



**INTERNATIONAL CIVIL AVIATION ORGANIZATION
EASTERN AND SOUTHERN AFRICAN OFFICE**

**THIRD MEETING OF THE APIRG COMMUNICATIONS,
NAVIGATION AND SURVEILLANCE SUB-GROUP (CNS/SG/3)**

(Nairobi, 26 - 30 April 2010)

**Agenda Item 3: FOLLOW UP OF APIRG/16 CNS/GS/2 AND SAFIRAN
CONCLUSIONS AND DECISIONS**

(Presented by the Secretariat)

SUMMARY

This paper presents the Conclusions and Decisions from the APIRG/16, CNS/2 and SAFIRAN Meetings with information on action taken and status of validity.

Ref:-APIRG/16, CNS/2, SAFIRAN

1. Introduction

1.1 The second meeting of the Communications Sub-group (CNS/SG/2, Dakar, 24-26 September 2007) formulated a number of Conclusions and Decisions for adoption by APIRG. Most of these Conclusions and Decisions were adopted by APIRG/16). Subsequently, various actions were taken by the Air Navigation Commission, the ICAO Council and the Regional Offices on the Conclusions and Decisions of APIRG/16, SAFIRAN and CNS/2.

1.2 **Attachment A** to this paper provides the list of Conclusions and Decisions of APIRG/16, and actions taken.

2. Discussion

2.1 The Secretariat has reviewed the list of Conclusions and Decisions as shown in **Attachment A**.

3. ACTION BY THE CNS SUB-GROUP

3.1 The Meeting is invited to review progress so far made on the implementation of these Conclusions and Decisions and to note the actions taken.

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CONC./DEC. NUMBER	TITLE	APIRG/16, CNS/SG/2, SPA-AFI/08	ACTION REQUIRED	ACTION TAKEN	STATUS
Concl. 16/13	<p><u>AFTN IMPLEMENTATION SPECIFICATIONS</u></p> <p>That:</p> <p>a) AFI AFTN specifications prescribed by APIRG/15 be amended to reflect emerging technologies and new communication bit-oriented protocols; and</p> <p>b) The further use of X.25 protocol be discouraged in the AFI Region.</p>	APIRG/16	States to be notified	States have been informed	Done
Concl. 16/14	<p><u>IMPLEMENTATION OF ATN/IPS (TCP/IP)</u></p> <p>That AFI States should implement ATN/IPS (TCP/IP) Standards to the maximum extent possible in order to avoid interoperability difficulties with an ATN/OSI system.</p> <p><i>Note: Indications are that ICAO SARPs related to ATN/IPS should be available by end of 2008.</i></p>	APIRG/16	States to be notified	States have been informed	On going
Concl. 16/15	<p><u>AERONAUTICAL USE OF PUBLIC INTERNET FOR NON-TIME CRITICAL APPLICATIONS</u></p> <p>That AFI States consider the use of the public Internet for non-time critical applications in accordance with relevant provisions in ICAO</p>	APIRG/16	States to be notified	States have been informed	Done

CONC./DEC. NUMBER	TITLE	APIRG/16, CNS/SG/2, SPA-AFI/08	ACTION REQUIRED	ACTION TAKEN	STATUS
	Annexes 3, 10 and 15, and Doc 9855.				
Concl.16/16	<p><u>IMPLEMENTATION/INTERCONNECTION OF SADC/2, NAFISAT AND AFISNET VSAT NETWORKS</u></p> <p>That States and international organizations concerned expedite the implementation and interconnection of SADC/2, NAFISAT and AFISNET VSAT networks as soon as possible, in order to increase AFS (AFTN and ATS/DS) connectivity and efficiency, thus improving flight coordination and management in the AFI Region.</p>	APIRG/16	Completed		Completed
Concl. 16/18	<p><u>COOPERATION BETWEEN NEIGHBOURING STATES IN IMPLEMENTATING VHF RADIO COVERAGE EXTENSION</u></p> <p>That AFI States and Air Navigation Service Providers cooperate in addressing all aspects related to the implementation of VHF coverage facilities at FIR/airspace boundaries, including regulatory, environmental and maintenance aspects, in compliance with AFI/7 Recommendation 5/12 and APIRG/12 Conclusion 12/16.</p>	APIRG/16	ICAO	States have been informed	Completed
Concl. 16/20	<p><u>STATES PARTICIPATION IN IATA VHF COVERAGE SURVEYS</u></p>		STATES		The first survey is done

CONC./DEC. NUMBER	TITLE	APIRG/16, CNS/SG/2, SPA-AFI/08	ACTION REQUIRED	ACTION TAKEN	STATUS
	That States cooperate and provide their support to VHF coverage surveys to be carried out by IATA in the AFI Region, initially every 18 months.	APIRG/16			
Concl. 16/21	<p><u>IMPLEMENTATION OF GNSS EN-ROUTE AND NON-PRECISION APPROACH OPERATIONS</u></p> <p>That AFI States continue their efforts to implement GNSS applications for en-route and non-precision approach operations as part of Phase 1 of AFI GNSS Strategy. In so doing, particular attention should be accorded to meeting all GNSS implementation requirements, including establishment of GNSS legislation, regulatory framework, and approval and monitoring procedures.</p>	APIRG/16	STATES	On Going	On going
Concl. 16/22	<p><u>RECORDING OF GNSS PARAMETERS</u></p> <p>That AFI States that approve GNSS-based operations ensure that GNSS data relevant to those operations are recorded as recommended in ICAO Annex 10, Volume I, Chapter 2, para. 2.4.3. Particularly, for GNSS core systems, the following monitored items should be recorded for all satellites in view:</p> <p>a) observed satellite carrier-to-noise density;</p> <p>b) observed satellite raw pseudo-range code</p>	APIRG/16	States		Done

CONC./DEC. NUMBER	TITLE	APIRG/16, CNS/SG/2, SPA-AFI/08	ACTION REQUIRED	ACTION TAKEN	STATUS
	<p>and carrier phase measurements;</p> <p>c) broadcast satellite navigation messages, for all satellites in view; and</p> <p>d) relevant recording receiver status information.</p>				
Concl. 16/23	<p><u>AERONAUTICAL INFORMATION RELATED TO GNSS</u></p> <p>That when implementing GNSS-based operations, AFI States ensure that the relevant aeronautical information is provided to the users as appropriate.</p>	APIRG/16	ICAO	Workshop on 1-3 Sept 2009	Done
Concl. 16/31	<p><u>COLLECTIVE APPROACH FOR THE MANAGEMENT OF CNS/ATM SYSTEM ELEMENTS</u></p> <p>That the air navigation service providers (ANSPs) adopt a collective approach and speak in a single voice on issues of common interest related to the implementation of CNS elements of the CNS/ATM systems (such as service level agreements with ATN service providers, system availability, etc.).</p>	APIRG/16	States	On going	On going
Draft Concl. 02/04	<p><u>INVESTIGATIONS ON ON MISSING FLIGHT PLANS</u></p>	CNS/SG/2	ICAO	poor feedback	Done

CONC./DEC. NUMBER	TITLE	APIRG/16, CNS/SG/2, SPA-AFI/08	ACTION REQUIRED	ACTION TAKEN	STATUS
	<p>That , in order to further analyze the issue of missing flight plans in the AFI Region, ATS centres located in areas of routing AR-4 and AR-5:</p> <ul style="list-style-type: none"> a) carry out xxx-day survey on AFTN performance from xxx to xxx October 2007 (inclusive), using the form and model messages attached as Appendix xxxx to this part of the report. In so doing, they should: b) Provide a list of the AFTN addresses of their AFI participating correspondents; and c) Send the results of the AFTN survey to the ICAO Regional Offices (Dakar and Nairobi); d) Take into account the following elements when analyzing the AFTN link operation during the investigation on the loss of flight plans to be conducted on a case by case basis from xx to xxx October 2007; <ul style="list-style-type: none"> i) Availability of the AFTN circuit(s) involved, based on the implemented routing configuration; ii) Transit times; iii) End user terminals (AFTN PC, teletype); and iv) Alphabetic codes (ITA-2, 1A-5) <p><i>Note: The forms to be used for ii, iii and iv above are shown at Appendices xxx and xxx to this report.</i></p>			<p>from States)</p>	

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Draft Concl. 02/06	<p><u>IMPLEMENTATION OF ATS/DS LINK ACCRA/LUANDA</u></p> <p>That Angola, Ghana and ATNS (South Africa) take the necessary steps to implement Accra/Luanda ATS/DS circuit through interconnection between AFISNET and SADC/2 networks.</p>	CNS/SG/2	Angola & Ghana	Implement ation of Circuits	Implemented
Draft Concl. 02/07	<p><u>IMPLEMENTATION OF LAS PALMAS/NOUADHIBOU AND LAS PALMAS/NOUAKCHOTT ATS/DS LINKS</u></p> <p>That Spain (AENA) and Mauritania (ASECNA) expedite the implementation of ATS/DS links between Las Palmas and Noukchott and between Las Palmas and Nouadhibou</p>		AENA and ASECNA	Links implement ed	Done
Draft Concl. 02/08	<p><u>IMPLEMENTATION OF ATS/DS LINK BANGUI/GBADOLITE</u></p> <p>That Central African Republic, Democratic Republic of The Congo and ASECNA explore the possibility of implementing a VSAT link between Bangui and Gbadolite by interconnecting the existing facilities.</p>	CNS/SG/2	ASECNA & DRC	DRC and CAR states have been addressed after APIRG 16.	Pending. Concerned ANSP (ASECNA for CAR and RVA for DRC) to find the technical suitable way to interconnect

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					the RDC domestic network to AFISNET
Draft Concl. 02/09	<p><u>IMPLEMENTATION OF ATS/DS LINKS BANJUL/CONAKRY AND BISSAU/CONAKRY</u></p> <p>That the Gambia, Guinea (Roberts FIR) and Bissau Guinea (ASECNA) expedite the implementation of the ATS/DS links Banjul/Conakry and Bissau/Conakry.</p>	CNS/SG/2	Implementation of the link	ASECNA & GAMBIA	Implemented
Draft Concl. 02/11	<p><u>NEED FOR SURVEY ON AMS FREQUENCIES</u></p> <p>That the ICAO Regional Offices (Dakar and Nairobi) coordinate the conduct of a regional survey on AMS/VHF frequencies by States and Organizations in order to ascertain that VHF frequencies are free of harmful interference, and to initiate remedial action with States concerned as necessary.</p>	CNS/SG/2	Frequency Program is under development	First phase of the program has been done	On going (part of this meeting)
Draft Dec. 02/15	<p><u>AFI GNSS IMPLEMENTATION STRATEGY</u></p> <p>That the action taken by the Air Navigation Commission on APIRG Conclusions 15/18, 15/19 and 15/20 be referred to the AFI GNSS</p>	CNS/SG/2	ICAO	On-going	On going (part of this meeting)

CONC./DEC. NUMBER	TITLE	APIRG/16, CNS/SG/2, SPA-AFI/08	ACTION REQUIRED	ACTION TAKEN	STATUS
	Implementation Task Force for the updating the AFI GNSS Strategy accordingly				
Draft Dec. 02/17	<p><u>STATUS OF IMPLEMENTATION OF AFI SURVEILLANCE PLAN FOR EN-ROUTE ACCS</u></p> <p>That the status of implementation of the AFI surveillance plan for en-route be included in the review of CNS system performance.</p>	CNS/SG/2	AFI Surveillance TF formed	First meeting on 8-9 Sept 2009	On going Part of this meeting
Draft Dec. 02/18	<p><u>DEVELOPMENT OF A SURVEILLANCE PLAN FOR TMAS AND AERODROMES</u></p> <p>That a comprehensive surveillance plan be developed for TMAs and aerodromes</p>	CNS/SG/2	AFI Surveillance TF formed	First meeting on 8-9Sept 2009	On going
Draft Conc. 02/..	<p><u>ADS-C/CPDLC IMPLEMENTATION</u></p> <p>That air navigation service providers be encouraged to adopt a collective approach and speak in a single voice on issues of common interest related to the implementation of ADS-C/CPDLC (such as service level agreements with ATN service providers, system availability, etc.).</p>		AFI Surveillance TF formed		On going
Draft Dec. 02/19	<p><u>ESTABLISHMENT OF AN AFI ADS-B IMPLEMENTATION TASK FORCE</u></p>			The first meeting on 8-9	Done Sept 2009

CONC./DEC. NUMBER	TITLE	APIRG/16, CNS/SG/2, SPA-AFI/08 CNS/SG/2	ACTION REQUIRED	ACTION TAKEN	STATUS
	<p>That an AFI ADS-B Implementation Task Force be established with the terms of reference provided in Appendix...</p> <p>ADS-B STUDY AND IMPLEMENTATION TASK FORCE Terms of Reference</p> <p>Conduct a study for the selection of ADS-B link for use in the AFI Region. The work to be addressed should include:</p> <ul style="list-style-type: none"> ▪ identify and quantify near term and long term benefits of ADS-B; ▪ develop a recommended implementation plan including a recommended target date of implementation taking into account availability of SARPs and readiness of airspace users and ATS providers for a coordinated implementation of service and benefits. <p><u>Note:</u></p> <ol style="list-style-type: none"> 1. The Task Force, while undertaking the task, should take into account of the work being undertaken by relevant ICAO Panels with a view to avoid any duplication. 2. The Task Force should complete its work 				

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	<p><i>and present the result to the ATS/AIS/SAR/SG/10, CNS/SG/3 and to the APIRG meetings.</i></p> <p><i>3. In assessing the readiness of airspace users, take into account business aviation usage.</i></p>				
Draft Concl. 02/20	<p><u>ELIMINATION OF CNS/DEFICIENCIES</u></p> <p>That States continue to accord high priority to solving the deficiencies that still affect the current communications, navigation and surveillance (CNS) systems, in accordance with APIRG Conclusion 15/99.</p>	CNS/SG/2	States		On going
Draft Dec. 02/21	<p><u>UPDATING OF THE LIST OF CNS DEFICIENCIES</u></p> <p>That the Secretariat coordinate with States and Organizations concerned the necessary updates to the list of deficiencies affecting CNS systems in the AFI Region, to be submitted to APIRG/16 meeting</p>	CNS/SG/2	ICAO		Done
Draft Concl. 02/22	<p><u>AMENDMENTS TO AFI CNS SYSTEMS IMPLEMENTATION STRATEGIES</u></p> <p>That the CNS systems implementation strategies developed in the AFI CNS/ATM Implementation Plan (Doc. 003) be updated taking due account of the revised ICAO Global Air Navigation Plan (Doc.</p>	APIRG/16	ICAO	On going	On going

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	9750) and AFI ATM operational objectives.				
Draft Concl. 02/23	<p><u>NEED FOR COLLECTIVE APPROACH TO CNS/ATM SYSTEM MANAGEMENT</u></p> <p>That air navigation service providers (ANSPs) be encouraged to adopt a collective approach and speak in a single voice on issues of common interest related to the implementation of CNS elements of the CNS/ATM systems (such as service level agreements with ATN service providers, systems availability, system reliability, etc.).</p>	CNS/SG/2	States	On-going	On going
Draft Dec. 02/24	<p><u>ICAO POSITION AND PREPARATIONS FOR TU WRCS</u></p> <p>That :</p> <p>a) Working Group composed of focal contact persons designated by AFI States and Organizations be established under the coordination of the Secretariat in order to address ITU matters and issues related to aeronautical radiofrequency spectrum control and management, in accordance with APIRG Conclusion 15/26.</p> <p>b) States and Organizations which have not yet done so be requested to provide the Secretariat with the names, official designation and contact details (telephone, fax and email addresses) of their</p>	CNS/SG/2	States	AFI Frequency Group formed	Done

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	designated focal points for ITU matters, and c) States are urged to support ICAO Position in WRC07.				
Draft Dec. 02/26	<p><u>HARMONIZATION OF TARGET DATES OF IMPLEMENTATION OF AFI OPERATIONAL SYSTEMS</u></p> <p>That:</p> <p>a) the CNS/SG should harmonized targets dates with ATM/SG Secretariat regarding operational system implementation in the AFI program.</p> <p>b) Both CNS and ATM reports reflecting disparity in dates should be amended accordingly.</p>	CNS/SG/2	CNS/SG & ATS/SG		Done
Draft 02/27	<p><u>ANY OTHER BUSINESS</u></p> <p>a) That the CNS/SG should harmonize target dates with ATM/SG Secretariat regarding operational system implementation in the AFI programme</p> <p>b) Both CNS and ATM reports reflecting disparity in dates should be amended accordingly.</p>		CNS/SG & ATS/SG		Done
Rec. 6/13	<u>PUBLICATION OF GNSS-BASED RNP</u>				

CONC./DEC. NUMBER	TITLE	APIRG/16, CNS/SG/2, SPA-AFI/08	ACTION REQUIRED	ACTION TAKEN	STATUS
	<p><u>APPROACH PROCEDURES</u></p> <p>That:</p> <p>a) States having taken part in the IATA area navigation (RNAV) global navigation satellite system (GNSS) procedures development and implementation programme and which had not yet done so, public GNSS-based required navigation performance (RNP) approaches, and at the same time, remove any operational restrictions that may be in place; and</p> <p>b) States that had not taken part in IATA RNAV GNSS procedures development and implementation programme, seek assistance from appropriate organizations with the objective of designing and implementing GNSS-based RNP approach procedures.</p>	SPA-AFI/08	States	State have been informed	On going
Rec. 6/14	<p><u>ICAO ASSISTANCE WITH LEGAL AND REGULATORY ISSUES ASSOCIATED WITH IMPLEMENTATION OF GNSS APPROACH PROCEDURES</u></p> <p>That ICAO provide assistance to States in overcoming legal and regulatory difficulties associated with implementation of global navigation satellite systems (GNSS) based approach procedures</p>	SPA-AFI/08			On going (ICAO to defined the project)
Rec. 6/18	<u>AFISNET FOLLOW-UP</u>			SNMC/17	Pending.

CONC./DEC. NUMBER	TITLE	APIRG/16, CNS/SG/2, SPA-AFI/08	ACTION REQUIRED	ACTION TAKEN	STATUS
	That, as a matter of urgency, ICAO and States involved in AFISNET follow-up on Conclusion 16/07 of Satellite Network Management Committee (SNMC/16)	SPA-AFI/08		planned the AFISNET joint technical evaluation and nominated ASECNA, Roberts FIR and GCAA as Team Leaders of three Technical Evaluation Sub Groups. Teams Leaders already addressed and recalled by WACAF	
Rec. 6/19	<u>PLANNING, IMPLEMENTATION AND OEPRATION OF VERY SMALL APERTURE TERMINAL (VSAT) NETOWKRS IN THE AFI REGION</u>				On going

CONC./DEC. NUMBER	TITLE	APIRG/16, CNS/SG/2, SPA-AFI/08	ACTION REQUIRED	ACTION TAKEN	STATUS
	That all entities involved with planning, implementation and operation of very small aperture terminal (VSAT) networks in the AFI Region hold regular joint meetings under the auspices of ICAO regional offices for the purpose of harmonization and eventual realization of a seamless AFI communication network supporting all present and future communications, navigation and surveillance (CNS) systems.	SPA-AFI/08			
Rec. 6/20	<p><u>IMPROVEMENT OF AIR-GROUND HIGH FREQUENCY (HF) COMMUNICATIONS IN THE AFI REGION THROUGH USE OF IONOSPHERIC PROPAGATION FORECASTS</u></p> <p>That States and air navigation service providers (ANSPs) utilizing high frequency (HF) air-ground communications develop procedures for selection of operational frequencies taking into account ionospheric propagation forecasts.</p>	SPA-AFI/08	ICAO	Part of the frequency program	On going
Rec. 6/21	<p><u>FREQUENCY SPECTRUM</u></p> <p>That:</p> <p>a) AFI States provide support to the activities of the frequency management group formed by APIRG/16;</p>	SPA-AFI/08	ICAO	AFI has been given two meetings	Done

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	<ul style="list-style-type: none"> b) ICAO Headquarters support several meetings and one seminar in the AFI Region prior to World radio Conference 2012 (WRC-2012) c) States and other international organizations support attendance by regional offices at International telecommunications Union (ITU) preparatory events for WRC-2012; d) AFI States' civil aviation authorities request their regulatory authorities to assign aviation experts to participate in their national delegation at ITU Conference in order to brief the delegations at those conferences on the ICAO position and to support that position; and e) A regional coordination meeting be held to develop a harmonized position prior to WRC-2012. 				