



International Civil Aviation Organization

APANPIRG/15-WP/2

**FIFTEENTH MEETING OF THE
ASIA/PACIFIC AIR NAVIGATION PLANNING AND
IMPLEMENTATION REGIONAL GROUP (APANPIRG/15)
Bangkok, Thailand, 23 to 27 August 2004**

Agenda Item 1: Review of Council and ANC actions on the APANPIRG/14 Report

**REVIEW OF THE COUNCIL AND ANC ACTIONS ON THE REPORT OF
THE FOURTEENTH MEETING OF ASIA/PAC AIR NAVIGATION
PLANNING AND IMPLEMENTATION REGIONAL GROUP
(APANPIRG/14)**

(Presented by the Secretariat)

SUMMARY

This paper presents the actions taken by the Air Navigation Commission and the Council of ICAO on the report of the fourteenth meeting of APANPIRG.

Action by APANPIRG is proposed at paragraph 5.

1. INTRODUCTION

1.1 Following each APANPIRG meeting, the report is first reviewed by the working group of the Air Navigation Commission (ANC) followed by the ANC itself and finally by the Council. During these reviews, the ANC and the Council note the Report, make comments thereon and provide guidance to APANPIRG as appropriate. Furthermore, the ANC and the Council may take specific action on certain conclusions contained therein, since the follow-up to some conclusions may require approval by the ANC or the Council.

1.2 Follow-up actions by the ICAO Secretariat on conclusions and decisions of APANPIRG are then guided by the outcome of the ANC and the Council actions described above.

1.3 This paper informs APANPIRG of the results of the ANC and the Council actions on the report of the APANPIRG/14 Meeting, which was held in Bangkok from 4 to 8 August 2003. The summary of Asia/Pacific regional developments in air navigation systems, that was presented to the Commission and Council, is available in Appendix A to this paper.

2. ACTION BY THE ANC ON THE APANPIRG/14 REPORT

2.1 The ANC referred the APANPIRG/14 Report to its Working Group on Regional Plans for a detailed review. The review was carried out on 27 November 2003, following which the ANC itself reviewed the APANPIRG/14 Report on 27 January 2004.

2.2 The ANC noted the APANPIRG/14 Report and took specific action on certain conclusions therein, as shown in Appendix B to this paper. The following are the highlights of the ANC's review:

- a) The Commission congratulated APANPIRG on the implementation of reduced vertical separation minimum (RVSM) in the Bay of Bengal and beyond effective 27 November 2003 (paragraph 2.1.22 of the Report refers). The Commission noted that the recent RVSM implementation in Europe and similar introduction on 27 November 2003 in the Middle East (MID) Region could make it possible to achieve a seamless RVSM environment between Asia and Europe through the Middle East (except Kabul and Baghdad FIRs), without transition areas.
- b) With respect to a request (paragraph 2.1.29 of the Report refers) for inclusion of RVSM phraseologies for controller-pilot data link communications in *Procedures for Air Navigation Services — Air Traffic Management* (PANS-ATM, Doc 4444), the Commission noted that the issue was already being addressed by the Secretariat.
- c) The Commission shared concern that, although the carriage of pressure-altitude reporting transponders by all aircraft and, effective 1 January 2003, that of airborne collision avoidance system (ACAS II) by aircraft having a maximum certified take-off mass in excess of 15 000 kg or approved passenger seating configuration of more than thirty passengers was mandatory, some States had not yet specified the carriage of these two requirements by their operators and also some operators have not implemented them. This is of critical importance particularly in the context of RVSM. In supporting Conclusion 14/6, the Commission called upon the Secretary General to urge States not having done so to ensure implementation of pressure-altitude reporting transponders and ACAS II by aircraft operators in accordance with Annex 6 — *Operation of Aircraft* provisions.
- d) The Commission agreed with APANPIRG that meteorological (MET) products aimed at supporting air traffic management (ATM) decisions could be very useful for the air traffic services (ATS) units. Consequently, the Commission, in response to Conclusion 14/10 (MET support to ATM large-scale weather deviation contingency procedures), called upon the Secretary General to develop provisions for additional meteorological service to the ATS in regard to the weather phenomena that cause significant changes in the ATC procedures, such as large-scale weather deviations contingency procedures.
- e) With regard to Conclusion 14/17 (use of satellite communication (SATCOM) voice for ATS), the Commission recalled that requirements for mandatory carriage of aeronautical mobile-satellite service (AMSS) systems shall be made on the basis of a regional air navigation agreement (Annex 10, Vol. III, Part I paragraphs 4.1.2.2. and 4.1.2.3 refer). It was further noted that the need for amendments to the current radiotelephony procedures is being investigated by the Secretariat. The Commission therefore called upon the Secretary General to

consider if any development of additional material would be required to address policy aspects.

- f) In relation to Automatic Dependent Surveillance-Broadcast (ADS-B), the Commission noted that APANPIRG has selected the Mode S extended squitter as the data link for the near-term implementation (Conclusion 14/20 refers) and that the States of the Asia/Pacific Region were encouraged to implement air-to-ground ADS-B by January 2006 (Conclusion 14/21 refers). Furthermore, the Commission supported Conclusion 14/22 regarding the inclusion of source data accuracy and integrity in ADS-B standards and also the development of separation standards for ADS-B surveillance. This approach, which initially involved determining the operational requirements for a system and subsequently calling for development of SARPs, was appreciated by the Commission.
- g) In view of the difficulties expressed by APANPIRG in the implementation of Annex 3 provisions for tropical cyclone advisories and SIGMETs (Conclusion 14/42 refers), the Commission requested the Secretary General to consider further development of Annex 3 provisions related to the format and content of the tropical cyclone advisories issued by the Tropical Cyclone Advisory Centres and SIGMETs for tropical cyclones issued by the meteorological watch offices.
- h) The Commission welcomed the initiative of APANPIRG in developing the concept of the Asia/Pacific Supplement to the Uniform Methodology that would provide a safety analysis resulting in allocation of appropriate priority in addressing deficiencies, taking into account associated risk factors (Conclusion 14/50 refers). Consequently, the Commission requested the Secretary General to monitor this concept and consider extending its application to other regions.

3. ACTION BY THE COUNCIL ON THE APANPIRG/14 REPORT

3.1 Following the ANC action, the Council, on 27 February 2004, noted the APANPIRG/14 Report on the basis of the ANC Report, and took specific actions on certain conclusions therein, as shown in the Appendix B to this paper. The following are the highlights of the Council's review:

- a) On the subject of protection of the aeronautical frequency spectrum, the Council recognized the contribution of the Asia/Pacific Region in addressing this issue in a number of fora, such as meetings of Directors General of Civil Aviation (DGCAs) and Asia-Pacific Telecommunity (APT) regional preparatory meetings. However, as the frequency bands allocated to aviation use were highly attractive to commercial users, the Council reiterated the need for the civil aviation community to continue to remain vigilant in safeguarding the aeronautical interest. In this connection, the Council noted Conclusion 14/24, concerning preparations for the forthcoming International Telecommunication Union (ITU) World Radiocommunication Conference 2007 (WRC-2007) and urged States to participate at various levels in different fora to provide support for the ICAO position.
- b) Sharing the concern expressed by APANPIRG, the Council supported the proposal to invite satellite distribution system (SADIS) and the international satellite communications system (ISCS) Provider States to arrange, in coordination with ICAO and the World Meteorological Organization (WMO), a training course on the operational use of gridded binary code (GRIB) and binary universal form for the representation of meteorological data (BUFR)-coded world

area forecast system (WAFS) products for the States of the Asia/Pacific Region during 2004/2005 (Conclusion 14/32 refers).

- c) With regard to increasing the efficiency and effectiveness of planning and implementation regional groups (PIRGs), the Council noted that APANPIRG reviewed its role and working methods. The Council noted that participating States and international organizations, in offering full commitment to APANPIRG, expressed its confidence in the mechanism, work programme and productivity of the PIRG and also commended the role of the Regional Office in this context (paragraph 6.3 of the Report refers). Against this background, the Council reviewed, made value addition, and approved the revised terms of reference of APANPIRG (available in Appendix C) as called for by Conclusion 14/52.
- d) In response to APANPIRG's recommendation for Viet Nam to become a full member of APANPIRG, the Council approved said recommendation (Conclusion 14/54 refers).

4. FOLLOW-UP ACTION BY THE SECRETARIAT ON THE APANPIRG/14 REPORT

4.1 The Secretariat's report on follow-up actions on the APANPIRG/14 Report will be presented to APANPIRG/15 in separate working paper(s).

5. ACTION BY APANPIRG

5.1 APANPIRG is invited to:

- a) note the ANC's and Council's actions on the APANPIRG/14 Report as outlined in this working paper and its appendices; and
- b) include the follow-up actions in the work programme of APANPIRG.

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APPENDIX A

SUMMARY OF THE CURRENT SITUATION IN THE ASIA/PACIFIC REGIONS PERTAINING TO PLANNING AND IMPLEMENTATION OF AIR NAVIGATION FACILITIES AND SERVICES

With a view to facilitating the review of the report of the fourteenth meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/14), the major developments in the field of Air Navigation in the Asia/Pacific Regions are summarized as follows:

- 1) Responding to the statement made by the President of the Council at the Air Navigation Commission (ANC) on 16 October 2002 with regard to increasing the efficiency and effectiveness of PIRGs, APANPIRG reviewed its role and working methods and consequently proposed revised terms of reference.
- 2) The implementation of RVSM in the Bay of Bengal and beyond in conjunction with a similar introduction in the MID Region was successfully completed on 27 November 2003. This has not only resulted in considerable safety, operational, economic, environmental and passenger service benefits, but could also make it possible to achieve a seamless RVSM environment between Asia and Europe through the Middle East (except Kabul and Baghdad FIRs), without transition areas.
- 3) While adopting Mode S Extended Squitter as the data link for ADS-B in the near-term, the States of the Asia/Pacific Region were encouraged to implement on-ground ADS-B with a target date of January 2006.
- 4) The deficiencies of the Asia/Pacific Regions were reviewed and addressed as a part of APANPIRG's work programme resulting in substantial improvements in the elimination of deficiencies. The draft regional procedures for identification, assessment, reporting and monitoring of the status of air navigation deficiencies as a supplement to the uniform methodology was developed and sent to States for comments. It is scheduled to be finalized by early 2004 for its implementation by States.
- 5) On the subject of protection of the aeronautical frequency spectrum, the Asia/Pacific Regions are continuing to address this issue in a number of fora, such as meetings of DGCAs and APT regional preparatory meetings.
- 6) Recognizing the need for an airspace system performance monitoring structure for the Asia/Pacific Region, which would provide a framework for safety monitoring services for the implementation of reduced separation minima and CNS/ATM applications such as ADS and controller-pilot data link communications (CPDLC), the meeting established a Regional Airspace Safety Monitoring Advisory Group with immediate effect.
- 7) Considerable progress has been made with regard to Cross Polar Route System thus providing additional benefits to both the users and service providers.

- 8) The States are preparing for migration to the operational use of GRIB and BUFR-coded WAFS products. In this regard, SADIS and international satellite communications system (ISCS) provider States were invited to provide required training in coordination with ICAO and WMO.
- 9) The SADIS second generation broadcast system was endorsed for its implementation.
- 10) The strategy for the provision of precision approach and landing guidance system as well for the implementation of global navigation satellite system (GNSS) navigation capability in Asia/Pacific Region was updated.

Achievements during 2002-2003

- 1) On 21 February 2002, as a part of RVSM introduction in Western Pacific/South China Sea, Phase I was implemented in the airspace of Phnom Penh, Kuala Lumpur, Kota Kinabalu, Manila, Singapore, Bangkok, Ho Chi Minh FIRs; and on N892 (within the oceanic airspace of the Sanya AOR). The implementation of Phase II in the following airspace of Hong Kong, Bali, Jakarta, Ujung Pandang, Vientiane, Ha Noi FIRs and in the rest of the oceanic airspace of the Sanya AOR was completed on 31 October 2002.
- 2) To gain benefits in terms of safety, efficiency and capacity enhancements, the EMARSSH (Europe, Middle East, Asia Route Structure South of Himalayas) project, which entails restructuring of international ATS routes, taking into account required navigation performance/area navigation (RNP/RNAV) and RVSM implementation, was established in 2000. The project involved intensive consultations with 32 States and international organizations as well as the Middle East and European Regions. Essential to the successful conclusion of the project was effective civil/military coordination carried out by many of the States. This revised ATS route structure was commissioned effective 28 November 2002.
- 3) The Contingency Routing Scheme for Asia/Middle East/Europe – 2003 (CRAME-03) was developed with the objectives of ensuring continued safety of air navigation within FIRs affected by airspace closures and minimizing effects on international civil air transportation in the event of military action occurring in the Middle East area. This contingency scheme was designed in coordination with the Middle East and Europe Regional Offices and IATA and contain multiple options that could be used for varying scenarios.

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APPENDIX B

**APANPIRG/14 CONCLUSIONS/DECISIONS CONSIDERED
FOR SPECIFIC ACTION BY THE AIR NAVIGATION
COMMISSION AND/OR COUNCIL**

Report Reference		Action by Council/ANC	Proposed Action
Concl./Dec. No.	Page		
Paragraph 2.1.22 of the APANPIRG/14 Report	2.1-4	C	Implementation of RVSM in Bay of Bengal and beyond Noted that RVSM in the Bay of Bengal and beyond was implemented effective 27 November 2003 and that a similar introduction in the MID Region could make it possible to achieve a seamless RVSM environment between Asia and Europe through the Middle East (except Kabul and Baghdad FIRs), without transition areas.
14/1	2.1-8	ANC	Review of the ICAO flight plan to include aircraft RNP type approval status Noted the conclusion and that it had already agreed to the establishment of a study group to address this issue.
14/6	2.1-14	ANC	Implementation of ACAS II and pressure-altitude reporting transponders in the Asia/Pacific Region Noted the conclusion and, as one of the possible means, requested the Secretary General to write specifically to States not having done so to urge them to ensure carriage of ACAS II and pressure-altitude reporting transponders by aircraft in accordance with Annex 6 provisions.
14/10	2.1-31	ANC	MET support to ATM large-scale weather deviations contingency procedures Noted the conclusion and requested the Secretary General to develop provisions for additional meteorological service to the ATS in regard to weather phenomena that cause significant changes in ATC procedures, such as large-scale weather deviations contingency procedures.

Report Reference		Action by Council/ANC	Proposed Action
Concl./Dec. No.	Page		
14/17	2.2-7	ANC	Use of SATCOM-voice for ATS Noted the conclusion and relevant provisions in Annex 10, and requested the Secretary General to consider developing, if necessary, additional procedures to address the use of SATCOM-voice for ATS.
14/22	2.2-14	ANC	Need for development of ICAO SARPs for ADS-B Noted the conclusion and requested the Secretary General to consider including source data accuracy and integrity requirements in ADS-B standards and also develop separation standards for ADS-B surveillance.
14/24	2.2-16	C	Preparation for World Radiocommunication Conference – 2007 (WRC-2007) Noted the conclusion and requested the Secretary General to continue encouraging States to participate at various levels in different fora to provide support for the ICAO position at the forthcoming WRC-2007 so as to protect aeronautical frequency spectrum.
14/25	2.2-16	ANC	Implementation of the SADIS second generation system (SADIS 2G) Noted the conclusion and recognized that the transition to SADIS 2 G would accrue benefits to States, although there would be an initial cost implication at the system level.
14/26	2.2-16	ANC	Discontinuation of the current first generation SADIS two-way VSAT programme Noted the conclusion and acknowledged that the discontinuation of the current SADIS two-way VSAT programme effective 1 January 2004 constituted an initial step for migration from first to second generation SADIS broadcast system.
14/32	2.2-20	C	GRIB/BUFR Training Noted the conclusion and requested the Secretary General to invite the SADIS and ISCS Provider States to arrange, in coordination with ICAO and WMO, training on the operational use of GRIB- and BUFR-coded WAFS products for the States in the Asia/Pacific Regions during 2004/2005.

Report Reference		Action by Council/ANC	Proposed Action
Concl./Dec. No.	Page		
14/37	2.2-24	ANC	Amendment to the SIGMET format Noted the conclusion and requested the Secretary General to develop amendments to the SIGMET format specified by Annex 3, in particular to the part of the SIGMET message related to the geographical location of the weather phenomenon, aimed at further standardization of the message format.
14/42	2.2-27	ANC	Further development of the ICAO provisions for the tropical cyclone advisories and SIGMETs Noted the conclusion and requested the Secretary General to consider further development of the Annex 3 provisions related to the format and content of the tropical cyclone advisories issued by the tropical cyclone advisory centre and SIGMETs for tropical cyclones issued by the WMO.
14/44	3-7	ANC	Application of Mode-S data link in automatic weather reporting Noted the conclusion and called upon the Secretary General to consider the use of Mode-S data link in automatic air reporting.
14/45	3-8	C	Fostering of exchanges between the MET and ATM Noted the conclusion and invited the Secretary General, in coordination with WMO, to organize a MET/ATM coordination seminar in the ASIA/PAC Region during 2004.
14/48	3-18	ANC	Establishment of the Regional Airspace Safety Monitoring Advisory Group (RASMAG) Noted the decision and requested the Secretary General to monitor the regional developments and formulate an approach for global harmonization of regional safety monitoring arrangements.
14/50	4-2	ANC	Asia Pacific Supplement to the Uniform Methodology Noted the conclusion and requested the Secretary General to monitor and evaluate the development of Asia Pacific Supplement to the Uniform Methodology and consider extending its application to other regions.

Report Reference		Action by Council/ANC	Proposed Action
Concl./Dec. No.	Page		
14/52	6-1	C	Revised terms of reference of APANPIRG Approved the revised terms of reference, as shown in Appendix C.
14/53	6-2	C	Filling key vacant posts in the Asia/Pacific Regional Office Noted the conclusion and requested the Secretary General, as a matter of urgency, to strengthen the Asia/Pacific Regional Office specifically by filling the AIS/MAP vacant post.
14/54	7-1	C	Viet Nam's application for full membership with APANPIRG Approved the membership of Viet Nam to APANPIRG.

APPENDIX C

REVISED TERMS OF REFERENCE ~~{AND OTHER PROVISIONS APPLICABLE TO}~~ [FOR] THE ASIA/PACIFIC AIR NAVIGATION PLANNING AND IMPLEMENTATION REGIONAL GROUP (APANPIRG)

1. ~~{Role of the group}~~ [The Terms of Reference of the Group are:]

~~{1.1 The provisions described hereunder shall be applicable to the ASIA/PAC Air Navigation Planning and Implementation Regional Group (APANPIRG).}~~

2. ~~Terms of reference of the APANPIRG~~

2.1 ~~The objectives of the group are to:~~

- ~~_____ a) ensure the}~~
 - [a]]to ensure continuous and coherent development of the [Asia/Pacific Regional] plans for Asia/Pacific Regions and ensure harmonization with global plan and those of adjacent regions;**
- ~~_____ b) develop proposals for improvements in the implementation of the ASIA/PAC Air Navigation Plan {on the basis of new technological developments;} [and other relevant regional documentation in a manner that is harmonized with adjacent regions, consistent with ICAO SARPs and Global Air Navigation Plan for CNS/ATM systems (DOC 9750) and reflecting global requirements;]~~
- ~~_____ {e) identify specific problems}~~
 - [b) to facilitate the implementation of air navigation systems and services as identified in the Asia/Pacific Regional Air Navigation Plan with due observance to the primacy of air safety, regularity and efficiency; and**
 - c) to identify and address specific deficiencies] in the air navigation field {and propose in appropriate form, action aimed at solving these problems; and} [.]**
- ~~_____ {d) develop, with due regard to the primacy of safety, business cases for various options taking into account the environmental benefits and the need to facilitate financing of preferred options in planning and implementation of air navigation facilities.}~~

[2. In order to meet the Terms of Reference, the Group shall:]

~~{2.2 In order to meet these objectives the group shall:~~

- ~~_____ a) keep under}~~
 - [a]]review, and propose when necessary[,the] target dates for implementation of facilities, services and procedures{. This will} [to] facilitate the coordinated development of the Air Navigation {System} [Systems] in the {Asia and Pacific Regions} [Asia/Pacific Region];**

Appendix C

- b) assist the ICAO ~~{regional office providing services in the Asia and Pacific Regions in its assigned task of fostering }~~ **[Asia/Pacific Regional Office in fostering the]** implementation of the ~~{ASIA/PAC}~~ **[Asia/Pacific]** Regional Air Navigation Plan;
- c) ~~{monitor developments in the air navigation field and develop proposals for consequential improvements in air navigation in the Asia and Pacific Regions;}~~ **[in line with the Global Aviation Safety Plan (GASP), facilitate the conduct of any necessary systems performance monitoring, identify specific deficiencies in the air navigation field, especially in the context of safety, and propose corrective action;]**
- ~~{d) review any shortcomings in the Asia and Pacific}~~ **[d) facilitate the development and implementation of action plans by States to resolve identified deficiencies, where necessary;**
- e) **develop amendment proposals to update the Asia/Pacific]** Regional Air Navigation ~~{System and develop recommendations for remedial action;}~~ **[Plan to reflect changes in the operational requirements;]**
- ~~{e) originate, as necessary, in coordination with affected State, amendments to the Plan for the ASIA/PAC Regions;}~~ **[f) monitor implementation of air navigation facilities and services and where necessary, ensure interregional harmonization, taking due account of organizational aspects, economic issues (including financial aspects, cost/benefit analyses and business case studies) and environmental matters;]**
- ~~{f) keep under}~~ **[g) examine human resource planning and training issues and propose where necessary human resource development capabilities in the region that are compatible with the Asia/Pacific regional Air Navigation Plan;**
- h) **review the Statement of Basic Operational Requirements and Planning Criteria**~~{Recommend}~~ **[and recommend]** to the Air Navigation Commission such changes ~~to them~~ as may be required in the light of **[new]** developments **[in the air navigation field]**~~{mentioned in e); and};~~ **[;]**
- ~~{g) use an appropriate mechanism to prepare cost/benefit analysis and business cases inclusive of environmental assessments and provide related guidance material in support of “prototype” sets of planned facilities and services. The group may utilize the services of}~~ **[i) request]** financial institutions, on a consultative basis **as appropriate to provide advise advice in the planning process;**
- j) **maintain close cooperation with relevant organizations and State grouping to optimize the use of available expertise and resources; and**
- k) **conduct the above activities in the most efficient manner possible with a minimum of formality and documentation and call meetings of the APANPIRG when deemed necessary to do so.**

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