

# Skynet 5

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Skynet 5, a program which will deliver global military satellite communication to the UK armed forces, is the MoD's largest PFI project to have reached preferred bidder stage to date worth approximately £2.5 billion over 15 years.

After over 18 months of negotiation since February 2002 when Paradigm Secure Communications was announced the preferred bidder, the contract was signed with the MoD on the 24 October 2003.

The war in Iraq has made Skynet 5's development more pertinent than ever. The war has underlined the absolute necessity of having effective space communications to ensure the all-round capability of the armed forces.

Now that the deal has closed, IJ examines the issues that using private capital to provide military capability has thrown up and how they were overcome.

## The Project

Later this decade, the UK's current military satellites, the Skynet 4s, are due to reach the end of their working life. Skynet 5 is designed to replace the existing Skynet 4 infrastructure and, in order to improve reliability and security, will also comprise:

- 2 satellites delivered in orbit- designed and manufactured by EADS Astrium
- Management System- designed, developed, implemented and supported by LogicaCMG
- Baseband System- designed by Cogent Defence & Security Networks
- Strategic ground elements located at three UK sites
- 59 new land tactical terminals
- Upgraded terminals on 36 ships

Although Paradigm service provision to the MoD has commenced in May 2003, initial Skynet 5 operational service will be delivered in 2005, followed in 2008 by full service utilising the Skynet 5 satellites.

Paradigm will hold the concession for providing the UK military satellite communications capability until 2018.

## Background

Given that the Skynet 5 program marks the first time a PFI approach has been undertaken by the MoD in the satellite communications area, the deal has been particularly complicated. As the MoD affirmed "quite simply such a deal has never been done before".

Skynet 4, the program's predecessor, commenced in 1988 led by British Aerospace and Marconi. The first stage of launches took place in the late 1980s/ early 1990s and the second stage took place 10 years later. The program followed a conventional procurement route: the MoD ordered the satellites itself and operated them using its own personnel. In

contrast, under PFI, the Skynet 5 contractor will operate the space and ground systems.

In 1999 when the MoD announced its intention to upgrade Skynet 4, Astrium decided to form the Paradigm team which is led by Paradigm Secure Communications (and whose principal members are the European Aeronautic Defence and Space Compnay EADS, the majority owners of Airbus, Paradigm Services, EADS Astrium, Serco, Logica CMG and Cogent) in order to address the emerging military satellite communications service market. The following diagram illustrates this original consortium structure:

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In winning the contract Paradigm beat off Rosetta Global Communications, the consortium led by Lockheed Martin of the United States, and guaranteed the future of Astrium, Europe's largest space company, 75 percent owned by EADS and 25 per cent owned by BAE Systems at the time and now 100 per cent owned by EADS.

Having awarded the contract, the MoD will now enter into a concession agreement with Paradigm Secure Communications Limited. Paradigm in turn enters in a construction sub-contract (for the build and launch of the Skynet 5 satellites required to support the MoD's operational requirements provided in the concession agreement) as well as a services sub-contract (relating to such matters as operation of the system, customer support and equipment maintenance) with EADS Astrium Limited and Paradigm Services Limited respectively. Debt financing has been arranged in the private sector through a £963 million syndicated loan led by BNP Paribas, CIBC and HSBC.

**The PPP contract**

In 1998, the MoD released the Strategic Defence Review White Paper. In this, the MoD acknowledged that defence procurement could be radically improved to cut both cost and time. Partly as a consequence operational commitments, but also because of undermanning and enduring problems with equipment availability and sustainability, the efficiency of the non-operational units was below target levels. It was felt that PFI provided the best solution to these problems.

The advantages of the Skynet 5PFI structure for MoD are threefold. Firstly, the project free-up MoD time enabling it to focus more on core military tasks. Secondly, the PFI arrangement has allowed the MoD to save some £500 million. Thirdly, the scheme secures the provision of flexible and reliable satellite communications, essential for modern military

operations, using the latest technology which will allow the MoD to respond to the expected growth in usage through the coming years. Furthermore, Paradigm's services will also be available to approved defence and other governmental users from other countries and multinational organizations.

The MoD is essentially getting the service for a lot less than they would have done had they followed a traditional procurement route and ordered the satellites itself. It could be said that transferring the risk to the private sector was the only way that such a massive project would have been procured.

The MoD has been very keen to facilitate the project as much as possible by helping to find solutions to the issues that have arisen. "The MoD have been particularly nimble" assured Nicholas Bliss from Freshfields who has been working on the project for nearly six years.

In future PFI projects, the MoD would like to drive down the time taken to complete the contract even more especially prior to the preferred bidder stage.

#### **Dropping out**

The complexity of the project has been such as to necessitate a change in the makeup of the original consortium. In January 2003, after the preferred bidder selection had been announced, Astrium, originally a joint venture, owned 75 per cent by EADS, the European Aeronautic Defense and Space Company, and 25 per cent by BAE Systems, underwent financial restructuring.

In July 2002, EADS and BAE Systems announced their intention for EADS to acquire BAE Systems 25 percent interest in Astrium and form Paradigm Secure Communications in order to exert strategic control over the industrial side of the Skynet 5 project. EADS, which already owned 75 percent of Astrium, paid €84m for BAE Systems stake in the company. Prior to completion of the transaction, EADS and BAE Systems each made a capital contribution into Astrium of €84m to facilitate the acceleration of EADS' strategy of increasing the overall industrial and financial efficiency of the company.

BAE had been keen to offload its stake in Astrium ever since the MoD decided to develop the Skynet 5 program. The two shareholders had conflicting interests for the project. The exit of BAE has left EADS with a free hand to attempt to turn around losses at Astrium - now formally known as EADS Astrium - which experienced a tough time financially due to the decline in demand for new satellite capacity. The final structure has been more conducive to facilitating the project.

#### **The Sponsor**

At present, EADS is the world's second largest aerospace and defence company in terms of revenues with €29.9 billion in 2002. Two of their most well known brands include Airbus, and Eurocopter, the world's largest helicopter manufacturer.

With over 70 sites in Germany, France, UK and Spain, EADS is also a very European venture. Clearly, the government's decision has thrown a lifeline to the British operations of Astrium. "Hundred of jobs will be safeguarded and created at our Stevenage, Portsmouth and Poynton sites", said Chris Chant, then Astrium Managing Director, at the time of preferred bidder selection.

At the outset of the Skynet 5 talks in 2000, Astrium and Logica had expressed concern that the MoD had invited US industry to bid for the supply of Skynet 5, an invitation not extended to UK industry by the American Department of Defence for its equivalent procurement and highlighted the impact of MoD's buying decisions on the export potential of British industry.

MoD dismissed claims that their decision to name Paradigm as preferred bidder showed a Euro bias. "Paradigm simply promised the best deal," an MoD spokesman, Ralph Dunn, said. He insisted cost had won Paradigm the deal over Rosetta Global Communications, a consortium consisting of the BT Group, US defence contractor Lockheed Martin and BAE Systems. "At the end of the day, we chose on the basis of value for money" insisted the MoD.

#### **Risks**

In May 2003, the three banks mandated as lead arrangers to Paradigm, BNP- Paribas, CIBC and HSBC, confirmed credit approval to proceed with the first round of banking support. The senior debt facilities amount to £963 million.

Citigroup has acted as exclusive financial advisors to Paradigm/ EADS since the outset of the project, constructing the commercial and financial plan. Simon Dudley of Citigroup told IJ: "This is by far one of the most complex PFI deals we've worked on". The group are also one of thirty sub underwriters who are participating in the syndication of debt.

The financial arrangement of such an innovative PFI as Skynet 5 is admittedly a high risk for these private finance providers such as the occurrence of any loss of capacity on or damage to any of the Skynet 5 satellites on or after those satellites have been launched. Given that insurance is one of the program's largest costs, it has been in the interest of the borrower and the lenders to optimize risk management programs.

Due to the specialized nature of satellite insurance, it is impossible to obtain broad insurance coverage, as one would do with a straightforward construction project for example. Added to this, losses of satellites at launch have recently spiraled which has resulted in an increase in premium charged by underwriters. Typically, at least one launch in six fails (for a new launch vehicle in the first twenty launches). The most obvious consequence of the surge of launch losses has been an increase in premiums charged by the underwriters. After heavy losses from 1999 to 2001, premiums began to rise at the end of 2001 and continued to escalate through 2002. This said, after the launch phase, failures are at a very low rate (between 2 per cent and 5 per cent).

Both insurers, Willis who are advising Paradigm Secure Communications and Marsh who are advising EADS, are taking a very conservative approach. As with other satellite insurers, they have been asking more questions relating to the health of the spacecraft while they evaluate the risk and have imposed strict policy restrictions. Paradigm are seeking to protect themselves against this risk by taking out and maintaining a range of space related insurance (covering specific project risks such as satellite launch damage/ loss and in orbit failure/ damage) as well as a package of ground risks and general project insurance.

Managing the multiple risks in space insurance has brought many headaches not to mention escalating legal fees. Initially, the MoD had hoped to place a contract by late 2002. "The length of time taken to complete the negotiations reflects the complexity of the deal" said Charles Robson of Lovells who is acting on behalf of EADS in the capacity of sole sponsor and also for EADS Astrium. When asked whether this dual advisory role caused any problems, Lovells insisted that operationally this posed no problem and involved simply ring fencing the two teams.

Other problematic issues that lawyers working on the deal faced have included the negotiation and documentation of IPR, project indemnities, impact of service change, the service credits regime and the limitation of liability provisions, together with the documentation of the Authority's wide ranging technical service requirements. Mark Patterson from Burges Salmon, who is acting for the MoD, commented: "all these issues have proved particularly complicated as would be expected from a project of this size and complexity".

#### **The Future**

While it may be too early to comment on the exact refinancing potential, it is hoped that once the launch risk has been overcome and that the project has been proven to operate according to contract, there will be a high possibility of refinancing to reflect a lower level of project risk. Although there is one school of thought that believes it would be best to refinance as quickly as possible, it is generally agreed that a swift refinancing would not maximize the benefits gained from waiting till the program has been derisked. Citigroup has already been mandated for refinancing in this eventuality. Skynet 5, perhaps with the exception of FSTA, will clearly remain the biggest equipment procurement for some time. "We're not going to see massive equipment deals like this", said Bliss, "Skynet 5 and FSTA will, in my opinion, mark the high watermark of MoD equipment PFI procurements". The only potential rival at the moment appears to be Skynet 6. This is due to be launched at the end of Skynet 5's fifteen-year concession period. Only after this time will another competition supply the next generation of satellites and the ownership of assets will then be transferred to the winner.

For now, no other such equipment procurement projects are due to appear on the radar screen...

#### Skynet 5 Project Information

- Concession Awarder: MoDSponsors: Paradigm Secure Communications (LogicaCMG, General Dynamics Decisions Systems, Cable & Wireless and Stratos)
- Project Total cost: £963 million
- Mandated Lead Arrangers: BNP Paribas, CIBC, HSBC
- Legal Advisor to Paradigm Secure Communications: Freshfields
- Legal Advisor to EADS: Lovells
- Legal Advisor to MoD: Burges Salmon
- Financial advisor to Paradigm/ EADS: Citigroup
- Financial advisor to MoD: Deloitte and Touche
- Senior debt facilities: £963 million
- Insurance advisors to Paradigm Secure Communications: MarshInsurance advisors to EADS: Willis

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