



SCRAG/15 - REPORT

INTERNATIONAL CIVIL AVIATION ORGANIZATION

**REPORT OF
THE FOURTEENTH MEETING OF THE
SADIS COST RECOVERY ADMINISTRATIVE GROUP
(SCRAG/15)**

(Frankfurt, 4 November 2014)

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INTRODUCTION

Place and duration

i.1 The Fifteenth Meeting of the SADIS Cost Recovery Administrative Group (SCRAG) was held at the Offices of the Deutscher Wetterdienst (German Weather Service), in Offenbach, Germany, on 4 November 2014.

Attendance

i.2 The Meeting was attended by two Members from the European Region and the Provider State (one 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. P. Simon, from France, was Chairperson of the Meeting. Ms. J. Zorbas, Joint Financing Officer, ICAO Headquarters, Montreal, was 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 2013

Agenda Item 4: Review of estimated SADIS costs and cost shares for the period 1 January to 31 December 2015 and estimated costs for the next 2-5 years

Agenda Item 5: Review of the status of SADIS payment for the current year (2014) invoices and depreciated assets

Agenda Item 6: Amendment to Annexes to the Agreement on the Sharing of Costs of the Satellite Distribution System relating to Air Navigation

Agenda Item 7: Future work and arrangements for the SCRAG/16 Meeting

Agenda Item 8: 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 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 59 States. Three of these States had the service withdrawn and three of these States are Least Developed Countries (LDCs), which are exempted from payment of SADIS cost share. The Group was also informed that 56 other States receiving the SADIS service had not yet acceded to the SADIS Agreement. Of these States, 29 are 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 Nineteenth Meeting of the SADIS Operations Group (SADISOPSG/19, London, 27 to 29 May 2014) provided by the Chairperson of SADISOPSG in the Executive Summary of Discussions of this meeting.

2.2 In accordance with Conclusion 19/5 of SADISOPSG/19, the Group noted the Statement of SADIS operational efficacy received from the Chairperson of SADISOPSG relaying the information from the Group at its Nineteenth Meeting to SCRAG that the operational efficacy of the SADIS had continued to be satisfactory, meeting all operational requirements since the SADISOPSG/18 Meeting (Dakar, 29 to 30 May 2013).

2.3 The Group noted Conclusion 19/13 of SADISOPSG/19 where the Chairperson of SADISOPSG was expected to notify the Chairperson of SCRAG that the running cost attributable to SADIS for a dedicated standalone server that would ensure the continuity of timeliness and availability monitoring, is approximately GBP 4,000 per annum (at 2014 prices). It was also noted that the SADIS Provider should undertake the migration of the monitoring system used from an existing development system to the standalone server.

2.4 The Group noted Conclusion 19/14 of SADISOPSG/19 where the Chairperson of SADISOPSG was expected to notify the Chairperson of SCRAG that the actual project costs, attributable to SADIS, associated with a mid-life upgrade to the SADIS Gateway Coremet system (NATS Message Switch) are GBP 187,110.27 comprising manufacturing hardware and NATS project costs. This cost is to be depreciated over a 5 year period.

2.5 The Group noted Conclusion 19/6 of SADISOPSG/19 where the Chairperson of SADISOPSG was expected to forward to the Chairperson of SCRAG an updated SADIS Inventory. This proposal is dealt with under Agenda Item 6 (see below paragraphs 6.1, 6.2 and Appendix J).

2.6 The Group noted that the information has effectively been forwarded to the SCRAG Chairperson.

**AGENDA ITEM 3: REVIEW OF ACTUAL SADIS COSTS AND COST SHARES FOR THE PERIOD
1 JANUARY TO 31 DECEMBER 2013**

Review of the 2013 Actual SADIS Costs

3.1 The Group reviewed the actual costs of providing the SADIS services in the year 2013. These actual costs are presented in Appendix E and total £739 839. 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 2013**

Cost Item	Actual Costs (UK £)
UK Meteorological Office	374 090
UK NATS Gateway	308 200
UK administrative costs	5 180
Sub-total UK	687 470
ICAO support services costs	52 369
TOTAL	739 839

Review of the 2013 Actual SADIS Cost Shares

3.2 The Group noted that one State, Slovenia, which was not assessed for the year 2013 by the SCRAG/13 Meeting, is included in the calculation of the actual cost shares for 2013 considering that it receives the SADIS service for a full year. Consequently, its share of the actual costs for 2013 was calculated based on 12 full months of service in 2013.

3.3 The Group noted that one State, Spain, which was not assessed for the year 2013 by the SCRAG/13 Meeting, is included in the calculation of the actual cost shares for 2013 considering that it receives the SADIS service (access to SADIS 2G) since 1 October 2013. Consequently, its share of the actual costs for 2013 was calculated based on 3 full months of service in 2013.

3.4 One State, Iran, which was assessed for the year 2013 by the SCRAG/13 Meeting, had its services withdrawn on 11 September 2013. Consequently, its share of the actual costs for 2013 was calculated based on 8 full months of service in 2013.

3.5 Another State, the Syrian Arab Republic, which was assessed for the year 2013 by the SCRAG/13 Meeting, had its services withdrawn on 17 April 2013. Consequently, its share of the actual costs for 2013 was calculated based on 3 full months of service in 2013.

3.6 One State, Tunisia which had its services withdrawn on 28 June 2012, and was assessed for the year 2013 by the SCRAG/13 Meeting, had its services reinstated on 22 March 2013. Consequently, its share of the actual costs for 2013 was calculated based on 9 full months of service in 2013.

3.7 The Group determined the actual cost shares for the period 1 January to 31 December 2013 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 2013, 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.

3.8 The Group noted that the adjustment for 2013, which is the combination of the difference between the 2013 actual costs and the 2013 estimated costs approved by the SCRAP/13 Meeting plus the amount assessed to the Russian Federation after the SCRAP/13 meeting, amounts to -£49 505. The Group formulated the following Conclusion:

Conclusion 15/1 -

The actual cost shares for 2013 as shown in Appendix E to the SCRAP/15 Report for the States participating in the SCAR Arrangement are approved by the SCRAP/15 Meeting, with consequential adjustments to be made by the United Kingdom in its billing of these States for 2015.

3.9 The Group received information from the observer from the United Kingdom on the status of payment of the cost shares of 2013 as at 1 December 2014. It noted that a total amount of £713 576 was collected for 2013 (see Appendix G – Table 1), representing 99.1% of the original amount billed for 2013 as approved by the SCRAP/13 Meeting. It also noted that an amount of £41 574 was collected for years prior to 2013 (see Appendix G – Table 2).

3.10 The Group notes that, consistent with Conclusion 14/7, which was reached during the SCRAP/14 meeting, the small additional costs incurred in the process of obtaining payment of SADIS invoices, (these include bank charges and courier costs) have been added to the administrative costs for the SADIS Provider State.

3.11 The Group noted that 3 States have not yet paid their assessment in full for the year 2013 and that the total amount due for 2013 is £6 178 (see Appendix G – Table 1).

3.12 Having noted the information in Table 1 and paragraphs 3.2 to 3.8 above, the Group agreed that the under-recovery of SADIS cost shares for the year 2013 amount to £9 100 as shown in Table 2. The under-recovery of 2013 is the amount subject to collection for 2013 (£764 250), less the amounts collected for 2013 (£713 576) and less the amounts collected for years prior to 2013 (£41 574). The Group formulated the following Conclusions:

Conclusion 15/2 -

An under-recovery, amounting to £9 100 of the SADIS cost shares for the year 2013 will be taken into account in the calculation of the SADIS cost shares for the year 2015, in accordance with Article XI, paragraph 4 of the SADIS Agreement.

**TABLE 2
UNDER-RECOVERY FOR 2013**

		(UK £)	References
(1)	Actual costs for 2013	739 839	Table 1
(2)	Under-recovery for 2011	24 411	SCRAP/13 Report, Table 2
(3)	Subject to collection for 2013	764 250	(1) + (2)
(4)	Collected from States for 2013 (as at 1 December 2014)	- 713 576	Appendix G – Table 1
(5)	Collected from States for years prior to 2013 (as at 1 December 2014)	- 41 574	Appendix G – Table 2
(6)	Under-recovery for 2013 (to be added to the assessments for 2015)	9 100	(3) + (4) + (5)

AGENDA ITEM 4: REVIEW OF ESTIMATED SADIS COSTS AND COST SHARES FOR THE PERIOD 1 JANUARY TO 31 DECEMBER AND ESTIMATED COSTS FOR THE NEXT 2-5 YEARS

Review of the 2015 Estimated SADIS Costs

4.1 The Group reviewed the cost estimates for providing the SADIS services in the year 2015.

4.2 The cost estimates for 2015 are detailed in Appendix F and total £790 315. 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 2015**

Cost Item	Estimated Costs (UK £)
UK Meteorological Office	377 112
UK NATS Gateway	357 974
UK CAA administrative costs	5 000
Sub-total UK	740 086
ICAO support services costs	50 229
TOTAL	790 315

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 2015. The calculation of the amount to be assessed is presented in Table 4.

**TABLE 4
AMOUNT TO BE ASSESSED UNDER THE SADIS AGREEMENT FOR 2015**

		(UK £)	References
(1)	Under-recovery for 2013	9 100	Table 2
(2)	Estimated costs for 2015	790 315	Table 3
(3)	Amount to be assessed for 2015	799 415	(1) + (2)

4.4 The Group determined the cost shares for the period 1 January to 31 December 2015 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 2013, in accordance with Article XI, paragraph 3 of the SADIS Agreement.

4.5 The Group noted that one State, Saudi Arabia, who had the service withdrawn on 28 January 2014, had the service reinstated on 29 September 2014, and is therefore included in the calculation of the assessment of cost shares for 2015.

4.6 The cost share in percentage terms and the share in £ sterling, including the share of under-recovery for 2013, to be borne by each State, are shown in Appendix H. Appendix I shows the

amounts to be billed to each State in 2015, corresponding to the adjustment for 2013 (Appendix E), plus the assessment for 2015 (Appendix H), less the deduction of unused credit balances from previous years. The Group formulated the following Conclusion:

Conclusion 15/3 -

The estimated cost shares for 2015 as shown in Appendix H to the SCRAG/15 Report for each State participating in the SCAR Arrangement are approved by the SCRAG/15 Meeting for collection by the United Kingdom. The Secretariat will place the tables in the SCRAG web page.

Cost estimates for the years 2016 to 2018

4.7 The Group considered the estimates provided by the United Kingdom (Appendix F) and summarised in Table 5 of providing the SADIS services for the years 2016 to 2018 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 2016, 2017 AND 2018***

Cost Item	Estimated Costs 2016 (UK £)	Estimated Costs 2017 (UK £)	Estimated Costs 2018 (UK £)
UK Meteorological Office	372 452	372 452	372 452
UK NATS Gateway	363 485	372 230	377 467
UK CAA administrative costs	5 000	5 000	5 000
Sub-total UK	740 937	749 682	754 919
ICAO support services costs	50 229	50 229	50 229
TOTAL	791 166	799 911	805 148

* Estimates based on 2014 prices.

AGENDA ITEM 5: REVIEW OF THE STATUS OF SADIS PAYMENTS FOR THE CURRENT YEAR (2014) INVOICES AND DEPRECIATED ASSETS

Depreciated Assets

5.1 The Group noted the information presented by the United Kingdom regarding the depreciated assets as at 31 December 2013 (see Appendix C) and approved the depreciation charges applicable from 2014 to 2018 inclusive.

5.2 The Group reviewed WP/13 on the status of payment for the current (2014) year, presented by the United Kingdom.

5.3 The Group formulated the following Conclusion:

Conclusion 15/4- The Group agreed that the SADIS Provider be invited to withdraw access to SADIS 2G and/or secure SADIS FTP for those States who, as at 1200 UTC on 28 January 2015, have cumulative outstanding payments over GBP 100 due for any invoice dated 2014 or earlier.

AGENDA ITEM 6: AMENDMENT TO ANNEXES TO THE AGREEMENT ON THE SHARING OF COSTS OF THE SATELLITE DISTRIBUTION SYSTEM RELATING TO AIR NAVIGATION

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

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

Conclusion 15/5 -

With the consent of the United Kingdom as the SADIS Provider State, in accordance with Article XVII, paragraph 5 of the SADIS Agreement, Annex II, SADIS Inventory, of the SADIS Agreement is amended as indicated in Appendix J to the SCRAG/15 Report.

AGENDA ITEM 7: FUTURE WORK AND ARRANGEMENTS FOR THE SCRAG/15 MEETING

7.1 The Group agreed that, subject to confirmation, its Sixteenth Meeting should be held at the UK CAA Offices in London during the first week of November 2015.

AGENDA ITEM 8: OTHER BUSINESS

8.1 The Group was informed by the Airport Operations and Interoperability (AOI) Section, that the Air Navigation Commission, during its 197th Session, approved the formation of the Meteorology Panel, (METP). Once the membership of the METP is established it will be tasked with establishing the necessary working groups which will include the maintenance and oversight of the SADIS system. The Group expressed concern regarding the potential impact of the change on the timetable of the SCRAG work requirements and requested that the SCRAG Chairperson communicate this to the ICAO Secretariat.

8.2 The Group considered the option of planning future meetings through Webex (or similar). The option will be considered on an annual basis taking into account the availability of attendees.

8.3 The Group expressed its appreciation to the Offices of the Deutscher Wetterdienst, in Offenbach, Germany for their hospitality and excellent support received during the meeting.

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APPENDIX A

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APPENDIX B**LIST OF SCRAG/15 WORKING PAPERS**

Working Paper No.	Agenda Item	Subject	Presented by
1	1 to 8	Provisional agenda	Secretariat
2	1, 3 & 4	Status of accession to the SADIS Agreement	Secretariat
3	2, 4 & 6	Reports on Conclusions of the SADISOPSG/19 Meeting	Chairperson, SADISOPSG
4	3	2013 ICAO actual SADIS administrative costs	Secretariat
5	3	2013 actual SADIS costs	United Kingdom
6	3 & 4	Status of payments for the year 2013	United Kingdom
7	3	Summary of actual costs and cost shares for the year 2013	Secretariat
8	5	Depreciated assets: SADIS costs	United Kingdom
9	4	2013 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 2015	Secretariat
12	6	Amendment to Annex II, SADIS Inventory, to the SADIS Agreement	Secretariat
13	5	Status of payments for the current (2014) year	United Kingdom

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APPENDIX C

**INVENTORY OF ASSETS
EMPLOYED BY THE UNITED KINGDOM TO PROVIDE SADIS SERVICES**

(1) Inventory of Assets: 2014	(2) Original Value	(3) Depreciated charges in 2014	(4) Total accumulated depreciation	(5) Net depreciated values at end of 2014
Original HUB Investment, Trial Systems and Capitalized Operation Asset	£713 769	£0	£713 769	£0
Two-Way Hub enhancement, VSATS and development	£375 000	£0	£375 000	£0
SADIS 2G Operational System	£87 428	£0	£87 428	£0
SADIS 2G Hardware Refresh	£59 988	£8 712	£59 987	£0
Total UKMO	£1 236 185	£8 712	£1 236 185	£0
SADIS Gateway	£227 462	£0	£227 462	£0

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APPENDIX D

STATES WHICH FORMALLY ACCEDED TO THE SADIS AGREEMENT

STATES	LDC's Exempted
Albania	
Armenia	
Australia	
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	
France	
Gabon	
Georgia	
Germany	
Greece	
Hungary	
Israel	
Italy	
Jordan	
Kazakhstan	
Kuwait	
Latvia	
Lithuania	
Madagascar	X
Mauritius *	
Mongolia *	
Morocco	
Netherlands	
Oman	
Pakistan	
Poland	
Portugal	
Republic of Moldova	
Romania	
Russian Federation	
Senegal	
Slovakia	
Slovenia	
Spain	
Sweden	
Switzerland	
Thailand	
Tunisia	
Turkmenistan *	
Ukraine	
United Arab Emirates	
United Kingdom	
United Republic of Tanzania	X
Viet Nam	

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

APPENDIX D (cont'd)

STATES WHICH HAVE NOT YET ACCEDED TO THE SADIS AGREEMENT

STATES	LDC's Exempted
Afghanistan	X
Algeria	
Angola	X
Azerbaijan	
Bangladesh	X
Benin	X
Bosnia and Herzegovina	
Bulgaria	
Burkina Faso	X
Burundi	X
Cambodia	X
Cape Verde	
Central African Republic	X
Chad	X
Comoros	X
Djibouti	X
Equatorial Guinea	X
Ethiopia	X
Gambia	X
Ghana	
Guinea	X
Guinea-Bissau	X
Iceland	
India	
Indonesia	
Iran (Islamic Republic of) *	
Iraq	
Ireland	
Kenya	
Lao People's Democratic Republic *	X
Libya	
Malawi	X
Maldives	
Mali	X
Malta	
Mauritania	X
Mozambique	X
Myanmar *	X
Namibia	
Nepal	X
Niger	X
Nigeria	
Qatar	
Rwanda	X
Saudi Arabia	
Serbia	
Seychelles	
Somalia	X
South Africa	
Sri Lanka*	
Sudan	X
Swaziland	
Syrian Arab Republic *	
The former Yugoslav Republic of Macedonia	
Togo	X
Turkey	
Uganda	X
Uzbekistan	
Yemen	X
Zambia	X
Zimbabwe	

* This State does not presently receive the service.

APPENDIX E

ACTUAL COST SHARES FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2013*

AND ADJUSTMENT FOR 2013

STATES	2013 Available Tonne-Kilometres in Scheduled Services (000)	Percentage Cost Share	Share of 2013 Actual Costs (£ Sterling)	Share of 2013 Estimated Costs (SCRAG/13) (£ Sterling) **	Adjustment for 2013 (£ Sterling)
Albania	148 152	0.026%	192.83	312.10	- 119.27
Algeria	863 538	0.152%	1 123.94	983.80	140.14
Armenia	10 773	0.002%	14.02	165.74	- 151.72
Australia	24 246 900	4.266%	31 558.73	27 645.39	3 913.34
Austria	3 366 938	0.592%	4 382.26	5 420.12	- 1 037.86
Azerbaijan	515 483	0.091%	670.93	544.36	126.57
Bahrain	2 015 418	0.355%	2 623.18	4 850.61	- 2 227.43
Belgium	5 093 063	0.896%	6 628.91	3 989.77	2 639.14
Bosnia and Herzegovina	2 723	0.000%	3.54	143.75	- 140.21
Botswana	48 092	0.008%	62.59	67.72	- 5.13
Bulgaria	175 539	0.031%	228.47	273.25	- 44.78
Cameroon	73 303	0.013%	95.41	87.04	8.37
Cape Verde	180 563	0.032%	235.01	254.64	- 19.63
China: - Beijing	92 361 117	16.249%	120 213.27	126 118.12	- 5 904.85
- Hong Kong	29 065 740	5.113%	37 830.72	45 037.54	- 7 206.82
- Macau	498 722	0.088%	649.12	628.57	20.55
Congo	70 791	0.012%	92.14	147.25	- 55.11
Côte d'Ivoire	86 152	0.015%	112.13	31.24	80.89
Croatia	184 943	0.033%	240.71	322.65	- 81.94
Cyprus	275 305	0.048%	358.33	646.42	- 288.09
Czech Republic	856 399	0.151%	1 114.65	1 507.93	- 393.28
Democratic People's Republic of Korea	35 133	0.006%	45.73	25.00	20.73
Denmark	1 776 221	0.312%	2 311.85	3 640.90	- 1 329.05
Egypt	4 597 833	0.809%	5 984.34	5 601.95	382.39
Estonia	87 164	0.015%	113.45	131.18	- 17.73
Finland	4 255 882	0.749%	5 539.27	6 746.37	- 1 207.10
France	28 650 262	5.040%	37 289.95	39 843.62	- 2 553.67
Gabon	639	0.000%	0.83	84.34	- 83.51
Georgia	44 113	0.008%	57.42	218.57	- 161.15
Germany	38 478 471	6.769%	50 081.93	62 639.24	- 12 557.31
Ghana	32 053	0.006%	41.72	11.38	30.34
Greece	911 168	0.160%	1 185.94	1 805.36	- 619.42
Hungary	1 954 013	0.344%	2 543.26	3 748.38	- 1 205.12
Iceland	1 149 903	0.202%	1 496.66	1 352.02	144.64
India	17 223 867	3.030%	22 417.85	28 784.75	- 6 366.90
Indonesia	12 238 471	2.153%	15 929.07	19 199.20	- 3 270.13
Iran (Islamic Republic of) (note 1)	2 152 717	0.379%	2 801.88	3 838.95	- 1 037.07
Iraq	115 877	0.020%	150.82	0.00	150.82
Ireland	13 730 721	2.416%	17 871.32	19 841.72	- 1 970.40
Italy	5 854 410	1.030%	7 619.85	10 984.51	- 3 364.66
Jordan	1 784 402	0.314%	2 322.50	2 874.51	- 552.01
Kazakhstan	1 651 532	0.291%	2 149.56	1 833.01	316.55
Kenya	1 490 282	0.262%	1 939.69	2 330.14	- 390.45
Kuwait	1 636 604	0.288%	2 130.13	2 839.66	- 709.53
Latvia	449 955	0.079%	585.64	836.68	- 251.04
Libya	634 715	0.112%	826.12	1 209.96	- 383.84
Lithuania	374 121	0.066%	486.94	3.55	483.39

APPENDIX E (cont'd)

ACTUAL COST SHARES FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2013*

AND ADJUSTMENT FOR 2013

STATES	2013 Available Tonne-Kilometres in Scheduled Services (000)	Percentage Cost Share	Share of 2013 Actual Costs (£ Sterling)	Share of 2013 Estimated Costs (SCRAG/13) (£ Sterling) **	Adjustment for 2013 (£ Sterling)
Maldives (note 6)	1 303	0.000%	1.70	1.91	- 0.21
Malta	367 266	0.065%	478.02	564.52	- 86.50
Morocco	2 087 765	0.367%	2 717.35	4 102.73	- 1 385.38
Namibia	266 591	0.047%	346.98	860.57	- 513.59
Netherlands	20 445 437	3.597%	26 610.91	24 367.44	2 243.47
Nigeria	499 973	0.088%	650.74	591.87	58.87
Oman	1 835 475	0.323%	2 388.98	2 230.87	158.11
Pakistan	3 424 847	0.603%	4 457.63	5 405.60	- 947.97
Poland	1 218 425	0.214%	1 585.85	1 775.38	- 189.53
Portugal	4 905 968	0.863%	6 385.40	7 528.43	- 1 143.03
Qatar	20 804 678	3.660%	27 078.48	25 740.49	1 337.99
Republic of Moldova	105 757	0.019%	137.65	163.44	- 25.79
Romania	622 803	0.110%	810.61	1 082.58	- 271.97
Russian Federation	29 785 001	5.240%	38 766.88	37 300.00	1 466.88
Saudi Arabia	11 469 931	2.018%	14 928.77	14 876.59	52.18
Senegal	79 533	0.014%	103.52	332.12	- 228.60
Serbia	207 092	0.036%	269.54	306.97	- 37.43
Seychelles	229 883	0.040%	299.21	425.09	- 125.88
Slovakia	5 045	0.001%	6.57	4.94	1.63
Slovenia (note 2)	126 961	0.022%	165.25	0.00	165.25
South Africa	6 360 752	1.119%	8 278.88	9 484.34	- 1 205.46
Spain (note 3)	3 110 355	0.547%	4 048.30	0.00	4 048.30
Sri Lanka	0	0.000%	0.00	2 984.98	- 2 984.98
Swaziland (note 6)	2 060	0.000%	2.68	2.88	- 0.20
Sweden	1 775 156	0.312%	2 310.47	3 199.58	- 889.11
Switzerland	8 596 146	1.512%	11 188.38	12 177.75	- 989.37
Syrian Arab Republic (note 4)	71 927	0.013%	93.62	1 316.34	- 1 222.72
Thailand	15 077 972	2.653%	19 624.84	20 973.03	- 1 348.19
The former Yugoslav Republic of Macedonia (note 6)	37 988	0.007%	49.44	50.21	- 0.77
Tunisia (note 5)	662 024	0.116%	861.66	0.00	861.66
Turkey	20 846 903	3.667%	27 133.44	23 172.47	3 960.97
Ukraine	1 071 008	0.188%	1 393.98	2 911.26	- 1 517.28
United Arab Emirates	61 925 169	10.894%	80 599.15	71 658.73	8 940.42
United Kingdom	42 130 299	7.412%	54 835.02	65 109.34	- 10 274.32
Uzbekistan	1 330 271	0.234%	1 731.42	2 052.49	- 321.07
Viet Nam	5 407 923	0.951%	7 038.72	6 835.49	203.23
Zimbabwe	80 176	0.014%	104.35	150.61	- 46.26
TOTAL	568 426 046	100.000%	739 839.00	789 344.00	- 49 505.00

* Excludes Least Developed Countries exempted.

The above figure of £789 344 represents the SCRAG/13 estimated cost figure of £752 044 and the subsequently billed amount of £37 300 attributable to the Russian Federation.

Note 1: Considering that the Iran (Islamic Republic of) had its service withdrawn on 11 September 2013, its share of the 2013 actual costs was calculated based on 8 full months of service in 2013.

Note 2: Considering that Slovenia received the service throughout the entire 2013 year and had not been assessed, its share of the 2013 actual costs was calculated for the entire 2013 year.

Note 3: Considering that Spain receives the service since 1 October 2013, its share of actual costs was calculated based on 3 full months of service in 2013.

Note 4: Considering that the Syrian Arab Republic had its service withdrawn on 17 April 2013, its share of the 2013 actual costs was calculated based on 3 full months of service in 2013.

Note 5: Considering that Tunisia had its service reinstated on 22 March 2013, its share of the 2013 actual costs was calculated based on 9 full months of service in 2013.

Note 6: We did not receive the number of ATKs in 2013 for the Maldives, Swaziland and the Former Yugoslav Republic of Macedonia.

The number of ATKs shown is the latest available adjusted based on the annual growth rate of ATKs for the specific Region.

Note 7: Sri Lanka was originally assessed for 2013, however no services were received throughout the year. There is therefore no amount attributable to Sri Lanka as a share of the 2013 Actual Costs.

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APPENDIX F

TABLE 1: UKMO Cost and manpower resource projections until year 2018 (at 2014 prices)

		Actual 2013	FOO 2014 (SCRAG15)	Est 2015	Est 2016	Est 2017	Est 2018
INVENTORY REF:	Note DESCRIPTION						
1	UK MET OFFICE COSTS						
	1. Equipment						
	Principally procured for SADIS						
	comms between Whitehill & Met Office	a	SADIS 2G	5,816	5,816	5,816	5,816
	comms link SADIS Gateway & Met Office		SADIS 2G	3,340	3,340	3,340	3,340
			ISDN Back-up	372	372	372	372
	Not procured principally for SADIS						
	message switch (FTP)	b	Secure SADIS FTP	7,380	7,380	7,500	7,500
	message switch (2G)		SADIS 2G	5,461	5,461	5,500	5,500
	internet bandwidth (FTP)		FTP	7,362	6,512	6,500	6,500
	FTP equipment running costs		FTP	33,805	13,061	13,000	13,000
	Service Desk Equipment Costs		Service Desk eqpt	12,042	12,473	12,500	12,500
	Serial Comms Costs and maintenance		Serial Comms	9,848	10,601	11,000	11,000
	sub total			85,426	65,016	65,528	65,528
	2. Procured Services						
	space segment annual lease	c	Satellite Segment	54,660	54,660	54,660	60,000
	annual maintenance	d	2G Maintenance	35,172	36,228	36,500	36,500
			2G Facilities Management	6,300	6,300	6,300	6,300
			IT Hall Space	14,824	14,863	15,000	15,000
		e	ad hoc maintenance	1,366	5,000	5,000	5,000
	sub total			112,322	117,051	117,460	122,800
	3. Annual Staff Requirements	f					
	Help Desk		Help Desk 0.3%	5,510	5,916	6,000	6,000
			Technical Team Leader 3.5%	12,471	12,647	12,700	12,700
			Network Systems Supervisor 7%	24,943	25,295	25,300	25,300
	Additional Support						
	Systems Integration Team		Network Computer Engineer	4,866	4,866	5,292	5,292
	Message Switching		Message Switching Manager	5,214	5,214	5,670	5,670
	Administrator		Executive Officer	55,612	55,612	62,850	62,850
	International Aviation Management		Aviation Manager	12,805	12,805	7,290	7,290
	Data Traffic		Communications Engineer	1,738	1,738	1,890	1,890
	Contract Management		Senior Procurement Officer	1,390	1,390	1,512	1,512
	Message Switching Team		Technical Officer	5,214	5,214	5,670	5,670
	Invoice Administration		Finance Officer & Business Acct	13,354	13,354	14,850	14,850
	SADIS Satellite Upgrade/decommissioning	g	Resource costs		10,000		
	Travel Costs		SADISOPSG & SCRAG	1,990	2,000	3,000	3,000
	sub total			145,107	146,051	162,024	152,024
	TOTAL			342,855	328,118	345,012	340,352
	Cost of Depreciated Capital						
		h	SADIS 2G	11,616	8,712	0	0
			FTP enhancements	0	0	0	0
		i	SADIS 2G ground segment Refresh	0	0	12,000	12,000
	sub total			354,471	336,830	357,012	352,352
			Cost of Capital	19,348	20,000	20,000	20,000
	Administrative costs	j	Financing costs	271	100	100	100
	Total UKMO Costs			374,090	356,930	377,112	372,452

APPENDIX F (cont'd)

TABLE 2: NATS and other SADIS Cost Projections until 2018

			Actual 2013	FOO 2014 (SCRAG15)	Est 2015	Est 2016	Est 2017	Est 2018
INVENTORY REF:	Note	DESCRIPTION						
2		NATS Gateway Costs						
	k	Staff Costs						
		Operational Staff	252,917	270,739	276,968	284,043	294,223	301,008
		Engineering Staff	2,397	10,210	9,430	9,660	10,009	10,242
		Engineering Staff	2,512	N/A	N/A	N/A	N/A	N/A
		Administration Staff	24,732	801	1,099	1,122	1,161	1,188
		sub total	282,558	281,750	287,497	294,825	305,393	312,438
		Systems Maintenance						
	I	IP Comms link to UKMO	18,128	N/A	N/A	N/A	N/A	N/A
		X.25 Comms link to UKMO	0	N/A	N/A	N/A	N/A	N/A
		Systems Maintenance	6,264	N/A	N/A	N/A	N/A	N/A
		Communications	N/A	4,000	7,500	7,652	7,801	7,957
		Maintenance	N/A	1,250	6,500	6,632	6,761	6,896
		T&RE	N/A	471	4,750	4,846	4,941	5,039
		Sadis Gateway Upgrade (Capital Project)	0	0	20,301	20,301	20,301	20,301
	m	Cost of Depreciated Capital	0	0	20,443	20,443	20,443	20,443
		Interest at 5.88%	0	0	10,983	8,786	6,590	4,393
		Sadis Backup enhancement	0	0	0	0	0	0
		annual support costs	1250	0	0	0	0	0
		Total NATS Gateway Costs	308,200	287,471	357,974	363,485	372,230	377,467
		CAA Administration Costs	5,180	5,000	5,000	5,000	5,000	5,000
		ICAO Administration Costs	52,369	51,686	50,229	50,229	50,229	50,229
		TOTAL SADIS COSTS	739,839	701,087	790,315	791,166	799,911	805,148

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APPENDIX G
TABLE 1
STATUS OF PAYMENT OF THE ASSESSMENT FOR 2013
AS AT 1 DECEMBER 2014

(£ Sterling)					
STATES	Total amount billed for 2013 (SCRAG/13 Report, Appendix I)	Amount Collected as at 1 December 2014	Administrative Charges Applied	Application of credit balance (or part of)	Unpaid amount (excess paid) as at 1 October 2014
Albania	430.55	430.55			0.00
Algeria	379.36	379.36	38.09		0.00
Armenia	- 1.79				- 1.79
Australia	28 542.75	28 542.75			0.00
Austria	5 354.22	5 354.22			0.00
Azerbaijan	588.72	588.72	2.00		0.00
Bahrain	2 529.95	2 529.95			0.00
Belgium	1 122.52	1 122.52	2.00		0.00
Bosnia and Herzegovina	247.80	247.80			0.00
Botswana	92.17	92.17			0.00
Bulgaria	158.67	158.67			0.00
Cameroon	0.00				0.00
Cape Verde	85.79	85.79			0.00
China: - Beijing	120 967.56	120 967.56	17.22		0.00
- Hong Kong	42 814.27	42 814.27	27.00		0.00
- Macau	485.39	485.39			0.00
Congo	132.20	132.20	7.20		0.00
Côte d'Ivoire	- 241.57				- 241.57
Croatia	201.46	201.46			0.00
Cyprus	- 198.42				- 198.42
Czech Republic	690.42	690.42			0.00
Democratic People's Republic of Korea	0.00	0.00			0.00
Denmark	4 077.76	4 077.76			0.00
Egypt	3 892.50	3 892.50	22.52		0.00
Estonia	90.28	90.28			0.00
Finland	6 166.35	6 166.35			0.00
France	37 830.95	37 830.95	4.00		0.00
Gabon	- 979.50				- 979.50
Georgia	242.43	242.43			0.00
Germany	47 715.89	47 715.89			0.00
Ghana	- 28.14				- 28.14
Greece	430.24	430.24	7.00		0.00
Hungary	5 642.71	5 642.71			0.00
Iceland	1 327.65	1 327.65			0.00
India	27 412.02	27 412.02			0.00
Indonesia	19 822.40	19 822.40			0.00
Iran (Islamic Republic of)	3 276.04				3 276.04
Ireland	18 241.46	18 241.46			0.00
Italy	3 227.22	3 227.22			0.00
Jordan	3 053.29	3 053.29			0.00
Kazakhstan	2 687.71	2 687.71			0.00
Kenya	887.74	887.74			0.00
Kuwait	2 216.52	2 216.52	11.00		0.00
Latvia	1 066.82	1 066.82			0.00
Libya	1 853.40	1 853.40			0.00

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APPENDIX G (cont'd)

TABLE 1 (cont'd)

STATUS OF PAYMENT OF THE ASSESSMENT FOR 2013
AS AT 1 DECEMBER 2014

(£ Sterling)

STATES	Total amount billed for 2013 (SCRAG/13 Report, Appendix I)	Amount Collected as at 1 December 2014	Administrative Charges Applied	Application of credit balance (or part of)	Unpaid amount (excess paid) as at 1 October 2014
Lithuania	- 354.68	- 354.68			0.00
Maldives	1.97	1.97			0.00
Malta	18.18	18.18			0.00
Morocco	4 506.76	4 506.76	12.00		0.00
Namibia	1 222.33	1 222.33			0.00
Netherlands	11 483.56	11 483.56			0.00
Nigeria	634.28	634.28			0.00
Oman	1 026.38	1 026.38			0.00
Pakistan	4 705.40	4 705.40			0.00
Poland	816.95	816.95			0.00
Portugal	5 812.13	5 812.13			0.00
Qatar	29 999.61	29 999.61			0.00
Republic of Moldova	137.59	137.59			0.00
Romania	586.98	586.98			0.00
Russian Federation *	42 427.56	42 427.56			0.00
Saudi Arabia	13 368.60	13 368.60			0.00
Senegal	298.18	298.18	7.00		0.00
Serbia	202.32	202.32			0.00
Seychelles	438.89	438.89			0.00
Slovakia	5.10	5.10			0.00
South Africa	7 406.43	7 406.43			0.00
Sri Lanka	2 968.46				2 968.46
Swaziland	2.58	2.58			0.00
Sweden	3 097.51	3 097.51			0.00
Switzerland	11 706.96	11 706.96			0.00
Syrian Arab Republic	1 701.46				1 701.46
Thailand	19 783.11	19 783.11			0.00
The former Yugoslav Republic of Macedonia	74.00	74.00			0.00
Tunisia	- 200.07	- 200.07			0.00
Turkey	27 854.46	27 854.46			0.00
Ukraine	3 314.51	3 314.51			0.00
United Arab Emirates	73 412.15	73 412.15	7.00		0.00
United Kingdom	47 263.33	47 263.33			0.00
Uzbekistan	2 000.76	2 000.76			0.00
Viet Nam	7 813.25	7 813.25	18.14		0.00
Zimbabwe	- 318.19				- 318.19
TOTAL	719 754.56	713 576.21	182.17	0.00	6 178.35

* Amount indicated as billed for the Russian Federation exceeds the amount indicated in the SCRAG/13 Report, Appendix I.

The Russian Federation was assessed 37 300 £ for 2013 subsequent to the SCRAG 13 Meeting.

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APPENDIX G (cont'd)

TABLE 2

STATUS OF PAYMENT OF BALANCES FOR YEARS PRIOR TO 2013
AS AT 1 DECEMBER 2014

(£ Sterling)

STATES	Balance due for years prior to 2013	Amount Collected as at 1 December 2014	Administrative Charges Applied	Application of credit balance (or part of)	Unpaid amount (excess paid) as at 1 October 2014
Algeria	3 206.13	3 206.13	9.73		0.00
Bosnia and Herzegovina	303.05	303.05	4.07		0.00
Cape Verde	7.87	7.87	7.87		0.00
Congo	194.31	194.31	14.00		0.00
Cote d'Ivoire	329.02	329.02	7.00		0.00
Egypt	25.00	25.00	25.00		0.00
Iran (Islamic Republic of)	13 109.16				13 109.16
Jordan	2 938.31				2 938.31
Kenya	1.95	1.95	1.95		0.00
Lebanon	0.18	0.18	0.18		0.00
Portugal	7 819.15	7 819.15	12.34		0.00
Saudi Arabia	20 272.72	20 272.72			0.00
Senegal	420.38	420.38			0.00
Swaziland	18.29	18.29			0.00
Syrian Arab Republic	2 136.60				2 136.60
Vietnam	8 235.59	8 235.59	7.00		0.00
Zimbabwe	740.61	740.61		173.32	- 173.32
TOTAL	59 758.32	41 574.25	89.14	173.32	18 010.75

APPENDIX H
ESTIMATED COST SHARES AND ASSESSMENTS
FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2015 *

STATES	2013 Available Tonne-Kilometres in Scheduled Services (000)	Percentage Cost Share	Share of 2015 Estimated Costs (£ Sterling)	Share of Under-recovery for 2013 (£ Sterling)	Amount to be Assessed for 2015 (£ Sterling)
Albania	148 152	0.026%	201.87	2.32	204.19
Algeria	863 538	0.149%	1 176.65	13.55	1 190.20
Armenia	10 773	0.002%	14.68	0.17	14.85
Australia	24 246 900	4.180%	33 038.62	380.42	33 419.04
Austria	3 366 938	0.580%	4 587.76	52.83	4 640.59
Azerbaijan	515 483	0.089%	702.39	8.09	710.48
Bahrain	2 015 418	0.347%	2 746.19	31.62	2 777.81
Belgium	5 093 063	0.878%	6 939.76	79.91	7 019.67
Bosnia and Herzegovina	2 723	0.000%	3.71	0.04	3.75
Botswana	48 092	0.008%	65.53	0.75	66.28
Bulgaria	175 539	0.030%	239.19	2.75	241.94
Cameroon	73 303	0.013%	99.88	1.15	101.03
Cape Verde	180 563	0.031%	246.03	2.83	248.86
China: - Beijing	92 361 117	15.924%	125 850.48	1 449.09	127 299.57
- Hong Kong	29 065 740	5.011%	39 604.73	456.02	40 060.75
- Macau	498 722	0.086%	679.55	7.82	687.37
Congo	70 791	0.012%	96.46	1.11	97.57
Côte d'Ivoire	86 152	0.015%	117.39	1.35	118.74
Croatia	184 943	0.032%	252.00	2.90	254.90
Cyprus	275 305	0.047%	375.13	4.32	379.45
Czech Republic	856 399	0.148%	1 166.92	13.44	1 180.36
Democratic People's Republic of Korea	35 133	0.006%	47.87	0.55	48.42
Denmark	1 776 221	0.306%	2 420.26	27.87	2 448.13
Egypt	4 597 833	0.793%	6 264.97	72.14	6 337.11
Estonia	87 164	0.015%	118.77	1.37	120.14
Finland	4 255 882	0.734%	5 799.03	66.77	5 865.80
France	28 650 262	4.940%	39 038.61	449.51	39 488.12
Gabon	639	0.000%	0.87	0.01	0.88
Georgia	44 113	0.008%	60.11	0.69	60.80
Germany	38 478 471	6.634%	52 430.44	603.70	53 034.14
Ghana	32 053	0.006%	43.68	0.50	44.18
Greece	911 168	0.157%	1 241.55	14.30	1 255.85
Hungary	1 954 013	0.337%	2 662.52	30.66	2 693.18
Iceland	1 149 903	0.198%	1 566.85	18.04	1 584.89
India	17 223 867	2.970%	23 469.10	270.23	23 739.33
Indonesia	12 238 471	2.110%	16 676.04	192.01	16 868.05
Iraq	115 877	0.020%	157.89	1.82	159.71
Ireland	13 730 721	2.367%	18 709.36	215.43	18 924.79
Israel	4 255 577	0.734%	5 798.61	66.77	5 865.38
Italy	5 854 410	1.009%	7 977.17	91.85	8 069.02
Jordan	1 784 402	0.308%	2 431.41	28.00	2 459.41
Kazakhstan	1 651 532	0.285%	2 250.36	25.91	2 276.27
Kenya	1 490 282	0.257%	2 030.65	23.38	2 054.03
Kuwait	1 636 604	0.282%	2 230.02	25.68	2 255.70
Latvia	449 955	0.078%	613.10	7.06	620.16
Libya	634 715	0.109%	864.86	9.96	874.82

APPENDIX H (cont'd)
ESTIMATED COST SHARES AND ASSESSMENTS
FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2015 *

STATES	2013 Available Tonne-Kilometres in Scheduled Services (000)	Percentage Cost Share	Share of 2015 Estimated Costs (£ Sterling)	Share of Under-recovery for 2013 (£ Sterling)	Amount to be Assessed for 2015 (£ Sterling)
Lithuania	374 121	0.065%	509.77	5.87	515.64
Maldives	1 303	0.000%	1.78	0.02	1.80
Malta	367 266	0.063%	500.43	5.76	506.19
Morocco	2 087 765	0.360%	2 844.77	32.76	2 877.53
Namibia	266 591	0.046%	363.25	4.18	367.43
Netherlands	20 445 437	3.525%	27 858.78	320.78	28 179.56
Nigeria	499 973	0.086%	681.26	7.84	689.10
Oman	1 835 475	0.316%	2 501.00	28.80	2 529.80
Pakistan	3 424 847	0.590%	4 666.67	53.73	4 720.40
Poland	1 218 425	0.210%	1 660.22	19.12	1 679.34
Portugal	4 905 968	0.846%	6 684.83	76.97	6 761.80
Qatar	20 804 678	3.587%	28 348.28	326.41	28 674.69
Republic of Moldova	105 757	0.018%	144.10	1.66	145.76
Romania	622 803	0.107%	848.63	9.77	858.40
Russian Federation	29 785 001	5.135%	40 584.79	467.31	41 052.10
Saudi Arabia	11 469 931	1.978%	15 628.83	179.96	15 808.79
Senegal	79 533	0.014%	108.37	1.25	109.62
Serbia	207 092	0.036%	282.18	3.25	285.43
Seychelles	229 883	0.040%	313.24	3.61	316.85
Slovakia	5 045	0.001%	6.87	0.08	6.95
Slovenia	126 961	0.022%	173.00	1.99	174.99
South Africa	6 360 752	1.097%	8 667.11	99.80	8 766.91
Spain	12 441 420	2.145%	16 952.57	195.20	17 147.77
Swaziland	2 060	0.000%	2.81	0.03	2.84
Sweden	1 775 156	0.306%	2 418.81	27.85	2 446.66
Switzerland	8 596 146	1.482%	11 713.04	134.87	11 847.91
Thailand	15 077 972	2.600%	20 545.12	236.56	20 781.68
The former Yugoslav Republic of Macedonia	37 988	0.007%	51.76	0.60	52.36
Tunisia	882 698	0.152%	1 202.76	13.85	1 216.61
Turkey	20 846 903	3.594%	28 405.81	327.08	28 732.89
Ukraine	1 071 008	0.185%	1 459.35	16.80	1 476.15
United Arab Emirates	61 925 169	10.677%	84 378.71	971.57	85 350.28
United Kingdom	42 130 299	7.264%	57 406.42	661.00	58 067.42
Uzbekistan	1 330 271	0.229%	1 812.62	20.87	1 833.49
Viet Nam	5 407 923	0.932%	7 368.79	84.85	7 453.64
Zimbabwe	80 176	0.014%	109.25	1.26	110.51
TOTAL	580 008 718	100.000%	790 315.00	9 100.00	799 415.00

* 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.

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APPENDIX I
AMOUNTS TO BE BILLED
FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2015
(£ Sterling)

STATES	Adjustment for 2013 (Appendix E)	Assessment for 2015 (Appendix H)	Deduction of Unused Credit Balance from Previous Years	Total Amount to be Billed for 2015
Albania	- 119.27	204.19		84.92
Algeria	140.14	1 190.20		1 330.34
Armenia	- 151.72	14.85		- 136.87
Australia	3 913.34	33 419.04		37 332.38
Austria	- 1 037.86	4 640.59		3 602.73
Azerbaijan	126.57	710.48		837.05
Bahrain	- 2 227.43	2 777.81		550.38
Belgium	2 639.14	7 019.67		9 658.81
Bosnia and Herzegovina	- 140.21	3.75		- 136.46
Botswana	- 5.13	66.28		61.15
Bulgaria	- 44.78	241.94		197.16
Cameroon	8.37	101.03		109.40
Cape Verde	- 19.63	248.86		229.23
China: - Beijing	- 5 904.85	127 299.57		121 394.72
- Hong Kong	- 7 206.82	40 060.75		32 853.93
- Macau	20.55	687.37		707.92
Congo	- 55.11	97.57		42.46
Côte d'Ivoire	80.89	118.74	- 191.24	8.39
Croatia	- 81.94	254.90		172.96
Cyprus	- 288.09	379.45	- 64.51	26.85
Czech Republic	- 393.28	1 180.36		787.08
Democratic People's Republic of Korea	20.73	48.42		69.15
Denmark	- 1 329.05	2 448.13		1 119.08
Egypt	382.39	6 337.11		6 719.50
Estonia	- 17.73	120.14		102.41
Finland	- 1 207.10	5 865.80		4 658.70
France	- 2 553.67	39 488.12		36 934.45
Gabon	- 83.51	0.88		- 82.63
Georgia	- 161.15	60.80		- 100.35
Germany	- 12 557.31	53 034.14		40 476.83
Ghana	30.34	44.18	- 28.14	46.38
Greece	- 619.42	1 255.85		636.43
Hungary	- 1 205.12	2 693.18		1 488.06
Iceland	144.64	1 584.89		1 729.53
India	- 6 366.90	23 739.33		17 372.43
Indonesia	- 3 270.13	16 868.05		13 597.92
Iran (Islamic Republic of)	- 1 037.07	0.00		- 1 037.07
Iraq	150.82	159.71		310.53
Ireland	- 1 970.40	18 924.79		16 954.39
Israel	0.00	5 865.38		5 865.38
Italy	- 3 364.66	8 069.02		4 704.36
Jordan	- 552.01	2 459.41		1 907.40
Kazakhstan	316.55	2 276.27		2 592.82
Kenya	- 390.45	2 054.03		1 663.58
Kuwait	- 709.53	2 255.70		1 546.17
Latvia	- 251.04	620.16		369.12
Libya	- 383.84	874.82		490.98
Lithuania	483.39	515.64		999.03

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APPENDIX I (cont'd)
AMOUNTS TO BE BILLED
FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2015
(£ Sterling)

STATES	Adjustment for 2013 (Appendix E)	Assessment for 2015 (Appendix H)	Deduction of Unused Credit Balance from Previous Years	Total Amount to be Billed for 2015
Maldives	- 0.21	1.80		1.59
Malta	- 86.50	506.19		419.69
Morocco	- 1 385.38	2 877.53		1 492.15
Namibia	- 513.59	367.43		- 146.16
Netherlands	2 243.47	28 179.56		30 423.03
Nigeria	58.87	689.10		747.97
Oman	158.11	2 529.80		2 687.91
Pakistan	- 947.97	4 720.40		3 772.43
Poland	- 189.53	1 679.34		1 489.81
Portugal	- 1 143.03	6 761.80		5 618.77
Qatar	1 337.99	28 674.69		30 012.68
Republic of Moldova	- 25.79	145.76		119.97
Romania	- 271.97	858.40		586.43
Russian Federation	1 466.88	41 052.10		42 518.98
Saudi Arabia	52.18	15 808.79		15 860.97
Senegal	- 228.60	109.62		- 118.98
Serbia	- 37.43	285.43		248.00
Seychelles	- 125.88	316.85		190.97
Slovakia	1.63	6.95		8.58
Slovenia	165.25	174.99		340.24
South Africa	- 1 205.46	8 766.91		7 561.45
Spain	4 048.30	17 147.77		21 196.07
Sri Lanka	- 2 984.98	0.00		- 2 984.98
Swaziland	- 0.20	2.84		2.64
Sweden	- 889.11	2 446.66		1 557.55
Switzerland	- 989.37	11 847.91		10 858.54
Syrian Arab Republic	- 1 222.72	0.00		- 1 222.72
Thailand	- 1 348.19	20 781.68		19 433.49
The former Yugoslav Republic of Macedonia	- 0.77	52.36		51.59
Tunisia	861.66	1 216.61		2 078.27
Turkey	3 960.97	28 732.89		32 693.86
Ukraine	- 1 517.28	1 476.15		- 41.13
United Arab Emirates	8 940.42	85 350.28		94 290.70
United Kingdom	- 10 274.32	58 067.42		47 793.10
Uzbekistan	- 321.07	1 833.49		1 512.42
Viet Nam	203.23	7 453.64		7 656.87
Zimbabwe	- 46.26	110.51	- 56.43	7.82
TOTAL	- 49 505.00	799 415.00	- 340.32	749 569.68

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 implementation of Secure SADIS FTP) and communications circuits, ISDN 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

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

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

i) Solely procured for SADIS (major components)

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

Dell Poweredge R900 servers to provide the Secure SADIS FTP service (see Section 1 C).

ii) Principally procured for SADIS

a) At the Met Office;

See Section 1 C for itemized components

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

2 Fibre Optic 64 ~~Kbps~~Kbit/sec circuits in support of SADIS 2G service

c) At the uplink site (Whitehill);

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

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

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

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

iii) Not procured principally for SADIS

- a) Met Office Message switch (MetSwitch): Total investment £738K¹ of which 1.00 per cent is attributable to the Secure SADIS FTP service usage: switching data to operational FTP service;
- b) Met Office Message switch (MetSwitch): Total investment £738K² of which 0.74 per cent is attributable to SADIS 2G usage: switching data to operational (2G) broadcast service and to 2G monitoring system (Corobor Comparator/MetSwitch Dev);
- c) Allocated bandwidth ~~4-Mbps~~16 Mbit/sec bursting to ~~8-Mbps~~24 Mbit/sec between server and Internet Service Provider (ISP) in support of the Secure SADIS FTP service. Individual client connections have a maximum throughput of 512Kbit/sec;
- d) NATS Message switch (CoreMet System);

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

- e) Secure SADIS FTP equipment running costs;

Note. — This comprises support and maintenance of the servers underpinning the Secure SADIS FTP services, a share of the cost for the underlying storage capacity on which the Secure SADIS FTP services are reliant, and operational monitoring of the Secure SADIS FTP services by Tivoli ensuring problems can be identified and resolved in a timely manner.

- f) Met Office Service Desk equipment; and

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

- g) Met Office Serial Communications.

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

B. SADIS data back-up system

The SADIS Gateway (UK NATS) has procured a dedicated SADIS data backup arrangement with the WIFS Provider State. The backup infrastructure includes an ISDN connection between the National Weather Service Telecommunications Gateway (NWSTG) and the SADIS Gateway, and an ISDN connection between the SADIS Gateway and Whitehill uplink facility, to provide SADIS data backup.

C. Hub equipment and services located at Exeter and Whitehill

<i>Item</i>	<i>Description</i>	<i>Quantity</i>
1.	Whitehill services (leased from Cable & Wireless)	
1.1	70 MHz to 140 MHz converter	1
1.2	140 MHz to C band converter	1
1.3	Satellite Hub leased bandwidth	1 slot
2.	ISDN back-up service to Washington (NWSTG)	

1 budgeted cost for providing MetSwitch service during the fiscal year 2013/20142014/2015.

2 budgeted cost for providing MetSwitch service during the fiscal year 2013/20142014/2015.

2.1	VadEDGE 4200	3*
2.2	ISDN 2e circuit	1
2.3	Interface cables	2

Note. — Hardware listed under Section 2 is located at Whitehill.

3. Secure SADIS FTP service

3.1	Dell Poweredge R900 servers with 1 Gb RAM	2
3.2	Dell Poweredge R900 (4 core) servers with 32 Gb RAM *	2
3.3	Shared Storage Arrays (analogous to hard disk storage, but with dynamic upper limit)	2
3.4	VMWave Virtual Platform with Red Hat Linux 5.3 OS	2
3.5	Intel Xeon X7350, 2.93 GHz Processors	2
3.6	Licenses, misc. support and maintenance costs	1

Note 1. — Item 3.2 relates to Digital Signing servers.

Note 2. — Items listed under Section 3 are located at Exeter.

4. SADIS 2G Infrastructure

4.1	MetSwitch port	1
4.2	MegaPAC V-IX Base System Dual PSU including Chassis, 1 CP6000, and 1 switch	2*
4.3	CP6000 for use with MegaPAC V-IX	1*
4.4	VadEDGE 4200	4*
4.5	Uplink modem (Comtech EF Data SDM-300a)	3*
4.6	Communications cabinet and lease	1
4.7	MegaWatch including Enterprise Reports, and PC	1
4.8	Comtech SDM300L demodulator (NER5 downlink)	1
4.9	Corobor comparator software and PC	1
4.10	Communications rack floor space at Exeter in IT Hall 1 and IT Hall 2, and at Whitehill	3
4.11	Space in stores at Exeter to locate spare hardware	1
4.12	WAN Module	2
4.13	Comtech EF Data SMS 301 – redundancy switch	2*
4.14	BRI Module for VadEDGE 4200	2
4.15	Interface cabling	8

** Includes one unit/module stored as a cold spare and one unit as part of downlink that may also be used as a spare for the uplink circuit if necessary.*

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

2. PROCURED SERVICES

- A. Space segment annual lease: Allocated frequency band to SADIS 2G, providing a 64 ~~Kbps~~ Kbit/sec data rate (less communications overhead);
- B. Annual maintenance of Met Office Exeter and Whitehill uplink site equipment (SADIS 2G and Secure SADIS FTP server); and
- C. Gateway function:
 - i) Communication circuits between Met Office and NATS infrastructure site; and
 - ii) System maintenance.

3. ANNUAL STAFF REQUIREMENTS

A. United Kingdom Met Office

i) Service Desk

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

24-hour Weather Desk support

Skill

- | | |
|--|---------------------|
| 1. Service desk (first point of contact) | Incident Management |
| 2. Additional Service Desk operator | Customer Enquiries |

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

24-hour IT Operations support

Skill

- | | |
|--|----------------------|
| 1. Technical Team Leader (TTL) | Technical Supervisor |
| 2. Networks and Systems Supervisor (NSS) | Service Continuity |

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

Normal working hours support

Skill

- | | |
|-------------------------------------|--------------------|
| 1. Change and problem manager (CPM) | Process Specialist |
|-------------------------------------|--------------------|

ii) Additional support

Day support

Resource

- | | |
|--|---|
| 1. Systems integration team | 14 staff-days of network computer engineer |
| 2. Message Switching Manager | 15 staff-days of MSS manager |
| 3. Administrator | 160 staff-days of executive officer |
| 4. International aviation management | 30 staff-days of manager |
| 5. Data traffic | 5 staff-days of communications engineer |
| 6. Contract procurement and management | 4 staff-days of senior procurement officer |
| 7. Message switching Team | 15 staff-days of technical officer |
| 8. Invoice Administration | 20 staff-days of invoicing officer and 15 staff-days of business accountant |

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

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

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

24-hour support

Resource

1. Operational staff support
2. Engineering staff support

523 staff-days per annum
22 staff-days per annum

Day Support

Resource

3. SADIS administration support
4. Engineering (including on-call)

50 staff-days per annum
15 staff-days per annum

C. Bought-in services

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

— END —