



Managing Wireless LANs Options for the Enterprise

May 2005



Do More
with Your Wi-Fi

Agenda

- WLAN trends
- WLAN management challenges
- WLAN management requirements
- WLAN management directions and approaches

Wireless LAN Trends

- Wireless LAN evolution is at the beginning
- Users expect WLAN everywhere
- Security is an overwhelming need
- Hardware choices are complex and varied (WLAN switch, legacy infrastructure, Fat APs, appliances)
- Wireless LANs increase the infrastructure elements in the network
- IT budgets are constrained, but WLANs are a MUST have project
- IT staffs are stretched thin, and are “doing more with less”
- Standards are insufficient and not moving fast enough

Wireless LAN Trends from Survey in Q1

Survey of over 1400 senior IT staff

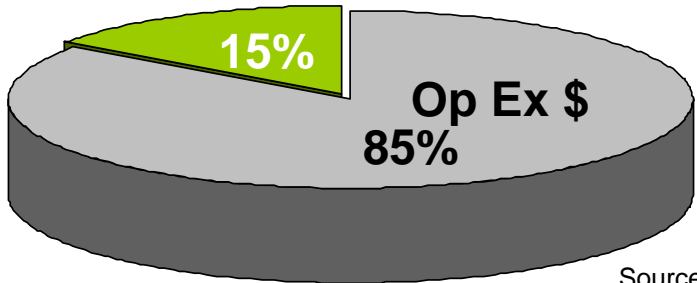
- Wireless LANs are no longer point solutions, and running multiple applications
- Wireless is more difficult to secure than wired
- Access Management is a Key challenge is: who can access the network, when can they access; where can they access, and what resources can they access
- WLANs open a new hole for viruses - compounding the security threat
- Verifying that the WLAN is compliant & secure is critical in today's environment
- Costs to Manage the WLAN. Wireless is expensive, labor-intensive and challenging.
- Is complex and confusing, needs new set of domain experts
 - New innovations MIMO, Mesh, WVOIP, E911
- Performance variability is a concern

The Wireless Management Difference

- Unlike a traditional wired network WLANs
 - Wireless networks don't have "ports"
 - Wireless links" behave quite differently from cables
 - Dead spots, interference, roaming, etc.
 - Class of service requirements
 - Wireless LANs increase the infrastructure elements in the network
 - Requires Access point management
 - Client Device management
 - Requires a solution that provides for data path monitoring and control
 - Identity aware, Location aware access and Authorization controls
 - Requires integration with AAA services
 - Application access control and monitoring
 - Integration with wired networks

Management and TCO is a concern

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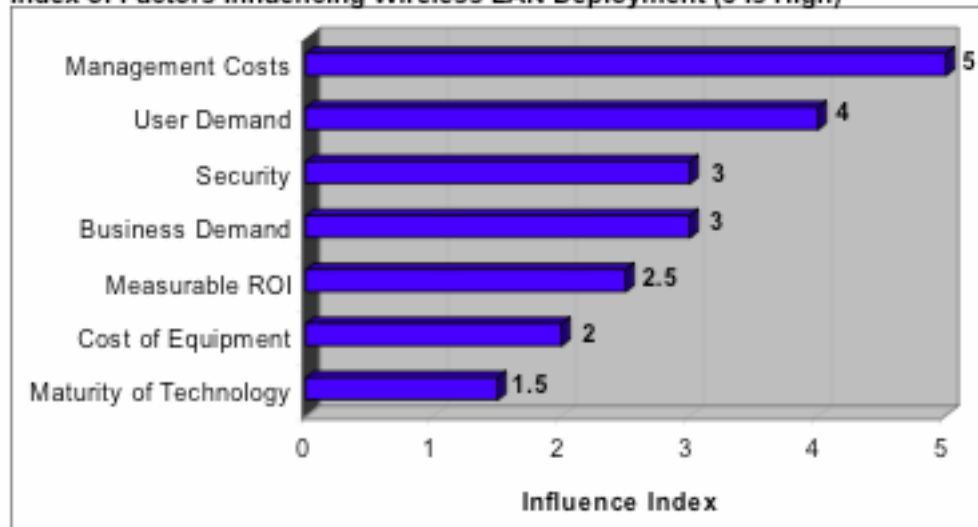
Source: META Group, 2003

WLAN Total Cost of Ownership

The management costs rank as the #1 concern for enterprise WLAN deployments (Survey by Unstrung, May 2004)

“Management has emerged as a critical issue for enterprises deploying wireless LANs.”

Index of Factors Influencing Wireless LAN Deployment (5 Is High)



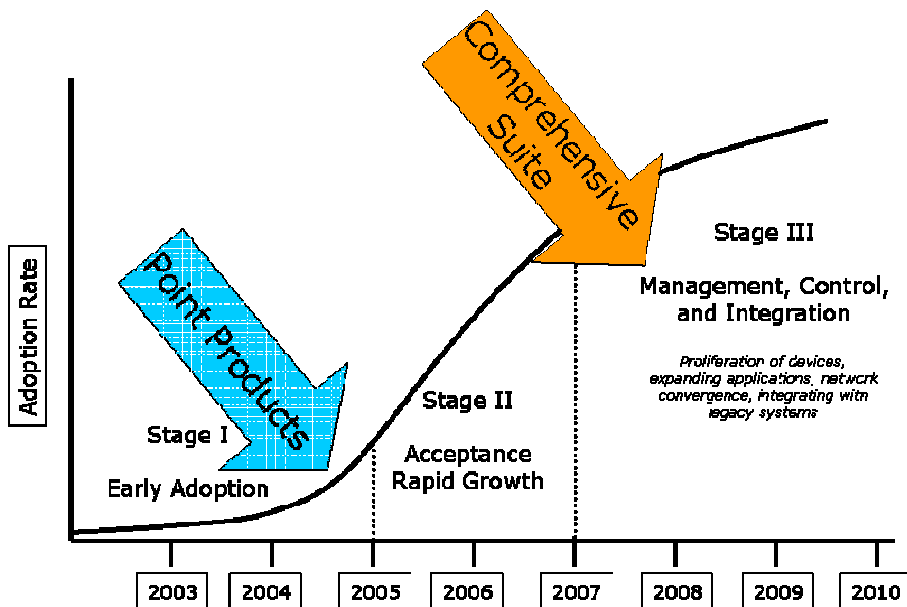
Source: Unstrung Insider



Enterprise WLAN management requirements

- Security
- Ensure performance of services
 - Identity and policy driven
 - Security is a service
 - Support for multiple types of clients
- Enable ease of use and quality of experience for the client
 - Balance between ease of use and security
- Lower OPEX thru ease of use and administrative efficiencies (i.e. configuration automation)
 - Make it easy for the administrator, security officer and help desk
- Flexibility and Agility
 - The ability to very quickly and effectively adapt to a rapidly changing environment

Wireless LAN Directions



■ Maturing from:

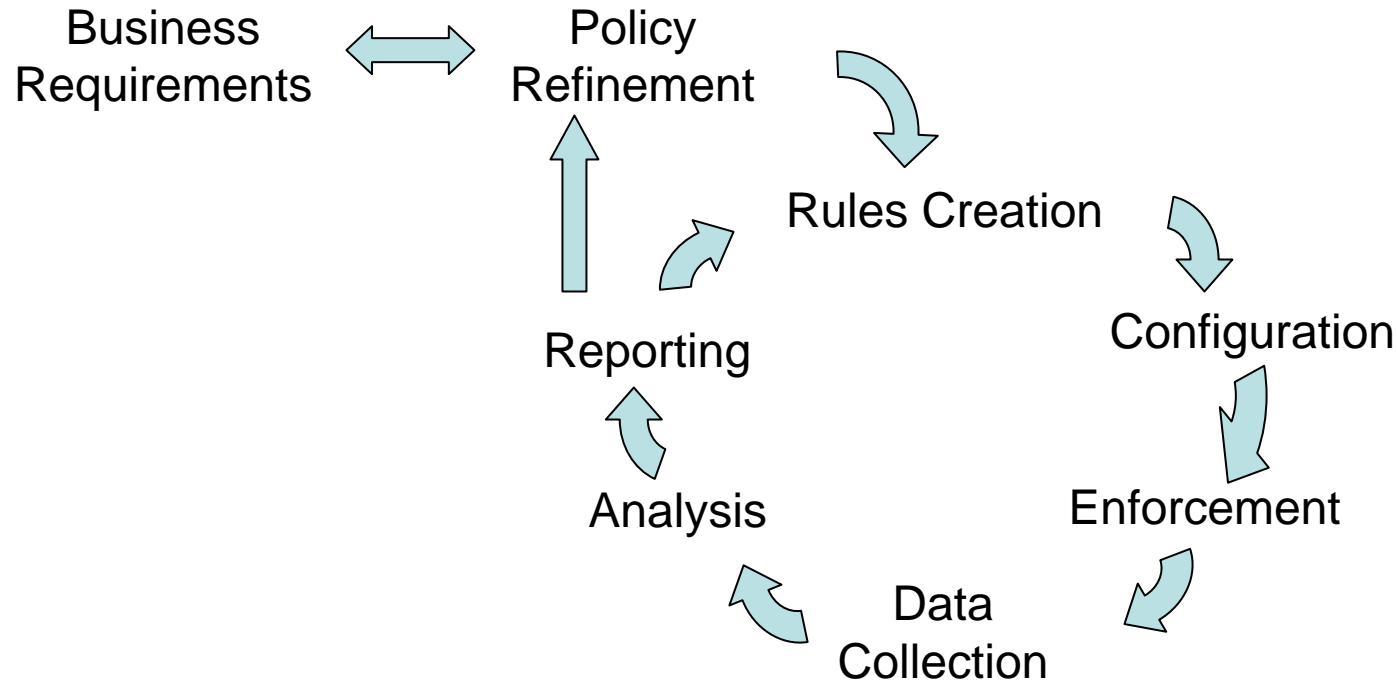
- Infrastructure management
- Managing ports
- Managing elements
- Static segmentation and monolithic policies

■ Migrating to:

- Client/user/device policy management
- Managing clients/users
- Managing services
- Policies driven by location, time, events (business centric management)
- Comprehensive platforms

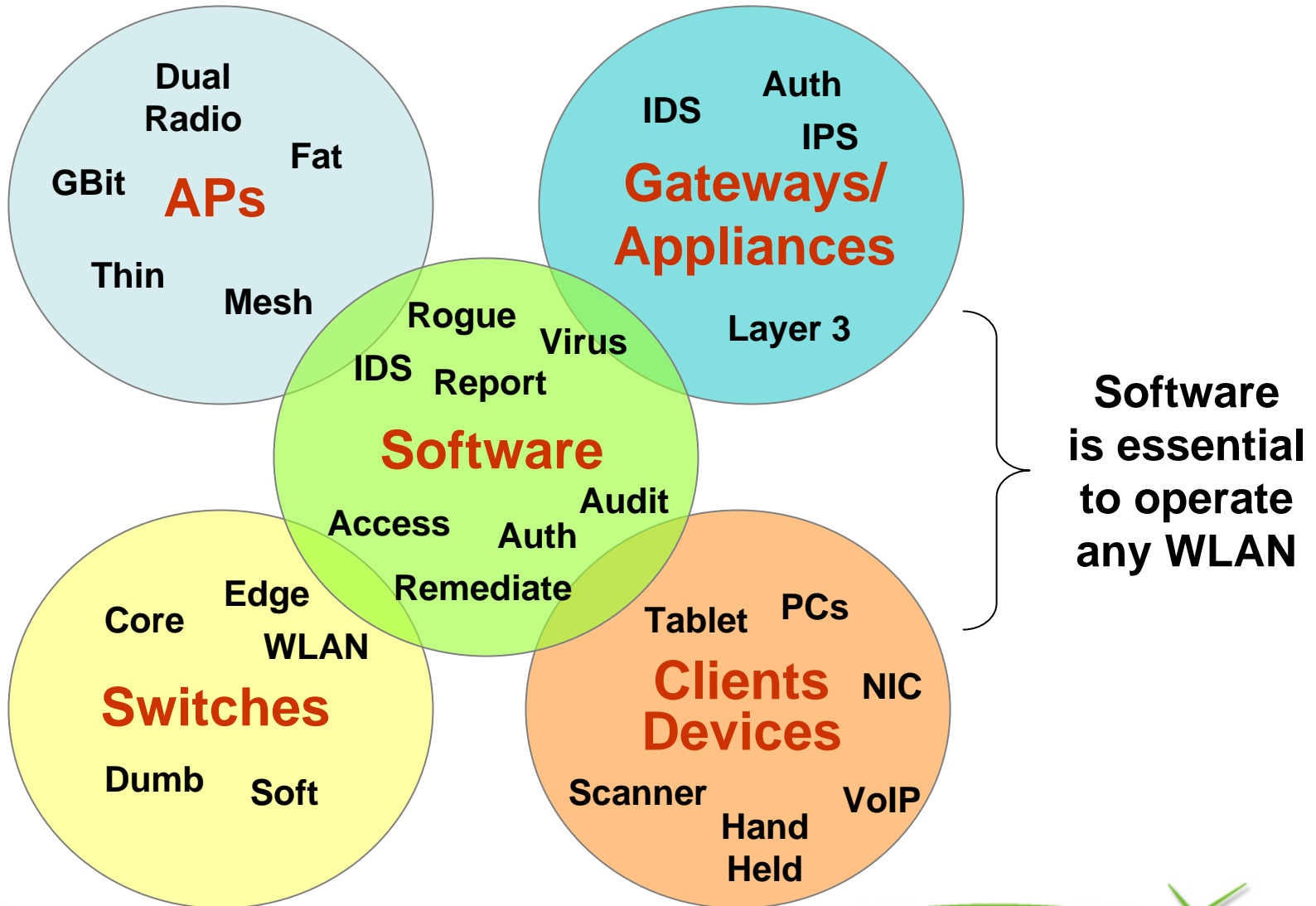
WLAN management operational lifecycle

Day to day functions in network operations follow a lifecycle that both drives and is driven by policies from the business that the network supports.



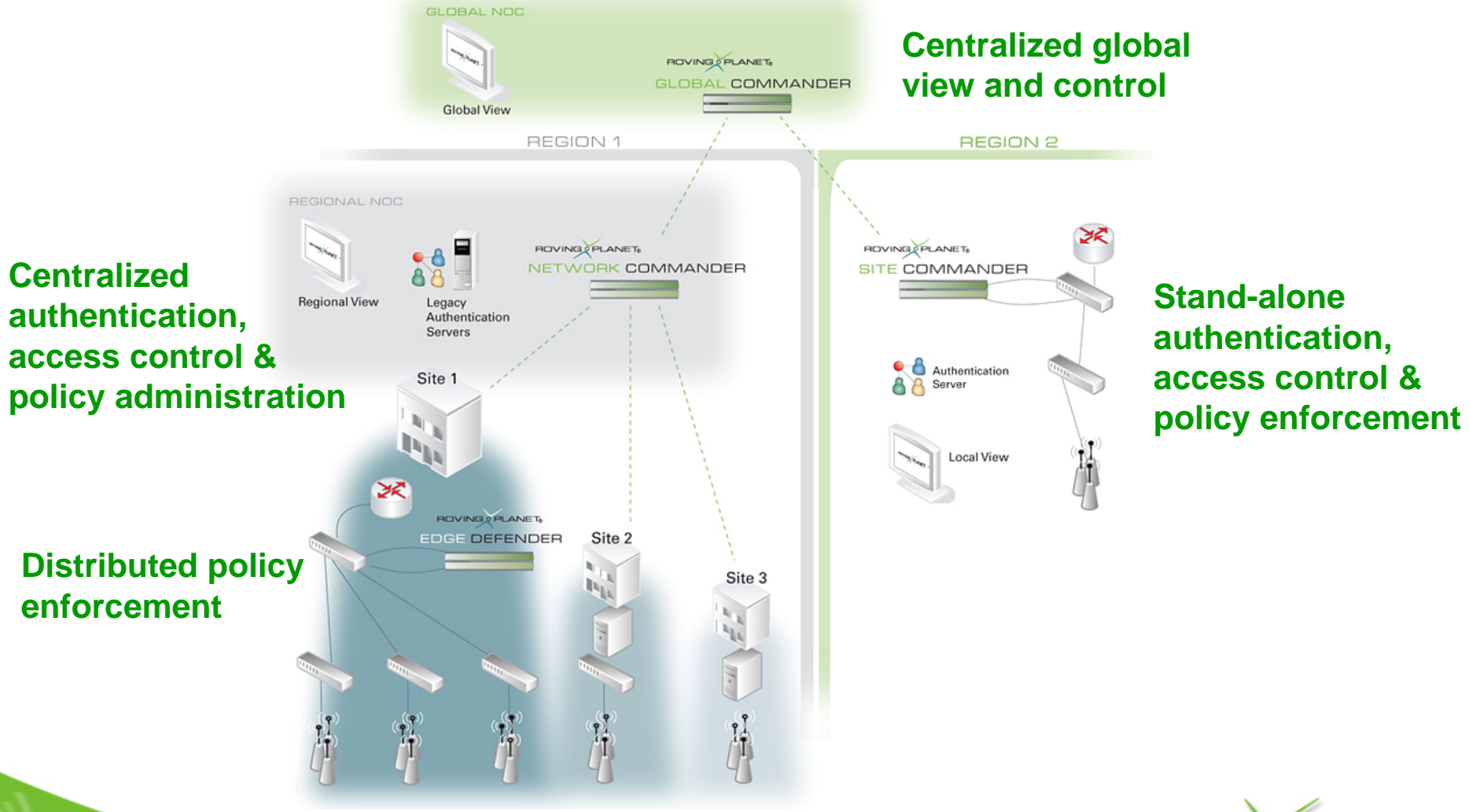
The lifecycle is enabled through the network infrastructure by communicating with **Network Elements** and manipulating their **Attributes**

Software completes management life cycle



WLAN Management Hierarchy

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