**SADIS COST RECOVERY ADMINISTRATIVE GROUP**

**EIGHTH MEETING**

(Paris, November 13-14 2007)

**ESTIMATED SADIS  COSTS : 2 to 5 YEARS**
(Presented by the United Kingdom)

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**REFERENCES**

SADIS Agreement

SCRAG/1/2/3/4/5/6/7 Reports

SADISOPSG/11 Executive Summary

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## 1.     INTRODUCTION

1.1    The medium term (two to five years) forecast of the expected costs of operating the SADIS Services are provided in this Working Paper.  Resource requirements will vary due to changing demand and these have been anticipated where possible and identified in the tables presented. The SADISOPSG identified potential changes to the SADIS inventory as a result of new requirements and these have been reflected where possible.

## 2.     DISCUSSION

2.1    The attached Table 1 identifies expected budgets for the years 2008, 2009, 2010 and 2011 based on expected trends for expenditure by the United Kingdom Met Office and NATS.

2.2     The following notes should be read in conjunction with Table 1.

a.    SADIS 1G will be disbanded at the end of 2008. Costs are therefore nil for 2009 onwards.

b.    Some allowance has been made for increased switching costs of data in GRIB2 format from 2009.

c.    ISP bandwidth costs are subject to change. Prices per unit bandwidth are expected to fall in the short term but are likely to be balanced by demand for faster access for an increasing number of users.

d.    Equipment running costs include infrastructure and service delivery costs (server hall usage, network connection, WAN costs) and platform support team costs.  Enhancements to the service are itemised separately.

e.	The current contract for the satellite bandwidth runs to the end of 2008. A new contract will be required from January 2009. The bandwidth needed will depend on the future requirement for the amount of data and speed of transmission. The current assumption is that the bandwidth will not be changed.

f.	An annual allowance of £5k is being made for ad-hoc maintenance as requested by the SCRAG/6.

g.	This work was previously conducted by UK CAA. There is a corresponding reduction in CAA administration costs.

h.	FTP enhancements costs are as presented to the SCRAG/6.  Work has started but the work is subject to change and slippage.

i.	The SADIS 2G operational equipment will become fully depreciated at the end of 2008.

j.	A rate of return of 10% has been applied as the cost of capital.


2.3	Notes on SADIS Gateway costs and UK CAA and UK Met Office administration costs

k.	The costs of operational, engineering and support staff are as described in WP/5.

l.	The full annual cost of software maintenance is £31,323.75.  20% of this cost (£6,264 per annum) is allocated to SADIS.

m.	The full capital cost of the project was £1,137k.  20% of this (£227.4k) was allocated to SADIS.  This cost is to be depreciated over a five year period ending in 2008, using the straight line method.  Depreciation charges for 2008 are £12,999.

n.	A rate of 7.75% has been applied to the average net book value of the asset to determine the cost of capital.  In 2007 the average net book value will be £6,498 (*7.75% = £504).

o.	Costs of implementing a SADIS back-up of WAFC services as discussed at SADISOPSG/11 (see also SCRAG/7 WP14).

p.	CAA administration costs of £5,000 represent the technical support provided by the CAA Met Authority (Mr A Wells), who will continue to attend the annual SCRAG meetings.  Billing and other administration functions transferred to the UK Met Office in 2007 (see item g)

## 3.  CONCLUSIONS

3.1      The annual running costs are subject to change. Costs may change as a result of changes in satellite bandwidth, maintenance and communication costs, new requirements and technological developments agreed by the PIRGS and SADISOPSG.

3.2      These figures should therefore be treated as an initial estimate of costs for the planning period and are subject to change.


## 4.  ACTION

4.1      The SCRAG/8 is requested to note these provisional figures for the SADIS Costs.

**TABLE 1: UKMO Cost and manpower resource projections until year 2011 (at 2007 prices)**

| INVENTORY REF: | Note | DESCRIPTION | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|
| **1** **UK MET OFFICE COSTS** | | | | | | |
| **1. Equipment** | | | | | | |
| **Principally procured for SADIS** | | | | | | |
| comms between Whitehill & Met Office | a | SADIS 1G | 3,139 | 0 | 0 | 0 |
| | | SADIS 2G | 6,364 | 6,364 | 6,364 | 6,364 |
| comms link SADIS Gateway & Met Office | | SADIS 1G | 0 | 0 | 0 | 0 |
| | | SADIS 2G | 0 | 0 | 0 | 0 |
| | | ISDN back up | 372 | 372 | 372 | 372 |
| **Not procured principally for SADIS** | | | | | | |
| message switch (FROST/SADIS) | a | SADIS 1G | 29,498 | 0 | 0 | 0 |
| message switch (FROST/FTP) | b | SADIS FTP | 9,141 | 20,000 | 20,000 | 20,000 |
| message switch (FROST/2G) | | SADIS 2G | 9,556 | 9,556 | 9,556 | 9,556 |
| internet bandwidth (FTP) | c | FTP | 12,240 | 12,240 | 12,240 | 12,240 |
| FTP equipment running costs | d | FTP | 12,675 | 12,675 | 12,675 | 12,675 |
| | | **sub total** | **82,985** | **61,207** | **61,207** | **61,207** |
| **2. Procured Services** | | | | | | |
| space segment annual lease | e | Satellite Segment | 83,610 | 83,610 | 83,610 | 83,610 |
| annual maintenance | a | SADIS 1G C&W | 9,816 | 0 | 0 | 0 |
| | a | 1G Facilities Mgmt | 6,300 | 0 | 0 | 0 |
| | | 2G Maintenance | 24,920 | 24,920 | 24,920 | 24,920 |
| | | 2G Facilities Mgmt | 3,150 | 3,150 | 3,150 | 3,150 |
| | | IT Hall Space | 16,747 | 16,747 | 16,747 | 16,747 |
| | f | ad hoc maintenance | 5,000 | 5,000 | 5,000 | 5,000 |
| | | **sub total** | **149,543** | **133,427** | **133,427** | **133,427** |
| **3. Annual Staff Requirements** | | | | | | |
| **Help Desk** | | Help Desk | 19,250 | 19,250 | 19,250 | 19,250 |
| **Additional Support** | | | | | | |
| Systems Integration Team | | Network Comp Eng. | 6,795 | 6,795 | 6,795 | 6,795 |
| Administrator | | Executive Officer | 50,963 | 50,963 | 50,963 | 50,963 |
| International Aviation Management | | Aviation Manager | 12,900 | 12,900 | 12,900 | 12,900 |
| Data Traffic | | Communications Engineer | 3,398 | 3,398 | 3,398 | 3,398 |
| Contract Management | | Senior Procurement Officer | 3,398 | 3,398 | 3,398 | 3,398 |
| UNIX Support | | Computer Engineer | 6,795 | 6,795 | 6,795 | 6,795 |
| Web Team Support | | Website Designer | 6,795 | 6,795 | 6,795 | 6,795 |
| Invoice Administration | g | Finance Officer | 10,193 | 10,193 | 10,193 | 10,193 |
| Enhancements to FTP Service | h | | 17,000 | 0 | 0 | 0 |
| **Travel Costs** | | SADISOPSG & SCRAG | 6,000 | 6,000 | 6,000 | 6,000 |
| | | **sub total** | **143,487** | **126,487** | **126,487** | **126,487** |
| | | **TOTAL** | **376,015** | **321,121** | **321,121** | **321,121** |
| **Cost of Depreciated Capital** | | | | | | |
| | i | SADIS 2G | 17,485 | 0 | 0 | 0 |
| | h | FTP enhancements | 13,000 | 13,000 | 13,000 | 13,000 |
| | | **sub total** | **406,500** | **334,121** | **334,121** | **334,121** |
| | j | Cost of Capital | 40,650 | 33,412 | 33,412 | 33,412 |
| | | **Total UKMO Costs** | **447,150** | **367,533** | **367,533** | **367,533** |

**TABLE 2: NATS and other SADIS Cost Projections until 2011**

| INVENTORY REF: | Note | DESCRIPTION | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|
| **2** **NATS Gateway Costs** | | | | | | |
| **Staff Costs** | | | | | | |
| Operational Staff | k | Air Traffic Services Asst. | 53,629 | 53,629 | 53,629 | 53,629 |
| Engineering Staff | | Systems Engineer | 21,217 | 21,217 | 21,217 | 21,217 |
| Administration Support | | Administration Officer | 14,791 | 14,791 | 14,791 | 14,791 |
| asset enginnering support | | asset management activities | 2,805 | 2,805 | 2,805 | 2,805 |
| | | **sub total** | **92,442** | **92,442** | **92,442** | **92,442** |
| Communications | | ip comms link to ukmo | 12,040 | 12,040 | 12,040 | 12,040 |
| | | x25 comms link | 3,340 | 0 | 0 | 0 |
| Maintenance | l | Systems Maintenance | 6,264 | 6,264 | 6,264 | 6,264 |
| Cost of Depreciated Capital | m | Depreciation | 12,999 | 0 | 0 | 0 |
| | n | Cost of Capital | 504 | 0 | 0 | 0 |
| Sadis Backup enhancement | | procurement & Installation | | | | |
| | o | annual support costs | 1,250 | 1,250 | 1,250 | 1,250 |
| **Total NATS Gateway Costs** | | | **128,839** | **111,996** | **111,996** | **111,996** |
| **CAA Administration Costs** | p | | **5,000** | **5,000** | **5,000** | **5,000** |
| **ICAO Administration Costs** | | | **37,468** | **37,468** | **37,468** | **37,468** |
| **TOTAL SADIS COSTS** | | | **618,457** | **521,997** | **521,997** | **521,997** |