E 114 00 00; N 14 30 00, E 114 00 00; N 14 30 00, E 112 00 00; N 18 20 28, E 107 40 53; N 19 16 04, E 107 11 23; N 19 57 33, E 107 55 47; N 20 30 00, E 108 03 00</p>	

Shanghai FIR

363200N — 1151800E
 372900N — 1173000E
 381500N — 1200000E
 380000N — 1240000E
 300000N — 1240000E
 290000N — 1240000E
 250000N — 1200000E
 230000N — 1173000E
 231000N — 1173000E
 233000N — 1173000E
 234100N — 1171300E
 234200N — 1171100E
 242200N — 1164200E
 244600N — 1150100E
 250700N — 1141800E
 260300N — 1140700E
 264200N — 1135700E
 290200N — 1143400E
 300500N — 1155600E
 325400N — 1154700E
 351500N — 1152700E
 354200N — 1150100E
 362100N — 1145500E



Shanghai FIR

N 30 05 00, E 115 56 00;
 N 32 54 30, E 115 48 48;
 N 34 31 00, E 115 54 30;
 N 35 14 48, E 115 27 00;
 N 36 40 00, E 115 24 00;
 N 37 29 12, E 117 30 00;
 N 38 15 00, E 120 00 00;
 N 38 15 00, E 123 00 00;
 N 38 00 00, E 124 00 00;
 N 29 00 00, E 124 00 00;
 N 26 29 08, E 121 26 56;
 N 25 00 00, E 120 00 00;
 N 23 00 00, E 117 30 00;

	<p>N 23 30 00, E 117 30 00; N 23 42 00, E 117 11 00; N 24 22 00, E 116 42 00; N 24 40 24, E 115 24 30; N 25 05 30, E 115 25 00; N 25 46 00, E 114 52 24; N 26 03 00, E 114 07 00; N 26 42 00, E 113 57 00; N 29 02 00, E 114 34 00; N 30 05 00, E 115 56 00</p>	
<p>Shenyang FIR</p>	<p>N 39 49 41, E 124 10 06; N 38 00 00, E 124 00 00; N 38 15 00, E 123 00 00; N 38 15 00, E 120 00 00; N 39 30 00, E 119 52 00; N 39 54 00, E 119 21 00; N 43 14 42, E 117 31 00; N 45 23 17, E 115 21 15; thence following the national boundary to N 39 49 41, E 124 10 06.</p>	
<p>Singapore FIR</p>	<p>N 02 36 00, E 104 45 00; N 03 40 00, E 103 40 00; N 04 50 00, E 103 44 00; N 06 00 00, E 103 05 00; N 06 45 00, E 102 40 00; N 07 00 00, E 103 00 00; N 07 00 00, E 108 00 00; N 10 30 00, E 114 00 00; N 08 25 00, E 116 30 00; N 06 00 00, E 113 15 00; N 02 15 00, E 108 30 00; N 02 00 00, E 108 30 00; N 01 00 00, E 108 30 00; N 01 00 00, E 108 58 00; N 01 00 00, E 108 54 00; thence south along the coastline of Borneo</p>	

	<p>to N 00 15 00, E 109 00 00; N 00 00 00, E 109 10 00; N 00 00 00, E 109 00 00; N 00 00 00, E 108 00 00; S 00 50 00, E 106 00 00; N 00 00 00, E 105 10 00; S 00 00 00, E 104 57 00; S 00 00 00, E 104 46 00; thence around the arc of a circle radius 100NM centered on Singapore Island to N 10 39 00, E 102 10 00; N 01 38 00, E 102 20 00; N 01 13 00, E 103 30 00; N 01 17 00, E 103 36 00; thence east along the international boundary of Singapore/Peninsular Malaysia, thence along N 01 20 00 to N 01 20 00, E 104 20 00;</p>	
<p>Tahiti FIR</p>	<p>N 03 30 00, W 145 00 00; N 03 30 00, W 120 00 00; S 30 00 00, W 120 00 00; S 30 00 00, W 130 54 00; S 30 00 00, W 157 00 00; S 05 00 00, W 157 00 00; S 05 00 00, W 155 00 00; N 03 30 00, W 145 00 00.</p>	

<p>Taipei FIR</p>	<p>N 25 00 00, E 120 00 00; N 29 00 00, E 124 00 00; N 23 30 00, E 124 00 00; N 21 00 00, E 121 30 00; N 21 00 00, E 117 30 00; N 23 00 00, E 117 30 00; N 25 00 00, E 120 00 00.</p>	
<p>Ujung Pandang</p>	<p>N 03 30 00, E 133 00 00; N 03 30 00, E 141 00 00; S 09 50 00, E 141 00 00; S 09 50 00, E 139 40 00; S 07 00 00, E 135 00 00; S 09 20 00, E 126 50 00; S 12 00 00, E 123 20 00; S 12 00 00, E 114 30 00; S 08 20 00, E 110 23 00; S 03 00 00, E 110 23 00; N 01 16 00, E 113 37 00; thence following the national boundary to N 04 00 00, E 120 00 00; N 04 00 00, E 132 00 00; N 03 30 00, E 132 00 00; N 03 30 00, E 133 00 00.</p>	

<p>Ulan Bator Ulaanbaatar FIR</p>	<p>N 49 55 00, E 089 40 00; N 52 06 00, E 099 00 00; N 45 25 00, E 115 19 00; N 41 44 00, E 105 13 00; N 49 55 00, E 089 40 00.</p>	
<p>Urumqi FIR</p>	<p>425500N — 0962000E 414800N — 0950800E 382100N — 0901300E 302600N — 0813700E Along national boundary 392900N — 0734000E Along national boundary 402000N — 0755000E Along national boundary 421100N — 0802000E</p>	
<p>Urumqi FIR</p>	<p>N 42 55 00, E 096 20 14; N 41 48 00, E 095 08 00; N 38 21 00, E 090 13 00; N 36 25 00, E 087 23 00; N 32 18 06, E 084 03 18; N 30 26 30, E 081 37 30; thence following the national boundary to N 42 55 00, E 096 20 14</p>	

Vientiane FIR

N 17 00 00, E 106 34 00;
 thence following the national boundary to
 N 17 00 00, E 106 34 00,



Wuhan FIR

- 333200N — 1105200E
- 340000N — 1102900E
- 345400N — 1124700E
- 360600N — 1142100E
- 362100N — 1145500E
- 354200N — 1150100E
- 351500N — 1152700E
- 325400N — 1154700E
- 300500N — 1155600E
- 290200N — 1143400E
- 292300N — 1130600E
- 293100N — 1092400E
- 301700N — 1092900E
- 315400N — 1093100E



Wuhan FIR	N 31 54 00, E 109 31 00; N 33 32 00, E 110 52 00; N 34 05 00, E 110 29 00; N 34 32 00, E 110 15 00; N 36 04 00, E 113 48 36; N 36 40 00, E 115 24 00; N 35 14 48, E 115 27 00; N 34 31 00, E 115 54 30; N 32 54 30, E 115 48 48; N 30 05 00, E 115 56 00; N 29 02 00, E 114 34 00; N 29 23 00, E 113 07 12; N 29 31 00, E 109 24 00; N 31 54 00, E 109 31 00.	
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Yangon FIR

N 14 00 00, E 092 00 00;
N 20 00 00, E 092 00 00;
N 21 00 00, E 092 00 00;
N 21 57 00, E 092 32 00;
N 14 00 00, E 092 00 00.

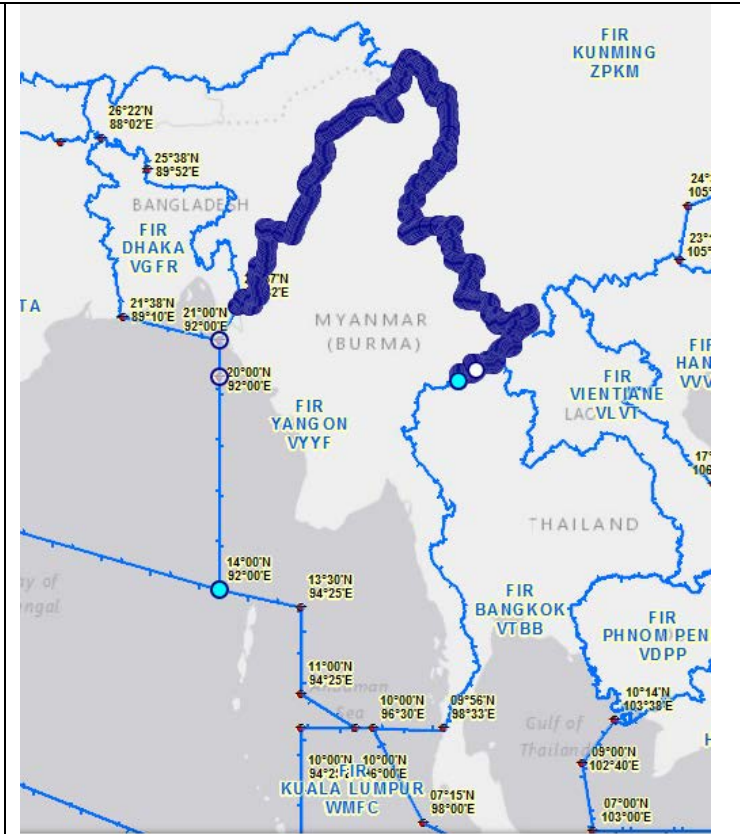


Table ATM II- ASIA/PAC- 2 – Asia and Pacific Regions ATS Routes

EXPLANATION OF THE TABLE

Column

- 1 Designator of ATS route and Type (Conventional, RNAV5 or RNAV1 etc.)
- 2 Significant points defining the ATS routes. Only prominent locations have been listed. Additional points where facilities are provided to complete navigational guidance along a route, but not otherwise marking significant characteristics of the route (change of heading of centre line, intersection with other routes, etc.) have normally not been included. Locations shown in parentheses indicate significant points outside the Region.

Note 1. Not representing the operator's requirements. Operator's required route and/or nav aids are shown in square brackets ([]).

Note 2. Subject to further study. Including the associated navigation aid coverage.

Note 3 Subject to military agreement.

Note 4. Not acceptable at present.

Note 5. At present, implementation possible only during specific periods (e.g. weekends, nights, etc., as published).

Note 6. At present, implementation of the RNAV route only possible above FL 300, or as published.

Note 7. Unidirectional use.

Note 8. For ATS route or part thereof is RNAV 1

Note 9: Acronyms used for route names are only intended as a rough guide to the location of the routes:

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

Whenever reference to name States is made in Table ATM II-XX in connection with the above notes, the following abbreviations, based on those indicated in Location Indicators (Doc 7910), are used:

Note 10: 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.

Note 11: route segments which have not been implemented are shown by bold significant points.

Designator Type 1	Significant Points 2	Designator Type 1	Significant Points 2
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 HACHIJO JIMA (APAC 14/01 – ATS)	A91	(KYAKHTA) SERNA 5018.5N 10628.1E ULAN BATOR
A201	LASHIO AGARTALA RAJSHAHI MONDA 2521.00N 08626.25E PATNA LUCKNOW	A202	CHEUNG CHAU SIKOU 2050.6N 11130.0E SAMAS 2030.3N 11029.7E ASSAD 182028N 1074053E XONUS 1804.2N 10714.0E DONGHOI VILAO 1718.0N 10600.0E SAVANNAKET KORAT BANGKOK
A204	YOROI 4500.5N 14147.1E RISHIRI AKSUN 4545.1N 14054.3E (SELT) (4713.3N 14013.3E)	A206	ASSAD VINH NONGT LUANG PRABANG
A211	MANADO TARAKAN TAWAU	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
A218	HARBIN (EKIMCHAN) (MYS SHMIDTA) BARROW	A219	KARACHI NAWABSHAM KALAT 2902.0N 06635.0E SERKA 2951.0N 06615.0E KANDAHAR

Designator Type 1	Significant Points 2	Designator Type 1	Significant Points 2
			(TERMEZ)
A220	CLUKK 3605.0N 12450.0E TAHITI	A221	GUAM ROTA IS TINIAN IS SAIPAN
A222	GUAM POHNPEI KOSRAE KWAJALEIN	A224	JOHOR BAHRU MERSING
A325	PRARATAPGARH TASOP 2514.1N 07045.0E KARACHI JIWANI	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
A331	ZIGIE 2419.0N 15717.5W SEDAR 4530.4N 12643.0W	A332	APACK 2402.8N 15619.3W AMITY 2626.0N 15229.0W HEMLO 4318.2N 12640.8W
A334	HAT YAI KOTA BHARU	A337	ADKAK 3354.0N 14210.0E TEGOD 2100.0N 14512.0E JUNIE 1132.5N 14706.3E KISME 0500.0N 14805.4E
A338	CHRISTCHURCH APORO 5000.0S 17120.0E BYRD	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 YOSHI (APAC 14/01 – ATS)
A340	RAYONG BISOR 1221.0N 10247.0E PHNOM PENH	A341	KOTA KINABALU SANDAKAN ZAMBOANGA
A342	COLD BAY OLCOT 5125.8N 16533.3E	A344	ROZAX 0245.6S 11140.0E SUMBAWA
A345	PYONGYANG GOLOT 4012.5N 12430.5E FENGCHENG KAIYUAN HAILAR KAGAK 4916N 11806E MANLI 4935N 11727E TELOK 4938N 11722E (CHITA)	A346	HAMILTON IS AUCKLAND

Designator Type 1	Significant Points 2	Designator Type 1	Significant Points 2
A347	MUMBAI BODAR 2236.3N 07413.3E PRATAPGAPH DELHI	A348	MELBOURNE EAST SALE NISEP 4146.6S 15601.5E
A364	SHACHE KASHI KURUM 4006.0N 07407.0E	A450	DENPASSAR HASSANUDDIN CAHYO 033000N 1333000E YAP IS GUAM WAKE KATHS2104.6N 16123.4W
A453	KABUL GHAZNI KANDAHAR (KANDAHAR) (ZAHEDAN) (BANDER ABBAS)	A454	KARACHI PARET 2527.2N 06451.5E TAPDO2424.0N 06120.0E (VUSET)
A455	PESHAWAR METAR 3406.0N 07128.0E KOTAL 3406.0N 07109.0E	A456	AMRITSAR LAHORE MOLTA 3012.0N 07236.2E BINDO
A457	HAT YAI TAMOS 0632.2N 10024.0E ALOR SETAR PENANG KUALA LUMPUR JOHOR BAHRU	A460	KUQA REVKI 4232.5N 8013.2E (KIRBALTABAY)
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	A462	KOLKATA DHAKA

Designator Type 1	Significant Points 2	Designator Type 1	Significant Points 2
	ALICE SPRINGS LEIGH CREEK		
A464	CHIANG MAI BANGKOK HAT YAI IPOH BATU ARANG KUALA LUMPUR SINGAPORE TINDAL TAROOM LORD HOWE IS AUCKLAND	A465	KOLKATA VISHAKAPATNAM CHENNAI COLOMBO
A466	(KABUL) SANAM 3305.0N 07003.0E DERA ISMAIL KHAN JHANG 3116.0N 07218.0E SAMAR 3120.8N 07434.0E ASARI 3048.3N 07509.6E DELHI	A467	BIRATNAGAR KATI HAR KOLKATA
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
A474	DELHI ASOVO MUMBAI MURUS 0600.0S 06319.7E (PLAISANCE)	A575	PYONGYANG GOLOT 4012.5N 12430.5E FENGCHENG DONGYANGJIAO DAHUSHAN CHAOYANG ANDIN4106.0N 11843.5E GUBEIKOU FENGNING EREN INTIK 4341.5N 11155.0E SAINSHAND ULAN BATOR (KYZYL)

Designator Type 1	Significant Points 2	Designator Type 1	Significant Points 2
A576	MEDAN SINGAPORE DENPASAR CURTIN ALICE SPRINGS PARKES SYDNEY	A577	SHIKANG KADET 2100.0N 11934.0E
A578	TONIK 3200.0N 14600.0E PHONPEI NAURU TARAWA NADI AUCKLAND	A579	SYDNEY NADI CARRP 1904.4N 15935.0W
A580	AUCKLAND NAUSORI APIA	A581	BAGO CHIANG MAI CHIANG RAI PONUK 2018.8N 10023.0E SAGAG 2111.5N 10137.4E BIDRU KUNMING MAGUOHE QIANXI HUAYUAN LINLI WUHAN
A582	JOMALIG NAHA KAGOSHIMA IKISHIMA BUSAN SEOUL	A583	HONG KONG CHEUNG CHAU (APAC 01/2) SABNO 1859.1N 11550.7E MAVRA 1814.4N 11615.1E AKOTA 1706.6N 11651.6E IBOBI 1354.4N 11832.6E REKEL 1324.1N 11848.3E LEGED 1301.9N 11859.6E TOKON 1142.0N 11940.3E ZAMBOANGA
A584	TONGA NIUE APIA FUNAFUTI NAURU	A585	PALEMBANG JAKARTA PORT HEDLAND CEDUNA ADELAIDE
A586	INTOS 3722.00N 13120.00E PUSAN CHEJU ERABU NAHA	A587	SUMBAWA ALICE SPRINGS
A588	DALIAN WAFANGDIAN	A589	DELHI BUTOP2919.7N 07523.9E

Designator Type 1	Significant Points 2	Designator Type 1	Significant Points 2
	WANGBINGOU KAIYUAN CHANGCHUN HARBIN SIMLI 5017.4N 12722.1E		ASARI 3048.3N 07509.5E
A590	JOMALIG MINAMI DAITO YOSHI 3310.2N 13857.4E OYAMA KAGIS 3549.0N 14234.0E PABBA 3700.0N 14400.0E PASRO 1417.1N 16040.5E AMOTT 6054.0N 15121.6W (APAC 14/01 – ATS)	A591	QINDAO XUEJIADAO LATUX 3532.0N 12044.0E MUDAL 3651.0N 12322.0E AGAVO 3710.0N 12400.0E
A592	PUPIS 1000.0S 17105.5W APIA VAVA'U TONGA	A593	TANGHEKOU XILIUHETUN SHIGEZHUANG POTOU PIXIAN WUXI SHANGHAI NANHUI FUKUE
A595	FUKUOKA IKISHIMA CHEJU	A596	HUAIROU HUAILAI TIANZHEN LIANGCHENG BAOTOU DENGKOU YABRAI
A597	KUSHIMOTO MONPI 2100.0N 14036.0E GUAM HONIARA NOUMEA AUCKLAND	A598	BRISBANE HONIARA NAURU MAJURO
A599	CHITTAGONG LINSO 2322.5N 09855.0E GENGMA KUNMING LUXI BOSE LAIBIN GAOYAO PINGZHOU ZHULIAO WONGYUAN	A791	(IMLOT) JIWANI KARACHI PRATAGARH BHOPAL JAMSHEDPUR KOLKATA

Designator Type 1	Significant Points 2	Designator Type 1	Significant Points 2
	NANXIONG GANZHOU NANFENG SHANGRAO TONGLU NANXUN SHANGHAI		
B200	ENKIP 3547.0S 17730.0E FICKY 3133.6N 12123.5W	B202	UBON PAKSE PLEIKU
B203	KATHMANDU BAGDOGRA GUWAHATI SILCHAR IMPHAL LASHIO	B204	GOMES 1324.0N 10135.3E SIEM REAP
B205	RAYONG BOKAK1257.5N 10230.0E SIEM REAP	B206	URUMQI FUKANG ALTAY GOPTO 4905.5N 08728.0E (AKTASH)
B209	JAMSHEDPUR KHAJURAO TIGER 2828.8N 07214.9E	B210	TASOP 2513.3N 07048.9E NAWABSHAH
B211	MUMBAI EPKOS 1653.1N 07407.2E CHENNAI	B213	LHASA CHENGDU
B214	NASAN LADON 2106.2N 10258.0E AKSAG 2049.1N 10027.3E	B215	DAWANGZHUANG TAIYUAN YINCHUAN YABRAI JIUQUAN HAMI FUKANG URUMQI KUQA SHACHE HONGQILAPU PURPA 3656.5N 07524.5E GILGIT ISLAMABAD
B218	KUNMING SIMAO 2243.1N 16058.2E SAGAG 2111.5N 10137.4E VIENTIANE LOEI CHUM PHAE	B219	PENANG KOTA BHARU

Designator Type 1	Significant Points 2	Designator Type 1	Significant Points 2
B220	BRISBANE PORT MORESBY	B221	NINAS 3100.0N 12215.0E PINOT 3125.2N 12214.2E SAGUT 3500.0N 12040.3E XUEJIADAO
B222	VINIK 0838.6N 11613.8E KOTA KINABALU	B223	DABUR 5147.1N 14235.9E LUMIN 4545.0N 14150.3E WAKKANAI
B326	HONIARA CHOKO 2022.6N 16053.0W	B328	EREN TAMURTAI TIANZHEN NANCHENGZI WEIXIAN
B329	PHNOM PENH PAKSE LEBAL 1630.2N 10556.7E VILAO 1722.0N 10605.0E	B330	HONG KONG TAMOT PINGZHOU GAOYAO DOUJIANG QUIANXI FUJIACHANG JINGTAI YABRAI MORIT 4202.0N 10249.0E NIDOR 5029.4N 09125.8E (LIKAR)
B331	CHEUNG CHAU KAPLI 2110.0N 11730.0E HENGCHUN	B332	SANKO 3814.2N 12228.4E TOMUK 3843.0N 12400.0E PYONGYANG SINSONGCHON SONDO 3947.0N 12713.6E KANSU 3838.0N 13228.5E
B333	AUCKLAND PORT MORESBY	B334	BEIJIN TANGHEKOU FENGNING TONGLIAO
B337	(TAKHTOYAMSK) ANIMO 4508.3N 14337.8E ASAHIKAWA	B338	MERSING TEKONG ANITO 0017.0S 10452.0E
B339	ULAN BATOR POLHO 4447.0N 11315.0E FENGNING	B345	KATHMANDU BHARATPUR BHAIRAHAWA LUCKNOW
B346	LUANG PRABANG NOBER 1516.6N 10040.1E BANGKOK	B349	BALI POTIP 2141.6S 12508.0E
B450	SYDNEY	B451	HAILAR

Designator Type 1	Significant Points 2	Designator Type 1	Significant Points 2
	LORD HOWE IS NORFORK IS PAGO PAGO		QIQIHAR HARBIN BISUN 4314.0N 13111.8E (VLADIVOSTOK) IGROD 4139.0N 13647.0E KADBO 3914.0N 13745.0E
B452	TONIK 3200.0N 14600.0E HONIARA NADI	B453	MIDDLETON IS KATCH 5400.0N 13600.0W DAASH 4226.5N 12600.1W
B454	PAGO PAGO RAROTONGA TONYS 3019.9N 12249.2W	B455	VAVA'U NISEX 1547.3S 17136.4W
B456	WEWAK JAYAPURA	B459	MUMBAI CLAVA 0134.0N 06000.0E (PRASLIN)
B460	KHORAT SAVANNAKET	B462	MACKAY HAMILTON IS. PORT MORESBY KADAB 0458.0S 14100.0E BIDOR 0400.0S 13130.0E TACLOBAN MANILA CABANATUAN LAOAG MIYAKO JIMA OKINAWA
B463	BAGO MANDALAY LASHIO	B465	KOLKATA CHITTAGONG MANDALAY LUANG PRABANG HANOI
B466	JOHOR BAHRU BATU ARANG CHENNAI MUMBAI	B467	KANGWON INTOS 3722.0N 13120.0E KANSU 3838.0N 13228.5E NULAR 4059.2N 13411.0E (TEKUK) 4241.0N 13527.4E
B468	DIENBIEN LADON 2106.2N 10258.0E LUANG PRABANG	B469	SINGAPORE JAKARTA CARNARVON GERALDTON PERTH CAIGUNA WHYALLA GRIFFITH SYDNEY

Designator Type 1	Significant Points 2	Designator Type 1	Significant Points 2
B470	SINGAPORE PANGKALPINANG JAKARTA	B472	LIPA ILO ILO COTABATO SELSO 0400.0N 12616.0E TOREX 0724.0N 13335.0E GOVE NORMANTON
B473	LIPA ROXAS CAGAYAN-DE-ORO DAVAO SADAN 0400.0N 12805.0E CAIRNS	B474	SYDNEY SANTO NANUMEA CHOKO 2022.6N 16053.0W
B480	(RAZDOLITE) LETBI 5011.9N 10330.6E BULGAN MORIT 4202.0N 10249.0E	B575	AUCKLAND TONGA PAGO PAGO
B576	TAIBEI CHEJU SEOUL	B577	NADI WALLIS IS APIA PAGO PAGO FICKY 3133.5N 12123.5W
B578	BRISBANE NOUMEA TAHITI	B579	PHUKET LANGKAWI PENANG
B580	SYDNEY NOUMEA CHOKO 2022.6N 16053.0W	B581	NADI FICKY 3133.5N 12123.5W
B583	BRUNEI DARWIN	B584	DENPASAR ELANG 0056.0S 11449.5E KOTA KINABALU
B586	NOUMEA SEKMO KAPKI PORT MORESBY GUAM OMLET 2100.0N 14259.2E TATEYAMA OSHIMA (APAC15/03 – ATS)	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
B589	PORT MORESBY KAPKI 1014.9S 14817.7E BUKA MAJURO	B590	NOUMEA PORT VILA NAURU
B591	SHANGHAI TAIBEI HENCHUN	B592	KOTA KINABALU JAKARTA

Designator Type 1	Significant Points 2	Designator Type 1	Significant Points 2
	(Partially implemented)		
B593	KOLKATA COMILLA AGARTALA GUWAHATI	B595	TAHITI KONA
B596	RAROTONGA DOVRR 1843.0N 15740.0W	B597	ERABU TANEGASHIMA SHIMIZU
B598	DARWIN THURSDAY ISLAND PORT MORESBY KAPKI 1014.9S 14817.7E HONIARA PORT VILA NADI NAUSORI TONGA RAROTONGA	B599	NOUMEA NADI TAHITI
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
G203	MIHO PUSAN	G204	ELNEX SHENGXIAN METAN SHANGHAI
G205	HAMILTON IS. GURNEY JUNIE	G206	DILARAM KABUL SABAR PURPA
G208	MUMBAI PARTY 2414.6N 07052.0E KARACHI PANJGUR (ZAHEDAN)	G209	LAERMONTH CHRISTMAS ISLAND PALEMBANG
G210	PANJGUR KARACHI MUMBAI	G212	(KHABAROVSK) ARGUK 4753.5N 13439.4E HAIQING JIAMUSI HARBIN TONGLIAO GUBEIKOU QINBAIKOU NANCHENGZI

Designator Type 1	Significant Points 2	Designator Type 1	Significant Points 2
			TAIYUAN YIJUN SANYUAN XIAOYANZHUANG NINGSHAN WUFENGXI FUJIACHANG WEINING MAGUOHE KUNMING
G213	BIAK BEKUB 0350.0N 13845.0E GUAM	G214	JIWANI PANJGUR RAHIM YAR KHAN MOLTA 3012.0N 07236.2E
G215	DUTCH HARBOR OLCOT 5125.8N 16533.3E	G216	(DORAB) ALPOR 2404.7N 06120.0E LATEM 2431.7N 06449.7E KARACHI
G218	HOHHOT TUMURTAI POLHO 4447.0N 11315.0E SOLOK 4954.0N 11545.0E	G219	VIRUT 0230.8N 10402.7E TEKONG
G221	PHUCAT BUNTA 1650.0N 10923.7E BAOLONG HAIKOU SAMAS SIKOU	G222	SAPDA BROOME AYERS ROCK PARKES
G223	TATEYAMA ADKAK TONIK 3200.0N 14600.0E NAURU NADI NAUSORI NIUE AITUTAKI TAHITI (LIMA) (APAC15/04 – ATS)	G224	NORFORK IS NADI PAGO PAGO TAHITI ISLA DE PASCUA (SANTIAGO)
G325	COLOMBO TIRUCHCHIRAPPALLI	G326	BALI TENNANT CREEK BRISBANE
G327	NANHUI NINAS 3100.0N 12215.0E AKARA 3130.0N 12330.0E	G329	BRISBANE NORFORK IS
G330	SHANGHAI POMOK	G331	PHUKET PADET

Designator Type 1	Significant Points 2	Designator Type 1	Significant Points 2
	NANTONG GURNI 3209.2N 12058.5E PIMOL 3215.0N 11944.0E		DAWEI
G332	TANGHEKOU CHAOYANG	G333	DELHI ESEM TIGER 2828.8N 07214.9E
G334	KUALA LUMPUR TIOMAM BUNTO 0242.0N 10600.0E DOTAS 0201.1N 10820.5E SIBU	G335	KATHMANDU JANAKPUR PATNA
G336	DHANBAD PATNA SIMRA KATHMANDU	G337	PERTH CHRISTMAS IS PEKANBARU
G339	PUSAN FUKUOKA KAGOSHIMA TANEGASHIMA PAKDO GUAM	G338	CHOIBALSAN KAGAK
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
G345	UNTAN CHANGZHOU LISHUI	G346	KIMCHAEK NULAR 4059.2N 13411.0E IGROD 4139.0N 13647.0E
G347	AUCKLAND POPIR 2500.0S 17804.8W PADDI 1825.7N 15854.8W	G348	PARO BAGDOGRA MECHI KATHMANDU
G424	(DAR ES SALAAM) VUTAS 0912.0N 06000.0E ALATO 1340.7N 06344.0E	G450	(MOGADISHU) MUMBAI NAGPUR KOLKATA
G451	AHMEDBAD SASRO 2404.3N 07100.0E PARTY 2414.6N 07052.0E	G452	(ZAHEDAN) RAHIM YAR KHAN TIGER 2828.8N 07214.9E DELHI
G453	KUALA LUMPUR KOTA BHARU	G454	(PLAISANCE) BOBOD 0600.0S 06941.1E PADLA 0446.1N 07800.0E COLOMBO
G455	SHANGHAI PINOT 3125.2N 12214.2E	G457	DOVRR 1843.0N 15740.0W ELLS 0500.0S 16704.1W

Designator Type 1	Significant Points 2	Designator Type 1	Significant Points 2
	AKARA 3130.0N 12330.0E		PAGO PAGO FAROA 2500.0S 17502.3W DIVSO 3452.3S 17624.5E
G458	BANGKOK SURAT THANI PHUKET	G459	CAIRNS TIMIKA
G460	KUCHING SIBU BINTULU BRUNEI	G463	RAJSHAHI DHAKA CHITTAGONG BAGO BETNO 1505.8N 09812.7E BANGKOK
G464	PONTIANAK ROZAX 0245.0S 11140.0E BALI KARRATHA BALLIDU PERTH	G465	(PRASLIN) MALE COLOMBO
G466	HO CHI MINH PHUCAT HENGCHUN	G467	LUBANG JOMALIG GUAM
G468	PENANG MEDAN	G469	PORT HEIDEN ST PAUL IS NYMPH 5324.5N 16814.4E
G470	XIANYANG FENGHUO CHANGWU JINGNING JINGTAI QITAI	G471	SHILONG LONGMEN GANGZHOU
G472	KARACHI AHMEDABAD NAGPUR BHUBANESHWAR PATHEIN BAGO	G473	BAGO MAKAS 1649.7N 09830.0E PHITSANULOKE UBON
G474	BANGKOK MENAM 1357.3N 10247.7E SOURN 1345.5N 10600.0E ANINA 1359.0N 10725.0E PHUCAT	G575	TAHITI RANGIROA FICKY 3133.5N 12123.5W
G576	CHEER 5310.0N 14000.1W SPONJ 4992.0N 13005.1W	G578	GURAG 2100.0N 12725.0E DILIS 1431.0N 12600.0E TACLOBAN MACTAN ZAMBOANGA DENPASAR

Designator Type 1	Significant Points 2	Designator Type 1	Significant Points 2
			PORT HEDLAND PARABURDOOD PERTH
G579	JAKARTA PALEMBANG SINGAPORE JOHOR BAHRU	G580	TOMAN 0121.5N 10547.0E NIMIX 0124.9N 10759.2E ATETI 0125.7N 10830.1E KUCHING MIRI BRUNEI
G581	HONG KONG ELATO 2220.0N 11730.0E HENGCHUN MIYAKO JIMA BISIS 2647.0N 12633.0E ERABUTAPOP 3240.0N 13607.9E (APAC 14/01 – ATS)	G582	PUGER 0324.1N 10017.6E BATU ARANG PEKAN
G583	EMMONAK BESAT 5945.0N 17925.1W (UST-BOLSHERETSK) BISIV 4456.3N 14412.3E MONBETSU	G584	KUALA LUMPUR PEKAN KUCHING
G585	MIHO POHANG SEOUL	G586	YINGDE ERTANG
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
G590	SIMRA VARANASI KHAJURAH BHOPAL INDORE BODAR 2236.3N 07413.3E	G591	CAIRNS NOUMEA NORFORK IS AUCKLAND
G593	FUNAFUTI NAUSORI NIUE RAROTONGA	G594	TIAMU TAHITI RAROTONGA AUCKLAND SOLIT 2355.0S 07500.0E (PLAISANCE)
G595	(TAHITI) SYDNEY MABAD 2648.4S 07500.0E (PLAISNACE)	G597	DONVO 3734.0N 12320.0E AGAVO 3710.0N 12400.0E SEOUL KANGNUNG MIHO

Designator Type 1	Significant Points 2	Designator Type 1	Significant Points 2
			OTSU KOWA OSHIMA VENUS 3618.2N 14042.1E
G598	LUCKNOW APIPU 2658.6N 08300.0E SIMARU	G599	AUCKLAND TAHITI
R200	PINGZHOU LIANSHENGWEI BIGRO ZHANJIANG	R201	BANGKOK UTAPAO
R202	PHRAE TATEL 1729.1N 098 45.8E	R203	SAPAM 0804.6N 09733.0E PHUKET
R204	KEITH 2100.0N 13456.5E KALIN 0000.0N 14200.0E LIDIT 0918.0S 14220.0E HORN IS CAIRNS	R205	ANARAK BIRJAND
R 206	PORT HEDLAND CHRISTMAS IS JAKARTA	R207	VIENTIANE NAN CHIANG MAI MANDALAY
R208	KUALA LUMPUR KUALA TRENGGANU KANTO 0649.9N 10348.3E	R209	TATOX 0857.0N 09702.0E LANGKAWI
R210	PORT MORESBY CAIRNS	R211	KASMI 3601.3N 14040.3E SWAMP 3619.2N 14032.3E DAIGO IWAKI NIIGATA KADBO 3914.0N 13745.4E AVGOK 4336.0N 13815.0E VELTA 4529.0N 13710.0E (APAC15/04 – ATS)
R212	(DIEGO GARCIA) GUDUG 0704.6S 07500.0E PIBED 0520.2S 09044.0E	R215	CHIANG RAI NAN LUANG PRABANG
R217	NODAN 4025.0N 14500.0E SENDAI NIIGATA	R218	DELHI DIPAS 2738.3N 07551.9E JAIPUR
R220	DAIGO IWAKI NANAC 3854.2N 14313.9E NIPPI 4942.6N 15920.8E NODLE 6117.0N 15200.0W (APAC15/04 – ATS)	R221	MERSING PULAU TIOMAN

Designator Type 1	Significant Points 2	Designator Type 1	Significant Points 2
R222	AVGOK 4336.0N 13815.0E (YEDINKA)	R223	BRUNEI ELANG 0056.0S 11449.5E
R224	YANJI VASRO 4227.8N 12944.4E KANSU	R325	KATHMANDU JANAKPUR DUMKA 2411.0N 08721.3E KOLKATA PHUKET HAT YAI IPOH JOHOR BAHRU
R326	NORFOLK IS CHRISTCHURCH	R327	GISBORNE FAROA
R328	DANANG HUE LEBAL 1630.2N 10556.7E SAVANNAKHET	R329	KAGLU 1231.2N 07200.0E MALE GAN (DIEGO GARCIA)
R330	SHEMYA POWAL 5024.3N 16530.8E	R332	MAJURO BONRIKI AKUMO 0614.9S 17535.5E ROTUMA NADI
R334	RAYONG KOH KONG SIHANOUK PHU QUOC	R335	VINH ALPHA 1832.6N 10319.7E VIENTIANE
R336	ADAK CARTO 4840.5N 16847.0E	R337	TACLOBAN KOROR
R338	NOME NINNA 5455.7N 17158.8E	R339	SIKOU 2050.6N 11130.0E HUGUANG NANNING BOSE
R340	AMBON WALGETT	R341	KODIAK NINNA 5455.7N 17158.8E
R342	MANADO BONDA 0200.0N 12451.2E PEDNO 0400.0N 12521.0E GENERAL SANTOS DAVAO	R343	NANXIANG WUXI LISHUI HEFEI WUHAN LONGKOU LAOLIANGCANG DARONGJIANG LAIBIN NANNING
R344	KATHMANDU BIRATNAGAR KATI HAR RAJSHAHI	R345	ROIET BIDEM 142153.57N 1034750.07E SIEM REAP

Designator Type 1	Significant Points 2	Designator Type 1	Significant Points 2
R346	TOWNSVILLE PORT MORESBY	R347	NIIGATA SADO EKVIK 3944.7N 13636.5E IGROD 4139.0N 13647.0E (VELTA) 4529.0N 13710.0E
R348	KADAP 0200.0S 08409.6E LATEP 0610.3S 07500.0E (DIEGO GARCIA)	R349	LEMOK 1000.0N 10302.2E RASER 1000.0N 10506.0E HO CHI MINH
R450	KIETA HONIARA	R451	ADAK OGDEN 4929.2N 16102.3E
R452	SONDO 3947.0N 12713.6E HAMUN 3955.1N 12731.1E KIMCHAEK UAMRI 4217.6N 13041.8E (TEKUK) 4241.0N 13527.4E	R453	NADI APIA
R455	PONTIANAK KUCHING	R458	MUMBAI EPKOS 1653.0N 07407.2E BELGAUM
R457	CHENNAI TIRUCHIRAPALLI MADUDAI MADURAI GUTEG 091100.0N0773154.0E TRIVANDRUM MALE (APAC15/01 - ATS)	R460	DELHI ALIGARH LUCKNOW VARANASI GAYA KOLKATA
R461	MUMBAI MABTA 1708.5N 07321.8E BELGAUM COIMBATORE COLOMBO MEDAN KUALA LUMPUR	R462	(SEEB) DENDA 2442.5N 06054.8E JIWANI KARACHI UPAIPUR DELHI
R463	APACK 2402.6N 15619.2W ALCOA 3750.0N 12550.0W	R464	BITTA 2332.0N 15529.0W BEBOP 3700.0N 12500.0W
R465	CLUTS 2300.0N 15439.0W CLUKK 3605.0N 12450.0W	R467	KUALA LUMPUR GUNIP 0429.9N 09931.9E
R468	BANGKOK BOKAK 1257.5N 10230.0E PHNOM PENH SAPEN 1102.2N 10611.0E HO CHI MINH	R469	PEKANBARU SINGAPORE
R470	VIENTIANE UDON THANI KHON KAEN	R472	KOLKATA RAJSHAHI GUWAHATI
R473	LILING	R474	GAOYAO

Designator Type 1	Significant Points 2	Designator Type 1	Significant Points 2
	NANXIONG WONGYUANG ZHULIAO PINGZHOU TAMOT 2221.5N 11352.0E		NANNING LONGZHOU HANOI VIENTIANE BANGKOK
R575	PAPRA 1546.0N 10711.0E KOH KONG UPNEP 0942.2N 10029.6E SURAT THANI	R576	DENNS 2222.0N 15353.0W DINTY 3329.0N 12235.0W
R577	EBBER 2143.0N 15309.0W ELKEY 3241.0N 12203.0W	R578	FITES 2049.0N 15300.0W FICKY 3133.5N 12123.5W
R580	OATIS 3800.0N 14345.0E OMOTO 4859.7N 16000.7E AMOTT 6053.9N 15121.8W	R581	KOLKATA MONDA 2521.0N 08626.4E SIMARA
R582	NORFOLK IS RAROTONGA	R583	TAIBEI BISIS 2647.1N 12633.1E OKINAWA MINAMIDAITO SABGU BUNGO
R584	AVLAS SALVA 2222.7N 13059.7E KEITH 2100.0N 13456.48E GUAM TRUK POHNPEI KWAJALEIN MAJURO JOHNSTON IS CHOKO 2022.9N 16053.2E	R585	CITTA 2818.9N 14507.2W GATES 3412.7N 12303.9W
R587	BRISBANE PORT VILA	R588	PHUKET RELIP PHNOM PENH PLEIKU
R590	AMBON COTABATO	R591	CAPE NEWENHAM AKISU 4734.3N 16119.3E ABETS 3605.0N 14425.0E
R592	BALI ONSLow PERTH	R594	LUCKNOW JALALABAD DELHI
R595	ANPU MIYAKO JIMA KEITH 2100.0N 13456.5E GUAM	R597	CABANATUAN SARSI 1642.0N 12316.9E SKATE 1716.7N 12423.0E
R598	KOLKATA RAJSHAHI SAIDPUR	R599	KIETA GIZO HONIARA

Designator Type 1	Significant Points 2	Designator Type 1	Significant Points 2
	COOCH BEHAR BOGOP PARO		PORT VILA WHANGAREI AUCKLAND
	RNAV Routes		
L301	BANGKOK DAWEI VISHAKHAPATNAM BUSBO 1914.9N 07807.6E NOBAT 2109.0N 06800.0E RASKI 2303.5N 06352.0E (VAXIM 2319.0N 06111.0E)	L333	KHAJURAH JAIPUR TIGER 2828.8N 07214.9E
L500	(SANTIAGO) AUCKLAND	L501	(RIO GALLEGOS) AUCKLAND
L503	BRISBANE IGEVO 3636.5S 16300.0E CHRISTCHURCH	L504	SINGAPOREMANADO
L505	BUSBO 1914.9N 07807.6E KAMOL 1938.1N 07340.0E NOBAT 2109.0N 06800.0E	L507	KOLKATA BAGO BANGKOK
L508	RAROTONGA CHRISTCHURCH MELBOURNE	L509	GAYA ASARI 3048.3N 07509.5E
L510	IBANI 250000N 0764311E ELBAB 201333N 0815954E LEKIR 071632N 0965243E GIVAL 070000N 0980000E	L512	INTOS 3722.0N 13120.0E NIIGATA
L513	PERTH HOBART AUCKLAND	L515	OBMOG 1154.1N 09623.5E IKULA 1000.0N 09721.2E PHUKET
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
L518	UDAIPUR PRATAPGARH INDORE MONPI 220414N 0755956E DUBOX 202215N 0764956E BEVSU 192649N 0771533E GUMIT 185931N 0772802E HIA 171340.1N 0782420.9E HYDERABAD BBZ 163118.3N 0804733.7E VIJAYWADA GOPNU 155112N 0820224E EGOLU 141858N 0844952E	L521	SYDNEY AUCKLAND

Designator Type 1	Significant Points 2	Designator Type 1	Significant Points 2
	SADAP 120605.6N 0884120.8E (APAC15/02 – ATS)		
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	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
L629	PEKAN DOLOX 0448.7N 10522.9E	L635	PEKAN MABLI 0417.3N 10612.9E
L637	BITOD 0715.3N 10612.9E TANSONNHET	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
L643	TANSONNHET CONSON	L644	CONSON JAKARTA
L645	COLOMBO SULTO 0738.6N 08801.9E SAMAK 0758.7N 09425.0E SAPAM 0804.6N 09733.0E PHUKET	L626	KATHUMANDU ONISA 2858.1N 08005.5E DELHI
L649	BRUNEI ISKUD 0536.6N 11452.3E URKET 0811.5N 11450.0E LAXOR 0949.6N 11458.5E (APAC 14/10– ATS)	L756	CLAVA MALE
L759	DELHI POSIG 2713.0N 07734.9E AGRA KHAJURAH PHUKET	L760	AGRA GURTI 2743.8N 07747.8E DELHI
L774	(PLAISANCE) LELED 116.5S 07500.0E ELATI 0200.0S 08957.7E KETIV 0042.0S 09200.0E MEDAN	L875	VUTAS 091206N 0600004E MOXET 110146N 0645024E GOLEM 115739N 0672213E EGOGI 121100N 0690000E GOKUM 122025N 0701005E OLNIK 122850N 0711440E BEDIL 123500N 0715958E DOLPI 124641N 0732711E

Designator Type 1	Significant Points 2	Designator Type 1	Significant Points 2
			MANGALORE(MML) PEXEG 130415N 0760230E BANGALORE (BIA) CHENNAI (MMV)
L888	BIDRU 22 43.1N 100 57.9E MAKUL 24 03.1N 100 34.6E NIVUX 26 00.0N 100 00.0E PEXUN 30 55.9N 100 00.0E SANLI 32 00.0N 100 00.0E NOLEP 38 34.5N 088 42.5E SADAN 40 04.6N 086 00.0E KUQA VOR (KCA)	L894	KITAL 2003.0N 06018.0E MALE SUNAN 0028.7S 07800.0E DADAR 0200.0S 07927.1E PERTH
L896	SAPDA 1200.0S 11125.6E NISOK 0302.9N 09200.0E DUGOS 0853.1N 08447.9E CHENNAI	L897	CHRISTMAS ISLAND KETIV 0042.0S 09200.0E COLOMBO
L899	HANIMAADHOO TRIVANDRUM	M300	(EMURU 2215.6N 05849.8E) LOTAV 2037.0N 06057.0E CALICUT MADURAI SALAX 0212.4N 10133.7E
M501	GUAM LIMLE 1639.7N 13000.0E SKATE 1722.2N 12425.6E LAOAG NOMAN 2000.0N 11640.3E	M502	BANGKOK AKATO 1337.3N 09910.3E LALIT 1252.4N 09225.1E
M504	ALPOR 2404.7N 06120.0E NODER 2350.0N 06700.0E TELEM 2402.0N 06846.0E	M505	BUON MA THUOT MONDULKIRI SIEM RIEP
M510	CAN THO PHNOM PENH	M512	COLOMBO ANIVE 0540.9N 07800.0E MALE
M520	SERNA 5018.5N 10628.1E POLHO 4447.0N 11315.0E	M522	VINIK 0838.5N 11613.8E KOTA KINABALU MAMOK 0405.1N 11547.2E DENPASAR
M625	MELBOURNE WELLINGTON	M626	KOTA BHARU DAWEI BAGO
M635	SINGAPORE RAMPY 0615.0 11320.8E CURTIN	M638	DOSTI 2558.0N 06503.0E KARACHI MINAR 2350.0N 06800.0E SAPNA 2330.0N 06750.0E NOBAT 2109.0N 06800.0E MUMBAI
M639	IGEVO 3636.5S 16300.0E	M641	MADURAI

Designator Type 1	Significant Points 2	Designator Type 1	Significant Points 2
	WELLINGTON		BIKOK 0817.0N 07836.0E COLOMBO COCOS IS PERTH
M643	HOBART CHRISTCHURCH	M644	RAYONG KOTA BHARU
M646	HENGCHUN ABVAR 1924.8N 12037.7E LAOAG SAN FERNANDO MANILA TOKON 1142.0N 11940.5E PUERTO PRINCESA KOTA KINABALU BRUNEI DARMU 0401.7N 11240.6E KAMIN 0234.7N 10855.9E SABIP 0209.7N 10750.7E ESPIT 0200.2N 10726.4E OBLOT 0142.9N 10641.8E TOMAN 0121.8N 10547.3E (APAC 14/12 – ATS)	M750	KILOG 2152.5N 11441.6E ENVAR 2159.5N 11730.0E MOLKA 2639.5N 12400.0E MOMPA 3050.5N 12955.1E BUNGU 3407.1N 13929.9E (APAC 14/01 – ATS)
M751	MERSING PEKAN KOTA BHARU REGOS 1200.0N 10035.1E BANGKOK	M753	ENREP 0452.4N 10414.8E BITOD 0715.3N 10407.3E PHU QUOC PHNOM PENH
M754	BRUNEI VINIK 0838.6N 11613.8E 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	M759	OLKIT 0450.1N 11149.1E BRUNEI
M761	PEKAN BOBOB 0222.1N 10706.1E SABIP 0209.7N 10750.5E AGOBA 0158.7N 10830.0E KUCHING	M766	COLOMBO JAKARTA INDRAMAYU MADIN 0617.9S 11023.0E CUCUT 0617.7S 11106.0E SURABAYA BALI DARWIN

Designator Type 1	Significant Points 2	Designator Type 1	Significant Points 2
M765	KOTA BHARU IGARI 0656.2N 10335.2E BITOD 0715.3N 10407.3E CONSON DAGAG 0927.8N 10826.5E MAPNO 1013.1N 11020.1E	M767	JOMALIG TOKON 1142.0N 11940.3E TENON 0915.3N 11616.5E TEGID 0857.2N 11551.6E TODAM 0631.7N 11235.4E
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	M770	KOTA BHARU RANONG BUBKO 1911.1N 08839.8E KAKID 2038.6N 08659.9E JAMSHEDPUR
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	M773	BUBKO 1911.1N 08839.8E LEGOS 2138.0N 08805.3E KOLKATA
M774	SINGAPORE KIKEM 0952.9S 12607.4E	M875	KAKID 2038.6N 08659.9E BUTOP 2919.7N 07523.9E GUGAL 3014.5N 07358.0E DERA ISMAIL KHAN
M890	LUCKNOW CHANDIGARH SAMAR 3120.8N 07434.0E	M904	BANGKOK U-TAPHAO DIPUN SIRAT TONIK TIDAR ODONO UPRON ENREP
N502	PARDI 0034.0S 10413.0E BOBAG 0102.5N 10329.9E	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 SALAX 0212.4N 10133.7E

Designator Type 1	Significant Points 2	Designator Type 1	Significant Points 2
N564	DUGOS 0853.1N 08447.9E AKMIL 1151.6N 08006.9E	N571	(RAGMA2306.0N 06105.7E) PARAR 2226.5N 06307.0E VAMPI 0610.9N 09735.1E GUNIP 0429.9N 09931.8E
N628	PEKANBARU BUSUX 0355.0S 06000.0E (PRASLIN)	N633	KUALA LUMPUR PEKANBARU POSOD 0329.5S 09409.9E PEDPI 1316.6S 07500.0E (PLAISANCE)
N640	TRIVANDRUM BIKOK 0817.0N 07836.0E COLOMBO LEARMONTH MOUNT HOPE ADELAIDE	N645	BRUNEI ELANG 005535.64S 1145003.10E SURABAYA
N750	SYDNEY CHRISTCHURCH	N759	MELBOURNE AUCKLAND
N774	AUCKLAND SYDNEY	N875	DENPASAR PONTIANAK ARUPA 0031.7N 10848.8E NIMIX 0124.9N 10759.4E BOBOB 0222.1N 10706.0E ENREP 0452.4N 10414.7E
N877	LAGOG 0835.6N 09159.8E VISHAKHAPATNAM NAGPUR PRATAGRAPH	N884	MERSING LUSMO 0333.7N 10655.7E LAGOT 0716.6N 11131.5E LAXOR 0949.6N 11448.5E LULBU 110936.07N 1163217.70E LEGED 130113.24N 1190006.94E LUBANG CABANATUAN MIYAKOJIMA
N884	MERSING LUSMO 0333.7N 10655.7E LAGOT 0716.6N 11131.5E LAXOR 0949.6N 11448.5E LULBU 110936.07N 1163217.70E LEGED 130113.24N 1190006.94E LUBANG CABANATUAN MIYAKOJIMA	N891	PAPA UNIFORM ENREP 0452.4N 10414.8E IGARI 0656.2N 10335.2E SAMOG 0800.0N 13014.6E RAYONG BANGKOK
N892	HENGCHUN KABAM 2100.0N 11925.7 MUMOT 1930.4N 11714.5E MAVRA 1814.4N 11615.1E MIGUG 1516.4N 11400.0E MESOX 1358.8N 11302.7E	N893	TELEM 2407.0N 06846.0E AHMEDABAD

Designator Type 1	Significant Points 2	Designator Type 1	Significant Points 2
	MUGAN 1222.0N 11152.3E MAPNO 1013.1N 11020.1E MOXON 0849.5N 10921.3E MELAS 0704.9N 10808.4E MABLI 0417.3N 10612.9E MERSING		
N895	BETNO 1505.8N 09812.7E PATHEIN BHUBANESWAR NAGPUR BODAR 2236.3N 07413.3E AHMEDABAD PARTY 2414.6N 07052.0E	P173	TAPIS 3431.0N 06909.0E DAVET 3657.6N 06447.2E (APAC 14/11 – ATS)
P501	ARAMA 0136.9N 10307.2E BOBAG 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 PEKANBARU	P574	(KUSRA) TOTOX 2150.5N 06222.5E BISET 1823.4N 06918.1E BELGAUM CHENNAI PUGER 0324.0N 10017.5E
P627	PHUKET 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	P895	IGAMA 134105.00N0715958.00E AKLON 112110.00N0745424.00E COCHIN GUTEG 091100.00N 0773154.00E BIKOK 81706.00N0783555.00E (APAC15/01 - ATS)
P901	IKELA 1839.7N 11214.7E CHEUNG CHAU	UB467	YEDINKA VELTA 4529N 13710E TEKUK 4241N 13527.4E NULAR 4059.2N 13411E

Designator Type 1	Significant Points 2	Designator Type 1	Significant Points 2
UL425	(KUTVI) ASPUX 1744.00N 06000.00E DONSA 1434.14N 06511.32E VANVO 1043.00N 07200.00E	UM551	(KANSU) 3838.0N 13228.5E DONSA 1435.3N 06511.6E ANGAL 1614.1N 06000.1E (AVAVO) 1646.3N 05526.1E

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Status of Proposals for Amendment to the Asia/Pacific Region Basic Air Navigation Plan

Formally Submitted Proposals			
PfA no.	Proposed Amendment	Proposing State/s	Remarks
APAC 15/04 – ATS	<i>Add</i> requirement for ATS route M503	China	Comment from States/IOs due on 24 July 2015 – nil received. Waiting on approval from President Council
APAC 15/16 – ATM	<i>Amend</i> requirements for ATS routes Correct incorrectly spelled location names in ATS routes	India	Comment from States/IOs due on 24 July 2015 – nil received. Waiting on approval from President Council

Proposals Affected by Moratorium			
ATS Route	Proposed Amendment	Proposing State/s	Remarks
A347 A474 R458 R461	<i>Amend</i> requirements for ATS routes: realigned and published in AIP, and need to be incorporated in the APAC Region BANP	India	RO feedback to India for clarification/information. Yet to be circulated to all affected States and IOs for comment
B342 P323	<i>Add</i> requirements for ATS routes		Yet to be formally submitted to Council
B209 G333 G336 G424 G450 G463 R329 L759 L760 P646 UL425	<i>Amend</i> requirements for ATS routes: realigned and published in AIP, and need to be incorporated in the APAC Region BANP	India	RO feedback to India for clarification/information. Yet to be circulated to all affected States and IOs for comment Yet to be formally submitted to Council

ATM/SG/3-WP/21
Attachment G

Proposals Affected by Moratorium			
ATS Route	Proposed Amendment	Proposing State/s	Remarks
P518 M638 L505 L301	<i>Amend</i> requirements for ATS routes: realigned and published in AIP, and need to be incorporated in the APAC Region BANP	India	RO feedback to India for clarification/information. Yet to be circulated to all affected States and IOs for comment Yet to be formally submitted to Council
N625	<i>Add</i> requirement for ATS route Overlay existing non-RNAV ATS route B329 with RNAV route	Cambodia, Lao PDR and Viet Nam	RO preparing feedback to States Yet to be circulated to all affected States and IOs for comment Yet to be formally submitted to Council
P515	<i>Add</i> requirement for ATS route Overlay/extend existing domestic ATS route Z902 with regional RNAV ATS route.	Philippines	RO preparing feedback to States Yet to be circulated to all affected States and IOs for comment Yet to be formally submitted to Council

South Asia/Indian Ocean ATM Coordination Group (SAIOACG) Terms of Reference

- 1) The scope and objective of the SAIOACG is to identify, plan and implement Air Traffic Management improvements within airspace serving the Asian Regional Major Traffic Flows:
 - AR-4.2 (Europe – Southeast Asia);
 - AR-4.4 (Africa – Southeast Asia/Australia);
 - AR-4.5 (Middle East – Southeast Asia/Australia).

- 2) To meet this objective the Group shall:
 - a. review and recommend improvements to relevant airspace and ATS route structures, in order to optimize the safety and efficiency of ATC operations;
 - b. review and recommend improvements to ATS facilities such as communication and surveillance capability in support of flight operations;
 - c. research and plan airspace and facility requirements based on future technologies, Performance Based Navigation and other capabilities that enhance flight operations;
 - d. coordinate with other bodies to establish appropriate navigation specifications;
 - e. identify ATM deficiencies with respect to ICAO Standards and Recommended Practices (SARPs), and make recommendations to achieve compliance;
 - f. cooperate with other bodies as required, to facilitate Seamless ATM;
 - g. create working groups as required to manage specific ATM-related projects; and
 - h. research and recommend appropriate means of minimizing the environmental consequences of flight operations.

- 3) The SAIOACG reports to the ATM Subgroup of APANPIRG.

The membership of the SAIOACG is open to States that provide ATS within the scope of airspace of SAIOACG, International Organizations and ICAO. The membership is also open to participants from outside the airspace or organizations that can contribute to SAIOACG by invitation from SAIOACG (such as military organizations that can facilitate civil/military cooperation).

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TERMS OF REFERENCE
SOUTH CHINA SEA MAJOR TRAFFIC FLOW REVIEW GROUP
(SCS MTFRG)

1. Objective

1.1 The objective of the SCS MTF/RG is:

- a) to analyze the MTF in the overall South China Sea airspace, air routes and the suitability of the FLOS to optimize airspace capacity and enhance flight safety in the long term; and
- b) to report outcomes of the review and recommendations to SEACG.

2. Tasks

2.1 To meet this objective the Review Group, with reference to the Asia/Pacific Region Seamless ATM Plan and expected traffic growth, shall:

- a) Review the existing MTF route structures in the SCS Airspace to establish priorities;
- b) Identify current and planned CNS/ATM capabilities and implementation timelines of States concerned;
- c) Identify reduced horizontal separation based on the current and planned CNS/ATM capabilities, taking into account aircraft approval status of the traffic operating on the relevant routes as well as the new CNS capabilities available;
- d) Review the existing FLAS/FLOS operating within the SCS with a view to enhancing efficiencies;
- e) Establish appropriate timelines/milestones/dependencies for activities planned under this Review Group; and
- f) Make recommendations to SEACG on implementation plans for route structures, airspace, FLOS and separation solutions to meet the expectations of the Asia/Pacific Seamless ATM Plan.