



**JOHN STEELE**  
*Principal Consultant*

## **PROFILE**

### **Professional Summary**

John runs his own IT company, Soroban Systems Ltd. He is currently working on a number of projects that require his combination of skills. The systems currently being designed require detailed knowledge of WAN routing, LAN networks, Windows XP/Windows 2003/Active directory architectures in a secure environment.

John was a Design Authority within Syntegra from 1993 until 2003. He worked on WAN architectures for MoD, with Essex CC on LAN, WAN and IT infrastructure generally prior to a Facilities Management contract being placed. Before that he was one of the key designers for a major project that delivered a communications reference centre for the MoD/Army – the Land Systems Reference Centre (LSRC).

John has worked in the IT industry for nearly 40 years. After graduating in 1963 he worked initially as a hardware designer for a computer manufacturer. He then moved to another computer manufacturer where he led a team implementing a real-time multi-user/multitasking operating system. He then moved to a software house that used his unusual blend of skills to deliver hardware projects. Ultimately one such project developed into a major business (£50M pa) supplying the financial markets with dealing room equipment.

### **Key Skill Areas**

John has in-depth practitioner knowledge of all aspects of system design arising from his unique combination of skills in hardware design, operating system implementation and applications. This includes **real-time** and **distributed application** and **distributed system** design, efficient utilisation of **LAN** and **WAN** technologies and hardware. He is able to apply this accumulated expertise to both innovative design and problem identification and rectification. He is able to build on his extensive knowledge, accumulated over his long career in the industry, and is readily able to assimilate new techniques and technologies.

John also has knowledge of the more specialist areas of security including not only the software aspects but also the **EMC** and **TEMPEST** aspects that were vital to the success of the LSRC.

John has experience in most **PC platforms** and **PC operating systems** and Microsoft desktop applications and configuring systems for efficient use of applications. John also has practitioner experience in current development tools including Visual C++ and Visual Basic. He has written extensively in Assembler although there is rarely any need to do so now. His knowledge of object orientated development was invaluable for the LSRC project.

### **CAREER SUMMARY**

2003 – date	Soroban Systems Ltd
1993 – 2003	Syntegra
1991 – 1993	Soroban Systems
1990 – 1991	Integralis
1976 – 1991	Data Logic
1970 – 1976	Computer Technology
1963 – 1970	Ferranti (Automation Systems Division)

### **EDUCATION/QUALIFICATIONS/TRAINING**

BSc(Hons) Electrical Engineering (University of Manchester)  
CEng, MBCS, CITP

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**KEY ASSIGNMENTS**

*Mar 2003 – Date, Principal Consultant (SOROBAN SYSTEMS Ltd)*

John has worked on a number of projects during this period related to secure communications and computer infrastructure. The details of this work are classified but they involve routing for WAN networks, design of a number of complete secure computing architectures that will ultimately be deployed to many sites. Other work includes the design of an infrastructure to capture data and record this to tape. The data rate requirements are up to 60 kilobytes per second for a period of up to 60 days continuous recording.

*Oct 1993 – Mar 2003, Design Authority (SYNTEGRA)*

John has been involved with a number of projects during this period. These have included:

*Secure WAN Network*

John designed a WAN to satisfy a need to share a common underlying ATM network between a number of independent existing IP networks. The existing networks used separate independent communications links feeding into a central hub and the new design makes the whole network resilient providing multiple routes so that communication does not depend on any one site being operational. A specific requirement was to ensure that the separate networks on each site must not be able to see data from any of the other networks. Although sharing the routing through the common central IP network data segregation has been achieved to the satisfaction of the security officers responsible for each network. The design is based on Cisco products.

*BOWMAN Integration Facility*

John worked with the customer and the architects to define the requirements for a building to perform final integration for the BOWMAN radio that will shortly be introduced into the British Army. The building had unusual power distribution requirements (28-volt dc) and had to satisfy the security requirements to handle classified data.

Following his experience with the LSRC the various security accreditation authorities were involved at the earliest possible stage.

*Essex County Council*

John provided technical expertise to the Essex CC team both during the bid phase and during the transition from a bid into a partnership where Syntegra is running the entire Essex CC IT operation. This work included analysis of the PC workstations including both hardware and software. It also included advising on the issues associated with migration of the desktops from the existing plethora of operating systems (mainly Window 95) operating system to Windows XP. It also included acquiring knowledge of the current network topology and working towards a strategy for the upgrade of its LAN and WAN components.

John also investigated and continues to advise on security of the computer systems and the network to ensure the Council can meet their obligations imposed by recent legislation and to work towards their intention to be BS 7799 compliant.

*Land System Reference Centre (LSRC)*

John was deputy system architect for the project with responsibility for the overall design and integrity of the entire technical infrastructure for the LSRC. This project delivered a facility for MoD where the army could bring communications equipment for certification prior to entering service or after upgrade. John was involved from the initial stages prior to the proposal being written, through contract negotiations, to successful delivery of a fully equipped working building. The building infrastructure is capable of carrying any communications signals in use by the army and hence interconnecting any of the Army fielded equipment. Facilities have been provided, in many cases designed for the purpose, to monitor the specialised military interfaces and communications protocols.

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The project entailed working with subcontractors who each developed their own subsystems with Syntegra acting as prime contractor. One of John's major roles was to ensure that all the interfaces between the subsystems worked and that the overall performance of the system was within expectations. This task required thorough knowledge of data and voice technologies both currently in service and on the foreseeable horizon. It also required thorough knowledge of the behaviour of the computer operating systems used (NT and UNIX) within each of the distributed subsystems.

The technical infrastructure design had to satisfy both the connectivity requirements and the overriding security requirements inherent on any installation where classified documents were handled. John's knowledge of low level technical subjects such as TEMPEST and EMC and of the operating systems being enabled these aspects to be discussed with the project's security accreditor at an early stage. This was a major contribution to the system being approved.

**VISA IARS**

Syntegra were developing a system to improve VISA International's account queries. The call centre required an agent application, developed by Syntegra, which interfaced to the PABX in order to perform the conventional functions of call management. John's role on this project was to implement the interface between the Syntegra application and the third party software that directly interacted with the PABX. The PABX was located in Baltimore although a WAN link was available in Maidstone. John also developed a test harness so that the application developers were not dependent on the switch. This harness proved to be invaluable to the efficiency of the software development team as they could conduct all of their initial work in Fleet. John was also able to use this test harness for most of his work minimising the need to work at Maidstone and eliminating the need to travel to Baltimore.

***Multi-user, Continuous Presence, Video Telephony Demonstrator***

John implemented a fully functional demonstration of a dynamic video conference system targeted at financial dealing rooms. ISDN was used to establish any part of the call that went to an alternative site. The design exploited standard video and voice switching technology from the Syntegra product range integrated with VC8000 ISDN videophone technology acquired from BT. This project used early versions of VC8000 hardware and software and required regular communication with the VC8000 product development team and with the device driver software team who were subcontractors. The project required detailed knowledge of video and voice switching, H.323 video and T.120 protocols for the transmission of voice and data. Visual Basic was used for the user interface and Visual C++ for the videophone integration.