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Solutions Telephony Converged IT & Data Services Info

VoIP and Beyond

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Agenda

- 2004 a year in review.
- Hybrid / Pure IP Telephony platforms.
- 2005 and Beyond
- Voice over WLAN
- Case Example

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2004 a Year in Review

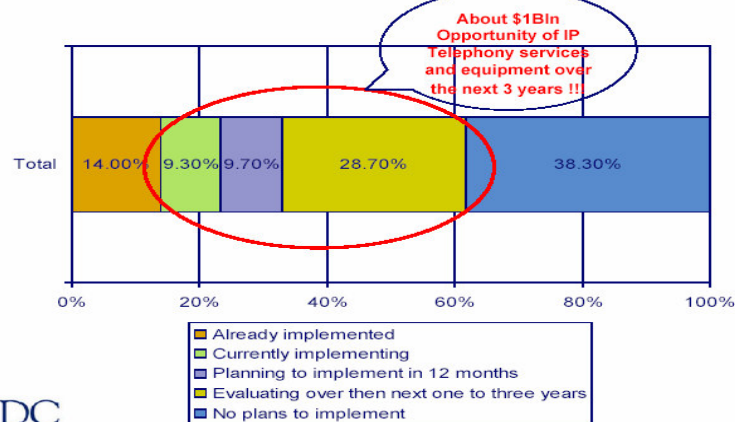
VoIP moves from leading edge to mainstream.

- Post Y2K upgrade cycle kicks-in (Data and Voice).
 - Competitive IP equipment costs.
 - Increase in market awareness.
 - The Australian VoIP enterprise equipment market is valued at \$177M (up 66% on 2003 figures) Source IDC Australia
 - Hybrid TDM / IP systems dominate enterprise telephony shipments
-
- All of NEC's Enterprise Telephony shipments are IP ready.
 - ~20% of NEC's handset shipments are IP.

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Australian Market IPT Deployment

Your Company Status of IP Telephony Deployment



Source: IP Telephony Survey, IDC, 2004

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Hybrid vs. Pure IP Telephony platforms

Hybrid :-

- Is generally in the form of an IP enabled PBX.
- Allows for cost effective migration from traditional PBX.
- Allows for failsafe use of telephony even in the effect of a data network outage.
- Internally supports a high density of non IP services.



Pure IP :-

- Is generally in the form of PC-server based platform.
- Is ideally suited for 'Greenfield' sites where an opportunity for upgrade doesn't exist.
- Typically has a smaller footprint than Hybrid platforms.
- Supports non IP services via add-on gateways.



NEC offers both Pure and Hybrid IP telephony platforms.

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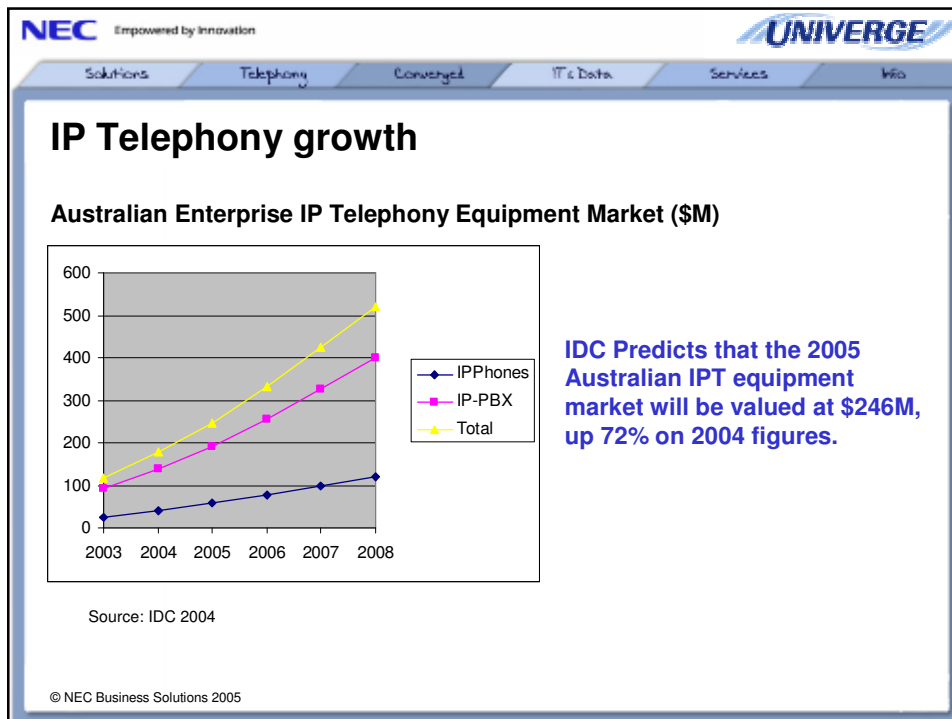
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2005 and Beyond

- Continued growth of IPT systems, including an increasing ratio mix of IP to TDM.
- An increased emphasis on securing VoIP networks.
- Converging desktop applications and VoIP
- SIP receives widespread acceptance.
- Voice and Data convergence over Wireless LAN's.



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VoIP Security Safeguards

- **Denial of Service (DoS) attack**
 - Look for DoS attack prevention features in IPT Platform.
 - Firewall front-end the IPT platform.
- **IPT Platform may be hacked.**
 - Run Virus / Trojan detectors on IPT platforms.
 - Non standard OS IPT platforms are less susceptible to attacks.
- **IPT Platform may be a back-door to the corporate network**
 - Maintain separation of voice and data networks with VLAN's / Firewall
 - IPT platforms should be included in an overall Intrusion Detection System.
- **Voice conversations may be intercepted.**
 - Voice encryption can avoid this.
 - VLAN / Firewall use can minimise this risk.

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Communication Tools

Desk Phone

Soft Phone

Wireless Phone

Mobile Phone

E-mail

Instant Message

Voice Mail

- End users will use a variety of communications tools.
- How is an end user meant to manage all these communication means?
- Convergence is about improving communications!
- Convergence is about making it easier!

....enter the *Communication Portal*

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Communications Portal

- Know the status of your colleagues
- Automate your own status
- Route calls based on your status
- Full directory integration
- Integrate your e-mail / calendar

Contacts

Hughes, Ken		At Desk
Hart, David		
Thompson, Allan		Meeting

My Outlook

My Controls

Missed Calls: 34

Connected To: McHaffey, Lance 2436

Dial As Is

My Status: At Desk

My Call Logs

Personal Directory

Full Name (last, first, middle)

Schaefer, Walter

Schaefer, Bruce

Schaefer, Brian

Schaefer, John

Schaefer, Christian

Schaefer, Don

Schaefer, Daniel

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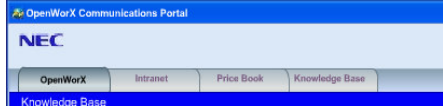
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Communications Portal

- Collaborate with multiple parties
 - Voice, Text, Video, Whiteboard and Application Sharing
- Drag and Drop Conferencing
- Portlets to other business tools




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Session Initiated Protocol - SIP

- **What is SIP?**
 - SIP is a protocol that is used to initiate and terminate communications sessions.
 - These communications sessions may be in many forms: including Voice, Video and Text.
- **Why should you care?**
 - SIP will give customers greater choice when deploying VoIP networks as IP handsets and other VoIP related components *may* be mixed and matched from different vendors
 - SIP handsets are being continually developed from 100's of manufacturers which should drive the cost of these handsets down.
 - Carriers and ISP's are deploying SIP functionality allowing for cheaper call rates.
 - SIP allows for easier integration from a security perspective.
- **What's the catch?**
 - SIP is not a *true* standard. Interpretation and usage of SIP varies and can make multi vendor interoperability difficult.

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Voice over WLAN

- New switched WLAN architecture allows for new applications including telephony .
- Adding voice capability to a WLAN network is a cost effective way to converge voice and data networks.
- Enterprise WLAN growth is exceeding IPT growth.
- Security is no longer a major barrier to installation.



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WLAN Handsets



NEC SIP Based



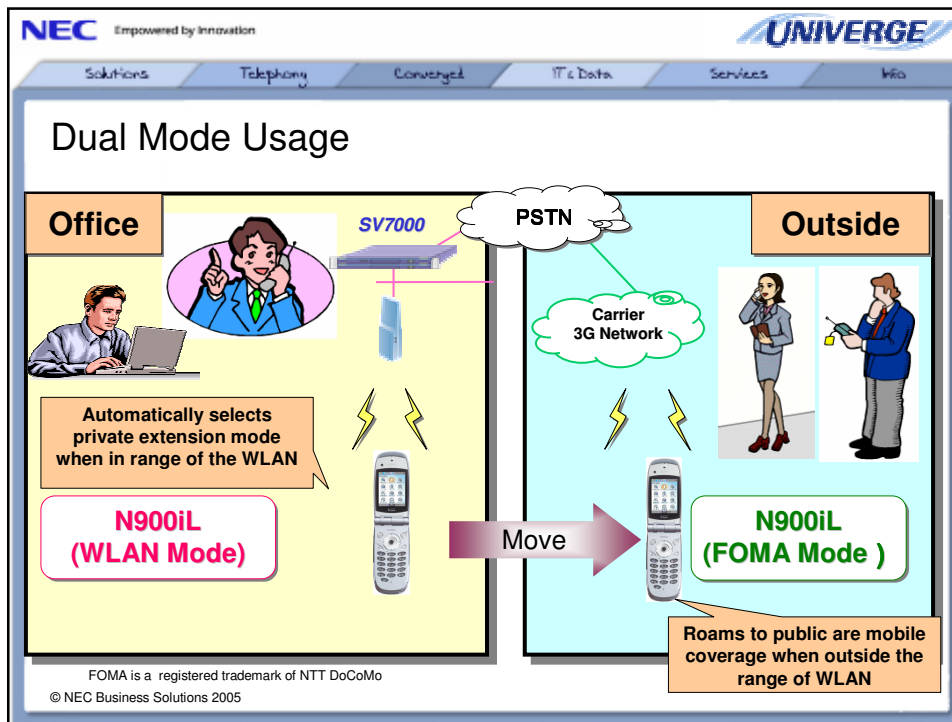
Spectralink with
NEC protocol



Currently only
available in
Japan

NEC Dual Mode
Handset
(3G / WLAN)

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Case Example – NEC's Broadband Office Solution

Purpose:-

Use the technology to confirm the benefits of our solutions

Continuously refresh the environment to take advantage of up and coming technologies that can be utilised to enhance the way we work.

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NEC's Shinagawa Hot Desking Office



- Wireless LAN Access
- IP telephone
- PC Soft-phones / Portal
- *'Paperless' Office*

Only one printer for approximately 400 employees

-30% reduction
of office space

There are only enough seating position for approx. 70% of the employees!

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Before



Conventional Office

After



Broadband Office

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