



International Civil Aviation Organization

Sixth Meeting of CNS/MET Sub-Group of APANPIRG

Bangkok, Thailand, 15 – 19 July 2002

Agenda Item 3: ATN transition planning

CNS/ATM IMPLEMENTATION AND PLANNING MATRIX

(Presented by the Secretariat)

SUMMARY

This paper presents the Regional CNS/ATM Implementation and Planning Matrix for review by the meeting on CNS/MET related items.

1. INTRODUCTION

1.1 In order to provide implementation status of various elements of the new CNS/ATM systems for assessment by the ASIA/PAC Air Navigation Planning and Implementation Regional Group (APANPIRG) and States, the Eleventh Meeting of APANPIRG adopted Conclusion 11/37 for the development of CNS/ATM Implementation Planning Matrix against ASIA/PAC FIRs.

2. DISCUSSION

2.1 The Regional Office issued a State Letter in June 2001 with a questionnaire to obtain necessary information for inclusion in the Matrix. Most of replies received from States were based on implementation status of States rather than each individual FIR.

2.2 Based on the information provided by States, a draft Matrix was prepared and presented to the Ninth Meeting of the CNS/ATM Implementation Coordination Sub-Group (CNS/ATM/IC/SG/9) of APANPIRG held in Bangkok from 11 to 15 March 2002 and the Fourth ATN Transition Task Force Meeting held in Mumbai from 8 to 12 April 2002.

2.3 The meetings reviewed the draft CNS/ATM Implementation Matrix provided in Attachment to this paper and updated, as required. It contains implementation status of CNS elements such as ATN, AIDC, CPDLC, GNSS and ADS. It is expected to be reviewed by APANPIRG and its Sub-Group on a regular basis to assess progress of implementation. The Matrix would be further developed progressively to include implementation status of major CNS/ATM elements covering all ASIA/PAC FIRs.

2.4 While reviewing the Matrix, the CNS/ATM/IC/SG/9 considered the need to include SBAS and GBAS and split the ADS column into two to indicate ADS-C and ADS-B separately. It was also recognized that status, such as trial and demonstration or operational use, should be reflected including the name of location where such facilities are provided. In view of the foregoing, the meeting formulated the following Draft Decisions.

Draft Decision 9/12 – Modification to the CNS/ATM Implementation Matrix

That, the CNS/ATM Implementation Matrix in Appendix A be modified to include SBAS and GBAS and split the ADS column into two for ADS-C and ADS-B to indicate implementation status separately.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) review the CNS/ATM Implementation and Planning Matrix provided in the Attachment; and
- b) note the above Draft Conclusion 9/2 and propose changes, as required.

CNS/ATM Implementation Planning Matrix
Implementation Status of CNS Elements

State/Organization	ATN G/G Boundary Intermediate System (BIS) Router/AMHS	AIDC	CPDLC	GNSS		ADS	Remarks
				NPA Supplemental Means (S) Primary means (P)	En-route Supplemental Means (S) Primary means (P)		
AUSTRALIA	ATN tests were conducted. BIS Router and Backbone BIS Router will be implemented by 2004. and AMHS in 2005	AFTN based AIDC Implemented between Brisbane and Auckland.	Implemented to support FANS1/A equipped aircraft.	Implemented (S) 260 GPS NPA Final 26 aerodromes to be completed 2002	Developed en-route as (P) for approval to use in domestic airspace.	ADS-C Implemented. ADS-B trial being conducted	
BANGLADESH							
BHUTAN	ATN BIS Router planned for 2005						
BRUNEI DARUSSALAM	Implementation of ATN BIS Router planned by 2005.		No CPDLC planned in view of full VHF coverage within their airspace.	NPA (S) planned for 2003.		No ADS planned due to complete Radar coverage.	
CAMBODIA							

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CHINA	ATN BIS Router will be implemented by 2005.	AIDC between ACCs within China are being implemented.	Implemented to support ATS Route L888 and polar routes. Trial on HF data link conducted for use in western China.		Implemented in certain airspace as (S).	Implemented to support L888 and polar routes.	
HONG KONG, CHINA	AMHS and BBIS tests were conducted with Japan and Thailand for implementation in 2004 Trial with Australia being conducted.	Trial on the AFTN based AIDC with Guangzhou China commenced. Implementation planned for 2002/2003.	Trials continuing for CPDLC. D-ATIS D-VOLMET and PDC implemented. VDL Mode-2 trial planned for 2002.		Implemented in certain airspace as (S)	Trials continuing for ADS-C.	
MACAO, CHINA							
COOK ISLANDS							

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DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA							
FIJI	ATN BIS Router will be implemented in 2005.	Trial planned implementation of AFTN based AIDC with Brisbane and Auckland in 2002	EUROCAT 2000 X system implemented for CPDLC.	NPA procedures for (S) to be completed in Dec. 2002.	Implemented as (S).	Implemented in oceanic airspace using EUROCAT 2000 X. ADS-B trials in 2002/2003. Implementation in 2004.	
FRANCE French Polynesia Tahiti		Implementation of limited message sets with adjacent centres under discussion.	Implemented since 1996.			Implemented since March 1999.	
INDIA	ATN BIS router and BBIS router planned for implemented at Mumbai in 2005.		Implemented at Kolkata and Chennai.			Implemented at Kolkata and Chennai.	
INDONESIA	ATN BIS router planned fr implementation in 2005	AFTN based AIDC planned for implementation between Brisbane and Jakarta in 2004	CPDLC in Jakarta, Ujung Pandang FIRs planned for 2003.	Planned for implementation in 2002as (S).		70% of area covered by RADAR ADS trial planned for Jakarta and Ujung Pandang FIRs for 2003.	

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JAPAN	ATN BBIS will be implemented in 2002. Router Tests are progressing. AMHS implementation between Japan and USA, Australia and Hong King planned for 2004.	AIDC based on AFTN procedure implemented with USA.	FANS1/A system Implemented in Tokyo FIR.			Implemented in Tokyo FIR.	
KIRIBATI							
LAO PDR	ATN BIS Router planned for implementation with Bangkok in 2002.		Planned for Bay of Bengal and South China Sea areas. Equipment is under test operation.		Implemented as (S).	Planned for Bay of Bengal and South China Sea areas. Equipment under test operation.	

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MALAYSIA	ATN BIS Router planned for 2005.		Planned for Bay of Bengal and South East Asia areas and the equipment is under test operation.			Planned for Bay of Bengal and South East Asia areas and equipment is under test operation.	
MALDIVES							
MARSHALL ISLANDS				NPA (S) implemented at Majuro Atoll.			
MICRONESIA FEDERATED STATES OF							
Chuuk				NPA(S) implemented			
Kosrae				NPA(S) implemented			
Pohnpei				NPA(S) implemented			
Yap				NPA(S) implemented			

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MONGOLIA	ATN BIS Router planned for 2005.		Function available. Regular trials are conducted.	GPS procedures are being developed.	Implemented as (P).	ADS-C implemented since August 1998. ADS-B trial in progress implementation planned for 2002/2003.	
MYANMAR							
NAURU							
NEPAL	BIS Router planned for 2005			Development of arrival procedure and NPA as (S) completed end development of departure procedure is being develop.	Implemented as (S).		

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NEW ZEALAND	BIS Router planned for 2005	AFTN based AIDC implemented between New Zealand and Australia. Tests with Fiji and USA planned for 2002.	Implemented			Implemented	
PAKISTAN	Implementation of ATN considered for Phase II (2005-2010).					RADAR coverage in Karachi and Lahore FIRs.	
PAPUA NEW GUINEA							
PHILIPPINES	ATN BIS Router planned for 2005. Implementation for AMHS also planned.		D-ATIS and CPDLC Planned for 2006.			Planned for 2006.	

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REPUBLIC OF KOREA	ATN BIS planned for 2005	AFTN based AIDC implemented between Incheon ACC and Seoul APP.				Planned for 2002	
SINGAPORE	ATN BIS Router planned for 2005.		Implemented since 1997. Integrated in the ATC system in 1999. D-ATIS implemented since February 2000.			Implemented since 1997. Integrated with ATC system in 1999.	
SRI LANKA	ATN BIS Router Planned for 2005.		CPDLC implemented since November 2000.	NPA (S) planned for 2003.		ADS-C implemented since November 2000.	GPS based domestic route structure being developed.

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THAILAND	ATN G/G system implemented for domestic services. BBIS/BIS Routers planned for 2002. AMHS test with Hong Kong conducted.	ATN based AIDC Implemented in Domestic Sector.	Implemented	Implemented at international airports	Implemented as (S).	Implemented	
TONGA							
UNITED STATES							
Anchorage				NPA(S) implemented	En-route (P) implemented		
Fairbanks				NPA(S) implemented			
Guam (Agana NAS)				NPA(S) implemented			
Guam (Anderson)				NPA(S) implemented			
Honolulu Intl.				NPA(S) implemented	En-route (P) implemented	ADS-C planned for Dec. 2004	
Johnston Atoll				NPA(S) implemented			
Kahului				NPA(S) implemented			

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Oakland	ATN BBIS will be implemented in 2002. Router Tests are progressing. AMHS implementation between Japan and USA in 2004	Implemented using AFTN procedure. ATN AIDC planned for 2005.	Phase I ATN CPDLC implemented in Sept 2001. Phase IA planned for implementation at 20 en-route centres in USA for en-route function in 2006/2007 time frame.	NPA (S) implemented	En-route (P) implemented	ADS-C planned for Dec. 2004.	
Saipan				NPA (S) implemented			
VIETNAM	ATN BIS Router planned for 2003 and AMHS in 2005.	ATN based AIDC planned between Ho-Chi-Minh and Bangkok in 2005	Planned for 2003 – 2005	Planned for NPA (S) for 2003-2005 period	Implemented as (S) planned for 2002	Most of air space in Hanoi and Ho-Chi-Minh FIRs covered by RADAR. ADS planned for 2003-2005.	