Application Intelligent IP Networks

Why, Where, When and How?

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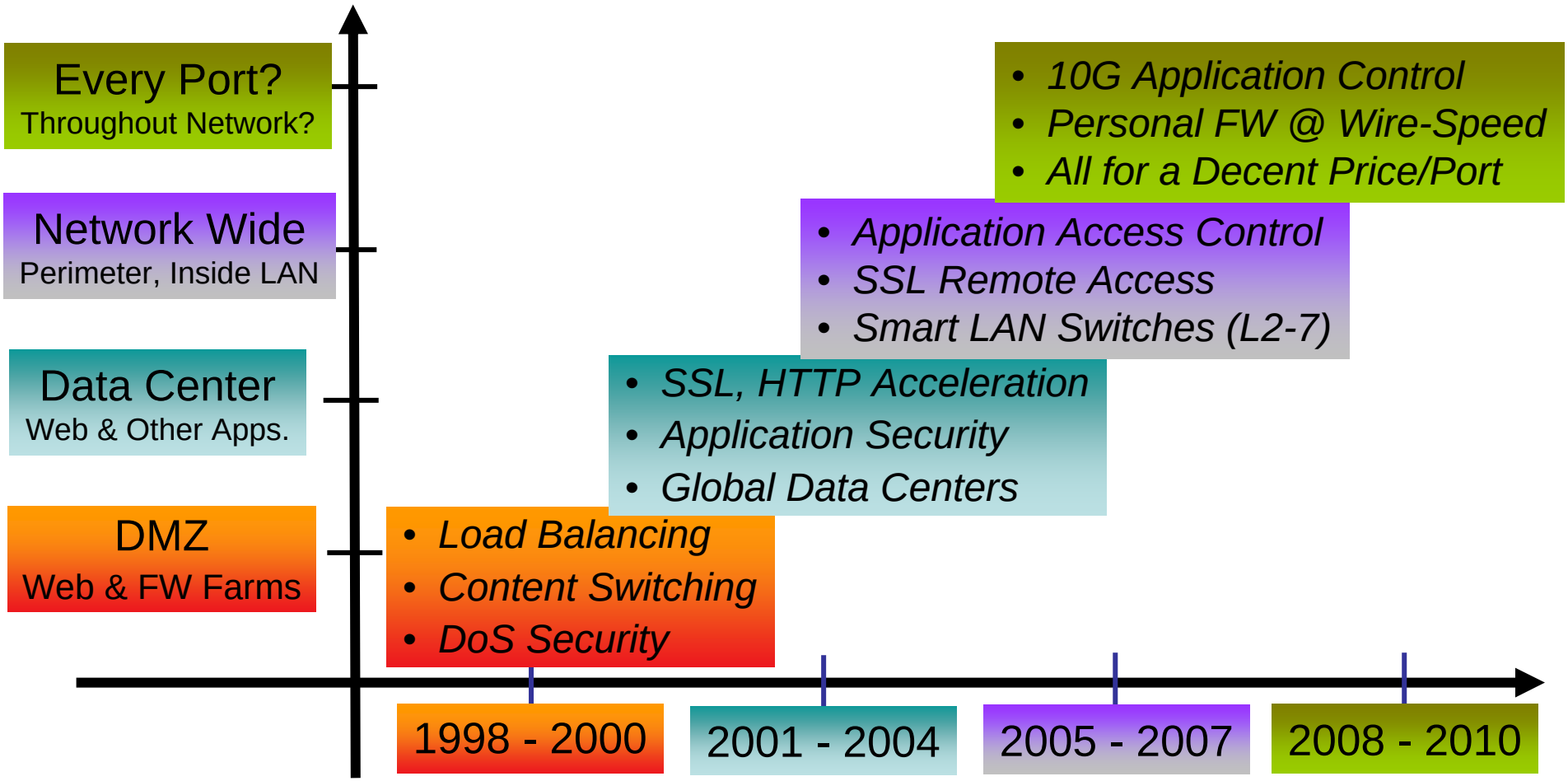
Evolution of the Application Network

Network Scope



Four Key Reasons for Application Networking

Performance
- Delivery Acceleration with Network Optimization
- Faster Response Times
- Better Resource Utilization

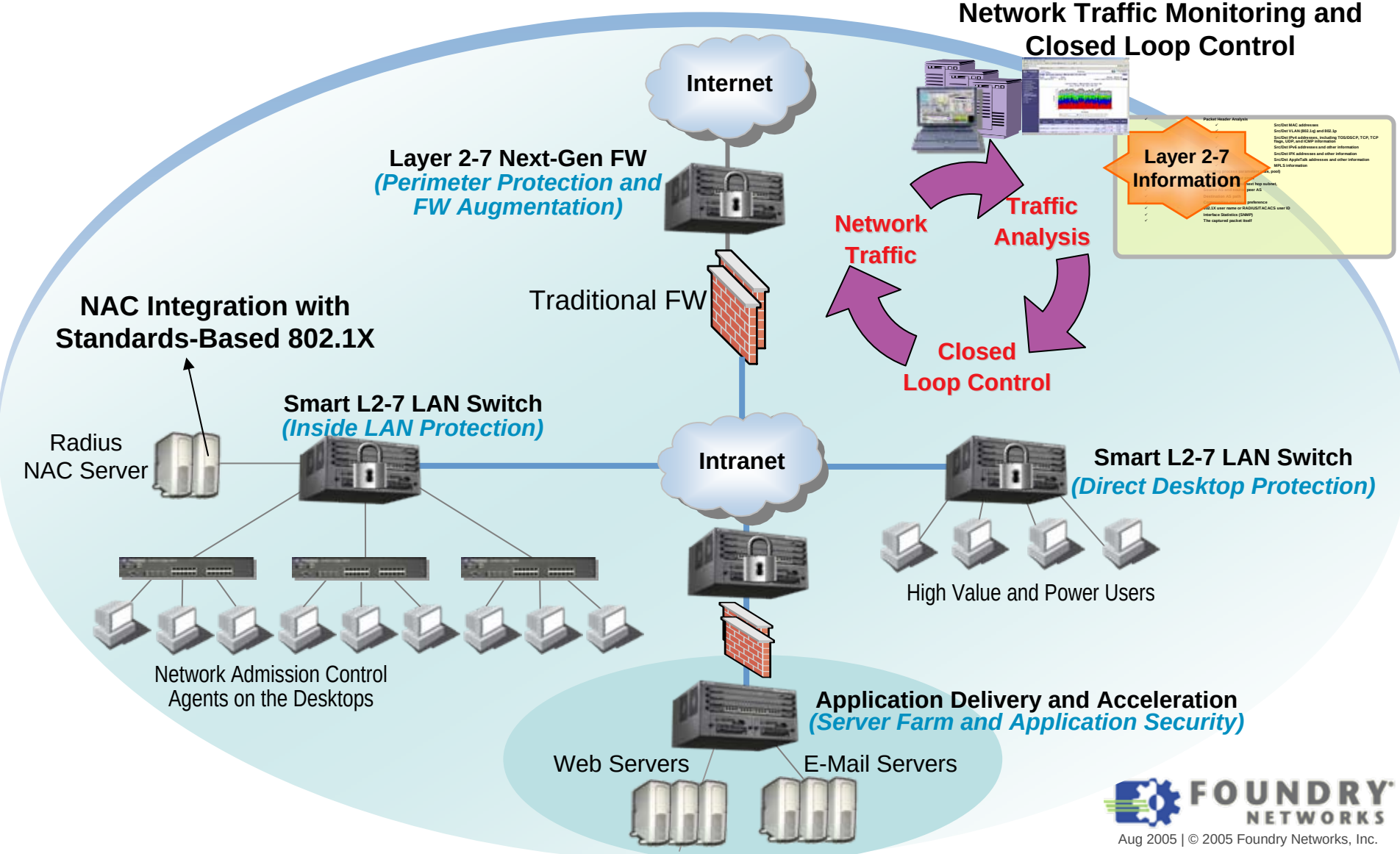
Security
- Granular Protection for Maximum Uptime
- Application Level to Protect Sensitive Data
- Identity Based Access

Critical IP Service Infrastructure

Availability
- Maximizing Uptime by Intelligent Traffic and Resource Management
- Globally Distributed Services and Disaster Recovery

Scalability
- Keep up with Growing Demands of Traffic, Users, Security Threats
- On-Demand Infrastructure

Example Application Network with Network Wide Application Intelligence



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Application Network Tradeoffs for Real Life!

- **Intelligence, Performance, Security and Cost are Conflicting Goals**
  - More Security will Cost More $$ and Give Less Performance
- **ROI Benefits are Realized with Savings Elsewhere**
  - Happier Users, Reduced Server Cost, Less Downtime
- **Distribute Security throughout Network**
  - Mitigates Performance Impact and Cost!
- **Centralize Optimization and Acceleration**
  - Example: WAN Edge, Data Center (More Complicated Application Logic)
  - Hard to Cost Effectively Distribute, Manage, and Benefit

Where Do We Go From Here?

- **Most Application Networking Technologies Today are CPU Based with some ASIC Assistance**
  - Central Management Modules
    Some Performance Scalability on Modular Architectures
- **Advances in Technology with some Willing Tradeoffs on Functionality will Take us to Application Awareness on Every Port**
  - Today, One Gigabit per Second Application Appliance Costs ~$30,000
- **Remember the Days when Simple Layer 3 Forwarding (IP Routing) was Done on Expensive Router Modules??**
  - One Vendor Changed it all to Wire-Speed Routing in Hardware @ 1/10th Cost

Thank You

Q & A