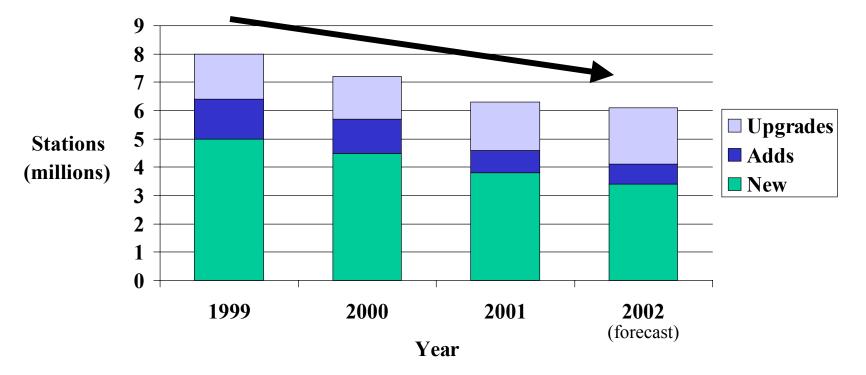
PBX Market Update: Confusion, Uncertainty and Opportunity

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2001 PBX Market Highlights

- Total PBX market demand declined for second consecutive year
- IP-PBX shipments grew as expected
- Industry downsizing (suppliers, employees)
- More indirect sales/service channels, and declining direct sales/service support
- Customer confusion regarding current PBX market and IP Telephony continues

PBX Market Shipments (USA, only)



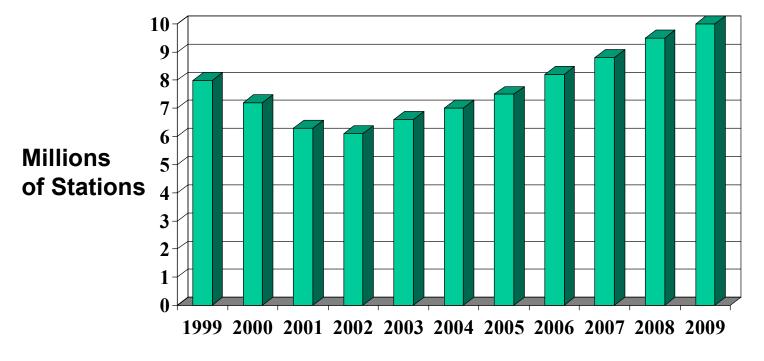
Upgrades: station additions to an upgraded installed system Adds: station additions to an installed system (no platform upgrade) New: station shipments with a newly installed system

TEQConsult Group 2002SOURCE: TEQConsult Group

Why the Decline?

- Recession economy
 - Budget cutbacks
 - Employee downsizing
 - Uncertain political climate (9/11 aftermath)
- Installed base upgrade & enhancement migration
 - Smooth port/feature/function migration path
 - Cost effective alternative to new system
- IP-PBX system paradigm

PBX Shipment Forecast (USA, only)



Source: TEQConsult Group

IP-PBX Systems are Here Today!

- IP-PBX offerings from leading traditional system suppliers finally available
 - New client/Server design
 - IP-enabled converged design
- Continuing feature/function enhancements from "new" suppliers
- Improved pricing, increased reliability, clearer understanding of benefits

Why Buy an IP-PBX Today?

- Upfront capital cost savings
 - Green Field location (unified cabling system)
 - Consolidation of multiple systems across network into one system
- Teleworker/very small office requirements
- Reduced maintenance/service expenses
- Reduced network expenses (VoIP)
- New desktop applications (web browser phone)

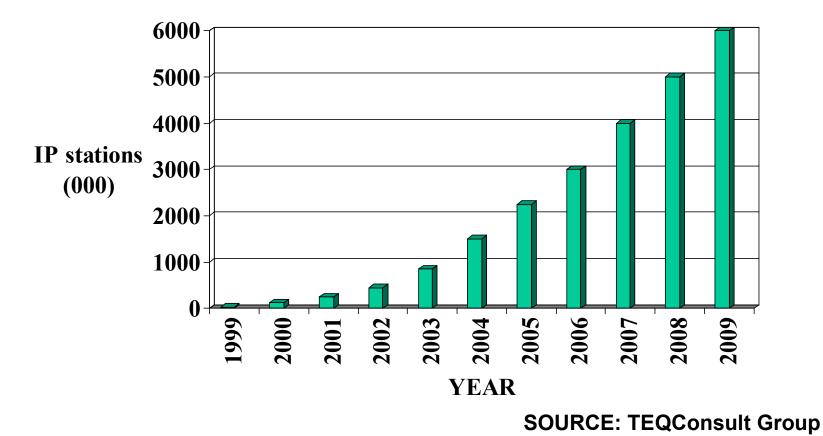
Why IP Telephony may NOT Dominate Anytime Soon

Costs

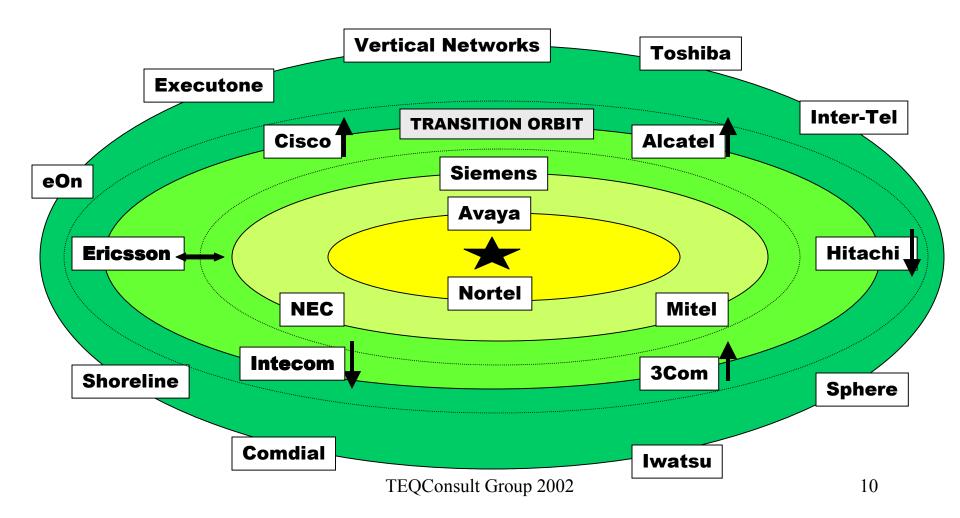
- LAN/WAN upgrades
- IP telephone prices
- Standards concerns (H.323 vs SIP, voice codecs,)
- Reliability and QoS
- Product upgrade issues
- Life cycle

PBX IP STATION SHIPMENT FORECAST

(SYSTEMS > 40 STATIONS)



PBX Solar System (USA)



USA PBX Market Leaders: Portfolio Offerings

	Voice Communications	Data Communications	Contact Center	Messaging
	Systems	Systems		
Avaya	Very Strong	Moderate	Very Strong	Very Strong
Nortel Networks	Very Strong	Strong	Strong	Strong
Siemens	Strong	Limited	Strong	Strong
NEC	Very Strong	Moderate	Moderate	Moderate
Mitel Networks	Moderate	Limited	Moderate	Strong

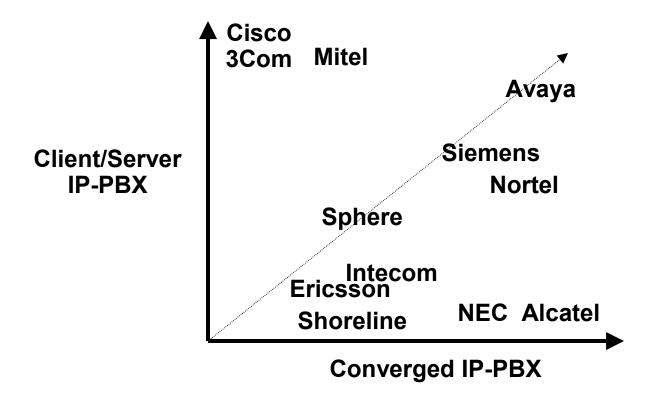
USA PBX Suppliers: Portfolio Offerings

	Voice Communications	Data Communications	Contact Center	Messaging
	Systems	Systems		
Alcatel	Moderate	Moderate	Strong	Moderate
Ericsson	Moderate	Limited	Strong	Strong
Cisco Systems	Limited	Very Strong	Moderate	Strong
3Com	Limited	Strong	Limited	Limited

Global PBX Market Leaders: IP-PBX Capabilities

PBX Supplier	Converged	Client/Server	LAN/WAN
	IP-PBX	IP-PBX	Solutions
Siemens	Yes	Yes	3rd Party
Nortel Networks	Yes	Yes	Yes
Avaya	Yes	Yes	Yes
Alcatel	Yes	Νο	Yes
NEC	Yes	Νο	Yes
Ericsson	Yes	Yes	3rd Party
Mitel Networks	Νο	Yes	3rd Party

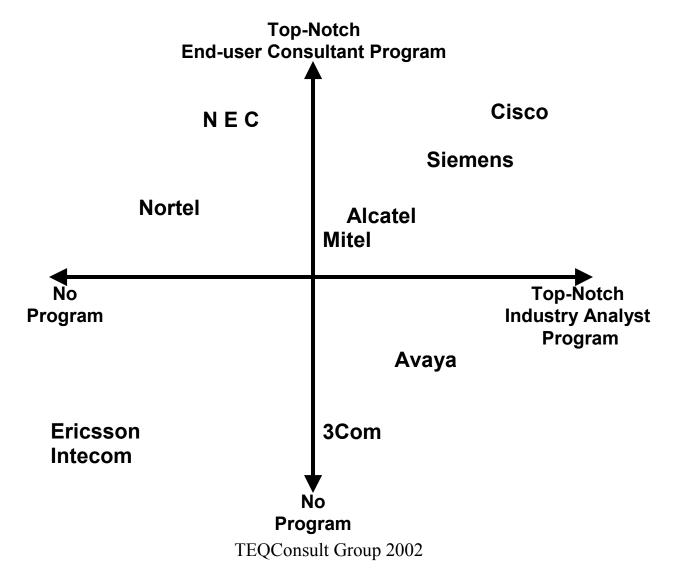
IP-PBX Product Positioning



General Comments re Major PBX Suppliers

- Traditional PBX suppliers have suffered from marketing myopia disease
 - Vast marketing resources devoted to IP telephony to the harm of everything else
 - Ignoring value of traditional features and functions
 - Poor product announcement materials
- Disastrous decline in resources to support sales gatekeepers: press, analysts, consultants

PBX Supplier CALPs in Turmoil



- Avaya
 - Big communications system revenues tumble in F2001
 - Strongest voice solutions portfolio of any supplier
 - Increased focus on CRM & Unified Communications, to detriment of PBX systems solutions
 - Downsized direct sales & support structure, e.g., , CLP
- Nortel Networks
 - Refocusing on enterprise communications after other business groups collapsed
 - Succession platform appears behind schedule, and Meridian 1 architecture is aging at an exponential rate
 - Must gain back lost customer confidence to move forward

• Siemens

- Very strong and solid corporate infrastructure
- Announced new HiPath systems to strengthen previously weak IP-PBX offerings
- Needs greater North American market focus to improve market perception, and gain market share
- NEC
 - Slow IP-PBX system pace picking up rapidly
 - Strengthened market position in both messaging and LAN/WAN
 - Late 1990's strides in marketing support programs slipping of late

- Mitel Networks
 - Good move: Back under ownership of original founder
 - Innovative product line, but historic weaknesses in large/very large market spaces continue
 - Plans for an IPO imply continued investment to remain competitive, but must improve penetration rate into competitive bases, and increase contact center sales

Ericsson

- Low visibility in local market, and very slow migration towards IP-PBX system platform
- 100% indirect sales strategy a risky venture in large systems market
- Need more people, more money, and more products to keep competitive in USA market (or else!)

- Alcatel
 - Appears to be making in-roads after a slow market start; distribution channels and support structure in-place
 - Corporate focus on carrier networks may limit enterprise system potential
 - Competitive PBX offerings may not be enough: more marketing/promotion \$'s needed to raise USA profile

Cisco Systems

- Continued improvements in IP telephony systems offering, but major feature/function gaps remain
- Has strongly leveraged LAN/WAN position to sell voice systems to data managers, but finding competitive wins more difficult versus established suppliers
- Finally realizing that voice is not just another LAN server application, and 99.999% reliability is not a myth

- Intecom
 - Stuck in large systems market niche; poor migration path for large installed base of aging systems
 - IP-PBX system innovator ironically not well positioned in emerging market space
- 3Com
 - Primarily selling into Hybrid/PBX market space: port capacity and feature limitations restrict market reach
 - Can be successful in SME market, but LME too risky
- Shoreline, Sphere, Vertical Networks
 - One-time unique market niche offerings no longer unique (increased competition from old-line suppliers with recent IP-PBX)
 - Have distanced themselves from other contemporaries, but future success is not guaranteed

PBX Market Tomorrow

- PBX sales will soon get back on track, but not until later this year, and growth rates will be moderate
- Continued strong growth of IP telephony, but circuit switched converged platforms will dominate for the foreseeable future
- Unique IP telephony features and applications, beyond web browser phone, are needed to drive IP-PBX system sales
- More suppliers will leave market (not voluntarily)
- Customers will continue to value system reliability& survivability, and maintenance & service support over technology innovations