



SCRAG/8 - REPORT

INTERNATIONAL CIVIL AVIATION ORGANIZATION

**REPORT OF
THE EIGHTH MEETING OF THE SADIS COST RECOVERY
ADMINISTRATIVE GROUP
(SCRAG/8)**

(Paris, 13 November 2007)

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INTRODUCTION

Place and duration

i.1 The Eighth Meeting of the SADIS Cost Recovery Administrative Group (SCRAG) was held in the European and North Atlantic (EUR/NAT) ICAO Regional Office, Paris, on 13 November 2007.

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 2006

Agenda Item 4: Review of estimated SADIS costs and cost shares for the period 1 January to 31 December 2008

Agenda Item 5: Amendment to Annex II, SADIS Inventory, 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/9 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 41 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 41 States, 22 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 Twelfth Meeting of the SADIS Operations Group (SADISOPSG/12, Bangkok, 4 to 6 June 2007) 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 Twelfth meeting (SADISOPSG/12, Bangkok, 4 to 6 June 2007) to SCRAG that the operational efficacy of the SADIS had continued to be satisfactory meeting all operational requirements since the SADISOPSG/11 Meeting (Cairo, 23 to 25 May 2006).

2.3 The Group noted Conclusion 12/5 of SADISOPSG/12 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 2006

Review of the 2006 Actual SADIS Costs

3.1 The Group reviewed the actual costs of providing the SADIS services in the year 2006. These actual costs are presented in **Appendix E** and total £644 481. 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 2006

Cost Item	Actual Costs (UK £)
UK Meteorological Office	442 305
UK NATS Gateway	147 689
UK administrative costs	17 575
Sub-total UK	607 569
ICAO support services costs	36 912
TOTAL	644 481

Review of the 2006 Actual SADIS Cost Shares

3.2 The Group noted that one State, Iceland, which was assessed for the year 2006 by the SCRAG/6 Meeting, is receiving the SADIS FTP service since 31 January 2006. Consequently, its share of the actual costs for 2006 was calculated based on 11 full months of service in 2006.

3.3 The Group noted that five States, Kenya, Mauritius, Nigeria, Russian Federation and Seychelles, which were assessed for the year 2006 by the SCRAG/6 Meeting, have had the SADIS service withdrawn on 8 November 2006. Consequently, their share of the actual costs for 2006 was calculated based on 10 full months of service in 2006.

3.4 The Group noted that a new receiver State, Syrian Arab Republic, is included in the calculation of the actual cost shares for 2006 considering that it receives the SADIS service since the end of 2005.

3.5 The Group noted that although the Republic of Korea is included in the calculation of the actual cost shares for 2006, there were questions on the services used by the Republic of Korea. The Group asked that the UK Met Office investigate whether the Republic of Korea had an operational system in 2006 and 2007 in order to determine if it should be charged for any of the actual costs for these two years.

3.6 The Group determined the actual cost shares for the period 1 January to 31 December 2006 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 2006, 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 8/1 -

The actual cost shares for 2006 as shown in Appendix E to the SCRAG/8 Report for the States participating in the SCAR Arrangement are approved by the SCRAG/8 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 2006 as at 26 October 2007. It noted that a total amount of £498 105 was collected and a total amount of credit balance of £34 134 was applied against the assessments for 2006 (see **Appendix G – Table 1**), both amounts representing 83.0% of the original assessments for 2006 as approved by the SCRAG/6 Meeting.

3.8 The Group noted that despite several reminders, there are still a few States that have not yet paid their assessment for the year 2006. The Group agreed that service to these States be terminated and reinstated only after full payment is received.

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 under-recovery of SADIS cost shares for the year 2006 amounts to £94 599 as shown in **Table 2**. This under-recovery is the difference between the actual costs for 2006 (£644 481), to which the over-recovery for 2004 is subtracted (£27 780) in order to obtain the amount subject to collection for 2006, and the collections from States for 2006 (£498 105 as shown in **Appendix G - Table 1**) plus the collections from States for years prior to 2006 after 31 December 2006 (£23 997 as shown in **Appendix G – Table 2**), and it formulated the following Conclusion:

Conclusion 8/2 -

A net under-recovery, amounting to £94 599 of the SADIS cost shares for the year 2006 will be taken into account in the calculation of the SADIS cost shares for the year 2008, in accordance with Article XI, paragraph 4 of the SADIS Agreement.

TABLE 2
UNDER-RECOVERY FOR 2006

		(UK £)	References
(1)	Actual costs for 2006	644 481	Table 1
(2)	Over-recovery for 2004	(27 780)	SCRAG/6 Report, Table 2 Revised
(3)	Subject to collection for 2006	616 701	(1) + (2)
(4)	Collected from States for 2006 (as at 26 October 2007)	498 105	Paragraph 3.7
(5)	Collected from States for years prior to 2006 after 31 December 2006 (as at 26 October 2007)	23 997	Paragraph 3.9
(6)	Under-recovery for 2006	94 599	(3) – (4) – (5)

Depreciated Assets

3.10 The Group noted the information presented by the United Kingdom regarding the depreciated assets as at 31 December 2007 (see **Appendix C**).

AGENDA ITEM 4: REVIEW OF ESTIMATED SADIS COSTS AND COST SHARES FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2008

Review of the 2008 Estimated SADIS Costs

4.1 The Group reviewed the cost estimates for providing the SADIS services in the year 2008. These cost estimates are detailed in **Appendix F** and total £618 457. 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 2008**

Cost Item	Estimated Costs (UK £)
UK Meteorological Office *	447 150
UK NATS Gateway	128 839
UK CAA administrative costs	5 000
Sub-total UK	580 989
ICAO support services costs	37 468
TOTAL	618 457

* Includes an amount of £10 193 for the invoice administration by the UK Met Office.

4.2 The Group noted that the UK Met Office applied a 10% rate of return on the costs incurred for SADIS and requested the UK to review this policy for future years in line with the SADIS Agreement and report back to the SCRAG/9 Meeting. The Group also asked that the ICAO support services costs be kept to a minimum.

4.3 The Group considered the under-recovery in **Table 2** in the calculation of the amount to be assessed under the SADIS Agreement for 2008. The calculation of the amount to be assessed is presented in **Table 4**.

**TABLE 4
AMOUNT TO BE ASSESSED UNDER THE SADIS AGREEMENT FOR 2008**

		(UK £)	References
(1)	Under-recovery for 2006	94 599	Table 2
(2)	Estimated costs for 2008	618 457	Table 3
(3)	Amount to be assessed for 2008	713 056	(1) + (2)

Review of the 2008 Estimated SADIS Cost Shares

4.4 The Group determined the cost shares for the period 1 January to 31 December 2008 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 2006, in accordance with Article XI, paragraph 3 of the SADIS Agreement.

4.5 The Group noted that five States, Kenya, Mauritius, Nigeria, Russian Federation and Seychelles, which were assessed for the year 2007 by the SCRAG/7 Meeting and which have actually the service withdrawn for failure of payment of their SADIS cost shares, are not included in the calculation of the assessment of cost shares for 2008.

4.6 The Group noted that one new receiver State, Morocco, is included in the calculation of the assessment of cost shares for 2008. Morocco had the service withdrawn on 6 August 2002 but is considering asking for the service being reinstated.

4.7 The cost share in percentage terms and the share in £ sterling, including the share of under-recovery for 2006, to be borne by each State are shown in **Appendix H**.

4.8 The Group agreed that the figures in Conclusion 8/2, tables 2 and 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 2008, to take into account any payment received between 26 October and 31 December 2007. Accordingly, the Group formulated the following Conclusion:

Conclusion 8/3 -

Subject to updating by the Secretariat to take into account any payment of arrears received between 26 October and 31 December 2007, the estimated cost shares for 2008 as shown in Appendix H to the SCRAG/8 Report for each State participating in the SCAR Arrangement are approved by the SCRAG/8 Meeting for collection by the United Kingdom.

Cost estimates for the years 2009 to 2011

4.9 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 2009 to 2011 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 2009, 2010 AND 2011*

Cost Item	Estimated Costs 2009 (UK £)	Estimated Costs 2010 (UK £)	Estimated Costs 2011 (UK £)
UK Meteorological Office **	367 533	367 533	367 533
UK NATS Gateway	111 996	111 996	111 996
UK CAA administrative costs	5 000	5 000	5 000
Sub-total UK	484 529	484 529	484 529
ICAO support services costs	37 468	37 468	37 468
TOTAL	521 997	521 997	521 997

* Estimates based on 2007 prices.

** Includes an amount of £10 193 for the invoice administration by the UK Met Office.

AGENDA ITEM 5: AMENDMENT TO ANNEX II, SADIS INVENTORY, 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 to take account of minor changes in the proportions of resource usage. The additions and deletions to the existing text of Annex II appear in outline and strikeout formats in **Appendix I**.

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

Conclusion 8/4 -

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/8 Report.

AGENDA ITEM 6: FUTURE WORK AND ARRANGEMENTS FOR THE SCRAG/9 MEETING

6.1 The Group agreed that, subject to confirmation, its Ninth Meeting should be held at the UK CAA in London at the end of October or at the beginning of November 2008.

AGENDA ITEM 7: OTHER BUSINESS

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

APPENDIX A

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APPENDIX B**LIST OF SCRAG/8 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/12 Meeting	Chairman, SADISOPSG
4	3	2006 ICAO actual SADIS administrative costs	Secretariat
5	3	2006 actual SADIS costs	United Kingdom
6	3&4	Status of payments for the year 2006	United Kingdom
7	3	Summary of actual costs and cost shares for the year 2006	Secretariat
8	3	Depreciated assets: SADIS costs	United Kingdom
9	4	2008 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 2008	Secretariat
12	5	Amendment to Annex II, Inventory, to the SADIS Agreement	Secretariat

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APPENDIX C

**INVENTORY OF ASSETS AS AT 31 DECEMBER 2007
EMPLOYED BY THE UNITED KINGDOM TO PROVIDE SADIS SERVICES**

(1) Inventory of Assets: 2007	(2) Original Value	(3) Depreciated charges in 2007	(4) Total accumulated depreciation	(5) Net depreciated values at end of 2007
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	£69 940	£17 488
Total UKMO	£1 176 197	£17 485	£1 158 709	£17 488
SADIS Gateway	£227 462	£45 492	£214 463	£12 999

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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	

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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	
Bangladesh	X
Benin	X
Bulgaria	
Burkina Faso	X
Central African Republic	X
Chad	X
Equatorial Guinea	X
Ethiopia	X
Gambia	X
Ghana	
Guinea	X
Iceland	
India	
Indonesia	
Lao People's Democratic Republic	X
Lebanon	
Malawi	X
Malaysia	
Maldives	X
Mauritania	X
Mozambique	X
Nepal	X
Niger	X
Nigeria	
Poland	
Qatar	
Republic of Korea	
Rwanda	X
Seychelles	
South Africa	
Sri Lanka	
Swaziland	
Syrian Arab Republic	
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 2006*
AND ADJUSTMENT FOR 2006

STATES	2006 Available Tonne-Kilometres in Scheduled Services (000)	Percentage Cost Share	Share of 2006 Actual Costs (£ Sterling)	Share of 2006 Estimated Costs (SCRAG/6) (£ Sterling)	Adjustment for 2006 (£ Sterling)
Algeria	434 229	0.129%	830.64	1 136.06	- 305.42
Armenia	185 748	0.055%	355.32	376.30	- 20.98
Austria	3 737 629	1.109%	7 149.74	7 657.76	- 508.02
Azerbaijan	319 068	0.095%	610.35	720.18	- 109.83
Bahrain	1 574 517	0.467%	3 011.91	3 467.95	- 456.04
Belgium	2 566 295	0.762%	4 909.09	5 705.82	- 796.73
Botswana	20 153	0.006%	38.55	39.99	- 1.44
Bulgaria	222 692	0.066%	425.99	276.88	149.11
Cameroon	128 622	0.038%	246.04	255.23	- 9.19
China: - Beijing	43 990 142	13.057%	84 149.13	85 273.17	-1 124.04
- Hong Kong	21 881 015	6.495%	41 856.39	40 901.59	954.80
- Macau	652 200	0.194%	1 247.60	1 033.00	214.60
Congo	64 495	0.019%	123.37	113.81	9.56
Côte d'Ivoire	105 891	0.031%	202.56	68.29	134.27
Croatia	181 563	0.054%	347.31	381.95	- 34.64
Cyprus	681 119	0.202%	1 302.92	1 579.70	- 276.78
Czech Republic	1 053 513	0.313%	2 015.27	2 157.56	- 142.29
Democratic People's Republic of Korea	10 661	0.003%	20.39	22.03	- 1.64
Denmark	1 762 429	0.523%	3 371.37	3 377.60	- 6.23
Egypt	2 738 612	0.813%	5 238.71	4 944.01	294.70
Estonia	128 423	0.038%	245.66	259.77	- 14.11
Finland	2 967 194	0.881%	5 675.97	5 881.38	- 205.41
Gabon	459 829	0.136%	879.61	913.07	- 33.46
Georgia	91 739	0.027%	175.49	172.36	3.13
Germany	35 676 012	10.589%	68 244.96	74 791.36	-6 546.40
Ghana	26 935	0.008%	51.52	202.61	- 151.09
Greece	1 593 283	0.473%	3 047.80	4 007.82	- 960.02
Hungary	735 117	0.218%	1 406.21	1 652.15	- 245.94
Iceland **	756 806	0.225%	1 447.70	1 631.50	- 183.80
India	10 140 642	3.010%	19 398.12	14 668.30	4 729.82
Ireland	6 373 839	1.892%	12 192.57	9 263.97	2 928.60
Italy	9 865 616	2.928%	18 872.02	19 207.35	- 335.33
Jordan	1 264 006	0.375%	2 417.93	2 744.36	- 326.43
Kenya ***	1 132 129	0.336%	2 165.66	2 503.87	- 338.21
Kuwait	1 670 086	0.496%	3 194.72	3 543.58	- 348.86
Lebanon	666 725	0.198%	1 275.38	1 432.59	- 157.21
Malaysia	9 842 986	2.922%	18 828.73	23 237.65	-4 408.92
Malta	384 103	0.114%	734.75	808.93	- 74.18
Mauritius ***	1 045 418	0.310%	1 999.79	2 796.56	- 796.77

APPENDIX E (cont'd)
ACTUAL COST SHARES FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2006*
AND ADJUSTMENT FOR 2006

STATES	2006 Available Tonne-Kilometres in Scheduled Services (000)	Percentage Cost Share	Share of 2006 Actual Costs (£ Sterling)	Share of 2006 Estimated Costs (SCRAG/6) (£ Sterling)	Adjustment for 2006 (£ Sterling)
Netherlands	17 344 576	5.148%	33 178.59	36 119.88	-2 941.29
Nigeria ***	202 533	0.060%	387.43	189.38	198.05
Oman	1 521 059	0.451%	2 909.65	3 410.86	- 501.21
Pakistan	3 362 515	0.998%	6 432.18	6 714.59	- 282.41
Poland	1 203 378	0.357%	2 301.95	2 370.92	- 68.97
Portugal	3 470 706	1.030%	6 639.14	6 682.95	- 43.81
Qatar	5 736 395	1.703%	10 973.20	6 343.25	4 629.95
Republic of Korea	25 441 535	7.551%	48 667.33	57 569.68	-8 902.35
Republic of Moldova	70 034	0.021%	133.97	109.53	24.44
Romania	580 197	0.172%	1 109.86	894.23	215.63
Russian Federation ***	11 158 144	3.312%	21 344.51	24 530.17	-3 185.66
Saudi Arabia	6 491 620	1.927%	12 417.88	13 432.17	-1 014.29
Senegal	152 643	0.045%	291.99	226.58	65.41
Serbia	219 732	0.065%	420.33	559.94	- 139.61
Seychelles ***	249 285	0.074%	476.86	576.08	- 99.22
South Africa	6 285 788	1.866%	12 024.14	13 868.04	-1 843.90
Sri Lanka	1 692 735	0.502%	3 238.05	3 452.97	- 214.92
Swaziland	660	0.000%	1.26	0.00	1.26
Sweden	1 757 484	0.522%	3 361.91	5 012.26	-1 650.35
Syrian Arab Republic	451 069	0.134%	862.85	5 012.26	-4 149.41
Switzerland	4 800 953	1.425%	9 183.78	10 865.21	-1 681.43
Thailand	10 516 053	3.121%	20 116.25	22 361.11	-2 244.86
The former Yugoslav Republic of Macedonia	37 127	0.011%	71.02	83.95	- 12.93
Tunisia	517 541	0.154%	990.01	1 089.35	- 99.34
Turkey	5 148 885	1.528%	9 849.35	7 872.87	1 976.48
Ukraine	926 077	0.275%	1 771.50	1 487.96	283.54
United Arab Emirates	19 895 183	5.905%	38 057.67	31 568.85	6 488.82
United Kingdom	38 574 957	11.450%	73 790.42	78 041.40	-4 250.98
Viet Nam	1 723 407	0.512%	3 296.72	3 924.40	- 627.68
Zimbabwe	247 771	0.074%	473.96	354.36	119.60
TOTAL	336 911 523	100.000%	644 481.00	673 933.26	-29 452.26

* 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.

** Considering that Iceland is receiving the SADIS FTP service since 31 January 2006, its share of the 2006 actual costs was calculated for only 11 months in 2006, based on the number of full months of service in 2006. In order to properly calculate Iceland's share of the 2006 actual costs, only 11/12th of its ATKs for 2006 was included in the second column.

***Considering that the SADIS service to Kenya, Mauritius, Nigeria, Russian Federation and Seychelles was withdrawn on 8 November 2006, their share of the 2006 actual costs was calculated for only 10 months in 2006, based on the number of full months of service in 2006. In order to properly calculate their share of the 2006 actual costs, only 10/12th of their ATKs for 2006 was included in the second column.

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APPENDIX F

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

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

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APPENDIX F (cont'd)

TABLE 2: NATS and other SADIS Cost Projections until 2011

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

APPENDIX G
STATUS OF PAYMENT OF THE ASSESSMENT FOR 2006
AS AT 26 OCTOBER 2007

STATES	Share of 2006 Assessment (£ Sterling)	Amount Collected as at 26 October 2007 (£ Sterling)	Application of credit balance (or part of) (£ Sterling)	Unpaid amount as at 26 October 2007 (£ Sterling)
Algeria	1 088.88	1 088.88		
Armenia	360.67	360.67		
Austria	7 339.74	7 211.64	128.10	
Azerbaijan	690.27	537.24	153.03	
Bahrain	3 323.93	3 323.93		
Belgium	5 468.86	1 518.45	3 950.41	
Botswana	38.33	34.44	3.89	
Bulgaria	265.38		265.38	
Cameroon	244.63		59.55	185.08
China: - Beijing	81 731.81	81 731.81		
- Hong Kong	39 202.97	37 694.73	1 508.24	
- Macau	990.10	990.10		
Congo	109.08		109.08	
Côte d'Ivoire	65.45		65.45	
Croatia	366.09	366.09		
Cyprus	1 514.10	1 514.10		
Czech Republic	2 067.96	2 067.96		
Democratic People's Republic of Korea	21.11		21.11	
Denmark	3 237.33	2 439.77	797.56	
Egypt	4 738.69		1 238.48	3 500.21
Estonia	248.98	248.98		
Finland	5 637.13	5 637.13		
Gabon	875.15		79.62	795.53
Georgia	165.20	165.20		
Germany	71 685.31	70 559.15	1 126.16	
Ghana	194.20		194.20	
Greece	3 841.38	1 982.77	1 858.61	
Hungary	1 583.54	1 302.95	280.59	
Iceland	1 563.74			1 563.74
India	14 059.13			14 059.13
Ireland	8 879.24	8 879.24		
Italy	18 409.68	18 131.16	278.52	
Jordan	2 630.39		46.82	2 583.57
Kenya	2 399.89			2 399.89
Kuwait	3 396.42	2 734.63	661.79	
Lebanon	1 373.10		29.24	1 343.86
Malaysia	22 272.60	22 272.60		
Malta	775.34	123.26	652.08	
Mauritius	2 680.42		188.12	2 492.30

APPENDIX G (cont'd)
STATUS OF PAYMENT OF THE ASSESSMENT FOR 2006
AS AT 26 OCTOBER 2007

STATES	Share of 2006 Assessment (£ Sterling)	Amount Collected as at 26 October 2007 (£ Sterling)	Application of credit balance (or part of) (£ Sterling)	Unpaid amount as at 26 October 2007 (£ Sterling)
Netherlands	34 619.84	28 777.83	5 842.01	
Nigeria	181.51			181.51
Oman	3 269.21	3 269.21		
Pakistan	6 435.74	6 435.74		
Poland	2 272.46	2 272.46		
Portugal	6 405.41	6 405.41		
Qatar	6 079.82	6 079.82		
Republic of Korea	55 178.84			55 178.84
Republic of Moldova	104.98	104.98		
Romania	857.09	569.00	288.09	
Russian Federation	23 511.44			23 511.44
Saudi Arabia	12 874.34	11 013.17	1 861.17	
Senegal	217.17		40.90	176.27
Serbia	536.69	536.69		
Seychelles	552.16			552.16
South Africa	13 292.11	13 292.11		
Sri Lanka	3 309.57	3 309.57		
Swaziland				
Sweden	4 804.10	3 631.28	1 172.82	
Switzerland	10 413.98	2 930.78	7 483.20	
Thailand	21 432.46	17 905.45	3 527.01	
The former Yugoslav Republic of Mace	80.46	80.46		
Tunisia	1 044.11	782.56	222.78	38.77
Turkey	7 545.91	7 545.91		
Ukraine	1 426.17	1 426.17		
United Arab Emirates	30 257.81	30 257.81		
United Kingdom	74,800.34	74 800.34		
Viet Nam	3,761.42	3 761.42		
Zimbabwe	339.64			339.64
TOTAL	641 141.00	498 105.05	34 134.01	108 901.94

APPENDIX G (cont'd)
STATUS OF PAYMENT OF BALANCES FOR YEARS PRIOR TO 2006
AS AT 26 OCTOBER 2007

STATES	Balance due for years prior to 2006 (£ Sterling)	Amount Collected as at 26 October 2007 (£ Sterling)	Application of credit balance (or part of) (£ Sterling)	Unpaid amount as at 26 October 2007 (£ Sterling)
Algeria				
Armenia	82.81	82.81		
Austria	481.82	481.82		
Azerbaijan				
Bahrain	317.00	317.00		
Belgium	241.65	241.65		
Botswana				
Bulgaria	286.61	286.61		
Cameroon	12.78	12.78		
China: - Beijing	15 062.77			15 062.77
- Hong Kong	9 477.26	6 387.97		3 089.29
- Macau	552.80	484.26		68.54
Congo	135.86	135.86		
Côte d'Ivoire	131.21	131.21		
Croatia				
Cyprus				
Czech Republic	363.90	363.90		
Democratic People's Republic of Korea				
Denmark	409.75			409.75
Egypt	68.44			68.44
Estonia	52.06	52.06		
Finland	348.91	348.91		
Gabon	44.46	44.46		
Georgia	73.50			73.50
Germany				
Ghana				
Greece				
Hungary				
Iceland				
India	2 504.29	2 401.27		103.02
Ireland				
Italy	2 147.57			2 147.57
Jordan	63.29			63.29
Kenya	3 070.83	976.10		2 094.73
Kuwait				
Lebanon	15.98			15.98
Malaysia	1 591.34	1 591.34		
Malta				
Mauritius	2 501.85			2 501.85

APPENDIX G (cont'd)
STATUS OF PAYMENT OF BALANCES FOR YEARS PRIOR TO 2006
AS AT 26 OCTOBER 2007

STATES	Balance due for years prior to 2006 (£ Sterling)	Amount Collected as at 26 October 2007 (£ Sterling)	Application of credit balance (or part of) (£ Sterling)	Unpaid amount as at 26 October 2007 (£ Sterling)
Netherlands				
Nigeria	331.27			331.27
Oman				
Pakistan	244.91	244.91		
Poland				
Portugal	258.91	258.91		
Qatar				
Republic of Korea				
Republic of Moldova	24.75			24.75
Romania	19.07	19.07		
Russian Federation	31 475.43			31 475.43
Saudi Arabia				
Senegal	35.35			35.35
Serbia				
Seychelles	1 991.93			1 991.93
South Africa				
Sri Lanka	114.69			114.69
Swaziland	17.62			17.62
Sweden				
Switzerland				
Thailand				
The former Yugoslav Republic of Macedonia				
Tunisia	12.79			12.79
Turkey				
Ukraine	392.92	392.92		
United Arab Emirates	8 647.54	8 647.54		
United Kingdom	93.70	93.70		
Viet Nam	546.04			546.04
Zimbabwe				
TOTAL	84 245.66	23 997.06		60 248.60

APPENDIX H
ESTIMATED COST SHARES AND ASSESSMENTS
FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2008 *

STATES	2006 Available Tonne-Kilometres in Scheduled Services (000)	Percentage Cost Share	Share of 2008 Estimated Costs (£ Sterling)	Share of Under-recovery for 2006 (£ Sterling)	Amount to be Assessed for 2008 (£ Sterling)
Algeria	434 229	0.134%	826.88	126.48	953.36
Armenia	185 748	0.057%	353.71	54.10	407.81
Austria	3 737 629	1.151%	7 117.36	1 088.67	8 206.03
Azerbaijan	319 068	0.098%	607.58	92.94	700.52
Bahrain	1 574 517	0.485%	2 998.26	458.61	3 456.87
Belgium	2 566 295	0.790%	4 886.85	747.49	5 634.34
Botswana	20 153	0.006%	38.38	5.87	44.25
Bulgaria	222 692	0.069%	424.06	64.86	488.92
Cameroon	128 622	0.040%	244.93	37.46	282.39
China: - Beijing	43 990 142	13.545%	83 767.98	12 813.12	96 581.10
- Hong Kong	21 881 015	6.737%	41 666.80	6 373.34	48 040.14
- Macau	652 200	0.201%	1 241.95	189.97	1 431.92
Congo	64 495	0.020%	122.81	18.79	141.60
Côte d'Ivoire	105 891	0.033%	201.64	30.84	232.48
Croatia	181 563	0.056%	345.74	52.88	398.62
Cyprus	681 119	0.210%	1 297.02	198.39	1 495.41
Czech Republic	1 053 513	0.324%	2 006.15	306.86	2 313.01
Democratic People's Republic of Korea	10 661	0.003%	20.30	3.11	23.41
Denmark	1 762 429	0.543%	3 356.10	513.35	3 869.45
Egypt	2 738 612	0.843%	5 214.99	797.68	6 012.67
Estonia	128 423	0.040%	244.55	37.41	281.96
Finland	2 967 194	0.914%	5 650.26	864.26	6 514.52
Gabon	459 829	0.142%	875.63	133.94	1 009.57
Georgia	91 739	0.028%	174.69	26.72	201.41
Germany	35 676 012	10.985%	67 935.84	10 391.45	78 327.29
Ghana	26 935	0.008%	51.29	7.85	59.14
Greece	1 593 283	0.491%	3 034.00	464.08	3 498.08
Hungary	735 117	0.226%	1 399.84	214.12	1 613.96
Iceland	825 607	0.254%	1 572.16	240.48	1 812.64
India	10 140 642	3.122%	19 310.26	2 953.69	22 263.95
Ireland	6 373 839	1.963%	12 137.35	1 856.52	13 993.87
Italy	9 865 616	3.038%	18 786.54	2 873.58	21 660.12
Jordan	1 264 006	0.389%	2 406.98	368.17	2 775.15
Kuwait	1 670 086	0.514%	3 180.25	486.45	3 666.70
Lebanon	666 725	0.205%	1 269.61	194.20	1 463.81
Malaysia	9 842 986	3.031%	18 743.45	2 866.99	21 610.44
Malta	384 103	0.118%	731.43	111.88	843.31
Morocco	1 585 369	0.488%	3 018.93	461.77	3 480.70

APPENDIX H (cont'd)
ESTIMATED COST SHARES AND ASSESSMENTS
FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2008 *

STATES	2006 Available Tonne-Kilometres in Scheduled Services (000)	Percentage Cost Share	Share of 2008 Estimated Costs (£ Sterling)	Share of Under-recovery for 2006 (£ Sterling)	Amount to be Assessed for 2008 (£ Sterling)
Netherlands	17 344 576	5.340%	33 028.31	5 052.00	38 080.31
Oman	1 521 059	0.468%	2 896.47	443.04	3 339.51
Pakistan	3 362 515	1.035%	6 403.05	979.41	7 382.46
Poland	1 203 378	0.371%	2 291.53	350.51	2 642.04
Portugal	3 470 706	1.069%	6 609.07	1 010.92	7 619.99
Qatar	5 736 395	1.766%	10 923.50	1 670.85	12 594.35
Republic of Korea	25 441 535	7.834%	48 446.90	7 410.42	55 857.32
Republic of Moldova	70 034	0.022%	133.36	20.40	153.76
Romania	580 197	0.179%	1 104.84	169.00	1 273.84
Saudi Arabia	6 491 620	1.999%	12 361.63	1 890.83	14 252.46
Senegal	152 643	0.047%	290.67	44.46	335.13
Serbia	219 732	0.068%	418.42	64.00	482.42
South Africa	6 285 788	1.935%	11 969.68	1 830.88	13 800.56
Sri Lanka	1 692 735	0.521%	3 223.38	493.05	3 716.43
Swaziland	660	0.000%	1.26	0.19	1.45
Sweden	1 757 484	0.541%	3 346.68	511.91	3 858.59
Switzerland	4 800 953	1.478%	9 142.19	1 398.39	10 540.58
Syrian Arab Republic	451 069	0.139%	858.95	131.38	990.33
Thailand	10 516 053	3.238%	20 025.13	3 063.04	23 088.17
The former Yugoslav Republic of Macedonia	37 127	0.011%	70.70	10.81	81.51
Tunisia	517 541	0.159%	985.52	150.75	1 136.27
Turkey	5 148 885	1.585%	9 804.73	1 499.73	11 304.46
Ukraine	926 077	0.285%	1 763.48	269.74	2 033.22
United Arab Emirates	19 895 183	6.126%	37 885.29	5 794.92	43 680.21
United Kingdom	38 574 957	11.877%	73 456.10	11 235.85	84 691.95
Viet Nam	1 723 407	0.531%	3 281.79	501.98	3 783.77
Zimbabwe	247 771	0.076%	471.82	72.17	543.99
TOTAL	324 778 184	100.000%	618 457.00	94 599.00	713 056.00

* 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.

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;

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 under Section 1 C);

2) Units and services leased from 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) ~~Dual contingent~~ Communication links (utilising WMO TCP/IP sockets protocol) between SADIS Gateway and Met Office in support of SADIS 2G service. ~~(Note.—It is expected that this single link will be upgraded to dual contingent links within the next 12 months.)~~
- iii) **Not procured principally for SADIS**

- a) Message switch (FROST): Total investment £1.2M¹ of which ~~3.15~~ 2.47 per cent is attributable to SADIS usage: switching data to operational (1G) broadcast service and to 1G monitoring system — Corobor Comparitor.

~~Note.— The percentage attributable to the SADIS 1G service has increased as a result of increased costs incurred to support the legacy X25 protocol.~~

- b) Message switch (FROST): Total investment £1.2M¹ of which ~~0.94~~ 0.77 per cent is attributable to SADIS FTP service usage: switching data to operational FTP service;
- c) Message switch (FROST): Total investment £1.2M¹ of which ~~1.82~~ 0.8 per cent is attributable to SADIS usage: switching data to operational (2G) broadcast service and to 2G monitoring system (Corobor Comparitor);

~~Note — The percentages attributable to the SADIS 1G, SADIS FTP and SADIS 2G services have fallen as a result of increased FROST traffic to other users, particularly traffic to web-based services.~~

- 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 the CoreMet System are exclusively for the support of the SADIS gateway function.~~

B. ISCS data back-up system

ISCS VSAT system, including TCP/IP receiver, and cables.

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

¹ budgeted cost for providing FROST service during the fiscal year 2006/2007

C. Hub equipment and services located at Exeter and Whitehill

<i>Item</i>	<i>Description</i>	<i>Quantity</i>
1.	Exeter Equipment to support SADIS 1G	
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
1.6	Communications rack floor space in IT hall 1 and space in stores to locate spare equipment	1
2.	Exeter Equipment (Spares) to support SADIS 1G	
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
<i>Note.— communication links in support of SADIS 1G service are included in Section 1.1 of the inventory.</i>		
3.	Whitehill earth station (SADIS 1G 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
3.10	Communications rack floor space for two communications racks	2
4.	Whitehill earth station SADIS 1G (spares)	
4.1	8471 Receive Demodulators	1
4.2	Station interface unit (SIU)	1
4.3	Megapac V rack assembly	2
4.4	Mega PAC V 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 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
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7. ISDN back-up service to Washington (NWSTG)

7.1	Mega PAC 2003 router (MP-2003)	1
7.2	Mega PAC 2003 router plus expansion (MP-2003-3-B)	1
7.3	ISDN 2e circuit	1
7.4	A/B switch	1
7.5	Interface cables	1

Note. — Hardware listed items under Section 7 are located at Whitehill.

8. SADIS FTP service

8.1	HP L2000 servers with 2Gb RAM	2
8.2	18Gb internal disk drives	2
8.3	DVD-ROM	2
8.4	Processors	2
8.5	Licenses, misc. support and maintenance costs	1

9. Operational SADIS 2G Infrastructure

9.1	Frost port	1
9.2	MegaPAC V System Dual PSU	3*
9.3	MegaPAC 2003 (Exeter)	43*
9.4	Uplink modem (Comtech EF Data SDM-300a)	3*
9.5	Communications cabinet and lease	1
9.6	MegaWatch including Enterprise Reports, and PC	1
9.7	Corobor comparator software and PC	1
9.8	Comtech EF Data CR100 redundancy switch	1
9.98	X10 Modules	812**
9.109	SIO Modules	23*
9.140	8Mb RAM Modules	23*
9.121	Communications rack floor space at Exeter in IT Hall 1 and IT Hall 2, and at Whitehill	3
9.132	Space in stores at Exeter to locate spare hardware	1
9.143	VadEDGE 4202 – 1U	2*
9.154	WAN Module	2
9.165	Comtech EF Data SMS 301 – redundancy switch	12*
9.176	Misc. cables Interface cabling	515

*Note 1. — * Includes one unit/module stored as a cold spare.*

*Note 2. — ** Includes four modules stored as a cold spares.*

2. PROCURED SERVICES

- A. Space segment annual lease: 1.2 MHz wide frequency band dedicated to SADIS 1G and 2G with minimum data rates at 38.4 Kbps for both services;
- B. Annual maintenance of Met Office and Whitehill site equipment (SADIS 1G, 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) ~~Help~~ Service Desk

Note.— The ~~Help~~ 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.

<i>Normal working hours</i>	<i>Skill</i>
1. Help Service desk (first point of contact)	Scientific supervisor

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

<i>24-hour support</i>	<i>Skill</i>
1. Operations systems analyst (OAS)	Systems analyst
3. Networks and services engineer (NSE)	Computer engineer
3. Networks and systems supervisor (NSS)	Technical supervisor
4. Nowcasting and Service Continuity Manager (NSCM)	Scientist

<i>Normal working hours support</i>	<i>Skill</i>
1. Change and problem manager (CPM)	Systems analyst
2. Additional helpdesk Service Desk operator	Systems analyst

Note. — The total support for SADIS is considered as 1 per cent of the total support provided by the ~~helpdesk~~ Service Desk and operational support function. These functions comprise 4 24-hour rosters of six staff each, an additional three-man team (CPM), and one further 5-roster team providing further (normal working-hours) ~~helpdesk~~ Service Desk support.

ii) Additional support

<i>Additional support</i>	<i>Skill</i>
1. Systems integration team	30 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

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|--|--|
| 5. Contract procurement, and management
and invoicing | 5 per cent of senior procurement officer |
| 6. UNIX support | 10 per cent of computer engineer |
| 7. Web team support | 10 per cent of website designer |

Note. — 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.

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

Note. — The CACC provides the OPMET Gateway function, which is provided from ~~one~~ 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. The staff is made up of 6 watches of 1 ATSA4 (air traffic services assistant) and 1 ATSA3 each (operations), ~~and~~ 1 ATCE4 (air traffic control engineer) (engineering watchkeeping) and 3 ATCE4 (engineering day support).

<i>24-hour support</i>	<i>Skill</i>
1. Operational staff support	10 per cent of ATSA4 10 per cent of ATSA3
2. Engineering staff support	10 per cent of systems engineer
 <i>Day Support</i>	
3. SADIS administration support	40 per cent of ATSACT & SC
4. Engineering (one including on-call)	10 per cent of ATCE4 75 7.5 per cent of ATCE4

C. Bought-in services

Additional support and maintenance agreements with third parties are in place to provide third line support of the SADIS 1G and 2G services.