Network Design Framework
IIN and SONA

Gary Coman
Influence of Consumer Technology on the Enterprise

Generation X and Y Influence

Consumerisation the most significant trend to affect IT over the next 10 years
Businesses Looking for a Way to Transcend the Growing Chaos

Globalization
Mobilization
Virtualization

Complexity
Intensity
3+
devices / person

Speed
27%
travel monthly
Productivity Significantly Affected

52% must use multiple methods to reach people

Results in missed deadlines 22% on monthly basis

36% can’t reach person on first try

Source: Sage Research, 2006
Old Way
New Way

Connected Content / Devices
Eliminating boundaries and unnecessary tradeoffs
All Forms of Communications and IT Converge in the Network

The Network as a Platform
In the Future Everything Will Be Connected

Devices connected to the Internet

Source: Forrester Research, as cited in BusinessWeek.com, 2/20/05
The Communications System of the Future

Everything will be connected by IP
People to people – SIP
People to machine – HTML
Machine to machine – XML

The network will be the secure, value-add platform for all communications
Cisco’s 3–5 Year Technology Vision: The Intelligent Information Network

INTEGRATED TRANSPORT

INTEGRATED SERVICES

INTEGRATED APPLICATIONS

PHASE 1

PHASE 2

PHASE 3

The Intelligent Movement of Data / Voice / Video Across a System of Networks

Application-Enhancing Services

Virtualized Networking Resources

Cisco Confidential
“SONA is an architectural approach to connect Network Services to Applications to deliver Business Solutions.”
What Is Required?
Intelligence Migrating into the Network

APPLICATIONS
- Firewall
- SBC
- CDRing
- Email
- ERP
- Voice Mail
- SSL
- RFID
- Mobile Email
- Multicast
- Caching
- Firewall
- Wireless Mgmt
- QoS
- Call Control

OS AND MIDDLEWARE
- Message Management
- Load Balancing
- Web Virtualization

IP NETWORK
- Email ERP
- NAS
- CRM
- AV
How Do We Get There?
Architectural Approach to Closing Gaps

Application Integration Gap
Need:
• Application integration
• Human interaction
• Productivity and innovation
Solution:
• Application fluency in the network
• Real-time interaction and collaboration

Resource Allocation Gap
Need:
• Flexible, efficient and secure usage of IT resources
Solution:
• Infrastructure Virtualization
• Self-Defending Networks
• Integrated Manageability

Introducing...
Cisco’s Service-Oriented Network Architecture (SONA)
# Network as the Platform: Service Oriented Network Architecture (SONA)

## Application Layer

<table>
<thead>
<tr>
<th>PLM</th>
<th>CRM</th>
<th>ERP</th>
</tr>
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<tbody>
<tr>
<td>HCM</td>
<td>Procurement</td>
<td>SCM</td>
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</table>

### Traditional Architecture / Services Oriented Architecture

## Interactive Services Layer

### Application Services

- Security Services
- Mobility Services
- Storage Services

### Infrastructure Services

- Voice Services
- Location Services
- Identity Services

## Networked Infrastructure Layer

<table>
<thead>
<tr>
<th>Campus</th>
<th>Branch</th>
<th>Data Center</th>
<th>MAN/WAN</th>
<th>Teleworker</th>
</tr>
</thead>
<tbody>
<tr>
<td>Server</td>
<td>Storage</td>
<td>Devices</td>
<td></td>
<td></td>
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</table>
Network as the Platform: SONA and UC

**Cisco Unified Customer Voice Portal**

- Unified contact center workflow tied to SOA for consistent customer experience
- Leverages APPLICATION LAYER for personalized interactions
- Broad Eclipse developer community speeds innovation
- Consolidates management and cross-channel analytics
Looking to the Future: The Evolution of the Network

- Best in Breed Networks
- End-to-End Networks
- Network of Networks
- Intelligent Information Network
- Network as the Platform

1990 2000 2010
Our Customers Enable Life’s Experiences

Enterprise

Service Providers

Data, Voice, Video, Mobility

Commercial

Consumer
The Network Changes How People, Companies, Countries Experience Life

Work
- Voice and Video
- Mobility
- Video Streaming
- Secure IP Network

Live
- Connected Health Authorities
- Connected Public Health
- Connected Education
- Connected Research

Learn
- Connected Teachers
- Connected Students

Play
- Connected Gamers

Network is the Platform
Today’s Empowered Employee

- Blending of business environment and the personal environment
- High expectations of mobility
- Reshaping the way businesses think about access
- Expectation changing applications are entering Enterprise, can IT Support?

It’s not where you work, it’s how you work…

Engaging the Human Network
## Value of the Human Network

<table>
<thead>
<tr>
<th>Simple to use, accessible, loosely structured, information publishing and retrieval</th>
<th>Faster information flow and sharing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexible, simplified, and effective options for direct communications</td>
<td>Quicker, more flexible communications without losing effectiveness</td>
</tr>
<tr>
<td>Collaborative online environments for contributive content</td>
<td>Harness the power and value of collective knowledge</td>
</tr>
<tr>
<td>Loosely coupled, lightly structured development interfaces to applications and data for flexible re-use and customization</td>
<td>Allow easy application and data use/re-use enabling, innovation, relevance and efficiency</td>
</tr>
</tbody>
</table>

Innovation | Ideas | Quicker Decisions
Q and A