RFI Synopsis: Aruba Networks

Performance and scalability	Controllers range from 6 to 512 APs, providing flexible sizing that accommodates everything from home and small-scale branch-office deployments to implementation at the core of large enterprise networks
Planning and deployment	Offers planning tool to conduct conventional site surveys with floor plans; company is a strong advocate for pico-cell deployments, in which dense installations of inexpensive APs in user locations leverage the company's RF management features to combat interference
Monitoring and management	Installations with fewer controllers can designate a single controller or a pair to act as a network-management system, pushing out configurations and gathering statistics from other devices; large installations can use standalone management software for more expansive monitoring and management, including advanced packet capture
Security and availability	Supports a broad multilayer security model with unique role-based stateful firewall and IDS/IPS; company integrates third-party endpoint scanning products and has its own client-checking module; controllers use load-sharing of APs for redundancy and standby redundancy (1+1)
AP capabilities	Offers broad range of single- and dual-radio APs, with and without external antennas; offers outdoor AP/bridge designed for harsh environments
Pricing	APs, from $195 to $595; controllers, from $1,795 to $17,995; management software starts at $3,995
Industry penetration	Microsoft's decision to deploy Aruba's Mobile Edge WLAN provides the company with significant industry credibility and will serve as a proving ground for its dense deployment, secure converged wireless solution; Aruba also has other high-profile customers and is widely viewed as Cisco's top competitor
Strengths	Its early focus on security let the company win business in organizations looking for a flexible security architecture; current product offerings are broader and more mature, providing a full range of features and functionality, and making the company an obvious shortlist candidate for enterprises that view wireless as a strategic service
Weaknesses	Its biggest problem may lie in scaling its organization to meet increasing demands from large customers while continuing to expand its customer base and channel partners; there is some uncertainty whether the company will be acquired or go public; on the technology front, the pico-cell architecture has not been fully proved in the field

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RFI Synopsis: Colubris Networks

Performance and scalability	Data processing handled at the AP, reducing load on WLAN controller; company claims sub-50-ms roaming handoffs; controllers support single integrated APs for hotspot deployments and up to 200 APs for large enterprise deployments
Planning and deployment	Offers RF planning tool, through its AirTight Networks partnership, to model RF propagation and design implementation plans; network-management system facilitates deployment by pushing configurations to switches and APs
Monitoring and management	Network-management system lets you manage devices individually or in groups and provides statistics and trending information; product offers syslog, e-mail alert and SNMP trap notification
Security and availability	Partnered with AirTight Networks to provide wireless IDS/IPS; APs can be used as AirTight sensors; APs autodiscover controllers, making for simple redundancy if switch fails
AP capabilities	APs support single or dual a/b/g radios; radios can be configured to act as dedicated sensors
Pricing	APs, from $499 to $999, depending on radio count and indoor/outdoor use; controllers, from $2,999 to $15,999; NMS starts at $7,999
Industry penetration	Has enjoyed its greatest success in the public access market, especially in environments where hardened, industrial-grade hardware is preferred; this success has allowed the company to branch into other arenas, including education, where public access is critical
Strengths	Has a strong reputation for designing and building solid, feature-rich smart APs, and it isn't abandoning that heritage to go thin at the edge. Instead, the company is focusing on a model with more distributed intelligence than its partners, yet still easy to deploy and manage as a single system
Weaknesses	Is viewed by some as a takeover target, perhaps because it has a strong relationship for product engineering; while its strength in the public access market gives it a base to build on, the company is playing catch-up as a provider of fully integrated controller-based WLAN systems

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RFI Synopsis: Extreme Networks

Performance and scalability	Controllers support up to 200 APs, providing good scalability for enterprise-class deployments
Planning and deployment	Offers professional services to perform site surveys; partnered with AirTight Networks and Motorola/Wireless Valley to offer an array of planning tools; products have flexible deployment options and profile configurations to ease deployment
Monitoring and management	Several monitoring points based on need; Web-based console for switches, Extreme's NMS and the AirTight system; supports syslog, RADIUS accounting and SNMP MIBs for management through third-party tools
Security and availability	Enterprises with Extreme wired infrastructure have access to MAC lockdown features to limit rogue APs; wireless IDS/IPS provided through AirTight partnership; switches can be configured in redundant modes and contain redundant power supplies
AP capabilities	APs feature dual radios with internal or external antennas
Pricing	APs, $795; switches start at $16,995 for models supporting 50 APs
Industry penetration	Has achieved significant market success in education, health care and other markets by providing mature, standards-based and feature-rich network equipment, one of the most popular alternatives to Cisco; its enterprise WLAN offering provides a viable platform based on an OEM offering from Siemens, which purchased the technology from Chantry Networks
Strengths	Its WLAN platform is based on a mature product and a sound architecture that will probably let the company meet the needs of most of its existing wired customers, and gives it a more compelling wired/wireless offering when pitching to new customers; it's doubtful the company will find customers at Cisco shops, except at sites looking for a safe alternative
Weaknesses	Has a spotty reputation in the enterprise wireless market; an ill-fated internal WLAN systems project convinced the company to look outside for a partner; its partnership with Siemens provides a full range of features, and Siemens seems committed to ongoing development, including a heavy focus on wireless VoIP

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RFI Synopsis: Extricom

Performance and scalability	Switches come in 8- and 24-port capacities, requiring additional hardware for large deployments; additional channel blankets can increase capacity in a given area
Planning and deployment	Minimal planning required, due to channel blanket approach, focused mainly on AP placement; switches placed at the edge, necessitating localized design and redundancy; APs require no configuration, but must be plugged directly into the switch
Monitoring and management	System managed through SNMP, CLI or Web interface; monitoring information gathered via SNMP traps or Web interface
Security and availability	Recommends best-of-breed approach to wireless IDS/IPS through external vendor; switch availability is in master/slave configuration, APs through redundant placement
AP capabilities	APs support dual a/b/g radios, but company plans to release 3- and 4-radio models later this year; radios can operate in the same band simultaneously; APs serve as client connection points, but association and authentication occurs with the switch
Pricing	Eight-port switch with 8 APs starts at $10,000
Industry penetration	Like most WLAN start-ups, has generated initial interest in education, health care and hospitality, three rapidly growing markets; most are small installations, but the company is expecting several of these networks to quickly increase in size in the coming year
Strengths	Focuses on a single-channel, scheduled-access system that offers some benefits, particularly related to roaming; the overall feature set makes it a viable option for environments looking to integrate voice and data services, especially those focused on 802.11g
Weaknesses	Its hot-rod performance comes at the cost of requiring APs to be cabled directly to the switch/controller; there's no question that most will look first to one of the many solutions that allows APs to be connected to controllers via IP

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RFI Synopsis: Meru Networks

Performance and scalability	Controllers support 5 to 150 APs, providing good flexibility for deployment sizes; additional channel blankets can increase capacity in a given area
Planning and deployment	Minimal planning required, due to channel blanket approach, focused mainly on AP placement
Monitoring and management	Controllers provide activity statistics through GUI and CLI, as well as syslog and SNMP support; management software provides monitoring for multiple controllers and integration with third-party location appliances
Security and availability	Integrated firewall, rogue detection and mitigation, and integration with Check Point Technologies endpoint quarantining; announced RF layer frame-jamming to combat rogue transmissions; controllers offer 1+1 and N+1 redundancy
AP capabilities	APs have dual radios, with external antenna connectors, and can act as dedicated sensors for wireless security features
Pricing	APs, from $495 to $795; controllers, from $1,795 to $36,995; radio switch, $1,695
Industry penetration	Has achieved its greatest success in organizations that are early adopters of wireless VoIP (it has significant strength in Asia) and in educational institutions where ease of deployment and suitability for dense user environments make it an appealing option
Strengths	Has arguably the most sophisticated WLAN architecture on the market, one that flies in the face of conventional cell-planning models but also embraces the centralized radio-management capabilities that allow cellular systems to function so efficiently; customers enthusiastically endorse the product's ease of implementation and management
Weaknesses	Remember, Ethernet won out against Token Ring, so even if you accept that Meru's architecture is superior to its competitors, that doesn't mean it signals a market shift; Extricom's entry with a similar architecture provides some market legitimization of Meru's basic principles; still, there are questions about whether the product can scale and be price-competitive given the cost associated with a more sophisticated technology

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RFI Synopsis: Proxim Wireless

Performance and scalability	Roaming across Layer 3 or VLAN boundaries requires optional wireless mobility controller
Planning and deployment	Third-party solution provides WLAN planning based on CAD drawings; large-scale AP configuration can be automated through third-party tool
Monitoring and management	APs provide statistics through standard MIBs and the AP's Web interface
Security and availability	APs support authentication, encryption and rogue AP detection; recommends third-party partnership solutions to achieve higher levels of wireless security
AP capabilities	Offers a variety of AP configurations to meet different needs, including those with mesh capabilities
Pricing	Pricing information not provided
Industry penetration	As one of the earliest providers of enterprise WLANs, has broad market penetration, but questions about business and technical viability are resulting in defectors; if the company can hang on to a small proportion of customers, it could have a foundation for turning itself around
Strengths	Has been written off many times, only to defy skeptics and maintain a market presence; has a lot more customers than many of the newer WLAN companies, and it's usually easier to keep an existing customer than to find a new one
Weaknesses	It's ironic that Proxim was one of the first WLAN companies to experiment with a controller-based architecture, but repeated financial business challenges have made it extremely difficult to maintain a viable enterprise-class offering; few IT managers are interested in longshots

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RFI Synopsis: Siemens AG

Performance and scalability	Controllers range from 30 to 200 APs, providing flexible sizing options
Planning and deployment	Third-party tools used for planning, but output (floor plans, AP locations) can be imported into management software for heat map and troubleshooting apps
Monitoring and management	Management software provides centralized point for network statistics, coverage heat maps and the ability to turn APs into RF sniffers to capture protocol data
Security and availability	Integrated IDS/IPS solution with APs able to function in sensor mode; system contains built-in compliance reports; controllers offer N+1 and 2N redundancy schemes
AP capabilities	Offers two dual-radio AP models, with internal or external antennas
Pricing	APs, start at $627.50; controllers, from $10,135 to $38,777; management software, $9,000
Industry penetration	In January 2005, acquired Chantry Networks, a WLAN start-up among the first to deliver a design that tied thin APs to controllers using IP; views the emerging wireless VoIP market as strategic, and the Chantry offering provides it with a viable architecture on which it can sell wireless VoIP services; also OEMs its offering to Extreme
Strengths	Early versions of Chantry's products were buggy and offered limited performance, but the current incarnation is more mature; it appears Siemens is committed to investing its considerable resources in ongoing development
Weaknesses	Today's enterprise WLAN market is heavily data-focused, and while every IT manager wants assurances their infrastructure will be ready for voice when it emerges, every vendor has a story to tell about voice—good today and better tomorrow. Still, there are a few voice-centric WLAN markets, and Siemens may be able to leverage its solid wired VoIP offerings to make a go of it with WLAN systems

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RFI Synopsis: Symbol Technologies

Performance and scalability	Controllers range from 6 to 48 APs, providing flexible sizing options
Planning and deployment	Recommends third-party tools for simple WLAN deployments, but suggests use of professional site surveys for more complex environments
Monitoring and management	Management system provides centralized monitoring and management of APs and switches; monitoring conducted using SNMP and client agents and can be used to trigger policy-based alerts
Security and availability	Controllers conduct packet inspection and filtering, with firewall available on some devices and company's own overlay IDS/IPS solution; switches support active/standby failover mode
AP capabilities	Offers low-cost entry-level AP models and ruggedized enterprise-class model for more robust needs
Pricing	APs, from $289 to $919; controllers, from $1,090 to $13,392
Industry penetration	The Cisco of the barcode-scanning world, usually associated with retail but extends to other elements of the supply chain, including distribution and manufacturing; has enjoyed some success as a WLAN system provider in education and health care
Strengths	Has a rich history in wireless LANs; its focus on mobile computing devices, including those with integrated bar-code scanning, provide a unique combination of technical and business skills; if you come at your wireless LAN strategy from a mobile application standpoint and like the company's mobile devices, this could be a good fit
Weaknesses	Has endured a series of business missteps in recent years, including financial mismanagement by senior corporate officials; the company was once viewed as a technical innovator, but now is playing catch-up, implementing tactical corrections to its most glaring system deficiencies

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RFI Synopsis: 3Com

Performance and scalability	Switches can be grouped in "Mobility Systems" to increase WLAN scale and capacity; switch capacity ranges from 3 to 120 APs, providing good sizing for branch and small offices as well as midsize deployments
Planning and deployment	Management software includes planning tool that uses building floor plans with construction materials to model RF propagation, assisting admins with WLAN planning
Monitoring and management	System includes canned reports, ranging from WLAN configuration to network health; can send notification e-mails to admins with specific status changes
Security and availability	Supports strong security model, including support for 802.1X and 802.11i; system offers integrated rogue detection with APs performing constant, scheduled or on-demand RF monitoring, and has the capability to enact RF countermeasures; controllers provide hardware redundancy and certain AP models contain Ethernet link redundancy
AP capabilities	Offers two managed AP models, one with simultaneous dual-band service, the other with 802.11a or 802.11b/g service, providing price flexibility for enterprises
Pricing	APs, from $299 to $499; controllers, from $999 to $21,799 based on number of APs supported; management software, starts at $3,999
Industry penetration	Its primary enterprise WLAN offerings are OEM products developed by Trapeze Networks; has significant channel strength, is a strong player in small and midsize organizations, and has a significant global presence, especially in Latin America
Strengths	Its choice of Trapeze as an OEM partner makes sense: The system is relatively mature and does an excellent job of leveraging 802.1X and 802.11i security, technologies that Trapeze bet on very early; its planning tools are popular with system integrators; as an OEM provider of Trapeze gear, 3Com's main strength is its distribution channel
Weaknesses	OEM partnerships introduce some level of risk to adopters, particularly in wireless, where further acquisitions and consolidation are likely to occur; large enterprises are more likely to want to deal directly with Trapeze Networks, except where longstanding ties to 3Com for other network offerings makes a single-vendor wired/wireless solution more appealing

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RFI Synopsis: Xirrus

Performance and scalability	Arrays come in 4, 8 and 16 AP models; sectored arrays provide up to 864 Mbps of bandwidth from a single location; array placement minimizes channel overlap and interference
Planning and deployment	Partnered with Motorola/Wireless Valley to offer its planning tool; integration of switch into radio array facilitates localized deployments; management tool provides the ability to configure and deploy multiple arrays
Monitoring and management	Management tool aggregates management of arrays across Layer 2 and 3 networks, providing a central point to manage the WLAN; arrays also can be managed individually through Web and CLI
Security and availability	Partnered with AirMagnet and Network Chemistry; arrays contain redundant wired network ports for failover, and second array can be purchased for array failover
AP capabilities	APs designed as multiradio arrays with 4, 8 or 16 radios; individual radios can function as dedicated sensors for AirMagnet and Network Chemistry IDS/IPS; arrays can provide wireless backhaul to non-hardwired arrays
Pricing	Arrays, from $3,999 to $11,999; management system, starts at $3,999
Industry penetration	Has had some early market success in education, manufacturing and warehousing; its unique WLAN array solution provides high system capacity using a single hybrid AP/controller device
Strengths	Its biggest strength lies in its unique architecture; in a market where you often must split hairs to define the difference between vendor offerings, Xirrus has one of the most powerful APs ever built
Weaknesses	Although the Xirrus solution is unique and provides extremely high capacity from a single AP, the product is expensive, and it will be difficult for organizations to view the company as a strategic WLAN system provider; although its array is probably the perfect solution for some WLAN implementation problems, it may prove to be a tough fit for the other 98 percent

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