International Civil Aviation Organization

MIDANPIRG Meteorology Sub-Group
Third Meeting (MET SG/3)

(Cairo, Egypt 19 to 21 December 2011)

Agenda Item 4: Status of Implementation of the Meteorological Services in the MID Region
4.1 Review implementation of WAFS and SADIS

SUMMARY OF RECENT AND FORTHCOMING DEVELOPMENTS TO THE SADIS

(Presented by the SADIS Provider State)

SUMMARY

This paper presents developments to the SADIS since the second meeting of the MID MET Sub Group in December 2009. Some of these developments have had a direct impact on end users. A number of important developments are planned to the SADIS in future years and these are highlighted in this paper for the consideration of the group.

REFERENCES

SADISOPSG/16 Follow-up Table

SADISOPSG/16 Report

1. INTRODUCTION

1.1 This paper presents developments to the SADIS since the second meeting of the MID MET Sub Group in December 2009. For more details of the activities of the SADIS, users may wish to review information available on the ICAO SADIS Operations Group website at URL: http://www2.icao.int/en/anb/met/sadisopsg/Pages/default.aspx.

2. RECENT DEVELOPMENTS

Secure SADIS FTP Service

2.1 The Secure SADIS FTP Service (formally SADIS FTP "Phase 2" enhancement) was implemented on 17th November 2010. The project delivered the new service on time and within budget and meets the requirements of ICAO Doc 9855 - *Guidelines on the Use of the Public Internet for Aeronautical Applications*. See also 0.

Suggested action: *Users should contact their workstation suppliers to determine the status of availability of Secure SADIS FTP compatible visualization software. Those users who have not already done so should arrange to obtain Secure SADIS FTP log on credentials from the SADIS Manager.*

WAFS Aviation Upper Air Forecasts in GRIB2 code form

2.2 The WAFC London GRIB2 Upper Air Forecast data was made available on Secure SADIS FTP on its implementation (17 November 2010). This data had been previously made available on SADIS FTP in March 2010.

2.3 WAFS Aviation GRIB2 was made available via the SADIS 2G service from 17 November 2010, (excluding data for CB clouds, icing, and turbulence, though these parameters are made available via Secure SADIS FTP for trial and evaluation purposes only).

Suggested action: *Note this information. Users should take action to obtain GRIB2 compatible visualization software from their workstation suppliers.*

Provision of Nuclear Emergency Messages on SADIS

2.4 On 18 November 2010, processes and routing were implemented to enable Nuclear Emergency Messages (WMO AHL NNXX01 EGRR) to be made available via SADIS (both satellite and Internet based services). These were issued for real during the tragic events following the Tōhoku undersea earthquake off Japan in March of this year (2011).

Suggested action: *Note this information.*

Provision of tropical cyclone advisories in graphical format

2.5 On 18th November 2010, routing was implemented to allow the delivery of tropical cyclone advisories in graphical format via SADIS (satellite and internet based services). To date, only TCAC La Reunion has advised of intent to provide such graphics, and the WMO AHLs to be used.

Suggested action: *Note this information.*

Update on data losses reported by some users

2.6 The SADIS Provider, in coordination with the SADIS Gateway Provider and the SADISOPSG Technical Developments Team continues to investigate the reports of missing data on the SADIS 2G. The most recent information to hand suggests that the majority of the reported data losses are due to local reception/equipment issues and that data transmission over satellite is of high quality. However further investigation is required to resolve completely. Difficulties in establishing a fully functioning Comparator at the UK Met Office's site have delayed progress in this investigation.

Suggested action: *Note this information.*

Dissolution of the SADIS Strategic Assessment Team

2.7 It was determined at SADISOPSG/16[1] (Decision 16/11) that the SADIS Strategic Assessment Team be dissolved; and that the volumes of OPMET (including World Area Forecast System (WAFS) forecasts) and AIS data disseminated, and expected to be disseminated over the next 5 years via SADIS be included in the SADIS Management Report prepared annually by the SADIS Provider State.

Suggested action: *Note this information. With immediate effect SADIS Strategic Assessment Tables will no longer be provided to the regional MET Sub groups.*

[1] 23-25 May 2011, Paris, France

Hosting of WAFC Washington GRIB2 Upper-Air Forecasts on the Secure SADIS FTP service

2.8 As of 1200 UTC 22 June 2011, WAFC Washington GRIB2 upper-air forecasts were hosted on the Secure SADIS FTP service.

Suggested action: *Note this information.*

SADIS 2G future bandwidth requirements

2.9 Following a detailed study, the SADIS Provider, in collaboration with the SADIS Technical Developments Team, has determined that the existing SADIS 2G bandwidth is, subject to certain conditions, sufficient for the transmission of WAFS Aviation GRIB 2 data. Consequently, the 'spare' capacity retained after cessation of the SADIS 1G service was relinquished on 31st December 2010 with a significant cost saving.

3 FORTHCOMING DEVELOPMENTS

Ongoing harmonization work between SADIS and ISCS/WIFS

3.1 Efforts by the SADIS Provider and the ISCS/WIFS provider continue to increase the harmonization of OPMET data between the two services, but the primary aim is to provide OPMET METAR and TAF data as per the requirements of SADIS User Guide Annex 1.

Suggested action: *Note this information.*

Access to Internet based services (SADIS FTP/Secure SADIS FTP/WIFS)

3.2 SCRAG/11, WAFSOPSG/6 and SADISOPSG/16 were apprised of the need to confirm and clarify the access policies for the Internet based services for delivering WAFS data; namely SADIS FTP/Secure SADIS FTP and WIFS. The group concurred that although the Internet based services had 'global'[2] footprints, the Regional Air Navigation Plans were to be used to identify from which service (SADIS or ISCS/WIFS) WAFS data was to be obtained for primary data supply. Users would be permitted to obtain accounts for accessing the alternative providers Internet based services for backup/contingency purposes only.

Suggested action: *Note this information. See item* 0 *below.*

3.3 In order to manage the transition from WAFS upper-air forecasts in the GRIB1 code form to those in the GRIB2 form, and the eventual withdrawal of GRIB1 (planned for November 2013) it is necessary to change the priority of GRIB1 and GRIB2 data. As such, it is currently planned that GRIB2 data will be made available before GRIB1 with effect from the 1200 UTC data time on 5th July 2012. This date will be confirmed closer to the time, and the subsequent timetable for delivering data is as given in **Appendix A** to this Working Paper.

Suggested action: *Note this information.*

[2] It should be noted that some States have limited connection to the internet, as a result of issues such as bandwidth, reliability and cost, whilst other States have legislation or other legal barriers that prohibits the use of the public Internet for aeronautical Met data. Therefore, the term 'global' in relation to the provision of data via the public Internet should be used with care and qualification

Future requirements of a SADIS satellite broadcast beyond 2015

3.4 SADISOPSG/15[3] determined that the satellite based infrastructure of SADIS will be retained until at least 2015. However, in order to determine the future requirements of the need for satellite based broadcasts, a survey of States was undertaken. The results presented to SADISOPSG/16 were that out of 32 respondents, 23 had indicated their desire for a satellite service beyond 2015. To progress this matter further, and to consider all options (including the status quo), a SADISOPSG ad hoc team[4] has been established to prepare recommendations concerning the need for a SADIS satellite broadcast service beyond 2015, in time of the SADISOPSG/17 Meeting.

Suggested action: *Note this information. Users should keep up to date with developments in this matter. States/users should respond in a timely fashion to any future requests for input on this subject in order to ensure their opinions are noted and considered.*

Extension of the SADIS FTP service by 12 months

3.5 The SADIS FTP service was intended to be fully replaced by the Secure SADIS FTP service by November 2011 and as such withdrawn from service. Owing to slower than anticipated take up of Secure SADIS FTP, the SADIS FTP service will now be withdrawn at the end of November 2012.

Suggested action: *Note this information. Users should make all efforts to migrate to Secure SADIS FTP before end of November 2012 or risk losing access to the Internet based provision of SADIS.*

Backup/Contingency for Secure SADIS FTP service

3.6 Those users (see 0) directed to take operational WAFS data from SADIS are nonetheless encouraged to apply for and obtain WIFS accounts for the establishment of backup/contingency processes in the (extremely unlikely) event of a failure of SADIS (satellite and Internet based services). Users should note that although access to WIFS in those States nominated by the Regional Air Navigation Plans to take the SADIS Service is permitted for backup/contingency purposes, in order to effectively manage ongoing service provision, they should take their primary operational data from the SADIS. It is the user's responsibility to apply for and arrange a WIFS account. The SADIS Provider will not arrange such accounts on behalf of users.

Suggested action: *Note this information. Users may wish apply for WIFS accounts for use in backup/contingency circumstances. Guidance in how to do this will be presented on the SADISOPSG website by 31 December 2011.*

Fourth round of SADIS Workstation Evaluations

3.7 SADISOPSG/16 endorsed the proposal to invite workstation vendors to have their workstation visualization software re-evaluated following recent introduction of GRIB2, Secure SADIS FTP, and the recent amendment 75 to Annex 3 - Meteorological Service for International Air Navigation. It is expected that these evaluations will be carried out over the next 6 to 24 months. A more objective set of evaluation criterion was endorsed by the group.

Suggested action: *Note this information. As the evaluations are published, users are recommended to review the reports in order to assess which systems best meet their needs.*

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[3] 26-28 May 2010, Paris, France

[4] consisting of the SADISOPSG Members from China, Netherlands, South Africa, United Kingdom (Rapporteur), ASECNA, IATA, WMO and the Rapporteur of the SADISOPSG Technical Developments Team

4. ACTION BY THE MEETING

4.1 The meeting is invited to review the content of this working paper and consider the suggested actions.

APPENDIX A

TABLES INDICATING THE DELIVERY SCHEDULE OF GRIB1/GRIB2 WAFS UPPER AIR FORECASTS BEFORE AND AFTER THE CHANGE OF PRIORITY

Priority up to and including 0600 DT dataset, 5th July 2012.

	Time that DT 0000 UTC data is made available	*Time that DT 0600 UTC data is made available*	*Time that DT 1200 UTC data is made available*	*Time that DT 1800 UTC data is made available*
GRIB1	*0315-0345*	*0915-0945*	*1515-1545*	*2115-2145*
GRIB2	*0345-0500*	*0945-1100*	*1545-1700*	*2145-2300*

Table 1: Table listing the current times at which WAFS Aviation GRIB1 and GRIB2 data are made available, and suggested to remain so until 0600 DT dataset on 5th July 2012, or until such a time as WAFSOPSG determines.

Priority from and including 1200 DT dataset, 5th Ju.y 2012.

	Time that DT 0000 UTC data will be made available	*Time that DT 0600 UTC data will be made available*	*Time that DT 1200 UTC data will be made available*	*Time that DT 1800 UTC data will be made available*
GRIB2	*0315-0430*	*0915-1030*	*1515-1630*	*2115-2230*
GRIB1	*0430-0500*	*1030-1100*	*1630-1700*	*2230-2300*

Table 2: Table listing the proposed times at which WAFS Aviation GRIB1 and GRIB2 data are made available, as of the 1200 DT dataset on 5th July 2012, or from such a time as WAFSOPSG determines.

Note - the transition date will be confirmed closer to the time of implementation

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