INTERNATIONAL CIVIL AVIATION ORGANIZATION

AFI PLANNING AND IMPLEMENTATION REGIONAL GROUP
SEVENTEENTH MEETING (APIRG/17)
(2-6 August, 2010)

Agenda Item 3: **AFI Regional Air Navigation Planning and Implementation Issues**

3.3 **Communications, Navigation and Surveillance (CNS)**

Review of the Report of the Third Meeting of APIRG Communications, Navigation and Surveillance Sub-group (CNS/SG/3)

AERONAUTICAL SURVEILLANCE STRATEGY

(Presented by the Secretariat)

SUMMARY
The report of the Third Meeting of the CNS Sub-group (CNS/SG/3) on its review of the report of the First Meeting of the AFI Surveillance Implementation Task Force, is presented for review by APIRG.
Action by the meeting is at paragraph 3.
References :   [1] – Report of the CNS/SG/3 Meeting (Principal reference)   [2] – Report of the CNS/SG/2 Meeting   [3] – Report of the APIRG/16 Meeting   [4] – Report of the ICAO Special AFI RAN Meeting (2008) (Doc 9930)   [5] – Annex 10 *to the Convention on International Civil Aviation, Volume 4*   *Note: References [1], [2], [3] and [4] can be downloaded from:* ***http://www.icao.int****.*
Related ICAO Strategic Objectives: A, D.

1. INTRODUCTION

1.1. Under its Agenda Item 7, the Third Meeting of the AFI Communications, Navigation and Surveillance Sub-group (CNS/SG/3) (Nairobi, 26 to 30 April 2010) reviewed the report of the First Meeting of the AFI Surveillance Implementation Task Force.

2. DISCUSSION

2.1 The meeting reviewed the First Meeting of the AFI Surveillance Implementation Task Force established under APIRG Decision 16/27, which took place on 16-18 September 2009 in Johannesburg, South Africa.

2.2 The Task Force developed an initial draft AFI Surveillance Strategy which the working groups were to finalize. The meeting recognized that the AFI Surveillance strategy would not be completed before APIRG/17. However, an initial draft AFI Surveillance Strategy is submitted to APIRG for consideration and comments. **Appendix A** to this working paper provides the draft AFI Surveillance Strategy.

2.3   The Task Force formed two working groups, one for en- route operations and another one for terminal operations. ASECNA and Seychelles were nominated as leaders of the working groups. **Appendix B** to this working paper provides the terms of reference, work programme and the composition of the established Aeronautical Surveillance working groups.

2.4   In accordance with APIRG Conclusion 13/77, States were urged to submit the following data concerning their managed aerodromes and terminal areas (TMAs) to facilitate the work of the CNS Sub-group on their categorization:

1. **Aerodromes**: for each aerodrome:
- Total number of movements during the year 2000 for each of the following types of
- Traffic: commercial, military and general aviation
- IFR and VFR traffic numbers.

2. **TMAs**: for each TMA:
- Number of civil and military airports within the TMA
- Total number of movements during 2000 at each type of airport
- Vertical and lateral limits of the TMA
- IFR and VFR traffic numbers
- Restricted, prohibited and danger areas.

3.   ACTION BY APIRG

3.1   The meeting is invited to:

a) Note the report of the CNS/SG/3 Meeting on its review of the report of the First Meeting of the AFI Surveillance Implementation Task Force as presented in this working paper;

b) Review and endorse the initial draft AFI Surveillance Strategy contained in **Appendix A** as a basis, and provide further guidance as necessary, for consideration by the CNS/SG;

c) Review the terms of reference, work programme and the composition of the AFI Surveillance Implementation working groups as shown in **Appendix B**; and

d) Request States to provide the data concerning their managed aerodromes and terminal areas (TMAs) in order to facilitate the work of the CNS Sub-group on their categorization, in accordance with APIRG Conclusion 13/77.

— E N D —

APPENDIX A

DRAFT INITIAL AFI SURVEILLANCE PLAN IN SUPPORT OF PBN IMPLEMENTATION

EN ROUTE OPERATIONS

Airspace		PBN Navigation specifications	Short term (2008-2012)	Mid- term (2013-2016)	Long term (2017 and beyond)
En route oceanic		RNAV10/RNP10 RNP4	ADS-C	ADS-C	ADS-C
En route remote continental		RNAV10/RNP10 RNP4	ADS-C	ADS-C	ADS-C
En route continental		RNAV5 RNAV1	ADS-C ADS-B trials MLAT trials	ADS-C ADS-B gradually MLAT gradually	ADS-C, ADS-B MLAT

DRAFT INITIAL AFI SURVEILLANCE PLAN IN SUPPORT OF PBN IMPLEMENTATION

TERMINAL OPERATIONS

Airspace		PBN Navigation specifications	Short term (2008-2012)	Mid- term (2013-2016)	Long term (2017 and beyond)
Terminal arrival/departure	TMA Type 3	RNAV1 in a surveillance environment	PSR where justified SSR where implemented ADS-B trials MLAT trials	PSR where justified SSR where implemented ADS-B gradually MLAT gradually	Reduced number of SSRs ADS-B MLAT
	TMA Type 2	RNAV1 in a surveillance environment	PSR where justified SSR where implemented ADS-B trials MLAT trials	PSR where justified SSR where implemented ADS-B gradually MLAT gradually	Reduced number of SSRs ADS-B MLAT
	TMA Type 1	Basic RNP1 in a non- surveillance environment	Voice reporting	Voice reporting	Voice reporting

DRAFT INITIAL AERONAUTICAL SURVEILLANCE PLAN IN SUPPORT OF PBN IMPLEMENTATION

APPROACH OPERATIONS

Airspace		PBN Navigation specifications	Short term (2008-2012)	Mid- term (2013-2016)	Long term (2017 and beyond)
Approach	Aerodrome Type 3	RNP APCH with baro-VNAV or RNP AR APCH if required	PSR where justified SSR where implemented ADS-B trials MLAT trials	PSR where justified SSR where implemented ADS-B gradually MLAT gradually	Reduced number of SSRs ADS-B MLAT
	Aerodrome Type 2	RNP APCH with baro-VNAV or RNP AR APCH if required	PSR where justified SSR where implemented ADS-B trials MLAT trials	PSR where justified SSR where implemented ADS-B gradually MLAT gradually	Reduced number of SSRs ADS-B MLAT
	Aerodrome Type 1	*RNP APCH with baro-VNAV or RNP AR APCH if required*	Voice reporting	Voice reporting	Voice reporting

APPENDIX B

FUTURE WORK PROGRAMME OF THE AFI SURVEILLANCE IMPLEMENTATION TASK FORCE

No.	Activity	Detailed requirements	Target dates
		ENROUTE OPERATIONS WORKING GROUP	
1.	En-route surveillance requirement	Review the draft en-route strategy	CNS/SG/4 ATS/AIS/SAR/SG/12
2.		• Complete table (app) Secretariat will align IATA Working paper Draft data distribution format • Draft data exchange agreement, incl. system details, data format, etc. • Draft Regulatory requirements (technical)	Feedback and input into February 2010 PBN Meeting
3.		Review and align with new ICAO Standards and guidance when development	On-going
4.		Finalize the surveillance data distribution format	CNS/SG/4
5.		Develop agreement template to be used for inter-State data exchange	First draft at CNS/SG/4
6.		Draft implementation Plan	Task Force to report to APIRG/17
7.		Update Doc. 003 and CNS Table 4A&B in FASID	On-going
		TERMINAL OPERATIONS WORKING GROUP	
1.	Terminal surveillance requirement	Review the draft terminals strategy	CNS SG4, ATS/AIS/SAR/SG/12
		• Complete table (app). Secretariat will align IATA WP Draft data distribution format • Draft data exchange agreement, incl. System details, data format, etc. • Draft Regulatory Requirements (Technical	Feedback and input into February 2010 PBN Meeting
2.		Review and align with new ICAO Standards and guidance when developed	On-going
3.		Update Doc. 003	On-going
4.		Finalize the surveillance data distribution format	CNS/SG/4
		Develop agreement template to be used for inter-State data exchange	First draft at CNS/SG/4
5.		Task Force to report to APIRG on progress: Draft implementation plan En-route Operations	APIRG/17

No.	Activity	Detailed requirements	Target dates
		• Seychelles (Team Leader) • South Africa • Nigeria • Ghana • Democratic Republic of Congo • IATA • Mauritius • Angola Terminal Operations • ASECNA (Team Leader) • Zambia • South Africa • IATA • Tanzania	
6.		Update Doc. 003 and CNS Tables 4A and 4B in FASID	On-going