INTERNATIONAL CIVIL AVIATION ORGANIZATION

WESTERN AND CENTRAL AFRICA OFFICE

Twentieth Meeting of the AFI Satellite Network Management Committee (SNMC/20)
(Abuja, Nigeria 08-12 October 2012)

Agenda Item 2: Review of operational and technical statistics of availability for AFISNET-supported links

(Presented by the secretariat)

SUMMARY

The purpose of this paper is to inform the meeting of the status of operational statistics of availability for AFISNET -supported links.
Reference: Monthly Reports from GCAA, NAMA, Roberts FIR and ASECNA

Action by the meeting in paragraph 3

1. Introduction

The AFI/6 RAN meeting recommended that States operating AFTN arrange for the monthly recording of circuits performance charts and for the exchange of completed forms between the stations concerned with copy to relevant ICAO Regional Office. The AFI/7 RAN meeting endorsed this recommendation.

2. Discussion

2.1 Status of implementation of AFTN circuits in AFI region

In the aim to satisfy ATM new requirements involving new organization of airspace, bilateral circuits have been realized and should be taken into account when updating the AFI Com chart.

So the rationalized AFI Plan achievement is now about to be completed. However the performance does not comply everywhere with ICAO Annex X requirements.

2.2 Operational Performance Statistics

The availability charts of the AFTN main circuits for the period of 2011 are hereto attached in **Appendix I** to this Working Paper.

When reviewing the performance of the circuits supported by the main AFISNET operating AFI centers (Brazzaville, Dakar and Niamey), one can note the dysfunctions encountered in the operation of the network:

a) Brazzaville AFTN Main center

A low rate of availability can be noted in the operation of the following links:

BZV-DKR: 94%
BZV-NIM: 93%
BZV-KNO: 43%

BZV- TNR: 88%
BZV-JOB: 87%
BZV-KIN: 0%
BZV-LDA: 06/%

Around the Brazzaville center we can note the good performance of the following links:
BZV-NDJ: **100%**
BZV-LBV**:** **99%**
BZV-DLA: **98%**
BZV- SSG: **100%**
BZV-ACC: **97%**
BZV-NBO: **99%**

b) Dakar AFTN Main center

A slow rate of availability is encountered on the following links:

DKR-BKO: 92%
DKR-BXO: 95%
DKR-NKC: 94%
DKR-CKY: 95%
DKR-NIM: 90%
DKR-BZV: **94%**
DKR-TNR: **91%**
DKR-LBV: **93%**

Good performance around Dakar can be noted on the following links:

DKR-BJL: 98%
DKR-SID: 100%
DKR-JNB: 98%
DKR-RIO: 99%
DKR-NIM: 99%

c) Niamey AFTN Main Center

Performance is below the AFI plan standards for the following links:

NIM-ACC: **96%**
NIM-BZV: **86%**
NIM-DKR: **90%**
NIM-KNO: **86%**
NIM-LFW: **94%**
NIM-NDJ: **94%**
NIM-NKC: **96%**
NIM-TIP: **83%**

Acceptable performance level is noted on:

NIM-ABJ: **99%**
NIM-ADD: **97%**
NIM-COO: **99%**
NIM-LOS: **98%**
NIM-OUA: **98%**

Some of the dysfunctions encountered have decreased the operational performance of the network and should be cleared out after technical cross investigation. The new flight plan format, the requirements of RVSM space management and the automation of flight data processing including flight plan, the automation of AIS including NOTAM messages, recommend that States/Organizations continue their efforts to increase AFS AFTN performance in particular for those current failing circuits.

Despite the above mentioned AFI recommendation, SNMC members are still not submitting the required information in a timely manner. The Performance Data collection Form (**PDCF**) is attached in Appendix II.

Since its adoption by SNMC 19 and by APITG 18 meetings its usage has not been undertaken by SNMC members.

Due to the difficulties faced by the Regional Bureau of WACAF to collect the AFTN statistics from States, it should be advisable to consider the implementation of a comprehensive database for AFS-AFTN statistics management and monitoring in the AFI Region, based on the PDCF and other relevant.

3. Action by the meeting:

The meeting is invited to:

a) Take note of the above information;

b) Urge States which do not submit AFTN performance charts to ensure that the information provided is relevant charts;

c) Participate in the development of a comprehensive database for AFS-AFTN statistics management and monitoring in the AFI Region, based on the PDCF and other relevant.

APPENDIX I

AFTN Performance for year 2011

Brazzaville AFTN Main Centre

Liaison	Janv.	Fev.	Mars	Avr.	Mai	Juin	Juil.	Aout	Sept.	Oct.	Nov.	Déc.	Min	Max	Moy
DKR	87	100	97	100	98,2	96	91	69	93	95	99,4	100	69	100	94
NIM	97	100	100	100	83,1	93	87	96	91	89	82,7	97	83	100	93
NDJ	100	100	100	100	100	99	100	99	100	100	100	99	99	100	100
LBV	100	100	100	100	95,2	100	98	100	98	100	100	100	95	100	99
DLA	99	100	100	100	100	100	100	100	97	90	96,4	99	90	100	98
BGF	100	100	100	97	98,7	99	99	99	81	83	100	83	81	100	95
SSG	100	100	100	100	100	100	99	100	97	100	100	100	97	100	100
PNR	100	70	99	99	99,5	100	99.5	99	95	99	99,5	99	70	100	96
KNO	0	0	0	0	0	0	32.5	79	99	99	100	99	0	100	43
ACC	96	97	99	99	99,8	99	99.5	98	99	93	96,6	93	93	99,8	97
TNR	87	89	73	85	96,5	100	77.5	75	87	90	100	90	73	100	88
JNB	100	100	62	84	80	100	60.32	91	69	100	95,6	80	62	100	87
TMS	0	40	0	70	97,4	93	94	98	100	91	100	91	0	100	79
KIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NBO	100	99	98	100	100	100	97.77	98	100	100	100	99	98	100	99
LAD	0	0	0	0	0	0	0	0	0	0	76,7	0	0	76,7	6

AFTN Performance for year 2011

Dakar AFTN Main Center

Liaison	Janv	Fév	Mars	Avril	Mai	Juin	Juillet	Aout	Sept	Oct	Nov	Déc	Min	Max	Moy
CMN	100	100	99,9	100	100	100	100	99,5	99,6	100	100	100	99,5	100	100
BKO	79,7	90,8	93	95	96,29	84,8	95	82,1	94,2	97,8	98,9	97,8	79,7	98,9	92
BJL	91,8	99,4	100	100	99,36	100	99	93,8	98,6	99,2	99,9	99,2	91,8	100	98
LPA	100	100	100	100	99,36	100	100	100	98,7	99,9	99,1	100	98,7	100	100
BXO	93,9	99,7	88,9	90	93,27	93	94	91,6	95,6	98,7	100	95,6	88,9	100	95
NKC	82	98,9	96	99	99,19	99,9	100	98	61,2	99,4	99,9	99,3	61,2	99,9	94
SID	100	100	99,9	100	100	100	100	100	98,7	100	97,5	100	97,5	100	100
CKY	95,1	100	96,8	100	91	89	89	93,3	97,1			97,1	89	100	95
ABJ	90,1	94,6	96,8	100	99,19	100	100	99,2	93,9	99	99,9	99,5	90,1	100	98
NIM	89,6	98,4	90,5	96	86,54	82,8	92	93,5	90,1	90,2	88,8	85,3	82,8	98,4	90
JNB	100	100	86,6	100	100	100	100	100	99,7	100	100	100	86,6	100	99
BZV	91,9	99,9	98,1	100	98,91	90,6	88	71,4	90,5	94,4	99,6	100	71,4	100	94
RIO	99,3	99,7	99,1	100	99,53	99,5	96	99	99	99,9	97,6	100	96,4	100	99
TNR	46,7	81,9	75	100	98,76	100	100	99	94,3	99,3	96,2	99,2	46,7	100	91
LBV	84	89,3	92,8	88	98,77	94	89	95,2	94,8	98,3	99,3	93,8	84	99,3	93

AFTN Performance for year 2011
Niamey AFTN Main Center

Liaison	Janv.	Fev.	Mars	Avr.	Mai	Juin	Juil.	Aout	Sept.	Oct.	Nov.	Déc.	Min	Max	Moy
ABJ	100	100	100	99	97,8	99,9	100	**96**	99,7	98,4	100	100	**96**	100	99
ACC	**96,4**	**96**	98,8	98	96,9	**91,7**	98,1	**91**	98	**92**	94	98	**91**	98,8	**96**
ADD	98,4	99	99,7	**93**	97,1	98,5	98,9	**95**	99,4	**86,8**	100	100	**86,8**	99,7	97
ALG	100	100	100	100	97,7	100	99,6	**96**	99,9	98,3	100	100	**96,1**	100	99
BZV	98,1	99	100	100	**85,6**	**91**	**87,5**	97	**89,4**	**90,4**	**86**	**12**	**11,6**	100	**86**
COO	100	100	98,4	97	97,7	99,6	98,8	97	98,1	97,7	100	99	**96,9**	100	99
DKR	**88**	97	**89,7**	**96**	**84,4**	**81,4**	**90,4**	**96**	**90,9**	**88,5**	**88**	**86**	**81,4**	97,4	**90**
KNO	**76,2**	**68**	**96,1**	**86**	**70**	**68,1**	**95,7**	**74**	99,9	98,1	100	100	**67,7**	100	**86**
LOS	100	100	100	100	97,5	100	97,1	96	98,7	93,3	97	100	**93,3**	100	98
LFW	99,2	99	99,7	**46**	97,4	100	99,9	95	94,9	97,5	100	100	**45,7**	100	**94**
NDJ	98	**96**	93,2	**87**	**95**	**96,3**	**95,5**	**90**	**93,7**	**97,3**	99	**93**	**87,4**	98,6	**94**
NKC	97,8	100	97,6	98	97,6	100	100	96	**70,3**	**96,2**	99	99	**70,3**	100	**96**
OUA	100	**96**	90,2	99	97,6	99,3	98,9	95	98,7	**96,9**	100	99	**90,2**	100	98
TIP	100	100	100	100	97,8	98,9	98,8	27	**4,47**	**84,2**	100	**84**	**4,47**	100	**83**

APPENDIX II

Performance Data Collection Form

A-Global Static parameters

Center **Date**

Parameters	Values	Remarks
Fixed Parameters		
Intelsat link Name	IS 901 @°E	
Transponder Number	36/36	
Satellite Earth Station Coordinates	LONG = ddd, mm O/E LAT = dd, mm N/S	Under WGS 84 Format
	AZ = ddd, mm O/E EL = dd, mm N/S	
Antenna Type and Size	….m	
Antenna Gain	Tx : …dBi Rx : …dBi	
SSPA type	X W	
Up Converter Frequency	MHz	
Down Converter Frequency	MHz	
B-Global Dynamic parameters		
EIRP		
G/T		
C/N0		
BER		
MTBF		
MTTR		
Parameter for Carrier Performance		
Carrier failure rate		
C/N0		
BER		

C-Services Performance

Performance of AFTN

Centre : Accra Date /

Country	Terminal I	Terminal II	Support	COM Protocol	Speed	Transit Time	Routing	Monthly Availability2011												½ Annual Average Availability	
								01		02		03		04		05		06		1	
Ghana	Accra	Niamey	AFISNET					TX	RX	TX	RX	TX	RX	TX	RX	TX	RX	TX	RX	TX	RX

Qualitative performance of ATS/DS

Centre :Kano
Date /

Country	Terminal I	Terminal II	Support	Connexion Time	Nb of Attempts	One Way Latence Time	Call set up time	Voice Quality (1 to 5)	Monthly Availability2011						½ Annual Average Availability
Nigeria	Kano	Niamey	AFISNET						01	02	03	04	05	06	

Qualitative performance of Future CNS Service s

Country	Terminal 1	Terminal II	Support	Provided Service	COM Protocol	Speed	Transit Time	Routing	Availability 2005-2010						Remarks
									05	06	07	08	09	10	
Mauritus	Maurice	Ivato	AFISNET	AIDC											
Liberia	Roberts	Dakar	AFISNET	AMHS											