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INTERNATIONAL CIVIL AVIATION ORGANIZATION

PLANNING AND IMPLEMENTATION REGIONAL GROUP

METEOROLOGY SUB-GROUP SEVENTH MEETING

(Dakar, 11 - 13 April 2005)

Agenda Item 3: WAFS in the AFI Region

Status of the implementation of the WAFS in the AFI Region

(Presented by the Secretariat)

Summary

This paper presents a status of implementation in the AFI Region of the WAFS in particular the Satellite Distribution System (SADIS) provided by the United Kingdom as an integral part of the ICAO aeronautical fixed service (AFS). It describes the follow-up action required for the SADISOPSG/9 Meeting.

References: Report of AFI/7 RAN Meeting, 1997
Reports of APIRG/13-14 Meetings
Reports of SADISOPSG/9
Annex 3

1. Introduction

1.1 It should be noted that the Satellite Distribution System for information relating to air navigation (SADIS) provided by the United Kingdom, as an integral part of the ICAO

2. Discussion

2.1 Review the report of the SADISOPSG/9 Meeting

2.1.1 It may be noted that the SADISOPSG/9 Meeting held in Dakar 1-4 June 2004 formulated one draft conclusion to the attention of PIRGs served by SADIS, related to the SADIS Internet-based FTP service. Furthermore, the MET/SG is expected to update the SADIS strategic assessment tables.

2.1.2 The MET/SG will recall that the SADIS Provider State offers a fully operational SADIS Internet-based FTP service to all authorized SADIS or International Satellite Communication System (ISCS) users. The MET/SG will be aware that the FTP service was introduced as a **back-up** to the SADIS broadcast and that, until now, the back-up service is provided free-of-charge to the authorized SADIS users. The SADISOPSG is of the opinion that the time has come to include the components of the SADIS FTP service in the SADIS inventory, with the understanding that the users of the FTP service would continue to be considered SADIS users and would have to contribute to the mandatory cost recovery. The MET/SG may wish to note that the SADIS Provider State would not recover any of the initial capital costs associated with establishing the FTP service; only the costs associated with providing an on-going operational service are proposed for inclusion in the SADIS inventory, as of 1 July 2005. With the proposed change, the management of the SADIS FTP service would become part of the tasks of the SADISOPSG, and the SADIS users would be in a position to impact the development of the SADIS FTP service.

2.1.3 In order to formalize the role of the SADIS Internet-based FTP service, the MET/SG is invited to formulate the following conclusion:

Conclusion .../... — SADIS Internet-based FTP Service

That, in parallel with the satellite broadcast, the SADIS Provider State be invited, as of 1 July 2005, to make WAFS forecasts and OPMET data available, as a primary component of the SADIS service, in accordance with the *SADIS User Guide* through the Internet-based FTP service.

Note 1.— The development and management of this service will be overseen by the SADISOPSG and its work programme will be amended accordingly.

Note 2.— The SADIS Cost Recovery Administrative Group (SCRAG) has been informed about the planned date of implementation.

wish to agree on the proposed tables and formulate the following conclusion:

Conclusion .../... — SADIS strategic assessment tables

That, the SADIS strategic assessment tables, as given in Appendix to this report, be adopted and forwarded to the SADISOPSG for planning the future requirements for bandwidth on the SADIS broadcast.

2.1.5 Table MET 7: authorized users of the SADIS Satellite Broadcast in the AFI Region is given at Appendix for review and update.

2.1.6 Detailed information on the WAFS and SADIS is given by the provider State United Kingdom in WP/10 and WP/11.

3. Action proposed

3.1 The MET/SG is invited to:

- note the information provided;
- suggest any action required to improve WAFS services in the AFI Region.

**FASID TABLE MET 7 -
AUTHORIZED USERS OF THE (SADIS) SATELLITE BROADCAST
IN THE AFI REGION
TALBLEAU FASID MET 7 -
USAGERS AUTORISES DE LA DIFFUSION PAR SATELLITE DU SADIS
DANS LA REGION**

EXPLANATION OF THE TABLE

Column

- 1 Name of the State or territory
- 2 User of the satellite broadcast. Abbreviations used:

CAA - civil aviation authority
NMS - national meteorological service
O - other than the civil aviation authority or the national meteorological service.
- 3 Location of VSAT: town and, where applicable, aerodrome to be indicated.
- 4 Indication whether the equipment is operational:

2w - two way VSAT operational
1w - one way VSAT operational
(blank) - no.

Editorial Note - The content of the FASID Table MET7 is to be kept up-to-date by the PIRGs and regional offices concerned.

EXPLICATION DU TABLEAU

Colonne

- 1 Nom de l'Etat ou territoire
- 2 Usager de la diffusion par satellite. Abréviations utilisées:

CAA - administration d'aviation civile
NMS - service météorologique national
O - autre service que l'autorité de l'aviation civile ou le service météorologique national

(en blanc)- non

Note: Le contenu du Tableau FASID MET7 est tenu à jour par les PIRGs et les Bureaux concernés.

*MET/SG/7-WP/7
Attachment A*

**TABLE MET 7/TABLEAU MET 7
IMPLEMENTATION OF THE SADIS IN THE AFI REGION/
MISE EN OEUVRE DU SADIS DANS LA RÉGON AFI**

SATELLITE DISTRIBUTION SYSTEM/SYSTÈME DE DISTRIBUTION PAR SATELLITE			
<i>State/Etat</i>	<i>WAFS User/ Usager WAFS</i>	<i>Location of VSAT/ Emplacement du VSAT</i>	<i>Equipment operational/ Equipement Opérationnel</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
<i>Algeria</i>	<i>NMS</i>	<i>Dar-El-Beida</i>	<i>1W</i>
<i>Benin</i>	<i>NMS</i>	<i>Cotonou/Aéroport Cadjehoun</i>	<i>1W</i>
<i>Botswana</i>	<i>NMS</i>	<i>Gaborone/S.S. Khama Airport</i>	<i>1W</i>
<i>Burkina Faso</i>	<i>NMS</i>	<i>Ouagadougou/Aéroport</i>	<i>1W</i>
<i>Burundi</i>	<i>NMS</i>		
<i>Cameroon</i>	<i>NMS</i>	<i>Douala/Airport</i>	<i>1W</i>
<i>Chad</i>	<i>NMS</i>	<i>Ndjamena/Aéroport</i>	<i>1W</i>
<i>Congo</i>	<i>NMS</i>	<i>Brazzaville/Maya Maya Aéroport</i>	<i>1W</i>
<i>Congo (RD)</i>	<i>NMS</i>	<i>Kinshasa/Aéroport N'Jili</i>	<i>1W</i>
<i>Côte d'Ivoire</i>	<i>NMS</i>	<i>Abidjan/F.H. Boigny Aéroport</i>	<i>1W</i>
<i>Equatorial Guinea</i>	<i>NMS</i>	<i>Malabo/Aéroport</i>	<i>1W</i>
<i>Eritrea</i>	<i>NMS</i>		
<i>Ethiopia</i>	<i>NMS</i>	<i>Addis Ababa/Bole Intl.</i>	<i>1W</i>
<i>Ethiopia</i>	<i>CAA</i>	<i>Addis Ababa</i>	<i>1W</i>

SATELLITE DISTRIBUTION SYSTEM/SYSTÈME DE DISTRIBUTION PAR SATELLITE			
<i>State/Etat</i>	<i>WAFS User/ Usager WAFS</i>	<i>Location of VSAT/ Emplacement du VSAT</i>	<i>Equipment operational/ Equipement Opérationnel</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
<i>Guinea</i>	<i>NMS</i>	<i>Conakry/Aéroport Gbessia</i>	<i>1W</i>
<i>Kenya</i>	<i>NMS</i>	<i>Nairobi/Jomo Kenyatta Intl.</i>	<i>1W</i>
<i>Kenya</i>	<i>NMS</i>	<i>Mombasa Airport</i>	<i>1W</i>
<i>Madagascar</i>	<i>NMS</i>	<i>Antananarivo/Aéroport IVATO</i>	<i>1W</i>
<i>Malawi</i>	<i>NMS</i>		
<i>Mali</i>	<i>NMS</i>		
<i>Mauritania</i>	<i>NMS</i>		
<i>Mauritius</i>	<i>NMS</i>	<i>Mauritius/Sirs. Rangooram Intl.</i>	<i>1W</i>
<i>Mozambique</i>	<i>NMS</i>	<i>Maputo Airport</i>	<i>1W</i>
<i>Niger</i>	<i>NMS</i>	<i>Niamey/Aéroport Diori Hamani</i>	<i>1W</i>
<i>Niger</i>	<i>EAMAC</i>	<i>Niamey EAMAC</i>	<i>1W</i>
<i>Nigeria</i>	<i>NMS</i>	<i>Lagos Airport</i>	<i>1W</i>
<i>Rwanda</i>	<i>NMS</i>	<i>Kigali Airport</i>	<i>1W</i>
<i>Senegal</i>	<i>NMS</i> <i>NMS</i>	<i>Dakar -/Aéroport L.S. Senghor</i> <i>Dakar -/Aéroport L.S. Senghor</i>	<i>1W</i> <i>2W</i>
<i>Seychelles</i>	<i>NMS</i>	<i>Mahé/Seychelles Intl.</i>	<i>1W</i>
<i>Sierra Leone</i>	<i>NMS</i>		
<i>Somalia</i>	<i>NMS</i>		
<i>South Africa</i>	<i>NMS</i>	<i>Pretoria/NMS</i>	<i>2W</i>

SATELLITE DISTRIBUTION SYSTEM/SYSTÈME DE DISTRIBUTION PAR SATELLITE			
<i>State/Etat</i>	<i>WAFS User/ Usager WAFS</i>	<i>Location of VSAT/ Emplacement du VSAT</i>	<i>Equipment operational/ Equipement Opérationnel</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
<i>Togo</i>	<i>NMS</i>	<i>Lome/Tokoin</i>	<i>1W</i>
<i>Tunisia</i>	<i>NMS</i>		
<i>Uganda</i>	<i>NMS</i>	<i>Entebbe/Intl.</i>	<i>1W</i>
<i>Zambia</i>	<i>NMS</i>	<i>Lusaka/Intl.</i>	<i>1W</i>
<i>Zimbabwe</i>	<i>NMS</i>	<i>Harare Airport</i>	<i>1W</i>

NMS - National MET Services/ Service Météorologique National

APPENDIX B

SADIS STRATEGIC ASSESSMENT TABLES CURRENT AND PROJECTED DATA VOLUMES 2005-2008

Note 1.— 1 octet = 1 byte = 1 character;

Note 2.— low level (SWL) <FL 100; medium level (SWM): FL100 – FL 250; high level (SWH): >FL 250.

Table 1. AFI— OPMET data volumes

Main routing(s): AFTN, direct line (GTS)

<i>OPMET data</i>	<i>Current 2004</i>	<i>Projected 2005</i>	<i>Projected 2006</i>	<i>Projected 2007</i>	<i>Projected 2008</i>
ALPHANUMERIC DATA					

<i>OPMET data</i>	<i>Current 2004</i>	<i>Projected 2005</i>	<i>Projected 2006</i>	<i>Projected 2007</i>	<i>Projected 2008</i>
Number of SP bulletins issued per day	3	0	0	0	
Number of SIGMET bulletins issued per day	5	35	35	35	
Number of FK/FV bulletins issued per day	2				
BINARY DATA					
Number of other bulletins issued per day (please specify header(s))	0	0	0	0	
Average number of stations per bulletin	0	0	0	0	
TOTALS					
Total number of OPMET bulletins per day	1606	1285	1335	1335	
Average size of OPMET bulletin (bytes)	500	500	500	500	
Total estimated OPMET data volume per day (bytes)	803K	642K	667K	667K	

Table 2. AFI — BUFR data volumes

Main routing(s): GTS

<i>BUFR SIGWX MESSAGES</i>	<i>Current 2004</i>	<i>Projected 2005</i>	<i>Projected 2006</i>	<i>Projected 2007</i>	<i>Projected 2008</i>
WMO Header	DAKAR	DAKAR	DAKAR	DAKAR	
Time(s) of issue of data (UTC)	—	—	0700,1300, 1900,0100	0700, 1300, 1900, 0100	
Average size of message (bytes)	—	—	15K	15K	
Data level (e.g. FL range or low (SWL)/medium level (SWM))	—	—	SWL/SWM	SWL/SWM	
Validity time(s) of data VT (UTC)	—	—	1200,1800, 0000,0600	1200, 1800, 0000, 0600	
WMO Header	PRETORIA	PRETORIA	PRETORIA	PRETORIA	
Time(s) of issue of data (UTC)	—	—	0700,1300, 1900,0100	0700, 1300, 1900, 0100	
Average size of message (bytes)	—	—	15K	15K	
Data level (e.g. FL range or low (SWL)/medium level (SWM))	—	—	SWL/SWM	SWL/SWM	
Validity time(s) of data VT (UTC)	—	—	1200,1800, 0000,0600	1200, 1800, 0000, 0600	
TOTALS					
Total number of BUFR messages per day	0	0	8	8	
Average size of messages (bytes)	0	0	15K	15K	
Total estimated volume of BUFR messages per day (bytes)	0	0	120K	120K	

Note.— It is assumed that only 2 sites will have the capacity to send BUFR information to WAFC

London.

Table 3. AFI — AIS data volumes

Main routing(s): AFTN

<i>AIS (Subject to statement of an operational requirement)</i>	<i>Current 2004</i>	<i>Projected 2005</i>	<i>Projected 2006</i>	<i>Projected 2007</i>	<i>Projected 2008</i>
ALPHANUMERIC AIS DATA (e.g. NOTAMs, ASHTAMs)					
Bulletin type	—	NOTAM	NOTAM	NOTAM	
Number of bulletins issued per day	0	300	300	300	
Average size of each bulletin (bytes)	0	400	400	400	
Bulletin type					
Number of bulletins issued per day					
Average size of each bulletin (bytes)					
CHART AIS DATA (e.g. AIP CHARTS)					
Header number/Chart type (e.g. AIP)	—	AIP	AIP	AIP	
Time(S) of issue of chart (UTC)	0	4	4	4	
Average size of chart (bytes)	0	100	100	100	
Validity time of chart VT(UTC)					
Header number/Chart type (e.g. AIP)					
Time(S) of issue of chart (UTC)					
Average size of chart (bytes)					
Validity time of chart VT(UTC)					
TOTALS					
Total number of AIS bulletins per day					
Average size of AIS bulletin (byte)					
Total number of AIS charts issued per day					
Average size of AIS chart (byte)					
Total estimated volume of AIS data per day (bytes)	0K	520K	520K	520K	