WLAN Small Business Guide

Introduction
This guide is intended to help you sell Cisco Aironet wireless networking products. One of three such guides – the other two discuss medium-sized and large enterprises – this one concerns itself with smaller businesses. All three guides adopt the same structure, covering a description of the typical customer, the business and IT networking issues they face, the benefits they can expect from wireless networking, and what opportunities are likely to exist for up-selling and cross-selling other Cisco products.

The target customer has between 1 and 15 employees. Often a greenfield site from an IT perspective, there will also be opportunities to sell consultancy and integration services as the focus is on the business and revenue generation not usually IT.

Working with the small business customer the rewards can be great in the longer term. You have the opportunity to help build the smaller company as it grows. Become the preferred business partner for IT and the rewards will be all the greater.

Studies show that WLANs deliver higher productivity and therefore a return on investment, and Cisco is committed to leading the WLAN revolution. So the financial benefits of Cisco’s secure, wireless network offering in terms of return on investment should remain uppermost in your customers’ minds.

The key points are that Cisco Aironet WLANs offer:

- Security
- Scalability
- Higher return on investment
- Flexibility
- Ease of installation and use
Who is the typical customer?
A small business with up to 15 employees. Such a company will often be housed in temporary or unsuitable premises as it works to boost cashflow. Small companies are often the fastest growing and so undergo frequent changes in personnel, premises and even business models.

Capital spending will be tightly constrained to that which can show a clear return on investment. The typical business may not have had the opportunity to take advantage of the general benefits of networking so is unlikely to require network management. When faced with wireless networking, it will of course be concerned about security but most important of all will be ease of installation, management and use, and return on investment. An example would be a company providing local marketing and PR services and consisting of 15 employees will require a network that allows them to:

- Access the Internet to find information critical to the business
- Access to email
- Collaborate on sales presentations and preparation of documents, such as spreadsheets, reports and other deliverables
- Share peripherals such as printers
- Aggregate employee time for billing purposes
- Access the company contacts database

What business problems do small enterprises face?
Their income will generally be sufficient to cover expenses, to allow them to break even, and probably to renew assets when necessary.

They will employ a small number of people and IT systems are likely to be minimal. They will be convinced of the need to invest in computing but the advantages of networking may not have been made clear previously, suggesting potential for up- and cross-selling opportunities. Most importantly, spending on capital equipment will be under tight control, and the need to maximise return on investment will be paramount.

For instance, if they can get both better staff productivity from a wireless network and improve customer access to sales information, they are more likely to want to buy. However, the basic benefits of networking are also compelling reasons to put in front of them.

What network-related problems do they face?
Building a successful network involves the application of both expertise and equipment in the right place at the right time. For a small business, a network must be efficient, cost-effective, and deliver very clearly defined benefits.
The kinds of issues likely to be faced by the reseller are:

- In terms of Internet access, the customer may have a limited number of modems or other Internet access devices if they have broadband, which may mean that not everyone can access the information they need to work productively.

- If the customer’s premises are already cabled up, the cabling may not be compatible with the technical requirements for 100Base-T networking.

- The customer’s rental agreement may limit the number of structural alterations that can be made to the offices.

- The customer’s business may demand high throughput of rich, multimedia data.

- Security is always an issue.

- Ease of installation, use and management are paramount.

What solutions does wireless networking bring?

In addition to the benefits that networking in general brings, such as the ability to share peripherals and information, wireless networks offer a range of unique benefits.

When a company is small, the changes it undergoes as it grows mean that it is likely to move its internal partitions and employee workstations around fairly frequently. If it is growing fast, it will also need to move premises fairly frequently too.

Cisco WLANs are ideally suited to this situation. They are secure, offer flexibility, ease of installation and use, and a high return on investment in terms of money saved over fixed wire infrastructure and enhanced productivity.

Secure

Security is often cited as a reason for not buying wireless networks but there is no basis for this perception to persist.

Cisco Aironet provides the greatest level of security available today for wireless networking, offering up to 128-bit encryption and supporting both the encryption and authentication options of the 802.11 standard.

As specified in the standard, Cisco Aironet uses the RC4 algorithm with a 40- or 128-bit key. When WEP is enabled, each station (clients and access points) has up to four keys. The keys are used to encrypt the data before it is transmitted through the airwaves. If a station receives a packet that is not encrypted with the appropriate key, the packet will be discarded and never delivered to the host.

The wired equivalent privacy (WEP) option of the 802.11 standard is likely to adequately address the needs of most of your small business customers. However, for some customers, this may not be enough. So Cisco goes beyond WEP, which only permits four static encryption keys, leaving undefined the means by which those keys are granted, revoked, and refreshed.
If the customer’s requirements demand it, Cisco’s Aironet 1100 and 1200 Series offer enterprise-level security to automate WEP key management as well as enhancing authentication. Via Cisco LEAP, an enhancement of the IEEE 802.1X EAP standard, Cisco ensures that strong, mutual authentication occurs on every network access. The credentials used for authentication, such as a log-on password, are never transmitted in the clear, or without encryption, over the wireless medium. LEAP also provides dynamic per-user, per-session WEP keys, removing the administrative burden and security issues surrounding static WEP keys.

Yet while 802.1X and EAP authentication types provide strong authentication for wireless LANs, standard 802.11 WEP encryption is still vulnerable to network attacks. Cisco’s Wireless Security Suite, part of the Cisco Aironet Series, provides several enhancements to WEP keys, both static WEP keys and the dynamic keys that are derived as a result of a successful 802.1X authentication. Cisco’s strategy includes the addition of encryption key servers along with key hashing and message integrity checks to protect the integrity of company information.

Cisco will continue to enhance security measures to ensure best-of-class security throughout the network.

**Easy to install/setup**

Installation is much simpler than for a fixed wire setup. The need to decide where workstations will be sited before the network is up and running is removed, and there is much less disruption of working patterns during installation. Also, with Cisco's Aironet 1100 and 1200 Series supporting inline power over Ethernet, access points can be sited wherever required with no need for extra power cabling.

In a survey of WLAN users (source: NOP, Fall 2001, “Wireless LAN Benefits”) when asked about any particular challenges, problems or issues presented by the implementation of wireless LANs, almost a third of users had experienced no problems or issues with WLANs at all. Where problems have been experienced, they have tended to revolve around speed and range/reception issues. Resolutions for these two issues can be found by upgrading the WLAN to 802.11a, and by installing additional access points.

**Flexible**

When people need to move around while working or if their workstation needs to move to accommodate business changes, wireless networking allows them to do just that. No longer need staff be tied to a network socket on the wall. With no cabling infrastructure to consider, employee workstations can be placed anywhere with network coverage guaranteed. What's more, employees can move around the office while remaining connected, allowing anyone to work where and when they like.

In a survey of WLAN users (source: NOP, Fall 2001, “Wireless LAN Benefits”) users in enterprises of all sizes said mobility was by far and away the biggest benefit of WLANs. This translated into easier collaboration with others, increasing the competitive advantage of the company, reducing errors by replacing paper with wireless output, and improving the company's image.
Easy to move the network
Moving office can be an expensive undertaking, both in terms of the cost of moving people and equipment, but also in terms of business downtime. With a fixed wire network, not only have they invested time and money in that cabling, they may well have to go through the cabling process all over again on moving to new premises. With a wireless network, your customers will save that cost because they will not be leaving the cabling infrastructure behind. Instead, access points can be simply removed from the wall or other mounting points and packed away for easy re-installation.

Wireless networks improve productivity
WLANs allow employees to access information from the Internet, emails or company databases from anywhere within range of an access point. In a recent NOP Study (source: NOP, Fall 2001 “Wireless LAN Benefits”) of WLAN users the productivity savings added up to a massive 70 minutes per employee per day, compared to a traditional fixed wire network. Respondents added that a wireless network improved the quality of their lives by allowing them the flexibility to work where they chose.

Wireless networks save money
WLANs offer big savings over fixed wire infrastructures. People are more productive because they can work wherever and whenever they like. Because WLANs are flexible, office moves are quicker, easier and so cheaper, infrastructure can travel with the business rather than be left behind, and there is no cabling to buy and install. Customers who already own fixed wire networks but who need to expand will find a WLAN ideal for extending an existing LAN rather than installing more cabling infrastructure and buying another hub/switch.

In a survey of WLAN users (source: NOP, Fall 2001 “Wireless LAN Benefits”) users overwhelmingly cited lack of cabling costs as wireless networking’s biggest cost-saver.

What opportunities are there for up-selling and cross-selling Cisco products?
When your customers buy a wireless network, they will be prospects for a range of other Cisco Systems products.

For example, if they did not already possess a network, this will allow them to share modems, printers and broadband Internet connections. Opportunities will exist to sell Cisco 600 Series or 800 Series Routers to attach the network to a broadband Internet connection.

If they do already own a fixed wire network, the WLAN will allow them to extend the LAN to a new premises or annexe at low cost, and/or to add an overlay network which allows employees to benefit from the mobility and extra productivity that wireless enables.
Alternatively, you may find that the customer prefers to install a new, wired network with wireless networking deployed tactically as the business needs change. This can mean the sale of both wired and wireless infrastructure products, including switches, routers, client access devices and access points.

Finally, as well as the opportunity to sell consultancy and integration services, you may find that Cisco wireless networking products can create pull-through for non-Cisco products such as laptops and associated hardware.

**Conclusion**

New technologies, standards, and an emphasis on worker mobility is driving the growth of wireless LANs worldwide. As the WLAN has redefined what it means to be connected, it has stretched the boundaries of the local-area network. It makes an infrastructure as dynamic as it needs to be.

Your customers, therefore, must begin planning their wireless strategies today. During this process, whether large, medium or small enterprises, they need to make no compromises. With standard and interoperable wireless products, LANs can help scale and extend the wired infrastructure – or even replace it. In a wireless world, users can remain mobile while maintaining a high-speed link to extranets, intranets, and the Internet.

In conjunction with existing wired infrastructures, the Cisco Aironet Series delivers the robust wireless connectivity required today, while assuring backward compatibility and future investment protection. Moreover, Cisco wireless technology provides industry-leading performance, easy field upgradeability, and the flexibility to support a variety of wireless standards to serve an organisation’s wireless access needs far into the future.