



SCRAG/6 - REPORT

INTERNATIONAL CIVIL AVIATION ORGANIZATION

REPORT OF

**THE SIXTH MEETING OF THE SADIS COST RECOVERY
ADMINISTRATIVE GROUP
(SCRAG/6)**

(Paris, 21 and 22 November 2005)

THE DESIGNATIONS AND THE PRESENTATION OF MATERIAL IN THIS PUBLICATION DO NOT IMPLY THE EXPRESSION OF ANY OPINION WHATSOEVER ON THE PART OF ICAO CONCERNING THE LEGAL STATUS OF ANY COUNTRY, TERRITORY, CITY OR AREA OF ITS AUTHORITIES, OR CONCERNING THE DELIMITATION OF ITS FRONTIERS OR BOUNDARIES.

TABLE OF CONTENTS

	<i>Page</i>
Introduction	2
Place and duration	2
Attendance	2
Officers and Secretariat	2
Agenda	2
Agenda Item 1: Review of SCRAG's Terms of Reference, Composition and Working Arrangements	2
Agenda Item 2: Consideration of issues relevant to the SCRAG's work addressed by the SADIS Operations Group (SADISOPSG)	3
Agenda Item 3: Review of actual SADIS costs and cost shares for the period 1 January to 31 December 2004	3
Agenda Item 4: Review of estimated SADIS costs and cost shares for the period 1 January to 31 December 2006	5
Agenda Item 5: Amendments to Annexes to the Agreement on the Sharing of Costs of the Satellite Distribution System relating to Air Navigation	8
Agenda Item 6: Future work and arrangements for the SCRAG/7 Meeting	8
Agenda Item 7: Other business	8
Appendix A: List of participants	A-1
Appendix B: List of SCRAG/6 working papers	B-1
Appendix C: Inventory of assets as at 31 December 2005 employed by the United Kingdom to provide SADIS services	C-1
Appendix D: Status of accession to the SADIS Agreement as at 18 October 2005	D-1
Appendix E: Actual cost shares for the period 1 January to 31 December 2004	E-1
Appendix F: SADIS cost estimates for 2006 to 2009 for SADIS services provided by the United Kingdom Meteorological Office	F-1
Appendix G: Status of payment of the assessment for 2004 and of balances for years prior to 2004 as at 18 October 2005	G-1
Appendix H: Estimated cost shares and assessments for the period 1 January to 31 December 2006	H-1
Appendix I: Amendment to Annex II, SADIS Inventory, to the SADIS Agreement	I-1

INTRODUCTION

Place and duration

i.1 The Sixth Meeting of the SADIS Cost Recovery Administrative Group (SCRAG) was held in the European and North Atlantic (EUR/NAT) ICAO Regional Office, Paris, on 21 and 22 November 2005.

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. J.C. Bugnet**, Chief, Joint Financing Section, ICAO Headquarters, Montreal, acted as Secretary of the Meeting, assisted by **Mr. Guillermo Vega**, Regional Officer.

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 2004

Agenda Item 4: Review of estimated SADIS costs and cost shares for the period 1 January to 31 December 2006

Agenda Item 5: Amendments 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 SCRAG/7 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, 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 37 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 37 States, 19 are Least Developed Countries (LDCs), which are exempted from payment of SADIS cost share.

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 Tenth Meeting of the SADIS Operations Group (SADISOPSG/10, Paris, 24 to 27 May 2005) provided by the Chairman of SADISOPSG in the Executive Summary of Discussions of this meeting.

2.2 The Group noted the Statement of SADIS operational efficacy received from the Chairman of SADISOPSG relaying the advice from the Group at its Tenth meeting (SADISOPSG/10, Paris, 24 to 27 May 2005) to SCRAG that the operational efficacy of the SADIS had continued to be satisfactory meeting all operational requirements since the SADISOPSG/9 Meeting (Dakar, 1 to 4 June 2004).

2.3 The Group noted Conclusion 10/7 of SADISOPSG/10 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 I**).

AGENDA ITEM 3: REVIEW OF ACTUAL SADIS COSTS AND COST SHARES FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2004

Review of the 2004 Actual SADIS Costs

3.1 The Group reviewed the actual costs of providing the SADIS services in the year 2004. These actual costs are presented in **Appendix E** and total £566 888. 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 2004

Cost Item	Actual Costs (UK £)
UK Meteorological Office	397 758
UK NATS Gateway	140 855
UK administrative costs	15 800
Sub-total UK	554 413
ICAO support services costs	12 475
TOTAL	566 888

Review of the 2004 Actual SADIS Cost Shares

3.2 The Group noted that one State, Mongolia, which was assessed for the year 2004 by the SCRAG/4 Meeting, did not have an operational equipment. Consequently, its share of the actual costs for 2004 is nil.

3.3 The Group noted that the Russian Federation, which was not assessed for the year 2004 by the SCRAG/4 Meeting, has had the SADIS service withdrawn on 6 August 2002 but reinstated in January 2004. Consequently, the share of the actual costs for 2004 for the Russian Federation was calculated based on 11 full months of service in 2004.

3.4 The Group determined the actual cost shares for the period 1 January to 31 December 2004 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 their number of ATKs in scheduled services for 2004, 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 6/1 -

The actual cost shares for 2004 as shown in Appendix E to the SCRAG/6 Report for the States participating in the SCAR Arrangement are approved by the SCRAG/6 Meeting, in view of the adjustments to be made by the CAA of the United Kingdom in its billing of these States.

3.5 The Group received information from the observer from the United Kingdom on the status of payment of the cost shares of 2004 as at 18 October 2005. It noted that a total amount of £440 268 was collected and a total amount of credit balance from 2002 of £31 042 was applied against the assessments for 2004, both amounts representing 86.0% of the original assessments for 2004 as approved by the SCRAG/4 Meeting and of the additional assessments for 2004 subsequent to the SCRAG/4 Meeting.

3.6 Having noted the information in Table 1 and paragraphs 3.2 to 3.5 above, the Group agreed that the net amount of the under-recovery of SADIS cost shares for the year 2004 amounts to £65 224 as shown in **Table 2**. This under-recovery is the difference between the actual costs for 2004 (£566 888), to which the over-recovery for 2002 is subtracted (£34 707) in order to obtain the amount subject to collection for 2004, and the collections from States for 2004 (£440 268 as shown in

Appendix G - Table 1) plus the collections from States for years prior to 2004 after 12 October 2004 (£26 689 as shown in **Appendix G – Table 2**), and it formulated the following Conclusion:

Conclusion 6/2 -

A net under-recovery, amounting to £65 224 of the SADIS cost shares for the year 2004 will be taken into account in the calculation of the SADIS cost shares for the year 2006, in accordance with Article XI, paragraph 4 of the SADIS Agreement.

TABLE 2
UNDER-RECOVERY FOR 2004

		(UK £)	References
(1)	Actual costs for 2004	566 888	Table 1
(2)	Over-recovery for 2002	(34 707)	SCRAG/4 Report, Table 3
(3)	Subject to collection for 2004	532 181	(1) + (2)
(4)	Collected from States for 2004 (as at 18 October 2005)	440 268	Paragraph 3.5
(5)	Collected from States for years prior to 2004 after 12 October 2004 (as at 18 October 2005)	26 689	Paragraph 3.5
(6)	Under-recovery for 2004	65 224	(3) – (4) – (5)

Depreciated Assets

3.7 The Group noted the information presented by the UK regarding the depreciated assets as at 31 December 2005 (see **Appendix C**).

AGENDA ITEM 4: REVIEW OF ESTIMATED SADIS COSTS AND COST SHARES FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2006

Review of the 2006 Estimated SADIS Costs

4.1 The Group reviewed the cost estimates for providing the SADIS services in the year 2006. These cost estimates are detailed in **Appendix F** and total £668 921. A summary of these costs is presented in **Table 3** below.

4.2 The Group noted that the ICAO administrative cost in support of SADIS will include, as of 1 January 2006, the cost of the services provided by ICAO to the SADIS Operations Group (SADISOPSG). The Group was informed that, according to a legal opinion from the Director of the Legal Bureau of ICAO, approved by the President of the Council, this addition did not require any amendment to Article VIII and/or Annex III to the SADIS Agreement. While accepting these estimates, the Members of the SCRAG questioned this interpretation of the Agreement and mentioned that their States might propose an amendment to the Agreement to clarify the situation.

4.3 The Group considered a proposal by the provider State for enhancements of the FTP Service and the corresponding budget estimates. The Group noted that the estimated costs of £22 000 in 2006 represent provisional figures not including maintenance costs. As a result of its deliberations, the Group adopted the following Conclusion:

Conclusion 6/3 -

In view of the increasing use of the SADIS FTP Service as a primary source of operational data the SCRAG approves in principle the budgetary costs presented by the SADIS provider State. The SCRAG invites the SADIS provider to complete a detailed implementation plan in time for SADISOPSG/11 and to advise SCRAG/7 as to whether any amendments to the budgetary figures are required.

4.4 The Group agreed that any increase of the total SADIS costs by more than 2% as compared with the estimates should be submitted for SCRAG' approval by correspondence before its implementation.

TABLE 3
SUMMARY OF ESTIMATED SADIS COSTS
FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2006

Cost Item	Estimated Costs (UK £)
UK Meteorological Office	471 405
UK NATS Gateway	142 362
UK administrative costs	20 000
Sub-total UK	633 767
ICAO support services costs	35 154
TOTAL	668 921

4.5 The Group considered the under-recovery in **Table 2** above in the calculation of the amount to be assessed under the SADIS Agreement for 2006. The calculation of the amount to be assessed is presented in **Table 4**.

TABLE 4
AMOUNT TO BE ASSESSED UNDER THE SADIS AGREEMENT FOR 2006

		(UK £)	References
(1)	Under-recovery for 2004	65 224	Table 2
(2)	Estimated costs for 2006	668 921	Table 3
(3)	Amount to be assessed for 2006	734 145	(1) + (2)

Review of the 2006 Estimated SADIS Cost Shares

4.6 The Group determined the cost shares for the period 1 January to 31 December 2006 to be borne by the States parties 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 2004, in accordance with Article XI, paragraph 3 of the SADIS Agreement. The Group noted that from the eight new receiver States (Afghanistan, Iceland, Ireland, Poland, Qatar, Republic of Korea, the former Yugoslav Republic of Macedonia and Zimbabwe), one State, Afghanistan, is a Least Developed Country and is thus exempted from payment of the SADIS cost share and the other States are included in the calculation of the assessment of cost shares for 2006. The cost share in percentage terms and the share in £ sterling, including the share of under-recovery for 2004, to be borne by each State are shown in **Appendix H**.

4.7 Due the importance of the under recovery for 2004, the Group agreed that the figures in Conclusion 6.2, Tables 2 & 4 above, and in **Appendix H** will be updated before the United Kingdom proceed to bill each of the States party to the SADIS Agreement for the share attributable to it in 2006, to take into account any payment received between 15 October and 31 December 2005. Accordingly, the Group formulated the following Conclusion:

Conclusion 6/4 -

Subject to updating by the Secretariat to take into account any payment of arrears received between 15 October and 31 December 2005, the estimated cost shares for 2006 as shown in Appendix H to the SCRAG/6 Report for each State participating in the SCAR Arrangement are approved by the SCRAG/6 Meeting for collection by the United Kingdom.

Cost estimates for the years 2007 to 2009

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 2007 to 2009 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 2007, 2008 AND 2009*

Cost Item	Estimated Costs 2007 (UK £)	Estimated Costs 2008 (UK £)	Estimated Costs 2009 (UK £)
UK Meteorological Office	495 528	481 228	379 148
UK NATS Gateway	138 836	104 077	90 574
UK administrative costs	20 000	20 000	20 000
Sub-total UK	654 364	605 305	489 722
ICAO support services costs	35 154	35 154	35 154
TOTAL	689 518	640 459	524 876

* Estimates based on 2005 prices.

AGENDA ITEM 5: AMENDMENTS 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 and take account of the implementation of the SADIS FTP service as of 1 July 2005.

5.2 The additions and deletions to the existing text of Annex II appear in outline and strikeout formats in **Appendix I**. As a result of its review, the group adopted the following Conclusion:

Conclusion 6/5 -

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 I to the SCRAG/6 Report.

5.3 The Group reviewed a proposal by the United Kingdom to amend Annex III, Financial Issues, to the SADIS Agreement. The SADIS provider believes that it is in the users interest to secure longer period contracts for the procured services, where practical. This reduces the amount of administrative effort in setting up and agreeing new contracts and provides greater stability for SADIS users. However, in order to accommodate this, the SADIS provider is seeking an addition to the wording of Annex III to the SADIS Agreement so that any unrecovered costs associated with a long period lease could be recovered in the event of termination of the SADIS Agreement. It proposed the addition of a new note 3 under Chargeable Costs in Annex III, which would read as follows: *“In the event this Agreement is terminated, the United Kingdom may, to the extent that it is unable to gain a refund for the unexpired portion of an external contract in support of the SADIS Service, charge the cost of the remaining portion of the contract to the costs recoverable from the participating States in the last year the Agreement remains in force.”* The Group decided to postpone its decision of this proposal until the SCRAG/7 Meeting.

AGENDA ITEM 6: FUTURE WORK AND ARRANGEMENTS FOR THE SCRAG/7 MEETING

6.1 The Group agreed that, subject to confirmation, its Seventh Meeting should be held in the ICAO Asia and Pacific Region Office (Bangkok) during the first or second week of November 2006.

AGENDA ITEM 7: OTHER BUSINESS

7.1 The Group bade farewell to Mr Jean-Claude Bugnet, Secretary of the SCRAG who is retiring on 30 November 2005 and expressed its appreciation and thanks to the staff of the European and North Atlantic (EUR/NAT) ICAO Regional Office for their hospitality and excellent support received during the meeting.

APPENDIX A

LIST OF PARTICIPANTS

Members

Mr. L.J.N. Rolvink

International Policy
Air Traffic Control
P.O. Box 75200
1117 ZT Luchthaven Schipol
Kingdom of the Netherlands
Tel.: +31 20 406 3210
Fax: +31 20 406 3648
Email: l.j.n.rolvink@lvnl.nl

Dr. Erland Lorenzen

Aviation MET Department
Head Customer Relation and Sales
Deutscher Wetterdienst
Kaiserleistraße 42
63067 Offenbach
Germany
Tel : +49 69 8062 26 94
Fax : +49 69 8062 20 14
Email : erland.lorenzen@dwd.de

Observers

United Kingdom as SADIS provider

Mr. Graham P. Stevens

Head En-Route Finance & Enforced Recovery
Civil Aviation Authority
3W Aviation House
Gatwick Airport South
West Sussex, RH6 0YR
United Kingdom
Tel: +44 1293 573434
Fax: +44 1293 573880
Email: graham.stevens@caa.co.uk

Advisors

Mr. Bernard Perry

Head of Met Authority
Civil Aviation Authority
CAA House (K6G1)
45-59 Kingsway
London WC2B 6TE
United Kingdom
Tel: +44 207 453 6526
Fax: +44 207 453 6565
Email: bernard.perry@dap.caa.co.uk

Mr. Nigel Gait

International Aviation Manager
Met Office
Fitzroy Road, Exeter
EX1 3PB
United Kingdom
Tel: +44 1392 886268
Fax: +44 1392 885681
Email: nigel.gait@metoffice.gov.uk

Mr. Richard Orrell

Senior International Aviation Analyst
Met Office
Fitzroy Road, Exeter
EX1 3PB
United Kingdom
Tel: +44 1392 884892
Fax: +44 1392 885681
Email : richard.orrell@metoffice.gov.uk

SADIS Operations Group

Dr. Theo van Stijn

Royal Netherlands Meteorological Institute (KNMI)
P.O Box 201
3730 AE DE BILT
Netherlands
Tel: +31 302 20 6471
Fax: +31 302 21 0407
Email: theo.van.stijn@knmi.nl

ICAO Secretariat

Mr. Jean-Claude Bugnet

Chief, Joint Financing Section
International Civil Aviation Organization
999 University Street
Montreal, QC, Canada H3C 5H7
Tel: + 1 514 954 8053
Fax: + 1 514 954 6744
Email: jf@icao.int

Mr. Guillermo Vega

Regional Officer
International Civil Aviation Organization
European and North Atlantic Office
3bis Villa Émile-Bergerat
92522 Neuilly-sur-Seine (Cedex)
France
Tel : +33 1 46 41 85 22
Fax : +33 1 46 41 85 00
Email : gvega@paris.icao.int

APPENDIX B**LIST OF SCRAG/6 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&5	Reports on Conclusions of the SADISOPSG/10 Meeting	Chairman, SADISOPSG
4	3	2004 ICAO actual SADIS administrative costs	Secretariat
5	3	2004 UK actual SADIS costs	United Kingdom
6	3&4	Status of payments for the year 2004	United Kingdom
7	3	Summary of actual costs and cost shares for the year 2004	Secretariat
8	4	Depreciated assets: SADIS costs	United Kingdom
9	4	2006 ICAO estimated SADIS administrative costs	Secretariat
10	4	Enhancement to SADIS FTP service – Budgetary estimate	United Kingdom
11	4	Estimated SADIS Costs: 2 to 5 years	United Kingdom
12	4	Summary of estimated costs and assessments for the year 2006	Secretariat
13	5	Amendment to Annex II, Inventory, to the SADIS Agreement	Secretariat
14	5	Proposed change to Annex III to the SADIS Agreement	United Kingdom

APPENDIX C

**INVENTORY OF ASSETS AS AT 31 DECEMBER 2005
EMPLOYED BY THE UNITED KINGDOM TO PROVIDE SADIS SERVICES**

(1) Inventory of Assets: 2005	(2) Original Value	(3) Depreciated charges in 2005	(4) Total accumulated depreciation	(5) Net depreciated values at end of 2005
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	£17 485	£34 970	£52 458
Total UKMO	£1 176 197	£17 485	£1 123 739	£52 458
SADIS Gateway	£227 462	£45 492	£123 479	£103 983

D - 1
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	

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 and Montenegro	
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	
Bangladesh	X
Benin	X
Bulgaria	
Burkina Faso	X
Chad	X
Equatorial Guinea	X
Ethiopia	X
Gambia	X
Ghana	
Guinea	X
Iceland	
India	
Indonesia	
Lao People's Democratic Republic	X
Lebanon	
Malaysia	
Maldives	X
Mozambique	X
Nepal	X
Niger	X
Nigeria	
Poland	
Qatar	
Republic of Korea	
Rwanda	X
Seychelles	
South Africa	
Sri Lanka	
Swaziland	
The former Yugoslav Republic of Macedonia	
Togo	X
Uganda	X
Yemen	X
Zambia	X
Zimbabwe	

APPENDIX E
ACTUAL COST SHARES FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2004*

STATES	2004 Available Tonne-Kilometres in Scheduled Services (000)	Percentage Cost Share	Share of 2004 Actual Costs (£ Sterling)
Algeria	499 094	0.192%	1 089.15
Armenia	165 315	0.064%	360.76
Austria	3 364 198	1.295%	7 341.56
Azerbaijan	316 390	0.122%	690.45
Bahrain	1 523 535	0.586%	3 324.75
Belgium	2 506 674	0.965%	5 470.22
Botswana	17 568	0.007%	38.34
Bulgaria	121 640	0.047%	265.45
Cameroon	112 128	0.043%	244.69
China **	55 884 771	21.513%	121 955.26
Congo	50 000	0.019%	109.11
Côte d'Ivoire	30 000	0.012%	65.47
Croatia	167 800	0.065%	366.18
Cyprus	693 991	0.267%	1 514.47
Czech Republic	947 858	0.365%	2 068.48
Democratic People's Republic of Korea	9 680	0.004%	21.12
Denmark	1 483 844	0.571%	3 238.14
Egypt	2 171 995	0.836%	4 739.86
Estonia	114 122	0.044%	249.04
Finland	2 583 803	0.995%	5 638.54
Gabon	401 128	0.154%	875.37
Georgia	75 723	0.029%	165.25
Germany	32 857 256	12.649%	71 703.17
Ghana	89 011	0.034%	194.25
Greece	1 760 709	0.678%	3 842.33
Hungary	725 819	0.279%	1 583.93
India	6 444 062	2.481%	14 062.64
Italy	8 438 152	3.248%	18 414.27
Jordan	1 205 649	0.464%	2 631.04
Kenya	1 099 996	0.423%	2 400.48
Kuwait	1 556 760	0.599%	3 397.26
Lebanon	629 362	0.242%	1 373.43
Malaysia	10 208 739	3.930%	22 278.15
Malta	355 377	0.137%	775.53
Mauritius	1 228 582	0.473%	2 681.09

APPENDIX E (cont'd)
ACTUAL COST SHARES FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2004*

STATES	2004 Available Tonne-Kilometres in Scheduled Services (000)	Percentage Cost Share	Share of 2004 Actual Costs (£ Sterling)
Mongolia		0.000%	0.00
Netherlands	15 868 145	6.109%	34 628.46
Nigeria	83 200	0.032%	181.56
Oman	1 498 453	0.577%	3 270.02
Pakistan	2 949 844	1.136%	6 437.34
Portugal	2 935 945	1.130%	6 407.00
Republic of Moldova	48 119	0.019%	105.01
Romania	392 853	0.151%	857.31
Russian Federation ***	10 776 565	4.148%	23 517.30
Saudi Arabia	5 901 005	2.272%	12 877.54
Senegal	99 539	0.038%	217.22
Serbia and Montenegro	245 992	0.095%	536.82
Seychelles	253 085	0.097%	552.30
South Africa	6 092 492	2.345%	13 295.42
Sri Lanka	1 516 955	0.584%	3 310.39
Swaziland	0	0.000%	0.00
Sweden	2 201 980	0.848%	4 805.30
Switzerland	4 773 293	1.838%	10 416.58
Thailand	9 823 659	3.782%	21 437.81
Tunisia	478 573	0.184%	1 044.37
Turkey	3 458 702	1.331%	7 547.80
Ukraine	653 690	0.252%	1 426.52
United Arab Emirates	13 868 793	5.339%	30 265.35
United Kingdom	34 285 043	13.198%	74 818.99
Viet Nam	1 724 065	0.664%	3 762.36
TOTAL	259 770 721	100.000%	566 888.00

* 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.

** China's share includes:

- Hong Kong SAR: 17 968 842 000 ATKs corresponding to a share of 2004 actual costs of £ 39 224.81

- Macau SAR: 453 817 000 ATKs corresponding to a share of 2004 actual costs of £ 990.65

*** The share of the Russian Federation was calculated for only 11 months in 2004, based on the number of full months of operation of the service to this State in 2004. In order to properly calculate its share of the 2004 actual costs, only 11/12th of its ATKs for 2004 was included in the second column.

F - 1
APPENDIX F

TABLE 1: UKMO Cost and manpower resource projections until year 2009 (at 2005 prices)

INVENTORY REF:	Note	DESCRIPTION	2006	2007	2008	2009
1 UK MET OFFICE COSTS						
1. Equipment						
Principally procured for SADIS						
comms between Whitehill & Met Office	a	SADIS 1G	3 139	3 139	3 139	0
		SADIS 2G	6 364	6 364	6 364	6 364
comms link SADIS Gateway & Met Office		SADIS 1G	3 340	3 340	3 340	0
		SADIS 2G	3 000	3 000	3 000	3 000
Not procured principally for SADIS						
message switch (FROST/SADIS)	a	SADIS 1G	32 280	32 280	32 280	0
message switch (FROST/FTP)		SADIS FTP	12 720	12 720	12 720	12 720
message switch (FROST/2G)	b	SADIS 2G	13 680	13 680	13 680	26 000
internet bandwidth (FTP)	c	FTP	26 000	26 000	26 000	26 000
FTP equipment running costs	d	FTP	11 000	11 000	11 000	11 000
		sub total	111 523	111 523	111 523	85 084
2. Procured Services						
space segment annual lease	e	Satellite Segment	94 576	94 576	94 576	80 000
annual maintenance	f	SADIS 1G C&W	10 500	11 000	11 000	0
		1G Facilities Mgmt	6 300	6 300	6 300	0
	g	2G Maintenance	23 570	24 000	24 000	24 000
		2G Facilities Mgmt	6 300	6 300	6 300	6 300
		FTP Maintenance	8 000	8 000	8 000	8 000
		SADIS Spares Storage	542	542	542	542
		sub total	149 788	150 718	150 718	118 842
3. Annual Staff Requirements						
Help Desk						
		Help Desk	25 018	25 018	25 018	25 018
Additional Support						
Systems Integration Team		Network Comp Eng.	12 326	12 326	12 326	12 326
Administrator		Executive Officer	54 066	54 066	54 066	54 066
International Aviation Management		Aviation Manager	13 324	13 324	13 324	13 324
Data Traffic		Communications Engineer	3 604	3 604	3 604	3 604
Contract Management		Senior Procurement Officer	3 604	3 604	3 604	3 604
UNIX Support		Computer Engineer	3 604	3 604	3 604	3 604
Web Team Support		Website Designer	7 208	7 208	7 208	7 208
Enhancements to FTP Service			12 000	32 000	17 000	0
Travel Costs						
		SADISOPSG & SCRAG	5 000	5 000	5 000	5 000
		sub total	139 754	159 754	144 754	127 754
TOTAL						
			401 065	421 995	406 995	331 680
Cost of Depreciated Capital						
	h	SADIS 2G	17 485	17 485	17 485	0
		FTP enhancements	10 000	11 000	13 000	13 000
		sub total	428 550	450 480	437 480	344 680
	i	Cost of Capital	42 855	45 048	43 748	34 468
		Total UKMO Costs	471 405	495 528	481 228	379 148

F - 2
APPENDIX F (cont'd)

TABLE 2: NATS and other SADIS Cost Projections until 2009

INVENTORY REF:	Note	DESCRIPTION	2006	2007	2008	2009
2		NATS Gateway Costs				
		Staff Costs				
		Operational Staff	50 256	50 256	50 256	50 256
		Engineering Staff	20 368	20 368	20 368	20 368
		Administration Support	13 686	13 686	13 686	13 686
		sub total	84 310	84 310	84 310	84 310
		Communications	0	0	0	0
		Maintenance	6 264	6 264	6 264	6 264
		Cost of Depreciated Capital	45 492	45 492	12 999	0
			6 296	2 770	504	0
		Total NATS Gateway Costs	142 362	138 836	104 077	90 574
		CAA Administration Costs	20 000	20 000	20 000	20 000
		ICAO Administration Costs	35 154	35 154	35 154	35 154
		TOTAL SADIS COSTS	668 921	689 518	640 459	524 876

APPENDIX G
STATUS OF PAYMENT OF THE ASSESSMENT FOR 2004
AS AT 18 OCTOBER 2005

STATES	Share of 2004 Assessment (£ Sterling)	Amount Collected as at 18 October 2005 (£ Sterling)	Application of credit balance (or part of) from 2002 (£ Sterling)	Unpaid amount as at 18 October 2005 (£ Sterling)
Algeria	1 266.90	1 266.90		
Armenia	345.38	345.38		
Austria	7 010.96	6 036.80	974.16	
Azerbaijan	791.68	791.68		
Bahrain	2 103.33	2 051.51	51.82	
Belgium	5 012.63		5 012.63	
Botswana	42.23	42.23		
Bulgaria	27.90		27.90	
Cameroon	285.56	232.34	53.22	
China *	109 085.95	39 099.06		69 986.89
Congo	32.48		32.48	
Côte d'Ivoire				
Croatia	412.77	412.77		
Cyprus	1 391.73	1 391.73		
Czech Republic	1 566.49	1 566.49		
Democratic People's Republic of Korea	21.41		21.41	
Denmark	3 787.87	3 787.87		
Egypt	5 611.22		402.67	5 208.55
Estonia	147.73	52.72	95.01	
Finland	5 106.74	5 089.90	16.84	
Gabon	896.35	682.88	213.47	
Georgia	106.23	96.42	9.81	
Germany	68 357.00	66 923.87	1 433.13	
Ghana	654.50	416.34	238.16	
Greece	4 302.38	3 626.88	675.50	
Hungary	1 703.56	1 482.38	221.18	
India	13 102.38	11 078.18	2 024.20	
Italy	18 483.49	13 255.54	5 227.95	
Jordan	2 513.42	2 427.44	85.98	
Kenya	2 189.53	2 189.53		
Kuwait	3 809.79	3 809.79		
Lebanon	1 354.18	1 333.22	20.96	
Malaysia	20 144.19	18 489.14	1 655.05	
Malta	1 339.94	1 339.94		
Mauritius	2 903.45	2 903.45		

APPENDIX G (cont'd)
STATUS OF PAYMENT OF THE ASSESSMENT FOR 2004
AS AT 18 OCTOBER 2005

STATES	Share of 2004 Assessment (£ Sterling)	Amount Collected as at 18 October 2005 (£ Sterling)	Application of credit balance (or part of) from 2002 (£ Sterling)	Unpaid amount as at 18 October 2005 (£ Sterling)
Mongolia	308.82			308.82
Netherlands	37 985.25	34 983.04	3 002.21	
Nigeria	202.60		69.04	133.56
Oman	2 222.03	2 110.83	111.20	
Pakistan	5 815.46	5 815.46		
Portugal	5 954.50	5 954.50		
Republic of Moldova	85.63	85.63		
Romania	1 075.06	646.29	428.77	
Russian Federation	17 351.57	17 351.57		
Saudi Arabia	13 833.63	12 104.23	1 729.40	
Senegal	242.27	242.27		
Serbia and Montenegro	530.85	530.85		
Seychelles	880.83			880.83
South Africa	13 788.48	13 169.52	618.96	
Sri Lanka	2 934.25	2 181.66	752.59	
Swaziland				
Sweden	5 611.01	5 312.47	298.54	
Switzerland	16 800.58	12 317.54	4 483.04	
Thailand	23 431.77	23 431.77		
Tunisia	1 143.56	1 001.74	141.82	
Turkey	8 515.06	7 602.13	912.93	
Ukraine	1 021.08	1 021.08		
United Arab Emirates	19 626.52	19 626.52		
United Kingdom	79 547.25	79 547.25		
Viet Nam	3 009.16	3 009.16		
TOTAL	547 828.57	440 267.89	31 042.03	76 518.65

- * China's share includes:
- Hong Kong SAR: assessment of £ 38 231.70
- Macau SAR: assessment of £ 867.36

APPENDIX G (cont'd)
STATUS OF PAYMENT OF BALANCES FOR YEARS PRIOR TO 2004
AS AT 18 OCTOBER 2005

STATES	Balance due for years prior to 2004 (£ Sterling)	Amount Collected as at 18 October 2005 (£ Sterling)	Application of credit balance (or part of) from 2002 (£ Sterling)	Unpaid amount as at 18 October 2005 (£ Sterling)
Algeria				
Armenia				
Austria	86.36	86.36		
Azerbaijan	138.03	138.03		
Bahrain	950.41	950.41		
Belgium				
Botswana	2.76			2.76
Bulgaria				
Cameroon				
China *	23 016.88			23 016.88
Congo				
Côte d'Ivoire				
Croatia	19.06	19.06		
Cyprus	314.88	314.88		
Czech Republic	398.32	398.32		
Democratic People's Republic of Korea	0.99			0.99
Denmark				
Egypt				
Estonia	58.19	58.19		
Finland	765.97	765.97		
Gabon	26.12	26.12		
Georgia				
Germany	8 677.32	8 677.32		
Ghana				
Greece				
Hungary				
India	1 972.53	1 972.53		
Indonesia	5 071.12			5 071.12
Italy				
Jordan	257.58	257.58		
Kenya	458.65			458.65
Kuwait	105.18	105.18		
Lebanon	40.11			40.11
Malaysia	558.99	558.99		
Malta				
Mauritius	224.20			224.20

APPENDIX G (cont'd)
STATUS OF PAYMENT OF BALANCES FOR YEARS PRIOR TO 2004
AS AT 18 OCTOBER 2005

STATES	Balance due for years prior to 2004 (£ Sterling)	Amount Collected as at 18 October 2005 (£ Sterling)	Application of credit balance (or part of) from 2002 (£ Sterling)	Unpaid amount as at 18 October 2005 (£ Sterling)
Mongolia	108.56			108.56
Morocco	4 601.37			4 601.37
Netherlands				
Nigeria	37.32			37.32
Oman	1 115.38	1 115.38		
Pakistan				
Portugal	958.56	958.56		
Republic of Moldova	23.02			23.02
Romania				
Russian Federation				
Saudi Arabia	220.03			220.03
Senegal	66.62	66.62		
Serbia and Montenegro	199.93			199.93
Seychelles	881.42			881.42
South Africa	1 445.88			1 445.88
Sri Lanka				
Swaziland	16.21			16.21
Sweden				
Switzerland				
Thailand	1 193.75	1 193.75		
Tunisia				
Turkey				
Turkmenistan	1 175.65			1 175.65
Ukraine	342.85			342.85
United Arab Emirates	9 026.23	9 026.23		
United Kingdom				
Viet Nam	761.85			761.85
TOTAL	65 318.28	26 689.48		38 628.80

- * China's share includes:
- Hong Kong SAR: unpaid balance of £ 2 071.38
- Macau SAR: no unpaid balance

APPENDIX H
ESTIMATED COST SHARES AND ASSESSMENTS
FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2006 *

STATES	2004 Available Tonne-Kilometres in Scheduled Services (000)	Percentage Cost Share	Share of 2006 Estimated Costs (£ Sterling)	Share of Under-recovery for 2004 (£ Sterling)	Amount to be Assessed for 2006 (£ Sterling)
Algeria	499 094	0.170%	1 136.06	110.77	1 246.83
Armenia	165 315	0.056%	376.30	36.69	412.99
Austria	3 364 198	1.145%	7 657.76	746.68	8 404.44
Azerbaijan	316 390	0.108%	720.18	70.22	790.40
Bahrain	1 523 535	0.518%	3 467.95	338.15	3 806.10
Belgium	2 506 674	0.853%	5 705.82	556.35	6 262.17
Botswana	17 568	0.006%	39.99	3.90	43.89
Bulgaria	121 640	0.041%	276.88	27.00	303.88
Cameroon	112 128	0.038%	255.23	24.89	280.12
China **	55 884 771	19.017%	127 207.76	12 403.56	139 611.32
Congo	50 000	0.017%	113.81	11.10	124.91
Côte d'Ivoire	30 000	0.010%	68.29	6.66	74.95
Croatia	167 800	0.057%	381.95	37.24	419.19
Cyprus	693 991	0.236%	1 579.70	154.03	1 733.73
Czech Republic	947 858	0.323%	2 157.56	210.38	2 367.94
Democratic People's Republic of Korea	9 680	0.003%	22.03	2.15	24.18
Denmark	1 483 844	0.505%	3 377.60	329.34	3 706.94
Egypt	2 171 995	0.739%	4 944.01	482.07	5 426.08
Estonia	114 122	0.039%	259.77	25.33	285.10
Finland	2 583 803	0.879%	5 881.38	573.47	6 454.85
Gabon	401 128	0.136%	913.07	89.03	1 002.10
Georgia	75 723	0.026%	172.36	16.81	189.17
Germany	32 857 256	11.181%	74 791.36	7 292.63	82 083.99
Ghana	89 011	0.030%	202.61	19.76	222.37
Greece	1 760 709	0.599%	4 007.82	390.79	4 398.61
Hungary	725 819	0.247%	1 652.15	161.09	1 813.24
Iceland	716 750	0.244%	1 631.50	159.08	1 790.58
India	6 444 062	2.193%	14 668.30	1 430.25	16 098.55
Ireland	4 069 835	1.385%	9 263.97	903.29	10 167.26
Italy	8 438 152	2.871%	19 207.35	1 872.84	21 080.19
Jordan	1 205 649	0.410%	2 744.36	267.59	3 011.95
Kenya	1 099 996	0.374%	2 503.87	244.14	2 748.01
Kuwait	1 556 760	0.530%	3 543.58	345.52	3 889.10
Lebanon	629 362	0.214%	1 432.59	139.69	1 572.28
Malaysia	10 208 739	3.474%	23 237.65	2 265.82	25 503.47
Malta	355 377	0.121%	808.93	78.88	887.81
Mauritius	1 228 582	0.418%	2 796.56	272.68	3 069.24

APPENDIX H (cont'd)
ESTIMATED COST SHARES AND ASSESSMENTS
FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2006 *

STATES	2004 Available Tonne-Kilometres in Scheduled Services (000)	Percentage Cost Share	Share of 2006 Estimated Costs (£ Sterling)	Share of Under-recovery for 2004 (£ Sterling)	Amount to be Assessed for 2006 (£ Sterling)
Netherlands	15 868 145	5.400%	36 119.88	3 521.92	39 641.80
Nigeria	83 200	0.028%	189.38	18.47	207.85
Oman	1 498 453	0.510%	3 410.86	332.58	3 743.44
Pakistan	2 949 844	1.004%	6 714.59	654.71	7 369.30
Poland	1 041 591	0.354%	2 370.92	231.18	2 602.10
Portugal	2 935 945	0.999%	6 682.95	651.63	7 334.58
Qatar	2 786 710	0.948%	6 343.25	618.51	6 961.76
Republic of Korea	25 291 448	8.606%	57 569.68	5 613.41	63 183.09
Republic of Moldova	48 119	0.016%	109.53	10.68	120.21
Romania	392 853	0.134%	894.23	87.19	981.42
Russian Federation	10 776 565	3.667%	24 530.17	2 391.85	26 922.02
Saudi Arabia	5 901 005	2.008%	13 432.17	1 309.72	14 741.89
Senegal	99 539	0.034%	226.58	22.09	248.67
Serbia and Montenegro	245 992	0.084%	559.94	54.60	614.54
Seychelles	253 085	0.086%	576.08	56.17	632.25
South Africa	6 092 492	2.073%	13 868.04	1 352.22	15 220.26
Sri Lanka	1 516 955	0.516%	3 452.97	336.69	3 789.66
Swaziland	0	0.000%	0.00	0.00	0.00
Sweden	2 201 980	0.749%	5 012.26	488.73	5 500.99
Switzerland	4 773 293	1.624%	10 865.21	1 059.43	11 924.64
Thailand	9 823 659	3.343%	22 361.11	2 180.35	24 541.46
The former Yugoslav Republic of Macedonia	36 881	0.013%	83.95	8.19	92.14
Tunisia	478 573	0.163%	1 089.35	106.22	1 195.57
Turkey	3 458 702	1.177%	7 872.87	767.65	8 640.52
Ukraine	653 690	0.222%	1 487.96	145.09	1 633.05
United Arab Emirates	13 868 793	4.719%	31 568.85	3 078.16	34 647.01
United Kingdom	34 285 043	11.667%	78 041.40	7 609.49	85 650.89
Viet Nam	1 724 065	0.587%	3 924.40	382.65	4 307.05
Zimbabwe	155 679	0.053%	354.36	34.55	388.91
TOTAL	293 869 615	100.000%	668 921.00	65 224.00	734 145.00

* 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.

** China's share includes:

- Hong Kong SAR: 17 968 842 000 ATKs corresponding to a share of 2006 assessments of £ 44 889.76
- Macau SAR: 453 817 000 ATKs corresponding to a share of 2006 assessments of £ 1 133.73

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 1G hub infrastructure connection to the Met Office message switch (FROST) consists of a number of units developed in conjunction with EADS Astrium and other suppliers. These are installed either at Exeter or at the uplink site at Whitehill, Oxfordshire, UK.

Additional hub infrastructure has been installed at Exeter and Whitehill to provide resilient SADIS 2G service. This hardware is physically separate from the SADIS 1G infrastructure.

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”).

Hewlett Packard L-class servers to provide SADIS FTP service (see Section 1 C)

ii) **Principally procured for SADIS**

a) At the Met Office

~~1) Product display console, including software~~ See Section 1 C for itemized components.

b) Communications between Whitehill and Met Office

- 1) 2 Fibre Optic 64 Kbps circuits in support of SADIS 1G service; and
- 2) 2 Fibre Optic 64 Kbps circuits in support of SADIS 2G service

c) At the uplink site (Whitehill)

1) Units forming part of a totally integrated rack structure to provide SADIS 1G service, with back-up, referred to as Chain A and Chain B (see the list ~~at~~ under Sections 4 and 5 1.C); ~~and~~

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

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

3) 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) Communication link (SVC) between SADIS Gateway and Met Office in support of SADIS 1G service; and

e) Communication link ~~(SVC 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) Message switch (FROST): Total investment, ~~1.42M¹£~~ of which ~~1.33~~ 2.69 per cent is attributable to SADIS usage: switching data to operational (1G) broadcast service and to 1G monitoring system — Corobor Comparitor (breakdown: 1.34 per cent to supply operational broadcast; 1.35 per cent to supply monitoring facility);

b) Message switch (FROST): Total investment, ~~1.42M¹£~~ of which ~~1.04~~ 1.06 per cent is attributable to SADIS FTP usage: switching data to operational FTP service;

c) Message switch (FROST): Total investment, ~~1.42M¹£~~ of which ~~1.33~~ 1.14 per cent is attributable to SADIS usage: switching data to 2G service;

Note.— The SADIS 2G monitoring system (Corobor Comparitor) not activated at the time of the SADISOPSG/10 Meeting; implementation expected before the SCRAG/6 Meeting.

d) Allocated bandwidth (2 Mbps bursting to 4 Mbps) between server and Internet Service Provider (ISP) in support of the SADIS FTP service; and

e) Message switch (CoreMet System);

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

¹ budgeted cost 1.195466 M£ for providing TROPICS/FROST service during the fiscal year 2005/2006

B. ISCS data back-up system

ISCS VSAT system, including TCP/IP receiver, and cables, break unit and X25 frame relay switch.

Note.— The equipment, including leases, listed above are being capitalized over the SADIS contract period.

C. Hub equipment and services located at Exeter and Whitehill

<i>Item</i>	<i>Description</i>	<i>Quantity</i>
1.	Exeter Equipment <u>to support SADIS 1G</u>	
1.1	Network Management System (NMS Computer)	1
1.2	MemoTech PAD (for NMS)	1
1.3	Telecoms interface units Megabox	2
1.4	CX1000 Frame Relay Switch (for NMS)	1
1.5	Product display console including software (COROBOR)	1
2.	Exeter Equipment (Spares) <u>to support SADIS 1G</u>	
2.1	Telecoms interface units Megabox	2
2.2	NMS Spare CPU	1
2.3	MemoTech PAD (for NMS)	1
2.4	CX1000 Frame Relay Switch (for NMS)	1
3.	Whitehill earth station (<u>SADIS 1G</u> uplink equipment)	
3.1	Telecoms controller Megapac V rack assembly	2
3.2	Station interface unit (SIU)	2
3.3	8360 Modulator	2
3.4	8471 Receive Demodulators	12
3.5	8550 Modem Switch	1
3.6	140 - L band upconverter	2
3.7	X Term NMS simulator	1
3.8	Equipment Rack Assembly (Chain 1)	1
3.9	Equipment Rack Assembly (Chain 2)	1
4.	Whitehill earth station <u>SADIS 1G</u> (spares)	
4.1	8471 Receive Demodulators	1
4.2	Station interface unit (SIU)	1
4.3	Megapac V rack assembly	2
4.4	Mega PACV Frad units	2
4.5	140 - L band upconverter	1
4.6	8360 Modulator	1
4.7	8550 Modem Switch	1

5. Whitehill services (leased from ~~Astrum under contract to~~ Cable & Wireless)

5.1	70 MHz to 140 MHz converters	2
5.2	140 MHz to C band converter	2
5.3	Satellite Hub leased bandwidth	1 slot

6. Test Rig at Poynton

6.1	Enhanced (SADIS 1G) Simulator	1
-----	-------------------------------	---

7. Communications equipment for SADIS second generation (2G) trial

7.1	FROST port	1
7.2	Megapac 2003	4
7.3	QPSK Modulator (Comtech EFD)	1
7.4.7.2	QPSK De-Modulator/Receivers (Comtech EFD and Radyne Comstream)	2
7.5	Modem running Viterbi with concatenated Reed Solomon coding	1
7.6	ISDN service between Bracknell and Whitehill	1
7.7	ISDN call charges for the duration of the trial	

Note. — One QPSK De-modulator/Receiver (Comtech EFD) and MegaPAC located in Zurich for use in the SADIS 2G trial.

8 ISDN back-up service to Washington (NWSGTG)

8.1	Mega PAC 2003 router (MP-2003)	1
8.2	Mega PAC 2003 router plus expansion (MP-2003-3-B)	1
8.3	ISDN 2e circuit	1
8.4	A/B switch	1
8.5	Interface cables	1

Note.— Hardware listed items under Section 8 are located at Whitehill.

9. SADIS FTP service ~~provision~~

9.1	HP L2000 servers with 2Gb RAM	2
9.2	18 Gb internal disk drives	2
9.3	DVD-ROM	2
9.4	Processors	2

Note.— The SADIS FTP service as of 1 July 2005.

10. Operational SADIS 2G Infrastructure

10.1	Frost port	1
10.2	MegaPAC V	3*
10.3	MegaPAC 2003	3 4*
10.4	Uplink modem (<u>Comtech EF Data SDM-300a</u>)	3
10.5	Communications cabinet and lease	1
10.6	Network Management System and licenses	1
10.7	MegaWatch and PC	1
10.8	Corobor comparator software and PC	1
10.9	SMS 301 <u>Comtech EF Data CR100 redundancy switch</u>	1
10.9	X10 Modules	8
10.10	SIO Modules	2
10.11	8 Mb RAM Modules	2

*Note.— * Includes one unit stored as a cold spare.*

2. PROCURED SERVICES

- A. Space segment annual lease: 1.2 Mhz wide frequency band dedicated to SADIS with minimum data rates at 38.4 Kbps;
- B. Annual maintenance of Met Office and Whitehill site equipment (SADIS 1G, 2G and FTP server) which is not leased; and
- C. Gateway function:
 - i) Communication ~~link~~ circuits between Met Office and NATS infrastructure site; and
 - ii) System maintenance.

3. ANNUAL STAFF REQUIREMENTS

A. Met Office of the UK

i) Help Desk

Note.— The Help 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 a call-out capability.

Normal working hours

Grade and skill

- | | |
|---------------------------------------|-----------------------|
| 1. Help desk (first point of contact) | Scientific supervisor |
|---------------------------------------|-----------------------|

Note.— Outside normal working hours, the helpdesk facility is provided by the 24-hour positions below.

24-hour support

Grade and skill

- | | |
|------------------------------------|----------------------|
| 1. Operations systems analyst | Systems analyst |
| 2. Production systems analyst | Systems analyst |
| 3. Networks and services engineer | Computer engineer |
| 4. Networks and systems supervisor | Technical supervisor |

Note.— The total support for SADIS is considered as 1 per cent of the total support provided by the help desk and operational support function. These functions comprise 4 X 24-hour rosters of six staff each and a three-man team providing the normal working-hour help desk.

ii) **Additional support**

Additional support

Grade and skill

- | | |
|--|---|
| 1. Systems integration team engineer | 20 per cent of network computer engineer |
| 2. Administrator | 75 per cent of executive officer |
| 3. International aviation management | 15 per cent of manager |
| 4. Data traffic | 5 per cent communications engineer |
| 5. <u>Contract procurement, management and invoicing</u> | <u>5 per cent of senior procurement officer</u> |
| 6. <u>UNIX support</u> | <u>10 per cent of computer engineer</u> |
| 7. <u>Web-team support</u> | <u>10 per cent of website designer</u> |

Note.— As a result of the audit of SADIS costs required by SCRAG, the help desk costs have been re-assessed and reduced to a level of 1 per cent of the total support offered.

iii) ~~SADIS second generation (2G) trial~~

~~*Second generation trial*~~

~~*Grade and skill*~~

- | | |
|------------------------|--|
| 1. Manpower | 5 per cent of engineer
5 per cent of specialist |
| 2. Budgets | Engineering consultancy |

~~iv) — SADIS second generation (2G) operational implementation project~~

~~Second generation roll out ————— Grade and skill~~

- | | |
|------------------------|---|
| 1. Manpower | 15 per cent project manager |
| | 15 per cent network computer engineer |
| | 5 per cent engineering consultancy for systems support and maintenance |
| 2. Budgets | Engineering consultancy |

B. NATS infrastructure site (OPMET Gateway function)

Note.— See also note under 3. A, “Help desk”, above.

24-hour support

Grade and skill

- | | |
|---------------------------------|---|
| 1. Operational staff support | 50 per cent of air traffic services assistant (H24/365) |
| 2. Engineering staff support | 10 per cent of systems engineer |
| 3. SADIS administration support | 75 per cent of day support engineer |
| | 50 per cent of air traffic services assistant |

— END —