



INTERNATIONAL CIVIL AVIATION ORGANIZATION
WESTERN AND CENTRAL AFRICAN OFFICE

Nineteenth Meeting of the AFI Satellite Network Management Committee (SNMC/19)
(Accra, Ghana 14-18 November 2011)

Agenda Item 3: Review/Updating of AFISNET nodes

(Presented by ASECNA)

SUMMARY

This working paper presents the upgrading of AFISNET nodes in ASECNA area, including the status of the implementation of new nodes and call for a continuous improvement of the AFISNET nodes

Reference: SNMC 18 report

Action by the meeting in paragraph 3

1. Introduction

Since the implementation of AFISNET in the early years of 1990, the network is in continuous expansion and records up to day almost **one hundred of nodes**, supporting the various aeronautical telecommunications services. The current Working Paper presents the status of implementation of new nodes in ASECNA area, including the improvement on going regarding the nodes.

2. Discussion

2.1 The implementation of new AFISNET nodes is still ongoing to improve the aeronautical fixed service (AFTN, ATS/DS, AMHS, AIDC...), the mobile service (extended VHF coverage...), Surveillance data exchanges...

The status of the recent implementation is provided in **Annex A** to this working paper.

2.2 Improvements are also on going in the nodes at the base band, IF and Radio frequency levels with:

- The full migration from the IBS systems to new Datum modems systems;
- The introduction of L band Modem for the usage of the full transponder;
- The migration of the multiplexors from the mol2P systems to new multiplexor generation;
- The improvement of the RF systems;
- The retrofit of most of the formers AEROSATEL stations and remote VHF stations

3. Action Required

The meeting is invited to:

- a) Review and up-date the implementation status of the AFISNET nodes in ASECNA area as presented at **Appendix A** to this working paper;
- b) Encourage AFISNET States/Organizations to pursue the upgrade of their AFISNET nodes to improve the availability and the reliability of AFISNET;

Annex A

Status of the AFISNET nodes in ASECNA

Country	Node	Coordinates		Antenna Standard		
		Latitude	Longitude	Ø	Serv.	Year
BENIN	Cotonou	36°46'00"N	03°03'00"E	F1 (3,7m)	SFA	1998
BURKINA	Ouagadougou	12°21'00"N	01°31'00"W	F1 (3,7m)	SFA	1998
	BoboDioulasso			F1 (3,7m)	SFA SMA	
CAMEROUN	Douala	04°00'52"N	09°43'00"E	F2 (7,3m)	SFA	1995
	Garoua	09°19'50"N	13°22'28"E	F1 (3,7m)	SFA SMA	1999
	Ngaoundere	07°19'26"N	13°35'02"E	F1 (3,8m)	SMA	2009
	Yaoundé	07°21'28"N	13°33'06"E	F1 (3,8m)	SFA	2009
	Bamenda	05°57'32"N	10°08'47"E	F1 (3,8m)	SMA	2009
COMORES	Moroni			F1 (3,7m)	SFA SMA	2001
CONGO	Brazzaville	04°15'00"S	15°15'00"E	F2 (7,3m)	SFA	1994
		04°15'00"S	15°15'00"E	F1 (3,8m)		2000
	Pointe Noire	04°49'00"S	11°53'00"E	F1 (3,7m)	SFA SMA	1998
	Ouessou	01°36'40"N	16°03'30"E	F1 (3,7m)	SMA	2000
COTE D'IVOIRE	Abidjan	05°15'00"N	03°56'00"W	F2 (7,3m)	SFA	1996
	Bouake	07°44'24"N	05°03'09"W	F1 (3,8m)	SMA	2009
	San Pedro	04°45'45"N	06°38'12"W	F1 (3,8m)	SMA	2009
	Touba	08°16'50"N	07°41'09"W	F1 (3,8m)	SMA	2009
GABON	Libreville	00°27'00"N	09°25'00"E	F2 (7,3m)	SFA	1994
	Port Gentil	00°43'00"N	08°47'00"E	F1 (3,7m)	SFA	
	Makokou	00°34'00"N	12°51'00"E	F1 (3,7m)	SMA	
	Lambarene	00°42'27"S	10°12'48"E	F1 (3,8m)	SMA	2009
GUINEE BISSAU	Bissau	11°53'18"N	15°39'09"W	F1 (3,7m)	SFA	2006
GUINEE EQUATORIALE	Malabo	03°44'56"N	08°42'36"E	F1 (3,7m)	SFA	1998
MADAGASCAR	Antananarivo	18°06'00"S	47°47'00"E	B (11m)	SFA	1997
	Mahajanga	15°40'08"S	46°20'56"E	F1 (3,7m)	SFA SMA	1997

	Toamasina	18°07'00"S	49°24'00"E	F1 (3,7m)	SFA SMA	1997
	Toliara	23°23'20"S	43°43'22"E	F1 (3,7m)	SFA SMA	1998
	Antsiranana	12°30'31"S	49°11'25"E	F1 (3,7m)	SMA	1998
	Mananjary	21°12'35"S	48°21'25"E	F1 (3,8m)	SMA	2009
	Maintirano	18°04'49"S	44°03'58"E	F1 (3,8m)	SMA	2009
	Antalaha	14°59'56"S	50°19'03"E	F1 (3,8m)	SMA	2009
MALI	Bamako	12°32'00"N	07°57'00"W	F1 (3,7m)	SFA	1998
	Gao	16°18'00"N	00°08'00"E	F1 (3,7m)	SMA	2001
	Tessalit	20°16'00"N	01°00'00"E	F1 (3,7m)	SMA	2001
	Taoudenni	22°41'00"N	03°49'00"E	F1 (3,7m)	SMA	
	Tombouctou			F1 (3,7m)	SMA	
	Mopti			F1 (3,7m)	SMA	
	Kidal	18°26'37"N	01°24'07"E	F1 (3,8m)	SMA	2009
MAURICE	Plaisance	20°11'42"N	57°31'18"E	F1 (3,7m)	SFA	
NIGER	Niamey	13°29'00"N	02°11'00"E	F2 (7,3m)	SFA	1994 1998
	Zinder	13°50'00"N	09°00'00"E	F1 (3,7m)	SMA	2001
	EAMAC	13°29'00"N	02°11'00"E	F1 (4,6m)	SFA	
	Agadez	17°00'00"N	08°00'00"E	F1 (3,7m)	SMA	2001
	Dirkou	19°10'00"N	12°54'00"E	F1 (3,7m)	SMA	2001
		Tahoua	14°53'24"N	05°15'54"E	F1 (3,8m)	SMA
RCA	Bangui	04°24'00"N	18°31'00"E	F2 (7,3m)	SFA	1995
	Bouar	05°57'10"N	15°38'20"E	F1 (3,7m)	SMA	1996
	Bria	06°32'00"N	21°59'00"E	F1 (3,7m)	SMA	
France	Saint Denis	20°53'00"S	51°31'00"E	F1 (3,7m)	SFA	2000
	Dzaoudzi	12°48'00"S	45°17'00"E	F1 (3,7m)	SFA	

	Toulouse	43°32'59"N	01°23'59"E	F1 (4,6m)	SFA	
RIM	Nouakchott	18°05'27"N	15°57'05"W	F1 (3,7m)	SFA	1998
	Nouadhibou	20°56'00"N	17°02'00"W	F1 (3,7m)	SFA	1998
	Birmogrhein	25°13'00"N	11°36'00"W	F1 (3,7m)	SMA	
	Atar	20°31'00"N	13°03'00"W	F1 (3,7m)	SMA	1999
	Nema			F1 (3,7m)	SMA	
	Elmreti	24°17'00"N	09°44'00"W	F1 (3,8m)	SMA	2009
	Tidjikja	18°33'59"N	11°25'34"W	F1 (3,8m)	SMA	2009
SENEGAL	Dakar	14°44'43"N	17°29'53"W	B (11m)	SFA	1996 1998
	Tambacounda	13°44'00"N	13°39'00"W	F1 (3,7m)	SMA	1996
TCHAD	Ndjamena	12°08'00"N	15°02'00"E	F2 (7,3m)	SFA	1995 1997
	Amtiman	11°02'22"N	20°16'39"E	F1 (3,7m)	SMA	1997
	Dire	15°50'22"N	14°49'58"E	F1 (3,7m)	SMA	1997
	FayaLargeau	17°56'00"N	19°07'00"E	F1 (3,7m)	SMA	2001
	Abéché				SMA	
	Sarh			F1 (3,7m)	SMA	
	Bardai	22°38'52"N	17°41'58"E	F1 (3,8m)	SMA	2011
TOGO	Lomé	06°10'00"N	01°15'00"E	F1 (3,7m)	SFA	1998
AFRIQUE DU SUD	Johannesbour g	26°08'13"S	28°14'59"E	F1 (3,8m)	SFA	
SAO TOME ET	Sao Tomé	00°22'31"N	06°42'42"E	F1 (3,7m)	SMA	

PRINCIPE						
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