



Intel in
Communications

Case Study: ODDO & Cie

Going wireless reaps rewards for investment company

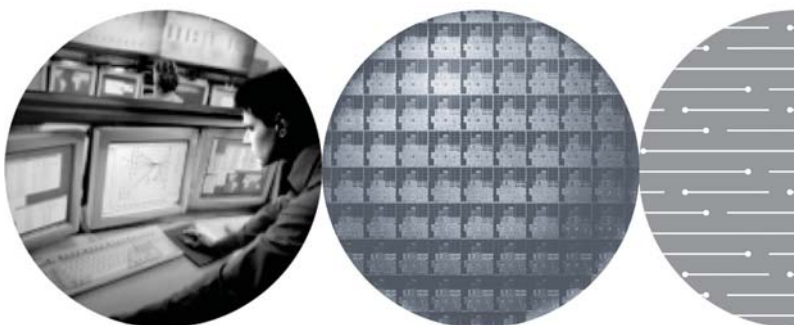
Solution Summary	A self-deployed WLAN within a historic building delivering flexibility, security, and availability at a remarkably high speed and low price with immediate ROI, without damage to building and with worldwide access via VPN.
Industry	Institutional investment.
Company Profile	Oddo & Cie is France's leading independent investment company, run and owned by family and partners, offering services and products to institutional and private investors and companies in France and elsewhere.
Challenge	To build a secure wireless network with minimal wiring, enabling staff and guests to access the Internet and exchange data via PC, laptop or other mobile device from anywhere within thier building, and from outside via VPN.
Solution	state-of-the-art implementation of WLAN technology from Intel with 25 access points and a single cable used to deliver power along with Internet access.
Solution Provider	In-house solution built by Oddo & Cie.
Benefits	Huge cost savings, immediate return on investment, extremely rapid deployment, increased flexibility, assured security, productivity gains in technical support, ample potential for expansion and global access via VPN.

Business Challenge

Oddo & Cie is France's leading independent investment company, run and owned by family and partners. It offers a range of services and products to institutional and private investors and companies in France and elsewhere.

The company has a staff of 642 and 176 million € in consolidated shareholders' equity. It has 8.8 billion € in assets under management and 85 mutual funds.

Oddo & Cie's 40-strong research team produces 7,000 pages of research a year and is one of the most renowned in Paris. It is the engine that drives all the company's brokerage-related services while providing information, analysis and recommendations to the company's other departments.



Networking constraints

Oddo & Cie is based in a nineteenth century listed building in the heart of Paris. Of its seven floors, two are under ground and the foundations are 28 inches thick. This created significant challenges when the company needed to upgrade its whole wired infrastructure from 5-cat to 6e-cat. The 5-cat infrastructure was getting old, but being in a listed building meant Oddo & Cie was severely constrained in what it was allowed to do to the walls, floors and ceilings. The thickness of the walls and foundations presented a further obstacle.

Olivier Huynh Van, Networks & Systems Manager at Oddo & Cie, says: “We needed to get rid of the old cable system and wanted a completely new solution with network connections in some of the oldest rooms including the appointment rooms where customers are received.” These rooms are used for presentations, demonstrations and customer meetings.

But because the building is a listed landmark, skilled workmen and specialized architects would be needed to do any modifications to the old rooms. The process would have been long, complex, bureaucratic and expensive. “We needed an economic solution and we needed it quickly,” says Huynh Van.

“The WLAN network topology cost less than two per cent of the cabling project,” Huynh Van says. WLAN technology also meant it was possible to hide the hot spots and conform to architectural regulations for listed buildings. Unsightly wiring and boxes can be avoided because the access points and antennae are hidden in the walls.

Security would also be much greater because the lack of wires or sockets on the walls or the floor means that guests cannot access the network physically. “There is no risk of an authorized person accidentally leaving an opening for someone to access critical data,” Huynh Van says.

Use of client-based VPN access in conjunction with a WLAN for staff when on the move would ensure the tight security conditions would apply to anyone trying to use the corporate network worldwide. The client-based approach provides an additional level of encryption above the standard Wireless Encryption Privacy (WEP) for WLAN. This prevents data theft from eavesdropping between the mobile device and the VPN firewall.

Wireless Solution

Working on its own, without the use of a third-party specialist, Oddo reviewed the wireless market and evaluated the WLAN product range. It was seeking versatility, a broad range of products, and a solution that fitted its very specific requirements.

Oddo chose Intel, and was delighted with the swift and supportive response it received to its initial request. “We wanted an early deployment and received lots of support and help from Intel,” Huynh Van says. Deployment, which happened at the end of 2001 (production release started beginning of 2002), took less than two weeks and ran for the first four months in pilot mode.

Return on Investment

So significant were the cost-savings compared to the hard wired approach, and so rapid was the deployment, that the WLAN system paid for itself immediately. “If we hadn’t been able to use a WLAN, we would have had to go for a hard-wired solution and that would have cost us a very great deal more money,” says Huynh Van. In fact, the WLAN cost less than two per cent of the hard-wired approach.

There are now 25 Intel WLAN Access-Points throughout the building. Mobile users have WLAN antennae integrated in their desktop systems. Guests, meanwhile, have USB antennae of PCMCIA cards provided by Oddo.

“With a wired system there is lots of tracking work to be done shutting down ports and removing cables when consultants move, and opening them for new people. “With a wireless system this doesn’t need to be done, saving hours of technical support time.”

Olivier Huynh Van

Networks & Systems Manager at Oddo & Cie.

Security and Mobility

Security and mobility were also important issues. Security is particularly crucial because of the fact that external people use the relevant rooms to attend meetings or work on-site as consultants. Oddo did not want its network to be physically accessible to them.

Additionally, there was a strong need for mobility because staff such as sales people and analysts needed to be able to use desktop PCs, notebook computers and palm-top devices in different rooms. “There is a need for flexibility, comfort and ease-of-use,” says Huynh Van. “These people have to be able to synchronize data with whatever device they are using.”

In addition, Oddo wanted to enable staff who travel extensively, such as sales people and analysts, of which there are a significant number, the ability to dial in to the network from overseas. This could be done safely and securely using a client-based Virtual Private Networking (VPN) approach.

No compromises

WLAN technology was the clear solution to these problems. It certainly fulfilled the economic requirements, offering a much more cost-effective solution than cabling.

Oddo Mobile-Units

The Oddo Mobile-Units facility is a key part of mobility within Oddo. The aim is to ensure that staff are not penalised for being on the move, inside or outside the company, that there are no compromises in their ability to access data. The VPN Mobile-Units facility allows staff on the streets to access their data from anywhere through a regular Internet access (via xDSL, cable, PSTN, GPRS or another service). The remote host establishes an encrypted link over the public network. On the other side, mobile users inside the company use the WLAN Mobile-Units facility. Both facilities feature IPSec tunnel and user authentication. The client-based VPN approach ensures the highest possible levels of security and prevents data theft from eavesdropping between the mobile device and VPN firewall. Sales people and analysts are constantly travelling. “This technology means they can access their data from wherever they are, even if it is a meeting room on the first floor underground, in a TGV or in San Francisco,” Huynh Van says.

Power and performance

Oddo & Cie had some very specific needs in deploying power over the network. Regulations governing listed buildings oblige the company to hide the hot spots. From a technical point of view, all hot spots need to be fixed near the ceilings where there are not usually power outlets. The only way to feed power into all access points was to inject power into the data cable. “Intel was able to handle this combination from the first version of its products,” Huynh Van says.

Another issue was performance. The 28-inch foundations and thick walls meant that Oddo needed extra high performance antennae for the access points. “Very high performance antennae were essential,” Huynh Van says. “Also in some cases we needed unidirectional or omnidirectional antennae, which once again Intel was able to provide.”

Firewall protection

Given the nature of the investment business, Oddo needed the highest levels of security for its new system. This was not a problem with the WLAN. On the contrary, the wireless service enables Oddo to build in stronger and safer security than was previously available under the hard-wired system. The system has also delivered a higher level of management control.

The WLAN is behind firewalls with two access levels: guest level and colleague level. Guest level uses the standard WEP system for WLANs, while colleague level employs ultra secure encryption between the mobile device and the firewall. “It is very controlled and very easy to control,” says Huynh Van. “With wires through open ports, sometimes they don’t shut down properly leaving the opening still activated, usable and dangerous.”

Productivity gains

The WiFi system has delivered significant productivity gains for the network team and the security team at Oddo. “With a wired system there is lots of tracking work to be done shutting down ports and removing cables when consultants move, and opening them for new people,” Huynh Van says. “With a wireless system this doesn’t need to be done, saving hours of technical support time.”

A welcome feature of the system is the ability to manage all access points together, for example adding new MAC addresses to each one simultaneously or flashing all hot spots with new firmware.

Oddo also likes the fact that Intel continues to upgrade and enhance its products. “The firmware embedded on the access points is always improving,” says Huynh Van. “Moreover, lots of the enhancements are free and can simply be downloaded from Intel’s Web site. So you can benefit from a new feature immediately.”

Peace of mind

Oddo & Cie is delighted with the benefits it has gained from the WLAN in terms of reduced costs, increased security, improved support productivity and a high level of flexibility. In the words of Huynh Van: “The WLAN topology is versatile – it responds to any needs. There are no restrictions.” This helps meet the company’s aim of enabling authorised people to access the information they need anywhere, anytime.

Moreover, the levels of security are very high. “The WLAN fulfils the requirements of the security manager and the network manager that the network should be physically secure – something they couldn’t be confident of however many doors were locked if someone had left a port open.” Thanks to the client-based VPN, this level of security protection applies globally to anyone trying to access the corporate network via the Internet.

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Flexibility, reliability and price performance

The decision to go with WLAN has proved the right one at Oddo & Cie, and the company is delighted with its Intel-based network. "The reason for choosing Intel was because of the maturity of its offering, the fact that it had a solution whether we wanted connectivity from desk top to notebook or palm top," Huynh Van says. "After evaluation and implementation we are totally satisfied with the results we have had from Intel products."

The fact that the wireless products featured enough flexibility to provide network connectivity in the whole building with a minimum investment – less than two per cent of the cabling project budget – further underlines the enormous advantages of the WLAN solution.

The future

Oddo & Cie aims to implement the WLAN technology at its other buildings in Paris at some point in the future. Even though these buildings have none of the architectural constraints of the head office, the benefits of the WLAN solution from a cost, convenience and security point of view make it ideal for further deployment when economic conditions allow.

Another benefit expected over the next six months to two years is increased productivity among Oddo's staff. Regulatory issues have held back the spread of WLAN systems in France so that people are relatively unfamiliar with its potential to improve personal productivity. "At present, many people are still using the wireless technology in the same way as they use their desktop systems," says Huynh Van. "However, as hot spots and wireless systems become more widespread in France, we anticipate that employees will begin to adapt their working practices to exploit the productivity benefits of WLAN technology."

Lessons Learned

- WLAN technology offers enormous cost-savings over a conventional hard-wired network solution. In the case of the Oddo & Cie network, the price came down remarkably to less than two per cent of the cost of cabling the building. The WLAN is also cheaper to maintain thanks to productivity gains in technical support.
- Where the fabric of a building is particularly historic or architecturally interesting and needs to be maintained, WLAN technology provides the potential to install a fully-functional state-of-the-art communications network without causing damage or introducing unsightly wires and sockets.
- Security can be significantly increased with WLAN by avoiding the need for sockets that might enable unauthorised access. WLAN also prevents the possibility of ports being accidentally left open for intruders to penetrate. Using a WLAN in combination with a client-based VPN also enhances global security.
- Flexibility and versatility are key features of a WLAN, enabling users to work at a time and place that suits them and access all the corporate data they need and are authorised to obtain.
- Offers such a broad range of WLAN components that it is possible to set up the entire network and obtain adapters, drivers and other key components to run the complete system using Intel technology.

Technology

The WLAN network comprises:

- Intel PRO/Wireless 2011 LAN Access Point
- Intel PRO/Wireless 2011B LAN Access Point
- Intel PRO/Wireless 2011 LAN PC Card
- Intel PRO/Wireless 2011 LAN PCI Carrier
- Intel PRO/Wireless 2011B LAN PCI Adapter
- Intel PRO/Wireless 2011 LAN USB Device
- Compaq 802.11b MultiPort (mix of Lucent and Intel chipset).

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