



**AFI PLANNING AND IMPLEMENTATION REGIONAL GROUP (APIRG)
SEVENTH MEETING OF THE MET SUBGROUP (MET SG/7)**

(Dakar, 11-13 April 2005)

Agenda Item 2: Review of APIRG Conclusions and Decisions

**IMPLEMENTATION OF APIRG AND METSG METEOROLOGICAL RELATED
DECISIONS AND CONCLUSIONS IN ASECNA MEMBER STATES**

(Presented by ASECNA)

Summary

This note outlines the state of implementation of APIRG and METSG decisions and conclusions related to meteorological services for international air navigation in ASECNA member states. The paper highlights ASECNA's efforts to implement all decisions and conclusions of APIRG related to meteorology and gives a concrete expertise of ASECNA in the domain of SADIS maintenance and operational personal training.

1. Introduction

1.1 Decisions and conclusions of APIRG/14 and METSG/6 Sub-Group meetings related to meteorology, have covered the following areas:

- ✓ Follow-up action on APIRG Conclusions and Decisions related to meteorology (APIRG/13, Decision 13/61)
- ✓ Training on the use of GRIB and BUFR Codes (METSG/6, Conclusion 6/1),
- ✓ Inclusion of METAR exchange in the AMBEX scheme (APIRG/14 Decision 14/35, METSG/6 Decision 6/5)
- ✓ Inclusion of Port-Gentil in AMBEX exchanges and FASID Table MET 1A for Trend type forecasts (APIRG/14 Decision 14/36, METSG/6 Decision 6/6)
- ✓ OPMET data banks at Pretoria and Dakar (APIRG/13, Conclusion 13/67)
- ✓ Provision of tropical cyclones and volcanic ash advisories for the AFI Region (METSG/6 Conclusion 6/7)
- ✓ Need for latest version of workstation software (METSG/6, Conclusion 6/2 and APIRG/14 Conclusion 14/32)
- ✓ Closure of the AFI RAFCs (Dakar, Las Palmas and Nairobi) (METSG/6, Conclusion 6/3)
- ✓ Application of EUR OPMET update procedures (APIRG/14 Conclusion 14/34)
- ✓ Meteorological component of the AFI Plan for the implementation of CNS/ATM (APIRG/14 Decision 14/43 and MET/SG/6 Conclusion 6/11)

1.2 The purpose of this note is to review the state of implementation of APIRG/14 and METSG/6 decisions and conclusions related to meteorological services for international air navigation issues.

2. Discussions

2.1 Follow-up action on APIRG Conclusions and Decisions related to meteorology.

2.1.1 Follow-up on Conclusions and decisions involves mainly the implementation of the WAFS in the AFI region. The state of implementation of the WAFS products distribution (SADIS) in the ASECNA member states, will be then presented.

2.1.2 By 31 July 2002, SADIS products were provided and operationally used in all the 15 ASECNA meteorological centres. Two VSAT stations intended for training and maintenance activities, were installed in Niamey (Niger) and Dakar (Senegal).

2.1.3 The 2-way VSAT SADIS planned in APIRG/9 Conclusion 9/26, was successfully installed in Dakar on 09 April 2002 and become operational on 01 Jun 2002 after two weeks trials. But following SADISOPSG/8 decision 8/13 to discontinue the current two way programme, the Dakar SADIS two-way VSAT programme was stopped on 1st January 2004 after only one year of operations and despite the substantial financial efforts made by ASECNA to establish an operational two-way station in Dakar.

2.2 Training on the use of GRIB and BUFR Codes

2.2.1 A training workshop on the use of GRIB and BUFR codes, was organized by ICAO from the 10th to 14th of March 2003 at EAMAC (Niamey), for the French speaking countries including ASECNA Member States.

2.3 Inclusion of METAR exchange in the AMBEX scheme:

2.3.1 In pursuance of APIRG/13 Conclusion 13/66, METAR addressing was modified for inclusion in AMBEX broadcasts lists. The new AMBEX Manual therefore came into force in ASECNA AMBEX centres since Jun 2002.

2.4 Inclusion of Port-Gentil in AMBEX exchanges and FASID Table MET 1A for Trend type forecasts

2.4.1 Necessary arrangements have been made to rise the number of necessary operating personals of Port-Gentil centre, to add the trend type forecast in the METAR and its inclusion in the FASID/MET, Table MET 1A, since the first half of year 2004.

2.5 OPMET data banks at Pretoria and Dakar

2.5.1 Some contacts are on the way for the implementation before September 2005, of the Dakar OPMET regional databank planed by APIRG/13 Conclusion 13/67.

2.6 Need for latest version of workstation software

2.6.1 Some contacts have been taken to buy and install before October 2005, the latest version of the workstation software on the use of GRIB and BUFR codes.

2.7 Closure of the AFI RAFCs – Dakar RAFC

2.7.1 Following the satisfactory results of the trials carried out by RAFC Dakar in November 2000, the Senegal Civil Aviation Authority informed ICAO on February 4th 2002, of the transfer of its RAFC responsibilities to WAFAC London concerning high-level SIGWX forecast and specific medium-level SIGWX according to APIRG/12 meeting, ending at the same time the initial phase of the WAFS implementation Plan.

2.8 Provision of tropical cyclones and volcanic ash advisories for the AFI Region

2.8.1 There is no volcanic ash advisory centres (VAAC) in the ASECNA region but some targeted centres as Antananarivo for tropical cyclones and Douala for volcanic ashes, have been sensitised to apply ICAO Annexe 3 and Doc 9766.

2.9 Application of EUR OPMET update procedures

2.9.1 According to APIRG/14 Conclusion 14/34 , ASECNA has taken necessary arrangements to apply the EUR OPMET update procedures.

2.10 Meteorological Component for the AFI CNS/ATM Plan

2.10.1 Following MET/SG/6 Conclusion 6/11 creating a task force for the MET component of the AFI CNS/ATM Plan, ASECNA participated to the 1st MET-CNS/ATM Task Force (MET-CNS/ATM-TF1) in Johannesburg, in South Africa during March 2003.

2.10.2 Implementation of meteorological system to support global CNS/ATM Plan – Development by ASECNA

2.10.2.1 D-ATIS Trials and implementation

- ✓ In December 1998 ASECNA signed an Agreement with a Group of manufacturers for the development, trials, demonstrations, validation and deployment of a D-ATIS datalink application in ASECNA area.
- ✓ ASECNA D-ATIS system called ATISA allow ACARS equipped aircraft to receive ATIS information via a datalink application to avoid voice communication sometimes source of ambiguity and to avoid VHF limitation constrains. ATISA also broadcasts a voice-ATIS information on the frequencies 128,400Mhz (in English) and 128,700Mhz (in French) for all aircraft equipped with a VHF receiver.
- ✓ ATISA system was developed from January to October 1999 with the participation of ASECNA engineers, and then was installed at the Abidjan (Côte d'Ivoire) trial site in November 1999. Trials and demonstrations were achieved from December 1999 to November 2001 with the participation of four airlines and SITA. Operational validation began in December 2001 and continued till July 2002. The deployment of ATISA on six ASECNA sites is expected for year 2003. Both Voice ATIS and D-ATIS will cohabitate until all aircraft have datalink communication capabilities to use only D-ATIS.

2.10.2.2 Implementation of D-VOLMET

- ✓ In the framework of its activities, ASECNA operates two HF VOLMET systems with one at Brazzaville (Congo) airport covering Brazzaville, Kinshasa, Luanda, Kano and N'djamena FIRs and the other in Antananarivo (Madagascar) covering Antananarivo and Mauritius FIRs.
- ✓ ASECNA has taken steps to implement by the end of year 2005, D-VOLMET datalink application at Brazzaville and Antananarivo using ACARS system. As for the ATIS system,

both VOLMET HF and D-VOLMET systems will cohabitate until all aircraft have datalink communication capabilities to use only D-VOLMET.

2.10.2.3 Development of D-AIREP

- ✓ Automated meteorological observations obtained from aircraft using the ACARS (Aircraft Communication Addressing and Report System) datalink application (Datalink AIREP or D-AIREP) are known as AMDAR (Aircraft Meteorological DATA Rely) data.
- ✓ From the results of a workshop on the AMDAR programme, held in November 2002 at Dakar (Senegal) under the care of WMO, ASECNA is considering a collaborative programme of targeted observations with E-AMDAR (a group of European Meteorological Authorities involved in the AMDAR programme) to develop a regional AMDAR programme in ASECNA member states and some neighbouring countries using AMDAR equipped aircrafts.
- ✓ The objective of the AMDAR programme is to improve the number of upper air observations and aviation weather forecasts by increasing vertical profiles of meteorological data from aircrafts.

3. Conclusion

3.1 APIRG/13 and METSG/6 meetings decisions and conclusions implemented by ASECNA:

- ✓ All 15 ASECNA meteorological centres receive presently SADIS data and provide WAFS products to users.
- ✓ The 2-way VSAT SADIS planed by APIRG has been installed and operationally used til the time of discontinuation on January 1st 2004. ASECNA has taken necessary actions for the implementation of the OPMET regional databank before September 2005.
- ✓ RAFC Dakar has followed and carried out procedures to transfer its RAFC responsibilities to WAFC London concerning high-level SIGWX forecast and specific medium-level SIGWX.
- ✓ A training workshop on the use of GRIB and BUFR codes, was organized by ICAO in March 2003 at EAMAC (Niamey), for ASECNA Member States.
- ✓ The new AMBEX Manual is being used in ASECNA area since Jun 2002.

3.2 ASECNA has gained a good experience in the maintenance of SADIS reception equipment and in the training of the operational personal of this system.

3.3 Implementation of D-ATIS, D-VOLMET and D-AIREP datalink applications in ASECNA area will prepare ASECNA member states and airlines in the region, to a gradual introduction to the new CNS/ATM systems in the AFI Region especially in the area of D-VOLMET, D-ATIS and D-AIREP ground/air/ground datalink applications.

3.4 Action by the Group:

The meeting is invited to:

- ✓ Note the information included in this paper,
- ✓ Inform the states of the AFI region of the willingness of ASECNA to provide its expertise in the SADIS operational personal training ,
- ✓ Recommend that ASECNA's efforts in the implementation of the APIRG and METSG decisions and conclusions related to meteorological services for international air navigation, be reflected in the report of MET/SG/7 meeting.
- ✓ Recommend that ASECNA's activities in the area of the development of the meteorological systems to support global CNS/ATM concept be reflected in the report of this meeting.