

VoiceCon Spring 2007
Enterprise Communications Systems Market Review

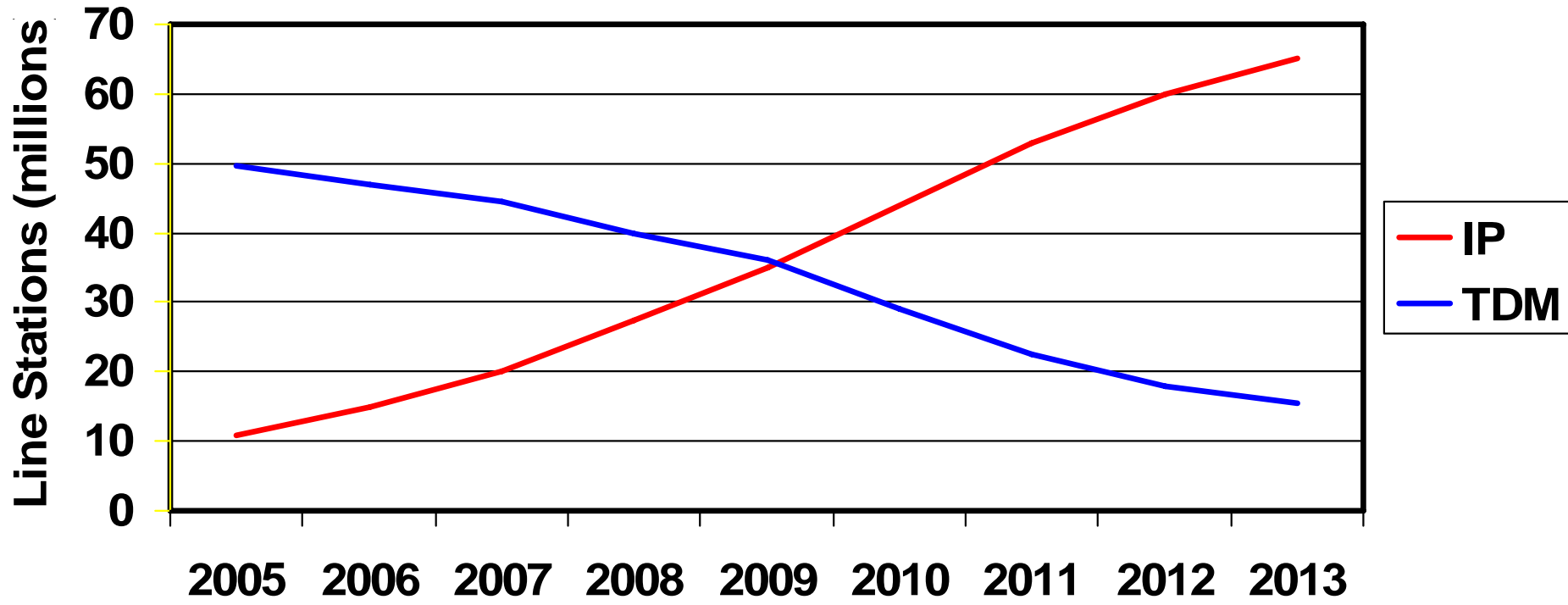
IP Telephony Takes Hold

Allan Sulkin
TEQConsult Group
amsulkin@aol.com

IP Telephony Market Moving Forward

- IP Telephony (IPT) systems dominate PBX market segment
 - 95%+ total system shipments are an IPT platform
 - 58% total line station shipments are IP endpoints
 - Client/Server is closing in on Converged as most popular IP-PBX design; demand for IP-enabled offerings is rapidly declining
- Key/Hybrid market segment a relatively equal mix mix of traditional digital and IPT designs
 - 16% total line station shipments are IP endpoints
 - Sizable number of small system customers with IPT requirements are replacing their installed Key/Hybrids with offerings classified as IP-PBXs

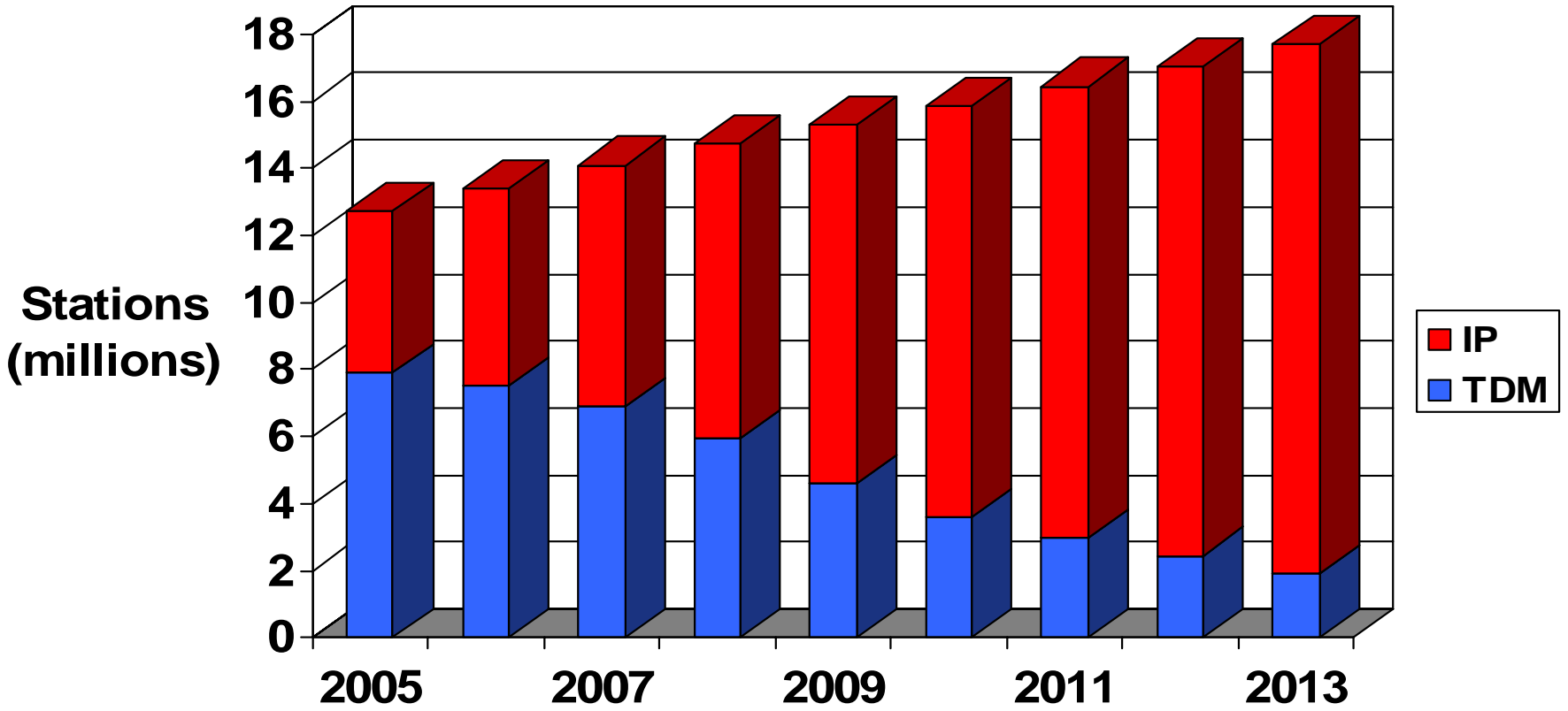
PBX IP Line Station Installed Base Forecast (USA, only)



Data Source: TEQConsult Group, 2006 ECA CCS Market Report

Total CPE Line Station Shipment Forecast

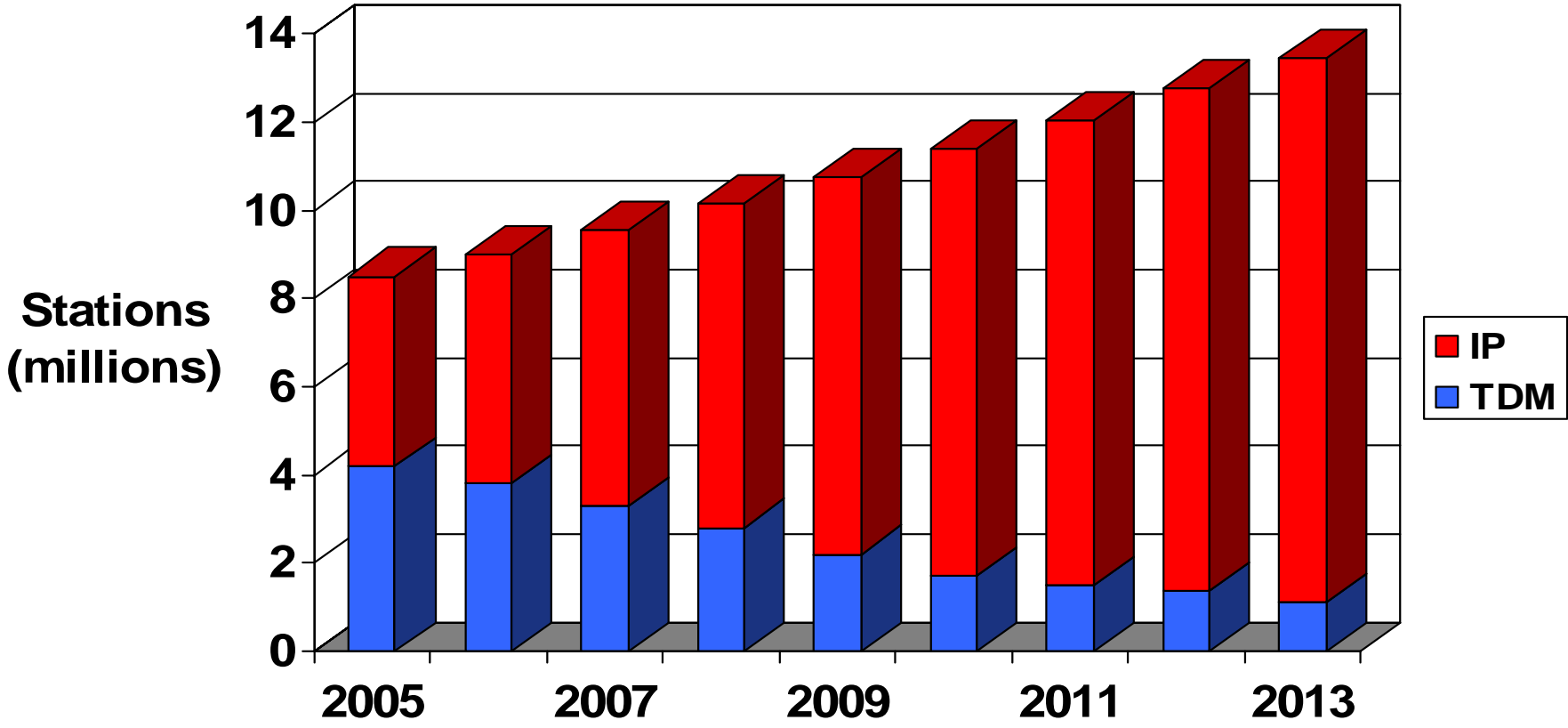
4% AAGR



Source: TEQConsult Group

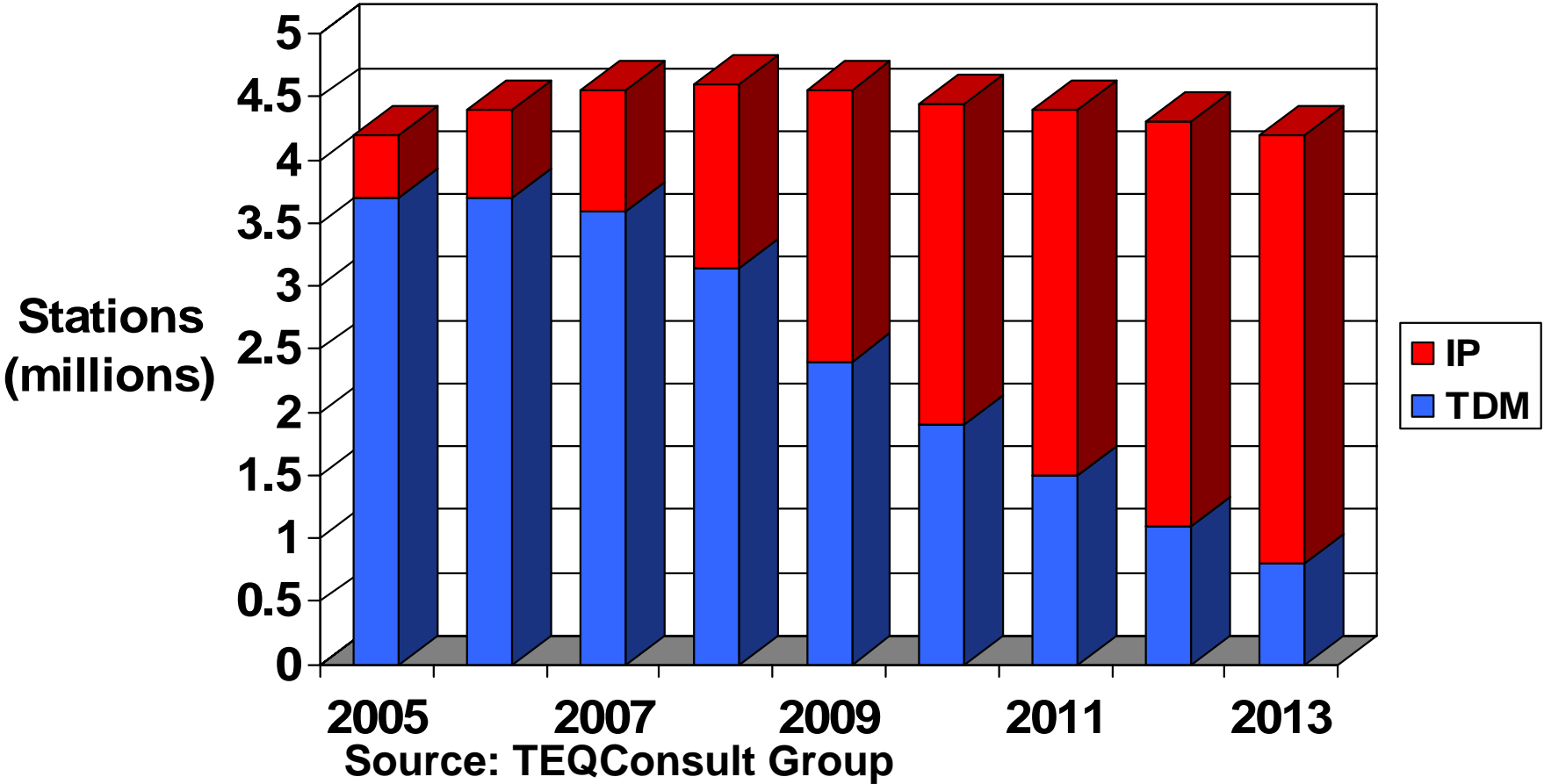
PBX Line Station Shipment Forecast

6% AAGR



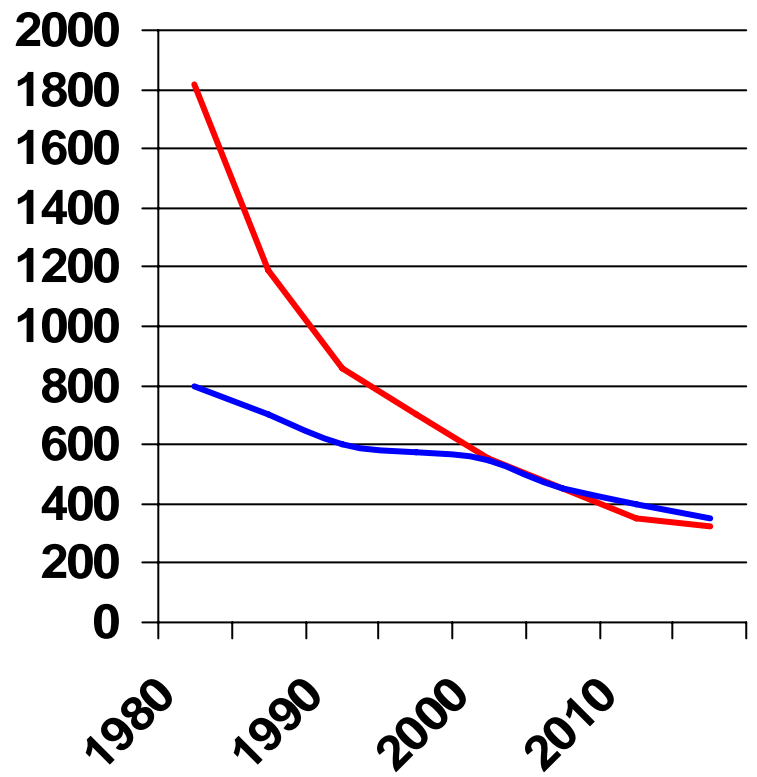
Source: TEQConsult Group

KTS/Hybrid Line Station Shipment Forecast 0% AAGR

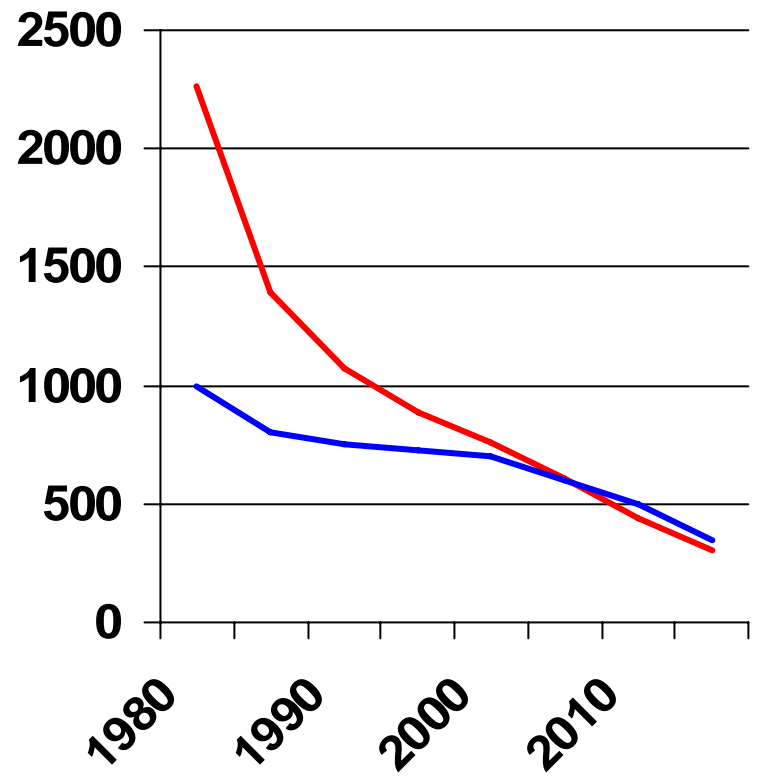


Baseline CPE Pricing Over The Years

KTS/Hybrid System



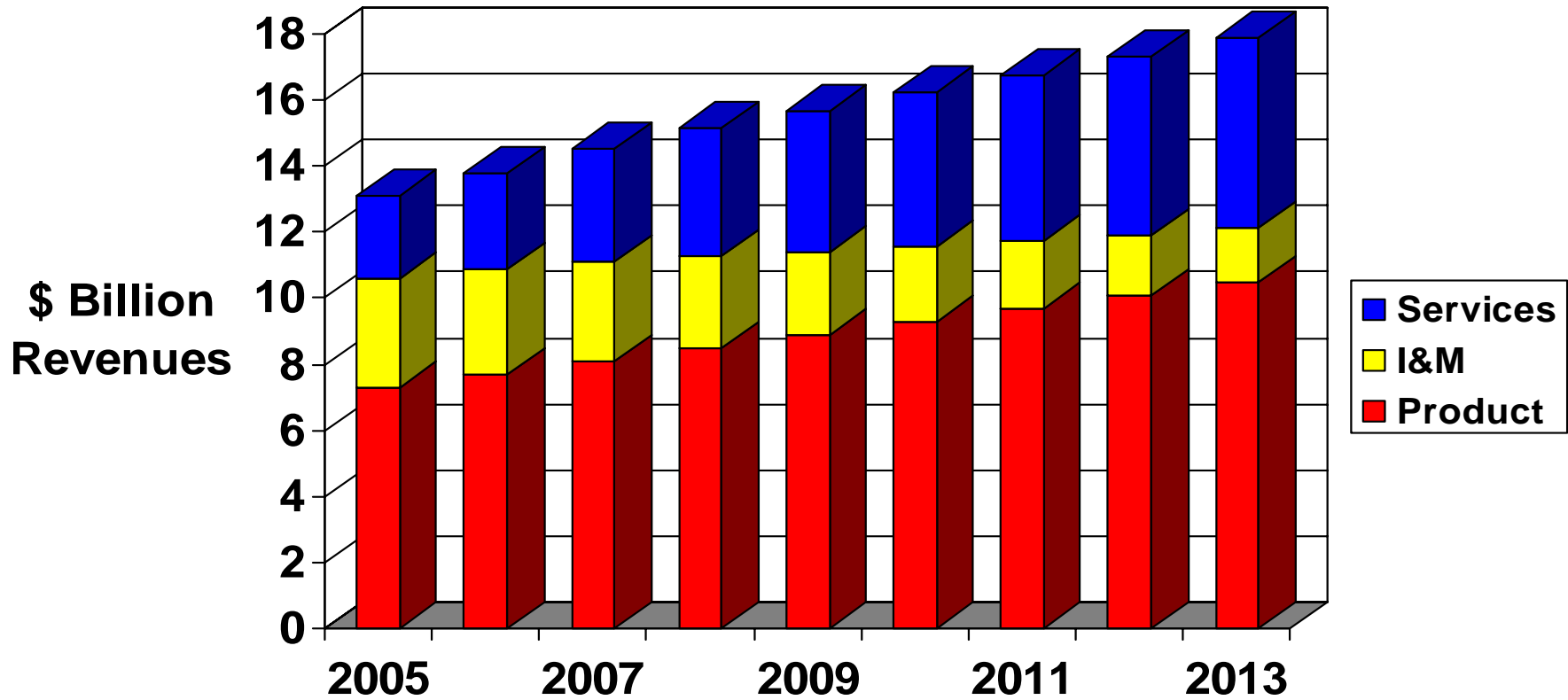
PBX System



— 2004 Dollars — Actual Dollars

CPE System Revenues Forecast

3% AAGR



Source: TEQConsult Group

IPT System Design Trend: The 3 R's

- *Reliability, Redundancy & Resiliency* are the 3 R's that characterize current IPT system design
- Reliability: stable Linux-based call processing & control; five "9's" availability; satisfactory QoS metrics; security features & monitoring
- Redundancy: duplicated/load sharing call servers and media gateways
- Resiliency: emergency back-up system control options (local survivability, network failover) when things do go wrong

Recent IP Telephone Design Advances

- High resolution backlit displays with larger screens; more color models
- Improved user interfaces include enhanced navigator control elements, capacitive touch technology
- Soft label keys with color status indicators
- Improved audio and acoustic quality: wideband codecs for handset/speakerphone operation
- New peripheral interface links: Gbit Ethernet; USB port; Bluetooth
- Wireless LAN modules for improved mobility & portability
- Customization: skins; screensavers; ring tones

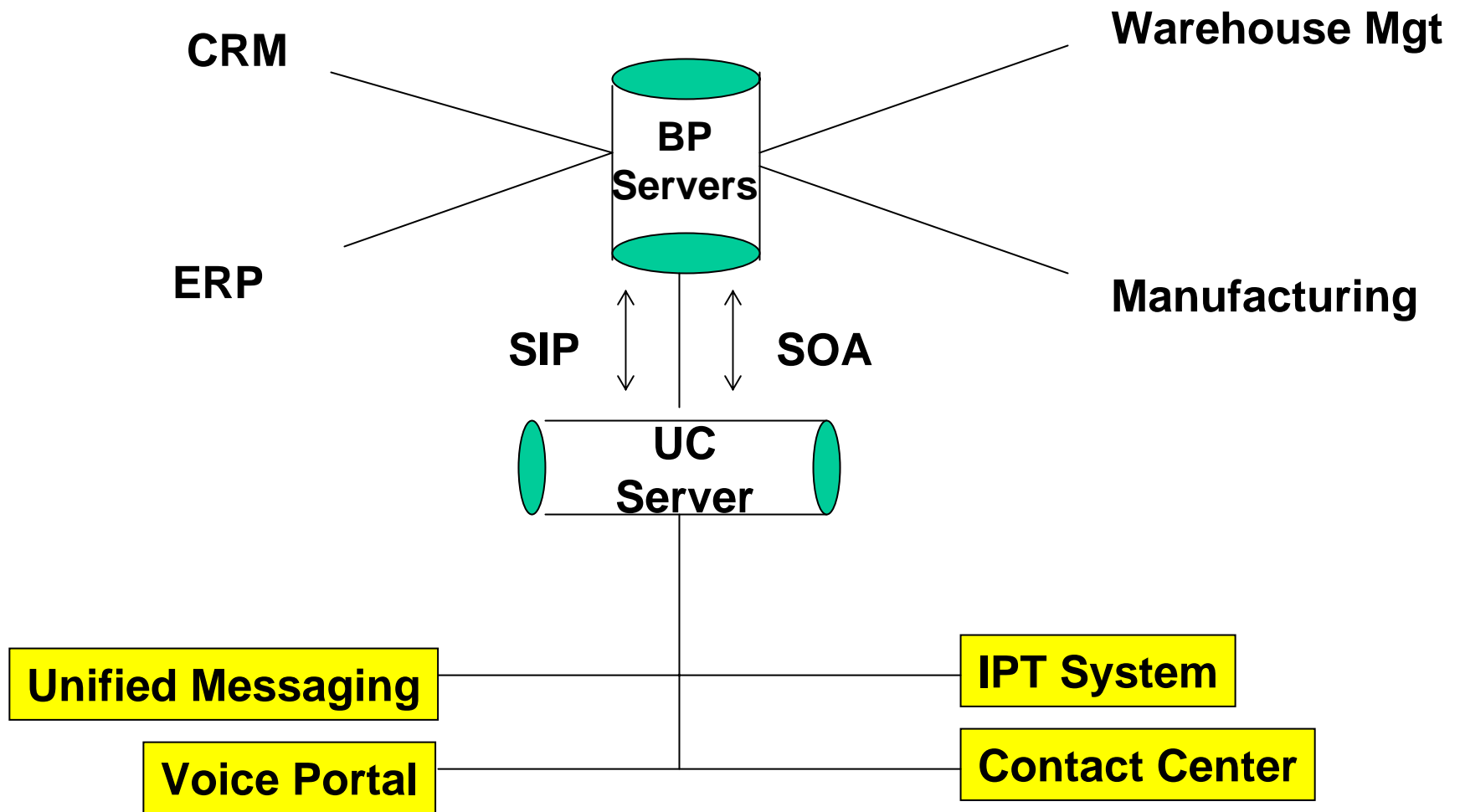
Communications Applications

	Installed Base Saturation	Comments/Outlook
Unified Messaging	~20% Messaging Subscribers	Gradual market acceptance; accelerating growth
Mixed Media Contact Center	<2% Contact Center Agents	Stalled market acceptance; moderate gradual growth
Unified Comm.	<1% PBX Systems	Relatively recent option; Very strong potential growth
VoWLAN	1-2% PBX Line Stations	Stalled market acceptance; Moderate potential growth
Desktop Soft Phone (Primary)	1-2% PBX Line Stations	Accepted teleworker option, but not as primary voice client
Desktop Video	<1% PBX Line Stations	Very limited market acceptance; Slow gradual growth

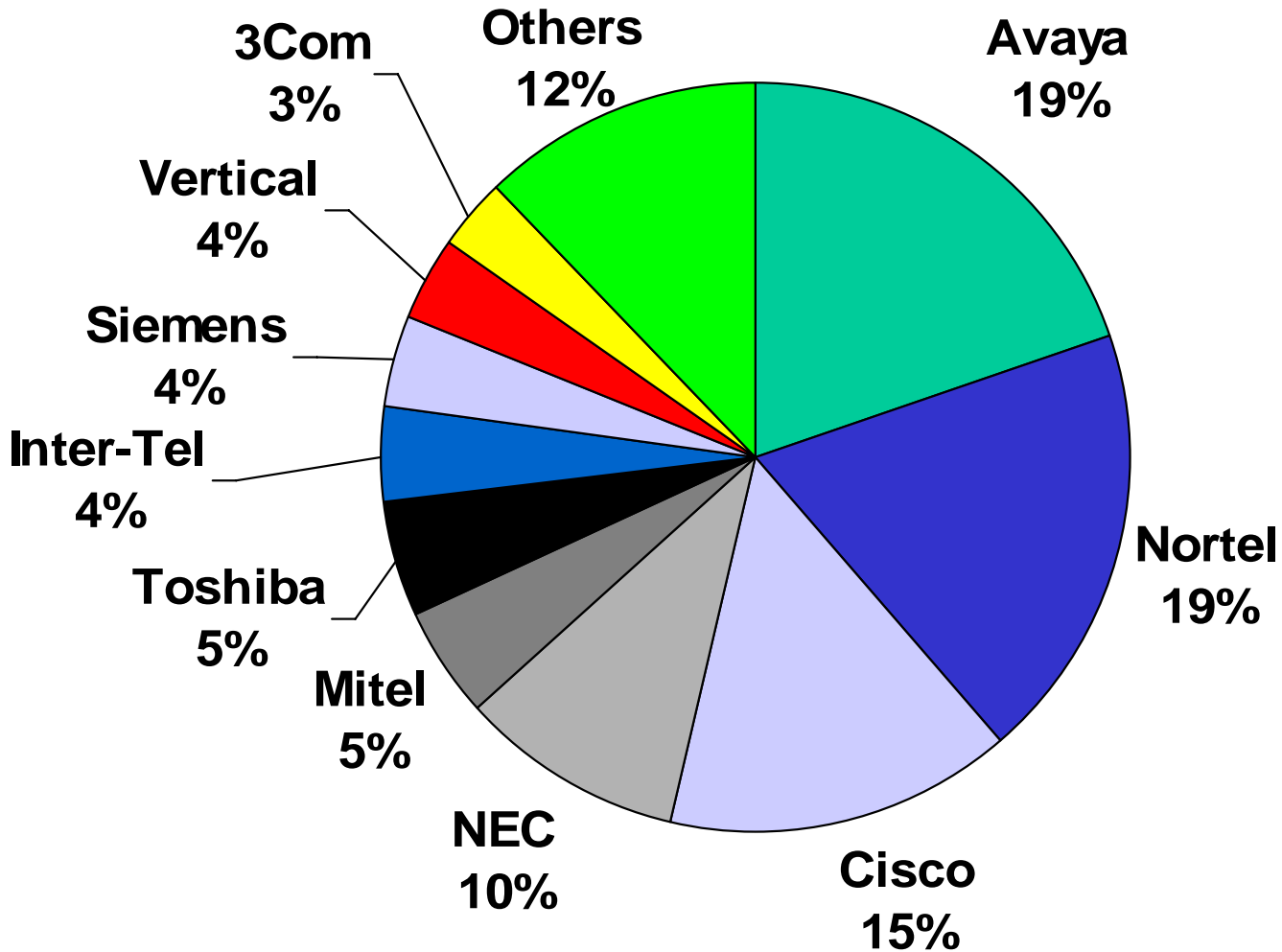
Business Process Integration: Next Big Communications Application?

- Business Process Integration (BPI) is embedding communications tools into standard business processes
 - Business processing system typically interfaces to communications ecosystem via a unified communications server
 - SIP and SOA are the means for physically and logically linking the disparate IT systems
- BPI is designed to automate a communications process to reduce latency for contact, conferencing and collaboration applications in support of information flow and decision making processes

BPI Eco-System



2006 CPE Market Share (Total Line Station Shipments)



Source: TEQConsult Group Estimates

System Size Market Coverage/Presence

	<40	40-99	100-399	400-999	1000+
Avaya	***	***	***	***	***
Nortel	***	***	***	***	***
Cisco	***	**	**	***	***
NEC	***	***	***	***	***
Mitel	**	***	***	**	*
Toshiba	***	***	*		
Inter-Tel	***	***	**	*	

***** Strong ** Moderate * Limited**

System Size Market Coverage/Presence

	<40	40-99	100-399	400-999	1000+
Siemens		*	***	***	***
Vertical	***	***	*		
3Com	***	***	**	*	*
Panasonic	***	*			
ShoreTel		*	**	*	*
Samsung	***	**	*		
Sphere		*	*	*	*

***** Strong ** Moderate * Limited**

System Size Market Coverage/Presence

	<40	40-99	100-399	400-999	1000+
Alcatel	*	*	*	*	*
Ericsson			*	*	**
Tadiran	*	*	*	*	*
Aastra			*	*	**
Teltronics	*	*	*	*	*
Altigen	*	*	*		
Vonexus	*	*	*		

***** Strong ** Moderate * Limited**

Rating The Leading Enterprise System Competitors

	Voice/Msg Systems	IT Infra-Structure	Contact Center	Unified Comm.	Support Services
Avaya	Very Strong *	OEM	Very Strong *	Strong	Very Strong *
Cisco	Strong	Very Strong *	Strong	Strong	Strong
Nortel	Very Strong	Very Strong	Very Strong	Very Strong	Mod. Strong
NEC	Very Strong	Strong	Mod. Strong	Mod. Strong	Strong
Siemens	Strong	OEM	Very Strong	Very Strong *	Very Strong
Mitel Networks	Strong	OEM	Strong	Very Strong	Mod. Strong






*** Market Leader**

Rating The Leading Enterprise System Competitors






	Voice/Msg Systems	IT Infra-Structure	Contact Center	Unified Comm.	Support Services
Inter-Tel	Strong	OEM	Mod. Strong	Strong	Strong
3Com	Strong	Very Strong	OEM	Mod. Strong	Moderate
Ericsson	Strong	OEM	Strong	Strong	Moderate
Alcatel/ Genesys	Strong	Strong	Very Strong	Very Strong	Mod. Strong
ShoreTel	Mod. Strong	OEM	Mod. Strong	OEM	Moderate

* Market Leader

Leading Enterprise System Competitor: Outlook and Comments

	Outlook	Comments
Avaya		Recent mgt/organization restructure; strongest portfolio/services; highly focused (and too-high priced)
Cisco		Major strides in past few years; leverages datacom dominance; deep pockets and energetic management
Nortel		Executive mgt overhaul; may or may not benefit from Microsoft alliance; revised SMB emphasis; channel loyalty
NEC		Stronger SME/Weaker MLE presence; More (or at least some) marketing pizzazz needed; applications development need greater attention
Siemens	?	Semi-limbo state until “partner” found; IPT product delays hurt high end sales; stronger market coverage needed
Mitel Networks		Transitioning from private to public company; greater focus on higher end of market, but resource limited

Leading Enterprise System Competitor: Outlook and Comments

	Outlook	Comments
Inter-Tel		Strong focus on managed services; new focus on MLE market; global market expansion needed; current issues with Axxess PBX migration and limited IP phone portfolio
3Com		Needs executive mgt stability; maintains strong SME position, but higher end success appears elusive
Ericsson		Fading market position; corporate focus on enterprise market needs major boost; sales channels need help
Alcatel/ Genesys		Lucent merger will take time to show better US market results; Genesys doing fine, but better marketing/channel support services needed to boost IPT system sales
ShoreTel		Successfully emerged from pack of 1990s start-ups; needs more emphasis on apps & services to maintain momentum; looking at IPO when conditions are right

Another Perspective: Society Of Telecommunications Consultants (STC) 2006 Perception Survey

System Supplier (# Survey Citations)	IP Telephony System	Applications Portfolio	Support Services	Working Relationship	Consultant Program	TOTAL
Avaya (42)	4.40	4.45	3.85	3.59	3.93	20.22
Cisco (42)	3.95	3.86	3.73	3.80	4.19	19.53
Nortel (42)	4.00	3.86	3.74	3.79	4.00	19.39
NEC (40)	3.78	3.55	3.65	3.98	4.10	19.06
Siemens (42)	3.81	3.93	3.34	3.79	4.14	19.01
Mitel (40)	3.87	3.63	3.53	3.63	3.91	18.57
ShoreTel (33)	3.73	3.33	3.06	2.91	2.76	15.79
Alcatel (34)	3.32	3.09	2.76	2.76	3.00	14.93
Inter-Tel (33)	3.12	2.82	2.76	2.82	2.09	13.61
3Com (33)	2.94	2.73	2.61	2.61	1.97	12.86
Ericsson (32)	2.41	2.38	2.28	2.31	1.94	11.32

1 = Negative 2 = Slightly Negative 3 = Neutral 4 = Slightly Positive 5 = Positive
 Survey created, conducted and tabulated by TEQConsult Group, November 2006

Microsoft: The Next Cisco Systems?

- Microsoft has been on the periphery of the enterprise communications market for many years, but now appears ready to make a big move
 - Upgraded unified communications solutions integrate VoIP and telephony with existing Microsoft Exchange Server and Microsoft Office Live Communications Server architecture
 - Offers a seamless communication experience for end users with single login access
- Microsoft/Nortel Integrated Communications Alliance and numerous business partner agreements with most of the other leading IPT system suppliers around LCS/Office Communicator
- Live Communications Server/Office Communicator poses a non-immediate threat to replace voice-centric IPT systems

Hosted/Managed IPT Systems: The Demise of Traditional CPE Systems?

- First generation hosted IPT systems were based on softswitch solutions using third party components (software, server, media gateways, telephone instruments)
 - Spearheaded by independent service providers
 - Primarily targeted at SME customers as a CPE alternative
- Traditional CPE suppliers have also entered the market with hosted/managed offerings of their IPT system solutions
 - Hosted: Mitel 3600 Hosted KTS; Avaya on Demand solutions; Siemens HiPath 8000, Cisco Unified Call Manager
 - Managed: NEC Univerge MPS MIPT; Alcatel OmniPCX Office

Closing Comments

- The IP telephony market is entering its mature phase with an increased emphasis on applications
- Market demand for IPT systems will remain moderately strong with:
 - Customers replacing KTS/Hybrids with more fully featured PBX solutions
 - Alternative network solutions posing a threat to continued growth
- New competitors are certain to enter market from peripheral product/service markets that are quickly converging with traditional enterprise voice systems
- Wireless technology will replace desktop wired, and virtual communications systems will blur distinctions between premises/network and business/consumer markets