



*International Civil Aviation Organization*

**Eight Meeting of the Communications/Navigation/Surveillance and Meteorology Sub-Group (CNS/MET SG/8) of APANPIRG**

Bangkok, Thailand, 12-16 July 2004

**Agenda Item 13: CNS/ATM Systems Implementation**

**1) CNS**

**KEY PRIORITIES FOR CNS/ATM IMPLEMENTATION**

(Presented by the Secretariat)

**SUMMARY**

This paper presents Key Priorities for CNS/ATM Implementation adopted by APANPIRG/14 meeting for review by the meeting.

**1. INTRODUCTION**

1.1 APANPIRG/14 reviewed and updated the list of Key Priorities for the CNS/ATM implementation in the ASIA/PAC region.

**2. DISCUSSION**

2.1 APANPIRG/12 recognized that, where possible, items entered, as Key Priorities, should have definitive target dates and avoid the use of the term “on going”. In addition, target dates should be realistic.

2.2 APANPIRG/14 included implementation of Data Link Flight Information Services (DFIS) applications: D-ATIS, D-VOLMET and PDC into the list of Key Priorities in the CNS/ATM implementation. based on benefit identified.

2.3 An item on implementation of APV and RNP approaches was also added to the list of Key Priorities by APANPIRG based on the changes made to the regional strategy for the GNSS implementation.

2.4 A new item of Safety Management System was also included in the list. In view of the foregoing, APANPIRG/14 formulated the following Decision:

**Decision 14/46 – Amendment to the key priorities for implementation of the CNS/ATM systems for the Asia/Pacific Region**

That, the amended list of Key Priorities for implementation of the CNS/ATM systems for the Asia/Pacific Region be adopted as shown in **Appendix B** to the Report on Agenda Item 3.

2.5 The list of the Key Priorities for CNS/ATM Implementation in the ASIA/PAC region is provided at Attachment to this paper.

### **3. ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) review and update the status of implementation of the Key Priorities;
- b) ensure that CNS/MET related key priorities are either included in the CNS/MET Subject/ Tasks List or addressed by the relevant Task Force; and
- c) identify any further action required in implementation of these priorities.

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

| NO. | KEY PRIORITIES                                              | DESCRIPTION                                                                                                                          | MILESTONES                                   | SUB-GROUP                            | STATUS                                                                                                                                                 |
|-----|-------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | ATN Implementation                                          | Implementation of Ground-to-Ground element of ATN is required.                                                                       | 2005                                         | CNS/MET<br>ATN Transition Task Force | 2005                                                                                                                                                   |
| 2   | Incorporation of CNS/ATM Material into Regional ANP & FASID | Incorporation of CNS/ATM Material into Regional ANP & FASID                                                                          | APANPIRG/13                                  | ATS/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<br>(Effective Date was 1 Jan 1998) | ATS/AIS/SAR                          | Implementation is monitored at each meeting using the uniform format for the reporting of WGS-84 implementation.<br><br>Report progress to APANPIRG/14 |
| 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             | ATS/AIS/SAR                          |                                                                                                                                                        |

| NO. | KEY PRIORITIES                                                                         | DESCRIPTION                                                                                                                                                                                                                         | MILESTONES                     | SUB-GROUP                   | STATUS                                                                                                                                                                                                                            |
|-----|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5   | RNP Implementation<br><br>En-route RNP 10 & 4<br>Terminal RNP 4& 1<br>Approach RNP 0.3 | <i>Implement RNP based navigation, operation and procedures to improve the efficiency and flexible use of airspace.</i>                                                                                                             | On Going<br>Report to APANPIRG | ATS/AIS/SAR &<br>CNS/ATM/IC | 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.                                                                                | APANPIRG                       | ATS/AIS/SAR                 | -Phased implementation.<br>Revised Regional CNS/ATM Guidance Material developed containing ADS section.<br><br>-Implementation focus and timetable need to be developed.<br><br>-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. | APANPIRG/14                    | 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 such as the APT and at the WRC, preparatory meetings and study groups to ensure that aviation spectrum requirements are fulfilled including GNSS spectrum requirements are protected. | WRC-2007                        | All         |                                                                                                                                                                 |
| 9   | GNSS Implementation <ul style="list-style-type: none"> <li>• ABAS</li> <li>• SBAS</li> <li>• GBAS</li> </ul> | <p>To implement GNSS in accordance with the Asia Pacific Regional Strategy.</p> <p>Develop regional GNSS Augmentation requirements</p> <p>Ensure region wide awareness of developing GNSS systems integrate into Regional Plan.</p>                                                                                         | On Going.<br>Report to APANPIRG | All         | <p>SBAS – WAAS IOC announced on 10 July 2003</p> <p>SBAS receiver - TSO C145/6 receivers now available</p> <p>GBAS – FAA LAAS contract for delivery in 2006</p> |
| 10  | ATS route implementation                                                                                     | To review and develop new requirements for ATS routes.                                                                                                                                                                                                                                                                      | APANPIRG/15                     | ATS/AIS/SAR | 2004                                                                                                                                                            |

| 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.                                                    | 2004                         | CNS/MET SG                                                 | <ul style="list-style-type: none"> <li>WAFS Transition Plan and Procedures has been developed and is being successfully implemented.</li> <li>Transfer of responsibility of RAFCs to WAFCs London and Washington has been implemented.</li> <li>Closure of RAFCs has been implemented.</li> </ul> |
| 12  | MET Chapter 8 of the ASIA/PAC Regional Plan for New CNS/ATM System | <p>To develop MET components of the ASIA/PAC CNS/ATM concept/strategy</p> <p>To develop MET Chapter of the Regional CNS/ATM Plan</p> | <p>2003</p> <p>2004</p>      | CNS/MET SG with assistance of the ATS/AIS/SAR SG METATM TF | <ul style="list-style-type: none"> <li>The first draft of MET Chapter of the Regional CNS/ATM Plan has been developed.</li> <li>METATM TF to develop MET components of the ASIA/PAC CNS/ATM concept/strategy.</li> </ul>                                                                          |
| 13  | Data – link Communications                                         | <p>Implementation of CPDLC.</p> <p>AIDC to be introduced where ATS automated systems are implemented.</p>                            | <p>On -going</p> <p>2005</p> | <p>All</p> <p>All</p>                                      | <p>Sub – Groups to review progress of implementation.</p> <p>Implementation focus and time table need to be developed.</p>                                                                                                                                                                        |

| NO. | KEY PRIORITIES                           | DESCRIPTION                                                                                                                                                                                                                                                                                                                            | MILESTONES                                 | SUB-GROUP                 | STATUS                                                                                                     |
|-----|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|---------------------------|------------------------------------------------------------------------------------------------------------|
| 14  | ADS-B                                    | <p>Data Link Selection for ADS/B recommended by ADS-B Task Force</p> <p><u>Target date of Implementation:</u></p> <p>States, where appropriate, implement “ADS-B out” for ground-based surveillance services on a sub-regional basis.</p> <p>ADS-B Task Force to develop implementation plan and sub-groups foster implementation.</p> | <p>2003</p> <p>2006</p>                    | <p>CNS/MET</p> <p>All</p> | <p>APANPIRG/14 adopted 1090 MHz ES as the data link for ADS-B in ASIA/PAC region.</p>                      |
| 15  | Implementation of APV and RNP Approaches | <p>Review applicability of APV and RNP Approach Design Standards for Asia Pacific.</p> <p>Develop implementation strategy.</p>                                                                                                                                                                                                         | <p>On Going.</p> <p>Report to APANPIRG</p> | <p>ATS/AIS/SAR</p>        | <p>APV and RNP Design standards now in PANS OPS.</p> <p>Aircraft certified for RNP and APV approaches.</p> |

| NO. | KEY PRIORITIES                                            | DESCRIPTION                                                                                                                                                                                                                                                                                                  | MILESTONES  | SUB-GROUP                                    | STATUS                                                                                                                                                                                      |
|-----|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 16  | Data Link Flight Information Services (DFIS) applications | <p>To implement the following applications via request/response mode of data link in the Asia and Pacific Regions:</p> <p>a) Data link –automatic terminal information services (D-ATIS);</p> <p>b) VOLMET data link service (D-VOLMET);</p> <p>c) Pre-Departure Clearance (PDC) delivery via data-link;</p> | 2008        | All                                          | <p>Trials and demonstrations are conducted and some operational services are provided by States;</p> <p>D-VOLMET to be implemented by VOLMET Broadcast Stations specified in the FASID.</p> |
| 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 | CNS/ATM/IC RASMA/SG (Subject to APANPIRG/14) | Annex 11 provision effective 27 November 2003.                                                                                                                                              |