



International Civil Aviation Organization

COM CO-ORDINATION MEETING

People's Republic of China, Japan, Mongolia and Russian Federation



Shanghai, People's Republic of China, 18 – 20 October 2011

Agenda Item 1: Review of AFS communication requirements in the Sub-region of North Asia, Russian Federation Far East including D - ATS Direct Speech Circuits Plan and CNS 1E - ATS Inter-Facility Data Communication (AIDC) Implementation Plan

REVIEW OF AFS REQUIREMENTS AND PLANNING TABLES

(Presented by the Secretariat)

SUMMARY

This paper presents relevant requirements for AFTN circuits and their characteristics as outlined in the Table CNS 1A - AFTN Plan contained in the Asia and Pacific Facilities and Services Implementation Document (FASID) and Tables CNS 1B and CNS 1C adopted by APANPIRG/22 meeting for review by this meeting.

1. INTRODUCTION

1.1 The first Edition of ASIA/PAC Basic Air Navigation Plan (ANP) and the ASIA/PAC Facilities and Services Implementation Document (FASID) were issued in early 2006.

1.2 Since then, relevant CNS Tables containing implementation and planning information relating to Aeronautical Fixed Service in the FASID have been regularly reviewed by the ATN Implementation Coordination Group as well as by CNS/MET Sub-group of APANPIRG. The most tables were updated by ATNICG/6 and endorsed by CNS/MET SG/15 and consequentially adopted by APANPIRG/22 in 2011.

1.3 The updated tables are subject to formal amendment process according to the established procedure. The working draft version of these tables is available at the ICAO APAC website: <http://www.bangkok.icao.int/edocs/index.html>

2. DISCUSSION

History of Development of the FASID

2.1 As approved by the ICAO Council on 26 February 1997, the Air Navigation Plan (ANP) – Asia and Pacific Regions (Doc 9673) has been presented in two complementary documents. The first, the Basic Air Navigation Plan (ANP) (Vol. I) contains general planning criteria, implementation guidelines and stable elements of the plan. The second, the Facilities and Services Implementation Document (FASID) (Vol. II) which contains in general terms, the details of facilities, services and procedures required for international air navigation which are changed based on changes in operational requirements. Such plan contains requirements which administrations should implement without undue delay.

2.2 The ASIA/PAC FASID has been prepared to serve as a planning tool to facilitate transition to the CNS/ATM systems in an evolutionary manner. The FASID is, therefore, expected to be updated regularly to facilitate planning and implementation of the air navigation services and facilities in the region based on changes in the operational requirements. States or regional planning bodies may propose for amendment from time to time.

2.3 Based on the development trend of regional air navigation planning process, the FASID would become part of e-ANP which is being studied and would be determined at AN Conf/12 to be held in November 2012.

2.4 The Table CNS 1A - AFTN Plan, Table CNS 1B – ATN Router plan and Table CNS 1C – AMHS Routing plan are regularly reviewed and updated by the ATN Implementation Coordination Group of APANPIRG in accordance with its term of reference. The updated requirements for those circuits covering area of interest to this meeting as contained in these tables are provided in the **Attachment A**, **Attachment B** and **Attachment C** to this paper.

3. ACTION BY THE MEETING

3.1 The meeting is expected to review the attachments and discuss implementation related issues with respect to the specific requirements.

Table CNS 1A

AERONAUTICAL FIXED TELECOMMUNICATION NETWORK (AFTN) PLAN

EXPLANATION OF THE TABLE

Column

1	The AFS station or facility of individual State, listed alphabetically. Each circuit appears twice in the Table
2	<p>Category of circuit:</p> <p>M - Main trunk circuit connecting Main AFTN Communication Centres.</p> <p>T - Tributary circuit connecting Main AFTN Communication Centre and AFTN stations to relay or retransmit AFTN traffic.</p> <p>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).</p>
3 and 7	<p>Type of circuit provided:</p> <p>LTT landline teletypewriter</p> <p>LTT/a landline teletypewriter, analogue (eg. cable, microwave)</p> <p>LTT/d landline teletypewriter, digital (eg. cable, microwave)</p> <p>LDD/a landline data circuit, analogue (eg. cable, microwave)</p> <p>LDD/d landline data circuit, digital (eg. cable, microwave)</p> <p>SAT/n/a/d satellite link, the number indicates the number of hubs in the circuit: Also use/a for analogue or/d for digital appropriate to the tail circuit.</p>
4 and 8	Circuit signalling speed, current or planned.
5 and 9	<p>Circuit protocols, current or planned</p> <p>COP-B Character oriented data link control procedure – System Category - B</p> <p>X. 25 X.25 protocol</p>
6 and 10	<p>Data transfer code (syntax), current or planned.</p> <p>ITA-2 International Telegraph Alphabet No. 2 (Baudot code)</p> <p>IA-5 International Alphabet No. 5 (7 - unit code)</p>
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.

State/Station	Cat.	CURRENT				PLANNED				Target date of implementation	Remarks
		Type	Signalling Speed	Protocol	Code	Type	Signalling Speed	Protocol	Code		
1	2	3	4	5	6	7	8	9	10	11	12
CHINA											
BEIJING - M/ZBBB	M	LDD/d	9600 bps	X.25	IA-5						
Guangzhou/ZGGG	M	LDD/d	2400 bps	None	IA-5						
Karachi/OPKC	S	SAT/d	300 baud	None	IA-5						
Kathmandu/VNKT	S	SAT/d	2400 bps	None	IA-5						
Russian Fedration/UHHH	M	SAT/d	9600 bps	None	IA-5						(Khabarovsk)
Pyongyang/ZKKK	S	SAT/d	9600 bps	X.25	IA-5						
Seoul/RKSS	S	SAT/d	9600 bps	X.25	IA-5						
Tokyo/RJAA	M	LDD/d	9600 bps	X.25	IA-5						
Ulaan Baatar/ZMUB	S	SAT/d	300 baud	None	IA-5	SAT/a	9600 bps	None	IA-5	12/05	Note 2
Yangon/VYYY	S	SAT/d	300 baud	None	IA-5						
GUANGZHOU-M/ZGGG											
Beijing/ZBBB	M	LDD/d	9600 bps	X.25	IA-5						
Hanoi/VVNB	S	SAT/d	2400 bps	None	IA-5						
Hong Kong/VHHH	M	LDD/d	2400 bps	None	IA-5						Note 1
Macau/VMMC	S	LDD/d	2400 bps	None	IA-5						
Sanya/ZJSY	S	LDD/d	2400 bps	None	IA-5						
SANYA-S/ZJSY											
Guangzhou/ZGGG	S	LDD/d	2400 bps	None	IA-5						
Hong Kong/VHHH	S	LDD/d	2400 bps	None	IA-5						
TAIBEI - S/RCTP											
Hong Kong/VHHH	S	LDD/d	4800 bps	X.25	IA-5						
Manila/RPLL	S	LDD/d	300 bps	None	ITA-2						Note 1, 2
Naha/ROAH	S	LDD/d	4800 bps	X.25	IA-5						
JAPAN											
TOKYO - M/RJAA											
Beijing/ZBBB	M	LDD/d	9600 bps	X.25	IA-5						
Hong Kong/VHHH	M	LDD/d	9600 bps	X.25	IA-5						
Russian Federation/UHHH	M	LTT	2400 bps	None	IA-5						(Khabarovsk)
Russian Federation/UUUU	M	LTT	200 baud	None	IA-5	LDD	2400 bps	None	IA-5		Coordination with Russian Federation in progress
Naha/ROAH	S	LDD/d	9600 bps	X.25	IA-5						Note 2
Seoul/RKSS	S	LDD/d	9600 bps	X.25	IA-5						
Singapore/WSSS	M	LDD/d	9600 bps	X.25	IA-5						
United States/KSLC	M	LDD/d	9600 bps	X.25	IA-5						Traffic exchange via AMHS
NAHA - S/ROAH											
Taibei/RCTP	S	LDD/d	4800 bps	X.25	IA-5						
Tokyo/RJAA	S	LDD/d	9600 bps	X.25	IA-5						
MONGOLIA											
ULAANBAATAR-S/ZMUE											
Beijing/ZBBB	S	SAT/d	300 baud	None	IA-5	SAT/a	9600 bps	None	IA-5	12/05	Note 2
Russian Federation/UIII	S	LTT	50 baud	None	ITA-2	LDD/d	9600 bps	X.25	IA-5	12/05	(Irkutsk)

TABLE CNS 1B

AERONAUTICAL TELECOMMUNICATION NETWORK (ATN) ROUTER PLAN

EXPLANATION OF THE TABLE

Column

1	Administration – the name of the Administration, State or Organization responsible for management of the router
2	Location of Router
3	Type of Router: BBIS - Backbone Boundary Intermediate System BIS - Boundary Intermediate System
4	Type of Interconnection: Inter – Regional -Connection provided with stations in other ICAO regions Intra – Regional - Connection provided between BBIS stations Sub – Regional - Connection provided between a BBIS station and a BIS station
5	Interconnection, Connected to router of: name of the location of the correspondent router
6	Link Speed – Speed requirements of the interconnecting link
7	Link Protocol – Protocol requirements for the interconnecting link
8	Target Date of Implementation – date of implementation of the router TBD- To be determined
9	Remarks

Table CNS 1B – ATN Router Plan

Administration	Location of Router	Type of Router	Type of Interconnection	Interconnection, Connected to router of:	Link Speed	Link Protocol	Target date of Implementation	Remarks
1	2	3	4	5	6	7	8	9
China	Beijing	BIS	Sub-Regional	DPR Korea	9600 bps	X.25	2010	ATN/AMHS Implemented
		BBIS	Intra-Regional	Hong Kong, China	64000 bps	X.25	2011	
		BBIS	Intra-Regional	India	64000 bps	X.25	2011	
		BBIS	Intra-Regional	Japan	64000 bps	X.25	TBD	
		BBIS	Inter-Regional	Kuwait	64000 bps	X.25	TBD	
		BIS	Sub-Regional	Macau, China	64000 bps	X.25	TBD	
		BIS	Sub-Regional	Mongolia	9600 bps	X.25	2010	
		BIS	Sub-Regional	Myanmar	9600 bps	X.25	2010	
		BIS	Sub-Regional	Nepal	9600 bps	X.25	2010	
		BIS	Sub-Regional	Pakistan	9600 bps	X.25	2010	
		BIS	Sub-Regional	Republic of Korea	64000 bps	X.25	2011	
		BBIS	Inter-Regional	Russian Federation	19200 bps	X.25	TBD	
		BBIS	Intra-Regional	Thailand	64000 bps	X.25	TBD	
		BIS	Sub-Regional	Vietnam			TBD	(Vietnam)
	Taipei	BIS	Sub-Regional	Hong Kong, China	9600 bps	X.25	2009	
		BIS	Sub-Regional	Japan	9600 bps	X.25	2009	
Japan	Tokyo	BBIS	Intra-Regional	Australia	64000 bps	X.25	TBD	
		BBIS	Intra-Regional	China	64000 bps	X.25	TBD	
		BBIS	Intra-Regional	Hong Kong, China	64000 bps	X.25	TBD	
		BBIS	Inter-Regional	Europe	64000 bps	X.25	TBD	
		BIS	Sub-Regional	Republic of Korea	64000 bps	X.25	TBD	
		BBIS	Inter-Regional	Russian Federation	64000 bps	X.25	TBD	
		BBIS	Intra-Regional	Singapore	64000 bps	X.25	TBD	
		BIS	Sub-Regional	Taipei	64000 bps	X.25	TBD	
		BBIS	Inter-Regional	United States	64000 bps	X.25	Implemented	
Mongolia	Ulaanbaatar	BIS	Sub-Regional	China	9600 bps	X.25	2010	(China)

Table CNS 1B – ATN Router Plan

Administration	Location of Router	Type of Router	Type of Interconnection	Interconnection, Connected to router of:	Link Speed	Link Protocol	Target date of Implementation	Remarks
1	2	3	4	5	6	7	8	9

Table CNS 1C

AMHS ROUTING PLAN

EXPLANATION OF THE TABLE

Column

1	Administration – the name of the Administration, State or Organization responsible for management of the facility
2	Location of Facility
3	Facility Type: AMHS UA (Location of AMHS)
4	Target Date of Implementation – date of implementation of the ATSMHS TBD – To be determined
5	Remarks

Note: AMHS – ATS Message Handling System which may include Message Transfer Agents and AFTN/AMHS gateways services.

Table CNS 1C – AMHS Routing Plan

Administration	Location of Facility	Facility Type	Target Date of Implementation	Remarks
China	Beijing	AMHS	2010	Implemented
	Taibei	AMHS	2010	
Japan	Fukoka	AMHS	Implemented	New AMHS meets the specification is planned for implementation
Mongolia	Ulaanbaatar	AMHS	2010	