INTERNATIONAL CIVIL AVIATION ORGANIZATION

REPORT OF THE FOURTEENTH MEETING OF THE AFI PLANNING AND IMPLEMENTATION REGIONAL GROUP (APIRG)

(Yaounde, Cameroon, 23 – 27 June 2003)

Prepared by the Secretary of APIRG

July 2003

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PART I

HISTORY OF THE MEETING

1. VENUE AND DATE

1.1 The fourteenth meeting of the AFI Planning and Implementation Regional Group (APIRG/14) was held in the conference room of Hilton Hotel in Yaounde, from 23 to 27 June 2003, at the kind invitation of the Republic of Cameroon.

2. OFFICERS AND SECRETARIAT

2.1 The meeting re-elected Mr. Mohamed Chérif of Tunisia as Chairman, Mr. Fidèle Manga Fouda (Cameroon) was elected as First Vice-Chairman and Mr. M. R. Alloo (Tanzania) was elected as Second Vice-Chairman. Mr. Chérif chaired all the sessions of the meeting. Paragraph 1.1 under Agenda Item 1 below also refers.

2.2 Mr. A. Cheiffou, ICAO Regional Director Dakar, served as the Secretary of APIRG. He was assisted by Mr. L. Mollel, ICAO Regional Director, Nairobi Office, Mr. V.D. Zubkov, Chief, Regional Affairs Office, Mr. H.P. Pretorius, Regional Affairs Officer from ICAO Headquarters and by the following Officers from Dakar and Nairobi Offices of ICAO:

Mr. H. H. Cissé	-	Regional Officer MET, Dakar
Mr. A. J. Kharuga	-	Regional Officer ATM, Nairobi
Mr. B. M. Sekwati	-	Regional Officer MET, Nairobi
Mr. L. W. Ndiwaita	-	Regional Officer AGA, Nairobi
Mr. A. Sene	-	Regional Officer CNS, Nairobi
Mr. J. C. Waffo	-	Regional Officer AGA, Dakar
Mr. P. Zo'o Minto'o	-	Regional Officer CNS, Dakar
Mr. K. Brou	-	Regional Officer ATM, Dakar

2.3 The discussions were conducted in English and French and the meeting documentation was issued in both languages. Translation and simultaneous interpretation services were provided under the supervision of Mr. J. Belinga, Translator/Reviser, ICAO WACAF Office, Dakar. He was assisted by Mr. A. Otou-N'Guini, Translator, ICAO Headquarters, Montreal, Miss F. Jouve, Translator, ICAO Office, Paris and three freelance interpreters. Mrs. P. A. Boimond-Basse, Administrative Officer, Dakar assisted the meeting on administrative matters.

2.4 The meeting was opened by the Honourable Minister of Transport of the Republic of Cameroon, Mr. John Begheni Ndeh. On behalf of the Government, he welcomed the participants to the meeting and expressed appreciation for the large turn out of delegates. He also thanked ICAO for choosing his country to host the fourteenth meeting of APIRG. He emphasized safety of air transport and the importance of international cooperation. He further highlighted the achievements of Cameroon in civil aviation, in particular investments in airports infrastructure (Cameroon has three international airports), the establishment of the Civil Aviation Authority of Cameroon and the ratification of most of the ICAO Conventions and protocols.

2.5 Before that, a welcome address was delivered by the Chairman of the Board of Directors of the Cameroon Civil Aviation Authority, Mr. Paul Pondi, wishing the delegates a pleasant stay in Yaounde. He stressed safety and security of air transport in Africa and the goals of Cameroon for peace and progress.

2.6 Mr. A. Cheiffou, Regional Director of the Western and Central African Office, Dakar, and Secretary of APIRG, welcomed the participants. He pointed out the major role played by Cameroon in the development of international civil aviation in Africa. He also emphasized the role played by APIRG in planning and implementing air navigation systems in Africa.

2.7 Mr. Cheiffou then reviewed progress achieved since the APIRG/13 Meeting in the AGA, COM, CNS, ATM, MET, AIS and SAR fields. He concluded by calling for strategies to overcome deficiencies in the air navigation field despite substantial progress achieved in recent years.

2.8 Mr. V.D. Zubkov, Chief of the Regional Affairs Office at ICAO Headquarters, Montreal, conveyed greetings of the President of the ICAO Council, Dr. Assad Kotaite, the Secretary General, Mr. Costa Pereira and the Representatives of the African States on the ICAO Council. Mr. Zubkov highlighted three issues of high political importance: follow-up on and expansion of USOAP and availability of financial and human resources to support APIRG and further development of international civil aviation in Africa.

2.9 The Chairman of APIRG expressed his appreciation to the Cameroon Authorities for their kind hospitality. He stressed the importance of civil aviation for the economic and social development of African States and the role of APIRG in planning and implementing air navigation facilities. Mr. Chérif also emphasized the need for the AFI States to prepare for the ICAO 11th Air Navigation Conference due in September/October this year.

2.10 The meeting noted with appreciation that all the available working papers, information papers, AFI Basic ANP and FASID, as well as the reference documents and reports of APIRG contributory bodies, had been placed on the ICAO web site of the regional offices concerned in accordance with the established procedures well in advance of the meeting as per Conclusion 12/27 (Disseminating of aeronautical and other information).

3. ATTENDANCE

3.1 The meeting was attended by one hundred seventy-two participants from 35 States, including 25 APIRG member States, 11 other States located in the AFI Region and the United States, as well as Observers from AFCAC, ASECNA, EUROCONTROL, the European Space Agency, IATA, IFALPA, IFATCA, INTELSAT and Roberts FIR.

3.2 The list of participants is given at Appendix A.

4. AGENDA

4.1 The meeting adopted the following agenda:

1. Election of Chairperson and Vice-Chairperson
2. Action by the Air Navigation Commission (ANC) and Council on the APIRG/13 Meeting Report
3. Review and follow-up of APIRG Conclusions and Decisions, including outstanding AFI/7 RAN Meeting recommendations

4. Air Navigation issues

4.1 Aerodrome operations
4.2 Communications
4.3 Air traffic management
4.4 Aeronautical meteorology
4.5 CNS/ATM planning/implementation
4.6 Traffic forecasting
4.7 ANP/FASID
4.8 Other related matters
4.8.1 Management of air navigation services
4.8.2 Aviation Safety Board
4.8.3 Preparation for the Eleventh Air Navigation Conference
4.8.4 Safety management system and quality assurance

5. Deficiencies in the Air Navigation field in the AFI Region

6. Human factors and manpower planning

7. Interregional coordination

8. Worldwide Air Transport Conference (March 2003)

9. Technical Co-operation

10. Terms of reference and working arrangements of APIRG.

11. Any other business.

5. CONCLUSIONS AND DECISIONS

5.1 APIRG records its actions in the form of Conclusions and Decisions with the following significance:

5.2 Conclusions

5.2.1 Conclusions deal with matters which, in accordance with the group's terms of reference, merit directly the attention of States or on which further action will be initiated by ICAO in accordance with established procedures.

5.3 Decisions

5.3.1 Decisions deal with matters of concern only to APIRG and its contributory bodies.

List of Conclusions

List of Decisions

PART II

REPORT ON AGENDA ITEMS

AGENDA ITEM 1: ELECTION OF CHAIRPERSON AND VICE-CHAIRPERSONS

1.1 The meeting elected its bureau as follows:

Mr. M. Cherif	-	Chairman (Tunisia)
Mr. F. Manga Fouda	-	First Vice-Chairman (Cameroon)
Mr. M. R. Alloo	-	Second Vice-Chairman (Tanzania)

AGENDA ITEM 2: ACTION BY THE AIR NAVIGATION COMMISSION (ANC) AND COUNCIL ON THE APIRG/13 REPORT

2.1 The meeting noted the actions taken by the Air Navigation Commission (ANC) and Council on the APIRG/13 Report (Appendix B).

2.2 The meeting noted that, among the APIRG/13 conclusions on which the Council had taken specific actions, were Conclusions 13/23 (ICAO's position at ITU WRC-2003), 13/31 (Implementation of area control service), 13/33 (ACAS II transition period and exemption process in the AFI Region), 13/83 (Assistance for GNSS procedure design), 13/90 (AFI Basic ANP and FASID documents), 13/96 (Format of list of deficiencies) and 13/100 (Membership of APIRG).

2.3 With respect to the Council action on APIRG Conclusion 13/83, ASECNA reminded the meeting that it was willing to assist States and service providers to develop GNSS approach procedures (NPA, APV-1, APV-2).

AGENDA ITEM 3: REVIEW AND FOLLOW-UP OF APIRG CONCLUSIONS AND DECISIONS, INCLUDING AFI/7 RAN MEETING OUTSTANDING RECOMMENDATIONS

3.1 The meeting reviewed action taken on APIRG conclusions and decisions since its thirteenth meeting. It noted those on which actions had been completed and reaffirmed those which are still valid and action on them is continuing. The meeting also reviewed the outstanding actions on recommendations of the AFI/7 RAN Meeting (Abuja, 1997) referred to it at its eleventh meeting. It noted those on which actions had been completed and identified those which are still valid.

AGENDA ITEM 4: AIR NAVIGATION ISSUES

4.1 Aerodrome operations

Review of the Report of the Fifth Meeting of the Aerodrome Operational Planning Sub-Group

4.1.1 The fifth meeting of the AOP/SG was held from 26 to 28 March 2003 in Dakar. Ten States and two international organizations participated. It acknowledged the status of implementation of aerodrome services, facilities and equipment and noted that, despite the significant progress made

by many States, as is indicated in the list of deficiencies, more efforts are required. The major issues were discussed further as follows:

Bird hazard control and reduction

4.1.2 Some States had made substantial efforts in bird hazard control and reduction. The workshops conducted by ICAO Regional Offices had achieved the desired results. Nevertheless, the meeting was of the view that some States were not as successful. Some of the reasons identified were non-existence of dedicated bird hazard control units at airports, the delegation of these activities including bird hazard committees to junior and/or inexperienced staff, insufficient involvement of the neighborhood communities and the implementation of measures without prior adequate ornithological and environmental studies. The meeting noted that some operators were reporting incidents of bird strikes to their airlines and consequently such incidents were not recorded at the airport of occurrence. The meeting therefore reiterated the relevance of its previous AFI/7 RAN Conclusion 4/1 and APIRG Conclusion 13/1 and further developed the following conclusion:

CONCLUSION 14/1: BIRD HAZARD CONTROL AND REDUCTION

That:

a) States facing bird hazard problems conduct environmental and ornithological studies to make sure that dispersal and control methods selected are appropriate, efficient and cost effective. Cooperative approach by States for the conduct of these studies should be encouraged; and

b) aircraft operators be encouraged to report all bird strikes to the airport operator in order to trigger action at the airport level.

Rescue and fire fighting services (RFFS)

4.1.3 The meeting was of the view that, as a result of the continued establishment of autonomous airport authorities and the progressive involvement of the private sector in the ownership of airports, substantial progress has been made in the implementation of the requirements as provided in the AFI ANP and Annex 14, Volume I with respect to RFFS.

4.1.4 However, several airports in the AFI Region which are located close to large bodies of water or swampy areas had neither the corresponding fire fighting and rescue equipment nor the appropriately trained personnel. In addition to planning for the procurement of these facilities, such States were encouraged to consider mutual agreements for assistance with other specialized institutions, agencies or local communities such as fishing communities, who are usually very familiar with these areas. On the issue of training, the meeting was informed that Ghana and ASECNA (at Douala, Cameroon) had developed training facilities that could be used by other States. Consequently, the meeting developed the following conclusion:

CONCLUSION 14/2: RESCUE AND FIRE FIGHTING IN A DIFFICULT ENVIRONMENT

That:

a) States ensure that airports close to large bodies of water or swampy areas are provided with appropriate rescue and fire fighting equipment and adequately trained personnel, if necessary by concluding mutual assistance agreements with specialized agencies; and

b) ICAO develop and make available to States appropriate guidance material on rescue operations and equipment in a difficult environment.

Aerodrome Emergency Plan (AEP)

4.1.5 The meeting observed from the summary of the status of implementation of this requirement in the AFI Region that some more work is required. States were reminded that, with the new requirement for aerodromes certifications becoming effective in November 2003, development of an AEP with a built-in mechanism for updating and a programme for regular testing shall become a prerequisite for consideration for certification. The meeting further took note that Ghana had acquired a disabled aircraft removal kit for a B747 type aircraft. Having noted that one of the main reasons for the inadequate implementation of this requirement was the absence of a designated authority responsible for coordinating the development the plan and its testing and updating, the meeting therefore developed the following draft conclusion:

CONCLUSION 14/3: DESIGNATION OF A NATIONAL COORDINATOR FOR AERODROME EMERGENCY PLANNING

That States designate an appropriate national coordinator for airport emergency planning responsible for ensuring regular updating and timely testing of emergency plans, with the assistance of a small committee.

Aerodrome certification

4.1.6 Slow progress is being made by States in preparation for the implementation of the requirement for aerodrome certification. The ICAO guidance manual has assisted a number of States. Some States have attended workshop organized in Dakar from 13 to 15 March 2003 under the auspices of ICAO and the meeting was informed that another workshop was scheduled to be held in Nairobi from 22 to 24 July 2003. The group was of the opinion that staff involved in the process of certification — in particular, aerodrome inspectors and auditors — should receive the appropriate training in order to ensure more consistency and objectivity. For purposes of maintaining uniformity, the training syllabi should be aligned to a standard training package to be developed by ICAO and made available to States. The meeting therefore developed the following conclusion.

CONCLUSION 14/4: CERTIFICATION OF AERODROMES

That :

a) States which have not done so take appropriate measures to develop an action plan aimed at implementing the requirement for aerodrome certification in accordance with Annex 14, Volume 1 paragraph 1.3; and

b) States ensure that personnel that would be involved in the certification process — in particular, aerodrome inspectors and auditors — be provided with appropriate training.

Impact of new larger aeroplanes (NLA) on aerodromes in the AFI Region

4.1.7 The meeting noted the discussions held by the sub-group when reviewing the report of the NLA/TF meeting held in Dakar from 24 to 25 March 2003. The meeting was informed that, so far, only South Africa (Johannesburg and Cape Town) and France, Ile de la Réunion (St. Denis) had received specific indications by airlines wishing to operate the NLA, in particular the A380 due to enter commercial operation in the first quarter of 2006. It was, however, agreed that additional surveys must be conducted in order to obtain a true picture of future needs.

4.1.8 The group noted the impact of the NLAs on aerodromes' physical characteristics and highlighted the need, for medium- and/or long-term planning, to carry out appropriate studies to assess current airports' capabilities to accommodate NLAs.

4.1.9 The meeting also noted the evaluation on the impact on the RFF requirements, in particular the rescue requirements, in view of the higher passenger capacity and the full loading on two decks. Similarly, the meeting agreed that such aircraft would require a review of the AEP, bearing in mind the higher passenger capacity and therefore casualty volumes, to ensure the facilities were correctly adapted and adequate resources were allocated, including suitable disabled removal equipments.

4.1.10 The meeting also acknowledged that operation of the NLAs would have a significant impact on terminal building and associated facilities and services, both on the airside and the landside, and that airports that would receive NLAs should carry out a careful evaluation to balance the acceptable levels of service to be provided to passengers with the cost considerations. In view of the above, the meeting developed the following conclusion:

CONCLUSIONS 14/5: IMPACT OF NEW LARGER AEROPLANES ON AERODROMES IN THE AFI REGION

That:

a) States, assisted by ICAO, carry out a survey of the airlines' requirements in order to identify which airports are expected to receive operations of NLAs in the medium and long term. IATA should be requested to support and assist States in this regard;

b) States planning for new airports acquire, wherever possible, sufficient land for code 4F considerations and develop medium- and long-term master plans accordingly;

c) States continue to monitor developments in this matter in order to be aware of the appropriate Standards and Recommended Practices as developed and approved by ICAO for implementation;

d) States begin planning for appropriate training of RFFS personnel to meet NLA requirements;

e) airports identified to be considered for operation of the NLAs evaluate their infrastructure, services and human resources to determine what actions need to be taken to prepare them for these operations; and

f) States planning for the development of new airports consider the construction of some facilities required for code F aerodromes in the first phase (culverts, bridges, pavement foundations) in order to avoid demolitions and associated impact at a later date.

4.2 Communications

Review of the Report of the Sixth Meeting of the Communications Sub-Group

4.2.1 APIRG analyzed the report of the sixth meeting of the Communications Sub-Group (COM/SG/6), which was held in Nairobi, Kenya from 24 to 26 September 2002.

Critical analysis of the AFTN

4.2.2 The meeting was informed of the critical analysis of the current AFI aeronautical fixed telecommunications network (AFTN) undertaken by the Communications Sub-Group, and agreed that the following limiting factors have been affecting the network in the region:

a) non-implementation of the required AFTN main circuits in the AFI Plan, i.e. Algiers-Niamey, Brazzaville/Nairobi, Johannesburg/ASIA-PAC, Johannesburg/SAM and a number of tributary circuits;

b) low availability rates of the existing circuits, at times far below the minimum requirement of 97% (AFI/7 Recommendation 9/3 refers);

c) low transmission speed of the main circuits, i.e. Addis-Ababa/Nairobi, Addis-Ababa/MID, Addis-Ababa/Niamey, Alger/Casablanca, Cairo/MID, Cairo/Tunis, Johannesburg/Nairobi and Nairobi/ASIA;

d) insufficient use of bit-oriented protocols;

e) extensive use of analogue technology;

f) excessive transit times, compared to the requirements of 5 minutes (for high priority messages) and 10 minutes (other messages);

g) incompatibility between sub-regional satellite telecommunication networks utilizing four different space segments; and

h) human factors.

Remedial actions

4.2.3 Based on the above limiting factors, the meeting identified the critical circuits and agreed on the following remedial actions:

Improvement of the AFTN networks

4.2.4 States and organizations concerned should implement APIRG Conclusions 12/13 on the upgrading of the transmission speed, 13/10 on the introduction of bit-oriented protocols and 13/12 on the organization of seminars/workshops on the aeronautical telecommunication network (ATN), including data transmission concepts and techniques.

Use of public data networks (PDN) and of integrated services digital networks for the implementation or upgrading of the main circuits

4.2.5 Noting that some States had developed public data networks (PDNs) and integrated services digital networks (ISDNs), the meeting suggested that recourse to such networks might be considered by States: a) when performance, availability and the cost-effectiveness ratio are demonstrably equivalent or higher than those of a dedicated circuit ; b) to overcome the temporary disruption of dedicated circuits; and c) when traffic does not justify the use of a dedicated circuit. It requested the Secretariat to undertake a survey on the availability and usage costs of PDNs and ISDNs in the AFI Region.

4.2.6 The meeting recalled AFI Recommendation 14/20 favourable, *inter alia*, to the use of public networks, provided that the cost-effectiveness ratio was positive, and was of the opinion that, when practicable, the use of such networks could be envisaged by States having difficulties in implementing their AFTN circuits, such as the main circuits Algiers/Niamey, Brazzaville/Nairobi, Johannesburg/ASIA/PAC and Johannesburg/SAM, or in improving their transmission speed, e.g. that of the low-speed main circuits Addis-Ababa/Nairobi, Addis-Ababa/Niamey, Addis-Ababa/MID, Alger/Casablanca, Cairo/Nairobi, Cairo/Tunis, Johannesburg/Nairobi and Nairobi/ASIA. The following decision and conclusion were adopted accordingly:

DECISION 14/6: SURVEY ON AVAILABILITY AND USAGE COSTS OF PDNs AND ISDNs

That the Secretariat conduct a survey on the availability and usage costs of PDNs and ISDNs in the AFI Region.

CONCLUSION 14/7: USE OF PDNs and ISDNs TO MEET AFTN REQUIREMENTS

That, when practicable, States consider using PDNs or ISDNs:

a) when performance, availability and the cost-effectiveness ratio are demonstrably equivalent or higher than those of a dedicated circuit;

b) to overcome the temporary disruption of dedicated circuits; or

c) when traffic does not justify the use of a dedicated circuit.

Incorporation of an existing bilateral circuit into the AFTN plan

4.2.7 The meeting was informed that the bilateral Cairo-Tripoli AFTN circuit was performing satisfactorily and decided that it should be incorporated into the rationalized AFTN plan for the AFI Region.

Implementation of AFTN requirements and monitoring of AFTN transit times

4.2.8 The meeting agreed on the requirements which have to be taken into account when implementing or assessing the circuits of the AFI rationalized AFTN, as reproduced in Appendix C to this report. It also reiterated the need for States to establish quarterly statistics on AFTN transit times on 23 January, 23 April, 23 July and 23 October for an improved monitoring of performances, using the reporting format shown in Appendix D to this report. The following conclusions were adopted:

CONCLUSION 14/8: IMPLEMENTATION REQUIREMENTS FOR THE AFTN CIRCUITS

That, in implementing the circuits required under the AFI rationalized AFTN plan, States take due account of the requirements contained in Appendix C to this report.

CONCLUSION 14/9 : AFTN TRANSIT TIME STATISTICS

That, in order to allow for the regular assessment of AFTN performance, States/organizations establish quarterly transit time statistics for their AFTN centres on 23 January, 23 April, 23 July and 23 October, using the reporting format reproduced in Appendix D to this report.

Use of the Internet for non-time-critical applications

4.2.9 The meeting agreed that States experiencing difficulties in the implementation or maintenance of their communication facilities should use the Internet when it is available to exchange data in the context of non-time-critical applications, subject to agreements on an appropriate level of service, to be negotiated with the Internet service providers. Also, the meeting was informed that the Air Navigation Commission, at the tenth meeting of its 162nd Session on 4 March 2003, agreed to the establishment of a study group, to be known as the *Aviation Use of the Public Internet Study Group (AUPISG)*, to assist ICAO in undertaking the necessary studies and developing guidelines on the use of the public Internet for aeronautical applications, taking due account of reliability, accessibility, integrity and security concerns. The following conclusion was formulated:

CONCLUSION 14/10: USE OF THE INTERNET

That, pending the development of ICAO guidelines on the use of the public Internet for aeronautical applications, States having difficulties implementing or maintaining facilities required in the AFI AFTN rationalized plan consider using the Internet when it is available, in particular for the exchange of data in the context of non-time-critical applications (e.g. flight regularity messages or administrative messages).

Review of deficiencies affecting the aeronautical fixed telecommunication network (AFTN) in the AFI Region

4.2.10 The meeting reviewed the performance and implementation status of the AFTN in the AFI Region and updated the list of AFTN deficiencies. States' efforts to maintain or increase the level of availability of AFTN circuits were noted. The meeting was informed that South Africa had installed a VSAT station of the CAFSAT network at Johannesburg, and that implementation of the AFI/SAM AFS circuits was awaiting installation of matching CAFSAT stations in Argentina and Brazil.

Review of the implementation status and performance of the direct speech communications network (ATS/DS) in the AFI Region, identification of deficiencies and remedial action for their elimination

4.2.11 The meeting reviewed efforts undertaken for the implementation of ATS/DS circuits since its last meeting (APIRG/13). It noted that 12 ATS/DS circuits had been implemented by 11 States, while 3 States had not implemented any of the 10 ATS/DS required circuits. Out of a total of 205 ATS/DS circuits required in the AFI air navigation plan (ANP), there were 54 unimplemented circuits, or 26.6% of the required circuits.

4.2.12 The meeting also updated the list of ATS/DS deficiencies in the AFI Region.

Communications between the Accra, Brazzaville, Dakar Oceanic, Kano, Kinshasa and Luanda FIRs

4.2.13 The meeting observed that there were serious communication problems between the Accra, Brazzaville, Dakar Oceanic, Kano, Kinshasa and Luanda FIRs, and agreed on the need for an ATS/COM coordination meeting of all interested parties to be held as soon as possible under the aegis of ICAO. The coordination meeting will be asked in particular to address the use of VSAT technology on the basis of the proposals formulated by the COM/SG/6 Meeting aimed at fulfilling the aeronautical fixed service requirements between those FIRs. The following conclusion was adopted:

CONCLUSION 14/11: ATS/COM COORDINATION MEETING BETWEEN THE ACCRA, BRAZZAVILLE, DAKAR OCEANIC, KANO, KINSHASA AND LUANDA FIRs

That ICAO arrange urgently an ATS/COM coordination meeting between all interested parties from the Accra, Brazzaville, Dakar Oceanic, Kano, Kinshasa and Luanda FIRs.

Developments and integration of satellite aeronautical telecommunication networks

4.2.14 The meeting was informed of the latest developments related to satellite aeronautical telecommunication networks of concern to the AFI Region, including the full digitization of the AFISNET network in Ghana, Nigeria, ASECNA and Roberts FIR, the incorporation of Burundi into the SADC network by ATNS, South Africa and ASECNA, the interconnection of the AFISNET and

SADC networks which allowed for the implementation of the main AFTN circuit between Brazzaville and Johannesburg, and a number of tributary circuits, the incorporation of South Africa into the CAFSAT network, and the good progress made as far as the NAFISAT project was concerned, as called for by APIRG Conclusion 13/15 and in which 9 out of 16 concerned States had already confirmed their participation.

4.2.15 The meeting recalled APIRG Conclusion 13/11 on the integration of sub-regional satellite aeronautical telecommunications networks (VSAT networks). On the basis of the information submitted by INTELSAT to the meeting on the IS 10-02@359° satellite and the advantages offered in terms of coverage and bandwidth, the group agreed on the consolidation of sub-regional VSAT networks on the said satellite, which should be operational in May 2004. Accordingly, it invited anew the VSAT networks' managing administrations and organizations to urgently arrange a meeting with INTELSAT, under the auspices of ICAO, in order to adopt a coordinated transition plan and related activities. The following conclusion was adopted:

CONCLUSION 14/12: PLANNING MEETING ON THE INTEGRATION OF SUB-REGIONAL VSAT NETWORKS

That, as a matter of urgency, a meeting between Intelsat and sub-regional VSAT networks' managing administrations and organizations be organized, under the aegis of ICAO, in order to finalize issues related to their integration and to agree on a coordinated transition plan.

Need for performance requirements relating to leased ATN services

4.2.16 The meeting noted that States increasingly called upon providers of commercial communication services and acknowledged the need to define a set of performance specifications and quality of service criteria of the networks for the benefit of ATS providers and aircraft operators when leasing ATN services (at sub-network or end-to-end levels) from communication service providers. It also noted that the establishment of the specifications was part of the work programme of the ICAO Panel on Aeronautical Communications (ACP).

Routing architecture and description of the ATN ground-to-ground network

4.2.17 The meeting noted that the work of the Communications Sub-Group on the aeronautical telecommunication network (ATN) was being pursued. It agreed that ATN implementation in the AFI Region might necessitate a major planning of the transition from the AFTN, and that it was necessary to have available precise information on the planning by States of ATN ground-to-ground applications (AIDC and AMHS). The following decision and conclusion were adopted:

DECISION 14/13: IMPLEMENTATION OF ATS INTER-FACILITY DATA COMMUNICATIONS (AIDC)

That the APIRG ATS/AIS/SAR Sub-Group collect the necessary information on schedules of implementation by States of ATS inter-facility data communications (AIDC).

CONCLUSION 14/14: INFORMATION ON THE PLANNING BY STATES OF THE IMPLEMENTATION OF THE ATS MESSAGE HANDLING SYSTEM (AMHS)

That the ICAO Secretariat conduct a survey on States plans for the implementation of the AMHS application to be supported by the ATN infrastructure.

Review of the implementation status and performance of the Aeronautical Mobile Service (AMS)

4.2.18 The meeting reviewed the implementation status and performance of the aeronautical mobile service in the AFI Region and updated the list of the AMS deficiencies.

Extension of the VHF coverage

4.2.19 The meeting acknowledged the efforts recently undertaken by States in the Antananarivo, Mauritius and Niamey FIRs and the plans which were being examined in the Brazzaville, Dakar Oceanic, Dar-es-Salaam, Entebbe, Luanda, Lusaka, Lilongwe, N'djamena and Niamey FIRs, aimed at extending the VHF coverage to ATS routes via remote VHF stations, in accordance with AFI/7 Recommendation 5/12. The meeting was also informed of the action being taken on the implementation of a VHF remote station from the Dakar Oceanic FIR to be installed in Cape Verde, and encouraged the States concerned to expedite the implementation process. The meeting was of the view that the diligent implementation of the existing projects would translate into significant progress and a major improvement to the AMS communications. It also noted that, upon a request from the Communications Sub-Group, the ICAO Secretariat was coordinating a survey aimed at publishing a chart on VHF coverage in the region.

4.2.20 In addition, the meeting reminded participants that States should coordinate the implementation of new aeronautical stations with ICAO Regional Offices in accordance with established procedures, in order to ensure that geographical separation criteria are duly taken into account.

Investigations on the deficiencies reported by operators

4.2.21 The attention of the meeting was drawn to the need for States to take action on the reports concerning communication deficiencies received from users and to nominate focal points in that respect. It also invited States to issue NOTAMs whenever a telecommunication facility is not fully operational.

IFALPA survey on the aeronautical mobile service communications

4.2.22 The meeting was appraised of a positive input made by IFALPA through a large-scale survey carried out in 2001 – 2002 on the aeronautical mobile service (AMS) communications (VHF, HF). It noted that the survey highlighted a relative reduction in the use of HF by some FIRs.

Aeronautical radio navigation service (ARNS)

4.2.23 The meeting acknowledged the progress made in the aeronautical radio navigation service (ARNS) since the last meeting (APIRG/13) (20 facilities had been implemented) and updated the list of deficiencies in the field.

Preparation for the WRC-2003 of the ITU

4.2.24 The meeting was informed of the preparatory work undertaken in the region in view of the World Radiocommunication Conference of the ITU in 2003 (WRC-2003) (Geneva, Switzerland, 9 June – 4 July 2003). It agreed that States should nominate focal points responsible for the coordination of subjects related to the WRCs of the ITU, although it acknowledged the fact that some of them had already done so; it was favourable to the establishment of a permanent liaison with State telecommunication regulatory authorities. The group also acknowledged the need to convene seminars on the radiofrequency spectrum regulations and management of the radio frequency spectrum in accordance with WRC-2000 Resolution 20. The following conclusions were adopted:

CONCLUSION 14/15: FOCAL POINTS FOR THE PREPARATION OF ITU WRCS

That States that have not already done so designate focal points from within their administrations for the preparation of ITU WRCs.

CONCLUSION 14/16: NEED FOR A PERMANENT LIAISON WITH STATE TELECOMMUNICATION REGULATORY AUTHORITIES

That Civil Aviation Administrations maintain a permanent liaison with State telecommunication regulatory authorities to build bridges and to facilitate the preparation of ITU WRCs.

CONCLUSION 14/17: SEMINARS ON THE REGULATIONS AND MANAGEMENT OF THE RADIO FREQUENCY SPECTRUM

That ICAO explore ways and means to implement ITU WRC-2000 Resolution 20 on the organization of seminars on the radiofrequency spectrum regulations and management.

Future work programme and composition of the Communications Sub-Group

4.2.25 The meeting adopted the future work programme and composition of the Communications Sub-group as proposed by COM/SG/6. The COM/SG work programme should also include the monitoring of the work being carried out by MIDANPIRG on the Egyptian NAVISAT project in coordination with the CNS/ATM/IC/SG, the harmonization of maintenance units working methods and coordination procedures, and the monitoring of aeronautical telecommunications.

4.3 Air traffic management

Review of the report of the seventh meeting of the ATS/AIS/SAR Sub-Group (ATS/AIS/SAR/SG/7)

4.3.1 The meeting was apprised on the report of the seventh ATS/AIS/SAR Sub-Group meeting (ATS/AIS/SAR/SG/7) which was held in ICAO ESAF Office, Nairobi from 14 to 18 October 2002. It considered the following major items.

Review of the ATS route network

4.3.2 The ATS/AIS/SAR Sub-Group considered in detail the overall status of implementation of the basic ATS route network, including RNAV routes contained in the ICAO AFI Air Navigation Plan (Doc 7474/27), Table ATS 1, Charts ATS 2 and ATS 3 in order to:

a) identify additional route requirements;
b) identify route segments requiring realignment;
c) identify routes which can be deleted from the air navigation plan (ANP); and
d) identify the non-implemented routes and establish target date(s) for their implementation.

4.3.3 The sub-group identified the requirement for two new ATS routes, namely:

- Geneina - Port Sudan (RNAV); and
- Cotonou - Malabo

4.3.4 The sub-group also prepared an implementation table for all the non-implemented routes and agreed that States be requested to implement those routes not later than the AIRAC date of 10 June 2004. In view of the foregoing, the following conclusions were formulated:

CONCLUSION 14/18: AMENDMENT TO AFI ANP TABLE ATS 1

That ICAO AFI ANP Table ATS 1 be amended to include a requirement for ATS routes:

a) Geneina - Port Sudan (RNAV); and
b) Cotonou - Malabo.

CONCLUSION 14/19: IMPLEMENTATION OF ATS ROUTES, INCLUDING RNAV ROUTES

That States that have not yet done so implement, as soon as possible and in any case not later than the AIRAC date of 10 June 2004, ATS routes in their FIR as shown in Appendix E to this report.

Implementation of air traffic control (ATC) service

4.3.5 The meeting noted with concern that the status of implementation of the area control service has been very slow and it accordingly considered necessary to extend the implementation target date to AIRAC 10 June 2004. Based on the foregoing, meeting formulated the following conclusion:

CONCLUSION 14/20: IMPLEMENTATION OF ATC SERVICE

That States that have not yet done so implement ATC service along all ATS routes contained in Table ATS 1 of the AFI Air Navigation Plan as soon as possible, but in any case not later than the AIRAC date of 10 June 2004 in the spirit of AFI/7 Recommendation 5/21.

Review of the report of the first meeting of the RVSM/RNAV/RNP Task Force

4.3.6 The meeting was apprised of the report of the RVSM/RNAV/RNP/TF meeting of 17 – 18 June 2002. This report was reviewed by the ATS AIS/SAR/SG at its seventh meeting; among the items covered was the development of an AFI RVSM/RNAV/RNP implementation strategy/action plan. The meeting was informed that, due to limited time available, it was not possible to complete all the tasks assigned. It was recalled that implementation of RVSM in AFI should be taken in a pragmatic manner, as there were other preceding associated CNS/ATM implementation issues which needed to be addressed, namely, the improvement of ATS/DS circuits, VHF coverage, ACAS, etc. It was also noted that RVSM had however been or was planned to be implemented in the interface areas of the other adjacent regions, i.e. the EUR/SAM Corridor (24 January 2002) and Egypt and the rest of the MID Region (23 November 2003). It was considered that, under the framework of the RVSM/RNAV/RNP TF, other selected airspaces could be identified. The meeting strongly felt that, before the introduction of RVSM in the continental AFI airspaces, due regard should be given to the development of an AFI RVSM/RNA/RNP implementation strategy/action plan.

4.3.7 With regard to APIRG Conclusion 13/85 (Initial implementation of RVSM in the AFI Region), the meeting recognized that the Air Navigation Commission had noted the conclusion on the understanding that an evaluation of the requirement for RVSM and an implementation strategy — including a formal risk assessment and the establishment of a safety management process — would be made available to ICAO in order to ensure that an acceptable level of safety can be achieved and maintained. In view of the foregoing, the following conclusion was formulated:

CONCLUSION 14/21: IMPLEMENTATION OF RVSM IN THE AFI REGION

That:

a) the RVSM Implementation Task Force finalize the development of a comprehensive implementation strategy/action plan, taking into consideration work so far done and that of the expert groups (RGSP Panel, NATSPG, EUROCONTROL, SAT meeting and MECMA), as well as the material at Appendix F, as soon as possible and not later than 31 December 2003;

b) the implementation strategy/action plan be circulated to States and international organizations for comments, which should be received not later than 31 March 2004;

c) States do their utmost to implement RVSM in selected airspaces by the AIRAC cycle date of January 2005, concurrently with the CAR/SAM Region; and

d) a coordination meeting be convened in September 2004 to make a go/no-go decision regarding the implementation of RVSM.

Review of the report of the second meeting of the Airspace Management Task Force (ASM/TF 2)

4.3.8 The meeting noted that the ATS/AIS/SAR Sub-Group had reviewed the ASM TF/2 Meeting Report concerning the ATS airspace organization in the region, covering in the agenda the following: airspace organization, establishment and identification of significant reporting points and the allocation of five-letter name code designators to the relevant significant points, implementation of 10-minute longitudinal separation and development of Chart ATM 1 for the FASID. It was noted that there was progress in the identification and designation of the five-letter name codes at airway crossing points. The meeting noted that the problem of implementation of RNAV route UM114 had not yet been resolved. The meeting was informed that the annual AFI Incident Analysis Working Group did not find any incident that could be attributed to the implementation of 10-minute longitudinal separation. Most incidents were attributed to inadequate ATS procedures or inefficient fixed or mobile communication. It was noted that the improved VHF coverage contributed to enhanced safety and capacity. The ATS coordination meetings hosted and held by ICAO Regional Offices for the improvement of air traffic service coordination between FIRs were noted with satisfaction. In view of the foregoing, the meeting adopted the following conclusions:

CONCLUSION 14/22: IMPLEMENTATION OF RNAV ROUTE UM114

That the Ghana ATS Authority implement and delegate to Kano/Lagos ATS Authorities the portion of UM114 within its airspace.

CONCLUSION 14/23: DELINEATION OF FIR BOUNDARIES

That ICAO convene a meeting between Algeria and Tunisia to harmonize the publication, in their respective AIPs, of the delineation of the FIR boundaries pursuant to AFI/7 Recommendations 5/1 and 5/9 and APIRG Conclusion 13/26.

CONCLUSION 14/24: IMPLEMENTATION OF 10-MINUTE LONGITUDINAL SEPARATION MINIMUM

That:

a) States that have not already done so urgently implement the 10-minute longitudinal separation minimum, taking into cognisance the relevant requirements in APIRG Conclusion 3/43 and the provisions of ICAO PANS-ATM (Doc 4444/501) and AFI CNS/ATM System Plan (Doc.003);

b) ICAO amend Doc 7030 to harmonize with the provisions in the PANS-ATM (Doc 4444/501); and

c) ICAO, through its regional offices, ensure adequate coordination with the neighbouring regions that have not yet implemented the 10-minute longitudinal separation minimum, in particular the ASIA Region.

CONCLUSION 14/25: DEVELOPMENT OF CHART ATM 1 (PART V – ATM OF THE AFI FASID)

That the SSR code allotment plan (Chart ATM 1 for Part V – ATM FASID) as contained in Appendix G to this report be published in the AFI FASID.

CONCLUSION 14/26: CLASSIFICATION OF AIRSPACES

That ICAO expedite the revision of the current airspace classification of airspaces with a view to reducing and simplifying them for uniform application.

Review of the report of the second meeting of the AIS Automation Task Force (AIS/MAP/TF/2)

4.3.9 The meeting was apprised of the report of the second meeting of the AIS/MAP Automation Task Force, which was held in Nairobi from 25 to 27 September 2002. The meeting noted with concern that the ICAO provisions relating to AIS/MAP, namely the production of the AIP in the new format, publication of WGS-84 information charts and production of World Aeronautical Chart-ICAO 1:1 000 000 have remained a problem in some States. The meeting was informed that assistance should be given to such States through a special implementation project (SIP). It was thus concluded:

CONCLUSION 14/27: DEVELOPMENT OF AIS/MAP SIP

That ICAO initiate a special implementation project (SIP) to assist States with the production of the AIP in the new format, publication of WGS-84 information charts and publication of World Aeronautical Chart-ICAO 1:1 000 000.

Review of the implementation of ICAO requirements in the field of search and rescue (SAR)

4.3.10 The meeting was apprised of the status of implementation of ICAO provisions relating to search and rescue services. It noted with concern that most of these provisions had remained unimplemented for many years and it was of the view that States should now be sensitized to the need to take remedial action. Furthermore, the meeting reiterated that assistance should be provided by ICAO in order to improve the provision of search and rescue services in the region. It was thus concluded:

CONCLUSION 14/28: ORGANIZATION OF REGIONAL SAR SEMINARS/WORKSHOPS

That ICAO organize regional SAR seminars/workshops in order to sensitize States to the need to take remedial action to implement the ICAO provisions relating to SAR.

4.3.11 The meeting noted with appreciation that the ICAO/AFCAC project had been initiated to address these issues and that the States concerned should continue to support this initiative.

Outstanding issues

4.3.12 The meeting noted that the relevant operational issues related to CNS/ATM have fully been considered by the CNS/ATM/IC/SG.

4.3.13 The meeting noted the provisions relating to, among others, ATS contingency planning, ATS incident reporting and analysis and ATS auditing and proficiency maintenance have been adequately addressed. However, it was deemed necessary that the ICAO Regional Offices concerned continue their efforts in urging the States to implement those provisions.

ATM safety management systems

4.3.14 The meeting recalled that the ICAO provisions in Annex 11 and the PANS-ATM (Doc 4444) relating to ATM safety management would become applicable on 27 November 2003. It was recalled that this subject would be adequately addressed by the Eleventh Air Navigation Conference. The meeting then developed the following conclusion:

CONCLUSION 14/29: ATM SAFETY MANAGEMENT SYSTEMS

That, in order to enhance safety, security and efficiency in air navigation services, States that have not done so expedite the implementation of relevant ICAO provisions relating to safety management systems, taking into account the provisions of Annex 11, 2.26 and the PANS-ATM (Doc 4444).

"Single Sky" concept in Air Traffic Management in the AFI Region

4.3.15 The meeting was apprised of the outcome of the first meeting of the Africa-Indian Ocean ATS providers (Dakar, 26 – 28 November 2002) and the Almadies (Dakar) Declaration adopted by AFI ATS providers. It particularly considered the concept of a "single sky" for Africa to be achieved through a gradual process including the following steps:

a) harmonization of air traffic management systems and procedures, including human resource and training plans and programmes;

b) rationalization of areas of service;

c) establishment of cooperative arrangements between ATS providers;

d) eventual consolidation of cooperative models for the provision of air traffic services, taking into consideration cost/benefit aspects, elimination of discontinuities in quality of service and system availability and the need to maintain a flexible system, responsive to user requirements.

4.3.16 In this connexion, it was recalled that the Eleventh AN Conference would be addressing as part of its work a global ATM operational concept which may one day include the "single sky" policy. The meeting was of the opinion that this subject should be pursued cautiously and that ICAO should be requested to provide appropriate guidance. The meeting was informed that, in line with use of "single sky", it would be prudent to use the existing ICAO terminology, i.e. "global air traffic management". In view of these discussions it was concluded:

CONCLUSION 14/30: "SINGLE SKY" CONCEPT IN AIR TRAFFIC MANAGEMENT IN THE AFI REGION

That :

a) the vision of the AFI Region on the "single sky" be aligned with ICAO concept of "global air traffic management"; and

b) ICAO develop the definition of the "single sky" concept and provide to the States of the AFI Region guidance material and the orientation for a progressive implementation of the "single sky" in Africa, taking into account the global ATM operational concept.

4.3.17 The meeting noted with concern that the implementation of ICAO provisions relating to the carriage and operation of ACAS and SSR transponders continues to pose a problem to some States and that may compromise safety. It was considered necessary to provide guidance to States relating to these provisions. The meeting was informed that ICAO was pursuing this issue and that sufficient guidelines would be provided in due course. In view of the foregoing, it was concluded :

CONCLUSION 14/31: CARRIAGE AND OPERATION OF AIRBORNE COLLISION AVOIDANCE SYSTEM (ACAS) AND PRESSURE-ALTITUDE REPORTING TRANSPONDERS

That States that have not done so expedite the implementation of mandatory carriage and operation of ACAS II and carriage and operation of pressure-altitude reporting transponders by aircraft in conformity with ICAO Annex 6, Part I, paragraphs 6.18 and 6.19, Annex 6, Part II, paragraph 6.13.1, Annex 10, Vol. IV, Doc 8168, Volume I, Part VIII and the PANS-ATM (Doc 4444), Chapter 8, paragraph 8.5.

ATS coordination meeting

4.3.18 In the course of the discussions, Sudan requested that ICAO organize an ATS coordination meeting with adjacent States to facilitate the establishment of ATS Letters of Agreement.

COSPAS-SARSAT system

4.3.19 Referring to decisions of the COSPAS-SARSAT Council on the phase-out of the processing by COSPAS-SARSAT of emergency beacons transmitting on 121.5 MHz, the AFCAC delegation called the attention of the meeting to the consequences of such a decision on SAR services in Africa. AFCAC further stressed the need for AFI States to take all the necessary actions in order to ensure a smooth transition towards the new COSPAS-SARSAT alerting system. It was noted that the system would be based exclusively on 406 MHz emergency beacons as of 2009.

4.4 Aeronautical meteorology

Review of the Report of the Sixth Meeting of the Meteorology Sub-Group (MET/SG/6)

Introduction

4.4.1 Under this agenda item, APIRG reviewed the report of the MET/SG/6 held in Nairobi from 21 to 23 May 2002.

WAFS in the AFI Region

4.4.2 The meeting noted the follow-up action by ICAO and the SADIS Provider State concerning APIRG Conclusion 13/63 on the training on the use of GRIB and BUFR codes. It also noted that two seminars had been organized for AFI States by the Dakar and Nairobi Regional Offices, in March 2002 and February 2003, respectively.

4.4.3 The meeting was also of the view that there was a need for States to acquire the latest version of workstation software relating to the use of GRIB and BUFR codes. The following conclusion was formulated:

CONCLUSION 14/32: NEED FOR LATEST VERSION OF WORKSTATION SOFTWARE

That States in the AFI Region be encouraged to acquire the latest version of workstation software from their respective workstation suppliers for the use of GRIB and BUFR codes.

4.4.4 The meeting was informed of the transfer of the responsibilities of the regional area forecast centre (RAFC) Dakar, to the world area forecast centre (WAFC) London, effective since 2 January 2002, and the transfer of the responsibilities of RAFC Nairobi, effective 13 May 2002. The meeting noted the closure of all AFI RAFCs pursuant to APIRG Conclusion 12/33.

4.4.5 The meeting also reviewed the membership list of AFI States to the SADISPOSG and noted that the members are: Côte d'Ivoire, Kenya, Senegal, South Africa and ASECNA. The mandatory cost recovery of the SADIS service was also discussed and the following conclusion concerning the principles for the AFI representation in the SADISOPSG was formulated:

CONCLUSION 14/33: COMPOSITION OF THE SADIS OPERATIONS GROUP (SADISOPSG)

That:

a) members of the SADISOPSG be appointed only from States that are users of the service and hence participate in the mandatory cost-recovery scheme; and

b) in accordance with this principle, the AFI members in the SADISOPSG be Côte d'Ivoire, Kenya, Senegal, South Africa and ASECNA.

Follow-up of the SADISOPSG/6 Meeting

4.4.6 The SADISOPSG/6 meeting held in Paris 28 May to 1 June 2001 had adopted EUR OPMET update procedures. Since these procedures had proved to be efficient, the meeting was invited to propose that similar procedures be developed and introduced in the AFI Region. The following conclusion was therefore formulated:

CONCLUSION 14/34: APPLICATION OF EUR OPMET UPDATE PROCEDURES IN THE AFI REGION

That a procedure similar to the EUR OPMET update procedure be developed and introduced in the AFI Region.

SADIS Strategic Assessment Tables

4.4.7 In accordance with APIRG Decision 12/35, the SADIS strategic assessment tables for the AFI Region have been updated by the meeting and sent to the SADIS Provider State as required.

AFI Meteorological Bulletins Exchange (AMBEX) Scheme

4.4.8 The meeting noted that, following the approval by the ICAO Council and, by delegated authority, the Air Navigation Commission (ANC), of APIRG Conclusion 13/66, the Secretariat has revised the AMBEX Handbook and introduced METAR exchanges, as well as general improvements to the content of the handbook. The meeting agreed to the changes introduced and the following decision was formulated:

DECISION 14/35: INTRODUCTION OF METARs IN AMBEX EXCHANGES

That States in the AFI Region be invited to implement METAR exchanges as contained in the AMBEX Handbook (6th edition).

4.4.9 The meeting discussed the requirements for trend forecasts and aerodrome forecasts (TAFs) of Port-Gentil, Gabon. As METARs and trend forecasts issued by the MET centre at Port-Gentil are required by users, the meeting decided to included this centre in the AMBEX exchanges and in FASID Table MET 1A for trend forecast requirements. The following decision was formulated:

DECISION 14/36: INCLUSION OF PORT-GENTIL IN AMBEX EXCHANGES AND FASID TABLE MET 1A FOR TREND FORECASTS

That the aerodrome of Port-Gentil be included in AMBEX exchanges and in AFI FASID Table MET 1A.

Provision of tropical cyclone and volcanic ash advisories for the AFI Region

4.4.10 The meeting recognized that volcanic ash and tropical cyclones continue to be a threat to aircraft operations and agreed that States should endeavour to have personnel continually trained on the requirements of Annex 3 SARPs and associated procedures and ensure that communication facilities are operational at all times.

Deficiencies in the MET field

4.4.11 The meeting reviewed and updated the list of deficiencies based on the uniform methodology approved by the Council for the identification, assessing, tracking and reporting of deficiencies of air navigation systems in the AFI Region.

New challenges facing AFI meteorological services

4.4.12 The meeting discussed the major challenges facing the majority of the AFI meteorological services, in particular autonomous management, cost recovery and the introduction of quality assurance.

4.4.13 The meeting noted that efforts were being made to overcome the difficulties and so face the challenges. In fact, the meeting was aware that the First Meeting of Directors General of Civil Aviation (DGCA/1) for Western and Central Africa, held in Abuja, Nigeria from 19 to 21 March 2002, had pointed out these difficulties and proposed appropriate solutions for AFI meteorological services. These solutions are related to cost recovery and the establishment of autonomous entities for the management of meteorological services. Along the lines of the DGCA/1 Meeting recommendations, the meeting formulated the following conclusions:

CONCLUSION 14/37: C O S T R E C O V E R Y O F A E R O N A U T I C A L METEOROLOGICAL SERVICES

That, when establishing a cost-recovery system for aeronautical meteorological services, States in the AFI Region use relevant ICAO and WMO documents and cooperate with airports, air navigation services and other aeronautical partners, including users.

CONCLUSION 14/38: SEMINARS ON COST RECOVERY OF AERONAUTICAL METEOROLOGICAL SERVICES

That WMO, in coordination with ICAO, organize seminars on cost recovery of aeronautical meteorological services for States requiring them.

CONCLUSION 14/39: AUTONOMOUS ENTITIES AND METEOROLOGICAL SERVICE FOR AIR NAVIGATION

That States in the AFI Region, when considering the establishment of autonomous entities to manage their air navigation services, take due account of the provision of meteorological service to air navigation.

4.4.14 The meeting emphasized the need for adequate and highly trained aviation meteorology personnel for efficient management of AFI aeronautical meteorological services in consideration of quality management. It was recognized that aeronautical meteorological services should stress quality assurance. The following conclusion was thus formulated:

CONCLUSION 14/40: QUALITY MANAGEMENT

That States in the AFI Region give priority to implementation of a quality management system (ISO 9000 series of standards) in order to improve meteorological service for international air navigation.

Manpower survey in the MET field

4.4.15 As a follow-up of Recommendation 10/26 of LIM AFI (COM/MET/RAC), 1988 and Recommendation 14/17 of AFI/7, 1997 concerning the study of training available for aeronautical meteorological personnel in the AFI Region, it was proposed that the Dakar and Nairobi Regional Offices carry out the study within the limit of their available budgets. The following conclusion was formulated :

CONCLUSION 14/41: STUDY OF TRAINING AVAILABLE FOR AERONAUTICAL METEOROLOGICAL PERSONNEL IN THE AFI REGION

That, as a follow-up action on recommendation 10/26 of LIM AFI (COM/MET/RAC) 1988 and recommendation 14/17 of AFI/7, 1997, the Dakar and Nairobi Regional Offices carry out a study of training available for aeronautical meteorological personnel in the AFI Region.

4.4.16 The DGCA/1 Meeting had emphasized the importance of the seminars on ATS/MET/pilot coordination organized in the AFI Region and called for such seminars to be pursued. The APIRG meeting supported the call for the continuation of such seminars. The following conclusion was formulated:

CONCLUSION 14/42: SEMINARS ON ATS/MET/PILOT COORDINATION

That ICAO, in coordination with WMO, organize seminars on ATS/MET/pilot coordination for the AFI Region.

4.4.17 The meeting discussed the development of the meteorology component of the AFI CNS/ATM implementation plan and decided to create a task force to deal with this important subject. The following decision was formulated:

DECISION 14/43: METEOROLOGY CHAPTER FOR THE AFI CNS/ATM IMPLEMENTATION

That a task force, including experts in the ATM, CNS and MET fields from Kenya, Nigeria, Senegal, South Africa, United Kingdom, ASECNA and IATA, be established to develop the meteorology component of the AFI CNS/ATM implementation plan along the lines given at Appendix H to this report.

Follow-up action by ASECNA

4.4.18 The meeting noted the follow-up actions carried out by ASECNA on various meteorological subjects, in particular the AMBEX, WAFS and SADIS, for which ASECNA could provide to interested AFI States maintenance and training on SADIS operation.

4.5 CNS/ATM planning/implementation

Review of the Report of the Fourth Meeting of the CNS/ATM/IC Sub-Group

4.5.1 The APIRG reviewed the report of the Fourth meeting of the CNS/ATM Implementation Coordination Sub-Group (CNS/ATM/IC/SG/4), which was held in Dakar from 10 to 14 March 2003.

Consideration of the NAVISAT satellite system

4.5.2 The meeting considered a status report of the CNS/ATM/IC Sub-Group on its review of the NAVISAT multi-mission satellite system proposed by Egypt, and was apprised of a proposal for the establishment by APIRG of a working group on the NAVISAT. The group was advised that MIDANPIRG had established a working group on the NAVISAT. It agreed that there was no need to establish a new contributory body and noted that the CNS/ATM/IC Sub-Group would monitor and review, with the assistance of the Communications Sub-Group, the work being carried out by MIDANPIRG.

CNS/ATM implementation activities in the AFI Region

4.5.3 The meeting noted that RNP 10 and RVSM had been implemented in the EUR/SAM Corridor, and that there were plans to achieve implementation of RVSM in the South Atlantic simultaneously with the CAR/SAM Region in January 2005, as well as implementation of random RNAV routing.

4.5.4 South Africa informed the meeting on the establishment and *modus operandi* of its National CNS/ATM Committee in accordance with APIRG Conclusion 13/74 – *Establishment of national CNS/ATM bodies and designation of focal points of contact*. APIRG further noted that 23 States had designated their CNS/ATM focal points and that the Secretariat had recently followed up this item with the remaining States.

Status of implementation of the AFI CNS/ATM Plan

4.5.5 APIRG reviewed and updated the status of implementation of the AFI CNS/ATM Plan in all ten areas of routing. The meeting made the following remarks:

a) VHF coverage is generally above 70%, reflecting the on-going efforts in several States. This could be further improved if projects in FIRs Kinshasa, Lilongwe, Luanda and Lusaka were implemented;

b) by March 2003, only 17 States had published the AIC on the mandatory carriage of ACAS II; and

c) area control service in upper airspaces was relatively good, reflecting the recent advances in VHF coverage.

Surveillance Plan for the AFI Region

4.5.6 The meeting reviewed the initial results of the study assigned to ASECNA and IATA on the development of criteria to be used for the categorization of TMAs and aerodromes. The proposed criteria define three categories for TMAs and aerodromes, respectively, and the associated surveillance.

4.5.7 Following discussions, the meeting suggested that the sub-group further consider the role of primary radar in defining the surveillance facilities in TMAs.

4.5.8 ASECNA provided to the meeting information on a surveillance mean using multi-lateration of SSR transponder emissions being developed in Europe. APIRG took note for further consideration by the CNS/ATM/IC/SG.

GNSS implementation matters

4.5.9 The meeting was briefed on the implementation of RNAV (GNSS) approach and landing procedures in South Africa, and of B-RNAV in Tunisia. ASECNA made a report on trials of APV 1 approaches at Dakar and on the implementation of GNSS-based non-precision approaches in its member States.

4.5.10 France informed APIRG of its evaluation of several types of GNSS approaches and expressed its support for the implementation of an SBAS system in the AFI Region.

4.5.11 IATA and Cape Verde provided information on their respective projects on RNAV (GNSS) procedures.

4.5.12 The US Delegate stressed the enormous benefits that GPS can provide to AFI States, especially those with limited or non-existent navigation infrastructure. He called attention to the agreements made by delegates at the ICAO GNSS Planning Meeting in Nairobi in November 2002

and requested input from and participation by the States and international organizations in preparing for a follow-up meeting/training seminar in Dakar later in 2003.

4.5.13 The following conclusion was adopted:

CONCLUSION 14/44: USE OF GNSS FROM EN-ROUTE TO NPA

That States authorize the use of GNSS from en-route to NPA and develop the relevant procedures.

GNSS test bed trials

4.5.14 The group discussed the implementation of the GNSS test bed in the AFI Region as well as the implementation of the GNSS strategy.

4.5.15 The meeting noted that ASECNA, in accordance with APIRG Conclusion 12/48 and on behalf of the AFI Region, had submitted in April 2002, through the regional organizations (ECOWAS, CEMAC, COMESA and SADC), a project document for funding of GNSS implementation from contributions of the Africa/Caribbean/Pacific - European Commission Cotonou Agreement. In this regard, the delegate representing the European Commission and the European Space Agency informed the meeting of their willingness to support the GNSS implementation in the AFI Region.

4.5.16 Furthermore, the meeting was informed that the European Space Agency has made available to the AFI test bed programme four reference stations to be used successively in Central, Southern and Eastern Africa.

4.5.17 The APV 1 tests in Central Africa were started just prior to the meeting, with flights done by ASECNA in Nigeria, Gabon, Equatorial Guinea and Cameroon. Delegates participating in APIRG/14 were given an opportunity to fly in the test aircraft. The meeting was informed of the preparatory activities for the installation of the test bed in Southern Africa. Sudan expressed its interest in supporting the test bed in Eastern Africa. The meeting encouraged States to participate in the test bed programme and adopted the following conclusion:

CONCLUSION 14/45: STATES' SUPPORT FOR THE FUNDING OF GNSS IMPLEMENTATION

That States:

a) request their regional organizations (CEMAC, COMESA, ECOWAS, SADC) to support the funding request submitted to the European Union (EU) for GNSS implementation in the AFI Region; and

b) provide full support of the activities related to the implementation of the GNSS test bed in the AFI Region.

Implementation of the AFI GNSS strategy

4.5.18 The meeting then considered the implementation of the AFI GNSS strategy. In this regard, participants were of the view that the next phase was for the AFI Region to proceed to an operational SBAS system. The meeting then formulated the following conclusion:

CONCLUSION 14/46: IMPLEMENTATION OF A GNSS SBAS OPERATIONAL SYSTEM

That:

a) a GNSS SBAS operational system be implemented in the AFI Region as an extension of the EGNOS, starting with the deployment of a pre-operational system; and

b) in view of the above, States take the necessary steps for the publication of APV GNSS SBAS-based procedures.

DECISION 14/47: GNSS IMPLEMENTATION TASK FORCE

That:

a) the GNSS Study Group be renamed the GNSS Implementation Task Force; and

b) the work programme of the GNSS Implementation Task Force include the implementation of the GNSS SBAS operational system (Conclusion 14/42).

4.5.19 The meeting reviewed and adopted a proposal from the CNS/ATM/IC Sub-Group to amend Table CNS 3 of the AFI FASID with the introduction of GNSS planning elements.

4.5.20 APIRG was informed of the outcome of the thirteenth meeting of the Obstacle Clearance Panel (OCP/13) regarding the development of PANS-OPS provisions for operations based on GNSS. The meeting adopted the following conclusions:

CONCLUSION 14/48: ASSISTANCE WITH GNSS PROCEDURES DESIGN

That ICAO contact EUROCONTROL, the FAA, the French DGAC, ASECNA, ATNS and the Dutch RLD in order to:

a) continue their support and organize seminars /workshops on the PANS-OPS provisions for GNSS-based operations; and

b) provide assistance to States with GNSS-based approach procedures design.

CONCLUSION 14/49: GNSS LEGISLATION

That States in the AFI Region be reminded of the need to review their national regulations to include provisions relating to aircraft and operator approval/certification, as well as operating procedures for GNSS en-route and non–precision approach (NPA) operations.

Review and update of the AFI CNS/ATM Implementation Plan (Doc 003)

4.5.21 The meeting reviewed proposals for amending the AFI CNS/ATM Implementation Plan (Doc 003). In doing so, the group agreed to reduce the number of areas of routing in the plan from ten to six. The routing areas are:

Routing areas	Description
AR1	Europe - South Atlantic (EUR/SAT) oceanic routes
AR2	Atlantic Ocean interface between AFI, NAT and SAM
AR3	Europe - Eastern Africa routes including the area of the Indian Ocean (EUR/AFI East)
AR4	Europe - Southern Africa routes (EUR/AFI South) including Continental Southern Africa routes
AR5	Continental Western Africa routes including coastal areas
AR6	Trans-Indian Ocean area interface with ASIA/PAC Region

4.5.22 The meeting agreed to three implementation coordination groups as follows:

a) SAT Group: AR1and AR2
b) Continental AFI ICG: AR3, AR4 and AR5
c) Indian Ocean ICG: AR6.

4.5.23 The meeting further agreed that the existing AFI/EUR interface meetings should continue and provide the CNS/ATM/IC Sub-Group with their inputs.

4.5.24 The meeting agreed to amend Doc 003 to reflect the changes in the definition and number of routing areas. It also agreed that the timelines at Appendix F of the current edition of Doc 003 should be published separately as Volume II of Doc 003 and be entitled *Status of Implementation of the AFI CNS/ATM Plan*. The following conclusion was adopted:

CONCLUSION 14/50: UPDATE OF THE AFI CNS/ATM IMPLEMENTATION PLAN (DOC 003)

That:

a) The AFI CNS/ATM Implementation Plan (Doc 003) be amended to reflect the changes in the definition and number of areas of routing; and

b) Appendix F of the current edition of Doc 003 be published separately as Volume II of Doc 003 entitled *Status of Implementation of the AFI CNS/ATM Plan*.

Note: The amended Doc 003 will be posted to the ICAO website (www.icao.int).

4.6 Summary of the activities of the AFI Traffic Forecast Group (AFI TFG)

4.6.1 The meeting was informed of the terms of reference for the AFI TFG and noted that the group had met three times since November 1998, during which it had deliberated and consolidated its traffic forecasting responsibilities. APIRG also considered and approved the future work programme with an amendment to include an item on aircraft equipage.

4.7 ANP/FASID

4.7.1 The meeting was presented with amendments to the AFI Basic ANP for approval by APIRG. These amendments relate to the CNS and MET fields and will be posted to the ICAO web site. In the CNS field, consideration was given to the inclusion of various AFTN circuits and GNSS elements. In the MET field, the proposed amendments take into account Amendment 72 to Annex 3 and the fact that the responsibilities of all regional area forecast centres in the AFI Region have been transferred to the world area forecast centre in London. The following conclusion was formulated:

CONCLUSION 14/51: AMENDMENT TO AFI ANP/FASID DOCUMENTS

That amendments proposed in the CNS and MET fields be reflected in the AFI ANP/FASID documents and posted to ICAO's web site (www.icao.int).

4.8 ICAO Universal Security Audit Programme (USAP)

The group welcomed the information that a significant amount of preparatory work required for the establishment and implementation of the ICAO Universal Security Audit Programme (USAP) has been completed by ICAO and that the programme has been successfully launched with an audit that took place in Uganda in November 2002. The group noted that several AVSEC auditor training courses have been planned.

CONCLUSION 14/52: ICAO UNIVERSAL SECURITY AUDIT PROGRAMME (USAP)

That AFI States nominate suitable candidates for training, and certification including short-term secondments to conduct USAP audits.

4.8.1 *Management of air navigation services*

4.8.1.1 The meeting noted the analysis made by ASECNA related to types of airspace and methods of their management in the AFI Region:

a) airspace management by a single State;
b) airspace management involving many States; and
c) airspace management involving many FIRS.

4.8.1.2 The analysis underlined the preceding associated conditions for establishing a model of cooperative airspace management that could lead to the implementation of the single sky concept.

4.8.2 *Aviation Safety Committee*

4.8.2.1 APIRG took action on APIRG Conclusion 13/91 regarding the establishment of an aviation safety committee in Africa tasked with mobilizing additional efforts to overcome deficiencies and improve air safety in the AFI Region. For that purpose APIRG reviewed a proposal for the establishment of a mechanism for air navigation safety instead of one single body for the whole region. The mechanism favoured a sub-regional approach based on already existing institutions.

4.8.2.2 The meeting noted that some air safety committees already existed in other regions, but was of the opinion that it was preferable to design a mechanism better suited to the realities of the AFI Region for the sake of cost-efficiency. It appeared to the group that the meetings of the Directors General of Civil Aviation which had recently become formalized would be the best forum for the establishment of the mechanism, under the aegis of ICAO. The DGCA meetings would consistently and regularly place on their agendas an item related to the overcoming of deficiencies, and thus would be tasked with the air navigation safety mechanism. They would thus serve as a catalyst for efforts undertaken by ICAO, States, international organizations and financial entities in order to give rise to synergy which would be favourable to the prompt solution of identified deficiencies.

4.8.2.3 The meeting also took into consideration the action taken by States and regional and international organizations, such as IATA, which established a team for the strengthening of safety to address the deficiencies related to ICAO Annexes 1, 6 and 8 and a group on ATS incidents, which represented a complementary mechanism to the one envisaged.

4.8.2.4 Finally, the meeting recommended that, with respect to the operation of a prospective mechanism, sincerity and transparency should prevail in the identification and elimination of

deficiencies and that emphasis be laid on systems analysis, preferably to coercive or legal action. The following conclusion was therefore adopted:

CONCLUSION 14/53: ESTABLISHMENT OF A MECHANISM FOR AIR NAVIGATION SAFETY IN THE AFI REGION

That, acknowledging the need for the reduction and elimination of deficiencies in the AFI Region:

a) ICAO establish a mechanism for air navigation safety in Africa;

b) the mechanism come within the scope of the formalized meetings of the Directors General of Civil Aviation of the region and be placed under the aegis of ICAO;

c) the DGCA meetings consistently and regularly place on their agendas an item on the identification, updating and resolution of deficiencies; and

d) the DGCA meetings be tasked with the air navigation safety mechanism, including the following :

i) to evaluate, validate, monitor and follow-up those deficiencies in the AFI Region which are classified as urgent (U) and develop appropriate remedial action to be taken. To this effect, the DGCAs will receive from ICAO the updated lists of urgent (U) deficiencies well in advance and from stakeholders through the ICAO Regional Offices;

ii) to promote the timely corrective actions to be taken by concerned States at the highest level in order to resolve specific deficiencies in their respective areas of responsibility; and

iii) to assist, through the relevant ICAO Regional Office, an individual State, a group of States or an executing body in identifying resources to resolve an urgent deficiency through advocacy of relevant high-level government officials, regional institutions, bilateral/multilateral cooperation and/or donor organizations.

4.8.3 *Eleventh Air Navigation Conference (AN-Conf./11)*

4.8.3.1 APIRG noted that the Council of ICAO had approved the convening of the Eleventh Air Navigation Conference in Montreal from 22 September to 3 October 2003. In relation to Agenda Item 1.3 of the conference — "The need for a global air navigation plan" — APIRG noted that the Secretariat was currently developing an electronic data base that would contain ATS routes and facilities/services as reflected in the Basic ANP and FASID. The group did not support the option of having one global air navigation plan/process instead of the present practice of several regional plans/processes.

4.8.3.2 AFCAC invited a number of States and organizations to attend a working group meeting aimed at drafting working papers on items of high importance to the AFI Region. States were invited to provide input to the members of the working group. With the importance of the conference in mind, the group drafted the following decision.

DECISION 14/54: ELEVENTH AIR NAVIGATION CONFERENCE

That States in the AFI Region:

a) take the necessary steps to attend the Eleventh Air Navigation Conference (AN-Conf/11); and

b) support AFCAC in its coordination effort with regard to the development of working papers to be presented to the conference.

4.8.4 *Safety and quality management systems*

4.8.4.1 The meeting reviewed a proposal on the need to introduce a safety management system (SMS) and a quality management system (QMS) in the air navigation plan. It acknowledged the fact that the need arose from the information contained in various ICAO documents concerning the improvement of safety, and noted that some States and service providers had already incorporated the concepts into their management; the practice would have to be extended to the whole region and to all safety-related areas. However, the meeting indicated that, as the subject was new to States, ICAO should assist in the familiarization and sensitization to the concept through the convening of regional seminars and workshops. The meeting finally agreed on the establishment of a reduced task force to provide States in the region with guidance material and model safety and quality management systems. It thus developed the following conclusion:

CONCLUSION 14/55: ESTABLISHMENT OF A SAFETY AND QUALITY MANAGEMENT TASK FORCE

That :

a) ICAO establish a task force on a safety management system (SMS) and quality management system (QMS) in the AFI Region;

b) the task force be responsible for providing guidance material and models to States;

c) the following States and organization be members of the task force:

- **Cameroon (Coordinator);**
- **Nigeria;**
- **Senegal;**
- **South Africa;**
- **Tunisia; and**
- **ASECNA; and**

d) ICAO arrange for regional seminars/workshops on the safety and quality management systems.

AGENDA ITEM 5: DEFICIENCIES IN THE AIR NAVIGATION FIELD IN THE AFI REGION

5.1 General

5.1.1 The meeting noted with appreciation that the deficiencies had been listed by State and by field, as requested at APIRG/13. The meeting further agreed that States should take the necessary action to review the list and advise the regional offices of any changes.

5.1.2 The meeting agreed that the critical deficiencies should be identified separately and brought to the attention of the Air Navigation Commission and Council for immediate action. These deficiencies were reflected in the list of AFI deficiencies in the Air Navigation field and posted to the ICAO web site (www.icao.int).

5.2 Deficiencies in the AOP field

5.2.1 In the AOP field, following the establishment of more and more autonomous airport authorities in the AFI region, significant progress had been made in solving deficiencies requiring infrastructure rehabilitation, such as runways and taxiways, aerodrome fencing, airfield lighting, power supply, etc., as can be noted through the completed or ongoing works at Abidjan (Côte d'Ivoire), Addis Ababa (Ethiopia), Bamako (Mali), Lusaka (Zambia), Dar-es-Salaam (Tanzania) Djerba and Tunis (Tunisia), Douala (Cameroon), Kano and Lagos (Nigeria), N'djamena (Chad) and Ouagadougou (Burkina Faso). Bird hazard committees have been created, bird hazard control

programmes established and scaring equipment acquired in many airports prone to bird strikes (Entebbe, Ouagadougou, N'Djamena, Lome, Dakar, Bamako, etc.). More and more exercises are organized with ICAO Regional Offices' assistance with a view to validating or updating emergency plans (Niamey, Cotonou, Abidjan, Lome, etc.). During discussions on deficiencies, the meeting acknowledged that one of the reasons for inadequate implementation of corrective actions was the fact that some of the autonomous authorities did not have the necessary decision-making autonomy. Consequently, the meeting developed the following conclusion:

CONCLUSION 14/56: ESTABLISHMENT OF AUTONOMOUS AUTHORITIES

That, when autonomous authorities are established, governments ensure that they are given management, financial and decision-making autonomy in order to facilitate the allocation and fast mobilization of resources for the elimination of air navigation systems deficiencies.

5.3 Deficiencies in the Aeronautical Telecommunications field

5.3.1 The following table shows the progress achieved in the elimination of aeronautical telecommunications deficiencies in the AFI Region since APIRG/11 (1998), and the tangible efforts that have been made and are still to be made by States in this respect. The updated list of deficiencies in this field is available on the ICAO website (www.icao.int).

APIRG Meetings	Number of Deficiencies			
	AFTN	ATS/DS	AMS	ARNS
APIRG/11 (1998)	31	59	19	75
APIRG/12 (1999)	20	45	14	64
APIRG/13 (2001)	14	53	14	60
APIRG/14 (2003)	10	50	9	40

5.3.2 The meeting formulated the following conclusion:

CONCLUSION 14/57: ELIMINATION OF DEFICIENCIES IN THE FIELD OF AERONAUTICAL TELECOMMUNICATIONS

That, as a matter of urgency, States and organizations mentioned in the list of deficiencies affecting aeronautical fixed services (AFS), aeronautical mobile services (AMS) and aeronautical radio navigation services (ARNS) implement available solutions for the elimination of reported deficiencies.

Cooperative approach to management and maintenance of aeronautical telecommunications infrastructure

5.3.3 The meeting emphasized the necessity for harmonized maintenance working methods and coordination procedures in order to improve efficiency in addressing deficiencies affecting aeronautical telecommunications, and confirmed the need for a cooperative approach between States in this field. It therefore urged States to refer to LIM AFI Conclusion 10/13 (1988) and AFI/7 Recommendations 14/3 (sub-paragraphs e) and i)), 14/4 and 14/8 whenever they implement cooperative structures. The meeting also considered communications monitoring forms developed by ASECNA and decided that they should be further analyzed by the Communications Sub-Group. It also requested that the harmonization of maintenance units' working methods and coordination procedures and the monitoring of aeronautical telecommunication facilities be included in the Communications Sub-Group's work programme.

5.4 Deficiencies in the ATS/AIS/SAR field

5.4.1 While reviewing the deficiencies in the ATS/AIS/SAR field, the meeting noted the advance in the implementation of the ICAO/AFCAC technical cooperation programme in the field of SAR. In particular, the meeting appreciated the start of the SAR evaluation programme, as well as the setting up of training sessions. Furthermore, the meeting noted with satisfaction that the programme made provision for training sessions to be organized in English and French during the second half of 2003. It was further noted that a seminar on the funding of SAR services was scheduled for 2004. The following conclusion was then developed:

CONCLUSION 14/58: ICAO/AFCAC SEARCH AND RESCUE TECHNICAL COOPERATION PROGRAMME

That States:

a) support AFCAC and ICAO in their efforts to improve search and rescue (SAR) services in the AFI Region;

b) attend the SAR training sessions organized in the framework of the project; and

c) participate in the SAR evaluation programme.

AGENDA ITEM 6: HUMAN FACTORS AND MANPOWER PLANNING

6.1 The group noted the progress to date on the human resource planning and training needs, as well as a special implementation project approved by the ICAO Council to conduct a Human Resource Planning Seminar in the Eastern and Southern African Region during the fourth quarter of 2003. With regard to the proposal to initiate a regional training planning process through a contributory body to the AFI Planning and Implementation Regional Group, it was felt that a continued lack of specialized manpower and resources in the region may hinder the progress in this regard. The group invited IATA and AFCAC to participate in the future work on this important

subject. In addition, APIRG requested ICAO to provide results of the regional training trial in the CAR/SAM Region for future consideration.

AGENDA ITEM 7: INTERREGIONAL COORDINATION

Informal meetings for the improvement of air traffic services over the South Atlantic (SAT)

7.1 The meeting noted with appreciation the activities and tangible achievements reached since APIRG/13 through the informal meetings for the improvement of air traffic services over the South Atlantic (EUR/SAM Corridor) (SAT/10, Dakar, 10 – 13 December 2001 and SAT/11, Johannesburg, 17 – 21 February 2003). It particularly noted the successful implementation of RNP 10 in October 2001 and RVSM in January 2002, and the integration of the CAFSAT network nodes in Morocco (Casablanca FIR, 2003), Senegal (Dakar oceanic FIR, 2001), South Africa (Johannesburg oceanic FIR, 2003) and Cape Verde (Sal oceanic FIR, 2001). Attention was drawn to the need to continue RNP 10 and RVSM post-implementation safety assessments on a regular basis in order to consolidate these significant achievements.

Coordination between the AFI and EUR Regions

7.2 The meeting was informed of the work undertaken on the "Single Sky" concept in the European Region and the potential consequences it could entail for the ATS route network at the EUR/AFI interface area. Recalling the experience gained from the implementation of RVSM and on-line data interchange (OLDI) standards in Europe, the meeting recommended close coordination between the AFI and EUR Regions on this particular issue of a Single European Sky.

7.3 After an exchange of views, the meeting agreed on formulated the following conclusion :

CONCLUSION 14/59: NEED FOR CONTINUED SUPPORT TO INTERREGIONAL COORDINATION

That States and ICAO continue to provide their support to the coordination mechanism established between the regions in order to consolidate the achievements and to increase efficiency in addressing interface issues.

AGENDA ITEM 8: FIFTH AIR TRANSPORT CONFERENCE (MARCH 2003)

8.1 APIRG noted that the Fifth Air Transport Conference produced a wide-ranging and comprehensive package of results which should help to guide States and ICAO in the liberalization process. It was recalled that the conference reached definitive results on nearly all its agenda items and did not request a major programme of further policy and guidance developments. The group noted that the conference had recognized that economic regulation of air transport was a rapidly evolving subject area and, given that the cycle of recent air transport conferences had been every eight to ten years, there would likely be specific issues emerging for attention by ICAO in the

interim. It was noted that the conference had proposed an active programme of monitoring and exchange of information with States, together with a reorientation of the Organization's work on economic regulation, specifically to liberalization. It was agreed that this programme would entail considerable effort.

CONCLUSION 14/60: FIFTH AIR TRANSPORT CONFERENCE

That States note the outcome of the Fifth Air Transport Conference and implement the conclusions as soon as practical.

AGENDA ITEM 9 : TECHNICAL CO-OPERATION PROGRAMME IN AFRICA

9.1 The group noted that six project documents had been prepared on the basis of existing cooperative groups of States. In Western and Central Africa, the first Cooperative Development of Operational Safety and Continuing Airworthiness Programme (COSCAP) project document was signed at the end of February 2003 for a group of eight States. Two more project proposals had been endorsed at the ministerial level, for likely commencement this year. In Eastern and Southern Africa, the East African Community (EAC) was adopting the COSCAP approach and had approved the draft project at a Ministers' meeting in March 2003. With regard to Southern Africa Development Community (SADC), a COSCAP project had been endorsed by SADC's Civil Aviation Committee at its recent meeting in May 2003. Where their implementation was under way, the COSCAP projects had proven to be successful mechanisms through which a considerable amount of training was offered, practical and harmonized tools developed and improved oversight procedures and techniques introduced. In this connexion, the meeting developed the following conclusion:

CONCLUSION14/61: COOPERATIVE DEVELOPMENT OF OPERATIONAL SAFETY AND CONTINUING AIRWORTHINESS PROGRAMME (COSCAP) MECHANISM

That States in Africa that have not done so consider making use of the Cooperative Development of Operational Safety and Continuing Airworthiness Programme (COSCAP) mechanism to address the deficiencies highlighted in the ICAO Universal Safety Oversight Audit Programme (USOAP) and to ensure sustainability of achievements.

International Financial Facility for Aviation Safety (IFFAS)

9.2 APIRG was presented with an update on the International Financial Facility for Aviation Safety (IFFAS) and noted that it would operate within the existing ICAO legal regime and with complete independence from ICAO's Regular Programme Budget, deriving its resources from voluntary contributions made by ICAO Contracting States and international organizations. APIRG noted that only Universal Safety Oversight Audit Programme (USOAP)-identified deficiencies, and no deficiencies identified by PIRGs ,would be eligible for assistance from IFFAS.

AGENDA ITEM 10: TERMS OF REFERENCE AND WORKING ARRANGEMENTS OF APIRG

Increasing the efficiency and effectiveness of PIRGS

10.1 APIRG noted the concerns expressed with regard to the role and activities of planning and implementation regional groups (PIRGs) and considered it necessary to revise the terms of reference of APIRG (Appendix I). To be more cost-effective, APIRG was convened approximately every 18 to 24 months. With regard to the size of the APIRG report, the meeting noted that the ANC, after the review of the GREPECAS/11 Report, had recommended to Council that it would be more valuable to receive the complete report, including all the appendices and guidance material, for its better appreciation.

10.2 To increase the effectiveness of APIRG, it was agreed to restructure and reduce the number of subgroups to ATM, CNS, MET and AOP. In addition, and in line with the development of the air traffic management concept at the global level, it was proposed that the MET component of ATM be addressed by the ATM Sub-Group; a decision on this will be make at a later date.

10.3 It was recalled that the APIRG reviews the Air Navigation Plan for the entire AFI Region. With regard to deficiencies, and their recurrence, the group recalled that the APIRG identifies and maintains lists of reported deficiencies and that it was the ultimate responsibility of States to take the remedial action required to eliminate deficiencies and not the responsibility of the PIRG.

10.4 Accordingly, the meeting formulated the following conclusion:

CONCLUSION 14/62: REVISED TERMS OF REFERENCE OF APIRG

That:

a) the proposed revised terms of reference of the AFI Planning and Implementation Regional Group (APIRG), contained in Appendix I to the APIRG/14 Report, be endorsed;

b) the APIRG sub-groups be restructured and reduced to four, namely: ATM, CNS, MET and AOP; and

c) the APIRG Handbook be amended accordingly.

10.5 The terms of reference, work programmes and composition of the current APIRG subsidiary bodies are given at the appendices as follows:

AOP/SG	:	Appendix J
COM/SG	:	Appendix K
ATS/AIS/SAR/SG	:	Appendix L
MET/SG	:	Appendix M

CNS/ATM/IC/SG : Appendix N

Membership of APIRG and its subsidiary bodies

10.6 The group was informed that applications had been received by the Secretary of APIRG from Chad and Sudan to be members of the group. The following conclusion was adopted:

CONCLUSION 14/63: MEMBERSHIP OF APIRG

That the ICAO Council approve the applications of Chad and Sudan for membership in APIRG.

DECISION 14/64: MEMBERSHIP TO APIRG SUBSIDIARY BODIES

That the memberships of Sudan in the COM Sub-Group, of the World Meteorological Organization (WMO) in the MET Sub-Group and Ghana and Zimbabwe in the ATS/AIS/SAR Sub-Group be approved.

AGENDA ITEM 11: ANY OTHER BUSINESS

11.1 The meeting expressed concern at the significant volume of APIRG documentation which generates excessive paperwork and extra work for the Secretariat and host State for the reproduction and distribution of working papers. The meeting was of the opinion that it would be necessary to enhance APIRG working methods in order to speed up and facilitate its work by simplifying the distribution of documents. In this connection, it indicated that, in future, APIRG members should be equipped with computer tools/equipment and Internet facilities that would enable them to have access to documents from the ICAO web site. In any event, the appendices to working papers from sub-groups, which constituted the most bulky documentation, would not be distributed during the meeting. Consequently, the following conclusion was developed:

CONCLUSION 14/65: FACILITATING OF APIRG WORK

That the concerned administrations provide APIRG members with the necessary computer tools and Internet facilities to access ICAO's web site for an efficient work participation.

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Fourteenth Meeting of the AFI Planning and Implementation Regional Group (APIRG/14)
Quartozième réunion du Groupe régional AFI de planification et de mise en œuvre (APIRG/14)
Yaoundé, Cameroon, 23 – 27 June/Juin 2003

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APIRG 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**		
13/1	4-3	ANC	**Bird hazard reduction** Noted the conclusion and requested the Secretary General to hold these workshops at regular intervals.
13/2	4-3	ANC	**New Larger Aeroplanes Task Force (NLA/TF)** Noted the conclusion and requested the Secretary General to monitor related developments in other regions to ensure harmonization.
13/4	4-5	ANC	**AFI AFTN circuits availability** Noted the conclusion and requested the Secretary General to urge States to implement the remaining circuits and to take remedial action to eliminate deficiencies of main AFTN circuits.
13/10	4-7	ANC	**Introduction of bit-oriented protocols in the AFI Region** Noted the conclusion in relation to the implementation of ATN.
13/13	4-8	ANC	**Use of SITA network for AFTN circuits requirements** Noted the conclusion and requested the Secretary General to task the regional offices in the AFI Region to identify practical and economical means of implementing the AFTN circuits such as VSAT.
13/14	4-9	ANC	**Interconnection between VSAT networks AFTN and ATS/DS connectivity** Noted the conclusion.
13/17	4-11	ANC	**Improvement of the ATS/DS network** Noted the conclusion and requested the Secretary General to task the regional offices in the AFI Region to identify means of implementing ATS/DS networks.

Report Reference		Action by Council/ANC	Proposed Action
Concl./Dec. No.	**Page**		
13/18	4-12	ANC	**Introduction of 25 kHz VHF channel spacing in the AFI Region** Noted the conclusion.
13/21	4-12	ANC	**Congestion of HF frequencies in AFI Region** Noted the conclusion and its relationship with Conclusion 13/13.
13/23	4-13	C	**Support for ICAO's position at ITU-WRC 2003** Noted the conclusion and requested the Secretary General to accord high priority to ICAO's role in safeguarding the aeronautical interest at WRC-2003.
13/25	4-15	ANC	**Target date for implementation of ATS routes** Noted the conclusion and requested the Secretary General to urge States to implement as soon as possible.
13/31	4-16	C	**Implementation of area control service** Noted the conclusion and requested the Secretary General to urge States which have not yet done so to implement area control service as a priority.
13/32	4-17	ANC	**Allocation of ICAO five-letter name-code designators for the ATS route crossing points** Noted the conclusion and urged States to render it high priority, with the assistance of the regional offices as necessary.
13/33	4-18	C	**ACAS II transition period and exemption process in the AFI Region** Noted the conclusion and requested the Secretary General to designate a regional office to coordinate the exemptions during the transition period.

Report Reference		Action by Council/ANC	Proposed Action
Concl./Dec. No.	**Page**		
13/34	4-18	ANC	**Carriage and operation of pressure-altitude reporting SSR transponders** Noted that the envisaged amendment to the AFI SUPPs was at variance with the existing requirement in Annex 6, Part I, paragraph 6.19, as well as Part II, paragraph 6.13.1, and should be aligned accordingly.
13/35	4-18	ANC	**AIC on the use of SSR transponders** Noted that the proposed amendment to the AFI regional supplementary procedures to modify the requirements for pressure altitude reporting transponders was at variance with global provisions in Annex 6, Part I, paragraph 6.19, as well as Part II, paragraph 6.13.1, and should be aligned accordingly.
13/37	4-18	ANC	**Publication of ACAS and SSR transponder requirements in national legislation** Noted the conclusion and its relationship with Conclusion 13/35.
13/38	4-19	ANC	**Publication of a draft AIC on ACAS II Implementation** Noted the conclusion and its relationship with Conclusion 13/35.
13/51	4-24	ANC	**Publication in plain language of NOTAMs issued in languages other than English** Noted the conclusion and requested the Secretary General to develop a proposal to amend Annex 15 accordingly.
13/63	4-30	ANC	**Training on the use of GRIB and BUFR codes** Noted the conclusion and requested the Secretary General to arrange the seminars where necessary.
13/67	4-31	ANC	**OPMET data banks at Pretoria and Dakar** Noted the conclusion in relation to the improvement of OPMET exchanges in the region.

Report Reference		Action by Council/ANC	Proposed Action
Concl./Dec. No.	**Page**		
13/68	4-31	ANC	**Better communication for volcano observatories** Noted the conclusion.
13/70	4-33	ANC	**Coordination between ATS providers and users in the implementation of CNS/ATM** Noted the conclusion and requested the Secretary General to accord high priority to ICAO's role in the coordination between the ATS providers and users.
13/71	4-33	ANC	**Amendment to AFI SUPPs (Doc 7030)** Noted the conclusion and requested the Secretariat to study the feasibility of reducing separation, considering the deficiencies in the areas of navigation aids and communications.
13/72	4-33	ANC	**Step-by-step approach to CNS/ATM systems implementation** Noted the conclusion and requested the Secretary General to assist States as necessary.
13/74	4-34	ANC	**Establishment of national CNS/ATM bodies and designation of focal points of contact** Noted the conclusion and requested the Secretary General to bring the *National Plan for CNS/ATM Systems* (Circular 278) to the attention of relevant States.
13/76	4-34	ANC	**Promulgation of national airborne collision avoidance system (ACAS) policies** Noted the conclusion and requested the Secretary General to assist States as necessary.
13/78	4-35	ANC	**En-route aeronautical surveillance plan for the AFI Region** Noted the conclusion and instructed the Secretariat to take the necessary action.
13/79	4-35	ANC	**AFI/EUR GNSS Test Bed Working Group** Noted the conclusion and requested the Secretary General to urge States to participate.

Report Reference		Action by Council/ANC	Proposed Action
Concl./Dec. No.	**Page**		
13/81	4-36	ANC	**Involvement of multi-modal transport organizations in the AFI GNSS test bed trials** Noted the conclusion and its relation to GNSS implementation.
13/83	4-36	C	**Assistance for GNSS procedures design** Noted the conclusion and requested the Secretary General to contact the organizations for assistance, to investigate the possibility of expanding the SADC/IATA GNSS procedures project further and to encourage States to implement GNSS procedures.
13/84	4-38	ANC	**AFI GNSS strategy** Noted the conclusion and requested the Secretary General to monitor related developments in other regions to ensure harmonization.
13/85	4-39	ANC	**Initial implementation of RVSM in the AFI Region** Noted the conclusion on the understanding that an evaluation of the requirement for RVSM and 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.
13/86	4-39	ANC	**Seminars/workshops on RVSM and RNAV/RNP** Noted the conclusion and requested the Secretary General to take the necessary action to arrange seminars and workshops in AFI on RVSM.

Report Reference		Action by Council/ANC	Proposed Action
Concl./Dec. No.	**Page**		
13/90	4-41	C	**AFI Basic ANP and FASID documents** a) Noted the conclusion and requested the Secretary General to take the necessary action. b) Noted the conclusion and requested the Secretary General to take the necessary action to post all relevant PIRG documentation on the ICAO web site. c) Requested the Secretary General to present specific proposals on a working format of regional plans. d) Noted the conclusion and requested the Secretary General to bring it to the attention of States.
13/91	4-42	ANC	**Establishment of an aviation safety board** Noted the conclusion and requested the Secretary General to initiate a review in consultation with States and international organizations.
13/96	5-2	C	**Format of list of shortcomings and deficiencies** Noted the conclusion and requested the Secretary General to monitor related developments in other regions to ensure harmonization.
13/99	7-1	ANC	**Follow-up action on ALLPIRG/4 conclusions** Noted the conclusion and instructed the Secretariat to take action accordingly.
13/100	10-1	C	**Membership of the APIRG** Approved the conclusion.
13/101	10-1	ANC	**Membership to APIRG subsidiary bodies** Noted the decision.
13/102	11-1	ANC	**Submission of information and working papers (IPs and WPs) to APIRG** Approved the conclusion.

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AFI RATIONALIZED AFTN – IMPLEMENTATION REQUIREMENTS/RSFTA RATIONALISE – BESOINS DE MISE EN OEUVRE

Explanation of the table/Explication du tableau

Col. No.	Explanations
1	Terminal I and Terminal II. Each circuit appears once in the Table./*Terminal I et Terminal II. Chaque circuit n'apparaît qu'une fois dans le Tableau*
2	Category of circuit/*Catégorie de circuit*: M - main circuit/*circuit principal* T - tributary circuit/*circuit tributaire* S - AFTN station circuit/*circuit de station RSFTA*
3 and 8	Circuit type/*Type de circuit*: NIL - not implemented/*Non mis en oeuvre* LTT/A - landline teletypewriter, analogue (eg cable, microwave/*circuit télétype terrestre, analogue (i.e. câble, faisceau hertzien)* LTT/D - landline teletypewriter, digital (e.g. cable, microwave/*circuit télétype terrestre, numérique (i.e. câble, faisceau hertzien)* LDD/A - landline data circuit, analogue (e.g. cable, microwave/*circuit de données terrestre, analogue (i.e. câble, faisceau hertzien)* LDD/D - landline data circuit, digital (e.g. cable, microwave/*circuit de données terrestre, numérique (i.e. câble, faisceau hertzien)* RTT - radio teletype circuit (HF)/*circuit radiotélétype (HF)* SAT/A/D - satellite circuit /a digital or/d digital/*circuit par satellite /a analogue ou /d numérique*
4 and 9	Circuit signalling speed/Rapidité *de modulation du circuit*
5 and 10	Circuit protocol / *Protocol de circuit* NONE: No protocol/*Aucun protocol* X.25: ITU X.25 protocol/*Protocol X.25 de l'UIT*
6 and 11	Data transfer code (syntax)/*Code alphabétique* ITA-2: International Telegragh Alphabet No.2/*Alphabet international No.2* IA-5: International Alphabet No.5/*Alphabet international No.5*
7 and 12	Aeronautical network served (AFTN or ATN)/*Réseau aéronautique desservi (RSFTA ou ATN)*
13	Implementation target date/*Date cible pour la mise en oeuvre*
14	Remarks/*Observations*

AFI AFTN RATIONALIZED PLAN - IMPLEMENTATION REQUIREMENTS

Terminal I/ Terminal II	Circuit category/ Catégorie de circuit	Current/Existant					Planned/Prévu					Target date of implem.entation/ Date cible de mise en oeuvre	Remarks/ Observations
		Circuit type/ Type de circuit	Modulation rate/ Rapidité de modulation (bps)	Prot.	Code	Network / Réseau	Circuit type/ Type de circuit	Modulation rate/ Rapidité de modulation (bps)	Prot.	Code	Network / Réseau		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
ADDIS ABABA													Addis centre can accommodate X25
Asmara	T	NIL					SAT/D	1200	X25	ITA-2	AFTN		NAFISAT
Djibouti	T	LTT	50	NONE	ITA-2	AFTN	SAT/D	1200	X25	ITA-2	AFTN		NAFISAT
Khartoum	T	NIL					SAT/D	1200	X25	ITA-2	AFTN		NAFISAT
Nairobi	M	SAT/A	50	NONE	ITA-2	AFTN	SAT/D	1200	X25	IA-5	AFTN		ISDN to explore
Niamey	M	SAT/A	50	TTY	ITA-2	AFTN	SAT/D	1200	X25	IA-5	AFTN		
MID (Jeddah)	M	SAT/A	50	A	ITA-2	AFTN	SAT/D	1200	X.25	IA-5	AFTN		ISDN to explore
ALGER													
Casablanca	M	SAT/A	50	NONE	ITA-2	AFTN	LTT/A	1200	X.25	IA-5	AFTN		
Niamey	M	NIL				AFTN	LTT	1200	X.25	IA-5	AFTN		
Tunis	M	SAT/A	1200		ITA-2	AFTN	SAT/D	1200	X.25	IA-5	AFTN		

Terminal I/ Terminal II	Circuit category/ Catégorie de circuit	Current/Existant					Planned/Prévu					Target date of implem.entation/ Date cible de mise en oeuvre	Remarks/ Observations
		Circuit type/ Type de circuit	Modulation rate/ Rapidité de modulation (bps)	Prot.	Code	Network / Réseau	Circuit type/ Type de circuit	Modulation rate/ Rapidité de modulation (bps)	Prot.	Code	Network / Réseau		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
EUR (Bordeaux)	M	SAT/A	1200		ITA-2	AFTN	SAT/D	1200	X.25	IA-5	AFTN		
BRAZZAVILLE													
Bangui	T	SAT/D	1200	X.25	ITA-2	AFTN	SAT/D	1200	X25	ITA-2	AFTN		
Dakar	M	SAT/D	2400	X.25	IA-5	AFTN	SAT/D	2400	X-25	IA-5	AFTN		
Douala	T	SAT/D	1200	X.25	ITA-2	AFTN	SAT/D	1200	X.25	ITA-2	AFTN		
Kinshasa	T	MW/V	50	TTY	ITA-2	AFTN	LTT/D	50	TTY	ITA-2	AFTN		
Johannesburg	M	SAT/D	1200	TTY	ITA-2	AFTN	SAT/D	1200	X.25	IA-5	AFTN		
Libreville	T	SAT/D	2400	X25	IA-5	AFTN	SAT/D	2400	X.25	IA-5	AFTN		
Luanda	T	NIL					SAT/D	1200	X.25	ITA-2	AFTN		
Nairobi	M	NIL					SAT/D	1200	X.25	IA-5	AFTN		Nairobi/ Dakar/ Brazzaville
N'Djamena	T	SAT/D	2400	X25	IA-5	AFTN	SAT/D	2400	X.25	IA-5	AFTN		
Niamey	M	SAT/D	2400	X.25	IA-5	AFTN	SAT/D	2400	X.25	IA-5	AFTN		

Terminal I/ Terminal II	Circuit category/ Catégorie de circuit	Current/Existant					Planned/Prévu					Target date of implem.entation/ Date cible de mise en oeuvre	Remarks/ Observations
		Circuit type/ Type de circuit	Modulation rate/ Rapidité de modulation (bps)	Prot.	Code	Network / Réseau	Circuit type/ Type de circuit	Modulation rate/ Rapidité de modulation (bps)	Prot.	Code	Network / Réseau		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Sao Tome	T	NIL				AFTN	SAT/D	1200	X.25	ITA-2	AFTN		
CAIRO													
Khartoum	T	SAT/A	50	TTY	ITA-2	AFTN	SAT/D	300	TTY	ITA-2	AFTN		To coordinate with Khartoum
Nairobi	M	SAT/A	50	TTY	ITA-2	AFTN	SAT/D	1200	X.25	IA-5	AFTN		9600 bps proposed by Egypt
Tunis	M	SAT/A	100	NONE	ITA-2	AFTN	SAT/D	1200	X.25	IA-5	AFTN		CIDIN
EUR(Athens)	M	SAT/D	9600	CIDIN	IA-5	AFTN	SAT/D	9600	CIDIN	IA-5	AFTN		
MID(Beirut)	M	SAT/D	9600	CIDIN	IA-5	AFTN	SAT/D	9600	CIDIN	IA-5	AFTN		
MID(Jeddah)	M	SAT/D	9600	CIDIN	IA-5	AFTN	SAT/D	9600	CIDIN	IA-5	AFTN		
CASABLANCA													
Dakar	M	LTT/A	2X75		ITA-2	AFTN	SAT/D	2400	TTY/FR	IA-5	AFTN		
Las Palmas	T	LTT/A	50		ITA-2	AFTN	LTT/A	50	CIDIN	IA-5	AFTN		
EUR(Madrid)	M	SAT/A	4800 50+1X200	CIDIN AFTN	IA-5	AFTN	SAT/D	4800	CIDN	IA-5	AFTN		
DAKAR													

Terminal I/ Terminal II	Circuit category/ Catégorie de circuit	Current/Existant					Planned/Prévu					Target date of implem.entation/ Date cible de mise en oeuvre	Remarks/ Observations
		Circuit type/ Type de circuit	Modulation rate/ Rapidité de modulation (bps)	Prot.	Code	Network / Réseau	Circuit type/ Type de circuit	Modulation rate/ Rapidité de modulation (bps)	Prot.	Code	Network / Réseau		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Abidjan	T	SAT/D	2400	X-25	IA-5	AFTN	SAT/D	2400	X.25	IA-5	AFTN		
Bamako	T	SAT/D	2400	X-25	IA-5	AFTN	SAT/D	2400	X.25	IA-5	AFTN		
Banjul	T	LLT	75	TTY	ITA-2	AFTN	LTT/D	2400	X.25	ITA-2	AFTN		
Bissau	T	NIL					SAT/D	2400	X-25	ITA-2	AFTN		
Johannesburg	M	LTT	2400	TTY	IA-5	AFTN	SAT/D	2400	X.25	IA-5	AFTN		
Niamey	M	SAT/D	2400	X.25	IA-5	AFTN	SAT/D	2400	X.25	IA-5	AFTN		
Nouakchott	T	SAT/D	2400	X.25	IA-5	AFTN	SAT/D	2400	X.25	IA-5	AFTN		
Conakry (Robertsfiield)	T	SAT	2400	TTY	IA-5	AFTN	SAT/D	2400	TTY	IA-5	AFTN		
Sal	T	SAT/D	2400	TTY	IA-5	AFTN	SAT/D	2400	X-25	IA-5	AFTN		
SAM(RIO)	M	SAT	2400	TTY	IA-5	AFTN	SAT/D	2400	TTY	IA-5	AFTN		

Terminal I/ Terminal II	Circuit category/ Catégorie de circuit	Current/Existant					Planned/Prévu					Target date of implem.entation/ Date cible de mise en oeuvre	Remarks/ Observations
		Circuit type/ Type de circuit	Modulation rate/ Rapidité de modulation (bps)	Prot.	Code	Network / Réseau	Circuit type/ Type de circuit	Modulation rate/ Rapidité de modulation (bps)	Prot.	Code	Network / Réseau		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
JOHANNESBURG													X25 planned/ IA-5 capable
Antananarivo	T	NIL				AFTN	SAT/D	1200	TTY	IA-5	AFTN		
Beira	T	SAT/D	1200	TTY	ITA-2	AFTN	SAT/D	1200	TTY	ITA-2	AFTN		
Bujumbura	T	NIL					SAT/D	1200	TTY	ITA-2	AFTN		VSAT planned
Gaborone	T	SAT/D	1200	TTY	ITA-2	AFTN	SAT/D	1200	TTY	ITA-2	AFTN		
Harare	T	SAT/D	1200	TTY	ITA-2	AFTN	SAT/D	1200	TTY	ITA-2	AFTN		
Kigali	T	NIL					SAT/D	1200	TTY	ITA-2	AFTN		
Lilongwe	T	SAT/D	1200	TTY	ITA-2	AFTN	SAT/D	1200	TTY	ITA-2	AFTN		
Lusaka	T	SAT/D	1200	TTY	ITA-2	AFTN	SAT/D	1200	TTY	ITA-2	AFTN		
Maputo	T	SAT/D	1200	TTY	ITA-2	AFTN	SAT/D	1200	TTY	ITA-2	AFTN		
Maseru	T	SAT/D	1200	TTY	ITA-2	AFTN	SAT/D	1200	TTY	ITA-2	AFTN		
Manzini	T	LTT/A	1200	TTY	ITA-2	AFTN	SAT/D	1200	TTY	ITA-2	AFTN		

Terminal I/ Terminal II	Circuit category/ Catégorie de circuit	Current/Existant					Planned/Prévu					Target date of implem.entation/ Date cible de mise en oeuvre	Remarks/ Observations
		Circuit type/ Type de circuit	Modulation rate/ Rapidité de modulation (bps)	Prot.	Code	Network / Réseau	Circuit type/ Type de circuit	Modulation rate/ Rapidité de modulation (bps)	Prot.	Code	Network / Réseau		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Nairobi	M	LTT/A	50	TTY	ITA-2	AFTN	SAT/D	1200	X.25	ITA-2	AFTN		
Windhoek	T	SAT/D	1200	TTY	ITA-2	AFTN	SAT/D	1200	NONE	ITA-2	AFTN		
ASIA/PAC (Brisbane)	M	NIL					SAT/D	1200	X.25	IA-5	AFTN		
SAM (Buenos Aires)	M	NIL					SAT/D	1200	X.25	IA-5	AFTN		
NAIROBI													
Dar es Salaam	T	LTT/A	50	NONE	ITA-2	AFTN	LTT/A	50	NONE	ITA-2	AFTN		
Entebbe	T	LTT/A	50	“	ITA-2	AFTN	LTT/A	50	“	ITA-2	AFTN		
Mauritius	T	SAT/A	50	“	ITA-2	AFTN	SAT/A	50	“	ITA-2	AFTN		
Mogadishu	T	NIL		“		AFTN	SAT/A	50	“	ITA-2	AFTN		SITA
Seychelles	T	SAT/A	50	“	ITA-2	AFTN	SAT/A	50	NONE	ITA-2	AFTN		
ASIA (Mumbai)	M	LTT/A	50	“	ITA-2	AFTN	LTT/A	1200	X.25	ITA-2	AFTN		
NIAMEY													
Accra	T	SAT/A	50	TTY	ITA-2	AFTN	SAT/D	2400	X.25	IA-5	AFTN		ACCRA X25 TBC

Terminal I/ Terminal II	Circuit category/ Catégorie de circuit	Current/Existant					Planned/Prévu					Target date of implem.entation/ Date cible de mise en oeuvre	Remarks/ Observations
		Circuit type/ Type de circuit	Modulation rate/ Rapidité de modulation (bps)	Prot.	Code	Network / Réseau	Circuit type/ Type de circuit	Modulation rate/ Rapidité de modulation (bps)	Prot.	Code	Network / Réseau		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Kano	T	SAT/D	50	TTY	ITA-2	AFTN	SAT/D	2400	X25	IA-5	AFTN		
N'Djamena	T	SAT/D	2400	X.25	IA-5	AFTN	SAT/D	2400	X.25	IA-5	AFTN		
Ouagadougou	T	SAT/D	2400	X25	IA-5	AFTN	SAT/D	2400	X25	IA-5	AFTN		
TUNIS													
Tripoli	T	LTT/A	50	NONE	ITA-2	AFTN	LTT/A	50	NONE	ITA-2	AFTN		TBC with TUNIS
EUR(Rome)	M	SAT/A	1200	X-25		AFTN	SAT/A	1200	X.25	ITA-2	AFTN		
ACCRA													
Cotonou	S	LTT/A	50	NONE	ITA-2	AFTN	LTT/A	2400	X25	IA-5	AFTN		
Lome	S	LTT/A	50	TTY	ITA-2	AFTN	LTT/A	2400	X25	IA-5	AFTN		
ANTANANARIVO													
Dzaoudzi	S	SAT/D	2400	TTY	IA-5	AFTN	SAT/D	2400	X.25	IA-5	AFTN		
Mauritius	T	SAT/D	2400	TTY	IA-5	AFTN	SAT/D	2400	TTY	IA-5	AFTN		
Moroni	S	SAT/D	2400	TTY	IA-5	AFTN	SAT/D	2400	TTY	IA-5	AFTN		
DOUALA													

Terminal I/ Terminal II	Circuit category/ Catégorie de circuit	Current/Existant					Planned/Prévu					Target date of implem.entation/ Date cible de mise en oeuvre	Remarks/ Observations
		Circuit type/ Type de circuit	Modulation rate/ Rapidité de modulation (bps)	Prot.	Code	Network / Réseau	Circuit type/ Type de circuit	Modulation rate/ Rapidité de modulation (bps)	Prot.	Code	Network / Réseau		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Malabo	S	SAT/D	1200	X25	IA-5	AFTN	SAT/D	1200	X.25	IA-5	AFTN		
KANO													
Lagos	S	SAT/A	50	NONE	ITA-2	AFTN	SAT/D	2400	X25	IA-5	AFTN		
LAGOS													
Cotonou	S	LTT/A	50	NONE	ITA-2	AFTN	SAT/D	2400	X.25	IA-5	AFTN		
MAURITIUS													
Saint Denis	S	SAT/D	2400	TTY	IA-5	AFTN	SAT/A	2400	TTY	IA-5	AFTN		
ASIA/PAC (Brisbane)	T	SAT/A	50	TTY	ITA-2	AFTN							To maintain until operation of J'Burg /ASIA/PAC
Johannesburg	T	SAT/D	1200	TTY	ITA-2	AFTN	SAT/D	1200	X.25	IA-5	AFTN		
Conakry													
Robertsfield	S	SAT/D	1200	X25	IA-5	AFTN	SAT/D	1200	X25	IA-5	AFTN		
Freetown	S	SAT/D	1200	X25	IA-5	AFTN	SAT/D	1200	X25	IA-5	AFTN		

INSTRUCTIONS FOR USE OF THE AFTN TRANSIT TIME STATISTICS FORM

23 January/April/July/October of each year

Transit time statistics should be computed for the messages received by a station during the 24-hour period of 230001 - 240001 of the month.

Column 1: Insert the ICAO Location Indicators of the AFTN station where the received message was originally filed for transmission.

Column 2: Show the Location Indicator of the station that actually transmitted the message to your station. In the case of direct circuits, the entry in Col. 2 would, therefore, be identical with the entry in Col. 1. Where traffic originating at a point is received over different routes, e.g. instances where alternate routing has been used, a separate entry should be made for each route.

Columns 3 and 4: In Col. 4 enter the total number of messages received from the Station of Origin during the 24-hour period covered by the Form for each Priority Group. Separate figures are to be shown to indicate the message classifications listed in Col. 3, viz. Priorities FF and higher, and Priority GG.

Column 5: Show the ICAO recommended transit times against each priority classification.

Column 6: The highest actual transit times experienced in respect of each priority classification are to be entered. Each time is found by examining the time interval between time of filing and time of delivery of each message in each priority classification, discarding the 5% having the highest transit time and then recording the highest transit time for the remaining 95% of the messages in each priority classification.

Example: If during the 24-hour period, 100 messages are received in each category (FF and higher, and GG) then for each category reject the five highest transit times. Of the remaining 95 messages, select the highest transit time - this is the figure to be shown in Col. 6 in respect the appropriate priority classification.

Column 7: Following the removal of 5% of messages in each priority classification having the highest transit time, the median time achieved for the remaining 95% of messages in each priority classification is to be recorded in this column.

Median transit time is defined as follows:

When the achieved transit time in any one category of messages are arranged in a sequential descending order, the median transit time for that group is the one achieved by the message which has as many messages above as there are below, after rejecting five percent of highest transit times.

Example: If there are 60 messages in a 24-hour period in any one category, arrange their achieved transit times in a descending order. Reject three (5%) messages with the highest transit times. The median transit time value for that group is the one achieved by the 29th message, which ha 28 messages above and 28 messages below it.

Column 8: Following the removal of 5% of the total messages in each priority classification having the highest relay time, the highest relay time for the remaining 95% of messages in each priority classification. Relay time of the addressee station is contained in paragraphs 3.1.60 and 3.1.61 of Doc 8259.

Column 9: Enter any appropriate observations noted regarding circuit operations, (for example, peak load periods, circuit failures, etc.), that are of relevance in respect of the Transit Time Statistics recorded in the Form.

AFTN TRANSIT TIME STATISTICS
TRAFFIC (CLASS A) RECEIVED FOR LOCAL DELIVERY

STATION (Location Indicator): ……(Month)…….(Year)

Location indicators		Message Priority Grouping	Total Number of messages for each Priority Group	Transit Time prescribed by ICAO	Highest Transit Time Experienced	Median Transit Time Achieved	Maximum Relay Time Experienced	Remarks
Station of Origin	Last Relay centre Received from							
1	2	3	4	5	6	7	8	9
			FF and higher					
			GG					
			FF and higher					
			GG					
			FF and higher					
			GG					

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ATS ROUTES IN THE ICAO AFI ANP (Doc. 7474)
REQUIRING IMPLEMENTATION

Route Designator	Segment(s)	States	Observations/Remarks
UA293	Ibiza Tiaret	Algeria	Required northbound
UA411	Jerba Tripoli Benina	Libya	Implemented at variance with the Plan via: A411 - Jerba/Zawia/Tripoli/Misurata A411N - Jerba/TANLI/Mitiga/Misurata
UA617	Kinshasa Windhoek	D. R. Congo	
UA618	SAGBU Malakal	Sudan	
UA748	(GOZO) Tripoli Mizda	Libya	
UA861	Lagos Garoua	Nigeria Cameroon	
UB525	Addis Ababa Luxor	Sudan	
UB607	El Obeid Dongola Abu Simbel	Sudan	
UG207	Mogadishu Karachi	Somalia	
UG623	Annaba Tebessa Ghadames	Algeria Libya	Segment of the route suspended since 1980.
UG855	Tripoli Ghadames B. Omar Driss	 Libya	

Route Designator	Segment(s)	States	Observations/Remarks
UG864	Tunis	Algeria	
	Ghardaia		
	Timimoun		
UG979	Bordj Omar Driss		
	Bou Saada	Algeria	
	Zemmouri		
UL612	Goma	D. R. Congo	Egypt can accept implementation via ATMUL New Valley/KATAB/DBA
	El Dhaba	Sudan	
		Egypt	
UM114	Lagos	Nigeria	Implemented at variance with the Plan within Kano FIR.
			LITAK ($11^0$00’00”N – $003^0$24”05”E)
UM220	Lodwar		Implemented by Kenya on segment from AVAGI to Lodwar.
	Abu Simbel	Sudan	
UM665	Addis Ababa	Sudan	
	Merowe		
UM731	MOLOM	Angola	
	Saurimo	Botswana	
	Johannesburg	D. R. Congo	
		South Africa	
UM994	Beni Walid		
	ORNAT	Libya	RNAV
UM998	(Martigues)		
	BALEN		
	Constantine		RNAV
	B.O. Driss		
	Tobuk		
	ENBUT		
	Maiduguri	Nigeria	
	EBIMU		

Route Designator	Segment(s)	States	Observations/Remarks
	Kinshasa	Congo D. R.	Congo DR not implemented as RNAV between Kinshasa Luena-Maun-Gaborone implemented as UB733 Kinshasa -Gaborone
	Luena	Angola	
	Maun	Botswana	
	Gaborone		
UM999	Casablanca	Morocco	
	Errachidia	Algeria	
	El Golea		RNAV
	Zarzaitine		
	Sebba		
	Sarir	Libya	
	New Valley	Egypt	
	Luxor	Sudan	
	Jeddah	Saudi Arabia	
UR400	Abu Simbel	Sudan	
	Kassala		
UR613	Pantelleria	Libya	Implemented in Malta FIR via SARKI. Not implemented in Tripoli
	Lampedusa		
	Tripoli		
UR780	Mogadishu	Somalia	
	Dire Dawa	Ethiopia	
	Asmara	Eritrea	
UR981	Casablanca	Morocco	
	Marraketch	Algeria	
	BULIS		
	Gao		Not implemented segment Casablanca/Gao
UR986	Tunis	Algeria	
	Ghadames	Libya	Not implemented due to restriction by Libya
	In Amenas		

Route Designator	Segment(s)	States	Observations/Remarks
UR991	ILDIR BOPAN	Namibia	
UR995	Addis Ababa Merowe	Sudan	

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AFI RVSM/RNAV/RNP IMPLEMENTATION PLAN

ID	Description	Start	Finish	Status	Resources
1	Agree on structure of TF to enable efficient handling of specialist technical tasks				
2	Identify resources for performing specialist technical tasks				
3	Investigate methods of funding any outside assistance required				
	Safety Assessment and Monitoring				
4	Conduct preliminary data collection and readiness assessment				
5	Evaluate options for setting up a central monitoring agency				
6	Evaluate options for carrying out the safety analysis				
7	Evaluate options for implementation of a height monitoring program				

ID	Description	Start	Finish	Status	Resources
8	Develop procedures for reporting large height deviations in existing system				
9	Collect weather and turbulence data for analysis				
10	Develop detailed program for safety analysis				
11	Establish requirements for pre and post-implementation monitoring				
12	Undertake initial safety analysis				
13	Carry out pre-implementation safety analysis				
14	Carry out pre-implementation readiness assessment				
15	Carry out post-implementation safety analysis during verification phase				

ID	Description	Start	Finish	Status	Resources
16	Review of mathematical and statistical techniques to assure their appropriateness for AFI RVSM				
17	Ensure transferability of aircraft data from other regions				
18	Devise methodologies for incorporating the effects of projected traffic growth and system changes on occupancy & collision risk in the future environment				
19	Perform periodically other data collections (eg. ASE stability) in order to ensure that the parameter values used in the mathematical collision risk models remain current				
	ATC Operational Issues				
20	Determine the limits of RVSM airspace (geographic and vertical)				

ID	Description	Start	Finish	Status	Resources
21	Develop ATC operational policy & procedures for normal RVSM operations				
22	Identify transition areas and transition procedures				
23	States assess the impact of RVSM implementation on controller automation systems and plan for upgrades/modifications				
24	Develop ATC procedures for non-approved State act to transit RVSM airspace				
25	Develop procedures for handling non-compliant civil aircraft (inc ferry & maintenance)				
26	Develop procedures for suspension of RVSM				

ID	Description	Start	Finish	Status	Resources
27	Evaluate the need for simulations to assess ATC workload and possible need for airspace/air route/Sector changes				
28	Develop ATC regional training guidance material				
29	Identify issues to be addressed in Letters of Agreement				
30	States to conduct local RVSM training for air traffic controllers				
	OPS/AIR Issues				
31	States to examine existing legislation and regulations to identify any changes required for RVSM				
32	Develop and promulgate information on the operational approval process				

ID	Description	Start	Finish	Status	Resources
33	Develop procedures for aircraft found to be non-compliant through monitoring				
34	Evaluate the need for chart amendments related to RVSM				
35	Develop regional guidance on pilot and dispatcher training				
36	Examine issues related to the use of ACAS in RVSM airspace				
37	Monitor progress with operator approvals				
	Joint Tasks				
38	Review preliminary readiness assessment				
39	Set target proportion of RVSM approved aircraft for full RVSM implementation				
40	Set target AIRAC implementation date(AIP Supplement to be published)				

ID	Description	Start	Finish	Status	Resources
41	Prepare/maintain regional status report detailing RVSM implementation plans				
42	Identify major milestone and target dates				
43	Develop a regional RVSM informational campaign				
44	Develop regional RVSM Guidance Material				
45	Review weather and contingency procedures for applicability under RVSM				
46	Develop model AICs and NOTAMs				
47	Evaluate preliminary readiness and safety assessments				
48	Undertake coordination and harmonization of procedures with adjacent egions				

ID	Description	Start	Finish	Status	Resources
49	Evaluate the need for tactical offset procedures to mitigate the effects of turbulence and TCAS alerts				
50	Develop Doc 7030 amendment				
51	Review aircraft altitude-keeping performance and operational errors				
52	Develop monitoring and evaluation program for the verification phase				
53	Evaluate final readiness assessment				
54	Evaluate final safety analysis				
55	Go/No-Go decision				

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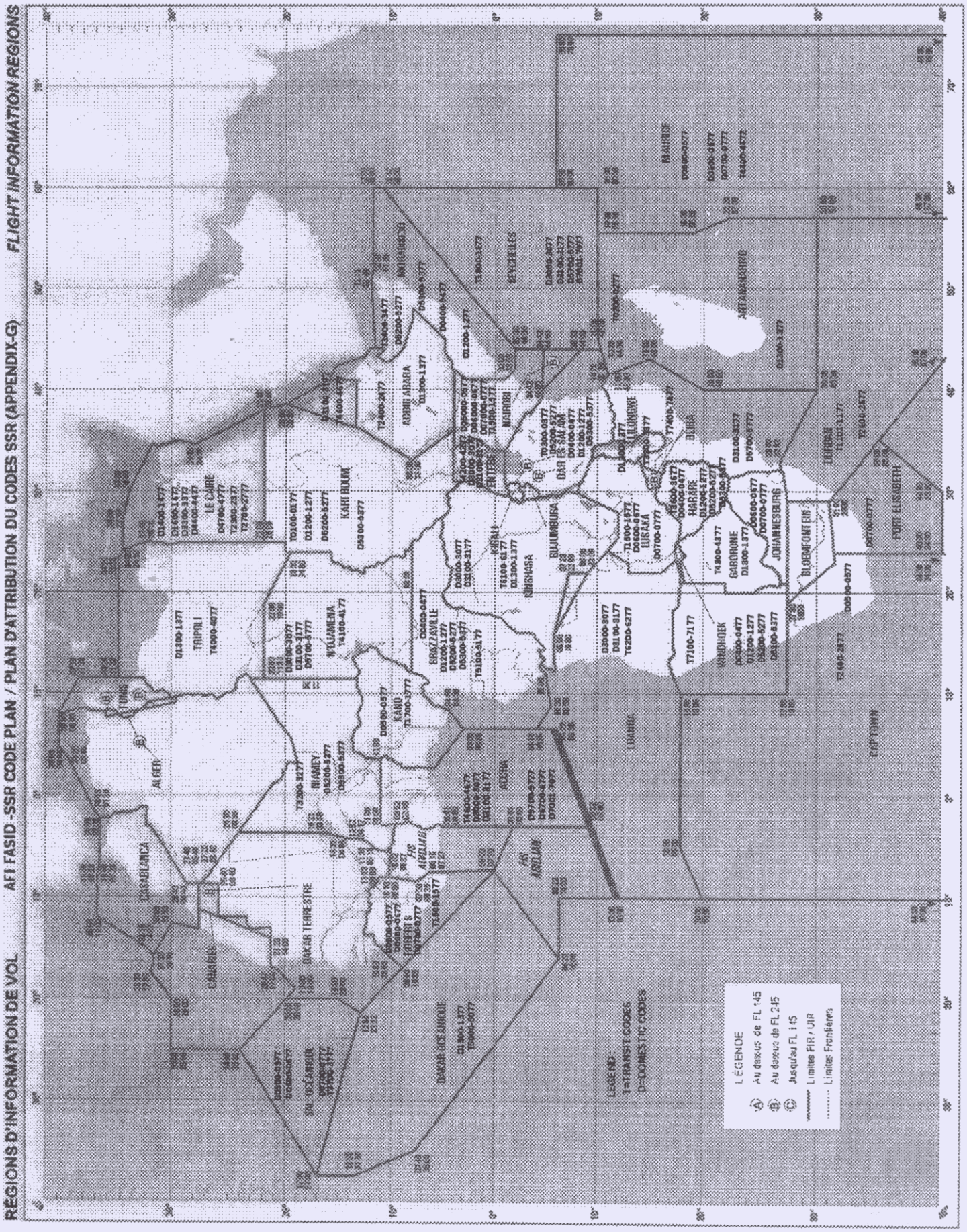
RÉGIONS D'INFORMATION DE VOL
AFI FASID -SSR CODE PLAN / PLAN D'ATTRIBUTION DU CODES SSR (APPENDIX-G)
FLIGHT INFORMATION REGIONS
LÉGENDE
Au dessus de FL 145
Au dessus de FL 245
Jusqu'au FL 145
Limites FIR / UIR
Limites Frontières
LEGEND:
T=TRANSIT CODES
D=DOMESTIC CODES

METEOROLOGY TASK FORCE FOR CNS/ATM PLAN

Terms of Reference

a) Evaluate the current status of implementation, capabilities and developments of the meteorological systems in the AFI Region.

b) Evaluate the future operational needs and emerging capabilities of meteorological systems in the AFI Region and develop proposals for changes necessary to meet those needs.

c) Develop a regional plan for implementation of meteorological services and facilities for the new CNS/ATM systems including associated target dates and the responsible bodies.

d) Report to the MET Sub-Group for further coordination through the ICAO Secretariat and other relevant bodies.

Composition:

Kenya, Nigeria, Senegal, South Africa, U.K., ASECNA and IATA.

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REVISED TERMS OF REFERENCE FOR THE AFRICA-INDIAN OCEAN REGIONAL PLANNING AND IMPLEMENTATION GROUP (APIRG)

1. The terms of reference of the group are:

   a) continuous and coherent development of the AFI Air Navigation Plan and other relevant regional documentation in a manner that is harmonized with adjacent regions, consistent with ICAO SARPs and reflecting global requirements;

   b) facilitate the implementation of air navigation systems and services as identified in the AFI air navigation plan with due observance to the primacy of air safety and security; and .

   c) identification and addressing of specific deficiencies in the air navigation field.

2. In order to meet the terms of reference, the group shall:

   a) review, and propose when necessary, the target dates for implementation of facilities, services and procedures to ensure the coordinated development of the Air Navigation System in the AFI Region;

   b) assist the ICAO Regional Offices providing services in the AFI Region in their assisted task of fostering implementation of the AFI Regional Air Navigation Plan;

   c) in line with the Global Aviation Safety Plan (GASP), ensure the conduct of any necessary systems performance monitoring, identify specific deficiencies in the Air Navigation field, especially in the context of safety and security, and propose corrective action;

   d) ensure the development and implementation of an action plan by States to resolve identified deficiencies, where necessary;

   e) promote, support and facilitate the regional implementation of AVSEC provisions;

   f) develop amendment proposals for the update of the AFI Air Navigation Plan necessary to satisfy any changes in the requirements, thus removing the need for regular regional air navigation meetings;

   g) monitor implementation of air navigation facilities and services and where necessary, ensure interregional harmonization, taking due account of cost/benefit analysis, business case development, environmental benefits and financing issues;

   h) examine human resource planning and training issues and ensure that the human resource development capabilities in the region are compatible with the AFI Regional Air Navigation Plan;

   i) review the Statement of Basic Operational Requirements and Planning Criteria and recommend to the Air Navigation Commission such changes to them as may be required in the light of developments;

j) invite financial institutions, as required, on a consultative basis and at a time it considers appropriate in the planning process to participate in this work;

k) ensure close cooperation with relevant organizations and State grouping to optimize the use of available expertise and resources; and

l) conduct the above activities in the most efficient manner possible with a minimum of formality and documentation and call meetings of the APIRG only when the Secretary and the Chairperson, through the Administration Coordination Group (ACG), are convinced that it is necessary to do so.

INDICATION OF AMENDMENTS TO THE TERMS OF REFERENCE OF THE AFRICA-INDIAN OCEAN PLANNING AND IMPLEMENTATION REGIONAL GROUP

1. The Terms of Reference of the ~~APIRG~~

~~2.1~~ ~~**The objectives of the**~~ Group are ~~to~~:

a) ~~ensure the~~ continuous and coherent development of the AFI ~~Regional Plan as a whole taking into consideration the effect of such development on the Regional Plans of~~Air Navigation Plan and other relevant regional documentation in a manner that is harmonized with adjacent regions~~; and~~

~~b) identify specific problems~~, consistent with ICAO SARPs and reflecting global requirements;

b) facilitate the implementation of air navigation systems and services as identified in the AFI air navigation plan with due observance to the primacy of air safety and security; and .

c) identification and addressing of specific deficiencies in the air navigation field ~~and propose, in appropriate for, action aimed at solving these problems~~.

2.~~2~~ In order to meet ~~these objectives~~the Terms of Reference the Group shall:

a) ~~keep under~~ review, and propose when necessary, the target dates for implementation of facilities, services and procedures to ensure the co~~-~~ordinated development of the Air Navigation System in the AFI Region;

b) assist the ICAO Regional Offices providing services in the AFI Region~~,~~ in their assign~~s~~ted task of fostering implementation of the AFI Regional Air Navigation Plan;

~~c) review any shortcomings in the AFI Regional~~
c) in line with the Global Aviation Safety Plan (GASP), ensure the conduct of any necessary systems performance monitoring, identify specific deficiencies in the Air Navigation ~~System and develop recommendations for remedial action;~~

~~d) originate and co-ordinate, as necessary, amendments to~~field, especially in the context of safety and security, and propose corrective action;

d) ensure the development and implementation of an action plan by States to resolve identified deficiencies, where necessary;

e) promote, support and facilitate the regional implementation of AVSEC provisions;

f) develop amendment proposals for the update of the AFI Air Navigation Plan necessary to satisfy any changes in the requirements, thus removing the need for regular regional air navigation meetings;

g) monitor implementation of air navigation facilities and services and where necessary, ensure interregional harmonization, taking due account of cost/benefit analysis, business case development, environmental benefits and financing issues;

h) examine human resource planning and training issues and ensure that the human resource development capabilities in the region are compatible with the AFI Regional Air Navigation Plan;

i) ~~e) monitor new developments in the air navigation field and when these have an effect on the AFI Region, develop proposals to meet the requirements resulting from these developments in a timely and evolutionary manner;~~

~~f) keep under~~ review the Statement of Basic Operational Requirements and Planning Criteria and recommend to the Air Navigation Commission such changes to them as may be required in the light of developments ~~mentioned in e).~~

~~vii. In facilitating implementation of facilities and services identified in the Regional Air Navigation Plan and with due regard to the primacy of safety, the APIRG should take into account the costs and benefits of implementation options and the need to facilitate financing of preferred options. With regard to multinational facilities and cooperative activities the APIRG may wish to use an appropriate mechanism to prepare cost/benefit analyses and business cases, and to provide related guidance material in support of "prototype" sets of planned facilities and services. At its discretion, the APIRG may~~ ;

j) invite financial institutions, as required, on a consultative basis and at a time it considers appropriate in the planning process~~,~~ to participate in this work;

k) ensure close cooperation with relevant organizations and State grouping to optimize the use of available expertise and resources; and

l) conduct the above activities in the most efficient manner possible with a minimum of formality and documentation and call meetings of the APIRG only when the Secretary and the Chairperson, through the Administration Coordination Group (ACG), are convinced that it is necessary to do so.

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TERMS OF REFERENCE, WORK PROGRAMME AND COMPOSITION OF THE AERODROME OPERATIONAL PLANNING SUB-GROUP (AOP/SG)

1. Terms of reference

a) **In the field of aerodrome operational planning:**

To keep under review the adequacy of the requirements contained in the ICAO Regional Air Navigation Plan taking into account changes to aircraft operations, new operational requirements and/or technological developments and propose amendments as required.

b) **In the field of aerodrome services:**

To identify, assess and track critical shortcomings and deficiencies in the provisions of aerodrome installations, equipment and services with priority to:

i) aerodrome power supply;
ii) visual aids;
iii) rescue and fire fighting;
iv) aerodrome fencing;
v) bird hazards;
vi) aerodrome emergency planning; and
vii) pavement surface condition.

2. Work Programme:

No.	Task description	Priority	Target Date
1	Review at each AOP/SG meeting the content of the Table AOP 1 and where necessary, after coordination with users and operators, introduce the respective changes through the established procedures. (AFI/7 RAN Meeting Conc. 3/2.)	A	Continuing
2	Develop a data base on shortcomings and deficiencies in the AOP field including their safety assessment according to the ICAO approved procedures and at each AOP/SG meeting, review and update the data base and identify requirements for possible technical cooperation. (AFI/7 RAN Meeting Concs. 14/1 and 14/2 and Rec. 14/3)	A	Continuing
3	Review the severity of the bird hazard and the status of implementation of appropriate bird hazard reduction measures in the Region .(AFI/7 RAN Meeting Conc. 4/7)	A	Continuing
4	Review States efforts to allocate the necessary resources to ensure the establishment of preventive maintenance at their aerodromes in order to provide adequate maintenance of facilities, installations and services. (AFI/7 RAN Meeting Conc. 4/10)	A	APIRG/14

No.	Task description	Priority	Target Date
5	Review the need and monitor the measurement and reporting by States of the surface condition and unevenness on movement areas at aerodromes in the AFI Region. (AFI/7 RAN Meeting Rec. 4/4)	B	APIRG/14
6	Review the provision of rescue and fire fighting services and emergency planning at international aerodromes in the AFI Region and monitor the switch over to the use of environmentaly friendly materials for fire fighting. (AFI/7 RAN Meeting Conc. 4/6)	A	APIRG/14
7	Review and monitor the development and implementation of guidelines and procedures for surface movement guidance and control systems at complex airports and during low visibility conditions. (Input to CNS/ATM planning process)	C	APIRG/15
8	Review, assess and provide guidance on the impact of the operations of the new larger aeroplanes at aerodromes in the AFI Region.	A	APIRG/15
9	Review and monitor the implementation of new approach and landing systems in order to ensure smooth transition and optimization of the performance of the systems implemented. (Input to CNS/ATM planning process)	A	APIRG/14
10	Monitor the progress in the implementation of the common geographical reference system (WGS-84) and the publication of coordinates of significant points with required degree of accuracy in the AFI Region. (AFI/7 RAN Meeting Recs. 12/28 and 12/29)	A	APIRG/14
11	Review and monitor the status of implementation of visual aids in the AFI Region and of provision of resources for ensuring preventive maintenance, human factors and progress in technology development in order to achieve increased safety and capacity. (AFI/7 RAN Meeting Conc. 4/1, Rec. 14/7)	A	APIRG/14
12*	Review and monitor the traffic growth in the AFI Region in order to develop appropriate guidance for the development of planning criteria.	B	APIRG/14
13	Monitor the work being conducted by the ICAO Air Navigation Commission on the impact of new larger aeroplanes at aerodromes and assess the particular circumstances pertaining to the aerodromes in the AFI Region.	A	APIRG/15
14	Taking into account human factors, study problems and make specific recommendation related to AOP personnel, with a view to ensuring the best services (AFI/7 RAN Meeting, Rec. 14/7)	A	Continuing

Priority:

A High priority tasks, on which work should be speeded up;

B Medium priority tasks, on which work should be undertaken as soon as possible, but without detriment to priority A tasks;

C Lesser priority tasks, on which work should be undertaken as time and resources permit, but without detriment to priority A and B tasks.

* This task will be a subject of coordination with the Traffic Forecasting Task Force.

3. Composition:

Angola, Algeria, Burkina Faso, Cameroun, Cape Verde, Congo, Côte d'Ivoire, Egypt, Gambia, Ghana, Guinea, Kenya, Malawi, Morocco, Nigeria, Senegal, South Africa, Togo, Tunisia, Uganda, Zambia, ACAC, ACI, ASECNA, IATA and IFALPA.

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FUTURE WORK PROGRAMME AND COMPOSITION OF THE APIRG COMMUNICATIONS (COM) SUB-GROUP

Item	Task description	Priority	Target date
1	Analyse, review and monitor deficiencies in the operation of the aeronautical fixed service, the aeronautical mobile service and the radionavigation service.	A	Continuing
2	Monitor the performance and implementation of the AFTN and propose corrective measures, as required.	A	Continuing
3	Follow-up the implementation of the ATS/DS circuits and propose corrective measures, as required.	A	Continuing
4	Update the AFI AFTN Routing Directory.	A	APIRG/15
5	Follow-up the interconnection of VSAT networks in the AFI Region.	A	Continuing
6	Follow up and monitor the implementation of VHF radio coverage in the AFI region in accordance with AFI/7 Rec. 5/12.	A	APIRG/15
7	Analyse and review the report of the ATN Planning Task Force on the transition from the AFTN to the ATN.	B	APIRG/15
8	Follow-up the upgrading of the transmission speed and the implementation of bit-oriented protocols for main AFTN circuits.	A	APIRG/15
9	Define a regional Interface Control Document (ICD) for the interface between AFI AFTN main centres employing X.25 control circuit protocol in accordance with AFI/7 Rec. 9/6.	B	APIRG/15
10	Coordinate and follow-up the ICAO position for the ITU-WRC meetings.	B	Continuing
11	Monitor the work being carried out by MIDANPIRG on the NAVISAT project, in coordination with CNS/ATM/IC/SG.	B	APIRG/15
12	Harmonize maintenance units working methods and coordination procedures, and monitoring of aeronautical telecommunications.	B	APIRG/15

Priority:

A: High priority tasks on which work should be speeded up;

B: Medium priority tasks, on which work should be undertaken as soon as possible, but without detriment to priority A tasks;

Composition: *Algeria, Angola, Congo, Côte d'Ivoire, D.R. of Congo, Egypt, Ethiopia, Ghana, Guinea, Kenya, Malawi, Morocco, Niger, Nigeria, South Africa, Spain, Sudan, Tunisia, Zambia, ACAC, ASECNA, IATA and IFALPA.*

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TERMS OF REFERENCE, WORK PROGRAMME AND COMPOSITION OF THE ATS/AIS/SAR SUB-GROUP

1. **Terms of reference**

a) To identify, State by State, those specific deficiencies and problems that constitute major obstacles to the provision of efficient air traffic management, aeronautical information services and search and rescue services and recommend specific measures to eliminate them.

b) To keep under review the adequacy of requirements in the Air Traffic Management, Aeronautical Information Services and Search and Rescue fields, taking into account, *inter alia*, changes to aircraft operations and new operational requirements or technological developments.

2. **Work programme**

No.	Task description	Priority	Target date
1	Analyse the operational implications relating to the implementation of ICAO CNS/ATM systems in the fields of ATS, SAR and AIS/MAP and propose any required actions with a view to ensuring their smooth integration in the operational environment.	A	Continuing
2	Taking into account human factors, study problems and make specific recommendations related to ATS and AIS personnel, with a view to ensuring the best services to users. (AFI/7 Rec. 14/7)	A	Continuing
3	Study the requirements for civil/military coordination procedures, including the promotion of the implementation of the concepts of joint use of airspace, free flight, flexible tracks, etc. and consider reducing and/or eliminating prohibited, restricted and danger areas. (AFI/7 Rec. 5/3)	A	APIRG/15
*4	Determine the framework within which air traffic data collection statistical analysis and forecasting should be carried out.	C	Continuing
5	Review the requirements and monitor the programme of implementation of area control service. (AFI/7 Rec. 5/21)	A	APIRG/15
6	Review the existing ATS route network (including RNAV routes) on a systematic basis with a view to achieving an optimum flow of air traffic while keeping flight distances of individual flights to a minimum. (AFI/7 Rec. 5/8)	A	APIRG/15
7	Consider problems and make specific recommendations relating to ATS interface routes with other regions.	A	Continuing
8	Monitor achievements and progress in the implementation of RVSM/RNAV/RNP, RSP and RTSP in the AFI Region and provide recommendations in the light of acquired experience.	A	Continuing

No.	Task description	Priority	Target date
9	Monitor developments in SSR planning criteria and review the allocation of SSR codes in the region to ensure there is no duplication with adjacent regions. (AFI/7 Rec. 5/20)	A	Continuing
10	Review the ATS requirements for navigation. (AFI/7 Rec. 10/4)	A	APIRG/15
11	Review of ATS requirements for communication including extension of VHF coverage. (AFI/7 Rec. 5/13, Rec. 5/12 and LIM AFI Rec. 10/36)	A	APIRG/15
12	Identify the ATS requirements for surveillance (RADAR, ADS, voice etc.) (AFI/7 Rec. 11/1)	A	APIRG/15
13	Carry out studies and develop recommendations aimed at facilitating in an effective way the existing contingency plans, reduce air traffic incidents, implementation of ACAS, ATIS, pressure-altitude reporting transponders, digital flight information service (D-FIS), RVSM, MSAW/CFIT, COSPAS/SARSAT and safety oversight programs in the AFI Region.	A	Continuing
14	Monitor the implementation of uniform ATS operational auditing and proficiency maintenance. (AFI/7 Conc 5/27)	B	Continuing
15	Review the requirements and monitor the implementation of search and rescue services.	B	Continuing
16	Review the requirements and monitor the implementation of AIS and MAP services, including AIS automation.	A	Continuing
17	Analyse, review and monitor shortcomings and deficiencies in the fields of ATS, AIS/MAP and SAR.	A	Continuing
18	Develop guidance material for the reporting and investigation of air traffic incidents in the AFI Region, taking into account material developed by other organizations such as the European Commission, EUROCONTROL, FAA, etc.	A	Continuing
19	Develop a standard criteria for the determination of new ATS route requirements to be included in the ICAO AFI Air Navigation Plan	A	Continuing

Priority:

A High priority tasks, on which work should be speeded up;

B Medium priority tasks, on which work should be undertaken as soon as possible, but without detriment to priority A tasks;

C Lesser priority tasks, on which work should be undertaken as time and resources permit, but without detriment to priority A and B tasks.

* This task will be a subject of coordination with the Traffic Forecasting Task Force.

3. **Composition:**

Algeria, Burkina Faso, Cameroon, Congo, Congo (DRC), Côte d'Ivoire, Egypt, Equatorial Guinea, Eritrea, Ethiopia, France, Gabon, Ghana, Guinea, Kenya, Madagascar, Malawi, Mauritania, Morocco, Niger, Nigeria, Senegal, Spain, South Africa, Sudan, Tanzania, Togo, Tunisia, Zambia, Zimbabwe, ASECNA, IATA and IFATCA.

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TERMS OF REFERENCE, WORK PROGRAMME AND COMPOSITION OF THE METEOROLOGY SUB-GROUP (MET/SG)

1. Terms of Reference

1. To keep under review, the adequacy of meteorological facilities and services to meet new technological developments in the air navigation field and make proposals as appropriate for implementation by States to APIRG.

2. To identify, State by State, those specific deficiencies and shortcomings that constitute major obstacle to the provision of efficient and reliable meteorological facilities and services to meet the requirements of air navigation in the AFI Region and recommend specific measures to eliminate them.

2. Work Programme

No.	Task description	Priority	Target Date
1	Establish and maintain detailed lists, State by State of the specific deficiencies of facilities for the provision of atmospheric measurements pertaining to surface wind, pressure, visibility/runway visual range, cloud base, temperature and dew point temperature considered critical for flight safety.	A	Continuing
2	Monitor the exchange of OPMET information through the AMBEX scheme in the AFI Region and between the AFI and ASIA/PACIFIC and EUR Regions	A	Continuing
3	Plan for the introduction of efficient inter-regional OPMET exchanges in coordination with the COM Sub-group as required	B	Continuing
4	Monitor the degree of implementation of very small aperture terminals (VSATs) for the reception of WAFS products (AFI/7 Rec. 14/12)	B	Continuing
5	Review and determine the necessary OPMET exchanges through the two-way VSAT SADIS stations in the AFI Region	B	Continuing
6	Monitor the quality of WAFS high and low level significant weather charts in the AFI Region, provide feed back to WAFC, London as appropriate	B	Continuing
7	Monitor the implementation of regional procedures for the issuance of volcanic ash and tropical cyclone advisories (AFI/7 Rec. 7/3 and 7/4)	A	Continuing

No.	Task description	Priority	Target Date
8	Review on a continuing basis the contents of Tables MET 1A and 1B and Tables MET 2A and MET 2B to ensure their validity in light of operational requirements and develop proposals to update them if necessary.	B	Continuing
9	Review the meteorological procedures in the introductory text to Part VI – Meteorology of the Basic AFI Regional Plan/FASID, as well as Meteorological related issues in other sections of the Plan and relevant regional supplementary Meteorology procedures (SUPPs) in the Doc 7030, in the light of procedures employed in other regions and develop amendment proposals as appropriate, coordinating where necessary with other APIRG Sub-Groups.	A	Continuing
10	Monitor developments in the CNS/ATM Systems with regard to meteorological requirements in the AFI Region.	B	Continuing
11	Develop guidelines for the use of GRIB and BUFR codes in the AFI Region.	A	Continuing
12	Monitor quality assurance/performance relating to the MET field	A	Continuing

Priority:

A High priority tasks on which work should be speeded up;

B Medium priority tasks, on which work should be undertaken as soon as possible, but without detriment to priority A tasks;

C Lesser priority tasks, on which work should be undertaken as time and resources permit, but without detriment to priority and A and B tasks.

3. Composition

Algeria, Burkina Faso, Cameroon, Congo, Côte d'Ivoire, Egypt, Eritrea, Ethiopia, France, Gabon, The Gambia, Ghana, Guinea, Kenya, Madagascar, Morocco, Niger, Nigeria, Senegal, South Africa, Spain, Tunisia, United Kingdom, Zambia, ASECNA, IATA and WMO.

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TERMS OF REFERENCE, WORK PROGRAMME AND COMPOSITION OF THE AFI CNS/ATM IMPLEMENTATION CO-ORDINATION SUB-GROUP

1. Terms of reference

a) Ensure the continuing and coherent development of the AFI Regional Implementation Plan for CNS/ATM systems in the light of new developments, in harmony with the Global Plan Air Navigation Plan for CNS/ATM Systems (Global Plan) and the plans of adjacent regions;

b) Prepare cost/benefit analyses for CNS/ATM Implementation options;

c) Study institutional arrangements for the implementation of CNS/ATM systems in the AFI Region.

2. Work Programme

Item	Task description	Priority	Target date
1	Continue the evolutionary development of the AFI CNS/ATM Systems Implementation Plan (AFI/7 Concl. 13/1)	A	Continuing
2	Identify requirements for digital flight information service (D-FIS) and develop appropriate implementation worksheets for the concerned areas of routing (AFI/7 Concl. 13/1)	B	APIRG/15
3	Develop comprehensive business cases for competing CNS/ATM Implementation options for the Routing Areas.	A	Continuing
4	Co-ordinate plans developed by States, international organizations, airlines, and industry for the implementation of the regional CNS/ATM systems implementation plan	A	Continuing
5	Update on a regular basis, Chapter 2 and the tables of Part II of the Global Plan	B	Continuing
6	Monitor the multi - mission satellite based system (NAVISAT) dedicated to CNS/ATM services in coordination with MID.	B	APIRG/15
7	Monitor the research and development, trials and demonstrations within the AFI Region and information from other regions	B	Continuing

Item	Task description	Priority	Target date
8	Give further consideration to the concept of "Multinational ICAO AFI Air Navigation Facility/Service" addressed in the AFI/7 Report under Agenda Item 14; (AFI/7, Concl. 10/6c)	A	Continuing
9	Identify and address as appropriate, all actions necessary, including funding, legal and institutional aspects, for the timely implementation of the AFI GNSS strategy (AFI/7, Concl. 10/6d)	A	APIRG/15
10	Establish and maintain current a data base on CNS/ATM planning and implementation in the AFI Region	B	APIRG/15
11	Review the report on categorization of TMAs and airports for further development of the surveillance plan and GNSS plan.	A	APIRG/15
12	Continue the development of the draft AFI Aeronautical Surveillance Plan	A	APIRG/15
13	Review, in due course, the requirements for the implementation of GBAS at identified locations, in accordance with the AFI GNSS strategy	C	

Priority:

A High priority tasks on which work should be speeded up;

B Medium priority tasks, on which work should be undertaken as soon as possible, but without detriment to priority A tasks;

C Lesser priority tasks, on which work should be undertaken as time and resources permit, but without detriment to priority A and B tasks.

Composition: Angola, Algeria, Botswana, Cameroon, Cape Verde, Côte d'Ivoire, Congo, D.R. of Congo, Egypt, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Kenya, Lesotho, Mali, Mauritania, Morocco, Nigeria, Niger, Senegal, Seychelles, South Africa, Spain, Tunisia, Tanzania, Zambia, Arab Civil Aviation Commission (ACAC), ASECNA, IATA, IFALPA, IFATCA.

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