



INTERNATIONAL CIVIL AVIATION ORGANIZATION
WESTERN AND CENTRAL AFRICA OFFICE

Twenty-Third Meeting on the Improvement of Air Traffic Services over the South Atlantic (SAT/23)

Durban, South Africa, 6-8 June 2018

Agenda Item 3: Communication, Navigation and surveillance (CNS)

Review of the performance of SAT CNS infrastructure and systems

(Presented by Ghana - GCAA.)

Table with 1 column and 5 rows containing SUMMARY, This working paper present the performance metrics for SAT CNS infrastructures and systems, REFERENCE(S): SAT/22 meeting Report, Related ICAO Strategic Objective(s), and Action by the meeting: See paragraph 3

1. INTRODUCTION:

The SAT/22 meeting held in Paris, France from the 7th to 9th June 2017 formulated Decision 22/07: Establishment of Technical Group for the identification of CNS systems performance and reads as follows

That;

- a. A Technical Group composed with ASECNA, Brazil, Capo Verde ,Ghana, Portugal is established with the mandate to define, identify and assess CNS systems performance:
b. The Group under the leadership of Ghana will submit to SAT members a draft list of performance and metrics by 30 June 2017 for comments and amendments to be sent no later than 31st July 2017
c. The draft document will be finalized no later than 30th September 2017 and forwarded to ANSPs for first reporting on SAT CNS performance before 31st January 2018
d. The Technical Group will work with the assistance of the Secretariat through e-mailing and teleconference

Since the SAT/22 meeting a lot of inputs were received from the Technical Group to support and implement this conclusion

## 2. DISCUSSION:

### Performance of SAT CNS Infrastructure and Systems

State: \_\_\_\_\_ ANSP: \_\_\_\_\_ Quarter: \_\_\_\_\_ Year: \_\_\_\_\_ **FIR:** \_\_\_\_\_

SYSTEMS		Performance Indicators				
		A (%)	MTIS (Min)	MTBF (H)	TTOS (H)	MTTR (H)
Communication	VHF					
	HF					
	AIDC/OLDI					
	CPDLC					
	AFTN/AMHS					
	VCS					
Navigation						
	VOR/DME					
	NDB					
Surveillance	SSR					
	ADS-C					
	ADS-B					
	MLAT					

**Indicators:**

**SA**–Service Availability (%)

**MTIS**–Mean Time Inoperative Service (Minutes)

**MTBSF** –Mean Time Between Service Failures (hours)

**TTOS**– Total Time Out Service (hours)

**SA**–Service Availability (SA): Is the service availability during a quarter.

$$SA = \frac{TT - TTOS}{TT} \times 100$$

**TT**: Total Time of the a quarter (90 days = 2160 hours)



**MTIS**–Mean Time Inoperative Service (MTIS): Is the average time that the service was inoperative each time the service failure occurred. For example, if during a quarter the service is inoperative for 2 times during 20 min and 30 min, respectively, the MTIS would be 25 Min.

**MTBSF** –Mean Time Between Service Failures (MTBSF): Is the average time between service failures during operation. For example, if during a quarter (90 days = 2160 hours) the service is inoperative for 3 times and the times between failures are 20 days (480 hours) and 30 days (720 hours), respectively, the MTBSF are 25 Days (600 hours)

**TTOS**– Total Time Out Service (TTOS): Sum of the times that the service was inoperative.

### 3. ACTION BY THE MEETING:

- 3.1. The meeting is invited to:
  - a. Note the information contained in this paper
  - b. Discuss any relevant matters as appropriate: and
  - c. Implement this conclusion

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