House of Commons

Public Accounts Committee

Defence Information Infrastructure

First Report of Session 2008–09

Report, together with formal minutes, oral and written evidence

Ordered by the House of Commons
to be printed 15 December 2008

HC 100
[Incorporating HC 1133–i, Session 2007–08]
Published on 15 January 2009
by authority of the House of Commons
London: The Stationery Office Limited
£0.00

The Public Accounts Committee

The Committee of Public Accounts is appointed by the House of Commons to examine "the accounts showing the appropriation of the sums granted by Parliament to meet the public expenditure, and of such other accounts laid before Parliament as the committee may think fit" (Standing Order No 148).

Current membership

Mr Edward Leigh MP (*Conservative, Gainsborough*) (Chairman)
Mr Richard Bacon MP (*Conservative, South Norfolk*)
Angela Browning MP *(Conservative, Tiverton and Honiton)*
Mr Paul Burstow MP (*Liberal Democrat, Sutton and Cheam*)
Rt Hon David Curry MP (*Conservative, Skipton and Ripon*)
Mr Ian Davidson MP (*Labour, Glasgow South West*)
Mr Philip Dunne MP (*Conservative, Ludlow*)
Angela Eagle MP *(Labour, Wallasey)*
Nigel Griffiths MP *(Labour, Edinburgh South)*
Rt Hon Keith Hill MP *(Labour, Streatham)*
Mr Austin Mitchell MP (*Labour, Great Grimsby*)
Dr John Pugh MP (*Liberal Democrat, Southport*)
Geraldine Smith MP *(Labour, Morecombe and Lunesdale)*
Rt Hon Don Touhig MP (*Labour, Islwyn*)
Rt Hon Alan Williams MP (*Labour, Swansea West*)
Phil Wilson MP *(Labour, Sedgefield)*

Powers

Powers of the Committee of Public Accounts are set out in House of Commons Standing Orders, principally in SO No 148. These are available on the Internet via www.parliament.uk.

Publication

The Reports and evidence of the Committee are published by The Stationery Office by Order of the House. All publications of the Committee (including press notices) are on the Internet at http://www.parliament.uk/pac. A list of Reports of the Committee in the present Session is at the back of this volume.

Committee staff

The current staff of the Committee is Mark Etherton (Clerk), Lorna Horton (Senior Committee Assistant), Pam Morris (Committee Assistant), Jane Lauder (Committee Assistant) and Alex Paterson (Media Officer).

Contacts

All correspondence should be addressed to the Clerk, Committee of Public Accounts, House of Commons, 7 Millbank, London SW1P 3JA. The telephone number for general enquiries is 020 7219 5708; the Committee's email address is pubaccom@parliament.uk.

Contents

Report

Summary

The Ministry of Defence (the Department) needs high quality information technology to achieve its goals, both on operations and in the United Kingdom. It is currently replacing hundreds of existing computer systems with a single new system, called the Defence Information Infrastructure (DII). The Programme to design, install and run this is being led by the ATLAS consortium. Ultimately, the Department intends to have some 150,000 terminals supporting 300,000 users at more than 2,000 sites, with additional capability on deployed operations and Royal Navy ships. DII must be able to handle material classified as Restricted, Secret and Top Secret. The Programme began in March 2005 and will cost an estimated £7.1 billion by 2015, if fully implemented.

The implementation of DII has suffered from major delays. Whereas 62,800 terminals should have been installed by the end of July 2007, only 45,600 were in place at the end of September 2008. The main causes of delay were the Programme's over-optimistic assumptions about the condition of the buildings into which DII would be fitted, and the consequent selection of an inappropriate and unresponsive methodology for installing terminals.

The DII Programme also provides a range of core software such as word processing, email, internet access and security to run on the new system. This should all have been available in June 2006, but less than half of the requirement had been delivered two years later in June 2008. The slow pace of software design has been caused primarily by the ATLAS consortium's inability to meet the Department's requirements.

As a result of these problems, the Department's existing computer systems have had to be used for longer than intended, with the increased risk that one or more of them will fail. The forecast cost of the DII Programme has also increased by an estimated £182 million. The Department has been able to protect benefits of the Programme, totalling an estimated £1.5 billion in due course, although some benefits will materialise later than planned.

In recent months, the performance of the DII Programme has improved somewhat, with some new software having been tested and 3,400 terminals being rolled out on average each month. However, rapid improvement to 4,300 terminals a month will be needed if the Department's latest deadlines are to be met.

The Department has had a number of significant security breaches of personal data in recent years. An independent review of its data handling was held in early 2008 and the Department is in the process of implementing the recommendations.

On the basis of a report by the Comptroller and Auditor General, the Committee examined the Ministry of Defence on the difficulties experience on the DII Programme in the past and the measures put in place to deliver improvement in future.[1]

1 C&AG's Report, *Defence Information Infrastructure*, HC (2007–08) 788

Conclusions and recommendations

1. **Implementation of the DII Programme is running 18 months late against the latest completion date estimated at contract signature, and a further increase in the rate of rollout of terminals is necessary even to meet the Department's new deadlines.** If the new deadline for completion of Increment 1 implementation by the end of January 2009 is missed, the Department should revise its target rollout rate downwards to a more realistic level for remaining increments to avoid any further inconvenience and wasted effort on the part of staff at sites preparing to receive the system.

2. **The longer it takes to complete the implementation of DII, the greater the risk that one or more of the Department's legacy systems will fail.** The Department should ask ATLAS to start to monitor and report regularly on the health of legacy systems. Detailed plans for each legacy system should be developed, setting out:

    - the work needed to maintain the viability and performance of the system over time;
    - an estimate of the latest date on which a decision will need to be taken about commencing upgrade work to prevent system failure; and
    - estimates of the likely cost of a major upgrade.

    The development of these plans should be funded through the 5% management fee paid to ATLAS.

3. **To date, users of DII have expressed low levels of satisfaction with the new system, despite the major enhancement to functionality that the Department believes DII to be delivering.** The Department should examine what the underlying causes of dissatisfaction are, covering issues such as the ease of transferring to DII, the adequacy of training and the user-friendliness of the system. Once it has identified where there are problems, it should address them swiftly to avoid permanent damage to DII's credibility among the user community.

4. **The first military unit is to receive the deployable version of DII at the start of 2009, a deadline that cannot easily be moved because it uses planned periods of unit military training to induct personnel in the use of the DII system.** The DII Programme team should keep commanders in the field informed about progress against this deadline to minimise disruption in the event of delay and, in tackling any slippage that occurs, should not cut the time available to train military personnel in how to use the system.

5. **The Department has more than half of the Programme left to deliver but has already spent £334 million of the £528 million risk funding with which it was provided.** The Department should identify where the money it has spent on mitigating and addressing risks has been most effective and use this to inform its future spending in order to make the best use of the £194 million risk funding that remains.

6. **The Department has secured sufficient funding to deliver 140,000 of the Programme's requirement of 150,000 terminals. It needs to find savings through more efficient use of funding to deliver the vision of creating a single information infrastructure.** An important way of achieving savings will be the use of legitimate means of reducing payments made to ATLAS, where the consortium's performance has not met the terms of the contract. The Department should keep a record of each month when Key Performance Indicators have not been met or measured in the way stipulated in the contract and should either reduce payments to ATLAS immediately or use this information to maximum effect in future commercial negotiations. It should also maintain detailed records of costs incurred by other Departmental programmes as a direct result of the delays in implementing DII and use these in future commercial negotiations.

7. **On the basis of totally inadequate research, the DII Programme made a major miscalculation about the condition of the buildings into which the new system would be installed, with serious consequences for the delivery of the Programme to time.** The Department should, for all future projects and programmes, conduct a thorough analysis of the dependence of the delivery of the project or programme on all other areas of activity, including requirements related to the estate and to training. Where accurate information is not available, assumptions should be prudent and cautious.

8. **The Department did not conduct a pilot before commencing full implementation, even though the DII Programme was complex and the timetable ambitious.** Even if the rollout methodology does not change substantially in future, the Department should set aside time to run a pilot before commencing work on each remaining increment of the DII Programme. This will allow it to recognise and reduce risks not previously encountered as it goes to new sites or attempts to install more functionality or more highly-classified versions of DII software.

9. **The ATLAS consortium's record of delivering software on time is not good and, despite recent successes, large parts of the original requirement are still missing. Many of ATLAS' initial designs have been of a poor quality, which has forced the Department to increase its scrutiny of them.** If the level of design errors increases again, the Department should reintroduce more onerous scrutiny and should not accept claims for increased costs that ATLAS incurs as a result. As soon as ATLAS's problems in designing software cause more delay to the overall DII implementation, the Department should oblige the consortium to bring in resources and expertise from a new contractor.

10. **The problems with software design have been greatest where security features are concerned and it took over two years longer than planned to get a version of DII that could handle Secret material.** Many of the security elements of DII software have been delayed, so the Department now needs to check that all designs are as robust as possible. It should incorporate any relevant recent developments in technology, to avoid any recurrence on DII of the data losses and security breaches on some of its legacy systems that have now come to light through the Department's recent review of its data security.

11. **The Department currently has an undesirable record on data security when it should be amongst the best in Government.** As well as completing the DII Programme without further delay, the Department should implement the other recommendations made in the Burton Report and, in particular, should make data security a priority for all its personnel, including through the use of robust disciplinary measures.

1 Completing the DII Programme

1. The Ministry of Defence (the Department) needs powerful and secure information technology to succeed on operations and to conduct its other business effectively. Through the Defence Information Infrastructure Programme (DII), the Department is currently replacing hundreds of different IT systems, many of which are very old, with a single information infrastructure.

2. The main part of DII is a 10 year contract with the ATLAS consortium, led by EDS, which began in March 2005. It is one of the largest IT programmes ever undertaken in the United Kingdom and, if completed, will deliver 150,000 computer terminals to 300,000 users at more than 2,000 defence sites, including on Royal Navy ships and in deployed operations. The infrastructure will be able to handle material classified as Restricted, Secret and Top Secret. The parts of DII already on contract are currently estimated to cost £4.9 billion by 2015, plus a further £1.2 billion for programmes on which DII depends. The total cost of the full programme, if the Department goes ahead with all of the work originally planned, would be some £7.1 billion.[2]

3. To date, the Programme has suffered from major delays. Although the first 62,800 terminals should have been installed at United Kingdom defence sites no later than July 2007, only 45,600 were in place by the end of September 2008.[3] Delays have been caused by a range of problems, described in Parts 3 and 4 of this report. Some progress has been made in addressing these difficulties and, in the four months after June 2008, the monthly rate at which terminals are being rolled out has increased to an average of 3,400. The Department revised its schedules again in September 2008 and it now plans to reach the target of 62,800 terminals installed and working by the end of January 2009, eighteen months later than originally intended. The Department has a second target to have 100,000 terminals installed by the end of December 2009.[4]

4. The Department is confident of meeting its latest targets, but recognises that this is dependent on improving its rollout performance still further.[5] **Figure 1** shows that if the current rate of rollout can be maintained, the Department will nonetheless miss its January and December 2009 targets by some 3,600 and 3,400 terminals respectively. To meet its January 2009 target, the Department will need to deliver 4,300 terminals a month. The DII Programme's record of sustaining a reasonable rollout rate for longer than a few months is not good. For example, an average rollout rate of 3,000 terminals a month between August and December 2007 was followed by one of only 1,900 terminals a month for the first half of 2008.[6] The Department believes that a delivery rate of 5,000 terminals a month ought to be possible by January 2009 because implementation will be concentrated at some of its largest sites, including its Main Building and the headquarters of the Royal Navy.[7]

2 Q 13; C&AG's Report, paras 1–20

3 Ev 13

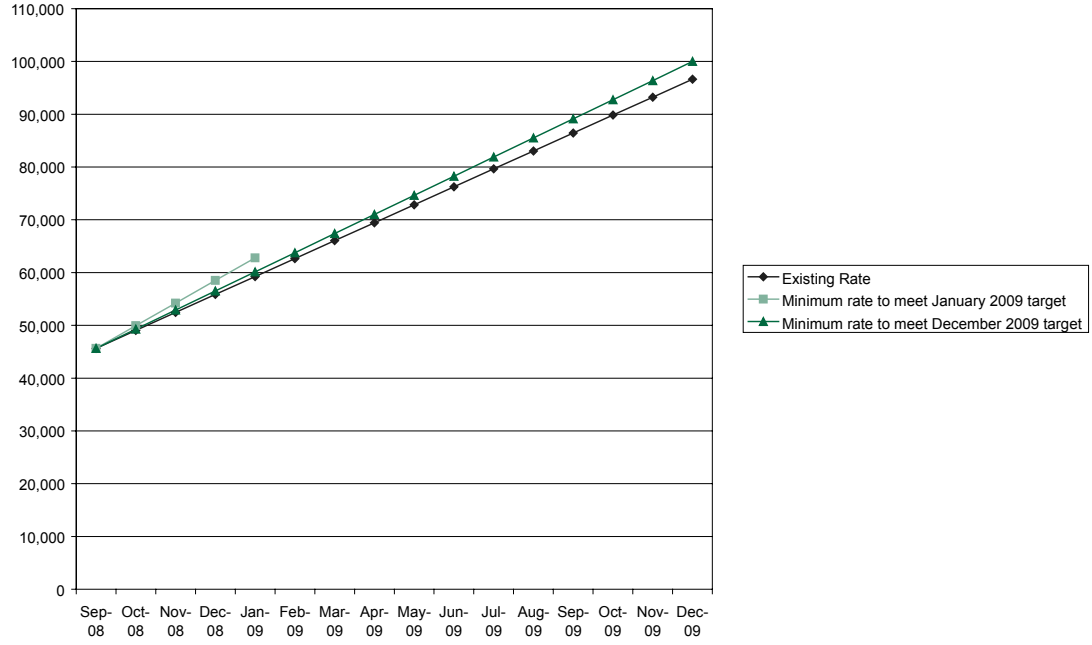
4 Qq 4–5; Ev 13

5 Qq 21–22

6 C&AG's Report, para 2.17; Appendix 6

7 Qq 61–62

Figure 1: Meeting targets for the rollout of DII terminals in 2009



Source: C&AG's Report and Ev 13

5. Going forward, there is an increasing risk that any additional delays to DII will have a serious detrimental impact on the Department's ability to conduct its business. The greatest risk is posed by the many legacy computer systems still in use. Those systems affected by Increment 1 of the DII Programme were due to be closed down by December 2006. At the beginning of 2008, however, only 15% of legacy terminals had been switched off because of the impact of programme delays, and because the Department's implementation plans have not prioritised the closure of legacy systems.[8] **Figure 2** shows the decrease in the number of legacy terminals has not kept pace with the rollout of DII terminals.

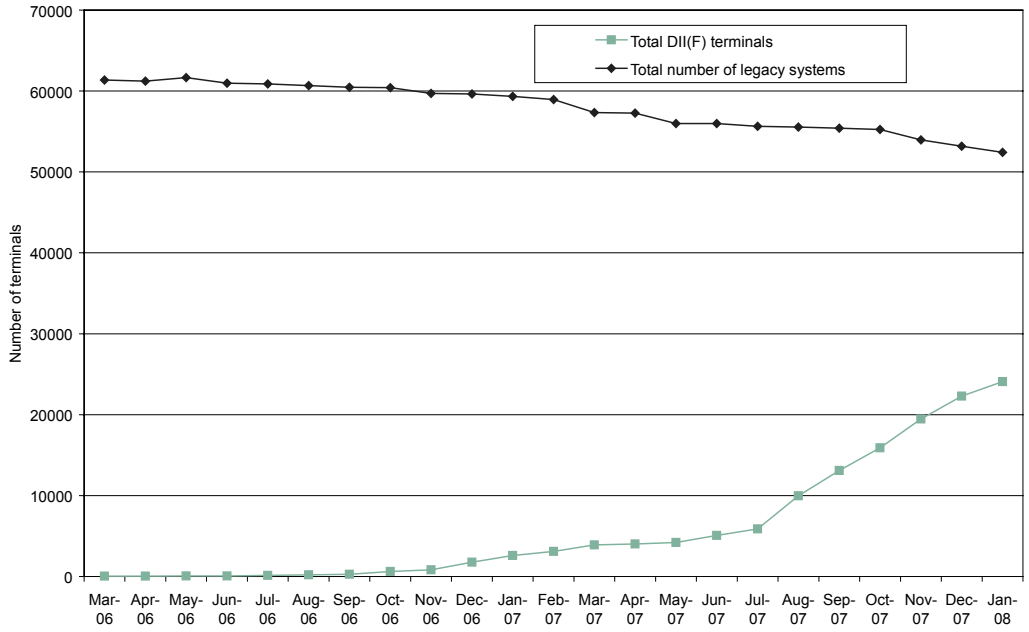
6. Most of the legacy systems remain robust at present, but the Department is aware that some will not be able to operate for much longer without requiring major upgrade work.[9] If the Department does not identify where such upgrades are needed, legacy systems could fail before they can be repaired. In addition to the unnecessary cost that would be incurred, such a scenario would leave some Departmental personnel with no access to their computers and thereby impair their ability to do their jobs. Although the systems are now the responsibility of the ATLAS consortium, which receives a 5% premium for managing payments to the companies that run them, the cost of any upgrade work would fall to the Department.[10]

8 Q 64; C&AG's Report, paras 2.13, 3.6

9 Qq 55, 80–81

10 Qq 70–73, C&AG's Report, para 1.12

Figure 2: The number of terminals running on legacy systems



Source: C&AG's Report, Figure 7

7. Other important business change programmes continue to rely on infrastructure to be supplied by DII to make them viable. These include the Defence Medical Information Capability Programme, the Defence Intelligence Modernisation Programme, Project CATARA to renovate RAF Brize Norton and the Air Movements Operations project.[11] In the past, delays to the Programme have required the Department to spend money on short-term fixes such as purchasing additional terminals on legacy systems, to avoid jeopardising dependent change programmes, most notably the Joint Personnel Administration project.[12] The latest rollout targets are broadly sufficient to meet the needs of other projects, but, in the event of further delay, the DII Programme might be required to spend more money on contingency measures.[13]

8. More generally, any additional delay to the implementation of DII will further inconvenience the Department's employees, many of whom have already faced disruption getting their site ready to receive the new system only to have the installation date postponed.[14] At least 40% of users declared themselves dissatisfied with DII in the first user satisfaction survey carried out at the beginning of 2008.[15] The DII Programme will only be successful if users are trained and willing to exploit the benefits of the new system.[16]

9. In no area is the avoidance of delay more important than in the development of a version of DII that can be deployed on operations. This part of the contract, known as

11 C&AG's Report, paras 1.7, 3.5; Box 4; Appendix 4

12 C&AG's Report, para 2.14 ; Box 3

13 Q 8

14 Q 20

15 Qq 30–34; C&AG's Report, para 3.17

16 C&AG's Report, para 3.5

Increment 2b and costing £385 million, was let in September 2007. It will provide the Armed Forces with a robust information system, comprising 1,500 terminals, that can be transported to operational theatres and, once there, can handle material classified as Secret.[17] The deployable version of DII should bring greater coherence and integration to operations, including those ongoing in Afghanistan and Iraq.[18] The first military unit is due to receive its terminals at the beginning of 2009, a deadline that cannot easily be moved as it utilises planned periods of unit training to train personnel in how to use and maintain the new equipment. The Department believes that it will still meet this deadline.[19]

17 C&AG's Report, para 3.7

18 Qq 2–3, 75

19 C&AG's Report, para 3.10

2 Controlling costs and managing the contractor

10. The ATLAS consortium is led by EDS, and its other partners are Fujitsu, EADS, General Dynamics and LogicaCMG.[20] We questioned the Department on their choice of contractors given the poor track record of EDS in delivering Government IT projects, such as the IT system for the Child Support Agency. The Department told us that the contract for DII was won by ATLAS in open competition. Although there have been problems on the Programme which required hard work with ATLAS, the Department felt that its partnership with the consortium has been something of a model and, while it could not comment on the projects of other government departments, its experience of working with EDS did not bear out the description of poor performance on other projects.[21]

11. The Department devised a robust commercial structure for the Programme, which includes 'contractor shadowing', an incremental approach to placing work on contract, and payment on performance. The contractor shadowing arrangement requires each member of the consortium to be matched by another member with equivalent capability who could step in to deliver relevant aspects of the Programme if needed. This arrangement was devised to protect the Programme in the event of a catastrophic failure of one of the consortium members, along the lines of Enron in 2001. It was also designed to protect the Programme if one contractor fails to deliver by providing an alternative capability to the Department.[22] The main ATLAS partners, EDS and Fujitsu, each have a roughly equal share of the Programme workload but would, if required, also be able to take on the role of the other.[23] To date, the Department has not felt that it has needed to use this provision despite the implementation delays that the Programme has experienced.

12. The Department originally forecast that the Programme would cost £5,854 million to deliver a system for Restricted and Secret material at permanent defence sites (**Figure 3**). The full cost of delivering the deployed and Top Secret capabilities required further work before it could be estimated.[24] This cost is greater than the £2.3 billion that the Department had previously reported to Parliament.[25] The Department stated that it had provided Parliament with the value of the contract that had been awarded to ATLAS at the time, which is its usual practice, but subsequently acknowledged that this could have been explained more fully.[26] The Department now estimates that the cost of delivering the DII Programme will be £7,093 million, including the deployed and Top Secret capabilities, and dependent programmes.

20 C&AG's Report, para 1.1

21 Q 12

22 Q 66; C&AG's Report, para 1.12

23 Qq 67–69

24 C&AG's Report, para 1.14

25 HC Deb, 17 July 2006, cols 210–211W

26 Qq 36–39; Ev 13–14

Figure 3: The Current Forecast Cost of the DII Programme (£m)

	Payments to ATLAS for DII[1]	Other Programme Costs[2]	Risk Pot	DII Programme Total	Dependent Programmes	Total
Forecast Programme Costs at Contract Let						
Increments 1, 2a and 3a approved in March 2005	3,520	787	528	4,835	1,019	5,854
Increment 2b approved in September 2007	1,321	19	44	385	-	385
Total	**4,841**	**806**	**573**	**5,220**	**1,109**	**6,239**
Current Forecast Programme Costs						
Increments 1, 2a and 2b	3,326	1,392	194	4,911	1,198	6,109
Increments 2c, 3a, 3b and 3c not yet on contract				984	-	984
Total				**5,895**	**1,198**	**7,093**

Notes:

1 Payments to ATLAS for delivering and managing DII and the cost of software and assets which are acquired by ATLAS but owned by the Department.

2 Costs for managing legacy systems, to assess work not yet on contract and the Department's programme management costs. Some of these costs are payments to ATLAS and some are incurred by the Department.

Source: C&AG's Report, Figure 16

13. In the first three years of the programme, the Department has incurred costs of £1,728 million against a forecast of £1,772 million—over 90% of the original budgeted costs. In this period it has received fewer than 50% of the terminals and software that it expected to receive. Payments to ATLAS for delivering and managing DII were £147 million less than were forecast at contract let because it has not delivered the expected number of terminals.[27] The Department has had to spend £353 million more than forecast on legacy systems to date, however, as they have been kept running for longer than originally intended.[28]

14. At the start of the programme the Department identified funding of £6,285 million, including for dependent programmes. Despite additional resources, the Programme has funding only to deliver 140,000 terminals out of the original requirement for 150,000

27 Qq 10–11; C&AG's Report, paras 3.16–3.20; Figure 13

28 Q 6; C&AG's Report, Figure 13

terminals, assuming it can achieve efficiency targets. The Department has to make yet further savings on the Programme to bridge the gap of 10,000 terminals. The final requirement may be lower than originally forecast because staff numbers are reducing for reasons unrelated to the DII Programme, such as the Department's plans to scale down its head office. To date, it has reduced the gap to about 6,000 terminals.[29]

15. The programme received a provision of £528 million for the cost of mitigating identified risks when they materialised. This is not standard practice for the Department and was done to recognise the considerable risks inherent in the Programme. The Programme has just over a third of its risk funding, £194 million, remaining with over half of the programme left to complete. The Department is confident that the funding will be sufficient because it believes that a lot of risk materialised, and was dealt with, at the beginning of the Programme, such as design and development activity, and work on the initial rollout.[30] In addition to using its risk funding, the Programme expects to incur a cost overrun of £182 million, some 3% of the original budget, over the 10 year life of the contract. It does not anticipate that there will be any further cost increases.[31]

16. The Department monitors the performance of DII using indicators measured by ATLAS. At the time of the Comptroller and Auditor General's report, ATLAS was not measuring all of indicators as specified in the contract. The Department can abate its monthly payment charge to ATLAS if indicators are not measured according to the contract, and if users experience poor availability or performance of DII. It has not exercised its right to penalise ATLAS where indicators have not been measured or have been measured manually. It has also not recorded where it has foregone abatements to use in commercial negotiations with ATLAS.[32] The Department confirmed that all performance indicators are now being measured although some continue to be measured manually rather than electronically, and said that the results show the DII system was performing well.[33]

17. The Department has a number of major change programmes that are dependent on DII, including the introduction of new software applications. It forecasts that DII will directly achieve or enable efficiency savings of £1,500 million over the ten year life of the contract. These savings will be secured through costs that are avoided by moving from 300 different systems to a single integrated system, and from benefits that are achieved by supporting the introduction of new software applications.[34] The majority of the enabled benefits are expected to come from the Joint Personnel Administration project which has automated large parts of the pay and personnel administration for the three Services. The Programme allowed the Joint Personnel Administration project to be delivered more or less according to the original timescale despite delays of 18 months to the implementation of DII. It achieved this by using a contingency programme which included purchasing

29 Qq 40–42

30 Q 51; C&AG's Report, para 1.14

31 Q 74

32 C&AG's Report, para 3.16

33 Q 54

34 Qq 56–59

additional legacy system terminals to run the Joint Personnel Administration project on which was managed by the Department, independently from ATLAS.[35]

35 Q 60; C&AG's Report, Box 3

3 Implementation approach

18. During 2006, the DII Programme was able to install only 1,600 terminals against a target of 62,800. The two causes of this severe underperformance were the DII Programme's failure to understand the condition of the buildings into which DII would be installed, and the subsequent selection of an unsuitable, rigid implementation methodology.

19. The DII Programme started in 2005 with a totally inadequate understanding of the condition of the Department's land and buildings. Preparatory work, which had been good in many other respects, was lacking in this area and the DII Programme team did not consult Defence Estates in planning the DII implementation.[36] Instead, it took for granted that up-to-date site plans and statutory Health and Safety documentation, including asbestos and power supply surveys, would be in place.[37]

20. The DII Programme's mistaken assumption about the condition of buildings was a crucial factor in its acceptance of an inappropriate method for installing DII terminals, the Fixed Rollout Methodology. This process assumed that a generic approach, operated to a strict 38-week timetable, would be suitable for implementing DII at all sites, whatever their size or condition.[38] The methodology was proposed by the ATLAS consortium, which told the Department that it had worked in other organisations of a similar size, such as the Department for Work and Pensions and the Royal Bank of Scotland.[39] The Department now admits that the defence environment is more complex than that of these organisations.[40]

21. When the DII Programme attempted to begin implementation during 2005, it quickly began to unearth problems, such as asbestos, at many sites.[41] These issues took much longer to resolve than the 38-week timetable could tolerate, but the lack of active project management—supposedly one of the advantages of the Fixed Rollout Methodology—meant that a flexible response was impossible.[42] Sometimes, a single manager would be responsible for the implementation of DII terminals at up to 30 different sites.[43] In many places, this resulted in sub-contractors attempting to do work at sites in line with a timetable that was no longer realisable.[44] It was only at the beginning of 2007, almost two years after the start of the Programme, that a more sensible rollout methodology was adopted.[45]

36 Q 15; C&AG's Report, para 2.8

37 Qq 14, 89–90

38 C&AG's Report, para. 2.9

39 Qq 16–18

40 Q 91

41 Qq 19, 90

42 Q 96; C&AG's Report, para 2.6

43 Qq 97–101

44 Q 9; C&AG's Report, para 2.11

45 C&AG's Report, paras 2.15–2.17

22. Many of these problems could have been identified before they had such serious consequences had the DII Programme set aside time and resources to conduct a proper pilot.[46] Instead, when contract negotiations lasted longer than intended, the Department and its contractor took the perverse decision to cut a three-month start-up period from the schedule.[47] Conversely, when the Programme did conduct proper piloting and testing before letting the contract to design a deployable version of DII in 2007, it found that this enabled it to reduce risks and increase the robustness of its plans.[48]

23. DII, like many other major IT projects in Government, is inherently complex, because of its size and ambitious requirements. Some of the Department's preparatory work for this Programme had successfully reduced complexity, in particular, by not making DII responsible for the development of new software applications as well as infrastructure.[49] Nonetheless, a number of other application projects that were ongoing within the Department made heavy demands on DII. The Joint Personnel Administration programme, in particular, required DII rollout schedules to be made more challenging so that its own timetable could be met.[50] Even after the problems with implementation occurred, the DII Programme continued throughout 2006 to expend significant resources on short-term measures to protect the Joint Personnel Administration programme, which diverted the team's attention from addressing its own systemic problems.[51]

46 Q 89

47 C&AG's Report, paras 2.2, 2.5

48 C&AG's Report, para 3.8

49 Qq 47, 77–79

50 C&AG's Report, para 2.10; Figure 5

51 Qq 8–9; C&AG's Report, para 2.14

4 Software Development

24. Although the DII Programme is not responsible for designing specialist software applications, it is providing a set of core software to run on the infrastructure, including word-processing and other office automation programmes and the security features to allow users to handle classified material. The Department's requirement for core software has changed very little since the contract was signed but the Programme has failed to deliver much of it.[52] Whereas all software was to have been provided in two instalments, known as Releases, by June 2006, less than half had been delivered by June 2008.[53] **Figure 4** describes the core software being procured.

Figure 4: Release 1 and Release 2 core software functionality

TYPE OF SOFTWARE	KEY ELEMENTS OF RELEASE 1	KEY ELEMENTS OF RELEASE 2
Software that the Department needs to conduct its business, including what end-users need to carry out tasks. This includes office automation, web-browsing and electronic document and records management.	Standard office tools, including word processing, internet and e-mail access, and standard file storage Desktops and laptops supported Access to a contractually agreed list of applications	Electronic document and records management services Collaborative tools A new Department-wide personnel directory An enterprise-wide search capability Scanning services Remote access to Departmental intranet for laptop users
Software that ATLAS needs to monitor the system and to deliver the managed 'end to end' service. This includes software to measure Key Performance Indicators and online catalogues to allow users to order additional services or changes to their existing IT environment.	Software tools to allow the Single Point of Contact call centres to manage contacts, user configurations and change requests. Also, software to track incident resolution and to monitor customer satisfaction Tools to measure a contractually agreed subset of the Performance Indicators and Key Performance Indicators Pairs of data centres holding back-up copies of all data to ensure service continuity	Tools to measure all of the Performance Indicators and Key Performance Indicators Web and application hosting services
Software that is required to make the system secure from external attack and to ensure that material classified as Restricted and Secret can be handled safely.	Discrete systems that can safely handle material classified as Restricted and Secret Identification, authentication and authorisation services, including, for instance, password protection Vulnerability testing and audit Basic Grade Messaging	Public Key Infrastructure services supporting additional security such as signing and encryption A domain that can handle material classified as Confidential and provide access to the Government-wide XGSI domain Full business continuity support Medium and High Grade Messaging

Source: C&AG's Report, Figure 9

25. The scale of delays impacted on the rollout of terminals because of the Department's promise that no user would move to DII until it was at least as good as the legacy system they were using.[54] This was most problematic for the sites which had the best legacy

52 C&AG's Report, para 2.21

53 C&AG's Report, para 2.22

54 C&AG's Report, para 2.22

systems, including the Department's Main Building in Whitehall and the headquarters of the Royal Navy and the Royal Air Force. Only in recent months has the Programme tested a version of the core software that will allow DII users to view Secret material.[55] For this reason, the DII Programme was able to install a small number of terminals at the Department's Main Building at the beginning of October.[56]

26. The Department told us that the slow pace of core software design has been primarily caused by the ATLAS consortium's inability to meet its requirements, even where these have not changed since the start of the contract.[57] ATLAS underestimated the complexity of the software it had agreed to create and could not muster the resources to run multiple streams of software design work concurrently.[58] When ATLAS did present designs, they were often not in a fit state to be signed off, forcing the Department to decide whether to wait for new designs and delay the Programme, or to proceed at risk.[59] During the first two years of the Programme, the number of defects found in ATLAS' designs was unacceptably high.[60] The Department increased the level of scrutiny it applied to ATLAS' work, and it was only when the quality of designs improved in 2008 that the level of the Department's quality assurance work reduced. [61] The problems were most acute in the area of security, where ATLAS was incapable of delivering a system that could safely handle Secret material for over two years.[62] The Department found it hard to get ATLAS to address the problems arising from its underestimation of the complexity of the Programme.[63]

27. Software delays could cause problems on the DII Programme in future. A large proportion of the software capability the Department requires is still to be delivered, including tools to allow collaborative working between staff at different sites and to improve the management of documents.[64] The full benefits of DII, already postponed at most sites, will not be realised if users do not get access to this software.[65] The Department's intention is also to design a version of DII that can handle Top Secret material, but this will be even more challenging to deliver than previous security features.[66] If ATLAS does not deliver, the Department has the right to oblige the consortium to bring in other resources to complete the work.[67]

55 Qq 86–87; Ev 13

56 Q 61

57 Qq 92–95; C&AG's Report, paras 2.26–2.28

58 Q 92; C&AG's Report, para 2.27

59 Q 94; C&AG's Report, para 2.27

60 Q 95; C&AG's Report, para 2.27

61 Q 94

62 Qq 84–85; C&AG's Report, para 2.27

63 Q 93

64 C&AG's Report, para 2.23; Figure 10

65 C&AG's Report, para 2.29

66 C&AG's Report, para 3.14

67 Q 63

5 Data security and DII

28. Increasing the security of the Department's IT systems and the data that resides on them has never been of greater importance, following high-profile incidents of data loss. The Department estimates that, between 1 April 2004 and 31 March 2008, 747 of its laptops and 121 memory sticks have gone missing or been stolen.[68] Since the start of this financial year, a further seven breaches have occurred, which together amount to the loss of the personal details of at least 1.7 million people.[69]

29. In the light of the losses identified at the beginning of 2008, the Department commissioned Sir Edmund Burton to conduct an independent review of its data handling policies.[70] The review made a number of recommendations about improving processes and ensuring compliance with them; the Department is in the process of implementing these.[71]

30. A key goal of the DII system is to enhance the Department's data security, both by making all data safer through measures like encryption, and by providing more stringent protection for highly classified material.[72] Thus, the long delays in implementing the Programme can only have contributed to the Department's difficulties: most laptops that run on legacy systems were not encrypted until the major incidents of data loss came to light in 2008.[73] The recent testing of a version of DII that can handle Secret material is a step forward, but the Department acknowledges that better hardware and software will only lead to data being better protected if personnel are provided with the training and incentives to use it correctly.[74]

68 HC Deb, 17 July 2008, col 663W

69 Q 102; Ev 13

70 Q 48

71 Q 88

72 Q 43

73 Q 88

74 Q 49

Formal Minutes

Monday 15 December 2008

Members present:

Mr Edward Leigh, in the Chair

Mr Richard Bacon
Angela Browning
Rt Hon David Curry
Mr Nigel Griffiths
Keith Hill
Mr Austin Mitchell
Dr John Pugh
Mr Don Touhig
Rt Hon Alan Williams

Draft Report (*Defence Information Infrastructure*), proposed by the Chairman, brought up and read.

Ordered, That the draft Report be read a second time, paragraph by paragraph.

Paragraphs 1 to 30 read and agreed to.

Summary read and agreed to.

Resolved, That the Report be the First Report of the Committee to the House.

Ordered, That the Chairman make the Report to the House.

Ordered, That embargoed copies of the Report be made available, in accordance with the provisions of Standing Order No. 134.

[Adjourned until Wednesday 17 December at 3.30 pm.

Witnesses

Wednesday 22 October 2008

List of written evidence

List of Reports from the Committee of Public Accounts 2008–09

First Report	Defence Information Infrastructure	HC 100

Oral evidence

Taken before the Committee of Public Accounts

on Wednesday 22 October 2008

Members present:

Mr Richard Bacon
Mr Ian Davidson
Nigel Griffiths
Keith Hill
Mr Austin Mitchell
Mr Alan Williams
Phil Wilson

In the absence of the Chairman, Mr Williams was called to the Chair

---

Mr Jim Rickleton, Assistant Auditor General, and Mr Mark Andrews, Director, National Audit Office, gave evidence.

Mr Marius Gallaher, Alternate Treasury Officer of Accounts, HM Treasury, was in attendance.

REPORT BY THE COMPTROLLER AND AUDITOR GENERAL

MINISTRY OF DEFENCE:

THE DEFENCE INFORMATION INFRASTRUCTURE (HC788)

Witnesses: **Sir Bill Jeffrey KCB,** Permanent Under Secretary, **Mr John C T Taylor,** Chief Information Officer and **Mr Bob Quick OBE,** Defence Information Infrastructure (DII) Integrated Project Team Leader, Ministry of Defence, gave evidence.

Q1 Mr Williams: Today's hearing is on the C&AG's Report *The Defence Information Infrastructure.* We welcome Sir Bill Jeffrey the Permanent Secretary from the Ministry of Defence again. Would you like to introduce your two colleagues?
Sir Bill Jeffrey: Yes. My two colleagues are John Taylor on my left, who is the MoD's Chief Information Officer and is also the SRO for this project and on my right is Bob Quick who was until very recently the IPT, that is Integrated Project Team Leader for the Defence IT Infrastructure project that we are examining today.

Q2 Mr Williams: When this is eventually available what will it mean to our troops?
Sir Bill Jeffrey: It ought to mean a great deal to our troops because most of the support concentrates on the so-called fixed infrastructure, which will affect all our offices and all our headquarters, including the three single Services, but there is a plan to roll this out also to deployed troops in theatre. Indeed, as the Report brings out, there has been some useful work already done during the programme to provide significant functionality for our troops in theatre. It should bring about a lot more "joined-upness" in theatre, just as it is doing within the department.

Q3 Mr Williams: Will the system help with things like friendly fire and that type of situation, the casualties we suffer as a result of bad communications?
Sir Bill Jeffrey: It may do. It certainly ought to improve integration of all our IT communication systems. I would not want to offer too much comfort on that specific issue.

Q4 Mr Williams: How late do you think it will be? When will the final date for full deployment be?
Sir Bill Jeffrey: The Report brings out the extent to which we have encountered significant delay in this programme. The position at the moment is that we expect to be able to roll out the first main increment by the end of January next year and the other significant aspects of it by the end of next year. Beyond that there is a continuing programme of enhancement and extension.

Q5 Mr Williams: Are you able to assess what the overall delay will be in its full introduction?
Sir Bill Jeffrey: Broadly speaking what the Report finds is that we have suffered something of the order of 18 months' delay so far. My sense is that, largely because we have a good programme structure in place and many of the things that your Committee and the NAO have advised the department to do in the past we are actually doing, because we have a robust structure we have a good chance of not adding to that delay in future.

Q6 Mr Williams: You drew up a budget for the first three years, you spent 93% of that, that is £1.7 billion, but at the end of the time all you got was less than 50% of the terminals and 50% of the software. Why was that? It is effectively a doubling of the cost, is it not? How far will that continue throughout the contract?
Sir Bill Jeffrey: I do not recognise the description of our having already exceeded our budget or almost spent all of it. We have incurred additional costs so far of £182 million direct increases in cost, which are noted in the Report, mostly on legacy systems which we have had to keep going for longer than was

originally intended. Otherwise the costs and the estimates are given in one of the tables in the Report and I certainly do not recognise the description of our having spent almost all of our original budget and only achieved a small proportion of what we set out to do.

Q7 Mr Williams: NAO, do you disagree with the witness there?
Mr Rickleton: Just to draw attention perhaps to paragraph 2.41 on page 33 where, we stated " . . . the Department has incurred costs of £1,728 million . . . against forecast costs of £1,722 million", I think those are the two figures you are referring to.

Q8 Mr Williams: Paragraph three on page five indicates that this project is essential for various other projects which might follow on. What other business change programmes are now at risk and what sort of risk?
Sir Bill Jeffrey: Many of our change programmes right across the department rely on this infrastructure. The most significant is the joint personnel administration programme for automating large parts of the Services personnel administration. We have taken steps—and the Report brings them out very clearly—as it became clear that with the consortium the rollout of terminals was not proceeding as early as had been intended, to protect the joint personnel administration programme and to ensure that it did proceed broadly on the timescale originally intended. There are also connections to a wide range of other defence programmes which, if I remember rightly, are brought out in Figure 2 of the Report. There has been a very coherent approach to this in the sense that the programme, under the supervision of the Second Permanent Secretary, has kept in view the defence IT infrastructure development but also its impact on this wide range of other projects. We have been very conscious of the fact that we needed to manage the whole change programme in a coherent fashion and, where we possibly could, prevent the slippage which has undoubtedly occurred in this programme from impacting on others.
Mr Taylor: Referring to Figure 2, these are the most significant programmes which make up what we call our defence change programme. Each of those constituent programmes have their own timeline but within the DII programme we have taken it upon ourselves to work very closely with each of those constituent programmes so that the risk of any of these programmes getting out of step, either with our programme or in some cases with each other, has been absolutely minimised. The Report sets out quite clearly the governance structure and you may see a reference to Tiger Teams. For each of the constituent programmes we will either put in place when they mature or have had in place a Tiger Team which has ensured that we are meeting the needs of those constituent programmes.

Q9 Mr Williams: Switching to the ATLAS fixed rollout methodology, why did it take you until the beginning of 2007 to realise it could not work and to replace it?
Sir Bill Jeffrey: It took us and ATLAS probably longer than it might have done. You need to remember that the contract was signed in March 2005. The early stages had not been intended, during much of the rest of 2005, to involve the rollout of terminals and these early stages went well. We transferred legacy systems to ATLAS and we opened what has turned out to be a very successful combined call centre. As we moved into 2006 the rollout of terminals was due to begin. Having read the papers more carefully than before in the last few weeks, my assessment is that there were some technical issues in the earlier part of that year which probably masked the nature of the problem. When it became clear that we were suffering delay in rolling out the terminals we concentrated principally on the steps which Mr Taylor and I have just been describing to protect the rollout of the JPA. Towards the end of 2006 we and ATLAS agreed on the nature of the problem and established a solution which was put in hand very early in 2007. We might have been quicker than that but all I can say is that there were some areas where the fixed rollout was working, it took a while for the nature of the problem to become clear and over that period making sure that we did not impact adversely on the joint personnel administration programme was our biggest preoccupation.

Q10 Mr Williams: I gather that for that ATLAS was exposed to a possible penalty of £250,000. Why did you not charge them the full penalty?
Sir Bill Jeffrey: If you are referring to the abatements which are picked up in the latter part of the Report, we have, with one exception, actually enforced these abatements and that exception related to the non-delivery of one of the performance indicators for a single month where we agreed with the consortium that they would address it in the following month and they did.

Q11 Mr Williams: So that was minor.
Sir Bill Jeffrey: I believe so, unless you have something else in mind.
Mr Taylor: May I refer the Committee to Table 13, this very clearly sets out the payments which would have been made had we stuck to the original schedule. You will see that table shows in the first column a difference of minus £147 million. That is the money which has not been paid to ATLAS as a result of the delays which we believe are down to them. This is obviously painful for them but it reflects the incentivised nature of the contract that we put in place. I am pleased to say that now the steps we took are working and we are seeing a much faster, sustained rate of rollout.

Q12 Keith Hill: I should like to explore the rollout of DII hardware, but first I want to ask a question about the leadership of the ATLAS consortium which was in the hands of EDS. I want to run by you

EDS's recent record on government contracts. I fully and freely admit that my source on this is Wikipedia but Wikipedia tells me that in November 2001 a £300 million PFI project to supply the UK's Ministry of Defence with a payroll system encountered serious problems which threatened to stop the pay of over 30,000 personnel. EDS could not deliver the system and was allegedly rescued by government bailout. In December 2003 EDS lost a 10-year £3 billion contract to run the Inland Revenue IT services after a series of serious delays in the payment of tax credits. In 2004 EDS was criticised by the UK's National Audit Office for its work on IT systems for the CSA (Child Support Agency) which ran seriously over budget, causing problems which led to the resignation of the CSA's head. The system's rollout had been two years late and following its introduction in March 2003 the CSA was obliged to write off £1 billion in claims while £750 million in child support payments from absent parents remained uncollected. The note goes on to say that an internal EDS memo was leaked that admitted that the CSA system was badly designed, badly tested and badly implemented. It goes on to say that UK MPs—probably I suspect this PAC—described it as an appalling waste of public money and called for it to be scrapped. All of these misfortunes occurred before you signed the ATLAS contract led by EDS. I have to say that there are subsequent EDS misfortunes listed here. Why did you sign a contract with a company with such a poor record?

Sir Bill Jeffrey: It was a contract which was won by a consortium of which EDS were the leaders. It was won in competition and it appeared to be the best tender in that competition. We have had to work hard with EDS and the other members of the consortium. I am sure as we go through this session there will be chance for me to explain why. Actually by the standards of many of the reports of this kind by the NAO on major IT projects this is rather a good account and we have done a lot right here. It has been hard work for, among others, the gentlemen on my right and left and it is not for me to speak up for EDS as a company but I have to say that the partnership between the consortium and the Ministry of Defence, as described in this Report—and I direct your attention particularly to the appendix in which the NAO sought Accenture's advice on how the programme was being managed—has actually been something of a model. We have experienced delays, of course we have, and it is right that the Committee should examine us closely on these. Our experience of working with this company does not bear out the impression that will be given by your question. For reasons I am sure the Committee will understand, I cannot obviously comment on projects involving other government departments.

Q13 Keith Hill: No, I understand that. In the light of this NAO Report we are dealing with today the notion that your experience on DII has been a model is a bit difficult to understand. Let me ask you, drawing on your general experience, in general terms Government do not seem to have a happy record with big projects of this sort. We have dealt in recent times in this Committee with this kind of IT endeavour which has had very mixed results. What is the problem in general terms? Is the market very narrow, is the choice very narrow? There is obviously a problem with these contracts on IT signed by government departments. Why?

Sir Bill Jeffrey: One of the problems is the size of the project. Let us not forget the scale of this, replacing about 300 legacy systems, 150,000 terminals, 300,000 users, over 200 sites in the end spread right around our estate; this is a massive undertaking. What we have learned from others' experience—and as the Report brought out we did seek others' experience, we spoke to the Americans in particular about the experience of the US Marines—played into our management of this project. Without dwelling on it, I would direct the Committee's attention to some of what the NAO says about this, that the programme was ambitious but well-conceived, it had a robust commercial structure, sound governance and decision-making structures which have endured since the start of implementation. We were good at transferring the legacy system, we were successful in protecting the JPA benefits, we introduced some very good interim systems. So far the service performance has been good, we chose key performance indicators well and we have also avoided one of the big pitfalls of these programmes in Government by having a good degree of continuity amongst the staff who are doing it. You might say that we did all that and got all that right, but nevertheless we have experienced delay. I would argue that it simply bears out just how difficult these projects are.

Q14 Keith Hill: Actually though, one thing that ought not to be difficult is to know whether the buildings where you want to install the computers have asbestos or not.

Sir Bill Jeffrey: There I would acknowledge—and the Report brings it out again very clearly—that we did not do nearly enough to understand that.

Q15 Keith Hill: That does seem really to have been a major issue in the delays in the rollout of the hardware, that actually one arm of MoD had simply not consulted with the other arm, namely Defence Estates, to have an elementary look at the condition of the buildings you wanted to put this stuff into. Why was that?

Sir Bill Jeffrey: I would put my hand up to that readily. The fact is that our estate does vary greatly and we should have spotted that. In our defence the company and the others involved in the consortium have had experience of this more generic method of rolling out IT systems elsewhere. We did underestimate how distinct the defence environment was and that was definitely a lesson we must learn.

Q16 Keith Hill: Before I come back to asbestos, just on the generic system, tell us where the fixed rollout methodology worked elsewhere in Government.

What have you drawn on? What experience elsewhere in Government have you drawn on to do this?
Mr Quick: It has been used in DWP, been used in the Royal Bank of Scotland; we saw a number of examples during the tender phase where the method had actually worked and it had the promise of a lot of efficiencies for us.

Q17 Keith Hill: Which were the contexts again?
Mr Quick: In the Department for Work and Pensions, the Royal Bank of Scotland, some organisations like that, the fixed rollout method had worked.

Q18 Keith Hill: How similar were the circumstances?
Mr Quick: They were very similar in size to MoD; very big organisations with a mixed estate, though with hindsight probably not as mixed as we have in MoD but certainly with a mixed type of estate.

Q19 Keith Hill: Back on the asbestos, has the DII team informed Defence Estates of all the buildings where it has found asbestos which had not been identified previously?
Mr Quick: Yes, not only have we informed Defence Estates and taken action on it and worked with Defence Estates but we have started a programme looking ahead at future sites to make sure that is dealt with in advance before we get to sites in the future.

Q20 Keith Hill: That is good to hear. You have had to change your rollout schedules on many occasions, partly as a result of the problems you found in the buildings. May I ask how much unnecessary effort and disruption results at sites which get ready to receive DII terminals only to have the installation date postponed by months or even years? What sort of disruption and unnecessary effort in your observation has been caused by this lack of testing in advance?
Mr Quick: There has been considerable testing in advance. The issue of the problems we have had with change and the problems we have had with the estates you mentioned have both impacted on the rollout at certain sites and it has caused disruption to the users. Since we developed the new rollout methodology and in fact stabilised the programme at the beginning of this year, we have now stayed within the schedule for delivery, in fact ahead of the delivery schedule for this year since April. I think we are past those problems now.

Q21 Keith Hill: I hope so. I notice in the note that Sir Bill has sent to us dated 14 October that deployment is now running at the rate of 3,400 terminals a month but that is still not the 5,000 target you began with. When do you expect to get up to the 5,000 target?
Sir Bill Jeffrey: At the moment the plan is to complete the delivery of the 62,800 that constitute increment one by the end of January 2009 and we believe we are on course to do that with some improvement of the 3,400 a month.

Q22 Keith Hill: What is your level of confidence?
Sir Bill Jeffrey: At the moment, in relation to this particular target, I think there is a good chance that we can do this by the end of January because we are now, as the note I sent you brings out, above 45,000 and we are regularly hitting about 3,500 a month.

Q23 Mr Bacon: It says in the report that the ATLAS consortium includes EDS and also Fujitsu, EADS, General Dynamics and Logica CMG. Is that right?
Sir Bill Jeffrey: Yes.

Q24 Mr Bacon: What role does IBM have?
Sir Bill Jeffrey: I am not aware of any role.

Q25 Mr Bacon: Not necessarily in the ATLAS consortium, but what role does IBM have in the overall DII?
Mr Taylor: IBM is a minority player in the consortium. They were originally involved, if memory serves.

Q26 Mr Bacon: So they are part of the ATLAS consortium.
Mr Taylor: Yes, but they are a tier three player in the sense that they are providing expertise and consultancy effort into the consortium and did so in the early days. I would not describe them as a major player in this programme.

Q27 Mr Bacon: Is it correct that IBM is involved in running the SCOPE project?
Mr Taylor: Yes, IBM was the contractor involved in SCOPE.

Q28 Mr Bacon: Can you tell us what the SCOPE programme involves?
Mr Taylor: I think it would be inappropriate in this open forum to discuss that programme because of the nature of the requirement.
Sir Bill Jeffrey: The short point is that it is not an MoD project.

Q29 Mr Bacon: What is the amount of money involved in the SCOPE project? Can you tell us that?
Sir Bill Jeffrey: I think we ought to invite the Cabinet Office to give you a note if they are able to do so.

Q30 Mr Bacon: Fine. I shall move on. I take it that you do satisfaction surveys where terminals have actually been installed and quite a few terminals have been installed. Do you do satisfaction surveys on what people have found with the experience of using the new terminals?
Sir Bill Jeffrey: Towards the end of the Report there is some indication of what these surveys are showing.

Q31 Mr Bacon: How often do you do those?
Mr Quick: They run every three months.

Q32 Mr Bacon: You have new data coming in all the time.

Mr Quick: Yes. We have a different group surveyed each time and as more people come onto the system they are surveyed in turn.

Q33 Mr Bacon: It is presumably like an opinion poll, is it? How many do you do in each sample?
Mr Quick: We encourage the complete sample but some people will complete the surveys and some people will not. A representative sample is achieved each time otherwise the statistics are not valid.

Q34 Mr Bacon: I have heard it said that more people are dissatisfied with the new system than with the old system. Would you like to comment on that?
Mr Quick: That is not what the statistics found that are talked about in the Report. Yes, there are some people who are dissatisfied in that they have lost some of the features they maybe had before in terms of the changes we have made, but the system is more capable than the previous systems they were on. Once people have got used to it we find that the satisfaction data improves.

Q35 Mr Bacon: Could I move on to the cost? What was the original estimated cost? It has obviously gone up, but what was it originally?
Sir Bill Jeffrey: What the NAO have attempted to do in the Report in the table at Figure 16 is to set out an account of the forecast programme costs, what they were and what they are currently. The DII programme total given there is £5.22 billion and the current estimate is £5.895 billion. Quite a lot lies behind that because there is more than one way of measuring the cost of the total programme.

Q36 Mr Bacon: When the MoD were asked parliamentary questions by a couple of my parliamentary colleagues about the original estimated costs, one of the questions was from the Member Mike Hancock on what the original estimated costs and in-service delivery date were for the Defence Information Infrastructure project. In the answer, while explaining why the in-service delivery date as such within the contract was not an appropriate way of putting it, the answer so far as the money was concerned was £2.3 billion. It did refer to increment one admittedly, but that was not the question. Did the MoD know in July 2006 when that question was asked and the answer £2.3 billion given just for increment one that the total cost then would be more of the order of £5.8 billion?
Sir Bill Jeffrey: What we did in response to that question and a number of others was what I think is pretty common practice which is to give the actual approved figures as approved by the department's investment approvals board. I do not believe it was misleading in the sense that in each case it was explained quite clearly what the figures related to. It is a very fair point that the NAO Report brings out; depending on how you define it there are other elements of this programme which could be argued to increase its overall cost.

Q37 Mr Bacon: Yes and there are amounts not yet contracted for and for future risks, departmental overheads, non-ATLAS costs, *et cetera.*
Sir Bill Jeffrey: Precisely.

Q38 Mr Bacon: The question was about the original estimated costs for the Defence Information Infrastructure project, not for particular contracts. So that was misleading actually, was it not?
Sir Bill Jeffrey: I had better look at that because what I am sure is that there was no intention to mislead at all. There may have been an answer which did not address the question as directly as it might have.

Q39 Mr Bacon: It was a very clear question and it ended up being an amount that was less than half; in fact it was around one third of what you are now expecting to spend. If you would look at that and perhaps send us a note, that would be very helpful.
Sir Bill Jeffrey: I shall certainly do so.[1]

Q40 Mr Bacon: I should like to ask about the difference between the amount you already have on contract, referred to in paragraph 2.43, of just over £6.1 billion and the amount required to finish the entire programme. It says "The Department is currently forecasting that it will cost £7,093 million to deliver the entire Programme, including the full requirement". Are you going to get all of that? That has not been contracted for. Is that all going to be in your budget?
Sir Bill Jeffrey: First of all, the £7.093 billion includes what the Report describes as dependent programmes, which are financed separately from the DII programme. What one is really looking at is the £5.895 at the bottom of the column headed "DII Programme Total". Most of that is provided for; our plan is to roll this out.
Mr Taylor: Of that total, if you take the total scope of the programme as being 150,000 work stations, as of today we have full funding for 140,000 of them.

Q41 Mr Bacon: When you say "full funding" do you mean that includes funding and the efficiency targets which have been set?
Mr Taylor: Yes, indeed. We are using our efficiency programme not just to assume that we will get the additional funding for the additional 10,000: we are looking at ways in which we can drive that additional 10,000 requirement down and where we sit today we have a shortfall of about 6,000 terminals.

Q42 Mr Bacon: Paragraph 2.44 implies 10,000 terminals; in fact it calls it a gap between the 140,000 and the planned 150,000 terminals. Have you managed to close the gap partly already?
Mr Taylor: Yes, indeed.
Sir Bill Jeffrey: There are two factors in this: one is that we think we can find imaginative ways of reducing the requirement through efficiencies. The other is that as a matter of fact, for unrelated

[1] Ev 13

reasons, our staff numbers are reducing. Our plan is to scale down both in the MoD head office and in the Defence Equipment and Support Organisation so the actual requirement may end up being a bit less than we have been previously assuming.

Q43 Mr Bacon: Let me ask you a question about the point of all this. The system is designed to replace a whole panoply of different non-integrated systems so you have one point of contact. Presumably, if you are putting on a set of spectacles to look at an individual trooper or army officer you could find out whether that person were getting the correct pay and rations or whether enough bullets were being delivered into the field for the company that officer was commanding. It is a crude way of putting it.
Sir Bill Jeffrey: It is true to say that this is infrastructure which will carry all these functionalities but there are protective security arrangements around each of them, not least where personal data is involved.
Mr Taylor: The principle you have described is precisely what underpins the vision for this joined-up infrastructure. We want to be in a situation where, rather as we have in the past had stovepipe systems to support various functions that defence carries out, increasingly as the DII footprint expands throughout the defence environment we will be able to use DII more for a multiplicity of functions, whether supporting logistics, supporting HR, supporting finance, right the way across the landscape. What we have not done is try to put this solution right down to the front line. There are other systems which fulfil that because they have to be hardened in particular ways. As a guide, we are taking it down to deployed headquarters level and then other systems will take over from there.

Q44 Mr Bacon: Like Bowman, which this Committee has looked at.
Mr Taylor: Precisely.

Q45 Nigel Griffiths: This Report is a bit of a disappointment to veterans of the Committee of Public Accounts because it seems to indicate that you are only 3% overspending and only 18 months behind before catching up. Do you share that disappointment?
Sir Bill Jeffrey: I would be reluctant, given that there has been serious delay—and there clearly has—to claim this as a triumph because I hope the Committee know me better than to think I would do that. On the other hand there is a decent argument to be made that the governance we put around the commercial arrangements has enabled us to manage some quite serious problems over the timescales better than we would otherwise have done. It is probably what gives me confidence that there is enough resilience in this programme and the way we set it up for us to be able to drive through the rest of it to a satisfactory conclusion. I am not claiming success here at all because I know that there are some points of serious criticism in this report, but, considering how difficult this territory is, we are not doing too badly.

Q46 Nigel Griffiths: What is disappointing is paragraph four, page five, which highlights that you sought to learn lessons from the United States Navy Marine Corps Intranet Programme, which I gather predates this one by four or five years.
Sir Bill Jeffrey: Yes.

Q47 Nigel Griffiths: What lessons did you learn and which ones did you not learn which have subsequently caused the delays?
Mr Taylor: The principal lesson was to get a really good grip of the applications which this infrastructure was going to support. Sadly the evidence we collected from a number of visits to the States to talk to the Navy Marine Corps was that they had underestimated the number of applications that they would be expecting to support. The way we took that lesson on board was to address that question even before we let this contract so that in the defence environment we were looking at in excess of 6,000 applications before we started. We rationalised those and that gave us a much more certain base line from which to place the main contract itself.

Q48 Nigel Griffiths: Security is of course a hot, topical, political issue and a practical issue. The Ministry lost TAFMIS data a short time ago and obviously there must be a big concern about the security of this system and what stops it being put on a laptop and being stolen from the boot of a car or robbed from someone or put on a memory stick. What safeguards have you built in to protect our defence secrets and personnel from such a theft?
Sir Bill Jeffrey: The loss of the recruitment laptop was a wakeup call for us because we had felt that we were probably better placed than most government departments. However, what it and the subsequent investigation I asked Sir Edmund Burton to do demonstrated was that, like other parts of Government and indeed other large organisations, we have a problem over the culture of security. Our systems and procedures were as one would want them to be but they were not being systematically followed through in practice so the shortcomings which the TAFMIS episode illustrated were real. Since then we have done a lot. John, as Chief Information Officer, has been at the centre of it. We have had a massive programme of encryption of laptops where they were not already encrypted; we have identified people as responsible information asset owners right across the organisation and senior data protection officers.

Q49 Nigel Griffiths: What I need to know and what the Committee need to know is whether there is anything different about this system which does not mean it ends up on a laptop which might get stolen however encrypted?
Sir Bill Jeffrey: This system's security features are such as to make that less of an issue.
Mr Taylor: Perversely part of the reason it has taken us longer to get to where we are today is because we have put so much effort into the security of the system, whether that is dealing with laptops that

certain members of the Armed Forces and our civilians need to do their jobs, whether it is the way in which new technology which was not available to us previously, for example memory sticks, these small devices which can carry large amounts of data, will be able to be used on the system but, if for any reason they get lost or stolen, the whole design philosophy for DII is that we feel safe. We have raised the accreditation bar for the DII well above what we have in some of our legacy systems such as TAFMIS. We are going further than that and that is putting in place the training regimes to deal with the people factors because it is the totality which gives you ultimately the protection for the data on the system.

Q50 Nigel Griffiths: Will people still be able to put it on a data stick?
Mr Taylor: Data sticks will still be able to be used but they will only be able to use approved ones; they will not be able to push any data stick into the system.

Q51 Nigel Griffiths: Figure 16, page 35 shows that you have spent £306 million on mitigating risks. That leaves a smaller proportion of the £500 million that was set aside to pay for the serious risks that this may face with half the programme to complete. Is that going to be sufficient?
Sir Bill Jeffrey: There is no reason to think it will not be.
Mr Quick: In programmes like this a lot of the risk comes up front in terms of the design and development and initial work on rollout. We are largely through that now. It is likely that we will use more risk in the early phase of a programme so yes, I am confident that the remaining risk will be adequate.

Q52 Nigel Griffiths: Are you anticipating any increase in the 3% overspend to which I and others referred, which is £182 million?
Mr Quick: Not at this stage. We have a complex financial model which is reviewed regularly as a programme. We know the reasons for that increase and we are not anticipating that those will increase or change.

Q53 Nigel Griffiths: What is the most risky aspect of the part to be completed of the contract?
Mr Quick: We are continuing to roll out the planned software and we continue to deal with the changing security scenario and that does require us to change issues on the systems as the security posture changes.

Q54 Nigel Griffiths: Paragraph 3.16 indicates that ATLAS is only measuring four of the 58 performance indicators fully. How do you then know that you are getting proper delivery levels?
Mr Quick: At the time of the report some of them were not being measured and some of them were only being measured manually. They are all now being measured, although some of them are still being measured manually. The results of those measurements have been good; the live system has performed well. We talked earlier about the abatement process in place when the service levels are not actually achieved.

Q55 Nigel Griffiths: What is the risk that one of your legacy systems might require a major upgrade before you can replace it?
Mr Quick: The legacy systems which have been passed across to ATLAS are all being managed. They have made a number of service improvements to those. Provided we follow through with our current deployment plan for the remaining terminals which have to be put on contract, then there will be no need to do any major work on those legacy systems. However, if we do not get them on the present contract yes, there will be a time when we will need to do something with them.

Q56 Phil Wilson: On page eight, paragraph 23, it says "The Programme reports that it has already achieved or enabled benefits to date of £916 million" on the way to £1 billion. Can you give us a breakdown of where you think you have achieved those benefits?
Mr Quick: The benefits which come from DII come really from three sources: the first ones are the direct benefits in terms of efficiency and cost reduction; then there is a considerable group of benefits, the enabled benefits. DII enables the delivery of the JPA, DMICP and some of the other big defence change programmes which we talked about earlier and those benefits all add up to that total.

Q57 Phil Wilson: So when the programme is completed what do you think that figure will increase to?
Sir Bill Jeffrey: That to my mind is £1.5 billion.
Mr Quick: Yes, the current estimate is that both the enabled and direct benefits equal about £1.5 billion.

Q58 Phil Wilson: So you are almost two thirds of the way towards that.
Mr Quick: That is over the length of the contract.

Q59 Phil Wilson: Are the £640 million of costs avoided with the contract penalties *et cetera?*
Mr Quick: Cost avoidance is those direct efficiencies that we get from removing the 300 terminals and replacing them with one single integrated information infrastructure and that brings us cost benefit because obviously you have a reduction.

Q60 Phil Wilson: Basically, even though there is a delay in there, it is actually showing its worth at the moment, is it not, looking at these figures?
Mr Quick: The programme has suffered from some significant delays and we have had some issues. However, the benefits have largely been protected by various means and the programme is on track to deliver the estimated benefits profile.
Sir Bill Jeffrey: The really significant fact is that we have managed to protect the JPA because it is where most of our efficiency savings are coming from. They are essentially automating processes which were previously done by large numbers of people. The

fact that notwithstanding the delays we were able to roll out the JPA more or less on the timescale we had originally envisaged means that the efficiencies we were looking for from that source are ones we can now count on.

Q61 Phil Wilson: On page 36 paragraph 3.3 describes the consequence of the continued delay in the hardware rollout of the terminals. We have received this note about the number of terminals and it says in the Report that to reach the target it has to be 5,000 a month, but this latest note says that you are doing 3,400 terminals. For my own benefit, you said earlier that you are still going to reach the target by the end of January.
Sir Bill Jeffrey: The point which was made fairly earlier was that the timescale we set for this has changed over time. I think the 5,000 assumed completion by about now and we are at the moment looking at completion of increment one by the end of January. The point I made earlier was that I now feel confident that we can achieve that.
Mr Taylor: We are anticipating that number by January because we are now hitting the big headquarters sites. For example, we have now started installing in the Main Building in Whitehall and in fact the first five work stations went live successfully just 12 hours ago. Because they are all in the building in a single environment that we understand very well, the pace of rollout out of the pipeline can be much slicker. We are anticipating that 3,500 creeping up as we move forward.

Q62 Phil Wilson: Because the building is bigger.
Mr Taylor: Yes. We are not aiming for numbers much above the 5,000 a month, partly because of the experience we have had.

Q63 Phil Wilson: Paragraph 3.4 is "Core Software Functionality". Have you planned what you would do in the event that is not successful in designing the remaining core software that you have ordered?
Mr Quick: The contract has a number of provisions. We went for a consortium to deliver this so as to have strength in depth. In the event that ATLAS or any part of ATLAS does not perform we are able either to seek input from other elements in the consortium or, *in extremis,* to ask ATLAS to bring in other resources to deliver for us.

Q64 Phil Wilson: On page 10 there is a similar issue around the system. Why have rollout schedules not been designed to maximise your ability to close legacy systems earlier and will further schedules be designed in this way?
Mr Quick: It is certainly our wish to close legacy systems as quickly as possible because of financial issues but, because of the difficulties we have already talked about and acknowledged, those closures have been prevented. It is still our aim; we have a programme of work looking at legacy systems. Looking at what we can do to the deployment schedule to accelerate their closure is one of the key elements of the programme.

Q65 Phil Wilson: One more point about the number of staff, page 16, paragraph 1.15. You have over 500 staff working on this but at the moment the consortium still is not providing the project management it should or are they being trained up to take over?
Sir Bill Jeffrey: No, they are different functions. This is the programme team which we will be scaling down as this comes in and beds down. It may seem a large figure and indeed it is but, to get back to where we were earlier in this discussion, some of the experience of earlier big programmes is that where they really come unstuck is when you under-invest in the project team. One thing I took reassurance from in this case is that the NAO clearly considered that we had staffed the project team about right.

Q66 Mr Davidson: May I ask about the contractor shadowing arrangements? Under what sort of circumstances would EDS be replaced by Fujitsu?
Sir Bill Jeffrey: It is intended to be where there is some catastrophic event which affects the viability of the company, for example, or they completely fail to do what we need them to do.
Mr Quick: It was designed to deal with a catastrophic failure of the company, an Enron failure, for example, but also to deal with a situation where one element of the consortium was not delivering so we could seek other elements to stand in to provide the capability we need. There are different scenarios which might be used to invoke that stand-in or stand-up capability.

Q67 Mr Davidson: Tying that with the incremental process, I am presuming that once somebody has the contract, notwithstanding the fact that they are shadowed, they always have the advantage for all the subsequent increments and they will not end up then in a position where their shadow picks up enough information to be able to undercut them for individual increments.
Sir Bill Jeffrey: Our expectation, barring something which would cause us to decide otherwise, is that there will be continuity in this. Let us not forget this is a consortium and if it is to be successful in working with us then the various constituent companies also need to work well with each other.
Mr Taylor: When we look at the makeup of this consortium it was also a recognition that we did not want to have all our eggs in one basket. It does provide a measure of burden-sharing both in terms of the workload that each of the constituent partners has to contribute to the whole, but it also means that at the top tier we do have risk-sharing between the partners. Because they are risk-sharing there is an incentive on each partner to shadow what the other is doing in case they have to step in in the event of a catastrophic failure. For me, the success of this arrangement is highlighted by the fact that we started out with the four main players in this consortium and we still have four main players in this consortium, so it seems to be working so far.

Q68 Mr Davidson: The shadow must have mixed feelings. In a sense it is a bit like being an understudy and they will benefit from the lead actor or actress falling under a bus, will they not? Therefore the inclination to be of assistance in a crisis is diminished.
Mr Taylor: That is why in the early stages of the contract, as the Report brings out in a number of places, we put in place a number of measures to try to inculcate this partnering ethos that is often talked about in these programmes but sometimes is quite difficult to identify. So far that ethos has served us well.

Q69 Mr Davidson: The shadowing element must to a certain extent involve people just watching each other, monitoring what others are doing. How much additional cost does that add to the programme?
Mr Quick: The shadowing contractor has work to do, he is part of the consortium and has work share. The fact is that they are aware of what is going on, they are part of the activity and they are able to stand in if needed. They are not actually just standing there waiting to take up some work but are very much part of the activity. If we take the two lead risk sharers, Fujitsu and EDS, they have roughly equal shares of work but in the end, in the event one of them were unable to continue, the other would be in position through their experience and involvement to pick up the other element of the work.

Q70 Mr Davidson: May I turn to the question of the legacy systems? As I understand it, ATLAS are administering the payments in return for a 5% share. What is the advantage to the department of paying ATLAS that 5% to handle payments?
Sir Bill Jeffrey: The 5% is a pretty standard administration fee. As I recall, our view was that this was a cost-effective way of delivering the service.
Mr Taylor: It was very much a mechanism that we put in place to ensure that. Given that this programme was so important to MoD's business across the board, we have to pay considerable attention to business continuity, therefore we saw that 5% premium, if you wish to call it that, as being a worthwhile investment to ensure that as a legacy capability came to an end and the new capability was put in place, we could seamlessly move from one to the other.

Q71 Mr Davidson: So it is more than simply handling payments.
Mr Taylor: Indeed so.

Q72 Mr Davidson: I would do it for 4% rather than getting them to do it for 5%. Can you clarify for me exactly what it is you are getting for this money?
Mr Taylor: What we are getting is continuity on moving from the very disparate legacy environment that we described earlier to the new environment so that the consortium is bearing responsibility for ensuring that we in MoD can continue our business while the implementation is taking place. That for me is the value which comes from that.

Q73 Mr Davidson: In this legacy contract, if you were not replacing systems, the MoD would be supervising those anyway. I am not quite sure what extra you get. Until you get to the final point when they are changing over, which I understand, I do not quite see any advantage to you from paying somebody else to handle the payments.
Sir Bill Jeffrey: It goes back to what we were saying earlier about one of the lessons we drew from the American experience, that in terms of delivering the eventual programme there is advantage in corralling the legacy systems and arranging for them to be identified and released as this process goes along. As the Report also brings out, there have been some significant improvements in the level of service provided through these legacy systems brought about by the consortium over this period. It is more than just an agency arrangement; it is a critical part of the thinking.
Mr Taylor: May I add a tangible example of how that has really helped us? Prior to this arrangement we had something like over 50 individual IT helpdesks for our user community. We have now integrated them into a common helpdesk facility in two physical locations where there is a single phone number for MoD users to ring up, if they have a problem; they do not have to worry about whether they are on legacy system A, B or C. We are getting something for this management fee, but at the same time, because there is no profit from that to the lead contractor, we have incentivised a move into the new environment as quickly as possible.

Q74 Mr Davidson: May I come back to the point Mr Griffiths raised about the fact that you are only 3% overspent at the moment and 18 months behind? What is your anticipation of the final overrun and final delay?
Sir Bill Jeffrey: We have at the moment no reason, because of the way the contract is constructed, to expect any other overspend in terms of additional costs of the kind the Report identifies, the 3%. That is not to say it will not materialise but at the moment we feel this is not going to run away with itself in terms of the cost in the way that other projects have.

Q75 Mr Davidson: Time delays?
Sir Bill Jeffrey: I feel reasonably confident that we can implement the rest of increment one by the end of January next year. We then look to increment two and we are aiming to roll that out over the rest of 2009 with a fair degree of confidence. Beyond that there are other aspects of this programme, including the most highly classified and more deployable, where I guess there are more uncertainties but we are not expecting any delay as such.
Mr Taylor: The Report talks about our increment 2 Bravo, which is the deployable element which will support our forces at the appropriate classification level overseas. That element of the programme is very much tracking to the schedule which was set out when that increment was awarded. We are getting confidence from that, having de-risked that element of the programme previously.

Q76 Mr Mitchell: I almost get the feeling that we cannot go on meeting like this. Another big project, another series of delays, another cost overrun and you here to explain that it was all devised in the year 2000, the contracts were let in April 2005 and you arrived in November 2005 so it is not your fault; mistakes were made but you very amiably tell us that you are getting round them. It is a sad saga, is it not?
Sir Bill Jeffrey: I was not saying anything about my own role in this at all. What I was saying earlier was that I have, as accounting officer, to say that the delays that this programme experienced are regrettable, they in some respects reflect things we could have done better, in particular the understanding of our own estate and the fact that that might hold things up. I was saying—and maybe you would find it even more reprehensible—that in this Report I actually found quite a lot which was favourable. I have read many NAO reports in the past on projects of this kind and there was a lot here that I could justifiably take comfort from.

Q77 Mr Mitchell: Can we just look at the project? This is a saga that happens with a lot of departments with big projects. They put everything on an information system, big contract, then it all goes wrong. It is happening in a series of departments. Where does this fetish for large systems like this embracing all the activities of the department come from? Is it something which is pushed on you by Government? Is it something which is pushed on you by super salesmen from the companies? Is it a matter of Civil Service pride that we must have a system better than everyone else's? Why this passion for grandiose systems?
Sir Bill Jeffrey: It is a very fair question in the sense that attempts to computerise the whole of a department's functions are often doomed to fail.

Q78 Mr Mitchell: So why do people embark on it?
Sir Bill Jeffrey: What I was going to say was that the thing about this particular system is that we were very clear at the beginning—something the NAO does comment favourably on—to distinguish between the infrastructure and the applications. Massive as it is, this is the rolling out of an IT infrastructure and many of the most significant business applications are being pursued as separate projects like the Joint Personnel Administration which we have touched on once or twice this afternoon. To the extent that we have been successful—I seriously do not want to over-claim for this because there have been delays—it has been because we have not attempted at one bound to computerise the whole business. This project was essentially about the IT infrastructure.

Q79 Mr Mitchell: Why at the start put so much on it? The more you put on it the riskier it gets and yet you have put on a lot of things unrelated to it like pay, manning levels, equipment, top secret stuff and procurement. Why create an overloaded system like that? Why not keep separate systems? Horses for courses.
Sir Bill Jeffrey: Because there is business benefit in having a single infrastructure and in particular single points of access. One of the downsides of the delays we have experienced with this project is that we have had longer than we would have wished to maintain some of the legacy systems. In some parts of the department people have had to operate with two screens and essentially two systems. The business benefit of getting a single infrastructure which is capable of carrying everything is very substantial as well as being overall cheaper. I am convinced that this stuff is worth doing but it is difficult.

Q80 Mr Mitchell: The more you put on it, the more the risk. It is marvellous to have systems which can tell people anywhere in the country all the basic information they need to know about a patient or a soldier or whatever, depending on which train the laptop has been left on in the first place. To multiply the inputs is to multiply the risk and many of the legacy systems have been actually cheaper to maintain and update than the cost of putting them on this system. Do you expect any of the legacy systems to fail before they are integrated with this system, to need replacing?
Mr Taylor: Provided we stick to the schedule—

Q81 Mr Mitchell: But you have not so far.
Mr Taylor: —we expect to be able to keep the legacy going for as long as it takes to replace it. Picking up on your point, I think of the DII—and I hope the Committee will forgive me—as what I call the Heineken system. It allows defence to have access to the individual information sources which allow defence to do its business. Responding to your point about throwing everything into this one programme, each of the other programmes is distinct in its own right.

Q82 Mr Mitchell: Were estimates done at the start of the cost of keeping each of the legacy systems going?
Mr Taylor: Yes.

Q83 Mr Mitchell: Did those costs allow for the delays which in fact occurred?
Mr Taylor: The costs which we put into what we call the public sector comparator showed that we could make substantial savings that we discussed earlier from joining up our infrastructure in a way which would enable a common approach to accessing the functional applications, whether logistics, medical, HR, finance, through this common infrastructure.

Q84 Mr Mitchell: I assume one risk which was taken was putting top secret stuff on. It might be important for somebody at the front line in Afghanistan, assuming it is not captured by the Taliban, to know what arrangements you were making for the invasion of Anguilla, say, but it does increase the cost of the risks. I see that it took eight months to deliver a software system capable of handling restricted documents and over three years passed without getting one which could deal with secret

material. This decision to put top secret stuff on has in fact delayed the whole project, has it not? Is it necessary?
Sir Bill Jeffrey: It has delayed the secret part of the project; it is not in itself the reason why the less classified elements took longer than they should have done. It is pretty self-contained for obvious reasons.

Q85 Mr Mitchell: It is also very risky, is it not?
Sir Bill Jeffrey: It is risky in the sense that it needs very careful protective security measures built into it as all highly classified systems do.

Q86 Mr Mitchell: When will the secret software be ready?
Sir Bill Jeffrey: The secret software itself is ready now.
Mr Taylor: We are rolling out the software now to support information handling in the secret domain.

Q87 Mr Mitchell: Is that a secret?
Mr Taylor: We are safe on that point.

Q88 Mr Mitchell: Are these occasional blunders we read about where personnel details are left on laptops which get stolen or whatever the fault of the legacy systems or will they be eliminated by the new systems?
Sir Bill Jeffrey: Incidents like the loss of a laptop reveal shortcomings in two things: first of all the extent to which systems of that kind were protected by encryption. If you look at Sir Edmund Burton's report on the loss of the laptop incident, the real problem there was that the system was not properly encrypted and the staff concerned were not sufficiently aware of that. The other issue is about behaviour and organisational culture which we are very keen to change.

Q89 Mr Mitchell: Why was there not a pilot study? The fact that the condition of the buildings was such a problem should have been known before you embarked on things, should it not? Why was there no pilot project to get all that information?
Sir Bill Jeffrey: We just underestimated how difficult some of the sites would be in terms of accommodation, readiness for equipment of this sort and assuming that it could be done in a more uniform fashion than it turned out to be capable of being done. That is the single point in this report that I feel most embarrassed about.

Q90 Mr Mitchell: That lack of information plus the fixed rollout seem to have caused problems, do they not?
Sir Bill Jeffrey: Precisely.

Q91 Mr Mitchell: I am not sure what is involved in a fixed rollout. Has the fixed rollout been done before by any other department?
Sir Bill Jeffrey: Admittedly in a more uniform environment, the Department for Work and Pensions and in the private sector the Royal Bank of Scotland had used the fixed rollout approach very successfully we understand, but it is fair to say that the defence environment is more complicated than that. When you begin to get into some parts of our estate where, for example, the Territorial Army is based, you hit accommodation which is by no means standard.

Q92 Mr Mitchell: Paragraph 2.27 gives some of the causes of delays in delivering the core software functionality and I should just like to look at them to see whose fault you think they were. One is "An underestimation of the complexity of the functionality contracted for and a lack of capacity within ATLAS to run multiple streams of software", so that is their fault is it?
Sir Bill Jeffrey: Yes, I guess so.

Q93 Mr Mitchell: Why was that not known in advance? Did they just become over-optimistic in the bid or what?
Sir Bill Jeffrey: As the Report says, they assumed the task would be less complex than it turned out to be and it was something our team worked hard with them over a period to get them to address.

Q94 Mr Mitchell: "In a number of cases, the Department says that designs have not been ready to review, while ATLAS says that the Department has been too doctrinaire in its application of review criteria". Who is wrong there?
Sir Bill Jeffrey: At that stage our view is that in the early stages of the delivery of the software we were just not satisfied with its quality and therefore our assurance processes were heavier in their impact on the consortium and they noticed it. As the Report observes, there has been some difference of opinion about that. I am assured that we are now more confident of the quality of the software that they are producing and as a consequence our own assurance processes are lighter touch than they were.

Q95 Mr Mitchell: "During the first two years of the Programme, the number of defects found during trials was very high". Is that their fault?
Sir Bill Jeffrey: It is and it bears out what I was saying earlier about the importance, as we saw it at that stage, of having challenging processes before we would accept software.

Q96 Mr Bacon: Two quick follow-ups: one about the fixed rollout programme. The implication is that once you have done all the preparatory work so that the implementation teams arrive, they can do it all very quickly with very little project management. I am just wondering. I know that you did not manage to deliver this but at least originally, paragraph 2.12, it was planned to have 6,000 to 7,000 per month installed; that is 200 terminals per day being installed. How many people in total would have been involved in or were planned to be involved in the installation of these 6,000 terminals per month or 200 per day?
Mr Quick: On big sites doing 200 a day is feasible but, because of the nature of the defence estate and the complexities and the small number of terminals

on some sites, it is not achievable. Certainly a number of people involved in the programme have been on programmes which have achieved that sort of rollout.

Q97 Mr Bacon: How many people were planned to be involved in the implementation, these implementation teams? Physically how many people does it take to do 6,000 terminals a month?
Mr Quick: ATLAS have approximately 2,000 people working on the programme at the moment.

Q98 Mr Bacon: So that is three terminals per person per month.
Mr Quick: They are not all doing implementation.

Q99 Mr Bacon: That is what I am asking about. I am actually asking about the implementation team. Paragraph 2.6 basically says "The methodology assumed that the Department would be able to complete certain preparatory works before implementation teams arrived". What I am trying to understand is, if I am part of an implementation team and I arrive at the site the preparatory work having been done and I with others am expected across the estate to install 6,000 a month, how many of me are there? Someone must know that surely.
Mr Quick: I could not answer that question.
Sir Bill Jeffrey: We ought to offer you a note.
Mr Taylor: We will give you a note on that.[2]

Q100 Mr Bacon: You do not know?
Sir Bill Jeffrey: No, not with any precision.

Q101 Mr Bacon: If nobody knows the answer to this question, it may account for the fact that you did not actually meet the target. If you could send us a note, I would be interested.
Mr Taylor: May I comment on the distinction between the fixed method and the so-called decision point method? In terms of the effort involved, there is a sequence of steps one has to go through to install infrastructure in a building. You start with cable laying, power and so on. We can give you some numbers as to typically what the team sizes would be. The main distinction between the fixed method, the so-called factory method and the decision point method is that we tailor the amount of project management effort to the complexity of the site involved. The fixed method, or factory method, assumed that we would have one manager looking after maybe 20 or 30 sites and it was that which tripped us up in the early days. There was not enough management effort to make sure that as the implementation teams did the respective parts of their implementation they would be managed effectively so that when the cabling man finished his work the man who was installing the routers on the site would then come in and then the hardware box man would come along straight after. That just was not being managed efficiently.
Sir Bill Jeffrey: On numbers, I imagine that the size of the consortium's teams will depend on the site. We will try to get some indicative figures for you.
Mr Taylor: For a range of sites.

Q102 Mr Bacon: Just one other quick question about data loss. We now hear surprisingly regularly on the radio that either a Royal Air Force officer or Royal Navy officer or a civil servant or somebody has gone and lost something, a laptop on a train or whatever. It is quite hard to keep track of all these because I am usually driving along in the car when I hear of another one. Could you send us a little schedule with all the incidents there have been that have involved the Ministry of Defence over the last five years, what the incident was, what the scale of the data loss was and what happened subsequently?
Sir Bill Jeffrey: We will provide as much as we can. I suspect, if you are talking about a five-year period, that we have discovered that our reporting arrangements are much better now than they were 10 years ago. We will certainly provide something.[3]
Mr Williams: Thank you for your evidence gentlemen.

[2] Ev 13

[3] Ev14

Letter from Sir Bill Jeffrey, Permanent Under Secretary, Ministry of Defence

In preparation for the PAC hearing on the Defence Information Infrastructure scheduled for 22 October, I thought PAC members might wish to be updated on two key developments on the programme since the NAO report was published on 4 July.

Since the report was published, good progress has been made in the roll-out of DII terminals across the Department and in the delivery of key software which enables the DII programme to take the next significant step and bring all of the Front Line Commands and the Ministry of Defence Head Office onto the DII F system. Further information is contained in the attached note.

14 October 2008

DII NAO REPORT UPDATE ON PROGRESS ON KEY DELIVERABLES

1. Roll-out of DII Terminals

Updated Plan. The DII terminal rollout plan is updated iteratively although it is clear in the NAO report the "Latest Plan"[1] was not being achieved. In March 2008 the Programme's Senior Responsible Owner asked for better account to be taken of known risks impacting the plan. This has resulted in more realistic monthly targets which were endorsed by the DII Programme Board and a revised overall target of delivering 62,800 terminals by the end of January 2009 to complete Increment 1 was agreed. This relates to terminals in fixed locations in the UK and Overseas but not to Deployed or Top Secret terminals and is the basis of the 18 month delay estimate as discussed in the NAO report.[2]

Delivery. Between the last reported rollout total in the NAO report (20 June 2008) and 5 October 2008, the Programme has delivered an average of 3,400 terminals per month. At the end of September the Programme had delivered 45,645 terminals which is ahead of the risk adjusted plan by some 1,800 terminals. The Deployed capability remains on track to deliver within it's original approvals.

Forecast. The forecast delivery of terminals remains on track to meet the end of Increment 1 target of January 2009, and the completion of the combined Increment 1 and 2a by December 2009.

2. Delivery of DII Software

Release 1 (SECRET). The Business Pilot Integrated Project Team (located at Abbywood, Bristol) has been using Release 1 (SECRET) software since July 2008. On the successful completion of this pilot, the Secret solution has been approved for release across the Department. The Release 1 (SECRET) implementation plan is now being rolled-out.

Release 2A Reachback. The RESTRICTED element of Release 2A has completed its Business Pilot and the SECRET element is currently being trialled at Headquarters Navy Command. Approval to release this software solution across the department is on track with a target date of late October 2008.

Impact on Programme. Delivery of these two software releases enables the programme to roll DII F to the MOD HQ (pilot starts 21 October 2008) and to the operational HQs of the RAF and Navy in early 2009 and to complete the roll-out of the Secret capability to the Army HQ in early 2009. In addition roll-out to the Permanent Joint Headquarters in Northwood is planned for summer 2009.

Memorandum from the Ministry of Defence

Question 39: *Mr Bacon asked for a note about the reply to Mr Michael Hancock's Parliamentary Question of 7 July 2006 (Hansard (Column 211W)) about the original estimated cost of the DII project.*

At the time Mr Hancock's Question was tabled, only Increment 1 of the DII Programme had obtained financial approval within the Department and was supported by a contract with the delivery partner. The Answer given was confined to the value of that contract—£2.3 billion. This is in accordance with normal practice, which reflects the fact that giving estimated values for subsequent increments which are not yet approved or under contract could adversely affect the Department's position in future commercial negotiations. The Answer was certainly not intended to be misleading, and made it clear that the figure given was the value of the Increment 1 contract, but we accept that—given the terms of the Question—it might have explained the position more fully.

Question 99: *Mr Bacon asked how many people would be in an implementation team to install the DII system at a site.*

The ATLAS site implementation teams ie those individuals physically involved with the installation of terminals, varies according to the size of the site concerned. For example, the installation at a TA centre with 15 terminals would require 16 people over the course of the nominal 38 week migration period and at a larger site with 1,000 terminals would require about 70 people over the course of the 38 week migration period.

There are 2,000 unique sites in total in Increments 1 and 2a, all with varying requirements which are analysed individually to ensure that the required implementation resource levels are allocated. Behind each on-site team there is considerable work required off-site by Engineering and Applications teams to ensure that the on-site Implementation team is as well-prepared and well-equipped as possible.

---

[1] "Latest Plan" rollout figures are shown in the table at Appendix 6 of the NAO report (page 56).
[2] As stated in paragraph 8 of the summary to the NAO report (page 8).

Question 102: *Mr Bacon asked for a schedule showing incidents involving the loss of personal data from information systems over the last five years.*

The information requested is in the table below. Incidents for the four years prior to 1 April 2008 were summarised in our Annual Report and Accounts for 2007–08 in conformance with the guidelines from the Cabinet Secretary's review of Data Handling procedures in Government, but represented here in the form requested. The table includes all incidents since 1 April 2008 that have been notified to the Information Commissioner.

INCIDENTS LEADING TO THE LOSS ON POTENTIAL COMPROMISE OF PERSONAL DATA

Date of incident	*Description of incident*	*Scale of data loss*	*Current status*
August 2004	TAFMIS recruiting laptop stolen from car in Bristol.	The laptop contained an earlier version of the database held on the laptop at Serial 7 and so the data lost was of the same types.	Parliament informed 21 January 2008. Police investigation of incident closed. Those individuals whose data was held on the laptop were covered by the actions detailed in the response to January 2008 TAFMIS incident.
May 2005	Accidental release of Personal Data without Consent from Armed Forces Personnel Administration Agency.	10 soldiers received pay details of other soldiers.	Information Commissioner notified. Soldiers concerned informed of compromise of their information. Incident closed.
December 2005	TAFMIS laptop stolen from Edinburgh Army Recruiting Office.	The laptop held details of some 500 recruits or potential recruits to the Army, no bank account details were held.	Parliament informed 21 January 2008. Police investigation of incident closed. Those individuals whose data was held on the laptop were covered by the actions detailed in the response to January 2008 TAFMIS incident.
July 2006	TAFMIS recruiting laptop stolen from car outside private residence in Leeds.	The laptop contained an earlier version of the database held on the laptop at Serial 7 and so the data lost was of the same types.	Parliament informed 21 January 2008. Police investigation of incident closed. Those individuals whose data was held on the laptop were covered by the actions detailed in the response to January 2008 TAFMIS incident.
October 2006	TAFMIS recruiting laptop stolen from car outside private residence in Leeds.	The laptop contained an earlier version of the database held on the laptop at Serial 7 and so the data lost was of the same types.	Parliament informed 21 January 2008. Police investigation of incident closed. Those individuals whose data was held on the laptop were covered by the actions detailed in the response to January 2008 TAFMIS incident.
November 2007	Theft of laptop deployed on overseas exercise. Laptop taken from Land Rover between 14 November 2007 and 9 January 2008.	Personal information records for 500 service personnel deployed on exercise.	Investigation Complete. It was concluded that the data held on the laptop was unlikely to have adversely compromised the security of either the exercise or its participating personnel.

Date of incident	*Description of incident*	*Scale of data loss*	*Current status*
January 2008	TAFMIS recruiting laptop stolen from car outside private residence in Birmingham.	The laptop held details of 600,000 recruits or potential recruits to the Royal Navy, Royal Marines and Royal Air Force. The information held is not the same for every individual. In some cases, for casual enquiries, the record may be no more than a name. But, for those who progressed as far as submitting an application to join the Forces, more extensive personal data is held. In some 3,500 cases, banking details were also included. Records also contain limited personal details of an additional 400,000 individuals; either next of kin or referees for the recruits.	Banks were warned through APACS of "at-risk" individuals whose account details had potentially been compromised. A help line was set up for those affected. Parliament informed on 21 January 2008. Police investigation of incident closed.
January 2008	Service Children's Education (SCE) Agency teacher's laptop stolen in Brunei.	Details on 17 individual pupils. Contact details were only provided at the level of detail of British Forces Post Office codes.	The parents of all the pupils concerned were informed. All SCE teachers' laptops have been encrypted in compliance with MoD policy.
February 2008	Theft of private laptop containing Army personnel data from nightclub in London. Laptop now returned.	Details of about 100 Army personnel serving in an Engineer Regiment.	Soldiers concerned were informed of the information compromised. Incident closed.
March 2008	Black bin bag discovered by Frimley Green resident.	Bag contained patient documentation from Derriford Hospital plus personal documentation relating to a current member of the Military Medical Staff at MDHU Frimley Park who had recently served at MDHU Derriford. Documents related to NHS patients treated at Derriford.	Documents returned.
March 2008	A computer server holding medical records was lost during transfer from a NATO unit in Lisbon, Portugal to the UK.	Medical records for up to 7,000 individuals.	Information Commissioner notified. Service Police investigations continue.
April 2008	Theft of Defence Dental Service laptop from RAF Halton between 27 April and 1 May 2008.	Contained 300 personal records (but these did not contain sensitive personal data as defined by the Data Protection Act).	Information Commissioner notified. All those personnel whose information was held on the laptop were informed of the loss. The police investigation has concluded without the laptop being recovered.
May 2008	Privately-owned USB memory stick lost by junior Army Officer found on floor of night club in Newquay. USB stick returned to MOD.	Exercise Instruction for an Adventurous Training exercise conducted by the officer's platoon and some personal information.	Information Commissioner notified. Individuals concerned notified.
June 2008	Three laptops stolen on EDS premises between 10 June 2008 and 13 August 2008.	Laptops fully encrypted so no information compromised.	Information Commissioner now notified.

Date of incident	*Description of incident*	*Scale of data loss*	*Current status*
August 2008	Computer server crash at Celle Medical centre in Germany led to accidental destruction of medical records. Subsequent action to restore from back-ups exposed failure of backup process at this medical centre (but not others).	Medical records for 1,150 individuals (servicemen and their dependants).	Information Commissioner notified. The total number of medical records corrupted in the incident was reduced to 714 following the successful importation of the medical records of a unit who had been deployed with their records to Iraq. The British community at Celle were kept informed. Installation procedures and back-up processes have been revised to avoid future reoccurrence. Records now successfully recreated manually.
August 2008	Theft of three USB Portable Hard Drives from secure computer facility at RAF Innsworth between 22 August and 17 September 2008.	6.2 million documents containing an archive of RAF personnel information.	Information Commissioner notified. MoD Police investigation ongoing. Loss publicised and helpline established for concerned current and former members of RAF.
October 2008	Laptop stolen from Army Foundation College at Harrogate which had been used for making local passes for Junior Soldiers	Photographs and limited personal details for 450 Junior Soldiers.	Information Commissioner notified. Parents of Junior Soldiers concerned have been informed of theft. Police investigation still underway.
October 2008	Loss of Portable Hard Disk from EDS Hook	Data of the same type as Serial 7 on 1.7 million recruits and potential recruits.	Information Commissioner notified. Those affected handled as for January 2008 TAFMIS incident. MOD Police investigation ongoing.

Printed in the United Kingdom by The Stationery Office Limited
1/2009 415060 19585