



CASE STUDY

TECHNOLOGY AND STRATEGIC POLICY UNITE TO PROVIDE SECURE WIRELESS MOBILITY TO FINANCIAL SERVICES NETWORKING

A Converged Network Delivers Wi-Fi Advantages and Services to the Sanpaolo IMI Group

Employees whose main work tools are fixed-base PCs spend a small percent of their time at their workstations. The need for increased mobility is encouraging new habits and generating new requirements—and the traditional office concept is becoming obsolete.

At the same time, the widespread adoption of wireless networks by businesses has demonstrated that Wi-Fi technology not only helps broaden the wired network, but it also preserves the main features of the wired component—security and reliability.

Ubiquitous connectivity, mobile technologies, and new architectural solutions enable organizations to increase productivity. However, these advancements must also ensure the security and protection of distributed computer systems.

The Sanpaolo IMI Group enjoys a reputation as one of Italy's most important banking and financial organizations, with central headquarters in Moncalieri, near Turin. With its widespread presence throughout Italy, the Group is well-established in both the residential and business markets, with a customer base of approximately seven million.

Pursuing innovative technologies is part of the Group's corporate culture and is considered a critical competitive advantage. To that end, the Group created a strategic business-mobility initiative to provide flexible and ubiquitous network access to employees and visitors alike through groundbreaking technology. This initiative would rely on Cisco Systems, IBM, and Intel engineering skills to offer the security levels, reliability, and centralized management to meet the requirements of a major credit company.

To move forward, Sanpaolo's users needed to adopt notebook PCs with Intel® Centrino™ mobile technology over a Cisco Wireless LAN infrastructure that was implemented by IBM, which would handle integrating the components.

The availability of the Cisco Compatible Extensions program within Intel's Centrino mobile technology was fundamental to the success of the initiative. The client systems were required to automatically retrieve any software updates at system startup, before users could be authenticated and allowed to access the network. Cisco Compatible Extensions enabled an authentication scheme that could satisfy the Group's security requirements, allowing wireless clients to perform the pre-established procedures used to control network access and to manage software updates.

Today, at Sanpaolo IMI, users can use PCs and IP mobile phones to wirelessly access the highly available network at any time and from any place.

Cisco Integrated Wireless Network and Intel Centrino mobile technology combine to provide mobility, security, reliability, and flexibility to Sanpaolo's multiservice network.

The *Macchina Operativa Integrata* (MOI), or Integrated Operations, is the Sanpaolo IMI team responsible for managing the combined information systems of the banking network and the parent company, and for providing back-office business support services.

In implementing the wireless network infrastructure, the MOI had two objectives: first, to create a flexible network architecture at the central headquarters for consultants, contractors, and guests, with different security policies and access rights for each user group; and second, to provide mobility throughout the company, initially only to a select group of internal users. To accomplish this, users needed dedicated laptops to gain network access while not being restricted to their physical workstations. The advantages offered by a flexible wireless solution, in terms of productivity and user satisfaction, were decisive, and ultimately determined its success.

Security requirements were carefully evaluated. At both the infrastructure level and the individual terminal level, security was critical to the final decision; the bank needed to be confident that the security levels provided were robust enough to protect both client and organizational data. To provide this level of security, the group chose a network infrastructure based on Cisco IP Communications and on Intel Centrino mobile technology.

“The Group’s routing and switching platform is based almost exclusively on Cisco devices,” says Stefano Mascella, manager of telecommunications for MOI. “It was simply a question of integrating the current architecture with a wireless extension—an innovation capable of adding value to the network and to our previous investments. No bank had ever ventured so far.”

Also thanks to the compatibility between the devices tasked with providing coverage and the native wireless capabilities of the interconnected clients, choosing a Cisco Integrated Wireless Network solution made it possible to implement a secure WLAN network with excellent overall reliability.

“Our internal users who have been given secure access to our intranet-based services are the primary beneficiaries of Wi-Fi connectivity,” Mascella says. “Due to their extensive mobility requirements, our original target had been middle management. However, the project was accepted enthusiastically by everyone, so much so that we continue to receive requests from all other areas.”

At the same time, the group implemented the “guest Wi-Fi” option to offer connectivity to all of its external users. This service was intended to provide consultants and vendors with restricted and controlled access to the network, in a secure, flexible manner that was capable of supporting the different types of virtual private network (VPN) connections that Sanpaolo IMI guests would need to use to access their own corporate intranets. “It is important for our visitors and contractors to be able to take advantage of our Wi-Fi Internet access to connect to their own corporate intranets through VPN,” Mascella explains.

Users with appropriate access credentials are presented with the terms of use for the available service, which must be accepted explicitly. The access control system then takes charge of user-session authentication and accounting and provides connection transparency for the Internet navigation and VPN access protocols; at the same time, it filters out all other types of traffic to protect the access network.

WIRELESS LAPTOPS, PDAS, AND IP PHONES HELP ELIMINATE CABLES AND INCREASE PRODUCTIVITY

A wireless infrastructure based on the Cisco Integrated Wireless Network architecture has laid the foundation for network capabilities, terminal capabilities, and implemented solutions that allow applications to use the network and provide voice support. An important further objective of the project was to lay the foundation for an IP Communications solution that would integrate voice and data over a converging IP network, whether wired or wireless.

Selecting the Cisco IP Communications solution allowed Sanpaolo IMI to address both current and future needs. The resulting IP Communications solution would consist of fully integrated networks and terminals, benefiting users through increased flexibility and ease of use.

“This service modifies the actual relationship of people with their workplace,” says Mascella. “Usable space, location, tools, and services acquire a new meaning.”

Benefits are also fiscally significant. The flexibility and ease of use of the adopted solution has encouraged staff to increase their use of network-based tools and applications; as a result, many more activities are completed today through direct use of Web-based applications. Making the Internet accessible to partners (vendors, consultants, guests) has increased the effectiveness and immediacy of their relationship with Sanpaolo IMI and has created real productivity gains for the bank. IP Communications technology has enabled a new communications paradigm that is more effective, flexible, and immediate. It offers tangible proof to Sanpaolo IMI’s users of the benefits that can be obtained when hosted solutions are integrated with client capabilities. The solution can be easily replicated to the other offices of the Group thanks to the architecture’s intrinsic scalability.

“By integrating the wireless component over our pre-existing Cisco network, we are able to further protect and take advantage of our previous strategic investments in Cisco Systems technologies,” concludes Mascella.

Cisco Compatible Extensions

The WLAN market is growing significantly, with users seeking to benefit from mobility in the workplace and beyond. Many WLAN client devices have been marketed to address the requirements generated by user mobility needs. These devices must be able to interoperate safely within a WLAN infrastructure and consistently provide the function set that corporations have grown to expect. Thanks to the Cisco Compatible Extensions program, the suppliers of WLAN devices can request licensing of Cisco WLAN technical innovations at no additional cost.

Within the framework of this program, each device's compliance is verified through interoperability testing that is carried out by an independent testing organization. As a result, the Cisco Compatible Extensions brand is awarded only to products that have been found to be fully compliant with the product compatibility specifications and with the new network services provided by Cisco WLAN products.

Since its introduction, Intel has been the lead collaborator and supports the development of Cisco Compatible Extensions features and capabilities. Intel Centrino mobile technology, which is available on the latest generation notebook PCs, is fully compliant with Cisco Compatible Extensions specifications and has been awarded this certification.



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