



International Civil Aviation Organization

ATN Seminar and Third ATN Transition Task Force Meeting

Singapore, 26-30 March 2001

Agenda Item 6: Review Status of Implementation of AFTN Circuit and Evaluate Circuit Capacity.

**REVIEW STATUS OF IMPLEMENTATION OF
THE ASIA/PAC AFTN PLAN**

(Presented by the Secretariat)

SUMMARY

This paper presents AFTN Plan for review by the meeting.

1. Introduction

- 1.1 To facilitate evolutionary transition to ATN, the AFTN Plan (Table CNS1A-AFTN Circuits) was developed and subsequently approved by the Council. The updated plan is provided in Attachment 1 to this paper for review. A chart is provided in Attachment 2.

2. Discussion

- 2.1 The AFTN plan was reviewed and updated regularly by the previous Task Force and the COM/MET/NAV/SUR Sub-Group meetings. The plan has since been further updated to reflect status of AFTN circuit implementation.
- 2.2 The main highlights of the AFTN improvements made during the year 2000 and early 2001 are as follows:

2.2.1 Circuits:

- Hong Kong/Ho-Chi-Minh circuit was upgraded from dual 75 baud 300 bauds since 1 April 2000;
- Beijing/Ulaan Baatar circuit was upgraded from 300 baud to 2400 bps since July 2000;
- Nadi/Noumea circuit was upgraded from 75 baud to 2400 bps since July 2000;
- Beijing/Seoul 300 baud circuit was implemented using VSAT since 20 February 2001;
- Beijing/Khabarovsk 2400 bps circuit was established using VSAT since 13 February 2001;

3. Action by the Meeting

3.1 The meeting is expected to:

- a) review the AFTN Plan (Table CNS1A-AFTN circuits) and the circuit capacity based on circuit loading; and
- b) update the entries, as required.

State/Station	Cat.	CURRENT				PLANNED				Target date of implemen-tation	Remarks
		Type	Signalling Speed	Protocol	Code	Type	Signalling Speed	Protocol	Code		
1	2	3	4	5	6	7	8	9	10	11	12
AMERICAN SAMOA PAGO PAGO - S/NSTU United States/KSLC	S	SAT/d	2400 bps	X.25	IA-5						
AUSTRALIA BRISBANE - M/YBBB	T	LDD/d	2400 bps	X.25	IA-5						Note 2
Christchurch/NZCH	S	LTT	75 baud	None	IA-5						Note 2
Honiara/AGGG	S	SAT/d	9600 bps	X.25	IA-5						Note 1,2
Jakarta/WII	S	LTT	50 baud	None	ITA-2						
Mauritius/FIMP	M	LDD/d	2400 bps	IA-5	IA-5						Note 2
Nadi/NFFN	S	SAT/d	2400 bps	X.25	IA-5						Note 2
Nauru/ANAU	S	SAT/d	9600 bps	X.25	IA-5						Note 2
Port Moresby/AYPM	S	LTT	300 baud	None	ITA-2						Note 2
Port Vila/NVVV	M					LDD/d	2400 bps	X.25	IA-5	06/01	SITA
Santiago/SCSC	M										Current routing via USA
Singapore/WSSS	M	LDD/d	600 baud	COP-B	IA-5	LDD/d	2400 bps	X.25	IA-5	12/00	
United States/KSLC	M	SAT/d	2400 bps	X.25	IA-5						
BANGLADESH DHAKA - S/VGZR	S	SAT/d	300 baud	None	IA-5						
Bangkok/VTBB	S	HF RTT	50 baud	None	ITA-2	LTT	50 baud	None	ITA-2	12/00	Note 1,2
Calcutta/VECC											
BHUTAN PARO - S/VQPR	S	SAT/a	50 baud	None	ITA-2						Dial-up
Mumbai/VABB											
BRUNEI DARUSSALAM BRUNEI - S/WBSB	S	LTT	75 baud	None	ITA-2	LDD	300 baud	COP-B	IA-5	12/00	
Singapore/WSSS	S	LTT	50 baud	None	ITA-2	LDD/d	300 baud	COP-B	IA-5	12/00	Note 1,2
Kota Kinabalu/WBKK											
CAMBODIA PHNOM PENH - S/VDPP	S	SAT/d	300 baud	None	ITA-2						Note 2
Bangkok/VTBB											
CHINA BEIJING - M/ZBBE	M	LDD/d	9600 bps	X.25	IA-5						
Guangzhou/ZGGG	M	LTT	50 baud	None	ITA-2	LDD/a	300 baud	None	IA-5	12/00	
Karachi/OPKC	S	SAT/d	300 baud	None	IA-5						
Kathmandu/VNKT	S	LDD/d	9600 bps	X.25	IA-5						
Kunming/ZPPP	M					SAT/d	2400 bps	None	IA-5	12/00	via Khabarovsk
Russian Fedration/UHHH	S	SAT/d	300 baud	None	IA-5						
Pyongyang/ZKKK											

State/Station	Cat.	CURRENT				PLANNED				Target date of implemen-tation	Remarks
		Type	Signalling Speed	Protocol	Code	Type	Signalling Speed	Protocol	Code		
1	2	3	4	5	6	7	8	9	10	11	12
Seoul/RKSS	S					SAT/d	9600 bps	X.25	IA-5	12/01	Note 1
Tokyo/RJAA	M	LDD/d	9600 bps	X.25	IA-5						
Ulaan Baatar/ZMUB	S	SAT/d	1200 bps	None	IA-5						Note 2
GUANGZHOU-M/ZGGG											
Beijing/ZBBB	M	LDD/d	9600 bps	X.25	IA-5						
Hong Kong/VHHH	M	LDD/d	1200 bps	None	IA-5						Note 1
Macau/VMMC	S	SAT/d	2400 bps	None	IA-5						
KUNMING - S/ZPPP											
Beijing/ZBBB	S	LDD/d	9600 bps	X.25	IA-5						
Yangon/VYYY	S					SAT/d	300 baud	None	IA-5	12/00	Note 1, 2
TAIBEI - S/RCTP											
Hong Kong/VHHH	S	LDD/d	4800 bps	X.25	IA-5						
Manila/RPLL	S	LTT	75 baud	None	ITA-2	LDD/d	2400 bps	X.25	IA-5	12/00	Note 1, 2
Naha/ROAH	S	LDD/d	4800 bps	X.25	IA-5						
HONG KONG, CHINA											
HONG KONG-M/VHHH											
Bangkok/VTBB	M	LDD/d	2400 bps	X.25	IA-5						
Guangzhou/ZGGG	M	LDD/d	1200 bps	None	IA-5						Note 1
Ho-Chi-Minh/VVTS	S	SAT/a	300 baud	None	ITA-2						Note 1, 2
Macau/VMMC	S	LDD/d	2400 bps	None	IA-5						
Manila/RPLL	S	LTT	2x75 baud	None	ITA-2	LDD/d	300 baud	None	IA-5	12/00	
Taipei/RCTP	S	LDD/d	4800 bps	X.25	IA-5						Note 2
Tokyo/RJAA	M	LDD/a	9600 bps	X.25	IA-5						
MACAU, CHINA											
MACAU - S/VMMC											
Hong Kong/VHHH	S	LDD/d	2400 bps	None	IA-5						
Guangzhou/ZGGG	S	SAT/d	2400 bps	None	IA-5						
COOK ISLAND											
RAROTONGA-S/NCRG											
Christchurch/NZCH	S	LDD/d	2400 bps	None	IA-5						
DPR KOREA											
PYONGYANG-S/ZKKK											
Beijing/ZBBB	S	SAT/d	300 baud	None	IA-5						
FIJI											
NADI - M/NFFN											
Apia/NSFA	S	LTT	50 baud	None	ITA-2						Note 2
Brisbane/YBBB	M	LDD/d	2400 bps	X.25	IA-5						Note 2
Christchurch/NZCH	S	LTT	2400 bps	X.25	IA-5						Note 2

State/Station	Cat.	CURRENT				PLANNED				Target date of implemen-tation	Remarks
		Type	Signalling Speed	Protocol	Code	Type	Signalling Speed	Protocol	Code		
1	2	3	4	5	6	7	8	9	10	11	12
Funafuti/NGFU	S					LTT	50 baud	None	ITA-2	04/01	
Noumea/NWWW	S	LTT	64000 bps	X.21	ITA-2	LTT	2400 bps	None	IA-5	12/00	Note 2
Tarawa/NGTT	S										
Tongatapu/NFTF	S	LTT	50 baud	None	ITA-2						
United States/KSLC	M	SAT/d	2400 bps	X.25	IA-5						
Wallis Is./NLWW	S					LTT	50 baud	None	ITA-2	when traffic justifies	Note 2
Current routing via Noumea											
FRENCH POLYNESIA (FRANCE)											
PAPEETE/NTAA											
Christchurch/NZCH	S	SAT/d	300 baud	None	ITA-2	LDD/d	2400 bps	X.25	IA-5	12/00	
INDIA											
MUMBAI - M/VABE											
Bangkok/VTBB	M	SAT/a	2400 bps	X.25	IA-5						
Calcutta/VECC	S	LTT	2x50	None	ITA-2	LDD/d	2400 bps	COP-B	IA-5	12/00	
Colombo/VCCC	M	SAT/a	50 baud	None	ITA-2	LDD/d	2400 bps	X.25	IA-5	12/00	via PVC
Karachi/OPKC	M	SAT/a	200 baud	None	ITA-2						Note 2
Kathmandu/VNKT	S	SAT/a	50 baud	None	ITA-2						
Muscat Seeb/OOMS	M	SAT/a	300 baud	None	ITA-2						Note 2
Nairobi/HKNC	M	SAT/a	50 baud	None	ITA-2						
Paro/VQPR	S	SAT/a	50 baud	None	ITA-2						Dial-up
CALCUTTA - S/VECC											
Dhaka/VGZR	S	RTT	50 baud	None	ITA-2	LTT	50 baud	None	ITA-2	12/00	Note 1, 2
Mumbai/VABB	S	LTT	2x50	None	ITA-2	LDD/d	2400 bps	COP-B	IA-5	12/00	
DELHI - S/MIDD											
Tashkent/UTTT	S	SAT/a	50 baud	None	ITA-2						
CHENNAI - S/VOMM											
Kuala Lumpur/WMKK	S	LTT	50 baud	None	ITA-2	LDD/d	300 baud	None	IA-5	12/01	Note 1, 2
INDONESIA											
JAKARTA - S/WII											
Brisbane/YBBB	S	SAT/d	9600 bps	X.25	IA-5						Note1,2
Singapore/WSSS	S	SAT/d	2x50 baud	None	ITA-2	SAT/d	2400 bps	X.25	IA-5	12/00	Note 2
Ujung Pandang	S	SAT/a	2x50 baud	None	ITA-2	SAT/d	2400 bps	X.25	IA-5	2002	Note1, 2
BATAM - S/WIKB											
Singapore/WSSS	S	LTT	50 baud	None	ITA-2						
JAPAN											
TOKYO - M/RJAA											
Beijing/ZBBB	M	LDD/d	9600 bps	X.25	IA-5						
Hong Kong/VHHH	M	LDD/a	9600 bps	X.25	IA-5						
Russian Federation/UHHH	M	LTT	2400 bps	None	IA-5						

State/Station	Cat.	CURRENT				PLANNED				Target date of implemen-tation	Remarks
		Type	Signalling Speed	Protocol	Code	Type	Signalling Speed	Protocol	Code		
1	2	3	4	5	6	7	8	9	10	11	12
Russian Federation/UUUU Naha/ROAH	M S	LTT LDD/d	200 baud 9600 bps	None X.25	IA-5 IA-5	LDD/d				12/03	(Moscow)
Seoul/RKSS Singapore/WSSS United States/KSLC	S M M	LDD/d LDD/a LDD/d	9600 bps 1200 bps 9600 bps	X.25 COP-B X.25	IA-5 IA-5 IA-5	LDD/d	9600 bps	X.25	IA-5	12/00	Note 2
NAHA - S/ROAH Taipei/RCTP Tokyo/RJAA	S S	LDD/d LDD/d	4800 bps 9600 bps	X.25 X.25	IA-5 IA-5						
KIRIBATI TARAWA - S/NGTT Nadi/NFFN	S					LTT	2400 bps	None	IA-5	12/00	
LAO PDR VIENTIANE - S/MLVT Bangkok/VTBB Ho-Chi-Minh/VVTS	S S	SAT/d SAT/d	300 baud 9600 bps	COP-B None	IA-5 IA-5						Note 2 Note 1, 2 via Hanoi
MALAYSIA KUALA LUMPUR-S/WMKK Bangkok/VTBB Chennai/VOMM Singapore/WSSS	S S S	SAT/d LTT LDD/d	2400 bps 50 baud 1200 bps	None None X.25	IA-5 ITA-2 IA-5	SAT/d LDD/d	2400 bps 2400 bps	X.25 X.25	IA-5 IA-5	12/00 12/01	Note 1, 2 Note 1, 2 Note 2
KOTA KINABALU-S/WBKK Brunei/WBSB	S	LTT	50 baud	None	ITA-2	LDD/d	300 baud	COP-B	IA-5	12/00	Note 1, 2
MALDIVES MALE - S/VRMM Colombo/VCCC	S	LTT	50 baud	None	ITA-2	SAT/d	2400 bps	X.25	IA-5	12/00	Note 2
MARSHAL ISLAND MAJURO - S/PKMJ United States/KSLC	S	SAT/d	1200 bps	X.25	IA-5						
MICRONESIA FEDERATED STATE OF CHUUK - S/PTKK United States/KSLC	S	SAT/a	1200 bps	X.25	IA-5						
KOSRAE - S/PTSA United States/KSLC	S	SAT/a	1200 bps	X.25	IA-5						

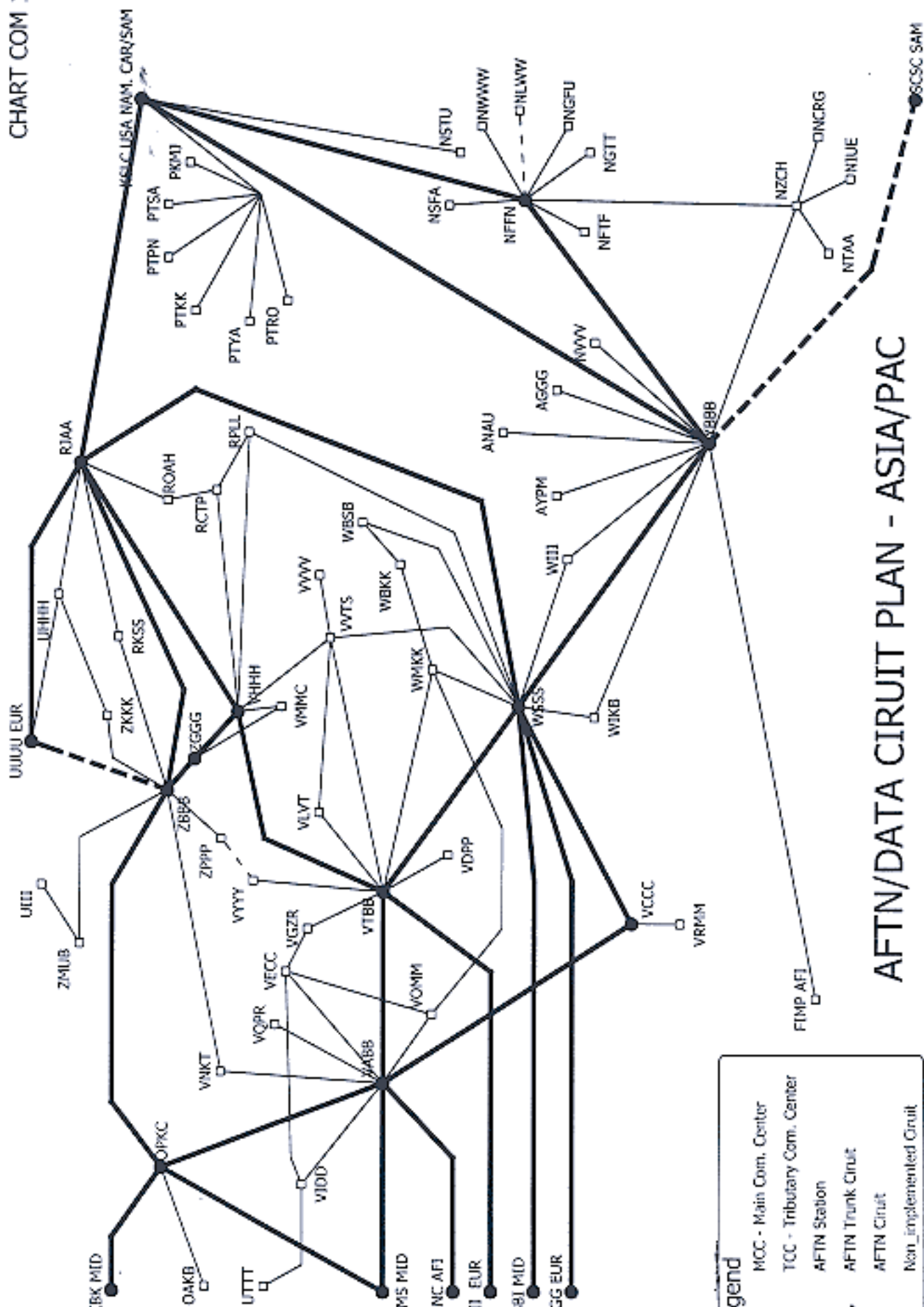
State/Station	Cat.	CURRENT				PLANNED				Target date of implemen-tation	Remarks
		Type	Signalling Speed	Protocol	Code	Type	Signalling Speed	Protocol	Code		
1	2	3	4	5	6	7	8	9	10	11	12
PONAPEI - S/PTPN United States/KSLC	S	SAT/a	1200 bps	X.25	IA-5						
YAP - S/PTYA United States/KSLC	S	SAT/a	1200 bps	X.25	IA-5						
MONGOLIA ULAANBAATAR-S/ZMUB Beijing/ZBBB Russian Federation/UII	S M	SAT/d LTT	1200 bps 50 baud	None None	IA-5 ITA-2						Note 2 (Irkutsk)
MYANMAR YANGON - S/VYYY Bangkok/VTBB Kunming/ZPPP	S S	SAT/d	300 baud	COP-B	IA-5	SAT/d	300 baud	None	IA-5	12/00	Note 2 Note 1,2
NAURU NAURU - S/ANAU Brisbane/YBBB	S	SAT/d	2400 bps	X.25	IA-5						
NEPAL KATHMANDU - S/VNKT Beijing/ZBBB Mumbai/VABB	S S	SAT/d SAT/a	300 baud 50 baud	None None	IA-5 ITA-2						
NEW CALEDONIA (FRANCE) NOUMEA - S/NWWW Nadi/NFFN	S	LTT/d	64000 bps	X.21	IA-5						Note 2
NEW ZEALAND CHRISTCHURCH-T/NZCH Brisbane/YBBB Nadi/NFFN Niue/NIUE Papeete/NTAA Rarotonga/NCRG	T S S S S	LDD/d LDD/d SAT/d LDD/d	2400 bps 2400 bps 300 baud 2400 bps	X.25 X.25 None None	IA-5 IA-5 ITA-2 IA-5	LDD/d	2400 bps	X.25	IA-5	12/00	Note 2 Note 1, 2 Currently by FAX
NIUE IS NIUE - S/NIUE Christchurch/NZCH	S										Currently by FAX
PAKISTAN KARACHI - M/OPKC Beijing/ZBBB Mumbai/VABB	M M	LTT SAT/a	50 baud 200 baud	None None	ITA-2 ITA-2	SAT/a	2400 bps	X.25	IA-5	12/00	Note 2

State/Station	Cat.	CURRENT				PLANNED				Target date of implemen-tation	Remarks
		Type	Signalling Speed	Protocol	Code	Type	Signalling Speed	Protocol	Code		
1	2	3	4	5	6	7	8	9	10	11	12
Kabul/OAKB Kuwait/OKBK	S M	SAT/d SAT/a	300 baud 50 baud	None None	IA-5 ITA-2						Note 2
PALAU KOROR - S/PTRO United States/KSLC	S	SAT/d	1200 bps	X.25	IA-5						
PAPUA NEW GUINEA PORT MORESBY-S/AYPM Brisbane/YBBB	S	SAT/d	9600 bps	X.25	IA-5						Note 2
PHILIPPINES MANILA - S/RPLL Hong Kong/VHHH Singapore/WSSS Taipei/RCTP	S S S	LTT LTT LTT	2x75 baud 2x75 baud 75 baud	None None None	ITA-2 ITA-2 ITA-2	LDD/d LDD/d LDD/d	300 baud 2400 bps 2400 bps	None X.25 X.25	IA-5 IA-5 IA-5	12/00 12/00 12/00	Note 2 Note 1, 2 Note 1, 2
REPUBLIC OF KOREA SEOUL - S/RKSS Beijing/ZBBB Tokyo/RJAA	S	LDD/d	9600 bps	X.25	IA-5	SAT/d	9600 bps	X.25	IA-5	12/01	Note1 Note 2
SAMOA APIA - S/NSFA Nadi/NFFN	S	LTT	50 baud	None	ITA-2						Note 2
SINGAPORE SINGAPORE-M/WSSS Bahrain/OBBI Bangkok/VTBB Batam/WIKB Brisbane/YBBB Brunei/WBSB Colombo/VCCC Ho-Chi-Minh/VVTS Jakarta/WII Kuala Lumpur/WMKK London/EGGG Manila/RPLL Tokyo/RJAA	M M S M S M S S S S M M S M	LTT LDD/d LTT LDD/d LTT LTT LTT LTT LTT SAT/d LDD/d LTT LDD/a	200 baud 1200 bps 50 baud 600 baud 75 baud 75 baud 75 baud 2x50 baud 1200 bps 1200 bps 2x75 baud 1200 bps	None X.25 None COP-B None None None None X.25 X.25 None COP-B	ITA-2 IA-5 ITA-2 IA-5 ITA-2 ITA-2 ITA-2 ITA-2 IA-5 IA-5 ITA-2 IA-5	SAT/a LDD/d LDD/d LDD SAT/a LDD/a LDD/d LDD/d	2400 bps 2400 bps 2400 bps 2400 bps 2400 bps 2400 bps 2400 bps 9600 bps	X.25 X.25 X.25 X.25 X.25 X.25 X.25	IA-5 IA-5 IA-5 IA-5 IA-5 IA-5	12/00 12/00 12/00 12/00 12/00 12/00 12/00	 Note 2 Note 2 Note 2 Note 1,2
SOLOMON IS. HONIARA - S/AGGC Brisbane/YBBB	S	LTT	75 baud	None	IA-5						
SRI LANKA COLOMBO - M/VCCC Mumbai/VABB	M	SAT/a	50 baud	None	ITA-2	LDD/d	2400 bps	X.25	IA-5	12/00	Via PVC

State/Station	Cat.	CURRENT				PLANNED				Target date of implemen-tation	Remarks
		Type	Signalling Speed	Protocol	Code	Type	Signalling Speed	Protocol	Code		
1	2	3	4	5	6	7	8	9	10	11	12
Male/VRMM	S	LTT	50 baud	None	ITA-2	SAT/d	2400 bps	X.25	IA-5	12/00	Note2
Singapore/WSSS	M	LTT	75 baud	None	ITA-2	LDD	2400 bps	X.25	IA-5	12/00	
THAILAND											
BANGKOK - M/VTBB											
Mumbai/VABB	M	SAT/a	2400 bps	X.25	IA-5						
Dhaka/VGZR	S	SAT/d	300 baud	None	IA-5						
Ho-Chi-Minh/VVTS	S	SAT/d	2400 bps	None	IA-5						Note 2
Hong Kong/VHHH	M	LDD/d	2400 bps	X.25	IA-5						
Kuala Lumpur/WMKK	S	SAT/d	2400 bps	None	IA-5			X.25		12/00	Note 1, 2
Phnom Penh/VDPP	S	SAT/d	300 baud	None	ITA-2						Note 2
Rome/LII	M	SAT/d	2400 bps	X.25	IA-5						
Singapore/WSSS	M	LDD/d	1200 bps	X.25	IA-5						Note 2
Vientiane/VLVT	S	SAT/d	300 baud	COP-B	IA-5						Note 2
Yangon/VYYY	S	SAT/d	300 baud	COP-B	IA-5						Note 2
TONGA											
TONGATAPU - S/NFTF											
Nadi/NFFN	S	LTT	50 baud	None	ITA-2						
TUVALU											
FUNAFUTI - S/NGFU											
Nadi/NFFN	S					LTT	50 baud	None	ITA-2	04/01	Note 2
UNITED STATES											
USA-M/KSLC											
Brisbane/YBBB	M	SAT/d	2400 bps	X.25	IA-5						
Chuuk/PTKK	S	SAT/d	1200 bps	X.25	IA-5						
Koror/PTRO	S	SAT/d	1200 bps	X.25	IA-5						
Kosrae/PTSA	S	SAT/d	1200 bps	X.25	IA-5						
Majuro/PKMJ	S	SAT/d	1200 bps	X.25	IA-5						
Nadi/NFFN	M	SAT/d	2400 bps	X.25	IA-5						
Pago Pago/NSTU	S	SAT/d	2400 bps	X.25	IA-5						
Ponapei/PTPN	S	SAT/a	1200 bps	X.25	IA-5						
Tokyo/RJAA	M	LDD/d	9600 bps	X.25	IA-5						
Yap/PTYA	S	SAT/d	1200 bps	X.25	IA-5						
VANUATU											
PORT VILA - S/NVVV											
Brisbane/YBBB	S	LTT	300 baud	None	ITA-2						SITA
VIET NAM											
HO-CHI-MINH - S/VVTS											
Bangkok/VTBB	S	SAT/d	2400 bps	None	IA-5						
Hong Kong/VHHH	S	SAT/a	300 baud	None	ITA-2						Note 1, 2
Singapore/WSSS	S	LTT	75 baud	None	ITA-2	SAT/a	2400 bps	X.25	IA-5	12/00	
Vientiane/VLVT	S	SAT/d	9600 bps	None	IA-5						Note 1, 2 via Hanoi
WALLIS IS. (FRANCE)											
WALLIS - S/NLWW											
Nadi/NFFN	S					LTT	50 baud	None	ITA-2	when traffic justifies	Current routing via Noumea

TABLE CNS 1A - AFTN CIRCUITS*Explanation of the Table**Column*

1	The AFS station or facility of individual State, listed alphabetically. Each circuit appears twice in the Table.
2	Category of circuit - M - Main trunk circuit connecting Main AFTN communication centres. - T - Tributary circuit connecting Main AFTN communication centre and AFTN stations to relay or retransmit AFTN traffic. - S - AFTN circuit which is used to transmit and receive AFTN traffic to and from a Main or Tributary AFTN communication centre directly connected to it and does not relay AFTN traffic except for the purpose of serving national station(s).
3 and 7	Type of circuit provided: - HF High frequency radio teletype - LTT/a landline teletypewriter, analogue (eg. cable, microwave) - LTT/d landline teletypewriter, digital (eg. cable, microwave) - LDD/a landline data circuit, analogue (eg. cable, microwave) - LDD/d landline data circuit, digital (eg. cable, microwave) - SAT/n/a/d satellite link, the number indicates the number of hops in the circuit: Also use/a for analogue or/d for digital appropriate to the tail circuit.
4 and 8	Circuit signalling speed, current or planned.
5 and 9	Circuit protocols, current or planned.
6 and 10	Data transfer code (syntax), current or planned. - ITA-2 International Telegraph Alphabet No. 2 (Baudot code). - IA-5 International Alphabet No. 5 (ICAO 7 - unit code). - CBI Code and Byte Independent (ATN compliant).
11	Target date of implementation
12	Remarks - Note 1: Circuit is required for alternate routing and for national routing for international traffic. - Note 2: Requirements exist for speech and data (S + DX) communication.



Attachment 2 to ATTF/3-WP/9

OK

OK

HK

LI

OK

EG

