

INTERNATIONAL CIVIL AVIATION ORGANIZATION



Fourth Meeting of the CNS/ATM/IC Sub-group

(Dakar, 10-14 March 2003)

Agenda Item 3: Review of the status of implementation Conclusions/Decisions of the previous meeting

(Presented by the Secretariat)

1. The attached Appendix A presents a review of the status of implementation of the Conclusions formulated by the third meeting of the CNS/ATM/IC Sub-group (Nairobi, March 2001), and adopted by APIRG/13 Meeting. Appendices B to E provide supporting information.
2. The meeting is invited to note the comments formulated by the Air Navigation Commission on APIRG/13 Conclusions 13/71 and 13/85.
3. The meeting is invited to review the progress made, and re-formulate those conclusions that are still pertinent.

- E N D -

APPENDIX A - CNS/ATM/IC/SG/4 - WP/3

Conclusion/ Decision N° (APIRG)	Text of Conclusion/ Decision	Followed by	Status	Remark
3/1 (13/77)	<p>Conclusion 13/77: Data for the categorization of TMAs and aerodromes</p> <p>That States be urged to provide, as soon as possible, the data shown at Appendix O to this report, in order to facilitate work on the categorisation of TMAs and aerodromes</p>	ICAO States	Replies received from 38 States . Data sent to ASECNA and IATA for study.	ASECNA and IATA to report on study under Agenda Item 6.
3/2 (13/69)	<p>Conclusion 13/69: Implementation of the World Geodetic Reference System (1984)</p> <p>That States implement, as a matter of urgency, WGS-84 airspace coordinates to enable the use of GNSS as a primary means of en-route navigation.</p>	States	List of States that have implemented WGS-84 coordinates (cf. Appendix C) .	
3/3 (13/70)	<p>Conclusion 13/70: Coordination between ATS providers and users in the implementation of CNS/ATM</p> <p>That ATS providers and users coordinate before any decision to implement CNS/ATM systems which have a bearing on equipage is taken.</p>	States and Users	On going	

Conclusion/ Decision N° (APIRG)	Text of Conclusion/ Decision	Followed by	Status	Remark
3/4 (13/71)	<p>Conclusion 13/71: Amendment to AFI SUPPs (Doc 7030)</p> <p>That the AFI SUPPs (Doc 7030) be amended as follows:</p> <p>a) Reduce longitudinal separation minima from 20 minutes to 10 minutes</p> <p>b) Reduce Lateral separation from 100 NM (as is the case in the EUR/SAM corridor) to 50 NM (in RNP 10 environment), and eventually to 25 or 30 NM as appropriate (in RNP 5 environment); and</p> <p>c) Introduction of Longitudinal RNAV/RNP separation minima of 10 minutes and/or 80 NM RNAV derived distance in selected airspaces</p>	ICAO		<p>Air Navigation Commission (ANC): The Commission noted the proposed amendment to the AFI supplementary procedures, as contained in the <i>Regional Supplementary Procedures</i> (Doc 7030), to reduce longitudinal separation minima from 20 to 10 minutes and to reduce lateral separation from 100 NM to 50 NM in an RNP 10 environment, and eventually to 25 or 30 NM in an RNP 5 environment (Conclusion 13/71). In this context, it was observed that a reduction in separation minima to 25 NM or 30 NM in an RNP 5 environment was not envisaged and that RNP 4 would be required to reduce lateral separation to 30 NM. The Commission requested the Secretariat to study the feasibility of reducing separation in the AFI Region, considering the deficiencies in the area of navigation aids and communications.</p>
3/5 (13/72)	<p>Conclusion 13/72: Step by step approach in the CNS/ATM implementation</p> <p>That in the implementation of the new CNS/ATM concept in the region, a step by step approach be adopted starting with the ATM objectives which can be achieved in the short term with minimum CNS requirements or relatively low cost. In this regard, the following ATM objectives and CNS requirements should be given priority over the emerging concepts:</p> <p>a) VHF coverage;</p> <p>b) ACAS;</p> <p>c) ATS/DS and AFTN circuits;</p> <p>d) area control service; and</p> <p>e) 10 minute longitudinal separation.</p>	States	<p>VHF coverage: Appendix D</p> <p>ACAS AIC Publication by States: Appendix E.</p> <p>AFTN and ATS/DS circuits, area control service and 10- minute longitudinal separation, see WP/6.</p>	

Conclusion/ Decision N° (APIRG)	Text of Conclusion/ Decision	Followed by	Status	Remark
3/6 (13/73)	<p>Conclusion 13/73: Early benefits to approved/ certified operations</p> <p>That taking into account the equipage approval of transcontinental operators, early benefits be given to such operators as soon as possible by initially allocating them dedicated/segregated airspace, without penalizing regional and domestic operations.</p>	States Users		Not reviewed by ANC.
3/7 (13/74)	<p>Conclusion 13/74: Establishment of national CNS/ATM bodies and designation of focal points of contact</p> <p>That, as a matter of urgency, States which have not done so be requested to implement APIRG Conclusion 12/45 on the establishment of national CNS/ATM bodies and designation of focal points of contact, and notify ICAO Regional Offices of action taken in this respect. In doing so, they should refer to guidance provided by ICAO (<i>Circular 278-AN/164 - National Plan for CNS/ATM</i>).</p>	States	21 States have designated their focal points.	
3/8 (13/75)	<p>Conclusion 13/75: Implementation of CNS/ATM within Areas of Routing AR-6 and AR-7</p> <p>That:</p> <p>a) the implementation of CNS/ATM within Area of Routing AR-6 be co-ordinated by the SAT Informal Group Meetings; and</p> <p>b) the implementation of CNS/ATM within Area of Routing AR-7 be co-ordinated by the AFI/EUR Interface Meetings.</p>	SAT group AFI/EUR Interface Meeting	Completed	AFI/ EUR interface meeting planned in 2003.

Conclusion/ Decision N° (APIRG)	Text of Conclusion/ Decision	Followed by	Status	Remark
3/9	<p>Decision 3/9: Coordination of ICGs That:</p> <p>a) pending the implementation of APIRG Conclusion 12/45 by States, the ICAO Regional Offices be tasked with the coordination of ICGs; and</p> <p>b) ICGs meetings continue to be combined as follows, taking into account affinities between Areas of Routing :</p> <ul style="list-style-type: none"> i. AR-1, AR-2, AR-6 (SAT Informal Meetings) ii. AR-3 iii. AR-4 iv. AR-5 and AR-9 v. AR-7 (AFI/EUR Interface Meetings) vi. AR-8 (SADC) vii. AR-10 (ICG10 Meetings) 	ICAO	<p>Implemented. However, meetings of ICGs planned for 2003 AR3, AR4, AR5 and AR9 have been canceled.</p> <p>AR10 is due to meet in last quarter 2003.</p> <p>AR8 met in 2002.</p> <p>AR1 and AR2: ICG meetings held from 10 to 13 December 2001 in Dakar (SAT/10) and from 17 to 21 February 2003 in Johannesburg (SAT/11).</p>	
3/10 (13/76)	<p>Conclusion 13/76: Promulgation of national airborne collision avoidance system (ACAS) policies</p> <p>That each AFI/EUR Interface State promulgate without delay an AIC clearly stating their national ACAS II exemption policy, including Minimum Equipment List (MEL) exemption</p>	Algeria Libya Morocco Tunisia	Implemented in: Tunisia	
3/11 (13/78)	<p>Conclusion 13/78: En route (FIR) Aeronautical Surveillance Plan for the AFI Region That:</p> <p>a) the first issue of the Aeronautical Surveillance Plan (ASP) for the AFI Region comprise: the en route aeronautical surveillance systems table at Appendix P and of the ATS automation systems table at Appendix Q ; and</p>	ICAO States	Completed	

Conclusion/ Decision N° (APIRG)	Text of Conclusion/ Decision	Followed by	Status	Remark
	b) the ASP be included in the AFI FASID.			
3/12 (13/79)	<p>Conclusion 13/79 - AFI/EUR GNSS Test bed Working Group That:</p> <p>a) South Africa and ASECNA be the representatives of the AFI GNSS Study Group in the AFI/EUR GNSS test bed Working Group; and</p> <p>b) States or navigation services providers , wishing to support GNSS test bed activities, be invited to join the AFI/EUR GNSS Test bed Working Group.</p>	States ICAO	a) completed. b) implemented. States invited to GNSS Study Group Meeting of 6-7 March 2003.	
3/13 (13/80)	<p>Conclusion 13/80: AFI Test bed project document</p> <p>That South Africa and ASECNA prepare a draft AFI test bed project document to be submitted by ASECNA to the European Commission for funding</p>	South Africa ASECNA ICAO	Completed April 2002. Report on follow up of submission to be provided by GNSS Study Group.	
3/14 (13/81)	<p>Conclusion 13/81: Involvement of multi-modal transport organizations in the AFI GNSS test bed trials</p> <p>That contact be established with multi-modal transport organizations in the AFI Region for their participation in the AFI GNSS test bed trials, as follows:</p> <p>a) ICAO with the International Maritime Organization (IMO) and the Economic Commission for Africa (ECA);</p> <p>b) ATNS with the South African SAR Organization (SASAR); and</p> <p>c) ASECNA with the Economic Community of West African States (ECOWAS) and CEMAC.</p>	ICAO ATNS ASECNA	In view of the limited coverage of the mobile test bed, it may not be advantageous to follow up on this conclusion.	

Conclusion/ Decision N° (APIRG)	Text of Conclusion/ Decision	Followed by	Status	Remark
3/15 (13/82)	<p>Conclusion 13/82: Contact with flight calibration organizations</p> <p>That ICAO contact the operators of flight calibration aircraft in the AFI Region for their participation in the AFI GNSS test bed trials.</p>	ICAO	ASECNA already involved. CAA Ethiopia and CAA South Africa contacted.	
3/16 (13/83)	<p>Conclusion 13/83: Assistance with GNSS procedures design</p> <p>That ICAO contact the following organizations to assist in designing GNSS-based approach procedures (NPA, APV-1, APV-2) at locations where trials will be conducted: Eurocontrol, FAA, French DGCA, ASECNA, ATNS, Dutch RLD</p>	ICAO	Requirement for assistance to be assessed with participating States.	
3/17	<p>Conclusion 3/17: Documentation for States</p> <p>That, further to AFI/7 RAN Conclusion 13/5:</p> <p>a) the following documentation be sent to States for their studies and use as appropriate for criteria on approving aircraft operations using GNSS:</p> <ul style="list-style-type: none"> - FAA Notice 8110.60 - FAA Advisory Circular (AC N° 20-130) - FAA TSO C129a <p>b) The European Commission <i>Manual for the Validation of GNSS in Civil Aviation</i> (MUSST) be made available on the ICAO web site; and</p> <p>c) ICAO conduct workshops in AFI Region to sensitize States on the need and importance of airworthiness and operational certifications of on board equipment for GNSS</p>		Not adopted by APIRG. However, intent included in para. 4.5.2 of APIRG/13 report. Documents sent to States (January 2002).	

Conclusion/ Decision N° (APIRG)	Text of Conclusion/ Decision	Followed by	Status	Remark
	operations.			
3/18 (13/84)	Conclusion 13/84: AFI GNSS Strategy That the AFI GNSS strategy be amended as shown in Appendix R to this report	States ICAO	Completed	
3/19 (13/53)	Conclusion 13/53: Adoption of a uniform format for the reporting of WGS-84 implementation That the table available at Appendix M be adopted as the uniform format for the reporting of WGS-84 implementation by States.	States ICAO	Completed.	
3/20 (13/85)	Conclusion 13/85: Initial implementation of RVSM in the AFI Region That RVSM be implemented in the AFI region concurrently with or soon after its implementation in the EUR Region, and initially between FL350 and FL390.		The ANC noted the conclusion on the understanding that an evaluation of the requirement for RVSM, an implementation strategy, including a formal risk assessment and the establishment of a safety management process, will be made available to ICAO in order to ensure that an acceptable level of safety could be achieved and maintained.	

Conclusion/ Decision N° (APIRG)	Text of Conclusion/ Decision	Followed by	Status	Remark
3/21 (13/58)	<p>Decision 3/21: Establishment of a Task Force on RVSM and RNAV/RNP implementation That a Task Force dedicated to RVSM and RNAV/RNP implementation be established, with the terms of reference shown at Appendix I to the report.</p> <p>Composition: Algeria, Cape Verde, Egypt, Ethiopia, Kenya, Morocco, Nigeria, South Africa, Tunisia, Senegal, Spain (Rapporteur), ASECNA and IATA</p>	ICAO	Task Force established by APIRG. Task Force has held one meeting (June 2002).	
3/22 (13/86)	<p>Conclusion 13/86: Seminars/Workshops on RVSM and RNAV/RNP That ICAO, as well as international organizations in a position to do so, organize Seminars/Workshops on RVSM and RNAV/RNP in the AFI Region.</p>	ICAO International organizations	ICAO conducted a seminar in Nairobi (October 2001)	
3/23 (13/87)	<p>Conclusion 13/87: Amendment of the AFI CNS/ATM Implementation Plan (Doc 003) That the AFI CNS/ATM Implementation Plan (Doc 003) be amended as shown at Appendix S to this report.</p>	ICAO	Completed.	
3/24	<p>Decision 3/24: Egypt membership in the AFI GNSS Study Group That Egypt be a member of the AFI GNSS Study Group.</p>	ICAO Egypt	Completed	
3/25	<p>Decision 3/25: Egyptian NAVISAT Initiative That the Egyptian NAVISAT Initiative be given further consideration by the AFI GNSS Study Group.</p>	AFI GNSS Study Group	Report by GNSS Study Group to be reviewed under Agenda Item 3.	

Conclusion/ Decision N° (APIRG)	Text of Conclusion/ Decision	Followed by	Status	Remark
3/26	<p>Decision 3/26: Information on the AFI GNSS Study Group Meetings</p> <p>That all the GNSS/TF members be informed of meetings of the AFI GNSS Study Group.</p>	ICAO.	Implemented. None of the States concerned attended the GNSS/13 meeting.	
3/27	<p>Decision 3/27: Future work programme of the CNS/ATM/IC Sub-group</p> <p>That the future work programme of the CNS/ATM/IC Sub-group be as shown at Appendix K to the report.</p>		Completed.	
13/88	<p>Conclusion 13/88: Integrity of WGS-84 Infrastructure</p> <p>That States concerned:</p> <p>a) Establish maintenance procedures in order to ensure the integrity of the WGS-84 ground infrastructure; and</p> <p>b) Consider the interconnection of the various WGS-84 ground reference networks in the AFI Region.</p>	States		
13/89	<p>Conclusion 13/89: Sharing of ADS data</p> <p>That States, in a position to do so, be encouraged to share ADS data for mutual benefit.</p>	States	Trials conducted by Las Palmas (Spain) and Sal (Cape Verde) ACCs through CAFSAT.	

APPENDIX B - WP/3

List of States that have replied to APIRG Conclusion 13/77
Data for the categorization of TMAs and Aerodromes

1. Algeria
2. Djibouti
3. DR of Congo
4. Eritrea
5. Ethiopia
6. France
7. Gambia
8. Ghana
9. Guinea
10. Kenya
11. Malawi
12. Mauritius
13. Mozambique
14. Nigeria
15. Rwanda
16. Seychelles
17. Spain
18. South Africa
19. Tanzania
20. Tunisia
21. Uganda
22. Zimbabwe
23. ASECNA (for 16 States)

APPENDIX C

List of States that have published WGS-84 airspace coordinates (APIRG 13/69)

1. Benin
2. Botswana
3. Burkina Faso
4. Burundi
5. Cameroon
6. Cape Verde
7. Central African Republic
8. Chad
9. Comoros
10. Congo
11. Côte d'Ivoire
12. Equatorial Guinea
13. Eritrea
14. Ethiopia
15. France (Reunion)
16. Gabon
17. Gambia
18. Kenya
19. Lesotho
20. Madagascar
21. Mali
22. Mauritania
23. Mauritius
24. Namibia
25. Niger
26. Rwanda
27. Sao Tome & Principe
28. Senegal
29. Seychelles
30. South Africa
31. Swaziland
32. Tanzania
33. Togo
34. Uganda
35. Zimbabwe

APPENDIX D
Recent VHF coverage extension projects

FIR	Station	Coordinates Coordonnées	Frequency Fréquence	Implementation date/Date de mise en oeuvre	Coverage Couverture
Accra	Niamtougou	0900N0109E	126.700	2003	North East
	Sao Tome	0020N0644E	130.900	2003	South East
Beira	Beira	1945S3453E	127.700	Oct 2002	
	Inhambane	2352S3525E	127.700	TBD	
	Nampula	1506S3917E	127.700	TBD	
	Songo	1536S3246E	127.700	Sept 2002	
Brazzaville	Bria			2002	South
	Makokou			2002	South
	Pointe Noire	0448S1152E		2002	North West
Cairo	El Owinat			2002	
	Port Said			2002	
Dakar Oceanic	Santiago			2002/2003	West
Dar es Salaam	Songea	1041S3535E	123.300		East
	Sumbawanga		119.300		West
Entebbe	Gulu		128.500		
	Kasese		128.500		
	Soroti	0143N3337E	128.500		
Khartoum	Damazin	1147N3420E	127.300	2002	South
	Dongola	1909N3026E	125.400		North
	El Fasher	1337N2519E	125.400		North
	Juba	0452N3136E	127.300		South
	Khartoum	1535N3233E	124.700/125.400		North
	Malakal	0933N3139E	127.300		South
	Nyala	1203N2457E	127.300		South
	El Obeid	1309N3014E	127.300		South
	Port Sudan	1926N3714E	125.400		North
	Wau	0743N2758E	127.300		South
Lilongwe	Muzuzu	1127S3401E	120.600		
	Zomba	1523S3523E	120.600		
Luanda	Lubango	1455S1337E			
	Menongue	1438S1741E			
	Saurimo	0940S2024E			
Lusaka	Chipata	1333S3236E	120.500		
	Kasama	1012S3108E	120.500		
	Livingstone	1749S2550E	120.500		
	Mansa	1108S2852E	120.500		
	Mongu	1513S2309E	120.500		
	Solwezi	1210S2622E	120.500		
Ndjamena	Garoua	0920N1318E		2002	South west
Niamey	Tombouctou	1644N0300W		2002	West

APPENDIX E

[to be completed]

List of States that published the AIC on ACAS II as per APIRG/13 Conclusion 13/72

1. Botswana
2. Eritrea
3. Ethiopia
4. Kenya
5. Malawi
6. Morocco
7. Rwanda
8. Spain
9. Tunisia
10. Uganda
11. Zimbabwe