NOMS
Distinguished Experts Panel

VoIP management

The Emperor Has No Clothes On

Henry Sinnreich/Pulver.com

*Internet voice is better and at no extra cost as well*

Vancouver, Thursday, 6 April 2006
Facts

- P2P traffic dominates the Internet (~80%)
- P2P Skype dominates VoIP (~80M users)
- Wideband IP-IP voice is better than PSTN
  - Skype, Google
Back to the e2e Internet

Fundamental technology shifts

• The p2p application is the communication network
  – P2P networks are self organizing
  – See SIP beyond VoIP: Presence, IM, multimedia, integration w. apps

• The application is trusted, not the admin
  – See Microsoft DRM

• Only PCs with trusted apps are admitted to the enterprise network
  – See Cisco network admission control
VoIP infrastructure made obsolete by P2P

- DNS, ENUM
- SIP registrar and proxy servers,
- Presence servers
- Component servers:
  - Announcements, voice mail, media servers, conference servers
- Session border controllers
- Softswitches: Local switch emulation, PBX
- Media servers
- Network elements for QoS
- Policy servers
- Network management
- Voice quality monitoring probes
- VoIP network IT (OSS) systems for all the above

The sum of all = IMS, TISPAN
Complexity Eating CS VoIP
Major P2P Projects

<table>
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<th>P2P SIP</th>
<th>New IETF WG</th>
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<td>Several P2P SIP projects and Internet Drafts</td>
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<td>(P2P IP PBX: Avaya and Peerio, prestandard)</td>
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<td><a href="http://p2psip.org">http://p2psip.org</a></td>
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| Open DHT          | OpenDHT is a publicly accessible distributed hash table (DHT) service. Clients of OpenDHT do not need to run a DHT node in order to use the service. http://www.opendht.org/index.html |

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<th>Planet Lab infrastructure</th>
<th><a href="http://www.planet-lab.org/">http://www.planet-lab.org/</a></th>
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<td>645 nodes over 310 sites. Academic, industrial, and government institutions</td>
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P2P Communications

IP L5: Application Layer

P2P Applications

Overlay Network

SIP applications

DHT Layer

TCP/IP

VoIP, Video
Presence
IM
File Transfer

Internet
How the internet killed the phone business
The Internet Is The Service

Quote from Jon Peterson, IETF Area Director

Questions?