Enterprise IP Telephony Case Study

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Agenda

1. Market Evolutions
2. IP Telephony Overview
3. Key Factor to deploy IP Telephony
4. Customer Case Study
5. Beyond IP Telephony with Application
6. Summary
Market Evolutions
IP Telephony has reached the “plateau of productivity”

IP penetration increasing

- Market penetration 5 to 20% of target audience
- Alcatel-Lucent IP penetration, 2006
  - 26% in the LE segment,
  - 18% in mid market

The future communication system

- Will be based on refined developments of the established IP Telephony systems with SIP and presence...
- ...and Unified Communications to manage alternative communications modes more effectively
SIP, two to five years to mainstream adoption

SIP penetration
- WW market deployment < 1%
- Years to mainstream adoption: 2 to 5 years

The future of SIP
- SIP will enable interoperability...
- But many vendors prefer to offer a proprietary variation of SIP.
- SIP standard is still evolving
- It will become the default open protocol for communication
Enterprise IP Communication

Building the IP Communication House

Open Software Solutions
- Business Telephony
- Business Applications
- Contact Center
- Collaboration
- Unified Communication
- Mobility

IP Telephony
- IP Softphone
- IP Phone
- IP Application Phone
- Communication Server
- IP Media Gateway

High Availability Infrastructure
- LAN
- WLAN
- WAN/MAN
- Security
- Microwave and Optics
Full IP Architecture

- Full IP LAN-based voice system
- Centralized application
- Centralized management
- IP phones and IP softphone
- Analog device behind ATA
- SIP / NGN compatible

Key Benefit
- Single infrastructure for voice and data
- Easily integrate a wide variety of applications on phone
- Deploy soft-phones as flexible, low-cost option
- Leverage next generation IP carrier offerings
Hybrid (TDM/IP) Architecture

- Single system across entire enterprise
- Centralized application
- Centralized management
- IP, digital and analog phones
- SIP / NGN compatible
- High-availability options per site
- Transform to full IP when ready

Key Benefit

- Create a virtual enterprise
  - Same level of service for all users
  - Users interact as if in one building
  - Full mobility between sites
  - Share applications and people
- Reduce telecom costs
  - Centralize telecom subscriptions
  - Eliminate inter-site telecom costs
- Reduce management expenses
  - Manage all sites centrally
  - One maintenance contract
Sample of IP Communication Network
Key Factor to deploy IP Telephony
A typical Network
A typical Network - Go Beyond the Cloud

Access Layer

Distribution Layer

Core Layer

Data Center
## Network Challenges

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<thead>
<tr>
<th>Access</th>
<th>Distribution Area</th>
<th>Backbone</th>
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<tbody>
<tr>
<td>Access Control</td>
<td>Port Density</td>
<td>Service aware</td>
</tr>
<tr>
<td>Quarantine Manager</td>
<td>Quality of Service</td>
<td>Multi Tenant</td>
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<tr>
<td>Power over Ethernet</td>
<td>Availability</td>
<td>Quality of Service</td>
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<td>Quality of Service</td>
<td>Reliability</td>
<td>Availability</td>
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<td>Availability</td>
<td>Firewall</td>
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<td>Reliability</td>
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### Data Center

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The challenge of a large Voice + Data enterprises Network

1. Challenge:
Different networks with different management systems.

→ Difficult, expensive and time consuming to operate!

2. Challenge:
Different applications with different needs of bandwidth, QoS, availability, ...

→ Difficult to ensure availability and QoS for Business Critical Applications!

CONVERGE networks to a single platform with a single management system for high available BUSINESS CRITICAL APPLICATIONS!

- L2 & L3 switching/routing
- Availability
- Dedicated QoS & CoS
- Reliability
- Security
- Service aware
Key concern factors for IP Communication Implementation

Network Infrastructure Readiness
- **Bandwidth** Requirements
- **Quality of Service (QoS)**
- **Security** (Firewall, VPN, Authentication)
- **Power over Ethernet (PoE)**

Manageability
- Simplified and **Centralized** (Configuration, Fault&Alarm, Billing)
- **Performance** Management Capability

Availability
- **Redundancy Requirement**
- **Resiliency Design**

Investment Protection
- **Add-on Application** (Contact Center, Unified Communication, Mobility)
- **Interoperability** with Carrier NGN (*SIP* Trunking)
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Customer Case Study
Customer Case Study (1)
Government with various branch office in Bangkok
Customer Case Study (1)
Government with various branch office in Bangkok (Con’t)

Needs
- Reduce administration costs
- Reduce telecom costs

Solution
- Distributed IP telephony
  - 50 Communication Server, one for each branch
  - IP Trunking
- Centralized Management
- Centralized Billing

Benefits
- Reduced administration cost with Centralized Management
- Reduced telecom costs with IP Trunking
- Control and manage telecom cost with Centralized Billing

Next Plan
- Looking for Unified Com. and Collaboration to improve employee efficiency
Customer Case Study (2)
A Bank Customer in Thailand
Customer Case Study (2)
A Bank Customer in Thailand (Con’t)

Needs
- Reduce telecom costs between HQ and branch
- Improve internal communication efficiency

Solution
- Centralized IP telephony
  - 3 Site in Bangkok, 15 Center nationwide
  - Total 2,500 TDM extension and 800 IP Phone
- Centralized Management, Billing

Benefits
- Reduced telecom costs with IP phone call between HQ and branch
- Reduced administration cost with Centralized Management
- Improve internal communication process

Next Plan
- Looking for Media Gateway at branch level to simplified user experience and offer better customer service
Customer Case Study (3)
Another Bank Customer in Thailand

IP corporate network

370 Branch nationwide

PSTN

Network Mgt

Call Server

Redundant Call Server
Customer Case Study (3)
Another Bank Customer in Thailand (Con’t)

Needs
- Improve customer interactions in branches
- Reduce telecom costs between HQ and branch

Solution
- Centralized IP telephony
  - 370 Media Gateway, one at each branch
  - Total 4,000 extension
- Centralized Management, Billing
- ARS (Automatic Route Selection)

Benefits
- Reduced telecom costs with call between HQ and branch
- Full telephony network availability for better customer service

Next Plan
- Expand more branch with IP Phone solution
- Unified Communication for better collaboration
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Beyond IP Telephony with Application
Beyond Telephony with Application

**MOBILITY**
- Cellular Extension
- Dual Mode (WiFi/GSM)
- Personal Router
- Softphones
- Instant Video
- Mobile Office

**COLLABORATION**
- Presence Info.
- Conferencing
- Video Conf.
- Broadcasting
- XML Application

**INTEGRATION**
- Mobility
- CRM Integration
- Desktop Integration
- Email Client Integration
- S.O.A Web Services

**CONTACT CENTERS**
- Small to Medium
- Large Contact Centers

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Net Day 2007

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TOP 3 Most Wanted Applications - TODAY
No.1 - Collaboration Solution - Multi-media Conferencing

Web Presentation
- Webinar, Training
- Tele-meeting
- Distance Learning

Application Sharing
- Helpdesk Remote Support
- Co-Browsing, Co-Editing

Audio & Presentation Recording
- On-Demand Playback

Business Value
- Cost Savings, ROI in months
- Improve Cross-functional Cooperation
- Implement Sales Strategies Faster
TOP 3 Most Wanted Applications - TODAY

No.2 - Mobility Solution - One Number Service

- Cellular Extension
  - Simultaneously ring on office desk phone and GSM phone
  - Access to company telephony service from GSM phone
- Dual Mode GSM/ WiFi phone
  - On-Site Mobility by Wi-Fi
  - Off-Site Mobility by GSM
- One telephone number (GSM number becomes a private number)

**Business Value**

- ✔ Continuity of Services
- ✔ Always On for VIP Customers
- ✔ Building the Mobile Enterprise
TOP 3 Most Wanted Applications - TODAY

No.3 - Rich Presence Information

Presence is the new dial tone
- Change the way we communicate
  - Connect people, not devices
- User experience prior to communicate
  - Right media at the right time
- Presence for all contact
  - IM, voice, video
- On PC screens and on IP Phone

Rich Presence with Location
The most important is to have single user interface for every applications

Consistent User Interface

Innovative user experience

Telephony services

Teamwork services

Messaging services

One number services

Adaptive to your needs

One number services

Telephony services

Messaging services

Teamwork services

One number services
Summary IP Telephony Benefits

- Cost Reduction
- Easy to Manage
- Converged Services
- Always On
Summary
Alcatel-Lucent Convergence Solution

Network Infrastructure
- OmniSwitch high scalability
  - Reduce Net Complexity
- PoE allocation & Mgt
  - Lower Power/Space
- Omnistivista 2x00
  - Single QOS, Topology
- End 2 End Mgt
  - Centralized IP@, VPN & Performance Mgt
- OmniSwitch high availability
  - Duplication, Hot Swap, SCS
- Security - ITU X 805
  - AVA, 802.1X, Quarantine
- Mobility - WLAN
  - Centralization
  - Voice aware
  - Location services

Optimized for:

Mass IPT

Converged Security
- OXE high scalability
  - 15K users, 100K in Net
  - Blade Center
- Omnistivista 4760
  - Single Topology
  - Single server (mid size)
  - MCS edition
- OXE high availability
  - 5x9, Spatial, PCS, backup
- Security - ITU X 805
  - 802.1x, Pinholing
  - Thales, Softphone VLAN
- Mobility - WLAN
  - FMC embedded in IPT
  - WLAN, Dual mode phones
  - Notification server

Converged Mobility

Cost Reduction
- Easy to Manage
- Always On

Converged Services

Cost Reduction
- Easy to Manage
- Always On
Thank You

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