



WORKING PAPER

**MEETING OF THE METEOROLOGY PANEL (METP)
WORKING GROUP MOG**

THIRD MEETING

Gatwick, London, United Kingdom, 13 to 17 June 2016

Agenda Item 3: Matters relating to SADIS

3.3.2: Operational efficacy of the SADIS – 2015/16

**OPERATIONAL EFFICACY ASSESSMENT 2015/2016, AND PROPOSAL FOR 2016/2017
OPERATIONAL EFFICACY QUESTIONNAIRE**

(Presented by the SADIS Provider State)

SUMMARY

This paper contains statistics and analysis related to the replies to the 2015-2016 SADIS operational efficacy questionnaire. Any issues raised will be presented to the METP-WG/MOG for review and action, as appropriate.

Action by the METP-WG/MOG is in paragraph 6.

1. INTRODUCTION

1.1 The group will note that following the disbanding of the Satellite Distribution System Operations Group¹ (SADISOPSG) the process for analysing the responses to the completed efficacy questionnaire now consists of the Secretariat providing the results of the survey directly to the SADIS Provider.

1.2 The group will also recall that METP WG-MOG/1² formulated Recommendation 1/4 whereby a revised content of the SADIS operational efficacy questionnaire was to be used for the 2015/16 survey.

1.3 The information provided in this paper has been extracted from the tabulated format which was supplied, in accordance with 1.1 above, by ICAO to the SADIS Provider on 8 April 2016.

¹ Disbanded in 2015

² 8 to 11 September, 2015; Gatwick, United Kingdom

2. DISCUSSION

2.1 The meeting will be pleased to note that this year's response (51) was higher than the previous year (45). However, this is lower than the response in 2014 (60).

2.2 Of the 51 users who responded, 40 (78%) indicated that they had plans to migrate from SADIS 2G to Secure SADIS FTP by 31 July 2016. 7 (14%) indicated they had no migration plans, and 4 (8%) did not indicate their intention. In view of the multiple systems in use by some of the respondents, the number units employed by the responding States amounts to 88 Secure SADIS FTP systems.

3. SUMMARY OF RESPONSES

3.1 SADIS 2G SERVICE PROVISION

3.1.1 Given the withdrawal of SADIS 2G at 1200 UTC on 31 July 2016, WG-MOG/1 Recommendation 1/4 stated that there was no requirement for questions relating to the efficacy of the SADIS 2G service for the 2015/2016 survey. As such, information normally provided on SADIS 2G in this section is not available this year.

3.2 SECURE SADIS FTP SERVICE PROVISION

3.2.1 Analysis of the responses was undertaken by the SADIS Provider, based upon data provided by ICAO. Where a State had not provided an appropriate response, i.e. left the entry blank, the assessment has been based on the remaining States who did provide a valid response. This is considered the most equitable method of calculation since it makes no assumption either way and removes the 'null' response from the sample.

3.2.2 It should also be noted that one State did not complete the on-line form but provided a spreadsheet detailing the individual experiences of several users within their State. As such this did not provide a consolidated 'State' position as per the intent of the questionnaire. This created a dilemma for ICAO and the SADIS Provider, since to 'interpret' those results on behalf of the submitting State could be considered outside the jurisdiction of ICAO and the SADIS Provider State, and potentially be considered a conflict of interest. Given that one of users within that State expressed some dissatisfaction, the dissatisfaction was logged, yet this would seem to disproportionately penalise the overall results (given that the remaining users within the State, including the 'State user' itself, expressed satisfaction with the service).

- a) 94 per cent (*95 per cent*) indicated that there were no Secure SADIS FTP service quality problems;
- b) 88 per cent (*no equivalent question for previous years*) indicated that the Secure SADIS FTP download rate was suitable for their operations.
- c) 96 per cent (*95 per cent*) reported good availability of upper-air data in the GRIB2 code form;
- d) 98 per cent (*98 per cent*) of States reported good availability of SIGWX data in the BUFR code form;
- e) 98 per cent (*95 per cent*) of States reported good availability of OPMET messages; and

- f) 98 per cent (95 *per cent*) of States reported a good overall assessment of the SADIS FTP service.

3.3 SADIS PROVIDER SUPPORT (SERVICE DESK AND ADMINISTRATIVE MESSAGES)

- a) 35 per cent (25 *per cent*) of States used the 24-hour Met Office Service Desk. Of these, 94 per cent (92 *per cent*) reported a satisfactory level of assistance; and
- b) 96 per cent (96 *per cent*) of States considered that the service administrative messages were adequate.

4. ANALYSIS OF THE RESPONSES

4.1 For completeness, as noted in section 3.1.1, users were not asked to respond with regard to SADIS 2G in the most recent efficacy questionnaire. As such, the feedback with regard to SADIS 2G normally referenced in this section, will no longer be provided.

4.2 With regard to Secure SADIS FTP, the number of users reporting that **there were no problems with the Secure SADIS FTP** remained very similar (down 1%) to the previous year, at 94%. Availability of GRIB2 data, SIGWX BUFR data and OPMET messages remained comparable or better than the previous year at 96% to 98%. The overall assessment for Secure SADIS FTP was improved on the previous year at 98%.

4.3 Notwithstanding the overall assessment, rated 'good' by the vast majority of the SADIS users, the SADIS Provider welcomes the individual comments provided by users. The SADIS Provider has sought, where possible, to respond to those comments and **Appendix A** documents the feedback and responses.

5. EFFICACY QUESTIONNAIRE FOR 2015-2016

5.1 Having reviewed the 2015-2016 Efficacy Questionnaire (<http://www.icao.int/safety/meteorology/sadisopsg/Lists/SADIS%20EFFICACY%20SURVEY%2020142015/NewForm.aspx>), it is proposed that the questionnaire provided at **Appendix B** be used for the 2016-2017 Efficacy Questionnaire.

6. CONCLUSION

6.1 Responses to 2015/2016 Efficacy Questionnaire

6.1.1 Based on the responses received and the summary presented above, the group may wish to reiterate its satisfaction with the quality of SADIS service, which is considered “good” by a clear majority of users and since the number of States with serious difficulties with their Secure SADIS file transfer protocol (FTP) servers has remained small.

6.1.2 The group, including the International Air Transport Association (IATA), may wish to agree that, in the light of comments received, the Secure SADIS FTP service continued to meet the

operational requirements during the period under review (namely 2015/2016) and to formulate the following conclusion accordingly:

Conclusion 3/xx — Annual statement of operational efficacy of SADIS 2015/2016

That the Chair of the METP-WG/MOG be invited to inform the Chair of the SCRAG that the SADIS continued to meet the operational requirements during the period 2015/2016.

6.2 Proposed 2016/2017 Efficacy Questionnaire

6.2.1 The group is invited to consider the proposal in **Appendix B** for the 2016/2017 Efficacy questionnaire. The group is invited to formulate the following decision accordingly:

Decision 3/xx — 2016/2017 SADIS operational efficacy questionnaire

That the questionnaire used in the 2016/2017 consultation with States/users on the operational efficacy of the SADIS be modified as proposed in **Appendix B** of this Working Paper, suitably adjusted as necessary and agreed by the WG-MOG/3 meeting.

7. ACTION BY THE METP-WG/MOG

7.1 The METP-WG/MOG is invited to:

- a) note the information contained in this paper; and
- b) decide on the draft conclusion and decision proposed for the group's consideration.

APPENDIX A

RESPONSES TO COMMENTS RAISED IN THE EFFICACY QUESTIONNAIRE 2016/2017

For brevity, the SADIS Provider has collected comments/feedback of similar content into groupings.

- 1) Because of the bandwidth throttling in use, the service is unreliable causing frequent disconnects and thereby issues with keeping the local copy in sync in with a reasonable amount of lag.

OPMET data arrives 10-15 min later than via satellite. If OPMET data delay persists, we would think about alternates.

Secure SADIS FTP is slower than SADIS 2G.

Note. Before this day the Secure SADIS FTP used as back-up means of data acquisition to the SADIS IIG. Suggestion. For operation purpose it will be useful to install 3 - minutes time interval in updating OPMET data in database of Secure SADIS FTP-server because 1 - minute it not suitable for downloading in some cases and 5-minutes it seems a long time for the critical OPMET data, e.g., SIGMETs

SADIS Provider's response:

As confirmed by ICAO, SADIS is a service for flight-planning purposes, therefore – and in accordance with WAFSOPSG/5 Conclusion 5/9, data that might otherwise be considered time-critical (SIGMET, TAF AMD) is not so defined when used for flight planning purposes. Notwithstanding the preceding points, follow up with one user indicated that they were not aware of, and presumably not using, the 'ONE_MINUTE_OPMET' files, that – as indicated by the filename, are updated every 60 seconds.

The time taken to download WAFS data, particularly WAFS GRIB2 data is considerably quicker than the availability over SADIS 2G. Secure SADIS FTP also provides the opportunity to re-poll should – for whatever reason – data be missed.

With regard to providing a 3 minute OPMET update file, the risk is that users then download the same data from numerous files/folders. Overall this is not efficient for individual users, nor the SADIS community as a whole.

Users are encouraged to adopt efficient polling strategies, rather than logging on/downloading the same data an excessive number of times. The SADIS Provider can provide greater bandwidth if the SADIS community, represented by the WG-MOG (SADIS) endorse and fund such increases.

- 2) FTP is a very outdated protocol. HTTP(S) is much more suitable for this type of service.

SADIS Provider's response:

The opinion is noted. Changing protocols is not without cost (funded by the SADIS community) for the provision of the service, and for end users of the service. Any future changes to SADIS will be considered in light of ICAO's developments in relation to IWXXM and SWIM, and will be overseen by the appropriate ICAO Working Groups.

- 3) If you could add some satellite images for MTE Aviation and received it on the SADIS FTP in the future

SADIS Provider's response:

Satellite imagery does not form part of ICAO Annex 3 services and is therefore not part of the data distribution remit of SADIS. Satellite data is available via other, dedicated systems.

- 4) For a longer period we missed the NOUK10 bulletins

SADIS Provider's response:

It is acknowledged that there were problems with distribution of NOUK32 bulletins for an extended period of time (now resolved). We are not aware of any problems with distribution of NOUK10 messages.

- 5) A coordinated directory list between SADIS and WIFS would be appreciated e.g. same structure and naming

SADIS Provider's response:

This has been previously considered by the now disbanded WAFSOPSG at its eighth meeting (2013, Bangkok, Thailand). The WAFSOPSG determined that the current Secure SADIS FTP and WIFS services should not be modified, but both WAFCs undertook to consider alignment of their services when implementing any major upgrade or replacement systems.

- 6) We would like to recap a number of issues related to the quality of SIGWX charts:

- (i) The volcano “RAUNG” was wrongly labelled as “RUANG” on WAFC London high level SIGWX charts valid at 18Z on 16 July, 00Z and 18Z on 17 July 2015.
- (ii) Tropical cyclones Goni and Atsani were wrongly labelled on WAFC London high level SIGWX charts valid at 18Z on 24 August 2015.

We also noticed occasional discrepancies between SIGWX BUFR data and the corresponding PNG charts provided due to missing objects in either BUFR data or respective PNG charts and had been reported to service desk. For example, a jet stream on FL390 was missing in the medium and high level EUR SIGWX BUFR data valid at 18Z September 2015. Considering that SIGWX BUFR data are official and essential data for flight planning systems to operate, the accuracy and reliability of SIGWX BUFR data needs to be improved.

SADIS Provider's response:

Strictly, these comments are related to the provision of WAFS services, and not the efficacy of SADIS itself. However, to respond to the points raised from a WAFC (rather than SADIS) perspective.

i) and ii) are acknowledged. The former, whilst fundamentally human error, was exacerbated by the very similar names (transposition of 2 letters – 'A' and 'U') for two real volcanoes that were not (on the scale of WAFS SIGWX charts) very far apart. This prevented the normal cross checks identifying the error. The latter was also human error.

With regard to discrepancies between the SIGWX BUFR and PNG charts, these events had not previously been brought to our attention. At time of submission of the paper, contact had been established and these matters were being investigated. At this time, whether the fault lies with the original data or (in the case of BUFR versions) the BUFR visualisation software, or some other cause, had not been established.

7) Is it possible to share pdf file like sadis production in SADIS deport

SADIS Provider's response:

Intent is not understood. To be followed up with submitter. Contacted, awaiting further information.

8) AS HEAD OF THE AERODROME METEOROLOGICAL OFFICE (FORECASTING CENTER), I WILL APPRECIATE IF GUIDANCE BE PROVIDED ON HOW TO ACCESS THE SECURE SADIS FTP WEBSITE/ LINK. THE SADIS 2G SYSTEM USED AT THE CENTRAL FORECAST OFFICE BANJUL INTL' AIRPORT BECAME NONOPERATIONAL SINCE 01/11/2013. FROM THEN UP TO DATE WE HAVE RESORTED IN USING THE BACKUP WASHINGTON-WAFC PRODUCTS; I.E. AVIATION WEATHER CENTER, NOAA, NATIONAL WEATHER SERVICE PRODUCTS.

SADIS Provider's response:

Secure SADIS FTP is a large data library, the majority of which is not suitable for processing/visualisation on a normal Windows Desktop or internet browser. Certain file formats, such as WAFC GRIB2 and WAFC SIGWX BUFR require special decoding and visualisation software. There are large volumes of alphanumeric data, and in theory these can be opened in simple text editors such as Notepad, but the volumes of data really require parsing and extracting to a local database (SADIS Workstation) for efficient use.

9) AS WE PROVIDE INFORMATION BY PRINTING TO THE USER WE PROPOSE A SECOND TERMINAL BE PROVIDED TO DISPLAY INFORMATION TO USERS

SADIS Provider's response:

This would be a matter for the user to follow up. To be followed up with submitter. Contacted, awaiting further information.

10) We would like to connect to the SADIS server through the RMDCN secure connection - is it possible? We want to connect via a channel that is reliable, with backup and high reliability. All meteorological information is arriving through that channel, why can't the SADIS information be available as well? (please notice thus the RMDCN hub is in ECMWF and the UK MET OFFICE is connected to it via broad band and secure connection channel).

SADIS Provider's response:

SADIS has no relation with WMO RMDCN nor ECMWF. As an ICAO overseen system, it is not possible to connect to the systems suggested.

11) No indicator available to inform that a new set of GRIB2 files processing was completed. Please add it.

***SADIS Provider's response:** At the moment there is no scope for implementing the information requested. GRIB2 data is issued to a published schedule and the records indicate that it is delivered to SADIS with extremely high reliability. A change to the way GRIB2 data is presented that should result in data only being presented once, and only when fully available, is expected to have been implemented by the time of the WG-MOG/3 meeting. The exception, which is expected to be very rare, will be when data is delayed beyond specified cut-off times. Under such circumstances it will be necessary to re-poll.*

12) ALL CONNECTIONS WITH SADIS ARE MADE BY MESSIR SYSTEM, CONFORM AGREEMENT WITH SADIS SYSTEM.

***SADIS Provider's response:** Intent is not understood. Contact with submitter has been attempted but email address invalid.*

13) For a better appreciation of the receipt of data by Secure SADIS FTP, we suggest to stop for a given duration broadcast exclusively by VSAT, to devalue the receipt by secure ftp over this period

***SADIS Provider's response:** The suggestion is noted, but it is not considered appropriate to temporarily cease the SADIS 2G service until the agreed date of withdrawal, as endorsed by ICAO.*

Supportive comments:

Whilst the SADIS Provider welcomes and considers all feedback, and understands that some users have different preferences, the Secure SADIS FTP Service is a service that has to meet the consensus requirements of the community that funds it and the overwhelming majority of tabulated responses indicate that users consider the service to be 'good'.

It may also be noted that a number of Secure SADIS users took the opportunity to express their satisfaction with the service:

"Just I want thank you for the Secure FTP service. it's easy."

"Thanks for good cooperation and high quality services"

"We're very happy with the service SADIS provides to MeteoSwiss. The general communication with regards to administrative (service) messages has significantly improved!"

"The services of the SADIS system is good for now."

APPENDIX B

SADIS OPERATIONAL EFFICACY QUESTIONNAIRE 2016/2017

PART A. - GENERAL

1. State:
2. Number of operational SADIS FTP user(s) in your State:
3. Location of the operational SADIS FTP user(s) in your State:

PART B. - SADIS FTP SERVICE PROVISION

5. Overall assessment of the SADIS FTP service:

a) service quality (excluding local Internet connectivity issues beyond the control of the SADIS Provider State):

No problems encountered

Problems encountered

If problems encountered, specify their nature below:

b) Is the SADIS FTP data download rate suitable for your operations?

Yes

No

If 'No', please provide details.

c) Availability on the SADIS FTP server (i.e. excluding local Internet connectivity issues, performance of user processing/display equipment and associated software) of WAFS upper-air gridded global forecasts in the WMO GRIB2 code form, including wind/temperature/humidity and CB cloud/icing/turbulence:

Good

Average

Poor

Not used

If availability of WAFS upper-air forecasts in WMO GRIB2 code form on the SADIS FTP server considered "average" or "poor", specify the nature of the problem below:

d) Availability on the SADIS FTP server (i.e. excluding local Internet connectivity issues, performance of user processing/display equipment and associated software) of WAFS SIGWX forecasts in the BUFR code form:

Good

Average

Poor

Not used

If availability of WAFS SIGWX forecasts in WMO BUFR code form on the SADIS FTP server considered "average" or "poor", specify the nature of the problem below:

e) Availability on the SADIS FTP server (i.e. excluding local Internet connectivity issues, performance of user processing/display equipment and associated software) of OPMET messages (METAR, TAF, SIGMET etc.):

Good
Average
Poor
Not used

If availability of OPMET messages on the SADIS FTP server considered "average" or "poor", specify the nature of the problem below:

6. Reliability of SADIS FTP service (i.e. excluding local Internet connectivity issues, performance of user processing/display equipment and associated software): a) overall assessment:

Good
Average
Poor

If the overall reliability of the SADIS FTP service considered "average" or "poor", specify the nature of the problem below:

PART C. - SERVICE DESK AND ADMINISTRATIVE MESSAGES

7. Assessment of SADIS 24-hour Service Desk. During the period under review, did you have occasion to contact the SADIS 24-hour Service Desk?

Yes
No

If the Service Desk was contacted, was the technical support provided satisfactory?

Yes
No

If considered not satisfactory, specify the nature of the problem related to technical support provided by the Service Desk:

8. Concerning SADIS administrative (service) messages, do you consider that those received were sufficient to keep you advised on the status of SADIS service?

Yes
No

If administrative message considered not sufficient, specify the nature of the problem below:

PART D. - ADDITIONAL REMARKS

9. Additional comments, including suggested future developments. Type your question here:

PART E. - CONTACT DETAILS

10. Please provide your contact details to enable ICAO and/or the SADIS Provider to contact you, if necessary, to seek clarification to any of the answers that you have provided to this questionnaire:

Name:
Organization:
Position:
Telephone:
Email:

— END —