

**SADIS COST RECOVERY & ADMINISTRATIVE GROUP (SCRAG)**

**TENTH MEETING**

(Paris, November 6 2009)

**2008 ACTUAL SADIS COSTS**

(Presented by the United Kingdom)

**REFERENCES**

SADIS Agreement

SCRAG Reports 1-9

SADISOPSG/14 Executive Summary

**1. INTRODUCTION**

- 1.1 Article IX of the SADIS Agreement identifies that the United Kingdom shall furnish on or before 30 June of each year, a statement of the actual costs of the SADIS, expressed in pounds sterling, for the previous calendar year. These costs are identified in TABLE 1.
- 1.2 The format of the table is similar to that provided for previous years and is consistent with information provided in the SADIS Inventory.

## **. DISCUSSION**

### **2.1 Notes to the actual costs for 2008 and forecast costs for 2009**

#### **a. Communications between Whitehill and the Met Office**

Terrestrial communications costs between Exeter and the SADIS Uplink site at Whitehill became effective from 1<sup>st</sup> October 2003. The cost in 2008 covers two circuits at £1569.75 per annum for SADIS 1G, one circuit for SADIS 2G of £1569.75 and a further circuit at £4795 per annum billed from May 5 2004. The circuits for SADIS1G were ceased in early January 2009 following cessation of the SADIS 1G broadcast.

#### **b. NATS Links**

Communications costs between the SADIS Gateway, operated by NATS, and the Met Office are provided here. NATS own the links and are billed for the circuits. NATS invoice the Met Office for the Met Office share of the costs. An additional link supporting SADIS 2G became operational early in 2005 but UKMO has not been billed for this. The ISDN back-up link was still in place at September 2009. It is expected to cease when the new backup arrangements are operational.

#### **c. Message Switch**

In 2008, data feeds were provided to SADIS 1G, SADIS 2G, SADIS FTP server and the Corobor comparator systems. FTP equipment running costs include software licences, depreciation and contractor support.

#### **d. Service Desk equipment and Serial Communications**

Following an internal audit of SADIS charges in 2008, new costs are included in the 2009 cost base covering equipment charges for the service desk functions and support of serial communications equipment (i.e. x.25)

#### **e. Satellite Segment**

The lease for the satellite segment was renewed through Cable & Wireless PLC for a period of 24 months covering the period 1 January 2009 to 31 December 2010.

#### **f. Annual Maintenance**

Maintenance comprises:- (i) A maintenance contract with Cable & Wireless for SADIS 1G Infrastructure and a facilities Management Charge for the SADIS 1G equipment which ceased on 31 Dec 2008. (ii) A Facilities Management charge for the SADIS 2G Equipment. (iii) A maintenance Contract for SADIS 2G with Vados Systems until 31 Dec 2008 at a cost of £24,920 per annum, increasing to £36,918 for the 12 months to 31 Dec 2009 (iv) IT Halls costs are charges made to the SADIS Programme based on floor usage of the IT Halls at Exeter for all SADIS equipment.

#### **g. Ad-hoc maintenance**

SCRAG/6 proposed that a charge of £5,000 be budgeted for ad-hoc maintenance activity in future years. In 2008, ad-hoc maintenance charges totalled £7700 comprising £3000 for SADIS1G Fault rectification at Whitehill on 23/05/08, £950 to rectify SADIS1G modulator fault at Whitehill on 13/10/2008 and £3,750 for 5-days VADIS consultancy. In 2009 to 30-09-09, ad-hoc maintenance charges include £3,600 for 5-days VADOS consultancy, £2,745 for hardware and annual support for ISDN connection for SADIS2G data backup and £4,510 for SADIS 1G decommissioning.

**h. Help Desk and Other staff costs**

The cost rates have been updated using the latest available figures. In 2009 a new method of calculation has been applied which more accurately reflects the effort from each of the servicedesk functions. The percentage attribution rates can be found in the SADIS Inventory.

**i. Additional support**

There were no significant changes to the staff costs in 2008. From 2009, cost for CIDA and Infrastructure engineer have been included. This cost includes support for FTP enhancements in 2009. The audit of the Met Office cost of capital by the UK National Audit Office was charged at £2500. The cost of the SADIS2G hardware refresh is discussed in WP/8.

**j. Travel Costs**

Actual travel and subsistence costs for two members of UKMO staff to attend the SADISOPSG and SCRAG meetings are included here.

**k. Cost of depreciated capital**

See WP/8

**l. Cost of Capital**

In 2008 a new method of calculating the Cost of Capital has been applied. See WP/13 for an explanation of the methodology.

**2.2 Notes on SADIS Gateway Costs**

**m. Staff Costs – Systems Engineers**

10% of the time allocated to the CoreMet system is dedicated to supporting the SADIS Gateway. 24-hour engineering support equates to 10% of an ATCE4 (£12,610 per annum). Daytime support for the SADIS Gateway equates to 10% of 0.75 of an ATCE4 (£9,456 per annum). Total Engineering support for 2008 was therefore £22,066. The cost of operational and administration staff have increased in line with inflation. A further staff cost, Asset Engineering Support, has been introduced. Commencing in 2007, this cost will cover the activities associated with the provision of data for SADIS Management Report and other Asset Management activities associated with the provision of the Gateway. This work is carried out by Air Traffic Engineering grades.

**n. Systems Maintenance**

No maintenance costs will be incurred until the end of the warranty period. Full cost of software maintenance will be £31,324 per annum commencing in June 2005. 20% of these costs are allocated to SADIS (£6,264).

**o. Depreciation**

The actual capital expenditure of the project was £1,137k. 20% of this sum is allocated to SADIS (£227.4k). This cost is to be depreciated over 5 years at £45.5k per annum. The SADIS Gateway became fully depreciated during 2008.

**p. Cost of Capital**

A rate of 7.75% has been applied to the average net book value of the asset. In 2008 the average NBV was £6,503 \* 7.75% = £504.

**q. SADIS Backup Enhancement**

The cost of implementing the SADIS backup enhancement in 2009 was £30,297. This had originally been included in the 2007 cost base at a figure of £29,141

**2.3 Notes on CAA and ICAO Administration Costs**

**r. CAA Administration Costs comprise the following:**

|  |        |
|--|--------|
| Met Authority Regulatory oversight       | £2,687 |
| Travel costs to SADISOPSG/13 in Dakar    | £2,609 |
| Cost to host SCRAG/9 in London           | £ 38   |
| 2007 (SADISOPSG/12) travel over-recovery | -£ 320 |
| Total                                    | £5,014 |

**s. ICAO Administration costs are detailed in WP/4.**

**3 ACTION**

3.1 The SCRAG/10 is requested to note the cost information provided by the United Kingdom and approve for these costs to be recovered from States within the Cost Recovery Scheme.

SCRAG/10 WP/5 Annex 1.

TABLE 1: 2008 and 2009 SADIS Costs

|   |      |                                | 2008           | 2008           | 2008           | 2009           | 2009           |
|---|------|--------------------------------|----------------|----------------|----------------|----------------|----------------|
|   |      |                                | Actual         | FOO            | Estimate       | FOO            | Estimate       |
| INVENTORY REF:                            | Note | DESCRIPTION                    | (Jan-Dec)      | (SCRAG9)       | (SCRAG8)       | (SCRAG10)      | (SCRAG9)       |
| <b>UK MET OFFICE COSTS</b>                |      |                                |                |                |                |                |                |
| <b>1. Equipment</b>                       |      |                                |                |                |                |                |                |
| <b>Principally procured for SADIS</b>     |      |                                |                |                |                |                |                |
| comms between Whitehill & Met Office      | a    | SADIS 1G                       | 3,139          | 3,139          | 3,139          | 0              | 0              |
|   |      | SADIS 2G                       | 6,364          | 6,364          | 6,364          | 6,364          | 6364           |
| comms link SADIS Gateway & Met Office     | b    | SADIS 1G                       | 3,340          | 3,340          | 0              | 0              | 0              |
|   |      | SADIS 2G                       | 0              | 0              | 0              | 3,340          | 0              |
| ISDN back-up link                         |      | ISDN Back-up link              | 372            | 372            | 372            | 372            | 372            |
| <b>Not procured principally for SADIS</b> |      |                                |                |                |                |                |                |
| message switch (FROST/SADIS)              | c    | SADIS 1G                       | 32,179         | 32,327         | 29,498         | 0              | 0              |
| message switch (FROST/FTP)                |      | SADIS FTP                      | 16,760         | 16,837         | 9,141          | 15370          | 24000          |
| message switch (FROST/2G)                 |      | SADIS 2G                       | 8,044          | 8,081          | 9,556          | 7938           | 8000           |
| internet bandwidth (FTP)                  |      | FTP                            | 11,269         | 6,976          | 12,240         | 6120           | 7000           |
| FTP equipment running costs               |      | FTP                            | 15,390         | 15,704         | 12,675         | 16000          | 16000          |
| Service Desk Equipment costs              | d    | Service Desk eqpt              |                |                |                | 15700          | 35000          |
| Serial Comms Costs and maintenance        |      | Serial Comms                   |                |                |                | 13600          | 24000          |
|   |      | <b>sub total</b>               | <b>96,857</b>  | <b>93,140</b>  | <b>82,985</b>  | <b>84,804</b>  | <b>120,736</b> |
| <b>2. Procured Services</b>               |      |                                |                |                |                |                |                |
| space segment annual lease                | e    | Satellite Segment              | 83,610         | 83,610         | 83,610         | 91197          | 83610          |
| annual maintenance                        | f    | SADIS 1G C&W                   | 9,816          | 9,816          | 9,816          | 0              | 0              |
|   |      | 1G Facilities Mgmt             | 6,300          | 6,300          | 6,300          | 0              | 0              |
|   |      | 2G Maintenance                 | 24,920         | 24,920         | 24,920         | 36918          | 31000          |
|   |      | 2G Facilities Mgmt             | 3,150          | 3,150          | 3,150          | 4275           | 3150           |
|   |      | IT Halls                       | 10,430         | 10,679         | 16,747         | 15578          | 11000          |
|   | g    | ad hoc maintenance             | 7,700          | 8,000          | 5,000          | 3600           | 5000           |
|   |      | Sadis 1G decommissioning       |                |                |                | 4510           | 4510           |
|   |      | SADIS Backup equipment         |                |                |                | 2745           |                |
|   |      | <b>sub total</b>               | <b>145,926</b> | <b>146,475</b> | <b>149,543</b> | <b>158,823</b> | <b>138,270</b> |
| <b>3. Annual Staff Requirements</b>       |      |                                |                |                |                |                |                |
| <b>Help Desk</b>                          |      |                                |                |                |                |                |                |
|   | h    | Help Desk                      | 19,373         | 18,509         | 19,250         | 5800           | 19250          |
|   |      | Technical Team Leader          |                |                |                | 11066          | 15000          |
|   |      | Network Systems Supervisor     |                |                |                | 22134          | 20000          |
| <b>Additional Support</b>                 |      |                                |                |                |                |                |                |
| Systems Integration Team                  | i    | Network Comp Eng.              | 7,067          | 6,774          | 6,795          | 7390           | 6795           |
| Administrator                             |      | Executive Officer              | 53,001         | 50,804         | 50,963         | 55428          | 50963          |
| International Aviation Management         |      | Aviation Manager               | 13,416         | 13,110         | 12,900         | 13616          | 12900          |
| Data Traffic                              |      | Communications Engineer        | 3,534          | 3,387          | 3,398          | 3695           | 3398           |
| Contract Management                       |      | Senior Procurement Officer     | 3,534          | 3,387          | 3,398          | 3695           | 3398           |
| UNIX Support                              |      | Computer Engineer              | 7,067          | 6,774          | 6,795          | 7390           | 6795           |
| Web Team Support                          |      | Website Designer               | 7,067          | 6,774          | 6,795          | 7390           | 6795           |
| Invoice Administration                    |      | Invoice Manager                | 10,601         | 10,161         | 10,193         | 11086          | 10193          |
| CIDA                                      |      | CIDA & Infrastructure Engineer |                |                |                | 12500          | 12500          |
| enhancements to FTP service               |      | FTP enhancements               | 0              | 5,000          | 17,000         | 0              | 15000          |
| GRIB2 data trial                          |      | GRIB2 over SADIS Trial         | 0              |                |                | 5500           | 30000          |
| Cost of capital audit                     |      | Audit                          |                |                |                | 2500           |                |
| SADIS 2G Hardware Refresh                 |      | Hardware refresh               |                |                |                | 7600           |                |
| <b>Travel Costs</b>                       | j    | SADISOPSG & SCRAG              | 5,314          | 5,500          | 6,000          | 6000           | 6000           |
|   |      | <b>sub total</b>               | <b>129,974</b> | <b>130,180</b> | <b>143,487</b> | <b>182,790</b> | <b>218,987</b> |
|   |      | <b>TOTAL</b>                   | <b>372,757</b> | <b>369,795</b> | <b>376,015</b> | <b>426,417</b> | <b>477,993</b> |
| <b>Cost of Depreciated Capital</b>        |      |                                |                |                |                |                |                |
|   | k    | SADIS 2G                       | 17,488         | 17,488         | 17,485         | 4,812          | 0              |
|   |      | FTP enhancements               | 0              | 0              | 13,000         | 0              | 0              |
|   |      | <b>sub total</b>               | <b>390,245</b> | <b>387,283</b> | <b>406,500</b> | <b>431,229</b> | <b>477,993</b> |
|   | l    | Cost of Capital                | 26,794         | 38,728         | 40,650         | 26,000         | 47,799         |
|   |      | <b>Total UKMO Costs</b>        | <b>417,039</b> | <b>426,011</b> | <b>447,150</b> | <b>457,229</b> | <b>525,792</b> |

TABLE 1: 2008 and 2009 SADIS Costs

| INVENTORY REF: | Note | DESCRIPTION                      | 2008                | 2008             | 2008                 | 2009             | 2009                 |
|----------------|------|----------------------------------|---------------------|------------------|----------------------|------------------|----------------------|
|                |      |                                  | Actual<br>(Jan-Dec) | FOO<br>(SCRAG 9) | Estimate<br>(SCRAG8) | FOO<br>(SCRAG10) | Estimate<br>(SCRAG9) |
| <b>2</b>       |      | <b>NATS Gateway Costs</b>        |                     |                  |                      |                  |                      |
|                |      | <b>Staff Costs</b>               |                     |                  |                      |                  |                      |
|                | m    | Operational Staff                |                     |                  |                      |                  |                      |
|                |      | Air Traffic Services Asst.       | 55,774              | 55,774           | 53,629               | 255,275          | 255,275              |
|                |      | Engineering Staff                |                     |                  |                      |                  |                      |
|                |      | Systems Engineer                 | 22,066              | 22,066           | 21,217               | 11,915           | 11,915               |
|                |      | Administration Support           |                     |                  |                      |                  |                      |
|                |      | Administration Officer           | 15,383              | 15,383           | 14,791               | 23,830           | 23,830               |
|                |      | Asset Engineering Support        |                     |                  |                      |                  |                      |
|                |      | Asset Management Activities      | 2,917               | 2,917            | 2,805                | 6,851            | 6,851                |
|                |      | <b>sub total</b>                 | <b>96,140</b>       | <b>96,140</b>    | <b>92,442</b>        | <b>297,871</b>   | <b>297,871</b>       |
|                |      | Communications                   |                     |                  |                      |                  |                      |
|                | n    | IP Comms link to UKMO            | 0                   | 0                | 12,040               | 12,040           | 12,040               |
|                |      | X.25 Comms link to UKMO          | 0                   | 0                | 3,340                | 0                | 0                    |
|                |      | Maintenance                      |                     |                  |                      |                  |                      |
|                |      | Systems Maintenance              | 6,264               | 6,264            | 6,264                | 6,264            | 6,264                |
|                |      | Cost of Depreciated Capital      |                     |                  |                      |                  |                      |
|                | o    | Depreciation                     | 12,999              | 12,999           | 12,999               | 0                | 0                    |
|                | p    | Cost of Capital                  | 504                 | 504              | 504                  | 0                | 0                    |
|                |      | SADIS Backup Enhancement         |                     |                  |                      |                  |                      |
|                | q    | Procurement & Installation       | 0                   | 0                | 0                    | 30,297           | 0                    |
|                |      | Annual support costs             | 0                   | 0                | 1,250                | 1,250            | 1,250                |
|                |      | <b>Total NATS Gateway Costs</b>  | <b>115,907</b>      | <b>115,907</b>   | <b>128,839</b>       | <b>347,722</b>   | <b>317,425</b>       |
|                |      | <b>CAA Administration Costs</b>  | <b>5,014</b>        | <b>5,334</b>     | <b>5,000</b>         | <b>4,959</b>     | <b>6,000</b>         |
|                | r    | <b>ICAO Administration Costs</b> | <b>35,918</b>       | <b>35,000</b>    | <b>37,468</b>        | <b>42,150</b>    | <b>43,700</b>        |
|                | s    | <b>TOTAL SADIS COSTS</b>         | <b>573,878</b>      | <b>582,252</b>   | <b>618,457</b>       | <b>852,060</b>   | <b>892,917</b>       |