

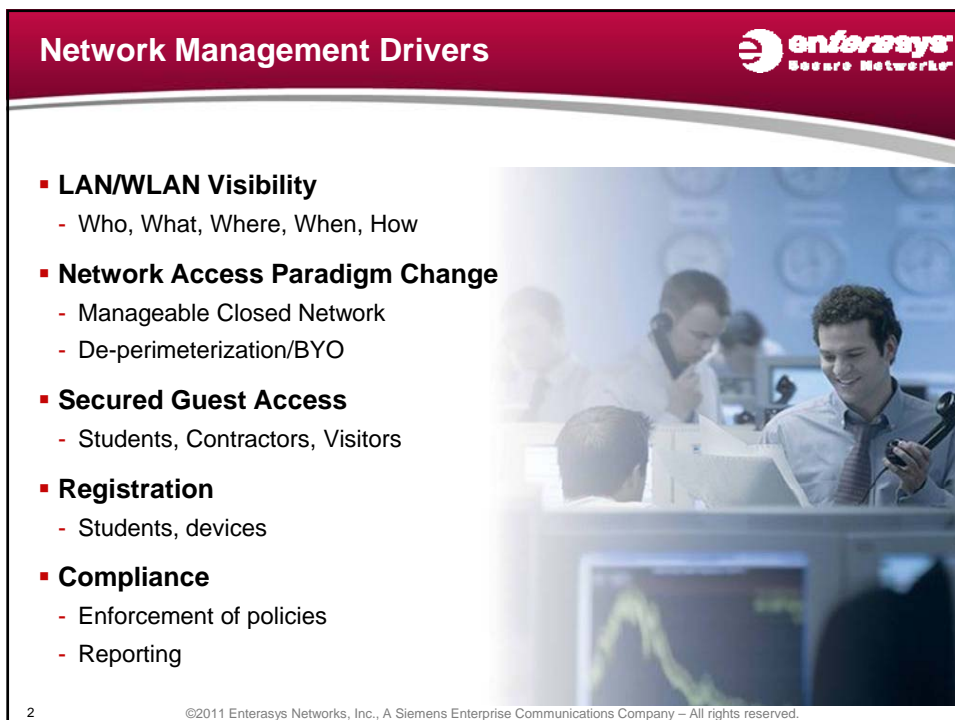


enterasys
Secure Networks

"There is nothing more important than our customers"

Visibility and Control Solutions
Dealing with the challenge of BYO

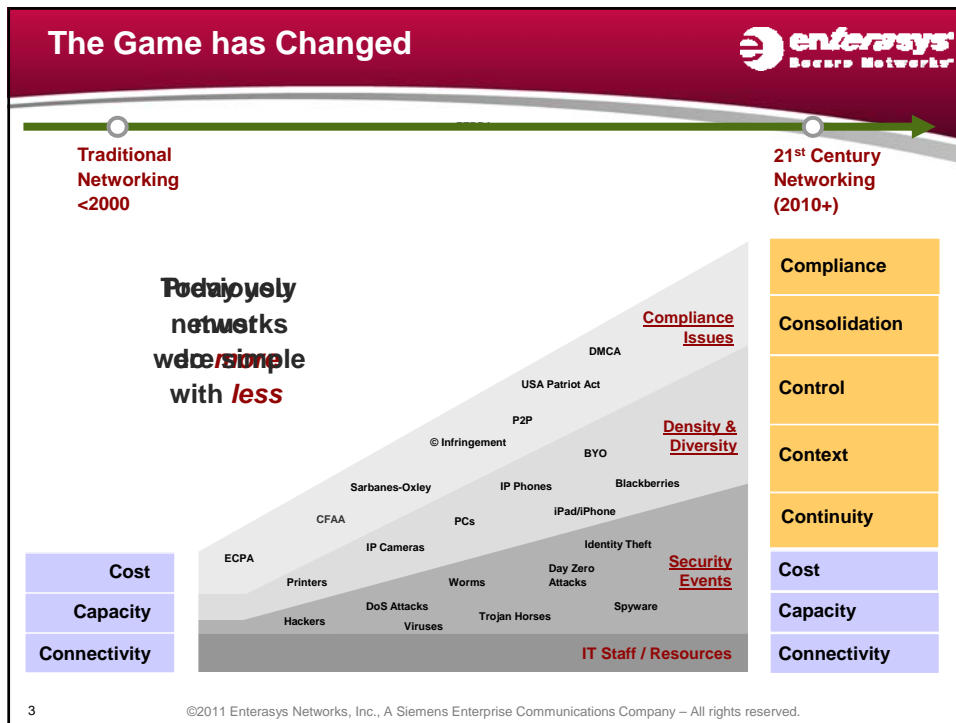
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Network Management Drivers

- **LAN/WLAN Visibility**
 - Who, What, Where, When, How
- **Network Access Paradigm Change**
 - Manageable Closed Network
 - De-perimeterization/BYO
- **Secured Guest Access**
 - Students, Contractors, Visitors
- **Registration**
 - Students, devices
- **Compliance**
 - Enforcement of policies
 - Reporting

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Access Layer Concerns

Limited Visibility at the Access Layer

- The devices connected to the network
 - Users
 - Headless IP devices
- Location of each device – switch, port, AP, SSID
 - Trusted area
 - Restricted area
- The access controls applied to each device user
 - IP Phone role
 - Enterprise user – IT, Faculty, HR, etc
 - Guest
 - Restricted Contractor
 - Quarantine
- Security state

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Application Layer Concerns



Limited Visibility at the Application Layer


- The devices connected to the network
 - What is using the bandwidth?
 - Which device is running prohibited applications?

- Mapping of Device IP address to User
 - Source IP address is of limited value
 - Switch Port to MAC to IP to Username mapping



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De-perimeterization and BYO in Education




- **Security and compliance mandates require “Least Privilege”**
 - Fundamental dichotomy given nature of Universities
 - Give access to a wider range of users
 - Give them more access to more services
 - Allow wider range of devices access - BYO
 - Threats are more likely inside the firewall


- **Collaboration orientated architecture in Higher Education**
 - Secured, controlled granting of access to quasi-affiliated entities demands;
 - Authentication
 - Risk Assessment
 - Systemic enforcement to be network vendor agnostic


 - EDUROAM
 - Just Internet
 - How about greater collaboration?

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Effects of BYO devices 

- **3 people are using P2P software**
 - Bittorrent & eDonkey2000 used
 - 250 different peers connected to

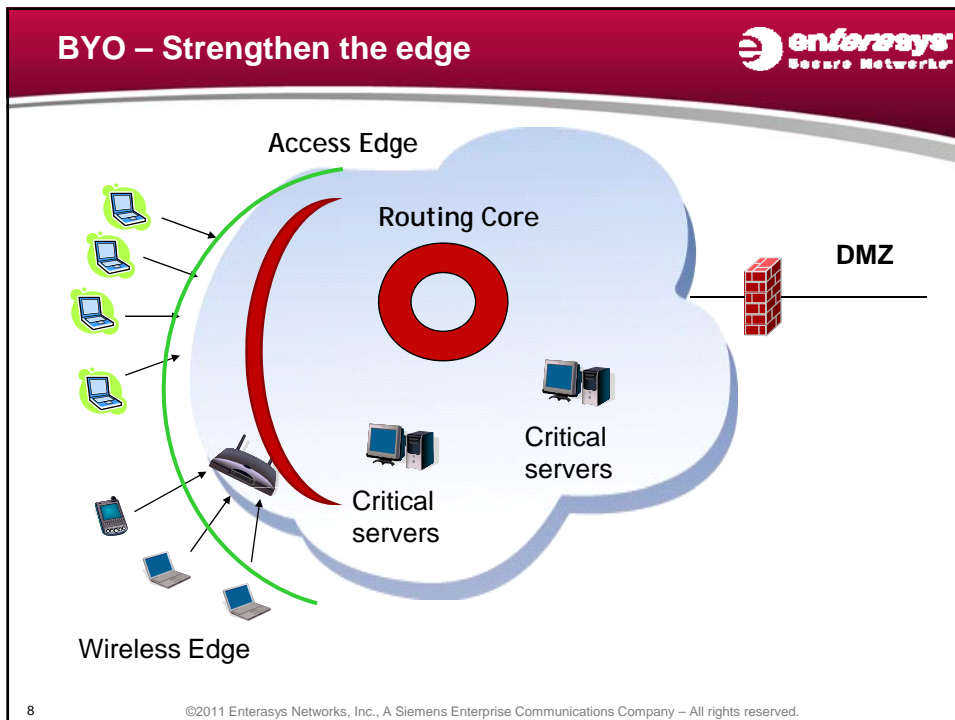
 **CCA-EDUCAUSE AUSTRALASIA 2011**
Darling Harbour 3 – 6 April 2011

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- **Bandwidth used by Skype**
 - 122 sources have consumed 445Mbps of data
- **Where is this network?**

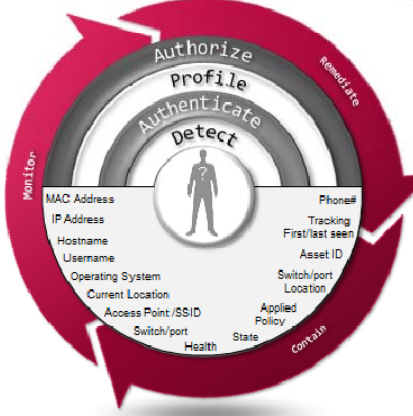
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Comprehensive Visibility




- **Ensure health and compliance both prior to and after allowing access**
 - Agent and agent-less assessment
 - Integration with other security technologies
- **Provide appropriate access (to assets and QoS) based on organizational role, authenticated identity and security posture**
 - MAC, IP, Hostname, Kerberos, Web, 802.1x -based authentication
 - Policy, VLAN or ACL enforcement
- **Support guest access, sponsored access and end-system / user tracking**
 - IP to ID mapping: track username, IP, MAC, location, etc.
- **Automatically contain detected threats**
 - Quarantine role
 - Assisted remediation
 - Automatic remediation




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Device Profiling



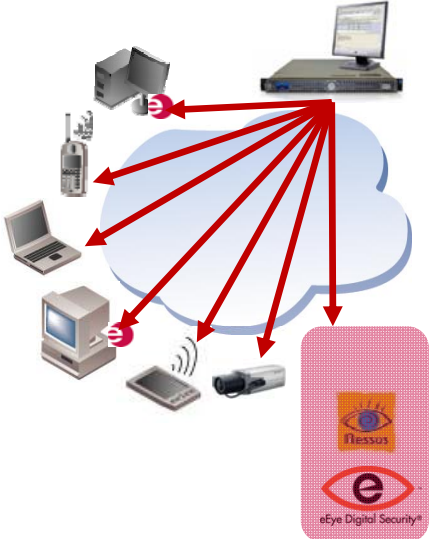
- **Automated profiling and device type detection**
 - Can detect new devices on the infrastructure automatically and profiles them to determine the type of device
 - Automated policy assignment is possible
 - Various sources such as
 - network and agent based assessment
 - DHCP OS fingerprinting
 - captive portal (used for remediation and registration, guest services)
 - and external profilers (via Netflow, IDS Signatures) can be used.
 - The Device type can be an Operating System Family, Operating System or Hardware Type, for example, Windows, Windows 7, Debian 3.0, HP Printer, iPhone, iPad etc.



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Assessment – In-depth Visibility and Control

- **Agent-less Assessment**
 - Network based scanning
 - CSV scoring
 - Out-of-box scanning configurations as well as customized configurations
 - Supports multiple OSs
 - Examples:
 - Anti-virus
 - Patches/OS versions
 - Applications
- **Agent-based Assessment**
 - Permanent or dissolvable
 - Examples:
 - Anti-virus (installed, active, up to date, etc.)
 - Firewalls (installed, active, etc.)
 - Services Running
 - Patches/OS versions (automatic patching enabled, up to date, hot fixes enabled, etc.)
 - Applications (installed, active)
 - Registry Keys



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Staged Deployment – Big Changes, Zero Risk



- **The biggest roadblock to changing network access posture is fear that it will impede connectivity**
- **Staged Deployment**
 - Allows full control over infrastructure changes during deployment
 - Minimizes impact to business processes
 - Deploy each function without enforcement
 - Verify results before enabling enforcement

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Interoperability



Implementation for any network without network upgrades

Standards-based - integrates with network equipment supporting RFC3580, VLANs and authentication


Network-based appliance allows integration with any network edge regardless of standards support



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Enterasys Advantage – Education

Driving Efficiency and Improving the Learning Experience



<ul style="list-style-type: none"> ▪ Enable open anytime, anywhere access enhancing academic collaboration ▪ Provide easy network access for a multitude of networked devices 	Student Advantage	Faculty Advantage	<ul style="list-style-type: none"> ▪ Leverage technology in the classroom to achieve learning objectives and minimize distraction ▪ Enable consistent anytime, anywhere access to resources
<ul style="list-style-type: none"> ▪ Support open access with detailed visibility, user accountability & control ▪ Automate & simplify student device registration, centralize compliance reporting & enable virtualization initiatives 	Organizational Advantage	Operational Advantage	<ul style="list-style-type: none"> ▪ Deliver industry-best TCO while supporting cutting edge learning tools ▪ Lower operational costs while delivering campus wide mobility, resiliency and security

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