



**INTERNATIONAL CIVIL AVIATION ORGANIZATION  
WESTERN AND CENTRAL AFRICAN OFFICE**

**Sixth Meeting of the Central Atlantic FIR Satellite (CAFSAT) Network Management  
Committee (CNMC/6)  
Lisbon, Portugal, 06 - 07 June 2016**

**Agenda Item 2: *Review the performance of CAFSAT earth stations and the  
operational statistics of availability for supported links***

**Lisbon and Santa Maria CAFSAT stations availability**

(Presented by Portugal)

**Summary**

This working paper presents information on availability of Lisbon and Santa Maria CAFSAT stations during the 1<sup>st</sup> and 2<sup>nd</sup> semesters of 2015 and the 1<sup>st</sup> trimester of 2016.

**Background**

According Conclusion SAT/16/14 and Decision CNMC/1/02 each trimester statistics of availability of CAFSAT earth stations are to be sending to ICAO Dakar Office and CNMC manager.

**Discussion**

Portugal has presented a quarterly report on availability of CAFSAT earth stations of Lisbon and Santa Maria.

This WP presents the consolidated report of 1<sup>st</sup> and 2<sup>nd</sup> semesters of 2015 and for the 1<sup>st</sup> trimester of 2016. Presented data is for Level 4 (client base equipment to client base equipment).

**Suggested action**

Meeting is invited to note the information of this WP.

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(14 pages)



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CAFSAT Collection of the Performance Statistics Data

(1<sup>st</sup> semester 2015)

Performance of AFTN

Centre: Lisbon (Coordinates: 38° 46' 29.14" N / 09° 07' 28.77 W, under WSG 84 format)

Date: 06/08/2015

Country	Terminal I	Terminal II	Support	Com Prot.	Speed	Transit time	Routing	Monthly Availability 2015												½ Annual Average Availability		
								01		02		03		04		05		06		1		
Portugal	Lisbon	Santa Maria	CAFSAT	Assy. V.24	2.4 Kbps		Direct	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	
								100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
		01						02		03		04		05		06						
		Tx						Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx

Quality Performance of ATS/DS

Centre: Lisbon

Date: 06/08/2015

Country	Terminal I	Terminal II	Support	Connection Time	Nb.. of Attempts	One Way Latency Time	Call set up time	Voice Quality (1 to 5)	Monthly Availability 2015						½ Annual Average Availability	
									01	02	03	04	05	06		
Portugal	Lisbon	Santa Maria 1	CAFSAT					4	100%	100%	100%	100%	100%	100%	100%	
		Santa Maria 2						4	100%	100%	100%	100%	100%	100%	100%	
		Casablanca AMS (Foia)						4	100%	100%	100%	100%	100%	100%	100%	
									4	100%	100%	100%	100%	100%	100%	100%
										01	02	03	04	05	06	



CNS Services OLDI and Radar Data

Centre: Lisbon

Date: 06/08/2015

Country	Terminal I	Terminal II	Support	Provided Service	COM Protocol	Speed	Transit Time	Routing	Monthly Availability 2015						½ Annual Average Availability
									01	02	03	04	05	06	
Portugal	Lisbon	Casablanca	CAFSAT	OLDI	X.25	9.6 Kbps		Direct	01	02	03	04	05	06	
		Casablanca		Radar Fóia	HDLC	9.6 Kbps		Direct	01	02	03	04	05	06	100%
		Casablanca		Radar Porto Santo	HDLC	9.6 Kbps		Direct	01	02	03	04	05	06	100%
									01	02	03	04	05	06	100%
									01	02	03	04	05	06	100%
									01	02	03	04	05	06	100%

06/08/2015



**CAFSAT Collection of the Performance Statistics Data**

**Appendix B**

(2<sup>nd</sup> semester 2015)

**Performance of AFTN**

Centre: Lisbon (Coordinates: 38° 46' 29.14" N / 09° 07' 28.77" W, under WGS 84 format)

Date: 17/02/2016

Country	Terminal I	Terminal II	Support	Com Prot.	Speed	Transit time	Routing	Monthly Availability 2015												½ Annual Average Availability	
								07		08		09		10		11		12		2	
								Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx		
Portugal	Lisbon	Santa Maria	CAFSAT	Assy. V.24	2.4 Kbps		Direct	100	100	100	100	100	100	100	100	100	100	100	100		
								%	%	%	%	%	%	%	%	%	%	%	%	%	%
		07						08		09		10		11		12					
		Tx						Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx

**Quality Performance of ATS/DS**

Centre: Lisbon

Date: 17/02/2016

Country	Terminal I	Terminal II	Support	Connection Time	Nb.. of Attempts	One Way Latency Time	Call set up time	Voice Quality (1 to 5)	Monthly Availability 2015						½ Annual Average Availability	
									07	08	09	10	11	12		
Portugal	Lisbon	Santa Maria 1	CAFSAT					4	100%	100%	100%	100%	100%	100%	100%	100%
		Santa Maria 2						4	100%	100%	100%	100%	100%	100%	100%	100%
		Casablanca AMS (Foia)						4	100%	100%	100%	100%	100%	100%	100%	100%
										100%	100%	100%	100%	100%	100%	100%
										100%	100%	100%	100%	100%	100%	100%
										100%	100%	100%	100%	100%	100%	100%



CNS Services OLDI and Radar Data

Centre: Lisbon

Date: 17/02/2016

Country	Terminal I	Terminal II	Support	Provided Service	COM Protocol	Speed	Transit Time	Routing	Monthly Availability 2015						¼ Annual Average Availability
									07	08	09	10	11	12	
Portugal	Lisbon	Casablanca	CAFSAT	OLDI	X.25	9.6 Kbps		Direct	07	08	09	10	11	12	100%
		Casablanca		Radar Fóia	HDLC	9.6 Kbps		Direct	07	08	09	10	11	12	100%
	Casablanca	Radar Porto Santo	HDLC	9.6 Kbps		Direct	07	08	09	10	11	12	100%		

17/02/2016



CAFSAT Collection of the Performance Statistics Data

Appendix C

(1<sup>st</sup> trimester 2016)

Performance of AFTN

Centre: Lisbon (Coordinates: 38° 46' 29.14" N / 09° 07' 28.77 W, under WSG 84 format)

Date: 28/04/2016

Country	Terminal I	Terminal II	Support	Com Prot.	Speed	Transit time	Routing	Monthly Availability 2016												½ Annual Average Availability					
								01		02		03		04		05		06		1					
Portugal	Lisbon	Santa Maria	CAFSAT	Assy. V.24	2.4 Kbps		Direct	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx				
								100	100	100	100	100	100												
		%						%	%	%	%	%													
		01						02		03		04		05		06									

Quality Performance of ATS/DS

Centre: Lisbon

Date: 28/04/2016

Country	Terminal I	Terminal II	Support	Connection Time	Nb.. of Attempts	One Way Latency Time	Call set up time	Voice Quality (1 to 5)	Monthly Availability 2016						½ Annual Average Availability
									01	02	03	04	05	06	
Portugal	Lisbon	Santa Maria 1	CAFSAT					4	01	02	03	04	05	06	
		100%		100%	100%										
		Santa Maria 2						4	01	02	03	04	05	06	
		100%		100%	100%										
		Casablanca AMS (Foia)						4	01	02	03	04	05	06	
		100%		100%	100%										



CNS Services OLDI and Radar Data

Centre: Lisbon

Date: 28/04/2016

Country	Terminal I	Terminal II	Support	Provided Service	COM Protocol	Speed	Transit Time	Routing	Monthly Availability 2016						½ Annual Average Availability
									01	02	03	04	05	06	
Portugal	Lisbon	Casablanca	CAFSAT	OLDI	X.25	9.6 Kbps		Direct	100%	100%	100%				
		Casablanca		Radar Fóia	HDLC	9.6 Kbps		Direct	01	02	03	04	05	06	
		Casablanca		Radar Porto Santo	HDLC	9.6 Kbps		Direct	100%	100%	100%				
									01	02	03	04	05	06	

28/04/2016





CAFSAT Collection of the Performance Statistics Data

Appendix D

(1<sup>st</sup> semester 2015)

Performance of AFTN

Centre: Santa Maria (Coordinates: 36° 58' 22.45" N / 25° 09' 55.01" W, under WGS 84 format)

Date: 06/08/2015

Country	Terminal I	Terminal II	Support	Com Prot.	Speed	Transit time	Routing	Monthly Availability 2015												½ Annual Average Availability	
								01		02		03		04		05		06		1	
								Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx		
Portugal	Santa Maria	Lisbon	CAFSAT	Assy V24	2.4Kbps		Direct	100	100	100	100	100	100	100	100	100	100	100	100		
								%	%	%	%	%	%	%	%	%	%	%	%		
	Sal	Assy. V24	2.4Kbps		Direct	01		02		03		04		05		06					
						Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx		
								100	100	100	100	100	100	100	100	100	100	100	100		
								%	%	%	%	%	%	%	%	%	%	%	%		

Quality Performance of ATS/DS

Centre: Santa Maria

Date: 06/08/2015

Country	Terminal I	Terminal II	Support	Connexion Time	Nb of Attempts	One Way Latency Time	Call set up time	Voice Quality (1 to 5)	Monthly Availability 2015						½ Annual Average Availability
									01	02	03	04	05	06	
Portugal	Santa Maria	Canary	CAFSAT					4	100%	99.93%	99.81%	100%	100%	100%	99.96%
		Sal						4	100%	100%	100%	100%	92.27%	100%	98.68%
		Lisbon 1						4	100%	100%	100%	100%	100%	100%	100%
		Lisbon 2						4	100%	100%	100%	100%	100%	100%	100%



CNS Services OLDI and Radar Data

Centre: Santa Maria

Date: 06/08/2015

Country	Terminal I	Terminal II	Support	Provided Service	COM Protocol	Speed	Transit time	Routing	Monthly Availability 2015						½ Annual Average Availability		
									01	02	03	04	05	06			
Portugal	Santa Maria	Canary	CAFSAT	OLDI	X.25	2.4 Kbps		Direct	01	02	03	04	05	06	100%		
		Sal		OLDI	X.25	1.2 Kbps		Direct	01	02	03	04	05	06	99.77%		
										01	02	03	04	05	06		
											01	02	03	04	05	06	

06/08/2015



CAFSAT Collection of the Performance Statistics Data

Appendix E

(2<sup>nd</sup> semester 2015)

Performance of AFTN

Centre: Santa Maria (Coordinates: 36° 58' 22.45" N / 25° 09' 55.01" W, under WGS 84 format)

Date: 17/02/2016

Country	Terminal I	Terminal II	Support	Com Prot.	Speed	Transit time	Routing	Monthly Availability 2015												½ Annual Average Availability	
								07		08		09		10		11		12		2	
Portugal	Santa Maria	Lisbon	CAFSAT	Assyn V24	2.4Kbps		Direct	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx
								100 %	100 %	100%	100%	100%	100%	100 %	100 %	100 %	100 %	100 %	100 %	100%	100%
		Sal		Assyn V24	2.4Kbps		Direct	07		08		09		10		11		12			
								Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx
100 %	100 %	97.98 %	97.98 %	98.26 %	98.26 %	99.9 %	99.9 %	99.7 %	99.7 %	99.9 %	99.9 %	99.9 %	99.9 %	99.32%	99.32%						

Quality Performance of ATS/DS

Centre: Santa Maria

Date: 17/02/2016

Country	Terminal I	Terminal II	Support	Connetion Time	Nb of Attemps	One Way Latency Time	Call set up time	Voice Quality (1 to 5)	Monthly Availability 2015						½ Annual Average Availability
									07	08	09	10	11	12	
Portugal	Santa Maria	Canary	CAFSAT					4	100%	100%	100%	99.96%	100%	100%	99.99%
		Sal						4	100%	97.98%	98.26%	99.94%	99.78%	92.69%	98.11%
		Lisbon 1						4	100%	100%	100%	100%	100%	100%	100%
								4	100%	100%	100%	100%	100%	100%	100%
		Lisbon 2						4	100%	100%	100%	100%	100%	100%	100%
								4	100%	100%	100%	100%	100%	100%	100%



CNS Services OLDI and Radar Data

Centre: Santa Maria

Date: 17/02/2016

Country	Terminal I	Terminal II	Support	Provided Service	COM Protocol	Speed	Transit time	Routing	Monthly Availability 2015						½ Annual Average Availability	
									07	08	09	10	11	12		
Portugal	Santa Maria	Canary	CAFSAT	OLDI	X.25	2.4 Kbps		Direct	07	08	09	10	11	12	99.99%	
									100%	100%	100%	99.96%	100%	100%		
		Sal		OLDI	X.25	1.2 Kbps			Direct	07	08	09	10	11	12	99.32%
										100%	97.98%	98.26%	99.94%	99.78%	99.93%	
										07	08	09	10	11	12	
										07	08	09	10	11	12	

17/02/2016



CAFSAT Collection of the Performance Statistics Data

Appendix F

(1<sup>st</sup> trimester 2016)

Performance of AFTN

Centre: Santa Maria (Coordinates: 36° 58' 22.45" N / 25° 09' 55.01" W, under WGS 84 format)

Date: 28/04/2016

Country	Terminal I	Terminal II	Support	Com Prot.	Speed	Transit time	Routing	Monthly Availability 2016												½ Annual Average Availability	
								01		02		03		04		05		06		1	
Portugal	Santa Maria	Lisbon	CAFSAT	Assy V24	2.4Kbps		Direct	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx
								100 %	100 %	100 %	100 %	100 %	100 %								
		Sal		Assy. V24	2.4Kbps		Direct	01		02		03		04		05		06			
								Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx
								100 %	100 %	99.7 %	99.7 %	98.9 %	98.9 %								

Quality Performance of ATS/DS

Centre: Santa Maria

Date: 28/04/2016

Country	Terminal I	Terminal II	Support	Connexion Time	Nb of Attemps	One Way Latency Time	Call set up time	Voice Quality (1 to 5)	Monthly Availability 2016						½ Annual Average Availability
									01	02	03	04	05	06	
Portugal	Santa Maria	Canary	CAFSAT					4	99.95%	99.88%	99.85%				
		Sal						4	100%	99.78%	98.91%				
		Lisbon 1						4	100%	100%	100%				
		Lisbon 2						4	100%	100%	100%				



CNS Services OLDI and Radar Data

Centre: Santa Maria

Date: 28/04/2016

Country	Terminal I	Terminal II	Support	Provided Service	COM Protocol	Speed	Transit time	Routing	Monthly Availability 2016						½ Annual Average Availability		
									01	02	03	04	05	06			
Portugal	Santa Maria	Canary	CAFSAT	OLDI	X.25	2.4 Kbps		Direct	99.95%	99.88%	99.85%						
		Sal		OLDI	X.25	1.2 Kbps		Direct	100%	99.78%	98.91%						
										01	02	03	04	05	06		
											01	02	03	04	05	06	

28/04/2016