SADIS COST RECOVERY & ADMINISTRATIVE GROUP (SCRAG)

TWENTY-THIRD MEETING

(30 November 2022)

COST RECOVERY METHODS

(Presented by the United Kingdom)

SUMMARY

This paper examines the metrics used in the SADIS cost recovery calculation.

1. Introduction

1.1 As noted in the SCRAG/21 report (paragraph 4.8) and in the SCRAG/22 report, it was proposed that a paper should be presented to outline options that could be considered as a basis of for assessing States for SADIS services in the future.

1.2 The SADIS provider is currently upgrading the technology used for SADIS in order to be able to handle the higher resolution WAFS data sets being introduced in November 2023, and to meet the ICAO requirements for providing SWIM compliant systems. The new SADIS API[1] will be hosted in the cloud and as well as certain fixed operating costs there will be a component that reflects the volume of data being downloaded by the end users. Therefore it seems an appropriate time to reconsider whether the current SADIS cost recovery process is still suitable, or whether it could be improved.

2. Discussion

2.1.1 The SADIS Cost Recovery Administrative Group (SCRAG) was established by the Council of ICAO in November 2000 as part of the agreement on sharing SADIS operating costs. The Agreement on the Sharing of Costs of SADIS (https://www.icao.int/sustainability/Joint-Financing/Documents/AGREEMENT-amended-scrag22.pdf). At this time SADIS operated using a satellite located at 60E over the Indian Ocean. States using the service to this day are primarily located under the footprint of the old satellite.

2.2 In 2000, when the SADIS Cost Recovery Agreement was being determined at the ICAO Council 161st session a range of cost recovery metrics were considered, and it was stated that the parameter used should meet the following prerequisites:

- It should reflect the extent of usage of the SADIS service by traffic in airspace for which the State concerned has accepted the responsibility of providing air traffic services;
- It should provide for equity amongst States in the sharing of SADIS costs;
- It should be readily applicable in all the States receiving the SADIS service; and
- The process of its application should be cost effective.

[1] Application Programmer Interface

2.3 A range of different metrics was considered at the time, and the Available Tonne Kilometer (ATK) metric that is used today was chosen. The ATK value reflects the ability of a State to contribute to the running of SADIS as it is based on the Payload capacity (passenger and cargo) multiplied by the number of kilometers flown.

2.4 One of the assumptions made at the time was that each State would only download the data once as a satellite receiver was needed. Now, with SADIS operating over the internet each user within a State is able to download the data directly for themselves.

2.5 There have also been issues in past years where their ATK values are not being updated each year, and so the SCRAG calculations have to apply a estimate based on the annual growth rate of ATKs for the relevant Region. However, in the past two years, the ATK data has been more complete as extensive efforts are being made to follow up on State data ATK reporting.

3. Options

3.1 As more than twenty years have passed since the introduction of the Agreement on the Sharing of Costs of SADIS, and in that period there have been large technological changes, it seems prudent to consider whether the current cost recovery mechanism is still fit for purpose or whether it should be reviewed. As noted in paragraph 1.2 there will be two cost components in the updated system, one for fixed operating costs and one related to the volume of data that is downloaded by each user. A revised cost recovery system can be developed to either: capture both the fixed and variable features of the new system; determine the cost share based only on a fixed cost basis; or determine the cost share based on data volume downloaded.

3.2 Possible ways of determining the cost share each Party to the Agreement for the fixed cost component of the service include the following:

- **ATKs**: Currently used metric, tonne-kilometres available equals the sum of the products obtained by multiplying the number of tonnes available for the carriage of revenue load (passengers, freight and mail) on each flight stage by the stage distance.

  Impact: Charge higher for heavier aircraft
  Consideration: Is there a correlation of service usage to capacity?

- **Distance**: Distance factor is calculated using the great circle distance from airport of departure to airport of arrival.

  Impact: Higher charges for long-haul flights
  Consideration: Is there a correlation of service usage to time in the air?

- **Departures:** The number of take-offs of aircraft. For statistical purposes, departures are equal to the number of landings made or flight stages flown.

  Impact: No capacity or weight considerations
  Consideration: Is unbiased consideration of all airspace users more equitably correlated to the service provided?

3.3 The cost share allocation could be based on the volume of data downloaded by users in each State. This would also help to appropriately assign the costs when a user accidentally downloads far more data than they should.

3.4 A user charge allocation system that combines a fixed cost allocation metric as presented in the examples in paragraph 3.2 and a variable cost share allocation based on the volume of data downloaded as described in paragraph 3.3.

4. Other Considerations

4.1 The cost share for some States is very small (less than 5 GBP annually) which means the cost of creating, sending, and paying the invoice costs far more than the amount owed. One option could be that each State pays at least a fixed minimum charge (for example 1000 GBP), and then the remainder of the annual charge is calculated using the current ATK cost share allocation method or another metric deemed more appropriate.

4.2 The cost share allocation could include information that reflects the number of user organisations, downloading data from SADIS in each State.

4.3 As the current determination of cost share of each Party is stipulated in Article XI of the SADIS Agreement, any modification in the cost share determination necessitates an amendment to the Agreement. Any such amendment would have to be executed in accordance to Article XVII of the Agreement and one of the requirements for the adoption of an amendment is the agreement of two-thirds of the Parties that have paid their share of the costs of providing the SADIS service. Also, any Agreement amendments would require Council approval to be followed by a formalized approach to notify all the Parties of the amendment details, including the entry into force of the amendment.

5. Next Steps

The SCRAG Group is invited to consider whether the upcoming operational system changes support the need for a formal review and presentation of cost share determination options. A future presentation on these options can include cost impact analysis of the various metrics presented in section 3 in addition to considered options to capture the data download cost component of the system into the cost recovery mechanism.

6. Action by the group

6.1 The SCRAG/23 is invited to discuss the information presented in this paper and decide what, if any, next steps should be taken in investigating the cost recovery methods used for SCRAG.