

Managing  
the Enterprise  
WLAN:  
How VARs  
Can Benefit By  
Working With  
Wavelink

*January 2004*

---

White  
Paper



**Table of Contents**

# Managing the Enterprise WLAN: How VARs Can Benefit By Working With Wavelink

<b>Sections</b>	Section 1	Wavelink’s Core WLAN Management Offerings.....	2
	Section 2	Wavelink Helps VARs To Sell More Effectively.....	4
	Section 3	Wavelink Saves VARs Money .....	6
	Section 4	Wavelink Enables New Services, Revenue Streams .....	6
	Section 5	Working With Wavelink .....	10
	Section 6	Wavelink Strengthens VARs’ Offerings .....	10
<b>Figures</b>	Figure 1	Wavelink: End-to-End Value.....	3
	Figure 2	Wavelink’s Value to VARs.....	5
	Figure 3	Wavelink Enables New Services and Revenues.....	9

*NOTE: This report is based upon information believed to be accurate and reliable. Neither Summit Strategies, Inc. nor its agents make any warranty, express or implied, as to the accuracy of the information or the opinions expressed. We shall have no liability for any errors of fact or judgment or for any damages resulting from reliance upon this information.*

*Trademarked names appear throughout this report. Rather than list the names and entities that own the trademarks or insert a trademark symbol with each mention of the trademarked name, Summit Strategies uses the names only for editorial purposes and to the benefit of the trademark owner with no intention of infringing upon that trademark.*

© 2004. Reproduction in whole or in part is prohibited except with the written permission of the publisher.

**Unauthorized use or sharing of this document is strictly forbidden.**

## Managing the Enterprise WLAN: How VARs Can Benefit By Working With Wavelink

Over the past few years, value-added resellers have helped drive the surge in Wireless Local Area Networking (WLAN) based on IEEE 802.11 standards. Broad adoption of these standards has driven growth in three distinct markets—home, business and public-access “hot spots.” VARs have participated in WLANs mainly in selling to the business market, where the combination of good performance and low cost has made WLANs popular as a replacement for traditional wired networks and to enable powerful new mobile applications such as inventory control in warehouses and point-of-sale applications in retail stores.

Many early WLANs were relatively small, involving just a handful of access points and mobile devices, and companies often deployed them with little advance planning. As WLANs proliferate, however, they begin to pose significant management challenges that many companies are just beginning to recognize. These challenges will only grow as WLANs increase not only in number but in size (involving more access points and mobile devices), geographic scope (deployed in multiple, widely scattered locations), and strategic importance (supporting mission-critical applications such as ERP, and performance-sensitive applications such as IP telephony and video).

Wavelink Corporation is one of the earliest vendors to address these issues by developing software to manage the many configuration, security and administrative challenges inherent in managing large-scale enterprise WLANs. Today Wavelink is one of the leaders in WLAN management with more than 5,000 customers and strong partnerships with networking leaders including Symbol, Cisco and Proxim and with major IT vendors such as Hewlett-Packard and Computer Associates.

This white paper focuses on the value that Wavelink provides for VARs and the advantages they can achieve by using Wavelink products.

VARs are a diverse industry, of course. Some have focused on the so-called “non-carpeted” world—including manufacturing and warehouse

environments—where WLAN management used to be fairly simple but has become much more complex as WLANs have grown. Others have focused on the “carpeted” world—corporate office buildings and campuses, for example—which have long relied on fixed networks and now are getting into the WLAN market. In a broad sense, the VAR label also applies to systems integrators and even to the regional Bell companies that have extensive professional services organizations and considerable networking expertise and, increasingly, are seeking to leverage those assets by designing, deploying and possibly managing WLANs for enterprise customers.

We begin with a brief overview of Wavelink’s WLAN management software. Then we discuss how VARs can use Wavelink to enhance their own offerings—to address numerous barriers to adoption and sell more effectively, and to boost their own margins. We also discuss, and invite VARs to consider, a variety of new opportunities that arise from Wavelink’s ability to support new services, new revenue streams, even new business models. We also describe a new certification program that Wavelink has launched to help VARs maximize the benefits they can achieve by incorporating its software in their offerings.

## **Section 1      Wavelink’s Core WLAN Management Offerings**

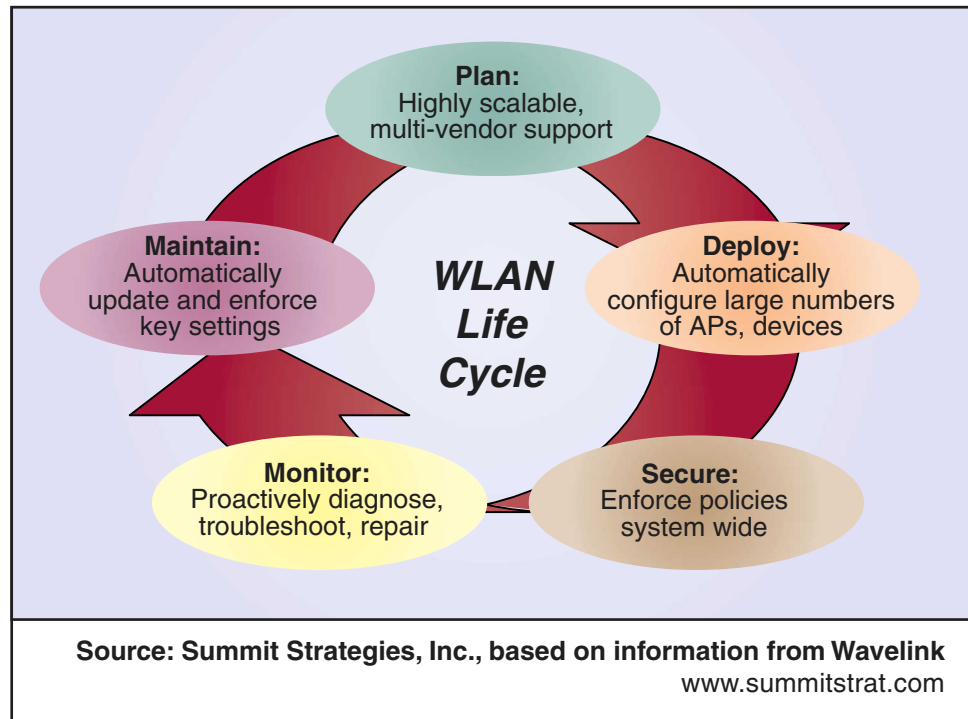
Wavelink’s product suite contains two offerings specifically aimed at WLAN management. One is Wavelink Mobile Manager, which addresses WLAN access points. The other is Wavelink Avalanche, which addresses the mobile devices—laptops, handhelds, PDAs and specialized devices—that connect to the WLAN. Both Wavelink product lines are designed to be highly scalable—capable of supporting several thousand access points and even more mobile devices—and to provide value (which can accrue to the VAR or the customer, or both) throughout the WLAN life cycle, from planning and implementation through security, monitoring and maintenance.

In the planning phase, Wavelink provides flexibility by supporting multiple platforms and multiple generations of equipment from a wide variety of vendors. (For a current list, go to [www.wavelink.com](http://www.wavelink.com) and click on “Partners.”) Wavelink also supports devices running multiple operating systems, including Windows; Pocket PC and CE; Palm OS; and older DOS-based devices. This gives VARs and customers the freedom to re-use legacy equipment, if desired, and to unify the management of WLANs that may have been deployed piecemeal using equipment from multiple vendors—as is often the case in large organization settings, for example, where departments have separate budgets and decision-making authority.

At implementation, Mobile Manager and Avalanche can automatically configure access points and mobile devices with initial radio and security

Figure 1

Wavelink: End-to-End Value



settings. Mobile Manager supports the use of profiles that specify settings according to various types of policies, such as physical location, the applications it will support, and the types of users authorized to access those applications. IT administrators can perform this automatic configuration from a central location, even when the devices are dispersed across multiple facilities and locations. These automatic configuration capabilities dramatically reduce deployment time—generating significant cost savings and speeding time-to-benefit.

In terms of security, Wavelink’s software allows remote application and enforcement of network and security parameters including WPA, WEP, 802.1x, and LEAP. It enhances security by enabling automatic rotation of WEP encryption keys and managing enterprise-wide access-control lists. It also detects unauthorized or “rogue” access points and can automatically disable them or apply operation policies that prevent intrusion and unauthorized use. And it supports platforms such as DOS that predate newer standards but still must be secured.

Once the WLAN is in operation, Wavelink’s software monitors performance and visually displays information on parameters such as capacity, signal quality and most-used and least-used equipment. Mobile Manager can issue alerts based on user-defined thresholds, and can proactively diagnose and address a number of error conditions before they affect network performance or usability. Wavelink has built adapters for Mobile Manager

that allow it to plug into HP OpenView™ and CA UniCenter™. It also includes a standard SNMP interface that allows it to mesh easily with other network management systems, such as IBM's Tivoli.

In terms of ongoing WLAN maintenance, Wavelink software automates and enables central administration of installation, support and upgrade functions for remote access points and access devices, including network and security configurations, firmware, drivers, utilities and applications. Updates can be distributed over the air, simultaneously, to multiple access points and devices, or be sent one at a time to specific access points or end-user devices.

In the following sections, we discuss specifically how VARs can use these capabilities to their advantage.

## Section 2 **Wavelink Helps VARs To Sell More Effectively**

Not coincidentally, the key issues that customers worry about when considering WLAN deployments play directly to the strengths of Mobile Manager and Avalanche. VARs, by crafting value propositions that incorporate Wavelink's capabilities, can demonstrate to customers that these concerns can be dealt with effectively. So what are these issues, and how does Wavelink help VARs to address them?

- *Security.* Perhaps the greatest impediment to enterprise adoption is the fear of unauthorized access to or misuse of the network—or of the administrative burden required to maintain network security. Wavelink's ability to configure, maintain and update security settings, and to detect and control "rogue" access points, addresses many of these concerns. Wavelink solutions can also be augmented with other vendors' security solutions for customers with unusual needs.
- *Cost.* Customers are beginning to understand that, as with many IT investments, the initial outlay for WLAN equipment isn't the problem, it's the potentially high cost of setting up and maintaining the equipment throughout its life cycle. By automating these tasks, as described in the preceding section, Wavelink's software reduces such costs nearly to zero.
- *Performance.* Customers also worry that factors such as interference and shifting traffic loads can impair network performance, and that they either have to live with such problems or devote significant IT resources to managing them. Mobile Manager, with its ability to monitor performance and address problems as they appear, can dramatically reduce this burden.
- *Multi-vendor support.* Wavelink's multi-vendor support gives VARs and customers maximum flexibility to design the WLAN for optimal performance and utility. For example, they can specify different equipment for different purposes, such as Palm OS handhelds with embedded bar code readers for a retail floor application, Windows CE pistol-grip

devices for inventory management in the stockroom or warehouse, and Windows PDAs and notebooks for use by corporate executives, and still have confidence that the result will still be easy to manage.

- **Complexity.** WLANs that incorporate access points from multiple vendors; that must support multiple departments and job roles (each with its own device and application needs); that span multiple cities, states, even continents; along with a host of other factors can make WLAN administration dauntingly complex if performed “by hand.” Again, Wavelink’s tools can streamline the various tasks required and reduce the complexity to manageable levels.

By using Wavelink to address such customer concerns, VARs can steer the discussion with a prospect towards the business value that WLANs can provide—flexibility and efficiency of communication, streamlined business processes, network access in locations where it was previously impossible or prohibitively expensive—and focus the discussion on the results that customers can achieve.

VARs such as Vytex Solutions and Anyware Network Solutions say Wavelink is a key differentiator for them because many solution providers are not yet emphasizing WLAN management in their value propositions to customers. The management message resonates particularly well today because IT staffs are smaller and busier than ever. “We tell them we’re making your life easier,” a Vytex spokesman said.

**Figure 2**

**Wavelink’s Value to VARs**

Issue	Wavelink Value
<b>Security</b>	Automatically configure, maintain and update security settings; detect and control "rogue" access points; augment with third-party solutions as needed.
<b>Cost</b>	Automate deployment and maintenance to reduce time and cost of these operations.
<b>Performance</b>	Mobile Manager monitors performance and addresses problems as they appear.
<b>Multi-vendor support</b>	Allows enterprises to design WLANs for optimal performance utility, with different devices for different purposes and environments.
<b>Complexity</b>	Simplify/unify management of WLANs that support multiple vendors, job roles, devices, applications, locations, network types.

**Source: Summit Strategies, Inc., based on information from Wavelink**  
[www.summitstrat.com](http://www.summitstrat.com)

In some cases, Wavelink enables applications that were highly impractical without it. For example, Anyware recently deployed a system for the Aurora, CO police department that uses Mobile Manager and Avalanche to dramatically speed and simplify the process of maintaining and upgrading the laptops deployed in some 300 city police cars. Manual software upgrades used to take four to five people at least two weeks; the automated process takes less than a minute.

Wavelink's software also enables the automatic distribution of large files such as maps and photos. The files are downloaded automatically when a police car enters a WiFi zone. If the car has to leave before the download is finished, Avalanche places a "bookmark" in the file that allows the download to automatically resume from the point where it was interrupted.

The solution also employs connection management software from Net-Motion Wireless that allows police to roam among CDPD, GPRS or WiFi networks, automatically connecting at the fastest available speed without re-authenticating.

### **Section 3      Wavelink Saves VARs Money**

VARs also point out that they benefit directly from using Wavelink's products—for example, by using Mobile Manager to reduce the time and resources required to initially configure and deploy access points (APs) and using Avalanche to do the same for end-user devices.

"We can pass it through to the customer, which in competitive situations is an advantage, and in other opportunities it helps increase our margins because we get done in a quicker time than we'd calculated," an Anyware spokesman said.

Wavelink's multi-vendor support is extremely valuable, VARs say, because the management tools provided by access point vendors only support that vendor's equipment. "The nice thing about Wavelink is it allows us to go into environments where we're not sure what manufacturer, or multiple manufacturers, will be used," the Anyware spokesman said. "Wavelink lets us pitch that central management capability."

In addition, the combination of Mobile Manager and Avalanche means "we can manage right down to the client," he said. "With proprietary tools, you're only managing the access points."

### **Section 4      Wavelink Enables New Services, Revenue Streams**

This is where things start to get interesting. Wavelink's capabilities, in conjunction with the expertise VARs and integrators develop in the course of multiple customer engagements, can drive a variety of new revenue gen-

erating services that today may lie outside their scope. Customers may be especially receptive to these service offerings today, when most in-house IT staffs are stretched thin.

### ***Wireless Training***

Outside of large enterprises with strong in-house IT capabilities, few customers have much knowledge of wireless technologies. But a VAR or integrator that has built a practice in WLAN design and implementation has built considerable expertise in operating and troubleshooting problems that arise. This expertise could be leveraged in the form of training programs for the customer's IT staff (if it is large enough to have one) or for the employees who will be using the WLAN and, therefore, have an interest in maintaining it. Initially, such training could take the form of a free seminar to demonstrate to potential customers the value of WLAN-based applications and the need to manage them. The VAR or integrator could also include training for two or three customer employees as part of its standard offering and charge additional fees if the customer wants to have additional trained personnel available.

### ***Device Management***

End-user issues—from simple “how do I connect” questions to restoring inadvertently deleted programs, etc.—take up a significant portion of IT managers' time. As in the previous example, VARs and integrators could leverage their knowledge of these end-user issues after deployment and offer ongoing device-management services or even provide help-desk support, charging for it on a monthly or per-incident basis.

The same combination of Wavelink capabilities and VAR expertise could form the basis of a range of managed services offerings. These could take an almost infinite variety of forms depending on the markets a VAR wishes to pursue and the services it believes are particularly important in those markets. Let's consider some of the services that could be offered on a “plain vanilla” basis or as the core of highly tailored services.

### ***Remote Monitoring***

Again considering the current overtaxed status of many in-house IT staffs, customers may be more than willing to pay a monthly fee to outsource their basic WLAN monitoring functions—a capability for which Wavelink's solutions are well suited. At the most basic level, the VAR or integrator could use the alerting capabilities in Mobile Manager to automatically inform customers by e-mail of WLAN performance issues, perhaps including follow-up contact to make sure the alerts are noticed, particularly during off-hours.

### ***Remote Management***

Depending on customer preferences, the VAR could create an additional offering that would utilize Mobile Manager's ability to proactively diagnose, troubleshoot and repair various types of problems before they take down the network. Highly valuable to the customer, this service could be provided at a very low marginal cost to the VAR because these capabilities are built into Mobile Manager and require little or no active involvement by the VAR's own personnel. Some VARs and integrators are already helping to manage customers' fixed networks. In such cases, adding WLAN management would seem to be an especially good fit.

### ***Security Management***

In light of the current high levels of concern about WLAN security, many companies will likely be receptive to outsourced security services such as monitoring for intrusion attempts and rogue APs. Again, Wavelink's built-in capabilities could alert the customer when it detected something amiss and apply new settings to the AP to disable it or force compliance with pre-set access policies. Companies with particularly strong security needs or concerns may want additional capabilities, which creates an opportunity for VARs to add value by bringing in another partner specifically focused on security.

### ***On-site Repairs***

VARs willing to dive deeper into the managed services model could augment remote monitoring and management capabilities by providing technicians to handle repairs that go beyond what Mobile Manager and Avalanche can do automatically—for example, replacing a failed access point. One potential scenario: The technician arrives on site and says, "Our monitoring service has detected that your WLAN is about to fail, and I'm here to fix it before that happens." It's difficult to imagine a customer who wouldn't be thrilled by such proactive attention.

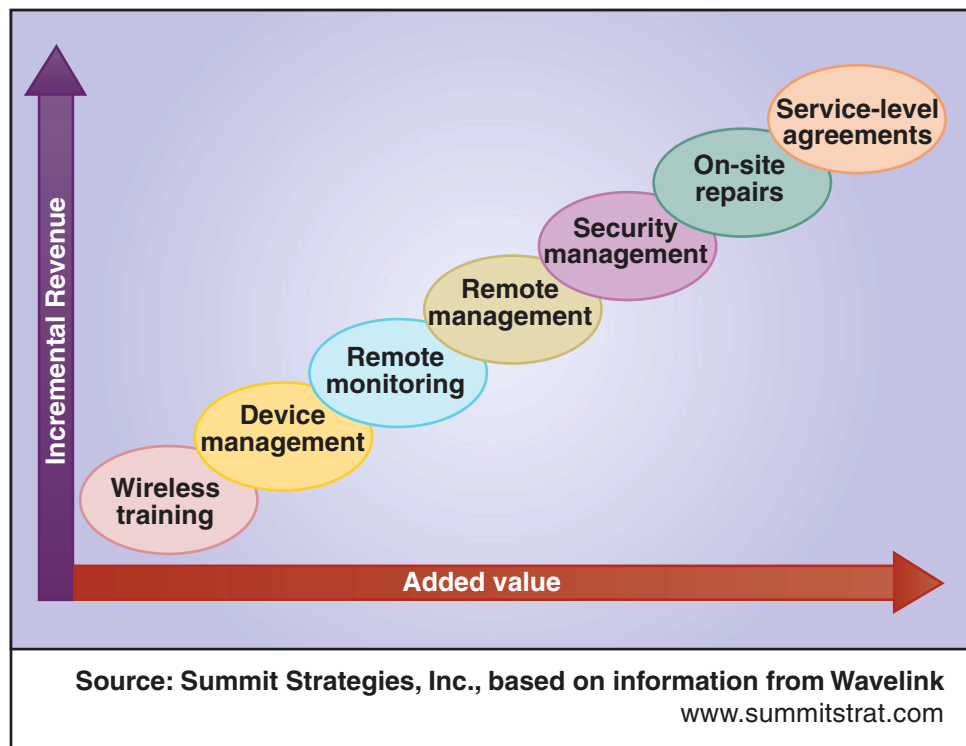
### ***Service Level Agreements***

At the high end of the managed services spectrum, VARs and integrators have an opportunity to provide a range of service-level agreements. For example, for a customer to which the VAR was already providing remote management services, the VAR could add a new service guaranteeing an on-site response (to an AP failure, for example) within a specified amount of time. The response time could be calibrated to the importance of the applications running over the WLAN, with business-critical applications receiving the most rapid response. And these differing response times would naturally command different prices.

The VAR—now better termed a managed service provider (MSP)—could also guarantee specific levels of WLAN availability, again on a tiered basis. This would follow the pattern set by application service providers (ASPs), which might offer a base level of 95 percent availability for a certain price and up to “five nines” availability for a premium price. These agreements could later be expanded to include quality of service (QoS) guarantees as those technologies mature—in particular, as the IEEE 802.11e standard is finalized and equipment supporting it becomes available in the market. The 802.11e standard is fairly basic, however, so WLAN QoS is likely to be an area in which significant proprietary extensions emerge. In any case, quality of service becomes particularly important with the growth of performance-sensitive applications such as voice and video over WLAN, and customers that deploy such applications will be natural prospects for managed service offerings that guarantee QoS.

For some VARs, managed services may seem like a radical shift in their business model. And for those that already have their hands full, it may not be worthwhile. But large VARs and integrators with established enterprise practices, as well as newcomers entering the market, may be attracted by the steady revenue streams provided by the managed-service model—just as major packaged software vendors are finally embracing the ASP model that they resisted for so long.

**Figure 3** Wavelink Enables New Services and Revenues



## Section 5

### Working With Wavelink

To help VARs deliver the greatest value possible, and to enlist more VARs, Wavelink recently launched a support program for resellers willing to commit themselves to training on Wavelink's products. To join the Wavelink Certified VAR Program, a reseller must have at least one member of its staff certified on Wavelink's products. VARs who join the Wavelink Certified VAR Program receive a variety of specific benefits:

- Use of Wavelink's "Certified Partner" logo;
- Discounted pricing;
- A listing on Wavelink's VAR locator;
- Free demonstration licenses;
- Preferred technical support;
- Access to a VAR partner portal; and
- Funds to support their marketing efforts, including direct mail, speaking opportunities and participation in trade shows.

## Section 6

### Wavelink Strengthens VARs' Offerings

As businesses come to depend more on WLANs, they will increasingly rely on their solution providers, including VARs, for strategic advice that covers all aspects of WLAN operation and spans all phases of the WLAN life cycle. Forward-thinking VARs will develop specific best-practices models that cover the spectrum from planning and implementation to monitoring, security and maintenance.

Dozens of companies have been formed over the past couple of years to address one or more aspects of WLAN management. Many of these companies are just getting started—just bringing products to market, landing their first customers, and getting their first real-world experience.

In contrast, Wavelink is an established company with the experience, partners, customers and market share which, in addition to its products, make it an attractive and effective partner for VARs.

In sum, Wavelink's software, support offerings and industry stature make it an excellent partner. VARs that are seeking to grow their existing businesses and/or to expand their offerings and create new revenue streams should strongly consider partnering with Wavelink.

**Warren Wilson**  
**wwilson@summitstrat.com**