



## INTERNATIONAL CIVIL AVIATION ORGANIZATION

### e-ANP CNS DEVELOPMENT WORKING GROUP

**Bangkok, Thailand  
8-10 April 2015**

### MEETING REPORT

#### (SUMMARY OF DISCUSSIONS)

#### 1. Introduction

1.1 In accordance with Decision 18/23 of CNS Sub-group of APANPIRG regarding the establishment of a small working group to develop CNS part of future e-ANP, the working group meeting was held at ICAO APAC Regional Office, Bangkok, Thailand from 8 to 10 April 2015. Prior to this meeting, two teleconferences on the same subject were organized in early 2015.

1.2 The meeting was attended by 12 participants from Cambodia, China, India, Japan, Malaysia, Papua New Guinea, Singapore, Thailand and USA. List of participants and their contact details are provided in **Appendix A**.

1.3 On behalf ICAO Regional Director, Mr. Li Peng, Regional Officer, extended warm welcome to all participants and thanked their Administrations for the support. The meeting was moderated by Messrs. Li Peng and Frederic Lecat.

#### 2. Summary of Discussions

2.1 The meeting reviewed the tasks and background information presented by the Secretariat through WP/02, WP/03 and a presentation. An initial gap analysis was provided in WP/04 between harmonized templates and current tables. An introduction to the draft material for populating the Volume III of the APAC e-ANP was given in WP/05.

2.2 The meeting noted the objective and purpose of the regional ANPs highlighted below:

- a) the ANPs provide for the planning and implementation of air navigation systems within a specified region(s), in accordance with the agreed global and regional planning framework. They are developed to meet those needs of specific areas not covered in the worldwide provisions. The development and maintenance of the ANPs is undertaken by ICAO PIRGs with the assistance of the ICAO Secretariat;

- b) the ANPs are used as a repository document for the assignment of responsibilities to States for the provision of air navigation facilities and services within a specified area in accordance with Article 28 of the Convention on International Civil Aviation (Doc 7300);
- c) the ANPs contain requirements related to the facilities and services to be implemented by States in accordance with regional air navigation agreements. The ANPs contain provisions that States can follow in planning the provision of their air navigation facilities and services, with the assurance that facilities and services furnished in accordance with the plan will harmonise with those of other States for an integrated system adequate for the foreseeable future;
- d) The procedural parts of ANPs are published in the ICAO Regional Supplementary Procedures (SUPPs) (Doc 7030);
- e) the ANPs may serve as a basis for air navigation service charges which are levied for services provided or made available to users, in accordance with ICAO's Policies on Charges for Airports and Air Navigation Services (Doc 9082) and ICAO Manual on Air Navigation Services Economics (Doc 9161); and
- f) the ANPs support the performance-based approach to planning adopted by ICAO to measure the efforts made by States in implementing the agreed requirements.

2.3 The definition of air navigation deficiency also has very close relation with the regional ANP.

2.4 The meeting recalled that The 12<sup>th</sup> Air Navigation Conference (AN-Conf/12) developed Recommendation 6/1 - Regional Performance Framework – Planning Methodologies and Tools, regarding the alignment of regional Air Navigation Plans (ANP) with the Fourth Edition of the Global Air Navigation Plan (GANP) (Doc 9750). It was also informed that the some common and harmonized text and templates for new e-ANP Vol. I, Vol. II and Vol. III had been reviewed by Air Navigation Commission and approved by the ICAO Council in June 2014.

#### **e-ANP Vol. I**

2.5 Thailand did an initial analysis to the existing information of CNS Part (Part IV) in the current Basic ANP and proposed to make necessary amendments to the provisions to be retained in the Part III of new e-ANP as regional specific requirement. The meeting reviewed the proposal and made recommendations for keeping some important contents separately in the different volumes of the new e-ANP. Some out of dated APANPIRG Conclusion were suggested to be no longer kept in the e-ANP. The detailed proposal with a table of justification resulted from discussions by the meeting is provided in the **Appendix B** to this Report. This proposal with clean text kept separately for Vol. I, Vol. II and Vol. III will be presented to CNS SG/19 meeting for consideration.

## **e-ANP Vol. II - common template parts**

2.6 The meeting reviewed four new templates for the CNS part adopted by the Council.

2.6.1 The meeting reviewed populated **TABLE CNS II-1 - AERONAUTICAL FIXED TELECOMMUNICATIONS NETWORK (AFTN) PLAN** initially input by India based on the latest available information. The Table CNS II-1 agreed by the meeting is provided in **Appendix C** to this Report for consideration by CNS SG/19 meeting.

2.6.2 The meeting also reviewed the **TABLE CNS II-2 - REQUIRED ATN INFRASTRUCTURE ROUTING PLAN** presented by China with assistance from India. The agreed Table CNS II-2 is provided in the **Appendix D** to this Report for further consideration by CNS SG/19 meeting.

2.6.3 Singapore presented the initial input for new **Table CNS II-3- ATS Direct Speech Circuits Plan (Appendix E)** including explanation to the Table) based on existing information and required format. Considering the current table had not been updated since 2006, it was recommended that Secretariat to issue a State Letter asking States/Administrations to verify the relevant information based on the operational requirement. The further updated table will be presented to CNS SG/19 for consideration. **ACTION ITEM/1** for Secretariat to follow-up.

2.6.4 The meeting noted that new table containing the requirement for the HF Network designators applicable for the Region is defined as **TABLE CNS II-4 - HF NETWORK DESIGNATORS**. It was considered that although some ready information may be available in the current ANP and other ITU document, some more time would be required for further study and population of the table. Since no volunteer expressed to take the work, the Secretariat was requested to complete this task and provide the result for consideration by CNS SG/19 meeting. **ACTION ITEM/2** for the Secretariat

## **e-ANP Vol. II - Regional Specific Requirements**

2.7 The meeting further reviewed the rest of CNS Tables in the Part IV of FASID (Doc 9673 Vol. II). The following Table were reviewed:

- Table CNS 1C - AMHS Routing Plan (merged into a new planning table with information in Table 1B) (Aug. 2012 updated & being updated 2015);
- Table CNS 1E - AIDC Implementation Plan (Aug.2012 updated);
- Table CNS 2 - AMS and AMSS (2007 updated);
- Table CNS 3 - Radio Navigation Aids (2006 updated);
- Table CNS 4A - Surveillance System (Aug. 2010 updated); and
- Table CNS 4B - ATS Automation System (Aug. 2010 updated)

2.7.1 The meeting considered that the Table CNS 1C – AMHS Routing Plan which was just updated through APANPIRG/25 Conclusion 25/29. This table had not been included in the harmonized template approved by the Council. The meeting did not recommend for keeping this Table in the e-ANP however recommended to refer to ACSICG/2 meeting scheduled for 20-22 May 2015 for further consideration. Justification for keeping such planning table is expected from ACSICG.

2.7.2 The meeting considered that the information contained in the current Table CNS 1E – AIDC Implementation Plan should be kept as regional specific requirements as implementation of AIDC had been identified as one of priorities by APANPIRG. The meeting recommended referring this Table for further refinement in terms for format and essential planning information by AIDC Task Force (APA TF/1) meeting scheduled for 16-18 June 2015.

2.7.3 The meeting also discussed the need for the Table CNS 2 - AMS and AMSS and considered that the information contained in this Table would be only useful for radio frequency coordination. The meeting did not recommend keeping this Table in the new e-ANP Vol. II as regional specific requirement. However, it was recommended to refer it to the SRWG meeting for further comments which is planned for 12 to 14 May 2015 in Bangkok.

2.7.4 The meeting reviewed information contained in the Table CNS 3 - Radio Navigation Aids considered that information relating requirement for ILS, VOR and DME may still be useful for systematic planning and cost calculation. The meeting recommended keeping such information as regional specific requirement however, it was recommended to simplify the table by removing that information of NDB and GNSS. The latter was considered as part of region PBN plan. Singapore presented a simplified format for this Table with additional columns for implementation status. The meeting requested Singapore to populate the table with the existing information (**Appendix F**). The Secretariat was requested to circulate the populated table to States/Administrations for further updates before presentation to the CNS SG/19 meeting. **ACTION ITEM/3**.

2.7.5 The meeting further reviewed information contained in Table CNS 4A - Surveillance System and Table CNS 4B - ATS Automation System. The meeting agreed to keep the essential information from these two tables and merging into one consolidated table as regional specific requirement. In this connection, the meeting discussed the initial sample combination presented by Thailand. After necessary changes, the new structure of the combined Table CNS II - X as regional specific requirement is provided in the Appendix G (without explanation to Table) to this Report for further consideration by CNS SG/19. The Secretariat was requested to clarify the need for and definition of the Surveillance Gap Column. If no objection by the participants through e-mail communication, then circulate the table to States/Administrations for further updates before presentation to the CNS SG/19 meeting. **ACTION ITEM/4**. The information will be initially populated with the assistance of Thailand.

2.8 Secretariat presented the structure of Volume III, the draft main planning table available for APAC region, and the ANRF adopted by APANPIRG/25. The draft main planning tables would need a comprehensive review against the seamless ATM plan v1.0 and against the ANRF. **ACTION ITEM/5**.

2.9 The meeting further updated the Action Plan which is provided in the **Appendix H** to this Report. The members of the Task Force are expected to take further follow up actions by the next meeting of the Task Force prior to the CNS SG/19 meeting, planned for early July 2015.

### **3. Closing the Meeting**

3.1 In closing the meeting, the Secretariat thanked all participants for their active participation and in particular to those volunteers for their dedication who had contributed to the development of new tables and regional specific requirements in the new e-ANP.

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## e-ANP CNS Development Working Group Face to face meeting

(Bangkok, Thailand, 08 – 10 April 2015)

### Appendix A to the Report

#### LIST OF PARTICIPANS

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e-ANP Working Group  
Appendix B to the Report

Paragraph	Meeting Decision	Remarks	Duplicate with APANPIRG 23 / 24 / 25???
1	delete	Propose to delete.	
2	delete	Propose to delete.	
3	delete	Propose to delete.	
4	delete	Propose to delete, information is obsolete.	
5	delete	Propose to delete, information is obsolete.	
6	delete	Propose to delete, information is obsolete.	
7	delete	Duplicated with Vol I part III 2.1, 2.2	
8	delete	Requirements may be out-of-date.	
9	Move to Vol II	The requirement is still needed, however, in the future the region can change this requirement considering the ongoing transition to AMHS.	
10	Move to Vol II	The requirement is still needed, however, in the future the region can change this requirement considering the ongoing transition to AMHS.	
11	Move to Vol III Guidance	The statement gives flexibility to States to perform their action and should be in place.	
12	delete	Statement is too general, should be deleted.	
13	Retain in Vol I		
14	Retain in Vol I	This statement is the minimum requirement of AFTN exchange in APAC.	
15	Retain in Vol I	This statement is the minimum requirement of AFTN exchange in APAC.	
16	delete	This is out-of-date technology and APAC is moving toward IP technology.	
16.1	delete	This is out-of-date technology and APAC is moving toward IP technology.	
17	delete	Redundant to statement in Vol II.	
17.1	Move to Vol II	There is still requirement for this critical service.	
17.2	delete	The statement is not applicable now and should be dropped.	
18	delete	The statement is not applicable now and should be dropped.	
19	delete	The statement is not applicable now and should be dropped.	
19.1	Retain in Vol I	APAC is still having ongoing transition from AFTN to AMHS.	
19.2	Retain in Vol I	APAC is still having ongoing transition from AFTN to AMHS.	
20	delete	This is general statement and should be dropped.	
21	delete	This requirement is covered in "Annex 11".	
22	delete	Included in Annex 11 and Doc 4444.	
22.1	delete	Included in general requirement of Vol II.	Related to C 24/27 Prioritization of AIDC Implementation to Address LHDs
22.2	delete	Included in general requirement of Vol II.	
23	delete	Superceded by APANPIRG Conclusion C25/35. The meeting proposed to add C25/35 to Vol II specific regional requirement.	
24	Retain as stated in remarks.	The meeting agreed to split the wording into two part: The first sentence will be retain in Vol 1 specific regional requirement, while the 2nd sentence will be moved to Vol II specific regional requirement.	
25	Retain in Vol I	The meeting agreed that this is a strong requirement and should be in place in Vol I.	
26	Move to Vol II	The meeting agreed that the main requirement is for States to report the interference.	
27	Move to Vol II	This requirement is still valide.	
28	Retain as stated in remarks.	The meeting proposed to retain para 28 2) and 3) in the Vol II specific regional requirement and the rest will be subjected to consideration by the SRWG outcome.	
29	delete	The statement is general and is not a requirement.	Related to C23/22 Support of AMSS in the new/replacement SATCOM System and 23/23 FANS 1/A over Iridium (FOI) for ATS Communication
30	delete	Proposed to delete.	
31	move to Vol II	The requirement is still valid, however it can be changed by APANPIRG in the future.	
32	delete	The requirement is not valid and should be dropped.	
33	move to Vol II	The requirement may be subjected to change by APAC navigation strategy.	



e-ANP Working Group  
Appendix B to the Report

Paragraph	Meeting Decision	Remarks	Duplicate with APANPIRG 23 / 24 / 25???
34	Move to Vol III Guidance	Retain the objective of sharing DME information for future procedure development.	
35	delete	General requirement.	
36	Move to Vol II	The meeting decided this is a dynamic requirement, however, it should be referred to PBNICG/2 for further action.	
36.1	Retain in Vol I	This statement is very important and should be emphasized in Vol I specific regional requirement.	
37	Move to Vol II	This statement is important to the design of flight procedure and should be kept as dynamic requirement.	
38	delete	The data was already collected.	Related to C23/28 Sharing of Ionospheric Data
39	delete	This is already in general requirement.	
40	delete	The requirement is out-of-date.	
41	delete	Included in Seamless plan already.	
42	delete	Included in Seamless plan already.	
43	move to Vol II	The meeting decided to keep the statement in Vol II and update the edition of GOLD document.	Related to C24/34 – Adoption of Global Operational Data Link Document (GOLD) Edition 2 (This is Edition 2!!)
44	move to Vol II	This is specific requirement to APAC.	
45	replace	Proposed to be deleted and then be replaced in Vol III Guidance by APANPIRG conclusion about AIGD.	
46	replace	Proposed to be deleted and then be replaced in Vol II specific regional requirement by APANPIRG conclusion C23/34.	Related to C23/34 Sharing of ADS-B data to support ATC operations and safety monitoring
47	move to Vol II	The requirement encourages the sharing of VHF infrastructure in line with ADS-B data sharing.	
47.1	move to Vol II	The requirement encourages the sharing of VHF infrastructure in line with ADS-B data sharing.	
47.2	move to Vol II	The requirement encourages the sharing of VHF infrastructure in line with ADS-B data sharing.	
48	delete	The requirement is out-of-date.	
49	move to Vol II	This requirement should be reviewed periodically.	
50	move to Vol II	This requirement should be reviewed periodically.	
51	move to Vol II	This requirement should be reviewed periodically.	
	Move to Vol III Guidance	The meeting discussed these strategy conclusions as objectives and should be included in Vol III guidance.	C 23/29 Navigation Strategy for the Asia/Pacific Region & C 24/41 & C 25/39 - may introduce another requirement.
	Move to Vol III Guidance	The meeting discussed these strategy conclusions as objectives and should be included in Vol III guidance.	C 23/35 Surveillance Strategy for the Asia/Pacific Region & C 24/47 - may introduce another requirement.
	Move to Vol III Guidance	The meeting discussed these strategy conclusions as objectives and should be included in Vol III guidance.	C 24/35 Revised regional Aeronautical Mobile Service Strategy - may introduce another requirement.
	Move to Vol III Guidance	The APAC Regional PBN Implementation Plan will be included as guidance under the Seamless ATM plan and should be included in Vol III guidance.	C 24/39 Asia/Pacific Regional PBN Implementation Plan Ver. 4 - may introduce another requirement.

**TABLE CNS II-1 - AERONAUTICAL FIXED TELECOMMUNICATIONS  
NETWORK (AFTN) PLAN**

**EXPLANATION OF THE TABLE**

*Column*

- 1 The AFTN Centres/Stations of each State are listed alphabetically. Each circuit appears twice in the table. The categories of these facilities are as follows:
- M - Main AFTN COM Centre
  - T - Tributary AFTN COM Centre
  - S - AFTN Station
- 2 Category of circuit:
- M - Main trunk circuit connecting Main AFTN communication centres.
  - T - Tributary circuit connecting Main AFTN communication centre and Tributary AFTN Communications Centre.
  - S - AFTN circuit connecting an AFTN Station to an AFTN Communication Centre.
- 3 Type of circuit provided:
- LTT/a - Landline teletypewriter, analogue (e.g. cable, microwave)
  - LTT/d - Landline teletypewriter, digital (e.g. cable, microwave)
  - LDD/a - Landline data circuit, analogue (e.g. cable, microwave)
  - LDD/d - Landline data circuit, digital (e.g. cable, microwave)
  - SAT/a/d - Satellite link, with /a for analogue or /d for digital
- 4 Circuit signalling speed in bits/s.
- 5 Circuit protocols
- 6 Data transfer code (syntax):
- ITA-2 - International Telegraph Alphabet No. 2 (5-unit Baudot code).
  - IA-5 - International Alphabet No. 5 (ICAO 7-unit code).
  - CBI - Code and Byte Independency (ATN compliant).
- 7 Remarks

**TABLE CNS II-1 - AERONAUTICAL FIXED TELECOMMUNICATIONS NETWORK (AFTN) PLAN**

State/Station	Category	Requirement				Remarks
		Type	Signaling Speed	Protocol	Code	
1	2	3	4	5	6	
<b>Afghanistan</b>						
Kabul						
Karachi	S	Sat/d	2400 bps	None	IA-5	
Tehran	S	LDD/d	2400 bps	None	IA-5	
<b>American Samoa</b>						
Pago Pago						
Salt Lake City/KSLC	S	LDD/d	2400 bps	IP	IA-5	
<b>Australia</b>						
Brisbane/YBBB						
Christchurch/NZCH	T	LDD/d	9600 bps	X.25	IA-5	<a href="#">MPLS VPN 64 Kbps/AMHS-IPS 2017</a>
Honiara/AGGG	S	LDD/d	<a href="#">N/A</a>	<a href="#">HTTP</a>	IA-5	<a href="#">INTERNET</a>
Jakarta/WIII	S	<a href="#">IP-VPN</a>	<a href="#">64 Kbps</a>	<a href="#">AMHS/IPS</a>	IA-5	<a href="#">2015</a>
Nadi/NFFN	M	<a href="#">LDD/d</a>	<a href="#">64 Kbps</a>	<a href="#">AMHS/OSI</a>	<a href="#">IA-5</a>	
Nauru/ANAU	S	LDD/d	<a href="#">N/A</a>	<a href="#">HTTP</a>	<a href="#">IA-5</a>	<a href="#">INTERNET</a>
Port Moresby/AYPM	S	<a href="#">LDD/d</a>	<a href="#">128 Kbps</a>	<a href="#">IP</a>	IA-5	
Port Vila/NVVV	S	<a href="#">LDD/d</a>	<a href="#">N/A</a>	<a href="#">HTTP</a>	<a href="#">IA-5</a>	<a href="#">INTERNET</a>
Dili/WPDL	S	LDD/d	<a href="#">N/A</a>	<a href="#">HTTP</a>	<a href="#">IA-5</a>	<a href="#">INTERNET</a>

Santiago/SCSC	M	LDD/d	2400 bps	X.25	IA-5	
Singapore/WSSS	M	LDD/d	64 Kbps	X.25	IA-5	<a href="#">IP/VPN AMHS/OSI 2015</a>
United States/KSLC	M	LDD/d	64 Kbps	X.25	IA-5	<a href="#">IP/VPN AMHS/IPS2017</a>
Johannesburg	M	<a href="#">LDD/d</a>	64Kbps	X.25	IA-5	
<b>BANGLADESH</b>						
<b>Dhaka/VGHS</b>						
Bangkok/VTBB	S	SAT/d	32 kbps	None	IA-5	
Kolkata/VECC	S	LDD/d	64Kbps	X.25	IA-5	
<b>Bhutan</b>						
Paro/VQPR						
Mumbai /VABB	S	Sat/a	300 baud	None	IA-5	
<b>Brunei DARUSSALAM</b>						
<b>Brunei /WBSB</b>						
Singapore/WSSS	S	LDD/d	64Kbps	X.25	IA-5	
Kuala Lumpur/WMKK	S	LDD/d	9600 bps	X.25	IA-5	
<b>CAMBODIA</b>						
<b>Phnom Penh/VDPP</b>						
<b>Bangkok/VTBB</b>	S	Sat/d	64Kbps	None	IA-5	
<b>China</b>						

<b>Beijing /ZBBB</b>						
Bangkok/VTBB	M	Sat/d	2400 bps	X.25	IA-5	
Guangzhou/ZGGG	M	LDD/d	64Kbps	X.25	IA-5	
Karachi/OPKC	M	LDD/d	2400 bps	X.25	IA-5	
Kathmandu/VNKT	S	Sat/d	300 bps	None	IA-5	
Russian Federation/UHHH	M	LDD/d	64 kbps	X.25	IA-5	
Pyongyang/ZKKK	S	LDD/D	64 kbps	X.25 or IP	IA-5	
Seoul/RKSS	S	Sat/d	9600 bps	X.25	IA-5	
Fukuoka/RJJJ	S	LDD/d	9600 bps	X.25	IA-5	
Ulaan Baatar/ZMUB	S	LDD/d	9600 bps	None	IA-5	
Yangon/VYYY	S	LDD/d	64 kbps	none	IA-5	
<b>Guangzhou/ZGGG</b>						
Beijing/VTBB	M	LDD/d	64Kbps	X.25	IA-5	
Hanoi/VVNB	S	Sat/d	2400bps	None	IA-5	
Hongkong/VHHH	M	LDD/d	2400bps	None	IA-5	
Macau/VMMC	S	LDD/d	2400bps	None	IA-5	
Sanya/ZJSY	S	LDD/d	2400bps	None	IA-5	
<b>HAIKOU/ZJHK</b>						
Guangzhou/ZGGG	S	LDD/d	2400bps	None	IA-5	
Hongkong/VHHH	S	LDD/a	2400bps	None	IA-5	
<b>TAIBEI/RCTP</b>						
Hongkong/VHHH	S	LDD/a	2400bps	X.25	IA-5	
Manila/ RPLL	S	LDD/d	300bps	None	ITA-2	
Fukuoka/RJJJ	S	LDD/d	64Kbps	X.25	IA-5	

<b>Hongkong China/VHHH</b>						
Hongkong/VHHH						
Bangkok/VTBB	M	LDD/a	64 Kbps	X.25	IA-5	
Guangzhou/ZGGG	M	LDD/a	2400bps	None	IA-5	
Ho- Chi- Minh/VVTS	S	LDD/a	2400bps	None	IA-5	
Macau/VMMC	S	LDD/a	64 Kbps	X.25	IA-5	
Manila/ RPLL	S	LDD/a	9600bps	X.25	IA-5	
HAIKOU/ZJHK	S	LDD/a	4800bps	None	IA-5	
TaiBei/RCTP	S	LDD/a	4800bps	X.25	IA-5	
Fukuoka/RJJJ	M	LDD/a	9600bps	X.25	IA-5	
<b>Macau China</b>						
Macau/VMMC						
Hongkong/VHHH	S	LDD/a	64 Kbps	X.25	IA-5	
Guangzhou/ZGGG	S	LDD/d	2400 bps	None	IA-5	
<b>COOK ISLANDS</b>						
RAROTONGA /NCRG						
Christ church/NZCH	S	LDD/d	2400 bps	X.25	IA-5	
<b>DPR Korea</b>						
Pyongyang/ZKKK						
Beijing/ZBBB	S	64 kbps	X.25 or IP	IA-5		
<b>FIJI</b>						
Nadi/NFFN						

Brisbane/YBBB	M	LDD/d	<a href="#">64 Kbps</a>	<a href="#">AMHS/OSI</a>	IA-5	
Funafuti/NGFU	S	Sat/d	64 kbps	X.25 or IP	IA-5	
Noumea/NWWW	S	Sat/d	9600 bps	IP	IA-5	
Tarawa/NGTT	S	SAT/d	Internet	VPN	IA-5	
United States/KSLC	M	LDD/d	9600 bps	X.25	IA-5	
Wallis Is./NLWW	S	Sat/d	9600 bps	IP	IA-5	
<b>FRENCH POLYNESIA (France)</b>						
<b>Papeete (NTAA)</b>						
Christ church/NZCH	S	LDD/d	64 Kbps	X.25	IA-5	
<b>India</b>						
Mumbai/VABB						
Bangkok/VTBB	M	LDD/d	64 Kbps	X.25	IA-5	
Kolkata/VECC	S	LDD/d	64 Kbps	X.25	IA-5	
Colombo/VCCC	S	LDD/d	64 Kbps	X.25	IA-5	
Karachi/OPKC	M	Sat/d	2400bps	None	IA-5	
Kathmandu /VNKT	S	Sat/a	50 Bauds	None	ITA-2	
Muscat/OOMS	M	Sat/a	300 bauds	None	ITA-2	
Nairobi/HKNA	M	Sat/A	50 bauds	None	ITA-2	
Paro/VQPR	S	Sat/a	300 Bauds	None	ITA-2	
Singapore/WSSS	M	LDD/d	64 Kbps	X.25	IA-5	
<b>Kolkata/VECC</b>						
Dhaka/VGZR	S	LDD/d	64 Kbps	None	IA-5	

Mumbai	S	LDD/d	64 Kbps	X.25	IA-5	
<b>Delhi/VIDP</b>						
Tashkent UT TT	S	Sat/a	50 bauds	None	ITA-2	
<b>Chennai /VOMM</b>						
Kuala Lumpur /WMKK	S	LDD/d	64 Kbps	None	IA-5	
<b>Indonesia</b>						
Jakarta/WIII						
Brisbane/YBBB	S	<a href="#">IP-VPN</a>	<a href="#">64 Kbps</a>	<a href="#">AMHS/IPS</a>	<a href="#">IA-5</a>	
Singapore/WSSS	S	LDD/d	128 kbps	X.25	IA-5	
<b>Japan</b>						
FUKUOKA - M/RJJJ	M	LDD/d	64 kbps	X.25	IA-5	
Beijing/ZBBB	M	LDD/a	9600 bps	X.25	IA-5	
Hong Kong/VHHH	M	LTT	64 kbps	X.25	IA-5	
Russian Federation/UUUU	S	LDD/d	9600 bps	X.25	IA-5	
Seoul/RKSS	M	LDD/d	64 kbps	X.25	IA-5	
Singapore/WSSS	M	LDD/d	64 kbps	X.25	-	
United States/KSLC	S	LDD/d	64 kbps	X.25	IA-5	
Taibei/RCTP						
<b>KIRIBATI</b>						
TARAWA - S/NGTT						
Nadi/NFFN	S	SAT/d	Internet	VPN	IA-5	



<b>LAO PDR</b>						
VIENTIANE - S/VLVT						
Bangkok/VTBB	S	SAT/d	32 kbps	None	IA-5	
Hanoi/VVNB	S	SAT/d	2400 bps	None	IA-5	
<b>MALAYSIA</b>						
KUALA LUMPUR-S/WMKK						
Bangkok/VTBB	S	SAT/d	64 kbps	None	IA-5	
Brunei/WBSB	S	LDD/d	9600 bps	X.25	IA-5	
Chennai/VOMM	S	LDD/d	9600 bps	X.25	IA-5	
Singapore/WSSS	S	SAT/d	64 kbps	X.25	IA-5	
<b>MALDIVES</b>						
MALE - S/VRMM						
Colombo/VCCC	S	SAT/d	9600 bps	X.25	IA-5	
<b>MARSHALL ISLAND</b>						
MAJURO - S/PKMJ						
United States/KSLC	S	Internet	64 kbps	IP	IA-5	
<b>MICRONESIA</b>						
<b>FEDERATED</b>						
<b>STATE OF</b>						
CHUUK - S/PTKK						
United States/KSLC	S	Internet	64 kbps	IP	IA-5	
KOSRAE - S/PTSA						

United States/KSLC	S	Internet	64 kbps	IP	IA-5	
PONAPEI - S/PTPN						
United States/KSLC	S	Internet	64 kbps	IP	IA-5	
YAP - S/PTYA						
United States/KSLC	S	Internet	64 kbps	IP	IA-5	
<b>MONGOLIA</b>						
ULAANBAATAR-S/ZMUB						
Beijing/ZBBB	S	LDD/d	64 kbps	None	IA-5	
Russian Federation/UIII	S	LDD/d	9600 bps	X.25	IA-5	
<b>MYANMAR</b>						
YANGON - S/VYYY						
Bangkok/VTBB	S	SAT/d	48 kbps	none	IA-5	
Beijing/ZBBB	S	LDD/d	64 kbps	none	IA-5	
<b>NAURU</b>						
NAURU - S/ANAU						
Brisbane/YBBB	S	LDD/d	<u>N/A</u>	<u>HTTP</u>	<u>IA-5</u>	<u>INTERNET</u>
<b>NEPAL</b>						
KATHMANDU - S/VNKT						
Beijing/ZBBB	S	SAT/d	300 baud	None	IA-5	
Mumbai/VABB	S	SAT/a	50 baud	None	ITA-2	

<b>NEW CALEDONIA</b>						
<b>(FRANCE)</b>						
NOUMEA - S/NWWW						
Nadi/NFFN	S	SAT/d	9600 bps	IP	IA-5	
<b>NEW ZEALAND</b>						
CHRISTCHURCH-T/NZCH						
Faleolo/NSFA	S	LDD/d	2400 bps	X.25	IA-5	
Brisbane/YBBB	T	LDD/d	2400 bps	X.25	IA-5	<a href="#">MPLS VPN 64 Kbps/AMHS-IPS 2017</a>
Niue/NIUE	S	E mail				
Papeete/NTAA	S	SAT/d	256 kbps	IP	IA-5	
Rarotonga/NCRG	S	LDD/d	2400 bps	X.25	IA-5	
Tongatapu/NFTF	S	LDD/d	2400 bps	X.25	IA-5	
USA/KSLC	M	LDD/d	9600 bps	X.25	IA-5	
<b>NIUE IS</b>						
NIUE - S/NIUE						
Christchurch/NZCH	S					
<b>PAKISTAN</b>						
KARACHI - M/OPKC						
Beijing/ZBBB	M	LDD/d	2400 bps	None	IA-5	
Mumbai/VABB	M	SAT/d	2400 bps	None	IA-5	
Kabul/OAKB	S	SAT/d	2400 bps	None	IA-5	
Kuwait/OKBK	M	LDD/d	2400 bps	None	IA-5	

<b>PALAU</b>						
KOROR - S/PTRO						
United States/KSLC	S	Internet	64 kbps	IP	IA-5	
<b>PAPUA NEW GUINEA</b>						
PORT MORESBY-S/AYPM						
Brisbane/YBBB	S	<a href="#">LDD/d</a>	<a href="#">128 Kbps</a>	<a href="#">IP</a>	<a href="#">IA-5</a>	
<b>PHILIPPINES</b>						
MANILA - S/RPLL						
Hong Kong/VHHH	S	LDD/a	9600 bps	X.25	IA-5	
Singapore/WSSS	S	LDD/d	64 kbps	X.25	IA-5	
Taipei/RCTP	S	LDD/d	300 baud	None	ITA-2	
<b>REPUBLIC OF KOREA</b>						
SEOUL - S/RKSS						
Beijing/ZBBB	s	SAT/d	9600 bps	X.25	IA-5	
Fukuoka/RJJJ	S	LDD/d	9600 bps	X.25	IA-5	
<b>SAMOA</b>						
FALEOLO - S/NSFA						
Chistchurch/NZCH	S	LDD/d	2400 bps	X.25	IA-5	
<b>SINGAPORE</b>						
SINGAPORE-M/WSSS						
Bahrain/OBBI	M	LTT/d	64 Kbps	X.25	IA-5	
Bangkok/VTBB	M	LDD/d	64 kbps	X.25	IA-5	

Brisbane/YBBB	M	LDD/d	64 Kbps	X.25	IA-5	<a href="#">IP/VPN AMHS/OSI 2015</a>
Brunei/WBSB	S	LDD/d	64kbps	X.25	IA-5	
Colombo/VCCC	S	LDD/d	64 kbps	X.25	IA-5	
Ho-Chi-Minh/VVTS	S	LDD/d	128 Kbps	X.25	IA-5	
Jakarta/WIII	S	LDD/d	128 Kbps	X.25	IA-5	
Kuala Lumpur/WMKK	S	SAT/d	64 Kbps	X.25	IA-5	
Mumbai/VABB	M	LDD/d	64kbps	X.25	IA-5	
London/EGGG	M	LDD/d	128 kbps	None	IA-5	
Manila/RPLL	S	LDD/d	64 kbpx	X 25	IA-5	
Fukuoka/RJJJ	M	LDD/d	64 kbps	X.25	IA-5	
<b>SOLOMON IS.</b>						
HONIARA - S/AGGG						
Brisbane/YBBB	S	<a href="#">LDD/d</a>	<a href="#">N/A</a>	<a href="#">HTTP</a>	IA-5	<a href="#">INTERNET</a>
<b>SRI LANKA</b>						
COLOMBO - M/VCCC						
Mumbai/VABB	M	LDD/d	64 kbps	X.25	IA-5	
Male/VRMM	S	SAT/d	32 kbps	None	IA-5	
Singapore/WSSS	S	LDD/d	64 kbps	X.25	IA-5	
<b>THAILAND</b>						
BANGKOK - M/VTBB						
Beijing/ZBBB	M	SAT/d	2400 bps	X.25	IA-5	
Mumbai/VABB	M	LDD/d	64 kbps	X.25	IA-5	
Dhaka/VGHS	S	SAT/d	32 kbps	None	IA-5	
Ho-Chi-Minh/VVTS	S	SAT/d	2400 bps	None	IA-5	

Hong Kong/VHHH	M	LDD/a	64 Kbps	X.25	IA-5	
Kuala Lumpur/WMKK	S	SAT/d	64 kbps	None	IA-5	
Phnom Penh/VDPP	S	SAT/d	64 kbps	None	IA-5	
Rome/LIII	M	LDD/d	64 kbps	X.25	IA-5	
Singapore/WSSS	M	LDD/d	64 kbps	X.25	IA-5	
Vientiane/VLVT	S	SAT/d	32 kbps	None	IA-5	
Yangon/VYYY	S	SAT/d	48 kbps	None	IA-5	
<b>TIMOR LESTE</b>						
DILI/WPDL						
Brisbane/YABB	S	<a href="#">LDD/d</a>	<a href="#">N/A</a>	<a href="#">HTTP</a>	<a href="#">IA-5</a>	<a href="#">INTERNET</a>
<b>TONGA</b>						
TONGATAPU - S/NFTF	S					
Cristchurch/NZCH		LDD/d	2400 bps	X.25	IA-5	
<b>TUVALU</b>						
FUNAFUTI - S/NGFU						
Nadi/NFFN	S	SAT/d	32 kbps	None	IA-5	
<b>UNITED STATES</b>						
USA-M/KSLC						
Brisbane/YBBB	M	LDD/d	64 Kbps	X.25	IA-5	<a href="#">IP/VPN AMHS/IPS2017</a>
Christchurch	S	LDD/d	9600 bps	X.25	IA-5	
Chuuk/PTKK	S	Internet	64 kbps	IP	IA-5	
Koror/PTRO	S	Internet	64 kbps	IP	IA-5	
Kosrae/PTSA	S	Internet	64 kbps	IP	IA-5	

Majuro/PKMJ	S	Internet	64 kbps	IP	IA-5	
Nadi/NFFN	M	LDD/d	9.6 kbps	X.25	IA-5	
Pago Pago/NSTU	S	SAT/d	2400 bps	IP	IA-5	
Ponapei/PTPN	S	Internet	64 kbps	IP	IA-5	
Fukuoka/RJJJ	M	LDD/d	64 kbps	X.25		
Yap/PTYA	S	Internet	64 kbps	IP	IA-5	
<b>VANUATU</b>						
PORT VILA - S/NVVV						
Brisbane/YBBB	S	<a href="#">LDD/d</a>	<a href="#">N/A</a>	<a href="#">HTTP</a>	<a href="#">IA-5</a>	<a href="#">INTERNET</a>
<b>VIET NAM</b>						
HANOI-S/VVNB						
Vientiane/VLVT	S	SAT/d	2400 bps	None	IA-5	
Ho-Chi-Minh/VVTS	S	SAT/d	9600 bps	None	IA-5	
Guangzhou/ZGGG	<b>M</b>	<b>SAT/d</b>	2400 bps	None	IA-5	
<b>HO-CHI-MINH - S/VVTS</b>						
Bangkok/VTBB	S	SAT/d	2400 bps	None	IA-5	
Hanoi/VVNB		SAT/d	9600 bps	None	IA-5	
Hong Kong/VHHH	S	LDD/a	2400 bps	None	IA-5	
Singapore/WSSS	S	<b>LDD/d</b>	<b>128 Kbps</b>	<b>X.25</b>	<b>IA-5</b>	
<b>WALLIS IS. (FRANCE)</b>						
WALLIS - S/NLWW						
Nadi/NFFN	S	SAT/d	9600 bps	IP	IA-5	

**TABLE CNS II-2 - REQUIRED ATN INFRASTRUCTURE ROUTING PLAN**

EXPLANATION OF THE TABLE

*Column*

- 1 Name of the Administration and Location of the ATN Router
- 2 Type of Router (in end systems (ES) of the Administration shown in column 1)
- 3 Type of Interconnection:  
Inter-Regional: Connection between different Regions/ domains  
Intra-Regional: Connection within a Region/ domain.
- 4 Connected Router: List of the Administration and location of the ATN routers to be connected with the router shown in column 1)
- 5 Bandwidth: Link Speed expressed in bits per second (bps)
- 6 Network Protocol: If Internet Protocol Suite is used, indicate version of IP (IPv4 or IPv6)
- 7 Via: The media used to implement the interconnection of the routers. (in case of IP service bought from a service provider, indicate VPN)
- 8 Remarks



## TABLE CNS II-2 REQUIRED ATN INFRASTRUCTURE ROUTING PLAN

### Chapter 1 EXPLANATION OF THE TABLE

*Column*

- 1 Name of the Administration and Location of the ATN Router
- 2 Type of Router (in end systems (ES) of the Administration shown in column 1)
- 3 Type of Interconnection:  
Inter Regional: Connection between different Regions/ domains  
Intra Regional: Connection within a Region/ domain.
- 4 Connected Router: List of the Administration and location of the ATN routers to be connected with the router shown in column 1.
- 5 Bandwidth: Link Speed expressed in bits per second (bps)
- 6 Network Protocol: If Internet Protocol Suite is used, indicate version of IP (IPv4 or IPv6)
- 7 Via: The media used to implement the interconnection of the routers. (in case of IP service bought from a service provider, indicate VPN)  
DDN (public telecomm leased line)  
VSAT  
VPN
- 8 Remarks

Administration and Location	Type of Router	Type of Interconnection	Connected Router	Bandwidth	Network Protocol	Via	Remarks
1	2	3	4	5	6	7	8
<b>Afghanistan</b> Kabul	BIS	Intra-Regional	Pakistan	64000bps	IPS		Intra-domain
	BIS	Inter-Regional	Iran	9600 bps	IPS		
<b>American Samoa</b> Pago Pago			United States				Intra-domain
<b>Australia</b> Brisbane	BBIS	Intra-Regional	Fiji	64000 bps	CLNP/IP-SNDCF		
	BIS	Intra-Regional	Indonesia	64000 bps	X.25/IP SNDCF		
	BBIS	Intra-Regional	Japan	64000 bps	IP/SNDCF		Not implemented
			Nauru		IPS		Intra-domain
	BIS	Intra-Regional	New Zealand	64000 bps	IPS		Implemented

Administration and Location	Type of Router	Type of Interconnection	Connected Router	Bandwidth	Network Protocol	Via	Remarks
1	2	3	4	5	6	7	8
			Papua New Guinea	64000 bps	IPS		Intra-domain/Implemented
	BBIS	Intra-Regional	Singapore	64000 bps	CLNP/IP-SNDCF		
	BBIS	Inter-Regional	South Africa	64000 bps	TBD		Not implemented
			Solomon Islands		IPS		Intra-domain
			Timor Leste		IPS		Intra-domain
			Vanuatu		IPS		Intra-domain
	BBIS	Inter-Regional	United States	64000 bps	IPS/SNDCF		
<b>Bangladesh</b>	BIS	Intra-Regional	India	64000 bps	IPS		
Dhaka	BIS	Intra-Regional	Thailand	9600 bps	X.25		
<b>Bhutan</b>	BIS	Intra-Regional	India	9600 bps	IPS		
Paro							
<b>Brunei Darussalam</b>	BIS	Intra-Regional	Malaysia	64000 bps	IPS		
Brunei	BIS	Intra-Regional	Singapore	9600 bps	X.25		Circuit implemented
<b>Cambodia</b>	BIS	Intra-Regional	Thailand	9600 bps	X.25		
Phnom Penh							
<b>China</b>	BIS	Intra-Regional	DPR Korea	9600 bps	X.25		Router Implemented
Beijing	BBIS	Intra-Regional	Hong Kong, China	64000 bps	X.25		Router Implemented
	BBIS	Intra-Regional	India	64000 bps	IPS		
	BBIS	Intra-Regional	Japan	64000 bps	IPS/SNDCF		
	BBIS	Inter-Regional	Kuwait	64000 bps	X.25		Router Implemented
	BIS	Intra-Regional	Macau, China	64000 bps	X.25		Implemented
	BIS	Intra-Regional	Mongolia	9600 bps	X.25		Router Implemented

<b>Administration and Location</b>	<b>Type of Router</b>	<b>Type of Interconnection</b>	<b>Connected Router</b>	<b>Bandwidth</b>	<b>Network Protocol</b>	<b>Via</b>	<b>Remarks</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
	BIS	Intra-Regional	Myanmar	9600 bps	IPS		Router Implemented
	BIS	Intra-Regional	Nepal	9600 bps	X.25		Router Implemented
	BIS	Intra-Regional	Pakistan	64000 bps	X.25		Router Implemented
	BIS	Intra-Regional	Republic of Korea	64000 bps	X.25		Implemented
	BBIS	Inter-Regional	Russian Federation	64000 bps	X.25		Router Implemented
	BBIS	Intra-Regional	Thailand	64000 bps	X.25		Router Implemented
	BIS	Intra-Regional	Vietnam	9600 bps	X.25		
Taipei	BIS	Intra-Regional	Hong Kong, China	64000 bps	X.25		
	BIS	Intra-Regional	Japan	64000 bps	IPS/SNDCF		
<b>Hong Kong, China</b> Hong Kong	BBIS	Intra-Regional	China	64000 bps	X.25		
	BIS	Intra-Regional	Macau, China	64000 bps	X.25		Implemented
	BBIS	Intra-Regional	Japan	64000 bps	IP/SNDCF		
	BIS	Intra-Regional	Philippines	64000 bps	X.25/IPS		
	BBIS	Intra-Regional	Taipei	64000 bps	X.25		
	BBIS	Intra-Regional	Thailand	64000 bps	X.25		Implemented
	BIS	Intra-Regional	Viet Nam	64000 bps	X.25		
<b>Macau, China</b> Macau	BIS	Intra-Regional	China	64000 bps	X.25		Implemented
	BIS	Intra-Regional	Hong Kong, China	64000 bps	X.25		Implemented
<b>Cook Islands</b> Rarotonga			New Zealand	9600 bps	IPS		Intra-domain
<b>DPR Korea</b> Pyongyang	BIS	Intra-Regional	China	9600 bps	X.25		

<b>Administration and Location</b>	<b>Type of Router</b>	<b>Type of Interconnection</b>	<b>Connected Router</b>	<b>Bandwidth</b>	<b>Network Protocol</b>	<b>Via</b>	<b>Remarks</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
<b>Fiji</b> Nadi	BBIS	Intra-Regional	Australia	64000 bps	CLNP/IP-SNDCF		
			Kiribati	64000 bps	IPS		Intra-domain
	BIS	Intra-Regional	New Caledonia				Intra-domain
			Tuvalu		IPS		Intra-domain
	BBIS	Inter-Regional	United States	9600 bps	X.25		Circuit implemented
			Wallis Islands				Intra-domain
<b>French Polynesia</b> Papeete			New Zealand	9600 bps	IPS		Intra-domain
<b>India</b> Mumbai	BIS	Intra-Regional	Bangladesh	64000 bps	IPS		
	BIS	Intra-Regional	Bhutan	9600 bps	IPS		
	BBIS	Intra-Regional	China	64000 bps	IPS		
	BIS	Inter-Regional	Kenya	9600 bps	TBD		
	BIS	Intra-Regional	Nepal	64000 bps	IPS		
	BIS	Inter-Regional	Oman	9600 bps	IPS		Interoperability trials in Q2/2012
	BIS	Intra-Regional	Pakistan	64000 bps	IPS		Interoperability test completed in 2010. Trial operations in progress.
	BBIS	Intra-Regional	Singapore	64000 bps	X.25		Circuit Implemented
	BIS	Intra-Regional	Sri Lanka	9600 bps	IPS		
	BBIS	Intra-Regional	Thailand	64000 bps	X.25		Trials Commence from Q2/2012
<b>Indonesia</b> Jakarta	BIS	Intra-Regional	Australia	64000bps	IPS		
	BIS	Intra-Regional	Singapore	19200 bps	IPS		

Administration and Location	Type of Router	Type of Interconnection	Connected Router	Bandwidth	Network Protocol	Via	Remarks
1	2	3	4	5	6	7	8
<b>Japan</b> Tokyo	BBIS	Intra-Regional	Australia	64000 bps	X.25/IP-SNDCF		Not implemented
	BBIS	Intra-Regional	China	64000 bps	X.25/IP-SNDCF		Implement gradually from 2016 on-wards
	BBIS	Intra-Regional	Hong Kong, China	64000 bps	IP/SNDCF		Implement gradually from 2016 on-wards
	BBIS	Inter-Regional	Europe	64000 bps	X.25/IP-SNDCF		Implement gradually from 2016 on-wards
	BIS	Intra-Regional	Republic of Korea	64000 bps	X.25/IP-SNDCF		
	BBIS	Inter-Regional	Russia Federation	64000 bps	X.25/IP-SNDCF		Implement gradually from 2016 on-wards
	BBIS	Intra-Regional	Singapore	64000 bps	IPS-SNDCF		Implement gradually from 2016 on-wards
	BIS	Intra-Regional	Taipei	64000 bps	X.25/IP-SNDCF		Implement gradually from 2016 on-wards
	BBIS	Inter-Regional	United States	64000 bps	X.25/IP-SNDCF		Circuit implemented
<b>Kiribati</b> Tarawa	BIS	Intra-Regional	Fiji	64000 bps	IPS		Intra-domain
<b>Lao PDR</b> Vientiane	BIS	Intra-Regional	Thailand	64000 bps	IPS		VSAT
	BIS	Intra-Regional	Viet Nam	9600 bps	X.25		
<b>Malaysia</b> Kuala Lumpur	BIS	Intra-Regional	Brunei	64000 bps	IPS		
	BIS	Intra-Regional	Singapore	64000 bps	IPS		
	BIS	Intra-Regional	Thailand	64000 bps	IPS		
<b>Maldives</b> Male	BIS	Intra-Regional	Sri Lanka	64000 bps	X.25		

<b>Administration and Location</b>	<b>Type of Router</b>	<b>Type of Interconnection</b>	<b>Connected Router</b>	<b>Bandwidth</b>	<b>Network Protocol</b>	<b>Via</b>	<b>Remarks</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
<b>Marshall Islands</b> Majuro		Inter-Regional	United States	64000 bps	IP	VPN	VPN over Internet/ Intra-domain
<b>Micronesia Federated State of</b> Chuuk Kosrae Ponapei Yap		Inter-Regional	United States	64000 bps	IP	VPN	VPN over Internet/ Intra-domain
		Inter-Regional	United States	64000 bps	IP	VPN	VPN over Internet/ Intra-domain
		Inter-Regional	United States	64000 bps	IP	VPN	VPN over Internet/ Intra-domain
		Inter-Regional	United States	64000 bps	IP	VPN	VPN over Internet/ Intra-domain
<b>Mongolia</b> Ulaanbaatar	BIS	Intra-Regional	China	9600 bps	X.25		
<b>Myanmar</b> Yangon	BIS	Intra-Regional	China	9600 bps	IPS		
	BIS	Intra-Regional	Thailand	9600 bps	IPS		
<b>Nauru</b> Nauru			Australia				Intra-domain
<b>Nepal</b> Kathmandu	BIS	Intra-Regional	China	9600bps	X.25		
	BIS	Intra-Regional	India	64000 bps	IPS		
<b>New Caledonia</b> Noumea			Fiji				Intra-domain
<b>New Zealand</b> Christchurch	BIS	Intra-Regional	Australia	64000 bps	IPS		

<b>Administration and Location</b>	<b>Type of Router</b>	<b>Type of Interconnection</b>	<b>Connected Router</b>	<b>Bandwidth</b>	<b>Network Protocol</b>	<b>Via</b>	<b>Remarks</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
			Cook Is.	24000 bps	IPS		Intra-domain
			French Polynesia	9600 bps	IPS		Intra-domain
			Samoa	2400 bps	IPS		Intra-domain
			Tonga	85000 bps	IPS		Intra-domain
	BIS	Inter-Regional	USA	64000 bps	IPS		
<b>Pakistan</b>	BIS	Intra-Regional	Afghanistan	64000 bps	IPS		
Karachi	BIS	Intra-Regional	China	64000 bps	X.25		
	BIS	Intra-Regional	India	64000 bps	IPS		Interoperability test completed in 2010. Trial operations in progress.
	BIS	Inter-Regional	Oman	64000 bps	-		
	BIS	Inter-Regional	Iran	64000 bps	-		
	BIS	Inter-Regional	Kuwait	64000 bps	-		
<b>Palau</b>		Internet	United States	64000 bps	IP		Intra-domain
Koror							
<b>Papua New Guinea</b>			Australia	64000 bps	IPS		Intra-domain
Port Moresby							
<b>Philippines</b>	BIS	Intra-Regional	Hong Kong, China	64000 bps	X.25/IPS		Circuit Implemented
Manila	BIS	Intra-Regional	Singapore	64000 bps	IPS		
<b>Republic of Korea</b>	BIS	Intra-Regional	China	64000 bps	X.25		Implemented
Seoul	BIS	Intra-Regional	Japan	64000 bps	X.25		
<b>Samoa</b>			New Zealand	2400 bps	IPS		Intra-domain
Faleolo							

Administration and Location	Type of Router	Type of Interconnection	Connected Router	Bandwidth	Network Protocol	Via	Remarks
1	2	3	4	5	6	7	8
Singapore Singapore	BBIS	Intra-Regional	Australia	64000 bps	CLNP/IP-SNDCF		
	BBIS	Inter-Regional	Bahrain	64000 bps	IPS		
	BIS	Intra-Regional	Brunei	9600bps	IPS		
	BBIS	Intra-Regional	India	64000 bps	X.25		Implemented
	BIS	Intra-Regional	Indonesia	19200bps	IPS		
	BBIS	Intra-Regional	Japan	64000 bps	IPS/SNDCF		
	BIS	Intra-Regional	Malaysia	64000 bps	IPS		
	BIS	Intra-Regional	Philippines	64000 bps	IPS		
	BIS	Intra-Regional	Sri Lanka	64000 bps	IPS		
	BBIS	Intra-Regional	Thailand	64000 bps	X.25		Implemented
	BBIS	Inter-Regional	United Kingdom	64000 bps	IPS		Implemented
	BIS	Intra-Regional	Viet Nam	9600 bps	X.25		
Solomon Islands Honiara			Australia		IPS		Intra-Domain
Sri Lanka Colombo	BIS	Intra-Regional	India	9600 bps	IPS		
	BIS	Intra-Regional	Maldives	64000 bps	X.25		
	BIS	Intra-Regional	Singapore	64000 bps	IPS		
Thailand Bangkok	BIS	Intra-Regional	Bangladesh	32000 bps	IPS		VSAT
	BIS	Intra-Regional	Cambodia	32000bps	IPS		VSAT
	BBIS	Intra-Regional	Beijing, China	64000 bps	X.25		
	BBIS	Intra-Regional	Hong Kong, China	64000 bps	X.25		Implemented
	BBIS	Intra-Regional	India	64000 bps	X.25		



Administration and Location	Type of Router	Type of Interconnection	Connected Router	Bandwidth	Network Protocol	Via	Remarks
1	2	3	4	5	6	7	8
	BBIS	Inter-Regional	Italy	64000 bps	X.25		
	BIS	Intra-Regional	Lao PDR.	32000 bps	IPS		VSAT
	BIS	Intra-Regional	Malaysia	64000 bps	IPS		
	BIS	Intra-Regional	Myanmar	32000 bps	IPS		VSAT
	BBIS	Intra-Regional	Singapore	64000 bps	X.25		Implemented
	BIS	Intra-Regional	Viet Nam	32000 bps	IPS		VSAT
<b>Timor Leste</b> Dili			Australia		IPS		Intra-domain
<b>Tonga</b> Tongatapu			New Zealand	9600 bps	IPS		Intra-domain
<b>Tuvalu</b> Funafuti			Fiji		IPS		Intra-domain
<b>United States</b> Salt Lake City	BBIS	Inter-Regional	Australia	64000 bps	IPS/SNDCF		
			American Samoa				Intra-domain
	BBIS	Inter-Regional	Fiji	9600 bps	X.25		Circuit implemented
	BBIS	Inter-Regional	Japan	64000 bps	IPS/SNDCF		Circuit implemented
		Internet	Marshall Islands	64000 bps	IP		Intra-domain
		Internet	Micronesia, Federated State of	64000 bps	IP		Intra-domain
	BIS	Inter-Regional	New Zealand	64000 bps	IPS		Circuit Implemented
	Internet	Palau	64000 bps	IP		Intra-domain	
<b>Vanuatu</b>			Australia		IPS		Intra-domain

<b>Administration and Location</b>	<b>Type of Router</b>	<b>Type of Interconnection</b>	<b>Connected Router</b>	<b>Bandwidth</b>	<b>Network Protocol</b>	<b>Via</b>	<b>Remarks</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
Port Vila							
<b>Viet Nam</b>	BIS	Intra-Regional	China	9600 bps	X.25		
Ho Chin Minh/Hanoi	BIS	Intra-Regional	Hong Kong, China	64000 bps	X.25		
	BIS	Intra-Regional	Lao PDR.	9600 bps	X.25		
	BIS	Intra-Regional	Singapore	9600 bps	X.25		
	BIS	Intra-Regional	Thailand	9600 bps	X.25		
<b>Wallis Islands</b>			Fiji				Intra-domain

**TABLE CNS II-3 - ATS DIRECT SPEECH CIRCUITS PLAN**

EXPLANATION OF THE TABLE

*Column*

1 and 2

Circuit terminal stations are listed alphabetically by the Terminal I.

3

seconds.

A— indicates ATS requirement for the establishment of voice communication within 15

D — indicates requirements for instantaneous communications.

4

Type of service specified:

LTF — landline telephone (landline, cable, UHF, VHF, satellite).

RTF — radiotelephone.

5

Type of circuits; Direct (DIR) or Switched (SW).

DIR — indicates a direct circuit connecting Terminals I and II.

SW — indicates that a direct circuit does not exist and that the connection is established via switching at the switching centre(s) indicated in column 6.

IDD — International direct dialling by public switch telephone network

6

Location of switching centre(s).

7

Remarks

*Note 1.— Number of D and/or S circuits between Terminals I and II are indicated by numerical prefix, i.e. 2 D/S means 2 direct circuits and one switched circuit.*

*Note 2.— Pending the implementation of proper ATS voice circuits, and provided that aeronautical operational requirements are met, IDD services may be used for the ATS voice communications in low traffic areas.*

ATS REQUIREMENTS FOR SPEECH COMMUNICATIONS			CIRCUIT			REMARKS
TERMINAL I	TERMINAL II	TYPE	SERVICE	DIR/SW	TO BE SWITCHED VIA	
1	2	3	4	5	6	7
<b>AMERICAN SAMOA (United States)</b>						
PAGO PAGO APP	ALOFI	A	LTF	DIR		
	APIA/FALEOLO	A	LTF	DIR		
	NADI	A	LTF	DIR		
<b>AUSTRALIA</b>						
BRISBANE ACC	AUCKLAND	A	LTF	DIR		
	BALI	A	LTF	DIR		
	HONIARA	A	LTF	DIR		
	JAKARTA	A	LTF	DIR		
	NADI	A	LTF	SW	OAKLAND	
	OAKLAND	A	LTF	DIR		
	PORT MORESBY	A	LTF	DIR		
	UJUNG PANDANG	A	LTF	DIR		
MELBOURNE	BRISBANE	A	LTF	DIR	NETWORK OPERATION	
	COLOMBO	A	LTF	DIR		
	DIEGO GARCIA	A	LTF	DIR		
	JAKARTA	A	LTF	SW	BRISBANE	
	JOHANNESBERG	A	LTF	DIR		
	MALE	A	LTF	DIR		
	MAURITIUS	A	LTF	DIR		
	JAKATA ACC	A	LTF	DIR		
	BRISBANE	X	LTF	DIR		
PERTH APP	JAKATA ACC	A	LTF	DIR		
<b>BANGLADESH</b>						
DHAKA ACC	AGARTALA	A	LTF	IDD		
	KOLKATA	A	LTF	DIR		
	GUWAHATI	A	LTF			
	YANGON	A	LTF	DIR		
<b>BRUNEI DARUSSALAM</b>						
BRUNEI ACC	KOTA KINABALU	A	LTF	DIR		
	LABUAN	A	LTF	DIR		
	LIMBANG	A	LTF	DIR		
	MIRI	A	LTF	DIR		
<b>CAMBODIA</b>						
PHNOM PENH ACC	BANGKOK	A	LTF	DIR		
	HO CHI MINH	A	LTF	DIR		
	VIENTIANE	A	LTF	SW	BANGKOK	
<b>CHINA</b>						
BEIJING ACC	DALIAN	A	LTF	DIR		
	HOHHOT	A	LTF	DIR		
	JINAN	A	LTF	DIR		
	SHENYANG	A	LTF	DIR		
	TAIYUAN	A	LTF	DIR		
	ULAANBAATAR	A	LTF	DIR		
	ZHENGZHOU	A	LTF	DIR		
	GUANGZHOU	A	LTF	DIR		
	GUILIN	A	LTF	DIR		
	GUIYANG	A	LTF	DIR		
	WUHAN	A	LTF	DIR		
	NANCHANG	A	LTF	DIR		

CHENGDU ACC	GUIYANG	A	LTF	DIR		
	KUNMING	A	LTF	DIR		
	LANZHOU	A	LTF	DIR		
	LHASA	A	LTF	DIR		
	WUHAN	A	LTF	DIR		
	XI'AN	A	LTF	DIR		
DALIAN ACC	BEIJING	A	LTF	DIR		
	PYONGYANG	A	LTF	DIR		
	QINGDAO	A	LTF	DIR		
	SEOUL	A	LTF	DIR		
	SHENYANG	A	LTF	DIR		
GUANGZHOU ACC	CHANGSHA	A	LTF	DIR		
	GUILIN	A	LTF	DIR		
	HAIKOU	A	LTF	DIR		
	HONG KONG	D	LTF	DIR		
	MACAO	A	LTF	DIR		
	NANCHANG	A	LTF	DIR		
	NANNING	A	LTF	DIR		
	SANYA	A	LTF	DIR		
	TAIBEI	A	LTF	DIR		
	XIAMEN	A	LTF	DIR		
GUILIN ACC	CHANGSHA	A	LTF	DIR		
	GUANGZHOU	A	LTF	DIR		
	GUIYANG	A	LTF	DIR		
	NANNING	A	LTF	DIR		
GUIYANG ACC	CHANGSHA	A	LTF	DIR		
	CHENGDU	A	LTF	DIR		
	GUILIN	A	LTF	DIR		
	KUNMING	A	LTF	DIR		
	NANNING	A	LTF	DIR		
HAIKOU ACC	GUANGZHOU	A	LTF	DIR		
	HA NOI	A	LTF	DIR		
	HONG KONG	A	LTF	DIR		
	NANNING	A	LTF	DIR		
	SANYA	A	LTF	DIR		
HAILAR ACC	CHITA	A	LTF	DIR		
	HARBIN	A	LTF	DIR		
	SHENYANG	A	LTF	DIR		
HARBIN ACC	KHABAROVSK	A	LTF	DIR		
	HAILAR	A	LTF	DIR		
	SHENYANG	A	LTF	DIR		
	VLADIVOSTOK	A	LTF	DIR		
HEFEI ACC	JINAN	A	LTF	DIR		
	NANCHANG	A	LTF	DIR		
	SHANGHAI	A	LTF	DIR		
	ZHENGZHOU	A	LTF	DIR		
	WUHAN	A	LTF	DIR		
HOHHOT ACC	BEIJING	A	LTF	DIR		
	LANZHOU	A	LTF	DIR		
	TAIYUAN	A	LTF	DIR		
	ULAANBAATAR	A	LTF	DIR		
JINAN ACC	BEIJING	A	LTF	DIR		
	HEFEI	A	LTF	DIR		
	QINGDAO	A	LTF	DIR		

	SHANGHAI	A	LTF	DIR		
	TAIYUAN	A	LTF	DIR		
	ZHENGZHOU	A	LTF	DIR		
KUNMING ACC	CHENGDU	A	LTF	DIR		
	GUIYANG	A	LTF	DIR		
	HANOI	A	LTF	DIR		
	NANNING	A	LTF	DIR		
	VIENTIANE	A	LTF	DIR		
	YANGON	A	LTF	DIR		
LANZHOU ACC	CHENGDU	A	LTF	DIR		
	HOHHOT	A	LTF	DIR		
	LHASA	A	LTF	DIR		
	ULAANBAATAR	A	LTF	DIR		
	URUMQI	A	LTF	DIR		
	XI'AN	A	LTF	DIR		
LHASA	CHENGDU	A	LTF	DIR		
	KATHMANDU	A	LTF	DIR		
	LANZHOU	A	LTF	DIR		
	URUMQI	A	LTF	DIR		
NANCHANG ACC	CHANGSHA	A	LTF	DIR		
	GUANGZHOU	A	LTF	DIR		
	HEFEI	A	LTF	DIR		
	WUHAN	A	LTF	DIR		
	XIAMEN	A	LTF	DIR		
NANNING	GUANGZHOU	A	LTF	DIR		
	GUILIN	A	LTF	DIR		
	GUIYANG	A	LTF	DIR		
	HAIKOU	A	LTF	DIR		
	HA NOI	A	LTF	DIR		
	KUNMING	A	LTF	DIR		
QINGDAO ACC	DALIAN	A	LTF	DIR		
	JINAN	A	LTF	DIR		
	SHANGHAI	A	LTF	DIR		
	TAEGU	A	LTF	DIR		
SANYA ACC	GUANGZHOU	A	LTF	DIR		
	HAIKOU	A	LTF	DIR		
	HA NOI	A	LTF	DIR		
	HO CHI MINH	A	LTF	DIR		
	HONG KONG	A	LTF	DIR		
	MANILA	A	LTF	DIR		
SHANGHAI ACC	FUKUOKA	A	LTF	DIR		
	HEFEI	A	LTF	DIR		
	JINAN	A	LTF	DIR		
SHENYANG ACC	BEIJING	A	LTF	DIR		
	DALIAN	A	LTF	DIR		
	HAILAR	A	LTF	DIR		
	HARBIN	A	LTF	DIR		
	PYONGYANG	A	LTF	DIR		
	VLADIVOSTOK	A	LTF	DIR		
SHENZHEN	HONGKONG	A	LTF	DIR		
	MACAO	A	LTF	DIR		
TAIBEI ACC	GUANGZHOU	A	LTF	DIR		
	HONG KONG	D	LTF	DIR		
	MANILA	A	LTF	DIR		

	NAHA	D	LTF	DIR		
	SHANGHAI	A	LTF	DIR		
	TAEGU	A	LTF	DIR		
	XIAMEN	A	LTF	DIR		
TAIYUAN ACC	BEIJING	A	LTF	DIR		
	HOHHOT	A	LTF	DIR		
	JINAN	A	LTF	DIR		
	XI'AN	A	LTF	DIR		
	ZHENGZHOU	A	LTF	DIR		
URUMQI ACC	ALMA-ATA	A	RTF	DIR		
	BARNUAL	A	RTF	DIR		
	BISHEKEK	A	RTF	DIR		
	KHOVD	A	RTF	DIR		
	LAHORE	A	LTF	DIR		
	LANZHOU	A	LTF	DIR		
	RAWALPIND	A	LTF	DIR		
	ULAANBAATAR	A	LTF	DIR		
WUHAN ACC	CHANGSHA	A	LTF	DIR		
	CHENGDU	A	LTF	DIR		
	HEFEI	A	LTF	DIR		
	NANCHANG	A	LTF	DIR		
	ZHENGZHOU	A	LTF	DIR		
XIAMEN ACC	GUANGZHOU	A	LTF	DIR		
	NANCHANG	A	LTF	DIR		
	SHANGHAI	A	LTF	DIR		
	TAIBEI	A	LTF	DIR		
XI'AN ACC	CHENGDU	A	LTF	DIR		
	LANZHOU	A	LTF	DIR		
	TAIYUAN	A	LTF	DIR		
	ZHENGZHOU	A	LTF	DIR		
ZHENGZHOU ACC	BEIJING	A	LTF	DIR		
	JINAN	A	LTF	DIR		
	TAIYUAN	A	LTF	DIR		
	WUHAN	A	LTF	DIR		
	XI'AN	A	LTF	DIR		
ZHUHAI APP	HONG KONG	A	LTF	DIR		
	MACAO	A	LTF	DIR		
<b>COOK IS.</b>						
RAROTONGA	AUCKLAND	A	LTF	DIR		
	TAHITI/PAPEETE	A	LTF	DIR		
<b>DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA</b>						
	DALIAN	A	LTF	DIR		
	SHENYANG	A	LTF	DIR		
	TAEGU	A	LTF	DIR		
	VLADIVOSTOK	A	LTF	DIR		
<b>FIJI</b>						
NADI ACC	ALOFI	A	LTF	DIR		
	APIA	A	LTF	DIR		
	AUCKLAND	A	LTF	DIR		
	BRISBANE	A	LTF	SW	AUCKLAND	
	HONIARA	A	LTF	SW	SYDNEY	
	NOUMEA	A	LTF	DIR		
	OAKLAND	A	LTF	DIR		
	PAGO PAGO	A	LTF	DIR		
	PORT VILA	A	LTF	DIR		
	VAVA'U	A	LTF	DIR		
	WALLIS	A	LTF	DIR		

<b>FRENCH POLYNESIA (France)</b>					
TAHITI/PAPEETE ACC	AUCKLAND	A	LTF	IDD	
	ISLA DE PASCUA	A	LTF	DIR	
	OAKLAND	A	LTF	DIR	
	RAROTONGA	A	LTF	DIR	
<b>GUAM (United States)</b>					
GUAM I.	MOEN	A	LTF	DIR	
	YAP	A	LTF	DIR	
<b>HONG KONG, China</b>					
HONG KONG ACC	GUANGZHOU	D	LTF	DIR	
	MACAO	D	LTF	DIR	
	MANILA	A	LTF	DIR	
	SANYA	A	LTF	DIR	
	SHANTOU	A	LTF	DIR	
	SHENZHEN	A	LTF	DIR	
	TAIBEI	D	LTF	DIR	
	ZHUHAI	A	LTF	DIR	
<b>INDIA</b>					
AGARTALA APP	KOLKATA	A	LTF	DIR	
	DHAKA	A	LTF	IDD	
AHMEDABAD APP	MUMBAI	A	LTF	DIR	
	KARACHI	A	LTF	DIR	
AMRITSAR APP	DELHI	A	LTF	DIR	
	LAHORE	A	LTF	DIR	
KOLKATA ACC	AGARTALA	A	LTF	DIR	
	MUMBAI	A	LTF	DIR	
	DHAKA	A	LTF	DIR	
	DELHI	A	LTF	DIR	
	GUWAHATI	A	LTF	DIR	
	KATHMANDU	A	LTF	DIR	
	CHENNAI	A	LTF	DIR	
	NAGPUR	A	LTF	DIR	
	VARANASI	A	LTF	DIR	
	YANGON	A	LTF	DIR	
CHENNAI ACC	MUMBAI	A	LTF	DIR	
	KOLKATA	A	LTF	DIR	
	COLOMBO	A	LTF	DIR	
	KUALA LUMPUR	A	LTF	DIR	
	MEDAN	A	LTF	DIR	
	TIRUCHCHIRAPPAL LLI	A	LTF	DIR	
	TRIVANDRUM	A	LTF	DIR	
	YANGON	A	LTF	IDD	
DELHI ACC	AMRITSAR	A	LTF	DIR	
	MUMBAI	A	LTF	DIR	
	KOLKATA	A	LTF	DIR	
	KARACHI	A	LTF	DIR	
	KATHMANDU	A	LTF	IDD	
	LAHORE	A	LTF	DIR	
	VARANASI	A	LTF	DIR	
GUWAHATI	KOLKATA		LTF	DIR	
	DHAKA		LTF	IDD	
MUMBAI ACC	AHMEDABAD	A	LTF	DIR	
	KOLKATA	A	LTF	DIR	
	DELHI	A	LTF	DIR	
	KARACHI	A	LTF	DIR	
	CHENNAI	A	LTF	DIR	
	MALE	A	LTF	IDD	



	MAURITIUS	A	LTF	IDD		
	MOGADISHU	A	LTF	IDD		
	MUSCAT/SEEB	A	LTF	DIR		
	NAGPUR	A	LTF	DIR		
	SEYCHELLES	A	LTF	DIR		
NAGPUR APP	MUMBAI	A	LTF	DIR		
	KOLKATA	A	LTF	DIR		
TIRUCHCHIRAPPALLI APP	CHENNAI	A	LTF	DIR		
TRIVANDRUM ACC	CALICUT	A	LTF	DIR		
	COLOMBO	A	LTF	IDD		
	CHENNAI	A	LTF	DIR		
	MALE	A	LTF	DIR		
VARANASI ACC	KOLKATA	A	LTF	DIR		
	DELHI	A	LTF	DIR		
	KATHMANDU	A	LTF	DIR		
<b>INDONESIA</b>						
BALI ACC	BRISBANE	A	LTF	DIR		
	JAKARTA	A	LTF	DIR		
	KUPANG	A	LTF	DIR		
	MANADO	A	LTF	DIR		
	SURABAYA	A	LTF	DIR		
	UJUNG PANDANG	A	LTF	DIR		
BATAM TWR	JAKARTA	A	LTF	DIR		
	SINGAPORE	D	LTF	DIR		
	TANJUNG PINANG	D	LTF	DIR		
BIAK APP	DARWIN	A	LTF	DIR		
	JAYAPURA	A	LTF	DIR		
	MANILA	A	LTF	DIR		
	OAKLAND	A	LTF	DIR		
	UJUNG PANDANG	A	LTF	DIR		
JAKARTA ACC	BALI	A	LTF	DIR		
	BATAM	A	LTF	DIR		
	KOTA KINABALU	A	LTF	SW	SINGAPORE	
	KUALA LUMPUR	A	LTF	SW	SINGAPORE	
	MANILA	A	LTF	DIR		
	MEDAN	A	LTF	DIR		
	PADANG	A	LTF	DIR		
	PEKAN BARU	X	LTF	DIR		
	PERTH	A	LTF	DIR		
	PONTIANAK	A	LTF	DIR		
	RANAI	A	LTF	DIR		
	SINGAPORE	A	LTF	DIR		
	SYDNEY	X	LTF	DIR		
	TANJUNG PINANG	A	LTF	DIR		
	UJUNG PANDANG	A	LTF	DIR		
JAYAPURA APP	BIAK	A	LTF	DIR		
	PORT MORESBY	A	LTF	DIR		
	VANIMO	A	LTF	DIR		
KUPANG APP	BALI	A	LTF	DIR		
	DARWIN	A	LTF	DIR		
MANADO	BALI	A	LTF	DIR		
	UJUNG PANDANG	A	LTF	DIR		
MEDAN ACC	COLOMBO	A	LTF	DIR		
	JAKARTA	A	LTF	DIR		

	KUALA LUMPUR	A	LTF	DIR		
	CHENNAI	A	LTF	DIR		
	PADANG	A	LTF	DIR		
	SINGAPORE	A	LTF	SW	JAKARTA	
PADANG	JAKARTA	A	LTF	DIR		
	MEDAN	A	LTF	DIR		
	PEKAN BARU	A	LTF	DIR		
PEKAN BARU APP	JAKARTA	X	LTF	DIR		
	KUALA LUMPUR	A	LTF	DIR		
	MALACCA	A	LTF	DIR		
	MEDAN	A	LTF	DIR		
	SINGAPORE	A	LTF	DIR		
PONTIANAK TWR	JAKARTA	A	LTF	DIR		
	KUCHING	A	RTF	DIR		
	RANAI	A	LTF	DIR		
	SINGAPORE	A	LTF	DIR		
	TANJUNG PINANG	A	LTF	DIR		
RANAI	JAKARTA	A	LTF	DIR		
	KUCHING	A	LTF	DIR		
	PONTIANAK	A	LTF	DIR		
SURABAYA	BALI	A	LTF	DIR		
TANJUNG PINANG	BATAM	D	LTF	DIR		
	JAKARTA	A	LTF	DIR		
	PONTIANAK	A	LTF	DIR		
	SINGAPORE	D	LTF	DIR		
UJUNG PANDANG	BALI	D	LTF	DIR		
	BIAK	A	LTF	DIR		
	BRISBANE	A	LTF	DIR		
	JAKARTA	A	LTF	DIR		
	KOTA KINBALU	A	LTF	DIR		
	MANADO	A	LTF	DIR		
	MANILA	A	LTF	SW	JAKARTA	
	PORT MORESBY	A	LTF	SW	JAKARTA, SYDNEY	
	OAKLAND	A	LTF	DIR		
<b>JAPAN</b>						
FUKUOKA ACC	TAEGU	A	LTF	DIR		
	SHANGHAI	A	LTF	DIR		
NAHA ACC	MANILA	A	LTF	DIR		
	OAKLAND	A	LTF	DIR		
	SHANGHAI	A	LTF	DIR		
	TAEGU	A	LTF	DIR		
	TAIBEI	A	LTF	DIR		
SAPPORO ACC	KHABAROVSK	D	LTF	DIR		
	VLADIVOSTOK	A	LTF	DIR		
	YUZHNO SAKHALINSK	A	LTF	DIR		
TOKYO ACC	ANCHORAGE	A	LTF	SW		
	ANCHORAGE	D	LTF	DIR		
	OAKLAND	A	LTF	DIR		
	TAEGU	A	LTF	DIR		
<b>JOHNSTON I. (United States)</b>						
JOHNSTON I. TWR	OAKLAND	A	LTF	DIR		
<b>KIRIBATI</b>						
TARAWA	OAKLAND	A	LTF	DIR		

KIRITIMATI I.	OAKLAND	A	LTF	DIR		
<b>LAO PEOPLE'S DEMOCRATIC REPUBLIC</b>						
VIENTIANE FIC	BANGKOK	A	LTF	DIR		
	HA NOI	A	LTF	DIR		
	HO CHI MINH	A	LTF	DIR		
	KUNMING	A	LTF	DIR		
	PHNOM PENH	A	LTF	SW	BANGKOK	
	YANGON	A	LTF	SW	BANGKOK	
<b>MACAO, China</b>						
MACAO	SHENZHEN	A	LTF	DIR		
	HONG KONG	D	LTF	DIR		
	ZHUHAI	A	LTF	DIR		
<b>MALAYSIA</b>						
JOHOR BAHRU APP	SINGAPORE	D	LTF	DIR		
	KUALA LUMPUR	A	LTF	DIR		
KOTA KINABALU ACC	BRUNEI	A	LTF	DIR		
	JAKARTA	A	LTF	SW	SINGAPORE	
	KUALA LUMPUR	A	LTF	DIR		
	KUCHING	A	LTF	DIR		
	MANILA	A	LTF	DIR		
	MIRI	A	LTF	DIR		
	SINGAPORE	A	LTF	DIR		
	TAWAU	A	LTF	DIR		
	UJUNG PANDANG	A	LTF	DIR		
KUALA LUMPUR ACC	BANGKOK	A	LTF	DIR		
	HO CHI MINH	A	LTF	DIR		
	JAKARTA	A	LTF	SW	SINGAPORE	
	JOHOR BAHRU	A	LTF	DIR		
	KUANTAN	A	LTF	DIR		
	KOTA KINABALU	A	LTF	DIR		
	CHENNAI	A	LTF	DIR		
	MALACCA	A	LTF	DIR		
	MEDAN	A	LTF	DIR		
	PEKAN BARU	A	LTF	DIR		
	SINGAPORE	D	LTF	DIR		
KUANTAN APP	SINGAPORE	A	LTF	DIR		
	KUALA LUMPUR	A	LTF	DIR		
KUCHING APP	KOTA KINABALU	A	LTF	DIR		
	PONTIANAK	A	LTF	DIR		
	RANAI	A	LTF	DIR		
	SINGAPORE	A	LTF	DIR		
LABUAN	BRUNEI	A	LTF	DIR		
LIMBANG	BRUNEI	A	LTF	DIR		
MALACCA APP	KUALA LUMPUR	A	LTF	DIR		
	PEKAN BARU	A	LTF	DIR		
MIRI	BRUNEI	A	LTF	DIR		
	KOTA KINABALU	D	LTF	DIR		
TAWAU APP	KOTA KINABALU	A	LTF	DIR		
<b>MALDIVES</b>						
MALE FIC	COLOMBO	A	LTF	DIR		
	MUMBAI	A	LTF	IDD		
	CHENNAI	A	LTF	DIR		
	MAURITIUS	A	LTF	DIR		
	MELBOURNE	A	LTF	DIR		
	TRIVANDRUM	A	LTF	DIR		
<b>MARSHALL IS.</b>						
MAJURO APP	OAKLAND	A	LTF	DIR		

KWAJALEIN APP	OAKLAND	A	LTF	DIR		
<b>MICRONESIA, FEDERATED STATES OF</b>						
KOSRAE APP	OAKLAND	A	LTF	DIR		
MOEN APP	GUAM I.	A	LTF	DIR		
	OAKLAND	A	LTF	DIR		
POHNPEI APP	OAKLAND	A	LTF	DIR		
YAP APP	GUAM I.	A	LTF	DIR		
	OAKLAND	A	LTF	DIR		
<b>MONGOLIA</b>						
ULAANBAATAR ACC	ABAKAN	A	LTF	DIR		
	BARNAUL	A	LTF	DIR		
	BEIJING	A	LTF	DIR		
	HUHHOT	A	LTF	DIR		
	IRKUTSK	A	LTF	DIR		
	KYZYL	A	LTF	DIR		
	LANZHOU	A	LTF	DIR		
	MUREN	A	LTF	DIR		
	URUMQI	A	LTF	DIR		
<b>MYANMAR</b>						
YANGON ACC	BANGKOK	A	LTF	DIR		
	KOLKATA	A	LTF	DIR		
	DHAKA	A	LTF	DIR		
	KUNMING	A	LTF	DIR		
	CHENNAI	A	LTF	IDD		
	VIENTIANE	A	LTF	SW	BANGKOK	
<b>NAURU</b>						
NAURU FIC	HONIARA	A	LTF	SW	SYDNEY	
	NADI	A	LTF	DIR		
	PORT MORESBY	A	LTF	SW	SYDNEY	
<b>NEPAL</b>						
KATHMANDU	KOLKATA	A	LTF	DIR		
	DELHI	A	LTF	IDD		
	LASHA	A	LTF	DIR		
	VARANASI	A	LTF	DIR		
<b>NEW CALEDONIA (France)</b>						
NOUMEA/LA TONTOUTA APP	HONIARA	A	LTF	SW	SYDNEY, NADI	
	NADI	A	LTF	DIR		
	PORT VILA	A	LTF	SW	NADI	
<b>NEW ZEALAND</b>						
AUCKLAND	ALOFI	A	LTF	IDD		
	CHRISTCHURCH	A	LTF	DIR		
	ISLA DE PASCUA	A	LTF	IDD		
	NADI	A	LTF	DIR		
	OAKLAND	A	LTF	IDD		
	RAROTONGA	A	LTF	IDD		
	BRISBANE	A	LTF	DIR		
	TAHITI/PAPEETE	A	LTF	IDD		
<b>NIUE (New Zealand)</b>						
ALOFI APP	AUCKLAND	A	LTF	IDD		
	NADI	A	LTF	DIR		
	PAGO PAGO	A	LTF	DIR		
<b>NORTHERN MARIANA IS. (United States)</b>						
SAIPAN APP	OAKLAND	A	LTF	DIR		
<b>PAKISTAN</b>						
KARACHI ACC	AHMEDABAD	A	LTF	SW	MUMBAI	
	MUMBAI	A	LTF	DIR		
	DELHI	A	LTF	DIR		
	KABUL	A	LTF	DIR		
	MUSCAT	A	LTF	DIR		

	TEHRAN	A	LTF	DIR		
LAHORE ACC	AMRITSAR	A	LTF	DIR		
	DELHI	A	LTF	DIR		
	DUSHANBE	A	LTF	DIR		
	KABUL	A	LTF	DIR		
	URUMQI	A	LTF	DIR		
<b>PAPUA NEW GUINEA</b>						
PORT MORESBY ACC	BRISBANE	A	LTF	DIR		
	CAIRNS	A	LTF	DIR		
	HONIARA	A	LTF	DIR		
	JAYAPURA	A	LTF	DIR		
	OAKLAND	A	LTF	DIR		
	UJUNG PANDANG	A	LTF	SW	SYDNEY, JAKARTA	
<b>PHILIPPINES</b>						
DAVAO APP	MACTAN	A	LTF	DIR		
	MANILA	A	LTF	DIR		
LAOAG APP	MANILA	A	LTF	DIR		
MACTAN APP	DAVAO	A	LTF	DIR		
	MANILA	A	LTF	DIR		
	ZAMBOANGA	A	LTF	DIR		
MANILA ACC	BIAK	A	LTF	SW	JAKARTA	
	DAVAO	A	LTF	DIR		
	HO CHI MINH	A	LTF	DIR		
	HONG KONG	A	LTF	DIR		
	KOTA KINABALU	A	LTF	DIR		
	JAKARTA	A	LTF	DIR		
	LAOAG	A	LTF	DIR		
	MACTAN	A	LTF	DIR		
	NAHA	A	LTF	DIR		
	OAKLAND	A	LTF	DIR		
	SANYA	A	LTF	DIR		
	SINGAPORE	A	LTF	DIR		
	SUBIC BAY	A	LTF	DIR		
	TAIBEI	A	LTF	DIR		
	UJUNG PANDANG	A	LTF	SW	JAKARTA	
SUBIC BAY APP	MANILA	A	LTF	DIR		
<b>REPUBLIC OF KOREA</b>						
DAEGU ACC	DALIAN	A	LTF	DIR		
	FUKUOKA	D	LTF	DIR		
	GIMHAE	A	LTF	DIR		
	INCHEON					
	JEJU	A	LTF	DIR		
	NAHA	A	LTF	DIR		
	PYONGYANG	A	LTF	DIR		
	QINGDAO	A	LTF	DIR		
	SHANGHAI	A	LTF	DIR		
	TAIBEI	A	LTF	DIR		
	TOKYO	A	LTF	DIR		
GIMHAE	DAEGU	A	LTF	DIR		
INCHEON ACC	DALIAN	D	LTF	DIR		
	FUKUOKA	D	LTF	DIR		
	NAHA	D	LTF	DIR		
	PYONGYANG	D	LTF	DIR		
	QINGDAO	D	LTF	DIR		
	SHANGHAI	A	LTF	DIR		
	TOKYO	D	LTF	DIR		

JEJU APP	DAEGU	D	LTF	DIR		
<b>SAMOA</b>						
APIA/FALEOLO	AUCKLAND	A	LTF	DIR		
	PAGO PAGO	A	LTF	DIR		
	NADI	A	LTF	DIR		
	TONGATAPU	A	LTF	DIR		
<b>SINGAPORE</b>						
SINGAPORE ACC	BANGKOK	A	LTF	DIR		
	BATAM	D	LTF	DIR		
	HO CHI MINH	A	LTF	DIR		
	JAKARTA	A	LTF	DIR		
	JOHOR BAHRU	D	LTF	DIR		
	KOTA KINABALU	A	LTF	DIR		
	KUALA LUMPUR	D	LTF	DIR		
	KUANTAN	A	LTF	DIR		
	KUCHING	A	LTF	DIR		
	MANILA	A	LTF	DIR		
	MEDAN	A	LTF	SW	JAKARTA	
	PEKAN BARU	A	LTF	DIR		
	PONTIANAK	A	LTF	DIR		
	TANJUNG PINANG	D	LTF	DIR		
<b>SOLOMON IS.</b>						
HONIARA ACC	BRISBANE	A	LTF	DIR		
	NADI	A	LTF	SW	SYDNEY	
	NAURU	A	LTF	SW	SYDNEY	
	NOUMEA	A	LTF	SW	SYDNEY, NADI	
	OAKLAND	A	LTF	SW		DIR?
	PORT MORESBY	A	LTF	DIR		
<b>SRI LANKA</b>						
COLOMBO ACC	BRISBANE	A	LTF	DIR		
	CHENNAI	A	LTF	DIR		
	MALE	A	LTF	DIR		
	MEDAN	A	LTF	DIR		
	TRIVANDRUM	A	LTF	DIR		
<b>THAILAND</b>						
BANGKOK ACC	HA NOI	A	LTF	DIR		
	HO CHI MINH	A	LTF	DIR		
	KUALA LUMPUR	A	LTF	DIR		
	PHNOM PENH	A	LTF	DIR		
	SINGAPORE	A	LTF	DIR		
	VIENTIANE	A	LTF	DIR		
	YANGON	A	LTF	DIR		
<b>TONGA</b>						
TONGATAFU APP	AUCKLAND	A	LTF	DIR		
	NADI	A	LTF	DIR		
VAVA'U	NADI	A	LTF	DIR		
<b>TUVALU</b>						
FUNAFUTI APP	NADI					
<b>UNITED STATES</b>						
ANCHORAGE ACC	ANADYR	A	LTF	DIR		
	MAGADAN	A	LTF	DIR		
	OAKLAND	A	LTF	DIR		
	TOKYO	A	LTF	SW	OAKLAND	
	TOKYO	D	LTF	DIR		
	VANCOUVER	A	LTF	DIR		
	PETROPAVLOVSK -KAMCHATSKY	A	LTF	DIR		
	VANCOUVER	D	LTF	DIR		
OAKLAND	AUCKLAND	A	LTF	IDD		
	BIAK	A	LTF	DIR		
	BRISBANE	A	LTF	DIR		

	KIRITIMATI I. TWR	A	LTF	DIR		
	GUAM I.	A	LTF	DIR		
	HONIARA	A	LTF	DIR		
	JOHNSTON I. TWR	A	LTF	DIR		
	KOROR	A	LTF	DIR		
	KOSRAE	A	LTF	DIR		
	KAWJALEIN	A	LTF	DIR		
	MAJURO ATOLL	A	LTF	DIR		
	MANILA	A	LTF	DIR		
	MOEN	A	LTF	DIR		
	NADI	A	LTF	DIR		
	NAHA	A	LTF	DIR		
	NAURU	A	LTF	DIR		
	PAGO PAGO APP	A	LTF	DIR		
	POHNPEI	A	LTF	DIR		
	PORT MORESBY	A	LTF	DIR		
	SAIPAN	A	LTF	DIR		
	SAPPORO	A	LTF	DIR		
	TAHITI	A	LTF	DIR		
	TARAWA TWR	A	LTF	DIR		
	TOKYO	A	LTF	DIR		
	UJUNG PANDANG	A	LTF	DIR		
	VANCOUVER	D	LTF	DIR		
	YAP	A	LTF	DIR		
<b>VANUATU</b>						
PORT VILA	NADI	A	LTF	DIR		
	NOUMEA	A	LTF	SW		
<b>VIET NAM</b>						
HA NOI ACC	BANGKOK	A	LTF	DIR		
	NANNING	A	LTF	DIR		
	HO CHI MINH	A	LTF	DIR		
	KUNMING	A	LTF	DIR		
	SANYA	A	LTF	DIR		
	VIENTIANE	A	LTF	DIR		
<b>HO CHI MINH ACC</b>						
	BANGKOK	A	LTF	DIR		
	HA NOI	A	LTF	DIR		
	HONG KONG	A	LTF	DIR		
	KUALA LUMPUR	A	LTF	DIR		
	MANILA	A	LTF	DIR		
	PHNOM PENH	A	LTF	DIR		
	SANYA	A	LTF	DIR		
	SINGAPORE	A	LTF	DIR		
	VIENTIANE	A	LTF	DIR		
<b>WALLIS AND FUTUNA IS. (France)</b>						
WALLIS	NADI	A	LTF	DIR		

### Table CNS 3

#### TABLE OF RADIO NAVIGATION AIDS

##### EXPLANATION OF THE TABLE

*Column*

- 1 Name of the State and city (and aerodrome if different name than the city) or, for en-route aids, the location of the facility.
- 2 The designator number and runway type:  
  
NINST — Visual flight runway  
NPA — Non-precision approach runway  
PA1 — Precision approach runway, Category I  
PA2 — Precision approach runway, Category II  
PA3 — Precision approach runway, Category III  
  
and functions:  
  
T — Terminal  
E — En route  
  
*Note.— Precision approach category refers to the standard of facility performance to be achieved and maintained in accordance with the relevant Annex 10 specifications and not to the specifications of the ILS equipment itself, which are not necessarily the same.*
- 3 ILS — Instrument landing system
- 4 L — Locator, either associated with an ILS or for use as an approach aid at an aerodrome.
- 5 DME — Distance measuring equipment. Aligned with the ILS shown in column 3 when the DME is required to serve as a substitute for a marker beacon. When aligned with VOR in column 6, indicates the DME to be collocated with the VOR.
- 6 VOR — VHF omnidirectional radio range.
- 7 Blank
- 8 Implementation Status for ILS
- 9 Implementation status for Locator
- 10 Implementation status for DME
- 11 Implementation status for VOR.



12      Remarks

*Note.— Columns 3 to 6 use the following symbols:*

R – Required

Blank Entry would mean no requirement.

*Note.— Columns 8 to 11 use the following symbols:*

I — Implemented.

X — Implementation status undetermined. (in red)

N — Not implemented. (in red)

P --- Planned (need to fill up Remarks column with planned implementation date in MM/YY format)

Requirements						Implementation Status					Remarks
State City/location (aerodrome)	Runway Function	ILS	L	DME	VOR	ILS	L	DME	VOR		
1	2	3	4	5	6	7	8	9	10	11	12
<b>AMERICAN SAMOA (United States)</b>											
PAGO PAGO	05 PA1	R	R	R	R		X	X	X	X	
	T			R	R				X	X	
	E			R	R				X	X	
<b>AUSTRALIA</b>											
ADELAIDE	23 PA1	R	R	R	R		I	I	I	I	
	T			R	R				I	I	
	E			R	R				I	I	
ALICE SPRINGS	12 PA1	R	R	R	R		I	I	I	I	
	T			R	R				I	I	
	E			R	R				I	I	
ARMIDALE	E				R					N	
BALLIDU	E				R					I	
BINDOOK	E			R	R				I	I	
BRISBANE	01 PA1	R	R	R	R		I	I	I	I	
	19 PA1	R		R	R		I		I	I	
	T			R	R				I	I	
	E			R	R				I	I	
BROOME	NPA		R	R	R			I	N	N	
	T			R	R				N	N	
	E			R	R				N	N	
CAIGUNA	E			R	R				I	I	
CAIRNS	15 PA1	R	R	R	R		I	I	I	I	
	T			R	R				I	I	
	E			R	R				I	I	
CARNARVON	E			R	R				N	I	
CEDUNA	E				R					N	
CHRISTMAS I.	NPA		R	R	R			I	I	I	
	T			R	R				I	I	
	E			R	R				I	I	
COCOS I.	NPA		R	R	R			I	I	I	
	T			R	R				I	I	
	E			R	R				I	I	
CURTIN	NPA			R	R				I	I	
	T			R	R				I	I	
	E			R	R				I	I	

DARWIN	29 PA1	R	R	R	R	I	I	I	I
	T			R	R			I	I
	E			R	R			I	I
DUBBO	NPA		R	R	R		I	N	I
	T			R	R			N	I
	E			R	R			N	I
ESPERANCE	E			R	R			I	I
GOVE	E				R				I
HOBART	12 PA1	R	R	R	R	I	I	I	I
	T			R	R			I	I
	E			R	R			I	I
KARRATHA	E				R				I
KUNUNURRA	E			R	R			I	I
LEARMONTH	NPA		R	R	R		I	I	I
	T			R	R			I	I
	E			R	R			I	I
LEIGH CREEK	E				R				I
LONGREACH	E				R				I
LORD HOWE I.	E			R	R			I	N
MALLOCOOTA	E			R	R			I	I
MELBOURNE	27 PA1	R	R	R	R	I	I	I	I
	16 PA1	R	R	R	R	I	I	I	I
	T			R	R			I	I
	E			R	R			I	I
MILDURA	E			R	R			I	I
MOUNT GAMBIER	E				R				I
MOUNT HOPE	E			R	R			I	I
MOUNT ISA	E			R	R			I	I
MOUNT LIVINGSTONE	E				R				I
NARRANDERA	E				R				I
NATYA	E				R				I
NORFOLK I.	NPA		R	R	R		I	I	I
	T			R	R			I	I
	E			R	R			I	I
NORMANTON	E				R				N
PARKES	E			R	R			I	I

PERTH	21 PA1	R	R	R	R	I	I	I	I
	24 PA1	R	R	R	R	I	I	I	I
	T			R	R			I	I
	E			R	R			I	I
PORT HEDLAND	NPA		R	R	R		I	I	I
	T			R	R			I	I
	E			R	R			I	I
ROCKHAMPTON	NPA		R	R	R		I	I	I
	T			R	R			I	I
	E			R	R			I	I
SYDNEY (Kingford Smith Intl)	07 PA1	R	R	R	R	I	I	I	I
	16R PA1	R	R	R	R	I	I	I	I
	16L PA1		R	R			I	I	
	34R PA1		R	R			I	I	
	34L PA1		R	R			I	I	
	T			R	R			I	I
TINDAL	NPA			R	R			N	I
	T			R	R			N	I
	E			R	R			N	I
TOWNSVILLE	01 PA1	R		R	R	I		I	I
	T			R	R			I	I
	E			R	R			I	I
<b>BANGLADESH</b>									
CHITTAGONG	NPA		R	R	R		X	X	X
	T			R	R			X	X
	E			R	R			X	X
COMILLA	E			R				X	
DHAKA (Zia Intl)	14 PA1	R	R	R	R	X	X	X	X
	T			R	R			X	X
	E			R	R			X	X
RAJSHAHI	E			R				X	
SAIDPUR	E			R				X	
<b>BHUTAN</b>									
PARO	NPA		R		R		X		X
	T		R		R		I		X
	E				R				X
<b>BRUNEI DARUSSALAM</b>									
BRUNEI	21 PA1	R	R	R	R	I	I	I	I
	T			R	R			I	I
	E			R	R			I	I
<b>CAMBODIA</b>									

PHNOM PENH	23 PA1	R	R	R	R		X	X				
	T			R	R						X	X
	E			R	R						X	X
SIEM REAP (Ankor)	NPA		R	R	R		X					
	T			R	R						X	X
	E			R	R						X	X
<b>CHINA</b>												
ALTAY	E											
BOSE	E			R	R							
BAOTOU	E			R	R							
BANTAJI	E											
BEIJING (Capital)	18R PA1	R	R	R								
	36L PA1	R	R									
	18L PA1	R	R									
	36R PA2	R	R	R	R							
CHANGCHUN	E			R	R							
CHANGSHA	36 PA1	R	R	R	R							
	18 PA1	R	R									
CHANGWU	E											
CHAOYANG	E			R	R							
CHENGDU	20 PA1	R	R	R	R							
	02 PA1	R	R									
CHONGQING	02 PA1	R	R	R	R							
	20 PA1	R	R									
DAGUSHAN	E											
DAHUSHAN	E			R	R							
DALIAN	28 PA1	R	R	R	R							
	10 PA1	R	R									
	E			R	R							
DANDONG	E			R	R							
DARONGJIANG	E											
DAWANGZHUANG	E			R	R							
DENGKOU	E			R	R							
DONGYANGJIAO	E											
DOUJIANG	E											
EREN	E			R	R							

ERTANG	E									
FENGNING	E									
FUJIACHANG				R	R				I	I
FUKANG	E			R	R				I	I
FUQING	E			R	R				I	I
FUZHOU	03 PA1	R	R	R	R		I	I	I	I
	21 PA1	R	R	R			I	I	I	
GANZHOU	E	R		R	R		I		I	I
GAOXIONG	09 PA1	R	R	R	R	X	X	X	X	X
	T			R	R			X	X	X
	E			R	R			X	X	X
GAOYAO	E		R	R	R			I	I	I
GENGMA	E		R	R	R			I	I	I
GUANGZHOU (Baiyun)	03 PA1	R	R	R	R		I	I	I	I
	21 PA1	R	R	R			I	I	I	
GUBEIKOU	E									
GUILIN	01 PA1	R	R	R	R		I	I	I	I
	19 PA1	R	R	R			I	I	I	
GUIYANG	E			R	R				I	I
HAILAR	E			R	R				I	I
HAMI	E			R	R				I	I
HANGZHOU (Jianqiao)	07 PA1	R	R	R	R		I	I	I	I
	NPA		R	R	R			I	I	I
	E			R	R				I	I
HARBIN (Taiping)	23 PA1	R	R	R	R		I	I	I	I
	05 PA1	R	R				I	I		
	E			R	R				I	I
HEFEI (Luogang)	14 PA1	R	R	R	R		I	I	I	I
	NPA		R					I		
	E			R	R				I	I
HEKOU	E									
HOHHOT	08 PA1	R	R	R	R		I	I	I	I
	NPA		R					I		
HOULUNG	E			R	R				X	X
HUAILAI	E									

HUAIROU	E			R	R			I	I
HUALIAN	E			R	R			I	I
HUAYUAN	E			R	R			I	I
HUGUANG	E								
JINAN (Yaoqiang)	01 PA1	R	R	R	R	I	I	I	I
JINGHONG	E			R	R			I	I
JINGNING	E			R	R			I	I
JINGTAI	E			R	R			I	I
JIUQUAN	E			R	R			I	I
KAIYUAN	E			R	R			I	I
KASHI	08 PA1	R	R	R	R	I	I	I	I
	26 PA1	R	R	R		I	I	I	
KUNMING (Wujjaba)	03 PA1	R	R	R	R	I	I	I	I
	21 PA1	R				I			
	E			R	R			I	I
KUQA	E			R	R			I	I
LAIBIN	E			R	R			I	I
LANZHOU (Zhongchuan)	36 PA1 NPA	R	R	R	R	I	I	I	I
LAOLIANGCANG	E			R	R			I	I
LIANGCHENG	E								
LIANJIANG	E			R	R			I	I
LIANSHENGWEI	E			R	R			I	I
LILING	E			R	R			I	I
LINLI	E								
LISHUI	E								
LONGKOU	E			R	R			I	I
LONGMEN	E								
LONGZHOU	E								
LUXI	E			R	R			I	I
MAGUOHE	E								
MAKUNG	E			R	R			X	X

	E								
NANHUI	E			R	R			I	I
NANJING (Lukou)	06 PA1	R	R	R	R			I	I
	24 PA1	R	R					I	I
NANNING (Wuxu)	05 PA1	R	R	R	R			I	I
	NPA		R					I	
	E			R	R			I	I
NANTONG	E			R	R			I	I
NANXIONG	E								
NANXUN	E								
PINGZHOU	E			R	R			I	I
PIXIAN	E			R	R			I	I
POTOU	E			R	R			I	I
QIANXI	E			R	R			I	I
QIEMO	E			R	R			I	I
QINGBAIKOU	E								
QINGDAO	35 PA1	R	R	R				I	I
	17 PA1	R	R					I	I
QIQIHAR	E	R		R	R			I	I
SANYA	08 PA1	R	R	R	R			I	I
	NPA		R					I	
SHACHE	E			R	R			I	I
SHANGRAO	E			R	R			I	I
SHANGHAI (Hongqiao)	18 PA1	R	R	R	R			I	I
	36 PA1	R	R					I	I
	E			R	R			I	I
SHANGHAI (Pudong)	17 PA1	R	R	R	R			I	I
	35 PA1	R	R	R				I	I
SHANTOU	E			R	R			I	I
SHENYANG (Taoxian)	06 PA1	R	R	R	R			I	I
	24 PA1	R	R					I	I
SHENZHEN	33 PA1	R	R	R	R			I	I
	15 PA1	R	R	R				I	I
SHILONG	E			R	R			I	I
TACHENG	E			R				I	



TAIBEI (Songshan)	10 PA1	R	R			X	X		
TAIBEI (Taoyuan)	05L PA2	R	R	R	R	X	X	X	X
	23R PA2	R	R	R		X	X	X	
	T			R	R			X	X
	E			R	R			X	X
	06 PA1	R		R	R	X		X	X
	24 PA1	R		R	R	X		X	X
TAIJUAN (Wusu)	31 PA1	R	R		R	I	I		I
	13 PA1	R	R			I	I		
	E				R				I
TIANJIN (Binhai)	34 PA1	R	R	R	R	I	I	I	I
	16 PA1	R	R	R		I	I	I	
	E			R	R			I	I
TANGHEKOU	E								
TIANZHEN	E								
TONGLIAO	E			R	R			I	I
TONGLU	E			R	R			I	I
TUMURTAI	E			R	R			I	I
ULANHOT	E			R	R			I	I
URUMQI (Diwopu)	25 PA1	R	R	R	R	I	I	I	I
	07 PA1	R	R			I	I		
	E			R	R			I	I
WAFANGDIAN	E								
WANGBINGOU	E								
WANGQING	E			R	R			I	I
WEIXIAN	E			R	R			I	I
WONGYUAN	E			R	R			I	I
WUFENGXI	E			R	R			I	I
WUHAN (Tianhe)	04 PA1	R	R	R	R	I	I	I	I
	22 PA1	R	R	R		I	I	I	
	E			R	R			I	I
WUXI	E			R	R			I	I
XIAMEN (Gaoqi)	05 PA1	R	R	R	R	I	I	I	I
	NPA		R				I		
XI'AN (Xianyang)	05 PA1	R	R	R	R	I	I	I	I
	23 PA1	R	R			I	I		
XICHANG (Qingshan)	36 PA1	R	R	R	R	I	I	I	I

	NPA		R				I		
XINGLIN	E								
XINGTANG	E								
XUEJIADAO	E		R	R			I	I	
XUYONG	E		R	R			I	I	
YABRAI	E								
YINGDE	E		R	R			I	I	
YINCHUAN	E		R	R			I	I	
YUNHE	E								
ZHOUKOU	E		R	R			I	I	
ZHULIAO	E								
<b>COOK IS.</b>									
RAROTONGA	NPA		R	R	R		X	X	X
	T			R	R			X	X
	E			R	R			X	X
<b>DEMOCRATIC PEOPLE'S REP. OF KOREA</b>									
PYONGYANG	NPA		R	R	R		I	X	X
	35 PA1	R	R			I	I		
	01 PA1	R	R			I	I		
	19 PA1	R	R			I	I		
	T			R	R			I	I
	E			R	R			I	I
<b>FIJI</b>									
NADI	02 PA1	R	R			I	I		
	T			R	R			I	I
	E			R	R			I	I
SUVA (Nausori)	NPA		R	R	R		I	I	I
	T			R	R			I	I
	E			R	R			I	I
<b>FRENCH POLYNESIA (France)</b>									
RANGIROA	NPA		R	R	R		I	N	I
	T			R	R			N	I
	E				R				I
TAHITI (Faaa)	04 PA1	R	R	R	R	I	I	I	I
	T			R	R			I	I
	E			R	R			I	I
<b>GUAM (United States)</b>									

GUAM I.	06L PA1	R	R	R	R		X	X	X	X
	T			R	R				X	X
	E			R	R				X	X
GUAM I. (Anderson AFB)	06R PA1	R		R	R		X		X	X
	T			R	R				X	X
	E			R	R				X	X
<b>HONG KONG, China</b>										
HONG KONG	07R PA2	R		R	R		I		I	I
	25L PA2	R		R	R		I		I	I
	T			R	R				I	I
	E			R	R				I	I
	E									
	07L PA2	R		R	R		I		I	I
25R PA3	R		R	R		I		I	I	
<b>INDIA</b>										
AHMEDABAD	23 PA1	R	R	R	R		I	I	I	I
	T			R	R				I	I
	E			R	R				I	I
AMRITSAR	34 PA1	R		R	R		I		I	I
	T			R	R				I	I
	E			R	R				I	I
BAGDOGRA	E			R	R				X	X
BELGAUM	E			R	R				I	I
BHUBANESHWAR	E			R	R				I	I
CALICUT	NPA		R	R	R			X	I	I
CHENNAI	07 PA1	R	R	R	R		I	I	I	I
	T			R	R				I	I
	E			R	R				I	I
COIMBATORE	E			R	R				I	I
DELHI (Indira Ghandi)	28 PA2	R	R	R	R		I	I	I	I
	27 PA1	R		R	R		I		I	I
	T			R	R				I	I
	E			R	R				I	I
GUWAHATI	E			R	R				X	X
IMPHAL	E			R	R				X	X
KOLKATA	19L PA1	R	R	R	R		I	I	I	I
	T			R	R				I	I
	E			R	R				I	I
LUCKNOW	27 PA1	R		R	R		I		I	I
	T			R	R				I	I
	E			R	R				I	I

MADURAI	E				R				I
MUMBAI (Chhatrapati Shivji Intl)	27 PA1	R	R	R	R	I	I	I	I
	T			R	R			I	I
	E			R	R			I	I
NAGPUR	32 PA1	R		R	R	I		I	I
	T			R	R			I	I
	E			R	R			I	I
PATNA	25 PA1	R		R	R	I		I	I
	T			R	R			I	I
	E			R	R			I	I
PORT BLAIR	E			R	R			I	I
PRATAPGARH	E			R	R			I	I
SILCHAR	E			R	R			X	X
TIRUCHCHIRAPPALLI	27 PA1	R		R	R	I		I	I
	T			R	R			I	I
	E			R	R			I	I
TRIVANDRUM	32 PA1	R		R	R	I		I	I
	T			R	R			I	I
	E			R	R			I	I
VARANASI	27 PA1	R		R	R	I		I	I
	T			R	R			I	I
	E			R	R			I	I
VISHAKHAPATNAM	E			R	R			I	I
<b>INDONESIA</b>									
AMBON (Patimura)	22 PA1	R	R	R	R	I	I	I	I
	T			R	R			I	I
	E			R	R			I	I
BALI (Ngurah Rai)	27 PA1	R		R	R	I		I	I
	T			R	R			I	I
	E			R	R			I	I
BALIKPAPAN (Sepinggán)	25 PA1	R	R	R	R	I	I	I	I
	T			R	R			I	I
	E			R	R			I	I
BANJARMASIN (Syamsudin Noor)	10 PA1	R	R	R	R	I	I	I	I
	E			R	R			I	I
	T			R	R			I	I
BATAM (Hang Nadmn)	04 PA1	R	R	R	R	I	I	I	I
	T			R	R			I	I
	E			R	R			I	I
BLAK (Frans Kaisiepo)	11 PA1	R	R	R	R	X	X	I	I

	T			R	R			I	I
	E			R	R			I	I
JAKARTA (Halim Perdanakusuma)	24 PA1	R	R	R	R			I	I
	T			R	R			I	I
	E			R	R			I	I
JAKARTA (Soekarno Hattal)	07R PA1	R	R	R	R			I	I
	07L PA1	R	R	R	R	N		I	I
	T		R	R	R			I	I
	E		R	R	R			I	I
JAYAPURA (Sentani)	30 PA1	R	R	R	R			I	I
	T			R	R			I	I
	E			R	R			I	I
KETAPANG	34 PA1	R		R	R	N		N	N
	T			R	R			N	N
	E			R	R			N	N
KUPANG (El Tari)	25 PA1	R	R	R	R			I	I
	T			R	R			I	I
	E			R	R			I	I
MANADO (Sam Ratulangi)	18 PA1	R	R	R	R			I	I
	T			R	R			I	I
	E			R	R			I	I
MEDAN (Polonia)	05 PA1	R	R	R	R			I	I
	T			R	R			I	I
	E			R	R			I	I
MERAUKE (Mopah)	NPA		R	R	R			I	I
	T			R	R			I	I
	E			R	R			I	I
PADANG (Tabing)	NPA		R	R	R			I	I
	T			R	R			I	I
	E			R	R			I	I
PALEMBANG (Sultan Mahmud Badaruddin II)	27 NPA	R	R	R	R			I	I
	T			R	R			I	I
	E			R	R			I	I
PANGKALPINANG	NPA			R	R			I	I
	T			R	R			I	I
	E			R	R			I	I
PEKANBARU	36 PA1	R	R	R	R			I	I
	T			R	R			I	I
	E			R	R			I	I
PONTIANAK (Supadio)	15 PA1	R	R	R	R			I	I
	T			R	R			I	I
	E			R	R			I	I
SURABAYA (Juanda)	10 PA1	R	R	R	R			I	I
	T			R	R			I	I

	E		R	R				I	I
TANJUNG PINANG (Kijang)	NPA		R	R	R			I	I
	T			R	R			I	I
	E			R	R			I	I
TARAKAN	NPA		R	R	R			I	I
	T			R	R			I	I
	E			R	R			I	I
TIMIKA(Tembagapura)	NPA		R	R	R			X	X
	T			R	R			X	X
	E			R	R			X	X
UJUNG PANDANG (Hasanuddin)	13 PA1	R	R	R	R	I	I	I	I
	T			R	R			I	I
	E			R	R			I	I
<b>JAPAN</b>									
AKITA	E			R	R			I	I
ASAHIKAWA	E			R	R			I	I
DAIGO	E			R	R			I	I
ERABU	E			R	R			I	I
FUKUE	E			R	R			I	I
FUKUOKA	16 PA1	R	R	R	R	I	I	I	I
	T			R	R			I	I
	E			R	R			I	I
GOBOH	E			R	R			X	X
HAKODATE	12 PA1	R	R	R	R	I	I	I	I
	T			R	R			I	I
	E			R	R			I	I
HIROSHIMA	10 PA1								
	NPA		R	R	R		I	I	I
	T			R	R			I	I
	E			R	R			I	I
IKISHIMA	E			R	R			I	I
IWAKI	E			R	R			I	I
KAGOSHIMA	34 PA1	R	R	R	R	I	I	I	I
	T			R	R			I	I
	E			R	R			I	I
KANSAI	06 PA2	R		R		I		I	
	24 PA2	R	R	R		I	I	I	
	T			R	R			I	I
KOMATSU	E			R	R			I	I

KOWA	E			R	R				I	I	
KUGA	E			R	R				I	I	
KUMAMOTO	07 PA3	R							I		
	07 PA1	R	R	R	R			I	I	I	
	T			R	R				I	I	
	E			R	R				I	I	
KUSHIMOTO	E				R	R			I	I	
MIHO	E				R	R			I	I	
MINAMI DAITO	E										
MIYAKE JIMA	E				R	R			I	I	
MIYAZU	E					R	R			I	I
NAGASAKI	32 PA2		R	R	R				I	I	I
	T			R	R					I	I
	E			R	R					I	I
NAGOYA	18 PA2		R	R	R				I	I	I
	36-PA	R	R	R	R			I	I	I	I
	T			R	R					I	I
	E			R	R					I	I
NAHA	36 PA1	R	R	R	R			I	I	I	I
	T			R	R					I	I
	E			R	R					I	I
NARITA	34 PA1	R	R					I	I		
	16 PA2	R	R	R	R			I	I	I	I
	16 PA3	R						I			
	T			R	R					I	I
	E			R	R					I	I
NIIGATA	28 PA1	R	R	R	R			I	I	I	I
	T			R	R					I	I
	E			R	R					I	I
OITA	01 PA1	R	R	R	R			I	I	I	I
	T			R	R					I	I
	E			R	R					I	I
OKAYAMA	07 PA1	R		R	R			I		I	I
	T			R	R					I	I
	E			R	R					I	I
OKINAWA	E				R	R			I	I	
ONJUKU	E				R	R			I	I	
OSAKA	32L PA1	R	R	R	R			I	I	I	I
	T			R	R					I	I
	E			R	R					I	I

OSHIMA	E			R	R				
OTSU	E			R	R				
REBUN	E			R	R				
SAPPORO (New Chitose)	01 PA1	R	R	R	R				
	19 PA1								
	T			R	R				
	E			R	R				
SENDAI	27 PA1	R		R	R				
	T			R	R				
	E			R	R				
SHIMIZU	E			R	R				
SHINODA	E			R	R				
TAKAMATSU	26 PA1	R		R	R				
	T			R	R				
	E			R	R				
TANEGASHIMA	E			R	R				
TATEYAMA	E			R	R				
TOKYO (Haneda)	22 PA1	R	R						
	33 PA1	R	R	R					
	34 PA1	R		R					
	T			R	R				
	E			R	R				
<b>JOHNSTON I (United States)</b>									
JOHNSTON ATOLL (Johnston I.)	NPA								
	T								
	E								
<b>KIRIBATI</b>									
KIRITIMATI I.	NPA			R	R			X	X
	T			R	R			X	X
	E			R	R			X	X
TARAWA (Bonriki Intl)	NPA		R	R	R		X	X	X
	T			R	R			X	X
	E			R	R			X	X
<b>LAO PEOPLE'S DEMOCRATIC REPUBLIC</b>									
PAKSE	E				R				X
VIENTIANE (Wattay)	14 PA1	R	R	R	R	X	X	X	X
	T			R	R			X	X
	E			R	R			X	X
<b>MACAO, China</b>									



MACAO	34 PA2 16 IGS	R	R	R	R		I	N	I	I
	T			R	R				I	I
	E			R	R				I	I
<b>MALAYSIA</b>										
ALOR SETAR (Sultan Abdul Halim)										
	NPA		R	R	R				I	I
	T			R	R				I	I
	E			R	R				I	I
IPOH (Sultan Azian Shah)										
	PA-I 04	R	R	R	R		I	I	I	I
	T			R	R				I	I
	E			R	R				I	I
JOHOR BAHRU										
	16 PA1	R	R	R	R		I	I	I	I
	T			R	R				I	I
	E			R	R				I	I
KERTEH										
	NPA			R	R				I	I
	T			R	R				I	I
	E			R	R				I	I
KOTA BHARU (Sultan Ismail Petra)										
	NPA		R	R	R				I	I
	T			R	R				I	I
	E			R	R				I	I
KOTA KINABALU										
	02 PA1	R	R	R	R		I	I	I	I
	T			R	R				I	I
	E			R	R				I	I
KUALA TERENGGANU (Sultan Mahmud)										
	NPA		R	R	R				I	I
	T			R	R				I	I
	E			R	R				I	I
KUANTAN										
	18 PA1	R	R	R	R		I	I	I	I
	T			R	R				I	I
	E			R	R				I	I
KUCHING										
	25 PA1	R	R	R	R		I	I	I	I
	T			R	R				I	I
	E			R	R				I	I
LABUAN										
	NPA	R	R	R	R		X	I	I	I
	T			R	R				I	I
	E			R	R				I	I
MALACCA										
	NPA		R	R	R				I	I
	T			R	R				I	I
	E			R	R				I	I
MERSING										
	E			R	R				I	I
MIRI										
	02 PA1 02	R	R	R	R		I	I	I	I

	T			R	R				
	E			R	R				
PENANG	04 PA1	R	R	R	R				
	T			R	R				
	E			R	R				
PULAU LANGKAWI	03 PA1	R	R	R	R				
	T			R	R				
	E			R	R				
PULAU TIOMAN	NPA			R	R			X	X
	T			R	R			X	X
	E			R	R			X	X
SANDAKAN	08 PA1	R	R	R	R				
	T			R	R				
	E			R	R				
SIBU	13 PA1	R	R	R	R				
	T			R	R				
	E			R	R				
SEPANG (KL Int'l)	32R PA1	R		R	R				
	14L PA1	R		R	R				
	32L PA1	R		R	R				
	14R PA1	R		R	R				
	T			R	R				
	E			R	R				
SUBANG (Sultan Abdul Aziz Shah)	33 PA1	R	R	R	R				
	15 PA1	R	R	R	R				
	T			R	R				
	E			R	R				
TAWAU	NPA	R	R	R	R	X			
	T			R	R				
	E			R	R				
<b>MALDIVES</b>									
GAN	NPA		R	R	R		N	N	N
	T			R	R			N	N
	E			R	R			N	N
MALE	36 PA1	R	R	R	R		N		
	T			R	R				
	E			R	R				
<b>MARSHALL IS.</b>									
MAJURO ATOLL (Marshall Is. Int'l)	NPA			R	R			X	X
	T			R	R			X	X
	E			R	R			X	X
<b>MICRONESIA (FEDERATED STATES OF)</b>									

KOSRAE	NPA		R	R			X	X	
	T			R	R			X	X
	E			R	R			X	X
POHNAPEI	NPA			R	R			X	X
	T			R	R			X	X
	E			R	R			X	X
WENO I. (FM Chuuk Int)	NPA		R	R			X	X	
	T			R	R			X	X
	E			R	R			X	X
YAP	NPA		R		R		X		X
	T			R	R			X	X
	E			R	R			X	X
<b>MONGOLIA</b>									
ULAANBAATAR	14 PA1	R	R	R	R	I	I	I	I
	T			R	R			I	I
	E			R	R			I	I
<b>MYANMAR</b>									
DAWEI	E			R	R			X	X
	E								
MANDALAY	E				R				X
PATHEIN	E				R				X
YANGON	21 PA1	R	R	R	R	X	X	X	X
	T			R	R			X	X
	E			R	R			X	X
<b>NAURU</b>									
NAURU I.	NPA		R	R	R		X	X	X
	T			R	R			X	X
	E			R	R			X	X
<b>NEPAL</b>									
BHAIRAHAWA	E			R	R			X	X
BIRATNAGAR	E			R	R			X	X
JANAKPUR	E				R				X
KATHMANDU	NPA		R	R	R		X	X	X
	T			R	R			X	X
	E			R	R			X	X
NEPALGUNJ	E			R	R			X	X
SIMARA	E			R	R			X	X
<b>NEW CALEDONIA (France)</b>									

NOUMEA (La Tontouta)	11 PA1	R	R	R	R		I	I	I	I
	T			R	R				I	I
	E			R	R				I	I
<b>NEW ZEALAND</b>										
AUCKLAND	05 PA1	R	R	R	R		I	I	I	I
	23 PA1	R	R				I	I		
	T			R	R				I	I
	E			R	R				I	I
CHRISTCHURCH	02 PA1	R	R	R	R		I	I	I	I
	20 PA1	R	R				I	I		
	T			R	R				I	I
	E			R	R				I	I
HOKITIKA	E			R					I	
WELLINGTON	NPA		R	R	R			I	I	I
	T			R	R				I	I
	E			R	R				I	I
<b>NORTHERN MARIANA IS. (United States)</b>										
OBYAN (Saipan Intl)	07 PA1	R			R		X			X
	T				R					X
	E				R					X
<b>NIUE (New Zealand)</b>										
NIUE	NPA		R					X		
	T			R					X	
	E			R					X	
<b>PAKISTAN</b>										
BINDO	E				R					I
CAPE MONZE	E									
CHORE	E									
GWADAR	NPA									
	T									
HANGU	E			R	R				X	I
ISLAMABAD (Chaklala)	30 PA2	R	R	R	R		I	X	I	I
	T			R	R				I	I
	E			R	R				I	I
JIWANI	E			R	R				I	I
	E									
KALAT	E									
KARACHI (Jinnah)	25R PA2	R	R	R	R		I	I	I	I
	T			R	R				I	I

	E			R	R				I	I
LAHORE	36R PA2	R	R	R	R	I	I	I	I	I
	T			R	R			I	I	
	E			R	R			I	I	
MULTAN	E			R	R			I	I	
NAWABSHAH	NPA		R	R	R		X	I	I	
	T			R	R			I	I	
	E			R	R			I	I	
PANJGUR	E			R	R			I	I	
PESHAWAR	NPA		R	R	R		X	I	I	
	T			R	R			I	I	
	E			R	R			I	I	
RAHIM YAR KHAN	E			R	R			I	I	
ZHOB	E			R	R			I	I	
<b>PALAU</b>										
KOROR	NPA		R	R	R		X	X	X	
	T			R				X		
<b>PAPUA NEW GUINEA</b>										
KIETA				R	R			X	X	
MADANG	E			R	R			X	X	
MOUNT HAGEN	NINST			R				X		
NADZAB				R	R			X	X	
PORT MORESBY	14L PA1	R	R	R	R	X	X	X	X	
	32R PA1	R		R	R	X		X	X	
	T			R	R			X	X	
	E			R	R			X	X	
VANIMO	NINST			R				X		
WEWAK	E			R	R			X	X	
<b>PHILIPPINES</b>										
CABANATUAN	E			R	R			X	X	
COTABATO	E			R	R			X	X	
DAVAO (Francisco Bangoy Intl)	05 PA1	R	R	R	R	X	X	X	X	
	23 PA1	R		R	R	X		X	X	
	T			R				X		
	E		R	R			X	X		
JOMALIG	E			R	R			X	X	

LAOAG	NPA			R	R			X	X	
	T			R	R			X	X	
	E			R	R			X	X	
LAPU LAPU (Mactan Cebu Intl)	04 PA1	R	R	R	R	X	X	X	X	
	22 PA1	R	R	R	R	X	X	X	X	
	T			R	R			X	X	
	E			R	R			X	X	
LUBANG	E			R	R			X	X	
MANILA	24 PA1	R	R	R	R	X	X	X	X	
	06 PA1	R	R			X	X			
	T			R	R			X	X	
	E			R	R			X	X	
OLONGAPO (Cubi)	NPA		R	R	R		X	X	X	
TACLOBAN	NPA			R	R			X	X	
	T			R	R			X	X	
	E			R	R			X	X	
ZAMBOANGA	NPA		R	R	R		X	X	X	
	T			R	R			X	X	
	E			R	R			X	X	
<b>REPUBLIC OF KOREA</b>										
ANGYANG	E				R				I	
BUSAN	E				R				I	
CHEONGJU	24R PA1	R			R	I			I	
	24R NPA				R				I	
	T				R				I	
DAEGU	31L PA1	R			R	I			I	
	31L NPA				R				I	
	T				R				I	
DALSUNG	E				R			I		
GANGWON	E			R	R			I	I	
GIMHAE	36L NPA			R	R				I	I
	36R PA1	R		R		I			I	
	36L PA1	R		R		I			I	
	36R NPA			R	R				I	I
	T			R	R				I	I
GIMPO	14R PA2	R		R		I			I	
	14L PA1	R	R	R		I	I		I	
	32R PA1	R	R	R		I	I		I	
	32R NPA			R	R				I	I
	32L PA1			R					I	
	32L NPA	R		R	R	I			I	I
	T			R	R				I	I

INCHEON	15R PA3	R		R		I		I	
	15L NPA			R	R			I	I
	33L PA1	R		R		I		I	
	33L NPA			R	R			I	I
	15L PA3	R		R		I		I	
	33R PA3	R		R		I		I	
	33R NPA			R	R			I	I
	T			R	R			I	I
JEJU	06 PA1	R		R		I		I	
	24 PA1	R		R		I		I	
	06 NPA			R				I	
	24 NPA			R	R			I	I
	T			R	R			I	I
	E			R	R			I	I
YANGYANG	33 PA1	R		R		I		I	
	33 NPA			R	R			I	I
	T			R	R			I	I
YANGJU	E		R	R			I	I	
<b>SAMOA</b>									
FALEOLO (Faleolo Intl)	NPA		R	R	R		X	X	X
	T			R	R			X	X
	E			R	R			X	X
<b>SINGAPORE</b>									
PAYA LEBAR	NPA				R				I
	T				R				I
SELETAR	NINST								
SINGAPORE (Changi)	02L PA2	R		R		I		I	
	20R PA1	R		R		I		I	
	02C PA1	R		R	R	I		I	I
	20C PA2	R		R	R	I		I	I
	T			R	R			I	I
	E			R	R			I	I
<b>SOLOMON IS.</b>									
HONIARA (Henderson)	NPA		R	R	R		X	X	X
	T			R	R			X	X
	E			R	R			X	X
<b>SRI LANKA</b>									
COLOMBO (Bandaranaike)	04 PA1	R	R	R	R	N	I	I	I
	22 PA1	R	R	R	R	I	I	I	I
	T			R	R			I	I
	E			R	R			I	I
HIGURAKGODA (Mineriyā)	25 PA1	R		R	R	N		N	N
	T			R	R			N	N
	E			R	R			N	N
<b>THAILAND</b>									

BANGKOK	21L PA1	R	R	R	R				
	21R PA2	R	R	R	R				
	T			R	R				
	E			R	R				
CHIANG MAI	36 PA1	R	R	R	R				
	T			R	R				
	E			R	R				
CHIANG RAI	03 PA1	R		R					
	T			R	R				
	E			R	R				
KHON KAEN	NPA			R	R				
	T			R	R				
	E			R	R				
PHITSANULOK	32 PA1	R		R					
	T			R	R				
	E			R	R				
PHUKET	27 PA1	R		R	R				
	T			R	R				
	E			R	R				
SONGKHLA(Hat Yai Intl)	26 PA1	R	R	R	R				
	T			R	R				
	E			R	R				
SURATHANI (Samui)	35 PA1	R		R	R				
	T			R	R				
	E			R	R				
UBON RATCHATHANI	23 PA1	R		R	R				
	T			R	R				
	E			R	R				
UTAPAO	18 PA1	R	R	R	R				
	T			R	R				
	E			R	R				
<b>TONGA</b>									
FUA'AMOTU	NPA		R	R	R		X	X	X
	T			R	R			X	X
	E			R	R			X	X
VAVA'U	NPA								
	T								
	E								
<b>TUVALU</b>									
FUNAFUTI	NPA								
	T								
	E								
<b>UNITED STATES</b>									



HONOLULU	08L PA1	R	R	R	R	X	X	X	X	
	04R PA1	R	R	R	R	X	X	X	X	
	T			R	R			X	X	
	E			R	R			X	X	
KAHULUI	02 PA1	R		R	R	X		X	X	
	T			R	R			X	X	
	E			R	R			X	X	
<b>VANUATU</b>										
PORT VILA (Bauerfield)	NPA			R	R			X	X	
	T			R	R			X	X	
	E			R	R			X	X	
SANTO (Pekoa)	NPA									
	T									
	E									
<b>VIET NAM</b>										
DA NANG	35R PA1	R	R	R	R	X	X	X	X	
	T			R	R			X	X	
	E			R	R			X	X	
HA NOI (Noi Bai)	11 PA1	R	R	R	R	X	X	X	X	
	T			R	R			X	X	
	E			R	R			X	X	
HO CHI MINH (Tan Son Nhut)	25R PA1	R	R	R	R	X	X	X	X	
	T			R	R			X	X	
	E			R	R			X	X	
<b>WALLIS AND FUTUNA IS. (France)</b>										
WALLIS (Hihifo)	NPA		R	F	R		I	P	I	Implementation date required in MM/YY
	T			F	R			P	I	Implementation date required in MM/YY
	E			F	R			P	I	Implementation date required in MM/YY

## TABLE CNS II-6 SURVEILLANCE

### EXPLANATION OF THE TABLE

*Column*

- 1      ATS Units to consider are ACC units and Approach units responsible for International airports and alternate aerodromes, International airports and alternate aerodromes.
- 2      The category may be: R, S, T or AD. Categories R,S, T are defined in the Seamless ATM plan. AD means Aerodrome.
- 3      Indicate Yes if part(s) of the airspace referred to in Column B is (are) not covered by surveillance listed in column 6, and in column remarks when such gaps are planned to be bridged
- 4      Indicate Yes or No.  
  
Indicate No in case of standalone displays of ATS surveillance data (should not be used operationally)
- 5      Indicate Yes or No
- 6      List all types of surveillance used:  
  
          P - PSR  
          S(S) - SSRmS  
          S(A/C) - SSRmAC  
          AB - ADS-B  
          AC - ADS-C  
          M - MLAT  
          W - WAM  
          PM - PRM
- 7      According to the definition in Doc 9830 Appendix B
- 8      Remarks

<b>New Column</b>	<b>Surveillance Information</b>	<b>New Column</b>	<b>New Column</b>		<b>Combine to ASMGCS level</b>
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ACC + Approach unit responsible for International airport and alternate aerodrome + International airport and alternate aerodrome.

According to Seamless ATM plan + AD = Aerodrome  
Need to define Surveillance Gaps

Yes & No

Yes & No

List all types of surveillance used:  
P - PSR  
S(S) - SSRmS  
S(A/C) - SSRmAC  
AB - ADS-B  
AC - ADS-C  
M - MLAT  
W - WAM  
PM - PRM

According to definition in Doc 9830 Appendix B

ATS Units Served	Category	Surveillance Gaps	Integration of Surveillance Information to ATC Situation Display?	Multi-Surveillance Data Processing Capability	Surveillance Used	Level of A-SMGCS Implemented	Remarks
1	2	3	4	5	6	7	8
<b>AFGHANISTAN</b>							
<b>AUSTRALIA</b>							
Cairns TUC Cairns ACC Cairns APP Cairns TWR					P + S(S) + S(A/C) + AB P + S(S) + S(A/C) + AB P + S(S) + S(A/C) + AB P + S(S) + S(A/C) + AB		
Brisbane EC Brisbane ACC Brisbane APP Brisbane TWR					S(S) + S(A/C) + AB S(S) + S(A/C) + AB S(S) + S(A/C) + AB S(S) + S(A/C) + AB		
Coolangatta APP Coolangatta TWR					P + S(S) + S(A/C) + AB P + S(S) + S(A/C) + AB		
Sydney TCU Sydney APP Sydney TWR					AB + M + PM P + S(S) + S(A/C) + AB P + S(S) + S(A/C) + AB		SMR
Canberra APP Canberra TWR					P + S(S) + S(A/C) + AB P + S(S) + S(A/C) + AB		
Melbourne ACC Melbourne APP Melbourne TWR					P + S(S) + S(A/C) + AB + M P + S(S) + S(A/C) + AB P + S(S) + S(A/C) + AB		
Adelaide ACC Adelaide APP Adelaide TWR					P + S(S) + S(A/C) + AB P + S(S) + S(A/C) + AB P + S(S) + S(A/C) + AB		
Perth ACC Perth APP Perth TWR					P + S(S) + S(A/C) + AB P + S(S) + S(A/C) + AB P + S(S) + S(A/C) + AB		
<b>BANGLADESH</b> Dhaka APP					S(A/C)		
<b>BHUTAN</b>							
<b>BRUNEI DARUSALAM</b> Brunei APP					P + S(A/C)		
<b>CAMBODIA</b>					S(A/C)		
<b>CHINA</b>							

New Column	Surveillance Information	New Column	New Column		Combine to ASMGCS level
ACC + Approach unit responsible for International airport and alternate aerodrome + International airport and alternate aerodrome.	According to Seamless ATM plan + AD = Aerodrome	Need to define Surveillance Gaps	Yes & No	Yes & No	List all types of surveillance used: P - PSR S(S) - SSRmS S(A/C) - SSRmAC AB - ADS-B AC - ADS-C M - MLAT W - WAM PM - PRM
Beijing ACC Beijing APP Beijing TWR					P + S(A/C) P + S(A/C) P + S(A/C)
Tianjin APP Tianjin TWR					S(A/C)
Shijiazhuang APP Shijiazhuang TWR					S(A/C)
Taiyuan ACC Taiyuan APP Taiyuan TWR					P + S(A/C) P + S(A/C)
Hohhot ACC Hohhot APP Hohhot TWR					S(A/C) S(A/C)
Guangzhou ACC Guangzhou APP Guangzhou TWR					P + S(A/C) P + S(A/C) P + S(A/C)
Shenzhen APP Shenzhen TWR					P + S(A/C)
Zhuhai ACC Zhuhai APP Zhuhai TWR					P + S(A/C) P + S(A/C) P + S(A/C)
Sanya ACC Sanya APP Sanya TWR					P + S(A/C) P + S(A/C) P + S(A/C)
Haikou ACC Haikou APP Haikou TWR					P + S(A/C) P + S(A/C)
Changsha ACC Changsha APP Changsha TWR					P + S(A/C) P + S(A/C)
Enshi TWR					S(A/C)
Wuhan ACC Wuhan APP Wuhan TWR					P + S(A/C) P + S(A/C)
Zhengzhou ACC Zhengzhou APP Zhengzhou TWR					P + S(A/C) P + S(A/C)
Guilin ACC Guilin APP Guilin TWR					P + S(A/C) P + S(A/C)

New Column	Surveillance Information	New Column	New Column		Combine to ASMGCS level	
ACC + Approach unit responsible for International airport and alternate aerodrome + International airport and alternate aerodrome.	According to Seamless ATM plan + AD = Aerodrome	Need to define Surveillance Gaps	Yes & No	Yes & No	List all types of surveillance used: P - PSR S(S) - SSRmS S(A/C) - SSRmAC AB - ADS-B AC - ADS-C M - MLAT W - WAM PM - PRM	According to definition in Doc 9830 Appendix B
Nanning ACC Nanning TWR					S(A/C) S(A/C)	
Zhanjiang ACC Zhanjiang APP Zhanjiang TWR					S(A/C) S(A/C)	
Shantou ACC Shantou APP Shantou TWR					P + S(A/C) P + S(A/C)	
Kunming ACC Kunming APP Kunming TWR					P + S(A/C) + AC P + S(A/C)	
Chengdu ACC Chengdu APP Chengdu TWR					P + S(A/C) + AC P + S(A/C)	
Guiyang ACC Guiyang APP Guiyang TWR					P + S(A/C) P + S(A/C)	
Chongqing ACC Chongqing APP Chongqing TWR					P + S(A/C) P + S(A/C)	
Shanghai ACC Shanghai APP Shanghai TWR					P + S(A/C) P + S(A/C) P + S(A/C)	
Jinan ACC Jinan APP Jinan TWR					S(A/C) S(A/C)	
Qingdao ACC Qingdao APP Qingdao TWR					S(A/C) S(A/C)	
Hefei ACC Hefei APP Hefei TWR					P + S(A/C) P + S(A/C)	
Nanjing ACC Nanjing APP Nanjing TWR					P + S(A/C) P + S(A/C)	
Lianyungang ACC Lianyungang APP Lianyungang TWR					S(A/C) S(A/C)	
Xuzhou TWR					S(A/C)	
Hangzhou ACC Hangzhou APP					P + S(A/C)	

New Column	Surveillance Information	New Column	New Column		Combine to ASMGCS level
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ACC + Approach unit responsible for International airport and alternate aerodrome + International airport and alternate aerodrome. According to Seamless ATM plan + AD = Aerodrome Need to define Surveillance Gaps Yes & No Yes & No List all types of surveillance used: P - PSR S(S) - SSRmS S(A/C) - SSRmAC AB - ADS-B AC - ADS-C M - MLAT W - WAM PM - PRM According to definition in Doc 9830 Appendix B

Hangzhou TWR					P + S(A/C)	
Nanchang ACC Nanchang APP Nanchang TWR					P + S(A/C)	
Fuzhou ACC Fuzhou APP Fuzhou TWR					P + S(A/C)	
Wenzou TWR					S(A/C)	
Xiamen ACC Xiamen APP Xiamen TWR					P + S(A/C)	
Shenyang ACC Shenyang APP Shenyang TWR					P + S(A/C)	
Dalian ACC Dalian APP Dalian TWR					P + S(A/C)	
Harbin ACC Harbin APP Harbin TWR					P + S(A/C)	
Xi'an ACC Xi'an APP Xi'an TWR					P + S(A/C)	
Lanzhou ACC Lanzhou APP Lanzhou TWR					S(A/C) + AC	
Urumqi ACC Urumqi APP Urumqi TWR					S(A/C)	
					P + S(A/C) + AC	
					P + S(A/C)	
<b>HONG KONG, CHINA</b> Hong Kong ACC Hong Kong APP Hong Kong TWR					P + S(A/C) + AB P + S(A/C) P + S(A/C) + AB + PM	SMR, A-SMGCS
<b>MACAO, CHINA</b> Macao TWR					S(A/C)	
<b>COOK ISLANDS</b>						
<b>DPR KOREA</b> <b>Pyongyang</b> Pyongyang ACC Pyongyang APP Pyongyang TWR					S(A/C) P + S(A/C)	PAR



New Column	Surveillance Information	New Column	New Column		Combine to ASMGCS level
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ACC + Approach unit responsible for International airport and alternate aerodrome + International airport and alternate aerodrome.

According to Seamless ATM plan + AD = Aerodrome

Need to define Surveillance Gaps

Yes & No

Yes & No

List all types of surveillance used:  
P - PSR  
S(S) - SSRmS  
S(A/C) - SSRmAC  
AB - ADS-B  
AC - ADS-C  
M - MLAT  
W - WAM  
PM - PRM

According to definition in Doc 9830 Appendix B

Yogyakarta APP					P	
Surabaya APP					P	A-SMGCS
Bali ACC Bali APP					AB	A-SMGCS
Biak APP					S(A/C) + AB	
Jayapura ACC Jayapura APP					P P	
Kupang ACC Kupang APP					AB AB	
Tarakan ACC					P + AB	
Batam ACC Batam APP					S(S) S(S) + AB	
Sorong ACC					S(S) + AB	
<b>JAPAN</b>						
Fukuoka ATMC					AC	
Narita APP Narita TWR						SMR
Haneda TWR						SMR
Chubu APP Chubu TWR						SMR
Osaka APP Osaka TWR					P + S(A/C) + S(S)	SMR
Kansai APP Kansai TWR					P + S(A/C) + S(S)	SMR
Fukuoka ACC Fukuoka APP Fukuoka TWR					P + S(A/C) + S(S) P + S(A/C) + S(S)	SMR
Naha ACC Naha APP Naha TWR					P + S(A/C) + S(S) P + S(A/C) + S(S)	SMR
Hakodate APP					P + S(A/C)	
Sendai APP					P + S(A/C)	
Tokyo ACC Tokyo APP					P + S(A/C) + S(S) P + S(A/C) + S(S)	
Niigata APP					P + S(A/C)	



New Column	Surveillance Information	New Column	New Column		Combine to ASMGCS level
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ACC + Approach unit responsible for International airport and alternate aerodrome + International airport and alternate aerodrome.

According to Seamless ATM plan + AD = Aerodrome

Need to define Surveillance Gaps

Yes & No

Yes & No

List all types of surveillance used:  
P - PSR  
S(S) - SSRmS  
S(A/C) - SSRmAC  
AB - ADS-B  
AC - ADS-C  
M - MLAT  
W - WAM  
PM - PRM

According to definition in Doc 9830 Appendix B

Chubu APP					P + S(A/C) + S(S)		
Hiroshima APP					P + S(A/C)		
Takamatsu APP					P + S(A/C)		
Kochi APP					P + S(A/C)		
Matsuyama TWR					S(A/C)		
Kitakyusyu TWR					S(A/C)		
Nagasaki APP					P + S(A/C)		
Oita APP					P + S(A/C)		
Kumamoto APP					P + S(A/C)		
Miyazaki APP					P + S(A/C)		
Kagoshima APP					P + S(A/C)		
Shimajiri APP					P + S(A/C)		
Sapporo ACC					P + S(A/C) + S(S)		
<b>KIRIBATI</b>							
<b>LAO PDR</b>							
Vientiane ACC					S(A/C) + S(S)		
Vientiane APP					P		
<b>MALAYSIA</b>							
Langkawi APP					P + S(A/C)		
Kuala Lumpur ACC					P + S(A/C) + S(S)		
Lumpur APP					P + S(A/C) + AC		
Johor Bharu APP					P + S(S)		
Kota Bharu APP					P + S(S)		
K. Kinabalu ACC					P + S(A/C)		
K. Kinabalu APP					P + S(A/C)		
Kuching ACC					P + S(A/C)		
Kuching APP					P + S(A/C)		
Kuching TWR					P + S(A/C)		
Miri APP					P + S(A/C)		
<b>MALDIVES</b>							
<b>MARSHALL ISLANDS</b>							

New Column	Surveillance Information	New Column	New Column		Combine to ASMGCS level
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ACC + Approach unit responsible for International airport and alternate aerodrome + International airport and alternate aerodrome.

According to Seamless ATM plan + AD = Aerodrome  
Need to define Surveillance Gaps

Yes & No

Yes & No

List all types of surveillance used:  
P - PSR  
S(S) - SSRmS  
S(A/C) - SSRmAC  
AB - ADS-B  
AC - ADS-C  
M - MLAT  
W - WAM  
PM - PRM

According to definition in Doc 9830 Appendix B

<b>MICRONESIA (FEDERATED STATE OF)</b>							
<b>MONGOLIA</b> Ulaanbaatar ACC Ulaanbaatar APP					AC AC		
<b>MYANMAR</b> Yangon ACC Yangon APP  Mandalay APP					S(A/C) + S(S) + AC S(A/C) + S(S) + AC  P + S(A/C) + S(S)		
<b>NAURU</b>							
<b>NEPAL</b> Kathmandu APP					P + S(A/C)		
<b>NEW CALEDONIA</b> Tontouta ACC Tontouta APP							
<b>NEW ZEALAND</b> Christchurch ACC Christchurch TWR  Auckland ACC Auckland TWR  Wellington TWR  Queenstown TWR					P + S(A/C) + S(S)  S(A/C) + S(S)	Auckland A-SMGCS has no SMR   Wide Area MDS planned for Queenstown in 2010	
<b>PAKISTAN</b> Karachi ACC Karachi APP Karachi TWR  Lahore ACC Lahore APP Lahore TWR  Islamabad APP Islamabad TWR					P + S(A/C) P + S(A/C) P + S(A/C)  P + S(A/C) P + S(A/C) P + S(A/C)  P + S(A/C) P + S(A/C)		
<b>PAPUA NEW GUINEA</b> Jacksons APP  Moresby ACC					P + S(A/C)  P + S(A/C)		
<b>PHILIPPINES</b> Manila ATM Center Manila ACC Manila APP					S(A/C) + S(S) + AB S(A/C) + S(S) P + S(A/C) + S(S)		

New Column	Surveillance Information	New Column	New Column		Combine to ASMGCS level
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ACC + Approach unit responsible for International airport and alternate aerodrome + International airport and alternate aerodrome.

According to Seamless ATM plan + AD = Aerodrome

Need to define Surveillance Gaps

Yes & No

Yes & No

List all types of surveillance used:  
P - PSR  
S(S) - SSRmS  
S(A/C) - SSRmAC  
AB - ADS-B  
AC - ADS-C  
M - MLAT  
W - WAM  
PM - PRM

According to definition in Doc 9830 Appendix B

Clark APP					P + S(A/C)	
Mactan APP					P + S(A/C)	
Kalibo/Caticlan APP					P + S(A/C) + S(S)	
Bacolod APP					P + S(A/C) + S(S)	
Davao APP					P + S(A/C) + S(S)	
Subic APP					P + S(A/C)	
<b>REPUBLIC OF KOREA</b>						
Jeju APP					P + S(A/C)	SMR
Jeju TWR						
CheongjuTWR						
Seoul ACC					P + S(A/C)	SMR, A-SMGCS
Seoul APP					P + S(A/C)	
Incheon TWR						
Yangyang TWR						
Gimhae APP					P + S(A/C)	
Gimhae TWR						
Daegu APP					P + S(A/C)	
Jungwon APP					P + S(A/C)	
Gimpo ACC					P + S(A/C)	SMR
Gimpo APP					P + S(A/C)	SMR
Gimpo TWR						SMR, A-SMGCS
<b>SINGAPORE</b>						
Singapore ACC					P + S(A/C) + AB + AC	SMR, A-SMGCS
Singapore APP					P + S(A/C)	
Singapore TWR						
<b>SOLOMON ISLANDS</b>						
<b>SRI LANKA</b>						
Colombo ACC					S(A/C) + AB + AC	ADS-C Trial
Colombo APP					P	
<b>THAILAND</b>						
Bangkok ACC					P + S(A/C) + S(S)	2
Bangkok APP					P + S(A/C) + S(S)	
Bangkok TWR						
SVB TWR						
Chiang Mai APP					P + S(A/C)	
Chiang Mai TWR						

New Column	Surveillance Information	New Column	New Column		Combine to ASMGCS level
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ACC + Approach unit responsible for International airport and alternate aerodrome + International airport and alternate aerodrome.

According to Seamless ATM plan + AD = Aerodrome  
Need to define Surveillance Gaps

Yes & No

Yes & No

List all types of surveillance used:  
P - PSR  
S(S) - SSRmS  
S(A/C) - SSRmAC  
AB - ADS-B  
AC - ADS-C  
M - MLAT  
W - WAM  
PM - PRM

According to definition in Doc 9830 Appendix B

Hat Yai APP Hat Yai TWR					P + S(A/C) + S(S)		
Phuket APP Phuket TWR					S(A/C) + S(S)		
Phitsanulok APP Phitsanulok TWR					P		
Hua Hin APP Hua Hin TWR					P		
U Taphao					S(A/C)		
<b>TONGA</b>					AB		
<b>UNITED STATES</b>							
Alaska ACC					AB + AC		
Hilo, Hawaii ACC Hilo, Hawaii APP Hilo, Hawaii TWR					S(A/C) P		
Honolulu, Hawaii ACC Honolulu, Hawaii APP Honolulu, Hawaii TWR					S(S) P		
Kahului, Hawaii APP Kahului, Hawaii TWR					P + S(A/C)		
Kokee, Hawaii ACC					P		
Lihue, Hawaii APP Lihue, Hawaii TWR					P + S(A/C)		
Mount Kaala, Hawaii ACC					P + S(A/C)		
Pahoa, Hawaii ACC					S(A/C)		
Kunianiau, Hawaii ACC					S(A/C)		
Guam ACC					P + S(A/C)		
Mount Santa Rosa, Guam ACC Mount Santa Rosa, Guam APP Mount Santa Rosa, Guam TWR					P + S(S) P + S(A/C)		
Kona, Hawaii ACC					S(A/C)		
<b>VANUATU</b>							
<b>VIET NAM</b>							
Hanoi ACC					P + S(A/C) + AB		

New Column	Surveillance Information	New Column	New Column		Combine to ASMGCS level
ACC + Approach unit responsible for International airport and alternate aerodrome + International airport and alternate aerodrome.	According to Seamless ATM plan + AD = Aerodrome	Need to define Surveillance Gaps	Yes & No	Yes & No	List all types of surveillance used: P - PSR S(S) - SSRmS S(A/C) - SSRmAC AB - ADS-B AC - ADS-C M - MLAT W - WAM PM - PRM
Noibai APP Noibai TWR					S(A/C)  SMR, A-SMGCS
Ho Chi Minh ACC					P + S(A/C) + AB + AC
Danang APP					P
Hanoi ACC					
Tansan Nhat APP Tansan Nhat TWR					P  SMR, A-SMGCS

eANP provisions	Current RANP provisions	Early analysis by APAC RO Secretariat	Action raised 04 Feb. 15	Target date	Owner	Recommendation of Ad Hoc working Group to CNS SG/19
<b>VOLUME I</b>	Basic Air Navigation Plan					
Part III - Communication Navigation and Surveillance (CNS)	Current textual provisions	Note and consider the need for APAC specific requirements	Review all requirements Note and consider the need for APAC specific requirements	During F2F meeting - 10 April 15	Thailand	Include specific requirements into volume I as per sheet "Review of BANP"
<b>VOLUME II</b>	FASID					
Textual provisions	Current textual provisions	Note and consider the need for APAC specific requirements	Note and consider the need for APAC specific requirements	During F2F meeting - 10 April 15		Include specific requirements into volume II as per sheet "Review of BANP"
Table CNS II-1 – AFTN Plan [former 1A]	CNS 1A AFTN PLAN	GAP - format changed	Consolidate current RANP table with responses from amendment proposal (expected for 9 March) Populate both eANP tables (tables into requirement (vol II) and implementation status (vol III) with material from States	Populate 2 eANP tables - 15 May 15	India	Global table - to be retained
Table CNS II-2 – Required ATN Infrastructure Routing Plan [former 1B]	CNS 1B ATN ROUTER PLAN	SLIGHT GAP - format slightly changed	Consolidate current RANP table with responses from amendment proposal (expected for 9 March) Populate both eANP tables (tables into requirement (vol II) and implementation status (vol III) with material from States	Populate 2 eANP tables - 15 May 15	China	Global table - to be retained
Table CNS II-3 – ATS Direct Speech Circuits Plan [former 1C]	CNS 1D ATS DIRECT SPEECH CIRCUITS PLAN	NO GAP	Split table into requirement (vol II) and implementation status (vol III) - Populate both tables with material from States	Populate 2 eANP tables - 15 May 15 To circulate current table via ICAO letter to States for update	Singapore ICAO	Global table - to be retained
Table CNS II-4 – HF Network designators applicable for the Region [former page 2-25 to 2-28]		GAP: required by eANP mandatory requirements and relevant information appended to existing Table CNS 2	Analyse Table CNS II-4 template and see how it can be populated for APAC	Populate table - 15 May 15	ICAO	Global table - to be retained
	CNS 1C AMHS routing plan	GAP: Not required by eANP template provisions - May be a specific regional requirement or not	PROs and CONs to keep or not	Refer back to ACS/CG/2 to check if it is needed with justification	ICAO	Keeping the table is not supported by the meeting Refer back to ACS/CG/2 to check if it is needed with justification
	CNS 1E AIDC IMPLEMENTATION PLAN	GAP: Not required by eANP template provisions - May be kept (or not)	Review and include in Vol III - see what is needed for volume II	Update will be requested during APA TF/1 - June 15	ICAO	Proposed to be retained and moved to Volume III to track progress against regional performance dashboard and seamless item 220. (see table AIDC). If feasible could be integrated in the seamless reporting process.
<b>SPECIFIC REGIONAL REQUIREMENTS</b>						
Textual provisions	Current textual provisions					
Table CNS 2A - VHF Aeronautical Mobile Service and AMSS	CNS 2 AERONAUTICAL MOBILE SERVICE AND AERONAUTICAL MOBILE SATELLITE SERVICE	NO GAP	Populate both eANP tables (tables into requirement (vol II) and implementation status (vol III) with material from current RANP and update from States	Populate 2 eANP tables - 15 May 15		Keeping the table is not supported by the meeting
Table CNS 3 radio navigation aids and GNSS in support of the PBN implementation	CNS 3 RADIO NAVIGATION AIDS	NO GAP	Populate both eANP tables (tables into requirement (vol II) and implementation status (vol III) with material from current RANP and update from States	Populate 2 eANP tables - 15 May 15 To circulate current table via ICAO letter to States for update	Singapore ICAO	Proposed to be retained and moved to Volume II Should discriminate clearly the requirements from the implementation status Only keep items until VOR/DME column
	Chart CNS 3A - En-route Navigation Aids			To check if ICAO maintains such charts - 15 May 15	ICAO	If ICAO cannot maintain an online version, keeping is not supported
	Chart CNS 3B - Aids to final approach and landing			To check if ICAO maintains such charts - 15 May 15	ICAO	If ICAO cannot maintain an online version, keeping is not supported
	CNS 4A SURVEILLANCE SYSTEMS	GAP: Not required by eANP template provisions - May be kept (or not)	PROs and CONs to keep or not	Combine tables 4A and 4B Populate combined Table	Thailand ???	Tables 4A and 4B proposed to be combined. Focus should be airpacs, not sensors.
	CNS 4B ATS AUTOMATION SYSTEMS	GAP: Not required by eANP template provisions - May be kept (or not)	PROs and CONs to keep or not			
	<b>Associated charts of PartIV of the FASID</b>					
	Att A - LANDLINE TELETYPEWRITER CIRCUIT PERFORMANCE CHART	GAP: Not required by eANP template provisions - May be kept (or not) as a specific regional requirement	PROs and CONs to keep or not			Keeping not supported
	Att B - AFTN CIRCUIT LOADING STATISTICS	GAP: Not required by eANP template provisions - May be kept (or not) as a specific regional requirement	PROs and CONs to keep or not			Keeping not supported
	Att C - HARMFUL INTERFERENCE REPORT FORM	GAP: Not required by eANP template provisions - May be kept (or not) as a specific regional requirement	PROs and CONs to keep or not			Keeping not supported
	<b>Regular publications</b>					
	Frequency list 1 List of facilities in the band 190 - 526.5 kHz	GAP: Not required by eANP template provisions - May be kept (or not) as a specific regional requirement	Proposed to be kept - see current provision of RANP and update if needed			Proposed to be retained until FF is available for States
	Frequency list 2 List of facilities in the band 108 - 117.975 MHz and 960 - 1215 MHz	GAP: Not required by eANP template provisions - May be kept (or not) as a specific regional requirement	Proposed to be kept - see current provision of RANP and update if needed			Proposed to be retained until FF is available for States
	Frequency list 3 List of facilities in the band 117.975 - 137.000 MHz	GAP: Not required by eANP template provisions - May be kept (or not) as a specific regional requirement	Draft a provision that when FF is available to States, the frequency list 3 will not be published any longer			Proposed to be retained until FF is available for States
	List of SSR II codes	GAP: Not required by eANP template provisions - May be kept (or not) as a specific regional requirement	Proposed to be kept - see current provision of RANP and update if needed - Draft a provision that when FF is available to States, the list will not be published any longer			Proposed to be retained until FF is available for States
	ASIA/PAC Catalogue of Flight Inspection Units	GAP: Not required by eANP template provisions - May be kept (or not) as a specific regional requirement	see if an update is needed - Proposed to be kept - see current provision of RANP and update if needed			Keeping not supported/Update??
	<b>Online tools</b>					
	AFTN routing chart	GAP: Not required by eANP template provisions - May be kept (or not) as a specific regional requirement				Keeping not supported (difficult to maintain graphical part and table AFTN is maintained)
	ATN routing chart	GAP: Not required by eANP template provisions - May be kept (or not) as a specific regional requirement				Keeping not supported (difficult to maintain graphical part)
	ATN doc tree	GAP: Not required by eANP template provisions - May be kept (or not) as a specific regional requirement	Proposed to be dropped			Keeping not supported
<b>VOLUME III</b>						
<b>PART 0 – Introduction</b>						
Textual provisions		Update name of the region - editorial work		30-May-15	ICAO	
<b>PART I – General Planning Aspects (GEN)</b>						
Textual provisions		Update name of the region - editorial work		30-May-15	ICAO	
Table GEN II-1 – Implementation Indicator(s) for each ASBU Block 0 module		Amend table as necessary in line with regional objectives and targets		30-May-15	ICAO	
Appendix A – Sample Template for Air Navigation Report Form (ANRF)		Note				
Appendix B – Main Planning Table Template		Note				
<b>PART II – Air Navigation System Implementation</b>						
Textual provisions		Update name of the region - editorial work		30-May-15	ICAO	
Main Planning Table		draft APAC eANP Main Planning Table should be reviewed/complemented as necessary (draft developed)		Comprehensive review 15 May 15	ICAO, Japan, Singapore, India, China	
ANRF		ANRF should be attached		Include the links to ANRF in the main planning table	ICAO	
Supplementary Tables populated, as needed		eANP tables populated with collecting data should be placed here		Tables are: AIDC, SUR, NAV PBN reporting form	ICAO	
	<b>Online tools</b>					
	Seamless ATM online reporting process	URL and guidance are available and should be provided		30-May-15	ICAO	
	Regional Performance Dashboard	URL and guidance are available and should be provided		30-May-15	ICAO	
Guidance	Regional Picture (project)			30-May-15	ICAO	Include guidance material as per sheet "Review of BANP"