



SCRAG/11 - REPORT

INTERNATIONAL CIVIL AVIATION ORGANIZATION

REPORT OF

**THE ELEVENTH MEETING OF THE SADIS COST RECOVERY
ADMINISTRATIVE GROUP
(SCRAG/11)**

(Paris, 4 November 2010)

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INTRODUCTION

Place and duration

i.1 The Eleventh Meeting of the SADIS Cost Recovery Administrative Group (SCRAG) was held in the European and North Atlantic (EUR/NAT) ICAO Regional Office, Paris, on 4 November 2010.

Attendance

i.2 The Meeting was attended by two of the five Members of the Group and two of the three Observers. The list of participants is in Appendix A and a list of working papers issued for the Meeting is in Appendix B.

Officers and Secretariat

i.3 Mr. L.J.N. Rolvink, from the Netherlands, was Chairman of the Meeting. Mr. C. Gauthier, Coordinator, Joint Financing, ICAO Headquarters, Montreal, acted as Secretary of the Meeting.

Agenda

i.4 The following agenda was adopted:

Agenda Item 1: Review of SCRAG's Terms of Reference, Composition and Working Arrangements

Agenda Item 2: Consideration of issues relevant to the SCRAG's work addressed by the SADIS Operations Group (SADISOPSG)

Agenda Item 3: Review of actual SADIS costs and cost shares for the period 1 January to 31 December 2009

Agenda Item 4: Review of estimated SADIS costs and cost shares for the period 1 January to 31 December 2011

Agenda Item 5: Amendment to Annexes to the Agreement on the Sharing of Costs of the Satellite Distribution System relating to Air Navigation

Agenda Item 6: Future work and arrangements for the SCRAG/12 Meeting.

Agenda Item 7: Other business.

AGENDA ITEM 1: REVIEW OF SCRAG'S TERMS OF REFERENCE, COMPOSITION AND WORKING ARRANGEMENTS

1.1 The Group noted that the Parties to the SADIS Agreement from the European Region still represent in the aggregate more than 50% of the total assessments, which results in the nomination of two SCRAG members from this Region, in accordance with Article VII, paragraph 2 of the SADIS Agreement.

1.2 The Group noted its Terms of Reference assigned by Article VII of the SADIS Agreement, which reads:

“The SADIS Cost Allocation and Recovery (SCAR) arrangement shall be administered by a group, the *SADIS Cost Recovery Administrative Group* (SCRAG) which shall:

- a) assess the annual cost share attributable to each Party, including re-assessments arising from new Parties adhering to this Agreement; and
- b) audit the costs of the SADIS provision and any related financial activities, incurred by the provider State and subject to cost sharing.”

1.3 The Group was informed that ICAO had received a formal notification of accession to the SADIS Agreement from 44 States. Three of these States had the service withdrawn and three of these States are Least Developed Countries (LDCs), which are exempted from payment of SADIS cost share. The Group was also informed that 11 States had informed ICAO of their intention to accede to the SADIS Agreement but had not yet sent a formal notification of accession and that 50 other States receiving the SADIS service had not yet notified their intention to accede to the SADIS Agreement. It was also informed that from these last 50 States, 28 are LDCs, which are exempted from payment of SADIS cost share. The Group also noted that Cape Verde which used to be a LDC has recently been removed from the list of LDCs and therefore should be assessed for the year 2011.

AGENDA ITEM 2: CONSIDERATION OF ISSUES RELEVANT TO THE SCRAG’S WORK ADDRESSED BY THE SADIS OPERATIONS GROUP (SADISOPSG)

2.1 The Group was informed of the main conclusions of the Fifteenth Meeting of the SADIS Operations Group (SADISOPSG/15, Paris, 26 to 28 May 2010) provided by the Chairman of SADISOPSG in the Executive Summary of Discussions of this meeting.

2.2 In accordance with Conclusion 15/4 of SADISOPSG/15, the Group noted the Statement of SADIS operational efficacy received from the Chairman of SADISOPSG relaying the advice from the Group at its Fifteenth meeting (SADISOPSG/15, Paris, 26 to 28 May 2010) to SCRAG that the operational efficacy of the SADIS had continued to be satisfactory meeting all operational requirements since the SADISOPSG/14 Meeting (Bangkok, 15 to 17 July 2009).

2.3 The Group noted Conclusion 15/5 of SADISOPSG/15 instructing the Chairman of SADISOPSG to forward to the Chairman of SCRAG an updated SADIS Inventory. This proposal is dealt with under Agenda Item 5 (see below paragraphs 5.1, 5.2 and Appendix J).

2.4 The Group also noted Conclusions 15/12 a) and b) and 15/18 b) of SADISOPSG/15 instructing the Chairman of SADISOPSG to advise the Chairman of SCRAG of costs arising from the development of SADIS.

AGENDA ITEM 3: REVIEW OF ACTUAL SADIS COSTS AND COST SHARES FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2009

Review of the 2009 Actual SADIS Costs

3.1 The Group reviewed the actual costs of providing the SADIS services in the year 2009. These actual costs are presented in Appendix E and total £842 135. A summary of these costs is presented in Table 1.

TABLE 1
SUMMARY OF ACTUAL SADIS COSTS
FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2009

| Cost Item | Actual Costs (UK £) |
|-----------------------------|------------------------|
| UK Meteorological Office | 446 952 |
| UK NATS Gateway | 347 722 |
| UK administrative costs | 5 091 |
| Sub-total UK | 799 765 |
| ICAO support services costs | 42 370 |
| TOTAL | 842 135 |

Review of the 2009 Actual SADIS Cost Shares

3.2 The Group noted that one State, Algeria, which was not assessed for the year 2009 by the SCRAG/9 Meeting, have had the service withdrawn on 17 October 2008 but reinstated on 1 November 2009. Consequently, its share of the actual costs for 2009 was calculated based on two full months of service in 2009.

3.3 The Group noted that one State, the Syrian Arab Republic, which was assessed for the year 2009 by the SCRAG/9 Meeting, have had the service withdrawn on 17 October 2008 but reinstated on 1 February 2009. Consequently, its share of the actual costs for 2009 was calculated based on eleven full months of service in 2009.

3.4 The Group noted that three States, Bosnia and Herzegovina, Iran (Islamic Republic of) and Uzbekistan, which were not assessed for the year 2009 by the SCRAG/9 Meeting, are included in the calculation of the actual cost shares for 2009 considering that they receive the SADIS service respectively since 1 August 2009, 1 July 2009 and 1 April 2009. Consequently, their share of the actual costs for 2009 was calculated based respectively on five, six and nine full months of service in 2009.

3.5 The Group noted that one State, Swaziland, which was assessed for the year 2009 by the SCRAG/9 Meeting, received the service only for ten full months in 2009. Consequently, its share of the actual costs for 2009 was calculated based on ten full months of service in 2009.

3.6 The Group determined the actual cost shares for the period 1 January to 31 December 2009 to be borne by the States party to the SADIS Agreement which are not exempted because they are on the list of the Least Developed Countries or because they denied their accession to the SADIS Agreement, on the basis of the number of available tonne-kilometres (ATKs) in scheduled services for 2009, in accordance with Article XI, paragraph 3 of the SADIS Agreement. The cost share in percentage terms and the share in £ sterling to be borne by each State participating in the SADIS Cost Allocation and Recovery (SCAR) Arrangement are shown in Appendix E. Accordingly the Group formulated the following Conclusion:

Conclusion 11/1 -

The actual cost shares for 2009 as shown in Appendix E to the SCRAG/11 Report for the States participating in the SCAR Arrangement are approved by the SCRAG/11 Meeting, in view of the adjustments to be made by the United Kingdom in its billing of these States.

3.7 The Group received information from the observer from the United Kingdom on the status of payment of the cost shares of 2009 as at 1 October 2010. It noted that a total amount of £623 313 was collected and a total amount of credit balance of £540 was applied against the assessments for 2009 (see Appendix G – Table 1), both amounts representing 99.9% of the original assessments for 2009 as approved by the SCRAG/9 Meeting.

3.8 The Group noted that only two States have not yet paid their assessment in full for the year 2009 and that the total amount due for 2009 is only £744.78.

3.9 Having noted the information in Table 1 and paragraphs 3.2 to 3.8 above, the Group agreed that the net amount of the over-recovery of SADIS cost shares for the year 2009 amounts to £4 540 as shown in Table 2. This over-recovery is the difference between the actual costs for 2009 (£842 135), to which the over-recovery for 2007 is deducted (£36 828) in order to obtain the amount subject to collection for 2009 (£805 307), and the collections from States for 2009 (£623 313 as shown in Appendix G - Table 1) plus the collections from States for years prior to 2009 after 31 December 2009 (£58 731 as shown in Appendix G – Table 2). The adjustment for 2009 (£127 803 as shown in Appendix E) has also been deducted in the calculation of the over-recovery for 2009 since this amount will be billed to the States in 2011. If this amount of adjustment for 2009 is not deducted, it would result in a significant over-recovery in 2011. The Group noted the efforts made by the provider State and ICAO to collect the assessments due. The Group formulated the following Conclusion:

Conclusion 11/2 -

A net over-recovery, amounting to £4 540 of the SADIS cost shares for the year 2009 will be taken into account in the calculation of the SADIS cost shares for the year 2011, in accordance with Article XI, paragraph 4 of the SADIS Agreement.

**TABLE 2
OVER-RECOVERY FOR 2009**

| | | (UK £) | References |
|-----|---|-----------|------------------------------------|
| (1) | Actual costs for 2009 | 842 135 | Table 1 |
| (2) | Over-recovery for 2007 | -36 828 | SCRAG/9 Report, Table 2 Revised |
| (3) | Subject to collection for 2009 | 805 307 | (1) + (2) |
| (4) | Collected from States for 2009 (as at 1 October 2010) | - 623 313 | Appendix G – Table 1 |
| (5) | Collected from States for years prior to 2009 after 31 December 2009 (as at 1 October 2010) | - 58 731 | Appendix G – Table 2 |
| (6) | Adjustment for 2009 | - 127 803 | Appendix E |
| (7) | Over-recovery for 2009 | - 4 540 | (3) + (4) + (5) + (6) |

Depreciated Assets

3.10 The Group noted the information presented by the United Kingdom regarding the depreciated assets as at 31 December 2010. The Group noted that the depreciation of the SADIS 2G hardware was initially calculated based on a depreciation period of three years; it requested that the provider State review its calculation starting in 2010 to calculate the depreciation over a five year period. The figures in Appendix C have been revised accordingly.

Review of SADIS costs

3.11 At the SCRAG/9 Meeting, the Group noted the substantial increase to the estimated costs for 2009 and future years and asked for further information on the following additional costs:

- UK MET Office costs:
 - Service desk equipment costs (£35 000)
 - Serial communications costs and maintenance (£24 000)
 - Help desk-technical team leader (£15 000)
 - Help desk-network systems supervisor (£20 000)
 - CIDA and infrastructure engineer (£12 500)
- NATS Gateway Costs:
 - Air traffic services assistant (increase of £201 646)

3.12 At the SCRAG/9 Meeting, the Group agreed with the principle that the service Provider be able to charge the full costs of the services but considering the substantial increase in the costs and the need to receive comprehensive additional information on these, it agreed to apply only 80% of the 2009 estimated costs for the purpose of the calculation of the assessments in 2009. It agreed however that the 2009 actual costs will be chargeable on the basis of the costs determined after proper review by the SADISOPSG and the SCRAG and that the difference will be charged in the adjustment of the 2009 actual costs when calculating the assessments for 2011 (SCRAG/9, Conclusion 9/3).

3.13 At the SCRAG/10 Meeting, the Group reviewed the additional information on the increased costs included in SCRAG/10-WP/14 and noted that, as requested, this issue has been reviewed by the SADISOPSG. The Group noted that the SADISOPSG/14 concluded that the additional costs proposed by the SADIS Provider State are in accordance with current and future service level requirements for the SADIS service. However, the Group considered that efforts should be made to reduce the costs in the future and in this respect, it agreed to apply only 80% of the 2010 estimated costs for the purpose of the calculation of the assessments in 2010. The Group also requested that the service Provider and the SADISOPSG determine possible savings in the coming years that would aim at reducing the costs of the years 2009 and 2010 by the portion of 20% of the estimated costs that was not taken into consideration in the calculation of the assessments for those years. Furthermore, when reviewing the 2010 ICAO estimated administrative costs, the Group asked that a review of these costs take place in order to determine how these costs are calculated, more specifically the costs related to the SADISOPSG, and how they could be reduced.

3.14 The Group reviewed the additional information as regards the SADIS operational costs included in SCRAG/11-WP/13 and noted that, as requested, this issue has been reviewed again by the SADISOPSG. The Group noted that following a study by the SADIS Service Provider and the SADIS Technical Developments Team, proposals to reduce costs by approximately 13% by removing some of the SADIS Gateway functions were not endorsed by the SADISOPSG/15. Changes to dissemination methods (use of satellite) which could contribute substantial changes are longer term aspirations, and a survey of users will identify the expected needs of such distribution beyond 2015. Relinquishing the retained SADIS 1G bandwidth and lower costs in 2011 and 2012 compared with 2009 and 2010 due to reduced capital investment needs will result in a saving of approximately 6% annually.

3.15 The Group noted that notwithstanding ongoing efforts to reduce costs where practicable, and across the entire SADIS service, it was recognized by SADISOPSG/15 that a centralized quality control process (the SADIS Gateway), was an essential part of the SADIS Service, and was cost effective compared with the alternative of individual States applying quality control, and that through other means, the SADIS Provider had identified savings of approximately 6% annually (through satellite bandwidth savings and staff cost reduction). The Group strongly recommended that the service Provider, in cooperation with the SADISOPSG, continue to look at ways to reduce the SADIS operating costs in the future and reports on this to the SCRAG annually.

3.16 The Group also reviewed the additional information as regards the ICAO SADIS administrative costs included in SCRAG/11-WP/9 and noted that, as requested, this issue has been reviewed by the ICAO Joint Financing (JF) Section and the ICAO Meteorology/Aeronautical Information Management (MET/AIM) Section. The Group noted the detailed work carried out by the JF and MET/AIM Sections included in this working paper, more specifically in the Attachment to this working paper. It noted that the work carried out by the MET/AIM Section requires a little more than the equivalent of three months of work of an officer and a little more than two months of work of a secretary and that in order to reduce these ICAO administrative costs a decision would need to be taken by the SADISOPSG to eliminate some of the services provided by ICAO to the SADISOPSG. The Group however expressed concerns on these increased ICAO administrative costs and the evaluation of the amount of time needed to accomplish some of these tasks.

3.17 The Group formulated the following conclusion:

Conclusion 11/3 -

- a) *Notwithstanding ongoing efforts to reduce costs where practicable, and across the entire SADIS service, it was recognized by SADISOPSG/15 that a centralized quality control process (the SADIS Gateway), was an essential part of the SADIS Service, and was cost effective compared with the alternative of individual States applying quality control, and that through other means, the SADIS Provider had identified savings of approximately 6% annually (through satellite bandwidth savings and staff cost reduction);*
- b) *It is strongly recommended that the service Provider, in cooperation with the SADISOPSG, continue to look at ways to reduce the SADIS operating costs in the future and reports on this to the SCRAG annually;*
- c) *As regards the ICAO administrative costs, it is requested that, once in post, the new Chief MET/AIM Section of ICAO carry out a revision of the time allocated to the tasks performed for the SADISOPSG and that the SADISOPSG review the operations of the MET/AIM Section of ICAO.*

AGENDA ITEM 4: REVIEW OF ESTIMATED SADIS COSTS AND COST SHARES FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2011

Review of the 2011 Estimated SADIS Costs

4.1 The Group reviewed the cost estimates for providing the SADIS services in the year 2011. These cost estimates are detailed in Appendix F and total £819 789. A summary of these costs is presented in Table 3.

TABLE 3
SUMMARY OF ESTIMATED SADIS COSTS
FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2011

| Cost Item | Estimated Costs (UK £) |
|-----------------------------|---------------------------|
| UK Meteorological Office | 424 471 |
| UK NATS Gateway | 332 320 |
| UK CAA administrative costs | 5 000 |
| Sub-total UK | 761 791 |
| ICAO support services costs | 57 998 |
| TOTAL | 819 789 |

4.2 The Group considered the over-recovery in Table 2 in the calculation of the amount to be assessed under the SADIS Agreement for 2011. The calculation of the amount to be assessed is presented in Table 4.

TABLE 4
AMOUNT TO BE ASSESSED UNDER THE SADIS AGREEMENT FOR 2011

| | | (UK £) | References |
|-----|--------------------------------|---------|------------|
| (1) | Over-recovery for 2009 | - 4 540 | Table 2 |
| (2) | Estimated costs for 2011 | 819 789 | Table 3 |
| (3) | Amount to be assessed for 2011 | 815 249 | (1) + (2) |

Review of the 2011 Estimated SADIS Cost Shares

4.3 The Group determined the cost shares for the period 1 January to 31 December 2011 to be borne by the States party to the SADIS Agreement which are not exempted because they are on the list of the Least Developed Countries, on the basis of the number of available tonne-kilometres (ATKs) in scheduled services for 2009, in accordance with Article XI, paragraph 3 of the SADIS Agreement.

4.4 The Group noted that one State, Cape Verde, which used to be in the list of Least Developed Countries (LDCs), thus exempt from payment of the SADIS cost share, has recently been removed from that list. Consequently, Cape Verde is included in the calculation of the assessment of cost shares for 2011.

4.5 The Group noted that two States, Morocco and the Russian Federation, which had the service withdrawn respectively on 6 August 2002 and 8 November 2006, are included in the calculation of the assessment of cost shares for 2011 since they had the service reinstated respectively on 1 July 2010 and 7 October 2010.

4.6 The Group noted that one State, Namibia, is included in the calculation of the assessment of cost shares for 2011 considering that it receives the service since 1 July 2010.

4.7 The cost share in percentage terms and the share in £ sterling, including the share of over-recovery for 2009, to be borne by each State are shown in Appendix H. Appendix I shows the amounts to be billed to each State in 2011, corresponding to the adjustment for 2009 (Appendix E), plus the assessment for 2011 (Appendix H), less the deduction of unused credit balances from previous years. The Group formulated the following Conclusion:

Conclusion 11/4 -

The estimated cost shares for 2011 as shown in Appendix H to the SCRAG/11 Report for each State participating in the SCAR Arrangement are approved by the SCRAG/11 Meeting for collection by the United Kingdom. The Secretariat will place the tables in the SCRAG web page.

Cost estimates for the years 2012 to 2014

4.8 The Group considered the estimates provided by the United Kingdom (see Appendix F) and summarised in Table 5 of providing the SADIS services for the years 2012 to 2014 as well as the estimates for the United Kingdom administrative costs and the costs of ICAO support services.

**TABLE 5
SUMMARY OF ESTIMATED SADIS COSTS
FOR THE YEARS 2012, 2013 AND 2014***

| Cost Item | Estimated Costs 2012 (UK £) | Estimated Costs 2013 (UK £) | Estimated Costs 2014 (UK £) |
|-----------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| UK Meteorological Office | 426 171 | 426 171 | 423 267 |
| UK NATS Gateway | 332 320 | 332 320 | 332 320 |
| UK CAA administrative costs | 5 000 | 5 000 | 5 000 |
| Sub-total UK | 763 491 | 763 491 | 760 587 |
| ICAO support services costs | 57 998 | 57 998 | 57 998 |
| TOTAL | 821 489 | 821 489 | 818 585 |

* Estimates based on 2010 prices.

AGENDA ITEM 5: AMENDMENT TO ANNEXES TO THE AGREEMENT ON THE SHARING OF COSTS OF THE SATELLITE DISTRIBUTION SYSTEM RELATING TO AIR NAVIGATION

5.1 The Group reviewed the amendments to Annex II, SADIS Inventory, to the SADIS Agreement as proposed by the SADISOPSG and agreed upon by the United Kingdom as the SADIS provider State. These amendments were necessary to ensure that the inventory would continue to meet the approved operational requirements. The additions and deletions to the existing text of Annex II appear in outline and strikethrough formats in Appendix J.

5.2 As a result of its review, the Group adopted the following Conclusion:

Conclusion 11/5 -

With the consent of the United Kingdom as the SADIS provider State, in accordance with Article XVII, paragraph 5 of the SADIS Agreement, Annex II, SADIS Inventory, of the SADIS Agreement is amended as indicated in Appendix J to the SCRAG/11 Report.

AGENDA ITEM 6: FUTURE WORK AND ARRANGEMENTS FOR THE SCRAG/12 MEETING

6.1 The Group agreed that, subject to confirmation, its Twelfth Meeting should be held at the UK CAA in London on Friday 4 November 2011.

AGENDA ITEM 7: OTHER BUSINESS

7.1 The Group reviewed the content of SCRAG/11-WP/14 on impacts of non-satellite distribution of aeronautical information on the SADIS cost recovery scheme.

7.2 The Group noted that the provision of World Area Forecast System (WAFS) data over satellite in the early days resulted in distinct areas of coverage (satellite footprints) which effectively defined from which service (SADIS or ISCS) user States were able to obtain their data. Subsequent introduction of internet based delivery mechanisms (SADIS FTP, WIFS) has introduced the capability of a global footprint through internet based communications. With the enabling clause in Amendment 75 to ICAO Annex 3 – *Meteorological Service for International Air Navigation* allowing provision of non-time critical aeronautical data over the public internet, combined with the confirmed withdrawal by the United States of their satellite based service (ISCS G2) in June 2012 which will be replaced by the now operational internet based WIFS system, the SADIS Provider State is of the opinion that there is a pressing need to agree and ratify ICAO policies on the provision and cost recovery of WAFS/OPMET data via means that are effectively global in coverage. Both the introduction of global internet services and the availability of aeronautical data via non-AFS networks pose a risk to the stability and future viability of the SADIS cost recovery scheme.

7.3 The SADIS Provider State also indicated that at the ICAO EANPG METG/18 and 20 meetings, it has been proposed that the United Kingdom hold a bilateral agreement with states that wish to receive WAFS/OPMET data via non-AFS telecommunications networks. It is of the opinion that this solution by-passes the SADIS cost recovery scheme and that proliferation of the use of these non-AFS networks for WAFS data could eventually lead to the collapse of SADIS and the SADIS cost recovery system. In addition, the nature of such bilateral agreements has not been discussed and a policy on how a payment would be calculated or how the money would be used has not yet been determined. A policy on the use of non-AFS networks for the distribution of WAFS data is desirable.

7.4 The Group indicated that it was not in favour of having two different charging schemes systems and that any State receiving the SADIS data, whatever the source, should pay for its share of the SADIS costs. As a result of its review, the Group adopted the following Conclusions:

Conclusion 11/6 -

The SCRAG endorses and recommends the position that RANPs should be reviewed and clarified in light of the global coverage of internet based distribution to the effect that it be confirmed that:

- a) States in the AFI, EUR, and MID regions source their primary OPMET data from the SADIS Provider State (i.e. via SADIS 2G and SADIS FTP);*
- b) States in the CARSAM region source their primary OPMET data from the ISCS Provider State (i.e. via ISCS 2G or WIFS);*

- c) *ASIAPAC States identified as being outside the ISCS footprint source their primary OPMET data from the SADIS Provider State (i.e. via SADIS 2G and SADIS FTP);*
- d) *ASIAPAC States identified as being outside the SADIS footprint source their primary OPMET data from the ISCS Provider State (i.e. via ISCS G2 or WIFS);*
- e) *ASIAPAC States under both satellite footprints would be free to choose a primary source from either provider.*

The Chairman of the SCRAG shall forward the above endorsed Conclusion to the Chairmen of the SADISOPSG and the WAFSOPSG for follow up action.

Conclusion 11/7 -

The SCRAG invites the SADIS Provider State to:

- a) *consider a mechanism for recovery of costs from States that receive their OPMET data via GTS that feeds back the monies received into the SADIS cost recovery scheme taking into account the statement of the SCRAG that it does not want a distinction between different ways of SADIS system and the payment of its services; and*
- b) *report back to the SCRAG/12 Meeting.*

7.5 The Group expressed its appreciation and thanks to the staff of the ICAO European and North Atlantic Office (Paris) for their hospitality and excellent support received during the meeting.

APPENDIX A

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APPENDIX B**LIST OF SCRAG/10 WORKING PAPERS**

| Working Paper No. | Agenda Item | Subject | Presented by |
|-------------------|-------------|---|------------------------|
| 1 | 1 to 7 | Provisional agenda | Secretariat |
| 2 | 1, 3 & 4 | Status of accession to the SADIS Agreement | Secretariat |
| 3 | 2, 4 & 5 | Reports on Conclusions of the SADISOPSG/15 Meeting | Chairman, SADISOPSG |
| 4 | 3 | 2009 ICAO actual SADIS administrative costs | Secretariat |
| 5 | 3 | 2009 actual SADIS costs | United Kingdom |
| 6 | 3 & 4 | Status of payments for the year 2009 | United Kingdom |
| 7 | 3 | Summary of actual costs and cost shares for the year 2009 | Secretariat |
| 8 | 3 | Depreciated assets: SADIS costs | United Kingdom |
| 9 | 4 | 2011 ICAO estimated SADIS administrative costs | Secretariat |
| 10 | 4 | Estimated SADIS Costs: 2 to 5 years | United Kingdom |
| 11 | 4 | Summary of estimated costs and assessments for the year 2011 | Secretariat |
| 12 | 5 | Amendment to Annex II, SADIS Inventory, to the SADIS Agreement | Secretariat |
| 13 | 3 & 4 | Commentary on the discussions at SADISOPSG/15 regarding options to reduce SADIS operational costs | United Kingdom |
| 14 | 7 | Impacts of non-satellite distribution of aeronautical information on the SADIS cost recovery scheme | United Kingdom |

APPENDIX C

**INVENTORY OF ASSETS AS AT 31 DECEMBER 2009
EMPLOYED BY THE UNITED KINGDOM TO PROVIDE SADIS SERVICES**

| (1) Inventory of Assets: 2010 | (2) Original Value | (3) Depreciated charges in 2010 | (4) Total accumulated depreciation | (5) Net depreciated values at end of 2010 |
|---|-----------------------------------|--|---|--|
| Original HUB Investment, Trial Systems and Capitalized Operation Asset | £713 769 | £0 | £713 769 | £0 |
| Two-Way Hub enhancement, VSATS and development | £375 000 | £0 | £375 000 | £0 |
| SADIS 2G Operational System | £87 428 | £0 | £87 428 | £0 |
| SADIS 2G Hardware Refresh | £59 988 | £11 616 | £16 428 | £43 560 |
| Total UKMO | £1 236 185 | £11 616 | £1 192 625 | £43 560 |
| SADIS Gateway | £227 462 | £0 | £227 462 | £0 |

APPENDIX D
STATES WHICH FORMALLY ACCEDED
TO THE SADIS AGREEMENT

| STATES | LDC's Exempted |
|---------------------------------------|----------------|
| Austria | |
| Bahrain | |
| Belgium | |
| Botswana | |
| Cameroon | |
| China | |
| Congo | |
| Côte d'Ivoire | |
| Croatia | |
| Cyprus | |
| Czech Republic | |
| Democratic People's Republic of Korea | |
| Democratic Republic of the Congo | X |
| Denmark | |
| Egypt | |
| Estonia | |
| Finland | |
| Gabon | |
| Georgia | |
| Germany | |
| Hungary | |
| Italy | |
| Jordan | |
| Madagascar | X |
| Mauritius * | |
| Mongolia * | |
| Morocco | |
| Netherlands | |
| Oman | |
| Pakistan | |
| Portugal | |
| Republic of Moldova | |
| Romania | |
| Russian Federation | |
| Senegal | |
| Sweden | |
| Switzerland | |
| Thailand | |
| Tunisia | |
| Turkmenistan * | |
| United Arab Emirates | |
| United Kingdom | |
| United Republic of Tanzania | X |
| Viet Nam | |

*Although they formally acceded to the SADIS Agreement, these States do not presently receive the service

APPENDIX D (cont'd)

STATES WHICH INFORMED OF THEIR INTENTION
TO ACCEDE TO THE SADIS AGREEMENT

| STATES | LDC's Exempted |
|--------------|----------------|
| Armenia | |
| Azerbaijan | |
| Greece | |
| Ireland | |
| Kenya | |
| Kuwait | |
| Malta | |
| Saudi Arabia | |
| Serbia | |
| Turkey | |
| Ukraine | |

APPENDIX D (cont'd)

STATES WHICH HAVE NOT YET NOTIFIED
THEIR INTENTION TO ACCEDE TO THE SADIS AGREEMENT

| STATES | LDC's Exempted |
|---|----------------|
| Afghanistan | X |
| Algeria | |
| Angola | X |
| Bangladesh | X |
| Benin | X |
| Bosnia and Herzegovina | |
| Bulgaria | |
| Burkina Faso | X |
| Cape Verde ** | |
| Central African Republic | X |
| Chad | X |
| Comoros | X |
| Djibouti | X |
| Equatorial Guinea | X |
| Ethiopia | X |
| Gambia | X |
| Ghana | |
| Guinea | X |
| Guinea-Bissau | X |
| Iceland | |
| India | |
| Iran (Islamic Republic of) | |
| Lao People's Democratic Republic | X |
| Latvia | |
| Libyan Arab Jamahiriya | |
| Lithuania | |
| Malawi | X |
| Maldives | X |
| Mali | X |
| Mauritania | X |
| Mozambique | X |
| Myanmar | X |
| Namibia | |
| Nepal | X |
| Niger | X |
| Nigeria | |
| Poland | |
| Qatar | |
| Rwanda | X |
| Somalia | X |
| South Africa | |
| Sri Lanka | |
| Swaziland | |
| Syrian Arab Republic | |
| The former Yugoslav Republic of Macedonia | |
| Togo | X |
| Uganda | X |
| Uzbekistan | |
| Yemen | X |
| Zimbabwe | |

** Cape Verde is no longer in the list of Least Developed Countries.

APPENDIX E

**ACTUAL COST SHARES FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2009*
AND ADJUSTMENT FOR 2009**

| STATES | 2009 Available Tonne-Kilometres in Scheduled Services (000) | Percentage Cost Share | Share of 2009 Actual Costs (£ Sterling) | Share of 80% of 2009 Estimated Costs (SCRAG/9) (£ Sterling) | Adjustment for 2009 (£ Sterling) |
|---------------------------------------|--|--------------------------|---|---|--|
| Algeria (note 1) | 123 671 | 0.036% | 300.37 | 0.00 | 300.37 |
| Armenia | 154 370 | 0.045% | 374.93 | 352.72 | 22.21 |
| Austria | 2 629 603 | 0.758% | 6 386.71 | 7 020.13 | - 633.42 |
| Azerbaijan | 241 320 | 0.070% | 586.11 | 706.45 | - 120.34 |
| Bahrain | 3 363 878 | 0.970% | 8 170.09 | 3 862.42 | 4 307.67 |
| Belgium | 3 195 141 | 0.921% | 7 760.27 | 6 084.72 | 1 675.55 |
| Bosnia and Herzegovina (note 2) | 9 362 | 0.003% | 22.74 | 0.00 | 22.74 |
| Botswana | 21 560 | 0.006% | 52.36 | 46.16 | 6.20 |
| Bulgaria | 182 280 | 0.053% | 442.72 | 457.61 | - 14.89 |
| Cameroon (note 3) | 0 | 0.000% | 0.00 | 295.95 | - 295.95 |
| China: - Beijing | 62 803 223 | 18.113% | 152 534.71 | 118 858.12 | 33 676.59 |
| - Hong Kong | 22 598 977 | 6.518% | 54 887.76 | 55 638.24 | - 750.48 |
| - Macau | 365 515 | 0.105% | 887.75 | 1 430.37 | - 542.62 |
| Congo (note 3) | 77 366 | 0.022% | 187.90 | 165.78 | 22.12 |
| Côte d'Ivoire (note 3) | 136 880 | 0.039% | 332.45 | 293.31 | 39.14 |
| Croatia | 208 932 | 0.060% | 507.45 | 407.04 | 100.41 |
| Cyprus | 687 594 | 0.198% | 1 670.01 | 1 600.51 | 69.50 |
| Czech Republic | 1 088 674 | 0.314% | 2 644.14 | 2 422.43 | 221.71 |
| Democratic People's Republic of Korea | 10 049 | 0.003% | 24.41 | 24.80 | - 0.39 |
| Denmark | 1 551 427 | 0.447% | 3 768.06 | 4 000.47 | - 232.41 |
| Egypt | 3 451 212 | 0.995% | 8 382.21 | 6 216.35 | 2 165.86 |
| Estonia | 81 204 | 0.023% | 197.23 | 297.82 | - 100.59 |
| Finland | 3 495 555 | 1.008% | 8 489.91 | 7 889.23 | 600.68 |
| Gabon | 515 809 | 0.149% | 1 252.78 | 1 057.85 | 194.93 |
| Georgia | 94 190 | 0.027% | 228.77 | 217.51 | 11.26 |
| Germany | 36 717 617 | 10.590% | 89 178.72 | 85 725.94 | 3 452.78 |
| Ghana (note 3) | 23 119 | 0.007% | 56.15 | 49.54 | 6.61 |
| Greece | 1 480 507 | 0.427% | 3 595.81 | 3 736.75 | - 140.94 |
| Hungary | 951 754 | 0.274% | 2 311.59 | 2 451.74 | - 140.15 |
| Iceland | 659 487 | 0.190% | 1 601.74 | 1 957.53 | - 355.79 |
| India | 14 422 094 | 4.159% | 35 027.98 | 27 543.59 | 7 484.39 |
| Iran (Islamic Republic of) (note 2) | 1 046 578 | 0.302% | 2 541.90 | 0.00 | 2 541.90 |
| Ireland | 10 233 576 | 2.951% | 24 855.02 | 17 602.68 | 7 252.34 |
| Italy | 8 735 662 | 2.519% | 21 216.93 | 22 356.36 | - 1 139.43 |
| Jordan | 1 299 095 | 0.375% | 3 155.21 | 3 108.20 | 47.01 |
| Kenya | 1 762 322 | 0.508% | 4 280.28 | 3 608.97 | 671.31 |
| Kuwait | 1 640 679 | 0.473% | 3 984.84 | 3 568.33 | 416.51 |
| Latvia | 298 546 | 0.086% | 725.10 | 689.43 | 35.67 |
| Libyan Arab Jamahiriya | 292 939 | 0.084% | 711.48 | 621.85 | 89.63 |
| Lithuania | 161 771 | 0.047% | 392.90 | 234.29 | 158.61 |
| Malta | 514 929 | 0.149% | 1 250.65 | 910.71 | 339.94 |

APPENDIX E (cont'd)
ACTUAL COST SHARES FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2009*
AND ADJUSTMENT FOR 2009

| STATES | 2009 Available Tonne-Kilometres in Scheduled Services (000) | Percentage Cost Share | Share of 2009 Actual Costs (£ Sterling) | Share of 80% of 2009 Estimated Costs (SCRAG/9) (£ Sterling) | Adjustment for 2009 (£ Sterling) |
|---|--|--------------------------|---|---|--|
| Netherlands | 17 446 452 | 5.032% | 42 373.45 | 39 855.69 | 2 517.76 |
| Nigeria | 264 985 | 0.076% | 643.59 | 560.31 | 83.28 |
| Oman | 636 738 | 0.184% | 1 546.49 | 3 764.57 | - 2 218.08 |
| Pakistan | 2 906 055 | 0.838% | 7 058.14 | 7 348.74 | - 290.60 |
| Poland | 1 279 938 | 0.369% | 3 108.68 | 2 877.97 | 230.71 |
| Portugal | 4 378 444 | 1.263% | 10 634.24 | 8 733.98 | 1 900.26 |
| Qatar | 10 445 243 | 3.012% | 25 369.11 | 17 217.77 | 8 151.34 |
| Republic of Moldova | 89 958 | 0.026% | 218.49 | 167.91 | 50.58 |
| Romania | 740 790 | 0.214% | 1 799.21 | 2 121.76 | - 322.55 |
| Saudi Arabia | 7 810 457 | 2.253% | 18 969.82 | 16 080.28 | 2 889.54 |
| Senegal | 174 491 | 0.050% | 423.80 | 351.71 | 72.09 |
| Serbia | 194 019 | 0.056% | 471.23 | 494.11 | - 22.88 |
| South Africa | 5 478 321 | 1.580% | 13 305.59 | 13 420.14 | - 114.55 |
| Sri Lanka | 1 439 343 | 0.415% | 3 495.84 | 3 808.13 | - 312.29 |
| Swaziland (note 3) | 1 262 | 0.000% | 3.07 | 3.25 | - 0.18 |
| Sweden | 1 580 520 | 0.456% | 3 838.72 | 3 185.60 | 653.12 |
| Switzerland | 6 052 312 | 1.746% | 14 699.69 | 12 020.54 | 2 679.15 |
| Syrian Arab Republic (note 1) | 421 118 | 0.121% | 1 022.80 | 1 015.97 | 6.83 |
| Thailand | 10 592 935 | 3.055% | 25 727.82 | 25 687.80 | 40.02 |
| The former Yugoslav Republic of Macedonia | 13 452 | 0.004% | 32.67 | 88.03 | - 55.36 |
| Tunisia | 535 564 | 0.154% | 1 300.76 | 1 081.31 | 219.45 |
| Turkey | 9 024 359 | 2.603% | 21 918.11 | 13 083.86 | 8 834.25 |
| Ukraine | 1 216 418 | 0.351% | 2 954.40 | 981.04 | 1 973.36 |
| United Arab Emirates | 33 592 912 | 9.688% | 81 589.52 | 50 439.39 | 31 150.13 |
| United Kingdom | 39 208 494 | 11.308% | 95 228.49 | 90 697.19 | 4 531.30 |
| Uzbekistan (note 2) | 755 811 | 0.218% | 1 835.68 | 0.00 | 1 835.68 |
| Viet Nam | 2 842 264 | 0.820% | 6 903.21 | 5 162.41 | 1 740.80 |
| Zimbabwe | 281 722 | 0.081% | 684.24 | 570.64 | 113.60 |
| TOTAL | 346 732 844 | 100.000% | 842 135.00 | 714 332.00 | 127 803.00 |

* Excludes Least Developed Countries exempted.

Note 1: Considering that the service to Algeria and to the Syrian Arab Republic had been withdrawn on 17 October 2008 and reinstated respectively on 1 November 2009 and 1 February 2009, their share of the 2009 actual costs was calculated based respectively on 2 and 11 full months of service.

Note 2: Considering that Bosnia and Herzegovina, Iran (Islamic Republic of) and Uzbekistan are receiving the SADIS service respectively since 1 August 2009, 1 July 2009 and 1 April 2009, their share of the 2009 actual costs was calculated based respectively on 5, 6 and 9 full months of service.

Note 3: The number of ATKs for Cameroon is nil in 2009 since its only airline ceased operating in March 2008.

We did not receive the number of ATKs in 2009 for Congo, Côte d'Ivoire, Ghana and Swaziland. The number of ATKs shown is that of 2008 adjusted based on the growth rate of ATKs for Africa of -1.7% in 2009. In addition, Swaziland received the service only for 10 full months in 2009, so its share of the 2009 actual costs was calculated based on 10 full months of service.

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APPENDIX F

TABLE 1: UKMO Cost and manpower resource projections until year 2014 (at 2010 prices)

| INVENTORY REF: | Note | DESCRIPTION | 2011 | 2012 | 2013 | 2014 |
|---|------|----------------------------------|----------------|----------------|----------------|----------------|
| 1 UK MET OFFICE COSTS | | | | | | |
| 1. Equipment | | | | | | |
| Principally procured for SADIS | | | | | | |
| comms between Whitehill & Met Office | a | SADIS 2G | 6,364 | 6,364 | 6,364 | 6,364 |
| comms link SADIS Gateway & Met Office | | SADIS 2G | 3,340 | 3,340 | 3,340 | 3,340 |
| | | ISDN Back-up | 372 | 372 | 372 | 372 |
| Not procured principally for SADIS | | | | | | |
| message switch (FROST/FTP) | b | SADIS FTP | 24,000 | 24,000 | 24,000 | 24,000 |
| message switch (FROST/2G) | | SADIS 2G | 10,800 | 12,500 | 12,500 | 12,500 |
| internet bandwidth (FTP) | | FTP | 11,500 | 11,500 | 11,500 | 11,500 |
| FTP equipment running costs | c | FTP | 40,000 | 40,000 | 40,000 | 40,000 |
| Service Desk Equipment Costs | | Service Desk eqpt | 15,700 | 15,700 | 15,700 | 15,700 |
| Serial Comms Costs and maintenance | | Serial Comms | 10,000 | 10,000 | 10,000 | 10,000 |
| | | sub total | 122,076 | 123,776 | 123,776 | 123,776 |
| 2. Procured Services | | | | | | |
| space segment annual lease | d | Satellite Segment | 70,000 | 70,000 | 70,000 | 70,000 |
| annual maintenance | e | 2G Maintenance | 32,500 | 32,500 | 32,500 | 32,500 |
| | | 2G Facilities Management | 4,275 | 4,275 | 4,275 | 4,275 |
| | | IT Hall Space | 15,000 | 15,000 | 15,000 | 15,000 |
| | f | ad hoc maintenance | 5,000 | 5,000 | 5,000 | 5,000 |
| | | sub total | 126,775 | 126,775 | 126,775 | 126,775 |
| 3. Annual Staff Requirements | | | | | | |
| Help Desk | | | | | | |
| | g | Help Desk 0.5% | 5,800 | 5,800 | 5,800 | 5,800 |
| | | Technical Team Leader 4% | 11,066 | 11,066 | 11,066 | 11,066 |
| | | Network Systems Supervisor 7% | 22,134 | 22,134 | 22,134 | 22,134 |
| Additional Support | | | | | | |
| Systems Integration Team | | Network Comp Eng. | 4,866 | 4,866 | 4,866 | 4,866 |
| Administrator | | Executive Officer | 55,612 | 55,612 | 55,612 | 55,612 |
| International Aviation Management | | Aviation Manager | 12,805 | 12,805 | 12,805 | 12,805 |
| Data Traffic | | Communications Engineer | 1,738 | 1,738 | 1,738 | 1,738 |
| Contract Management | | Senior Procurement Officer | 1,390 | 1,390 | 1,390 | 1,390 |
| Web Team Support | | Website Designer | 5,214 | 5,214 | 5,214 | 5,214 |
| Invoice Administration | | Finance Officer | 12,165 | 12,165 | 12,165 | 12,165 |
| CIDA | | CIDA and Infrastructure Engineer | 5,214 | 5,214 | 5,214 | 5,214 |
| Travel Costs | | | | | | |
| | | SADISOPSG & SCRAG | 6,000 | 6,000 | 6,000 | 6,000 |
| | | sub total | 144,004 | 144,004 | 144,004 | 144,004 |
| | | TOTAL | 392,855 | 394,555 | 394,555 | 394,555 |
| Cost of Depreciated Capital | | | | | | |
| | h | SADIS 2G | 11,616 | 11,616 | 11,616 | 8,712 |
| | | FTP enhancements | 0 | 0 | 0 | 0 |
| | | sub total | 404,471 | 406,171 | 406,171 | 403,267 |
| | | Cost of Capital | 20,000 | 20,000 | 20,000 | 20,000 |
| | | Total UKMO Costs | 424,471 | 426,171 | 426,171 | 423,267 |

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APPENDIX F (cont'd)

TABLE 2: NATS and other SADIS Cost Projections until 2014

| INVENTORY REF: | Note | DESCRIPTION | 2011 | 2012 | 2013 | 2014 |
|----------------------------------|-------------|-----------------------------|----------------|----------------|----------------|----------------|
| 2 NATS Gateway Costs | I | | | | | |
| Staff Costs | | | | | | |
| Operational Staff | | Air Traffic Services Asst. | 268,039 | 268,039 | 268,039 | 268,039 |
| Engineering Staff | | Systems Engineer | 12,511 | 12,511 | 12,511 | 12,511 |
| Administration Support | | Administration Officer | 25,022 | 25,022 | 25,022 | 25,022 |
| asset engineering support | | asset management activities | 7,194 | 7,194 | 7,194 | 7,194 |
| | | sub total | 312,766 | 312,766 | 312,766 | 312,766 |
| Communications | | ip comms link to ukmo | 12,040 | 12,040 | 12,040 | 12,040 |
| | | x25 comms link | 0 | 0 | 0 | 0 |
| Maintenance | | Systems Maintenance | 6,264 | 6,264 | 6,264 | 6,264 |
| Cost of Depreciated Capital | | Depreciation | 0 | 0 | 0 | 0 |
| | | Cost of Capital | 0 | 0 | 0 | 0 |
| Sadis Backup enhancement | | procurement & Installation | 0 | 0 | 0 | 0 |
| | | annual support costs | 1,250 | 1,250 | 1,250 | 1,250 |
| Total NATS Gateway Costs | | | 332,320 | 332,320 | 332,320 | 332,320 |
| CAA Administration Costs | | | 5,000 | 5,000 | 5,000 | 5,000 |
| ICAO Administration Costs | | | 57,998 | 57,998 | 57,998 | 57,998 |
| TOTAL SADIS COSTS | | | 819,789 | 821,489 | 821,489 | 818,585 |

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APPENDIX G
TABLE 1

**STATUS OF PAYMENT OF THE ASSESSMENT FOR 2009
AS AT 1 OCTOBER 2010
(£ Sterling)**

| STATES | Total amount billed for 2009 (SCRAG/9-Report, Appendix I revised) | Amount Collected as at 1 October 2010 | Application of credit balance (or part of) | Unpaid amount (excess paid) as at 1 October 2010 |
|---------------------------------------|--|--|--|---|
| Armenia | 213.45 | 213.45 | | 0.00 |
| Austria | 4 130.09 | 4 130.09 | | 0.00 |
| Azerbaijan | 541.29 | 541.29 | | 0.00 |
| Bahrain | 3 091.29 | 3 091.29 | | 0.00 |
| Belgium | 5 019.58 | 5 019.58 | | 0.00 |
| Botswana | 36.67 | 36.67 | | 0.00 |
| Bulgaria | 415.87 | 415.87 | | 0.00 |
| Cameroon | 231.20 | 231.20 | | 0.00 |
| China: - Beijing | 115 168.94 | 115 168.94 | | 0.00 |
| - Hong Kong | 49 431.96 | 49 431.96 | | 0.00 |
| - Macau | 1 131.08 | 1 131.08 | | 0.00 |
| Congo | 94.65 | 94.65 | | 0.00 |
| Côte d'Ivoire | 352.97 | 352.97 | | 0.00 |
| Croatia | 285.08 | 285.08 | | 0.00 |
| Cyprus | 1 230.76 | 1 230.76 | | 0.00 |
| Czech Republic | 1 774.65 | 1 774.65 | | 0.00 |
| Democratic People's Republic of Korea | 19.39 | 19.39 | | 0.00 |
| Denmark | 2 867.95 | 2 867.95 | | 0.00 |
| Egypt | 5 284.13 | 5 284.13 | | 0.00 |
| Estonia | 219.73 | 219.73 | | 0.00 |
| Finland | 7 448.01 | 7 448.01 | | 0.00 |
| Gabon | 826.32 | 826.32 | | 0.00 |
| Georgia | 179.43 | 180.00 | | - 0.57 |
| Germany | 70 542.17 | 70 542.17 | | 0.00 |
| Ghana | 29.25 | | 29.25 | 0.00 |
| Greece | 2 690.85 | 2 690.85 | | 0.00 |
| Hungary | 2 500.35 | 2 500.35 | | 0.00 |
| Iceland | 1 242.28 | 1 242.28 | | 0.00 |
| India | 30 068.29 | 30 068.29 | | 0.00 |
| Ireland | 16 695.16 | 16 695.16 | | 0.00 |
| Italy | 16 342.39 | 15 455.21 | 146.72 | 740.46 |
| Jordan | 2 625.66 | 2 625.66 | | 0.00 |
| Kenya | 520.94 | 520.00 | | 0.94 |
| Kuwait | 2 662.41 | 2 662.41 | | 0.00 |
| Latvia | 1 090.90 | 1 090.90 | | 0.00 |
| Libyan Arab Jamahiriya | 1 062.79 | 1 062.79 | | 0.00 |
| Lithuania | 400.42 | 400.42 | | 0.00 |
| Malta | 751.29 | 751.29 | | 0.00 |

APPENDIX G (cont'd)

TABLE 1 (cont'd)

STATUS OF PAYMENT OF THE ASSESSMENT FOR 2009

AS AT 1 OCTOBER 2010

(£ Sterling)

| STATES | Total amount billed for 2009 (SCRAG/9-Report, Appendix I revised) | Amount Collected as at 1 October 2010 | Application of credit balance (or part of) | Unpaid amount (excess paid) as at 1 October 2010 |
|---|---|---------------------------------------|--|--|
| Netherlands | 30 844.04 | 30 844.04 | | 0.00 |
| Nigeria | 364.23 | | 364.23 | 0.00 |
| Oman | 3 120.60 | 3 120.60 | | 0.00 |
| Pakistan | 5 939.89 | 5 939.89 | | 0.00 |
| Poland | 2 433.48 | 2 433.48 | | 0.00 |
| Portugal | 8 157.45 | 8 157.45 | | 0.00 |
| Qatar | 19 813.85 | 19 813.85 | | 0.00 |
| Republic of Moldova | 156.43 | 156.43 | | 0.00 |
| Romania | 2 523.19 | 2 523.19 | | 0.00 |
| Saudi Arabia | 13 813.19 | 13 813.19 | | 0.00 |
| Senegal | 355.48 | 355.48 | | 0.00 |
| Serbia | 400.10 | 400.10 | | 0.00 |
| South Africa | 8 285.96 | 8 285.96 | | 0.00 |
| Sri Lanka | 2 981.96 | 2 981.96 | | 0.00 |
| Swaziland | 3.95 | | | 3.95 |
| Sweden | 1 398.21 | 1 398.21 | | 0.00 |
| Switzerland | 10 177.39 | 10 177.39 | | 0.00 |
| Syrian Arab Republic | 751.47 | 751.47 | | 0.00 |
| Thailand | 21 690.80 | 21 690.80 | | 0.00 |
| The former Yugoslav Republic of Macedonia | 72.62 | 72.62 | | 0.00 |
| Tunisia | 722.79 | 722.79 | | 0.00 |
| Turkey | 13 027.44 | 13 027.44 | | 0.00 |
| United Arab Emirates | 50 055.85 | 50 055.85 | | 0.00 |
| United Kingdom | 72,957.19 | 72 957.19 | | 0.00 |
| Viet Nam | 4,724.22 | 4 724.22 | | 0.00 |
| Zimbabwe | 606.48 | 606.48 | | 0.00 |
| TOTAL | 624 597.90 | 623 312.92 | 540.20 | 744.78 |

APPENDIX G (cont'd)

TABLE 2

STATUS OF PAYMENT OF BALANCES FOR YEARS PRIOR TO 2009
AS AT 1 OCTOBER 2010

(£ Sterling)

| STATES | Balance due for years prior to 2009 | Amount Collected as at 1 October 2010 | Application of credit balance (or part of) | Unpaid amount (excess paid) as at 1 October 2010 |
|----------------------|---|--|--|---|
| India | 26 913.09 | 26 913.09 | | 0.00 |
| Malaysia | -4 680.75 | -4 680.75 | | 0.00 |
| Morocco | 4 601.37 | 4 601.37 | | 0.00 |
| Russian Federation | 17 317.39 | 17 317.39 | | 0.00 |
| Serbia | 480.67 | 480.67 | | 0.00 |
| Swaziland | 2.71 | | | 2.71 |
| Syrian Arab Republic | 0.00 | 197.81 | | - 197.81 |
| Turkey | 13 239.97 | 13 239.97 | | 0.00 |
| Zimbabwe | 661.62 | 661.62 | | 0.00 |
| TOTAL | 58 536.07 | 58 731.17 | 0.00 | - 195.10 |

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APPENDIX H

ESTIMATED COST SHARES AND ASSESSMENTS
FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2011 *

| STATES | 2009 Available Tonne-Kilometres in Scheduled Services (000) | Percentage Cost Share | Share of 2011 Estimated Costs (£ Sterling) | Share of Over-recovery for 2009 (£ Sterling) | Amount to be Assessed for 2011 (£ Sterling) |
|---------------------------------------|--|--------------------------|--|---|---|
| Algeria | 742 026 | 0.203% | 1 660.67 | - 9.20 | 1 651.47 |
| Armenia | 154 370 | 0.042% | 345.48 | - 1.91 | 343.57 |
| Austria | 2 629 603 | 0.718% | 5 885.11 | - 32.59 | 5 852.52 |
| Azerbaijan | 241 320 | 0.066% | 540.08 | - 2.99 | 537.09 |
| Bahrain | 3 363 878 | 0.918% | 7 528.43 | - 41.69 | 7 486.74 |
| Belgium | 3 195 141 | 0.872% | 7 150.80 | - 39.60 | 7 111.20 |
| Bosnia and Herzegovina | 22 469 | 0.006% | 50.29 | - 0.28 | 50.01 |
| Botswana | 21 560 | 0.006% | 48.25 | - 0.27 | 47.98 |
| Bulgaria | 182 280 | 0.050% | 407.95 | - 2.26 | 405.69 |
| Cameroon ** | 0 | 0.000% | 0.00 | 0.00 | 0.00 |
| Cape Verde | 197 603 | 0.054% | 442.24 | - 2.45 | 439.79 |
| China: - Beijing | 62 803 223 | 17.145% | 140 555.03 | - 778.40 | 139 776.63 |
| - Hong Kong | 22 598 977 | 6.170% | 50 577.02 | - 280.10 | 50 296.92 |
| - Macau | 365 515 | 0.100% | 818.03 | - 4.53 | 813.50 |
| Congo | 77 366 | 0.021% | 173.15 | - 0.96 | 172.19 |
| Côte d'Ivoire | 136 880 | 0.037% | 306.34 | - 1.70 | 304.64 |
| Croatia | 208 932 | 0.057% | 467.59 | - 2.59 | 465.00 |
| Cyprus | 687 594 | 0.188% | 1 538.85 | - 8.52 | 1 530.33 |
| Czech Republic | 1 088 674 | 0.297% | 2 436.48 | - 13.49 | 2 422.99 |
| Democratic People's Republic of Korea | 10 049 | 0.003% | 22.49 | - 0.12 | 22.37 |
| Denmark | 1 551 427 | 0.424% | 3 472.13 | - 19.23 | 3 452.90 |
| Egypt | 3 451 212 | 0.942% | 7 723.89 | - 42.77 | 7 681.12 |
| Estonia | 81 204 | 0.022% | 181.74 | - 1.01 | 180.73 |
| Finland | 3 495 555 | 0.954% | 7 823.13 | - 43.32 | 7 779.81 |
| Gabon | 515 809 | 0.141% | 1 154.39 | - 6.39 | 1 148.00 |
| Georgia | 94 190 | 0.026% | 210.80 | - 1.17 | 209.63 |
| Germany | 36 717 617 | 10.024% | 82 174.85 | - 455.09 | 81 719.76 |
| Ghana | 23 119 | 0.006% | 51.74 | - 0.29 | 51.45 |
| Greece | 1 480 507 | 0.404% | 3 313.41 | - 18.35 | 3 295.06 |
| Hungary | 951 754 | 0.260% | 2 130.05 | - 11.80 | 2 118.25 |
| Iceland | 659 487 | 0.180% | 1 475.95 | - 8.17 | 1 467.78 |
| India | 14 422 094 | 3.937% | 32 276.97 | - 178.75 | 32 098.22 |
| Iran (Islamic Republic of) | 2 093 156 | 0.571% | 4 684.53 | - 25.94 | 4 658.59 |
| Ireland | 10 233 576 | 2.794% | 22 902.97 | - 126.84 | 22 776.13 |
| Italy | 8 735 662 | 2.385% | 19 550.61 | - 108.27 | 19 442.34 |
| Jordan | 1 299 095 | 0.355% | 2 907.40 | - 16.10 | 2 891.30 |
| Kenya | 1 762 322 | 0.481% | 3 944.12 | - 21.84 | 3 922.28 |
| Kuwait | 1 640 679 | 0.448% | 3 671.88 | - 20.33 | 3 651.55 |
| Latvia | 298 546 | 0.082% | 668.15 | - 3.70 | 664.45 |
| Libyan Arab Jamahirija | 292 939 | 0.080% | 655.60 | - 3.63 | 651.97 |
| Lithuania | 161 771 | 0.044% | 362.05 | - 2.01 | 360.04 |
| Malta | 514 929 | 0.141% | 1 152.42 | - 6.38 | 1 146.04 |
| Morocco | 1 787 647 | 0.488% | 4 000.79 | - 22.16 | 3 978.63 |

APPENDIX H (cont'd)
ESTIMATED COST SHARES AND ASSESSMENTS
FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2011 *

| STATES | 2009 Available Tonne-Kilometres in Scheduled Services (000) | Percentage Cost Share | Share of 2011 Estimated Costs (£ Sterling) | Share of Over-recovery for 2009 (£ Sterling) | Amount to be Assessed for 2011 (£ Sterling) |
|---|--|--------------------------|--|---|---|
| Namibia | 251 190 | 0.069% | 562.17 | - 3.11 | 559.06 |
| Netherlands | 17 446 452 | 4.763% | 39 045.55 | - 216.23 | 38 829.32 |
| Nigeria | 264 985 | 0.072% | 593.04 | - 3.28 | 589.76 |
| Oman | 636 738 | 0.174% | 1 425.03 | - 7.89 | 1 417.14 |
| Pakistan | 2 906 055 | 0.793% | 6 503.82 | - 36.02 | 6 467.80 |
| Poland | 1 279 938 | 0.349% | 2 864.53 | - 15.86 | 2 848.67 |
| Portugal | 4 378 444 | 1.195% | 9 799.06 | - 54.27 | 9 744.79 |
| Qatar | 10 445 243 | 2.852% | 23 376.69 | - 129.46 | 23 247.23 |
| Republic of Moldova | 89 958 | 0.025% | 201.33 | - 1.11 | 200.22 |
| Romania | 740 790 | 0.202% | 1 657.90 | - 9.18 | 1 648.72 |
| Russian Federation | 15 362 802 | 4.194% | 34 382.30 | - 190.41 | 34 191.89 |
| Saudi Arabia | 7 810 457 | 2.132% | 17 479.98 | - 96.80 | 17 383.18 |
| Senegal | 174 491 | 0.048% | 390.51 | - 2.16 | 388.35 |
| Serbia | 194 019 | 0.053% | 434.22 | - 2.40 | 431.82 |
| South Africa | 5 478 321 | 1.496% | 12 260.61 | - 67.90 | 12 192.71 |
| Sri Lanka | 1 439 343 | 0.393% | 3 221.28 | - 17.84 | 3 203.44 |
| Swaziland | 1 515 | 0.000% | 3.39 | - 0.02 | 3.37 |
| Sweden | 1 580 520 | 0.431% | 3 537.24 | - 19.59 | 3 517.65 |
| Switzerland | 6 052 312 | 1.652% | 13 545.21 | - 75.01 | 13 470.20 |
| Syrian Arab Republic | 459 401 | 0.125% | 1 028.15 | - 5.69 | 1 022.46 |
| Thailand | 10 592 935 | 2.892% | 23 707.23 | - 131.29 | 23 575.94 |
| The former Yugoslav Republic of Macedonia | 13 452 | 0.004% | 30.11 | - 0.17 | 29.94 |
| Tunisia | 535 564 | 0.146% | 1 198.60 | - 6.64 | 1 191.96 |
| Turkey | 9 024 359 | 2.464% | 20 196.72 | - 111.85 | 20 084.87 |
| Ukraine | 1 216 418 | 0.332% | 2 722.37 | - 15.08 | 2 707.29 |
| United Arab Emirates | 33 592 912 | 9.171% | 75 181.69 | - 416.36 | 74 765.33 |
| United Kingdom | 39 208 494 | 10.704% | 87 749.51 | - 485.98 | 87 263.53 |
| Uzbekistan | 1 007 748 | 0.275% | 2 255.36 | - 12.49 | 2 242.87 |
| Viet Nam | 2 842 264 | 0.776% | 6 361.05 | - 35.23 | 6 325.82 |
| Zimbabwe | 281 722 | 0.077% | 630.50 | - 3.49 | 627.01 |
| TOTAL | 366 300 599 | 100.000% | 819 789.00 | -4 540.00 | 815 249.00 |

* Excludes Least Developed Countries exempted, States for which the access to SADIS is not operational and States which refused to accede to the SADIS Agreement.

** Cameroon does not have any ATK reported for 2009.

I - 1
APPENDIX I
AMOUNTS TO BE BILLED
FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2011
(£ Sterling)

| STATES | Adjustment for 2009 (Appendix E) | Assessment for 2011 (Appendix H) | Deduction of Unused Credit Balance from Previous Years | Total Amount to be Billed for 2011 |
|---------------------------------------|--|--|---|---|
| Algeria | 300.37 | 1 651.47 | - 115.51 | 1 836.33 |
| Armenia | 22.21 | 343.57 | - 113.52 | 252.26 |
| Austria | - 633.42 | 5 852.52 | | 5 219.10 |
| Azerbaijan | - 120.34 | 537.09 | - 242.66 | 174.09 |
| Bahrain | 4 307.67 | 7 486.74 | | 11 794.41 |
| Belgium | 1 675.55 | 7 111.20 | | 8 786.75 |
| Bosnia and Herzegovina | 22.74 | 50.01 | | 72.75 |
| Botswana | 6.20 | 47.98 | - 3.20 | 50.98 |
| Bulgaria | - 14.89 | 405.69 | | 390.80 |
| Cameroon | - 295.95 | 0.00 | | - 295.95 |
| Cape Verde | 0.00 | 439.79 | | 439.79 |
| China: - Beijing | 33 676.59 | 139 776.63 | | 173 453.22 |
| - Hong Kong | - 750.48 | 50 296.92 | | 49 546.44 |
| - Macau | - 542.62 | 813.50 | | 270.88 |
| Congo | 22.12 | 172.19 | | 194.31 |
| Côte d'Ivoire | 39.14 | 304.64 | | 343.78 |
| Croatia | 100.41 | 465.00 | - 114.18 | 451.23 |
| Cyprus | 69.50 | 1 530.33 | | 1 599.83 |
| Czech Republic | 221.71 | 2 422.99 | - 142.29 | 2 502.41 |
| Democratic People's Republic of Korea | - 0.39 | 22.37 | - 21.98 | 0.00 |
| Denmark | - 232.41 | 3 452.90 | - 6.23 | 3 214.26 |
| Egypt | 2 165.86 | 7 681.12 | - 4 695.87 | 5 151.11 |
| Estonia | - 100.59 | 180.73 | | 80.14 |
| Finland | 600.68 | 7 779.81 | | 8 380.49 |
| Gabon | 194.93 | 1 148.00 | | 1 342.93 |
| Georgia | 11.26 | 209.63 | - 2.40 | 218.49 |
| Germany | 3 452.78 | 81 719.76 | - 1 306.48 | 83 866.06 |
| Ghana | 6.61 | 51.45 | - 58.06 | 0.00 |
| Greece | - 140.94 | 3 295.06 | - 1 001.86 | 2 152.26 |
| Hungary | - 140.15 | 2 118.25 | - 876.86 | 1 101.24 |
| Iceland | - 355.79 | 1 467.78 | | 1 111.99 |
| India | 7 484.39 | 32 098.22 | | 39 582.61 |
| Iran (Islamic Republic of) | 2 541.90 | 4 658.59 | | 7 200.49 |
| Ireland | 7 252.34 | 22 776.13 | | 30 028.47 |
| Italy | - 1 139.43 | 19 442.34 | | 18 302.91 |
| Jordan | 47.01 | 2 891.30 | | 2 938.31 |
| Kenya | 671.31 | 3 922.28 | | 4 593.59 |
| Kuwait | 416.51 | 3 651.55 | - 492.61 | 3 575.45 |
| Latvia | 35.67 | 664.45 | | 700.12 |
| Libyan Arab Jamahiriya | 89.63 | 651.97 | | 741.60 |
| Lithuania | 158.61 | 360.04 | | 518.65 |
| Malta | 339.94 | 1 146.04 | | 1 485.98 |
| Morocco | 0.00 | 3 978.63 | | 3 978.63 |

APPENDIX I (cont'd)
AMOUNTS TO BE BILLED
FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2011
(£ Sterling)

| STATES | Adjustment for 2009 (Appendix E) 0 | Assessment for 2011 (Appendix H) | Deduction of Unused Credit Balance from Previous Years | Total Amount to be Billed for 2011 |
|---|---|--|---|---|
| Namibia | 0.00 | 559.06 | | 559.06 |
| Netherlands | 2 517.76 | 38 829.32 | | 41 347.08 |
| Nigeria | 83.28 | 589.76 | | 673.04 |
| Oman | - 2 218.08 | 1 417.14 | | - 800.94 |
| Pakistan | - 290.60 | 6 467.80 | - 282.41 | 5 894.79 |
| Poland | 230.71 | 2 848.67 | | 3 079.38 |
| Portugal | 1 900.26 | 9 744.79 | | 11 645.05 |
| Qatar | 8 151.34 | 23 247.23 | | 31 398.57 |
| Republic of Moldova | 50.58 | 200.22 | | 250.80 |
| Romania | - 322.55 | 1 648.72 | | 1 326.17 |
| Russian Federation | 0.00 | 34 191.89 | | 34 191.89 |
| Saudi Arabia | 2 889.54 | 17 383.18 | | 20 272.72 |
| Senegal | 72.09 | 388.35 | | 460.44 |
| Serbia | - 22.88 | 431.82 | | 408.94 |
| South Africa | - 114.55 | 12 192.71 | - 2 407.50 | 9 670.66 |
| Sri Lanka | - 312.29 | 3 203.44 | | 2 891.15 |
| Swaziland | - 0.18 | 3.37 | | 3.19 |
| Sweden | 653.12 | 3 517.65 | - 1 403.06 | 2 767.71 |
| Switzerland | 2 679.15 | 13 470.20 | | 16 149.35 |
| Syrian Arab Republic | 6.83 | 1 022.46 | - 197.81 | 831.48 |
| Thailand | 40.02 | 23 575.94 | - 3 039.92 | 20 576.04 |
| The former Yugoslav Republic of Macedonia | - 55.36 | 29.94 | | - 25.42 |
| Tunisia | 219.45 | 1 191.96 | | 1 411.41 |
| Turkey | 8 834.25 | 20 084.87 | - 1 939.85 | 26 979.27 |
| Ukraine | 1 973.36 | 2 707.29 | - 13.60 | 4 667.05 |
| United Arab Emirates | 31 150.13 | 74 765.33 | | 105 915.46 |
| United Kingdom | 4 531.30 | 87 263.53 | | 91 794.83 |
| Uzbekistan | 1 835.68 | 2 242.87 | | 4 078.55 |
| Viet Nam | 1 740.80 | 6 325.82 | | 8 066.62 |
| Zimbabwe | 113.60 | 627.01 | | 740.61 |
| TOTAL | 127 803.00 | 815 249.00 | - 18 477.86 | 924 574.14 |

SADIS INVENTORY

The inventory items identified below cover the equipment and staffing required to provide, operate and maintain the SADIS. The inventory includes: hub infrastructure (including all additions following the completion of the hub enhancement project) and communications circuits, ISCS data back-up system, procured services, and staff. It should be noted that some equipment items are under lease and form part of a wider infrastructure. Costs of individual items cannot be separated from the required infrastructure that includes a significant part of the development of the software and technical configuration. The inventory is in accordance with the SADIS User Guide.

1. EQUIPMENT

A. Key components of Hub infrastructure and communications circuits

The SADIS 2G hub infrastructure connection to the Met Office message switch (Frost) consists of a number of units developed in conjunction with VADOS Systems and other suppliers. These are installed either at Exeter or at the uplink site at Whitehill, Oxfordshire, UK.

The SADIS FTP hub infrastructure connection to the Met Office message switch (Frost) consists of a number of units installed at Exeter.

i) Solely procured for SADIS (major components)

SADIS gateway function software (developed specifically for the gateway as part of the NATS CoreMet system; see items under “Not procured principally for SADIS”).

Dell Poweredge R900 servers to provide SADIS FTP service (see Section 1 C),

ii) Principally procured for SADIS

a) At the Met Office;

See Section 1 C for itemized components

b) Communications between Met Office Exeter and Whitehill uplink facility;

↳ 2 Fibre Optic 64 Kbps circuits in support of SADIS 2G service

c) At the uplink site (Whitehill);

1) Units and services leased from Cable and Wireless Communications Ltd. to support SADIS 2G services:

- 1 (70 to 140 MHz) convertor;
- Use of 1 (140 to C band) convertor;
- Use of satellite hub (lease represents only a very small part of this large aperture) for SADIS 2G services; and

2) Units forming part of a totally integrated rack structure to provide SADIS 2G service, with back-up (see the list under Section 1 C).

- d) Dual contingent communication links (utilising WMO TCP/IP sockets protocol) between SADIS Gateway and Met Office in support of SADIS 2G service.

iii) **Not procured principally for SADIS**

- a) Met Office Message switch (FROST): Total investment £1.2602M¹ of which 1.2271 per cent is attributable to SADIS FTP service usage: switching data to operational FTP service;

Note. — The percentage attributable to the SADIS FTP service will increase as GRIB 2 WAFS data is routed to the server by FROST before the end of 2009.

- b) 1) Met Office Message switch (FROST): Total investment £1.2602M¹ of which 0.6386 per cent is attributable to SADIS usage: switching data to operational (2G) broadcast service (excluding GRIB2) and to 2G monitoring system (Corobor Comparitor);

- 2) Met Office Message switch (FROST): Total investment £1.02M¹ of which 1.06 per cent is attributable to SADIS usage: switching data to operational (2G) broadcast service (including GRIB2) and to 2G monitoring system (Corobor Comparitor);

Note. — Information regarding the cost with (2) and without (1) the WAFS GRIB2 data are provided since delivery of WAFS GRIB2 data over SADIS 2G has yet to be endorsed by the SADISOPSG, and a date of provision decided.

- c) Allocated bandwidth (24 Mbps bursting to 48 Mbps (as of 31 January 2010) between server and Internet Service Provider (ISP) in support of the SADIS FTP service;
- d) NATS Message switch (CoreMet System);

Note. — Some elements of the CoreMet System are exclusively for the support of the SADIS gateway function.

- e) SADIS FTP equipment running costs;

Note. — These costs are applied to all MET Office internet facing services and primarily relate to costs associated with ensuring high levels of IT security.

- f) Met Office Service Desk equipment; and

Note. — Equates to 3.5 per cent of the total share of Met Office IT Operations equipment.

- g) Met Office Serial Communications.

Note. — Equates to 20 per cent of total share of Met Office Serial Communications. Includes cost of switching serial data from FROST Message Switch to SADIS 2G, comprising staff and equipment costs of supporting serial WAN, TTL Routers, Serial Modems and TTL matrix switches.

¹ budgeted cost for providing FROST service during the fiscal year 2009~~10~~/2010~~1~~.

B. SADIS data back-up system

ISCS VSAT receiving system, including TCP/IP receiver and cables, on SADIS Provider (UK Met Office) premises.

Note 1.— This hardware is not currently used in an operational environment.

Note 2.— The SADIS Gateway (UK NATS) has ~~continues to procure~~ a dedicated SADIS data backup arrangement with the ISCS Provider State. The backup infrastructure ~~will~~ includes an ISDN connection between the NWS Telecommunications Gateway and the SADIS Gateway, and an ISDN connection between the SADIS Gateway and Whitehill uplink facility, to provide SADIS data backup. This hardware is currently undergoing final testing of functionality and process before becoming operationally acceptable.

C. Hub equipment and services located at Exeter and Whitehill

| Item | Description | Quantity |
|---|---|--------------------|
| 1. | Whitehill services (leased from Cable & Wireless) | |
| 1.1 | 70 MHz to 140 MHz converter | 1 |
| 1.2 | 140 MHz to C band converter | 1 |
| 1.3 | Satellite Hub leased bandwidth | 1 slot |
| 2. | ISDN back-up service to Washington (NWSTG) | |
| 2.1 | MegaPAC 2003 router (MP-2003) VadEDGE 4202 | 1 3* |
| 2.2 | MegaPAC 2003 router plus expansion (MP-2003-3-B) | 1 |
| 2.3 | ISDN 2e circuit | 1 |
| 2.4 | A/B switch | 1 |
| 2.5 | Interface cables | 1 2 |
| <i>Note. — Hardware listed under Section 2 is located at Whitehill.</i> | | |
| 3. | SADIS FTP service | |
| 3.1 | Dell Poweredge R900 servers with 1 Gb RAM | 2 |
| 3.2 | 26.8 Gb internal disk drives | 2 |
| 3.3 | VMWave Virtual Platform with Red Hat Linux 5.3 OS | 2 |
| 3.4 | Intel Xeon X7350, 2.93 GHz Processors | 2 |
| 3.5 | Licenses, misc. support and maintenance costs | 1 |
| <i>Note. — Hardware listed under Section 3 is located at Exeter.</i> | | |
| 4. | SADIS 2G Infrastructure | |
| 4.1 | Frost port | 1 |
| 4.2 | MegaPAC V-IX Base System Dual PSU including Chassis, 1 CP6000, and 1 switch | 3 2 * 2 |
| 4.3 | CP6000 for use with MegaPAC V-IX 2003 (Exeter) | 3 1 * 1 |
| 4.4 | VadEDGE 4202 | 3* |

| | | |
|-------|--|-----------------|
| 4.45 | Uplink modem (Comtech EF Data SDM-300a) | 3* |
| 4.56 | Communications cabinet and lease | 1 |
| 4.67 | MegaWatch including Enterprise Reports, and PC | 1 |
| 4.78 | Comtech SDM300L demodulator (NER5 downlink) | 1 |
| 4.89 | Corobor comparator software and PC | 1 |
| 4.9 | X10 Modules | 12** |
| 4.10 | SIO Modules | 3* |
| 4.11 | 8Mb RAM Modules | 3* |
| 4.120 | Communications rack floor space at Exeter in IT Hall 1 and IT Hall 2, and at Whitehill | 3 |
| 4.131 | Space in stores at Exeter to locate spare hardware | 1 |
| 4.14 | VadEDGE 4202 1U | 2 |
| 4.152 | WAN Module | 2 |
| 4.163 | Comtech EF Data SMS 301 – redundancy switch | 2* |
| 4.14 | BRI Module for VadEDGE 4202 | 2 |
| 4.175 | Interface cabling | 158 |

* Includes one unit/module stored as a cold spare.

** ~~Includes four modules stored as cold spares.~~

Note. — Hardware listed under Section 4 is located at Exeter and Whitehill.

2. PROCURED SERVICES

- A. Space segment annual lease: 1.5 MHz wide frequency band of which 57 per cent is utilised to support SADIS 2G, with 64 Kbps data rate (less communications overhead);

Note. — SADIS 1G was terminated on 5 January 2009. The percentage of satellite space segment has, however, remained unchanged because the SADIS 1G satellite bandwidth allocation was maintained in 2009 and 2010, as called for by SADISOPSG Decision 13/26.

- B. Annual maintenance of Met Office Exeter and Whitehill uplink site equipment (SADIS 2G and SADIS FTP server); and

- C. Gateway function:

- i) Communication circuits between Met Office and NATS infrastructure site; and
- ii) System maintenance.

3. ANNUAL STAFF REQUIREMENTS

- A. **United Kingdom Met Office**

- i) **Service Desk**

Note.— The Service Desk acts as a first point of contact for all inquiries, including those concerning the OPMET Gateway function. Complex inquiries will be passed to a relevant expert. Experts are available either on a 24-hour rota basis, or as a daytime support with limited on-call capability.

*24-hour Weather Desk support**Skill*

- | | |
|--|-----------------------|
| 1. Service desk (first point of contact) | Scientific supervisor |
| 2. Additional Service Desk operator | Systems analyst |

Note. — Total support for SADIS provided by the Met Office Service Desk team equates to 0.3 per cent of the total Weather Desk budget.

*24-hour IT Operations support**Skill*

- | | |
|--|----------------------|
| 1. Technical Team Leader (TTL) | Computer engineer |
| 2. Networks and Systems Supervisor (NSS) | Technical supervisor |

Note. — Total support for SADIS provided by the Met Office IT Operations team equates to 3.5 per cent of the total IT Operations budget.

*Normal working hours support**Skill*

- | | |
|-------------------------------------|-----------------|
| 1. Change and problem manager (CPM) | Systems analyst |
|-------------------------------------|-----------------|

ii) Additional support*Day support**Resource*

- | | |
|---|---|
| 1. Systems integration team <i>(Note 1)</i> | 10 per cent 14 staff-days of network computer engineer and 10 per cent of CIDA |
| 2. Message Switching Manager | 10 per cent 15 staff-days of MSS manager |
| 3. Administrator | 75 per cent 160 staff-days of executive officer |
| 4. International aviation management | 15 per cent 30 staff-days of manager |
| 5. Data traffic | 5 per cent 5 staff-days of communications engineer |
| 6. Contract procurement and management <i>(Note 2)</i> | 5 per cent 4 staff-days of senior procurement officer |
| 7. UNIX support Message switching Team <i>(Note 3)</i> | 10 per cent 15 staff-days of computer engineer technical officer |
| 8. Web team support Invoice Administration | 10 per cent 20 staff-days of website designer invoicing officer and 15 staff-days of business accountant |

Note 1. — Support by the UNIX team of the SADIS FTP service will incur some additional costs in excess of simple human resources. These costs are applied to all Internet facing services and primarily relate to costs associated with ensuring high levels of IT security. Due to re-organisation and rationalisation within the Met Office's IT services division, the CIDA role is now included within the Network Computer Engineer's responsibilities. Effort required also significantly reduced since decommissioning of SADIS IG.

Note 2. — ~~CIDA is the Co-ordinating Installation Design Authority. The Met Office CIDA Installation Design and Engineering team are technical authorities who work alongside project managers to co-ordinate the efforts of a number of different groups. Reduced effort required since cessation of SADIS 1G.~~

Note 3. — Responsibility for support and maintenance to the SADIS FTP service transferred from the Web Team to the Message Switching Team during 2009.

B. NATS infrastructure site – CACC (OPMET Gateway function)

Note 1. — The CACC provides the OPMET Gateway function, which is provided from a single operational site, but with a full capability at an alternative site. Staff are available either on a 24-hour basis, or as a daytime support with on-call capability.

Note 2. — The resource demand of 610 days required to provide the SADIS Gateway service comprises 6 watches of 1 ATSA4 and 1 ATSA3 each (Operations), 1 ATCE4 (Engineering Watchkeeping) and 3 ATCE4 (Engineering Day Support).

| | |
|------------------------------------|---|
| <i>24-hour support</i> | <i>Resource</i> |
| 1. Operational staff support | 523 man staff-days per annum |
| 2. Engineering staff support | 22 man staff-days per annum |
| <i>Day Support</i> | <i>Resource</i> |
| 3. SADIS administration support | 50 man staff-days per annum |
| 4. Engineering (including on-call) | 15 man staff-days per annum |

C. Bought-in services

Additional support and maintenance agreements with third parties are in place to provide third line support of the SADIS 2G service.