International Civil Aviation Organization

Fifteenth Meeting of the APANPIRG ATM/AIS/SAR Sub-Group (ATM/AIS/SAR/SG/15)

Bangkok, Thailand, 25 – 29 July 2005

Agenda Item 3: **Review and progress the tasks assigned to the ATM/AIS/SAR/SG by APANPIRG**

KEY PRIORITIES

(Presented by the Secretariat)

SUMMARY

In line with Decision 15/52 of the APANPIRG/15 meeting, this paper considers the setting up of a Key Priority List relevant to the activities of the ATM/AIS/SAR/SG to be presented to APANPIRG.

1. INTRODUCTION

1.1 On reviewing the list of APANPIRG Key Priorities for CNS/ATM Implementation in the Asia/Pacific Region, as updated by the CNS/MET/SG/8 and ATM/AIS/SAR/SG/14 meetings, APANPIRG/15 (August 2004) recognized that the list now contained 17 items. In this regard, the effectiveness and appropriateness of the current Key Priorities list was questioned, and in the subsequent discussion, the meeting agreed to the following Decision:

Decision 15/52 – Sub-Group Key Priority Lists

That, in order to identify priorities for CNS/ATM implementation programmes or highlight other critical functions of the Sub-Groups' work programmes, the CNS/MET and ATM/AIS/SAR Sub-Groups are to compile and evaluate Key Priority lists relevant to their activities for review by APANPIRG. Lists should be highly focused, fit the purpose intended and be time bounded

2. DISCUSSION

2.1 It was considered by APANPIRG/15 that it was important to maintain some type of key priorities list in order to provide summary information on the activities considered particularly important to APANPIRG. The meeting agreed that any list of this nature should be highly focused, fit for the purpose intended, time bounded and succinct. Further, the list should also be reviewed and updated regularly.

2.2 APANPIRG/15 was updated on the history of the key priorities list, whereby the intention of the list had been to facilitate CNS/ATM implementation programmes by highlighting matters that should be given priority for implementation. A way forward was suggested, under which the Sub-Groups would compile and maintain key priority lists of matters relevant to the respective Sub-Group. The lists were to be kept to a minimum number of items and contain items adopted by APANPIRG as priorities for CNS/ATM implementation that would serve to focus the Sub-Groups' work programmes.

2.3   APANPIRG/15 retained the current list of key priorities as presented at **Appendix A** to this paper to facilitate the compilation of a suitable key priority list by the Sub-Groups. Further, APANPIRG/15 agreed to a mechanism whereby the Sub-Groups would compile and evaluate key priorities relevant to their activities and present these to APANPIRG.

2.4   In accordance with Conclusion 15/52, the issue of Key Priority lists was reviewed by the Ninth Meeting of the CNS/MET Sub Group (CNS/MET/SG/9), held in Bangkok, Thailand from 11-15 July 2005. The updated APANPIRG list, as amended by CNS/MET/SG/9, is included as **Appendix B** for consideration by the meeting.

3.   ACTION BY THE MEETING

3.1   The meeting is invited in line with Decision 15/52, to compile a list of key priorities taking into account the current Lists of Key Priorities as shown in the Appendices, relevant to the ATM/AIS/SAR Sub-Group's activities to be presented to APANPIRG/16.

APANPIRG KEY PRIORITIES FOR CNS/ATM IMPLEMENTATION IN THE ASIA/PACIFIC REGION

(Note: APANPIRG/15 abandoned this list of key priorities.
The list is retained to facilitate the compilation of key priorities lists for the respective APANPIRG Sub Groups.)

NO.	KEY PRIORITIES	DESCRIPTION	MILESTONES	SUB-GROUP	STATUS
1	ATN Implementation	Implementation of Ground-to-Ground element of ATN is required.	2005	CNS/MET ATN Transition Task Force.	Implementation plan to be completed and implementation to commence in 2005
2	Incorporation of CNS/ATM Material into Regional ANP & FASID	Incorporation of CNS/ATM Material into Regional ANP & FASID	Report to APANPIRG	ATM/AIS/SAR	On-going
3	WGS-84 Implementation	To achieve uniformity in aeronautical data publication across the Region in order to ensure a standard reference system for CNS/ATM.	Immediate (Effective Date was 1 Jan 1998)	ATM/AIS/SAR	Implementation is monitored at each meeting using the uniform format for the reporting of WGS-84 implementation.
4	RVSM Implementation	To provide more efficient flight profiles and to increase airspace capacity in conjunction with the implementation of CNS/ATM.	Bay of Bengal – 27 November 2003 Domestic airspace of Tokyo and Naha FIRs and Incheon FIR – June 2005.	ATM/AIS/SAR	Completed On-going

NO.	KEY PRIORITIES	DESCRIPTION	MILESTONES	SUB-GROUP	STATUS
5	RNP Implementation En-route RNP 10 & 4 Terminal RNP 4 & 1 Approach RNP 0.3	Implement RNP based navigation, operation and procedures to improve the efficiency and flexible use of airspace.	Report to APANPIRG	ATM/AIS/SAR	On-going Phased implementation.
6	ADS-C	The implementation of ADS in oceanic or remote areas in accordance with the Regional CNS/ATM Plan is required for the enhancement of safety and ATM.	Report to APANPIRG FIT-BOB reconvened September 2003. Bay of Bengal operational trial of ADS/CPDLC commenced February 2004 FIT-SEA inaugural meeting May 2004. South China Sea operational trial of ADS/CPDLC expected 2006/2007	ATM/AIS/SAR	Phased implementation. Revised Regional CNS/ATM Guidance Material developed containing ADS section. Implementation focus and timetable need to be developed. States are gaining experience in the use of ADS.
7	Technical Co-operation in Regional CNS/ATM Planning & Implementation	The continuation and enhancement of ICAO's co-ordinating role of technical co-operation in CNS/ATM planning and implementation, in close co-operation with all partners and taking into account the regional approach, is required.	Report to APANPIRG	All	Sub-Groups to identify requirements.

NO.	KEY PRIORITIES	DESCRIPTION	MILESTONES	SUB-GROUP	STATUS
8	Preparation for WRC-2007	The co-operative participation of States is required with their respective telecommunications regulatory authorities, regional groups, at the APT forums and at the WRC regional preparatory meetings for WRC-2007 to ensure that aviation spectrum requirements are fulfilled and protected.	WRC-2007	All	States are designating contact points responsible for preparation for WRC 2007 and are providing contact details for posting on the website to facilitate coordination.
9	GNSS Implementation • ABAS • SBAS • GBAS	To implement GNSS in accordance with the Asia Pacific Regional Strategy. Develop regional GNSS augmentation requirements Ensure region wide awareness of developing GNSS systems integrate into Regional Plan.	On Going. Report to APANPIRG	All	SBAS – WAAS IOC announced on 10 July 2003 SBAS receivers – (TSO C145/6) now available GBAS – FAA LAAS contract for delivery in 2009
10	ATS route implementation	To review and develop new requirements for ATS routes.	Report to APANPIRG APANPIRG/14 established the ATS Route Network Review Task Force (ARNR/TF). The first meeting is scheduled in September 2004.	ATM/AIS/SAR	On-going States to undertake review of current and future route requirements to submit to ARNR/TF

NO.	KEY PRIORITIES	DESCRIPTION	MILESTONES	SUB-GROUP	STATUS
11	Final phase of WAFS	To implement transition to the final phase of WAFS to support the CNS/ATM system.	2005	CNS/MET WAFS Implementation Task Force	• WAFS Transition Plan and Procedures have been developed and are being successfully implemented. • Transfer of responsibility of RAFCs to WAFCs London and Washington has been implemented. • RAFCs have been closed.
12	MET Chapter 11 of the ASIA/PAC Regional Plan for New CNS/ATM System	To develop MET components of the ASIA/PAC CNS/ATM concept/strategy To develop MET Chapter of the Regional CNS/ATM Plan To identify the ATM requirements for new MET products supporting CNS/ATM systems and update the plan accordingly.	2003 2004 2005	CNS/MET with assistance of the ATM/AIS/SAR & METATM TF	• The first draft of MET Chapter of the Regional CNS/ATM Plan has been developed. • MET Chapter 11 of the Regional CNS/ATM Plan incorporated in issue 6 of the Plan. • METATM TF to survey the requirement and update the MET components of the ASIA/PAC CNS/ATM Plan.

NO.	KEY PRIORITIES	DESCRIPTION	MILESTONES	SUB-GROUP	STATUS
13	Data link Communications	Implementation of CPDLC.	On -going February 2004- CPDLC operational trial in the Bay of Bengal area. 2006/2007 CPDLC operational trial expected in the South China Sea area	All	Sub–Groups to review progress of implementation.
		AIDC to be introduced where ATM automated systems are implemented.	2005	All	Implementation focus and time-table need to be developed.
14	ADS-B	Data Link Selection for ADS/B recommended by ADS-B Task Force	2003	CNS/MET	APANPIRG/14 adopted 1090 MHz ES as the data link for ADS-B in ASIA/PAC region.
		ADS-B Task Force to develop implementation plan and sub-groups foster implementation.	2005	ADS-B Task Force	On-going
		States, where appropriate, implement ADS-B Air-Ground surveillance service on a sub-regional basis.	2006	All	On-going Australia actively progressing wide implementation of ADS-B.
15	Implementation of APV and RNP Approaches	Review applicability of APV and RNP Approach Design Standards for Asia Pacific. Develop implementation strategy.	On Going. Report to APANPIRG	ATM/AIS/SAR	APV and RNP Design standards now in PANS OPS. Aircraft certified for RNP and APV approaches.

NO.	KEY PRIORITIES	DESCRIPTION	MILESTONES	SUB-GROUP	STATUS
16	Data Link Flight Information Services (DFIS) applications	To implement the following applications via request/response mode of data link in the Asia and Pacific Regions: a) Data link –automatic terminal information services (D-ATIS); b) VOLMET data link service (D-VOLMET); c) Pre-Departure Clearance (PDC) delivery via data-link;	2008	All	Trials and demonstrations are conducted and some operational services are provided by States.
17	Safety Management Systems	States to establish national safety management systems and effective application of safety programmes which are required for the provision of air traffic services.	APANPIRG/14 established the Regional Airspace Safety Monitoring Advisory Group (RASMAG). First RASMAG meeting held 26-30 April 2004	RASMAG	Annex 11 provisions effective 27 November 2003. On-going RASMAG activities

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Key Priorities for CNS/ATM Implementation in the Asia/Pacific Region

KEY PRIORITIES FOR CNS/ATM IMPLEMENTATION IN THE ASIA/PACIFIC REGION

No.	KEY PRIORITIES	DESCRIPTION	MILESTONES	SUB-GROUP	STATUS	Discussion/Action
1	~~ATN Implementation~~	~~Implementation of Ground to Ground element of ATN is required.~~	~~2005~~	~~CNS/MET~~ ~~ATN Transition Task Force.~~	~~Implementation plan to be completed and implementation to commence in 2005~~	Implementation plan completed and proposal for the ATN TTF to be dissolved. TF to be replaced by ATN Implementation Coordination Group. ACTION: Remove item from KP List.
2	Incorporation of CNS/ATM Material into Regional ANP & FASID	Incorporation of CNS/ATM Material into Regional ANP & FASID	Report to APANPIRG	ATM/AIS/SAR	On-going	Regional ANP and FASID extensively reviewed and are now estenially up-to-date. No action required by CNS/MET SG. ACTION: Suggest to ATM/AIS/SAR SG that item be removed from KP List.
3	WGS-84 Implementation	To achieve uniformity in aeronautical data publication across the Region in order to ensure a standard reference system for CNS/ATM.	Immediate (Effective Date was 1 Jan 1998)	ATM/AIS/SAR	Implementation is monitored at each meeting using the uniform format for the reporting of WGS-84 implementation.	Majority of States have implemented WGS-84. Non-compliant states are identified in the deficiency list. Deficiency process provide sufficient attention to have matter resolved. ACTION: Suggest to ATM/AIS/SAR SG that item be removed from KP List.

No.	KEY PRIORITIES	DESCRIPTION	MILESTONES	SUB-GROUP	STATUS	Discussion/Action
4	RVSM Implementation	To provide more efficient flight profiles and to increase airspace capacity in conjunction with the implementation of CNS/ATM.	Bay of Bengal – 27 November 2003 Domestic airspace of Tokyo and Naha FIRs and Incheon FIR – June 2005.	ATM/AIS/SAR	Completed On-going	ACTION: no comment
5	RNP/RNAV Implementation En-route RNP 10 & 4 Terminal RNP 4 & 1 Approach RNP 0.3	Implement RNP based navigation, operation and procedures to improve the efficiency and flexible use of airspace.	Report to APANPIRG	ATM/AIS/SAR	On-going Phased implementation.	ACTION: Change title to RNP/RNAV Implementation
6	*ADS-C*	The implementation of ADS in oceanic or remote areas in accordance with the Regional CNS/ATM Plan is required for the enhancement of safety and ATM.	Report to APANPIRG FIT-BOB reconvened September 2003. Bay of Bengal operational trial of ADS/CPDLC commenced February 2004 FIT-SEA inaugural meeting May 2004. South China Sea operational trial of ADS/CPDLC expected 2006/2007	ATM/AIS/SAR	Phased implementation. Revised Regional CNS/ATM Guidance Material developed containing ADS section. Implementation focus and timetable need to be developed. States are gaining experience in the use of ADS.	ACTION: no comment

No.	KEY PRIORITIES	DESCRIPTION	MILESTONES	SUB-GROUP	STATUS	Discussion/Action
7	~~Technical~~ Co-operation in Regional CNS/ATM Planning ~~&~~ , Implementation <u>& Training</u>	The continuation and enhancement of ICAO's co-ordinating role of technical co-operation in CNS/ATM planning and implementation, in close co-operation with all partners and taking into account the regional approach, is required.	Report to APANPIRG	All	Sub-Groups to identify requirements.	Emphasis needs to be on sharing information and training. Title 'Technical Co-operation" is confusing with assistance programs. Need to inform States of opportunities for training well in advance of scheduled date. Training opportunities should include ICAO programs as well as associated organisations programs. ACTION: Re-title to '~~Technical~~ Co-operation in Regional CNS/ATM Planning ~~&~~ , Implementation <u>&</u> Training' , Retain in KP List
8	Preparation for WRC-2007	The co-operative participation of States is required with their respective telecommunications regulatory authorities, regional groups, at the APT forums and at the WRC regional preparatory meetings for WRC-2007 to ensure that aviation spectrum requirements are fulfilled and protected.	WRC-2007 <u>APT Feb 06</u>	All	States are designating contact points responsible for preparation for WRC 2007 and are providing contact details for posting on the website to facilitate coordination.	High importance task. Spectrum must be available to enable CNS/ATM implementation. ACTION: Retain as KP, Add regional (eg APT) preparatory meetings as milestones.

No.	KEY PRIORITIES	DESCRIPTION	MILESTONES	SUB-GROUP	STATUS	Discussion/Action
9	GNSS Implementation • ABAS • SBAS • GBAS	~~To implement GNSS in accordance with the Asia Pacific Regional Strategy.~~ ~~Develop regional GNSS augmentation requirements~~ ~~Ensure region wide awareness of developing GNSS systems integrate into Regional Plan.~~ Facilitate market available GBAS ground system certified to Annex 10 SARPs	~~On-Going.~~ ~~Report to APANPIRG~~ 2008	~~All~~ CNS/MET	~~SBAS – WAAS IOC announced on 10 July 2003~~ ~~SBAS receivers (TSO C145/6) now available~~ ~~GBAS – FAA LAAS contract for delivery in 2009~~ Lead aircraft with certified GBAS avionics now in service~~.~~	To be read in conjunction with KP-15. Strategy for Approach, Landing and Departure identified GBAS as a preferred CAT I option. No ground equipment is available that is certified to Annex 10 SARPs. ACTION: Changes as marked Reassign to CNS/MET
10	ATS route implementation	To review and develop new requirements for ATS routes.	Report to APANPIRG APANPIRG/14 established the ATS Route Network Review Task Force (ARNR/TF). The first meeting is scheduled in September 2004.	ATM/AIS/SAR	On-going States to undertake review of current and future route requirements to submit to ARNR/TF	ACTION: no comment

No.	KEY PRIORITIES	DESCRIPTION	MILESTONES	SUB-GROUP	STATUS	Discussion/Action
11	Implementation of WAFS	To fully implement the WAFS products in support to the CNS/ATM system.	2005 Implementation of BUFR-coded products by 1 Dec 2006	CNS/MET WAFS Implementation Task Force	• WAFS Implementation Plan and Procedures have been developed and are being successfully implemented. • Transfer of responsibility of RAFCs to WAFCs London and Washington has been implemented. • RAFCs have been closed. • Transition to GRIB and BUFR coded WAFS products is in progress	
12	MET support for New CNS/ATM System	To develop MET components of the ASIA/PAC CNS/ATM concept/strategy To develop MET Chapter of the ASIA/PAC Regional Plan for the New CNS/ATM Systems To identify the ATM requirements for new MET products supporting CNS/ATM systems and	2003 2004 2005	CNS/MET with assistance of the ATM/AIS/SAR & METATM TF	• • MET Chapter 11 of the Regional CNS/ATM Plan incorporated in issue 6 of the Plan. • METATM TF has surveyed the new requirements and is preparing an update for the MET chapter of the ASIA/PAC Regional Plan for the New CNS/ATM Systems. • MET/ATM coordination	

No.	KEY PRIORITIES	DESCRIPTION	MILESTONES	SUB-GROUP	STATUS	Discussion/Action
		update the plan accordingly.			seminar planned for end of 2005 or early 2006	
13	Data link Communications	Implementation of CPDLC.	On-going	All	Sub-Groups to review progress of implementation.	Data link communications is part of normal implementation program. There is no inhibitor preventing the implementation of CNS/ATM
			February 2004 CPDLC operational trial in the Bay of Bengal area.			
			2006/2007 CPDLC operational trial expected in the South China Sea area	All		ACTION:
		AIDC to be introduced where ATM automated systems are implemented.	2005		Implementation focus and time table need to be developed.	
14	ADS-B	Data Link Selection for ADS/B recommended by ADS-B Task Force	2003	CNS/MET	APANPIRG/14 adopted 1090 MHz ES as the data link for ADS-B in ASIA/PAC region.	Focus on activities to enable successful ADS-B implementation.
		ADS-B Task Force to develop implementation plan and sub-groups foster implementation.	2005	ADS-B Task Force	On-going	Roll-out of ADS-B considered an on-going activity.
			2006	All	On-going	ACTION: Amend item as marked.
		States, where appropriate, implement ADS-B Air-Ground surveillance			Australia actively progressing wide implementation of ADS-B.	

No.	KEY PRIORITIES	DESCRIPTION	MILESTONES	SUB-GROUP	STATUS	Discussion/Action
		~~service on a sub-regional basis.~~				
		Operational Standards to support proposed separation standards	2006	ADS-B Task Force		
		Airline aircraft certificated to participate in ADS-B operations	2006	ADS-B Task Force		
		Avionic packages available to meet GA and low capacity operations.	2008	ADS-B Task Force		
15	Implementation of APV and ~~RNP~~ RNAV(GNSS) Approaches	Review applicability of APV and ~~RNP~~ RNAV(GNSS) Approach Design Standards, aircraft certification and augmentation system availability for Asia Pacific. Develop implementation strategy.	~~On Going.~~ ~~Report to APANPIRG~~ 2006 2007	~~ATM/AIS/SAR~~ CNS/MET	APV and ~~RNP~~ RNAV(GNSS) Design standards now in PANS OPS. Aircraft certified for ~~RNP~~ RNAV(GNSS) and APV approaches.	Navigation function. ACTION: Update terminology as shown Reassign to CNS/MET Extend applicability review

No.	KEY PRIORITIES	DESCRIPTION	MILESTONES	SUB-GROUP	STATUS	Discussion/Action
16	Data Link Flight Information Services (DFIS) applications	To implement the following applications via request/response mode of data link in the Asia and Pacific Regions: a) Data link –automatic terminal information services (D-ATIS); b) VOLMET data link service (D-VOLMET); c) Pre-Departure Clearance (PDC) delivery via data-link; d) DCL	2008	~~All~~ ATM/AIS/SAR CNS/MET	Trials and demonstrations are conducted and some operational services are provided by States.	ACTION: Add DCL and Reassign to ATM/AIS/SAR and CNS/MET
17	Safety Management Systems	States to establish national safety management systems and effective application of safety programmes which are required for the provision of air traffic services. Required monitoring services available to support operational enhancements	~~APANPIRG/14 established the Regional Airspace Safety Monitoring Advisory Group (RASMAG).~~ ~~First RASMAG meeting held 26–30 April 2004~~	RASMAG RASMAG	Annex 11 provisions effective 27 November 2003. On-going RASMAG activities Operational enhances suspended where effective monitoring is not available	States without compliant SMS to be listed on deficiency list. ACTION: Amended as marked.