



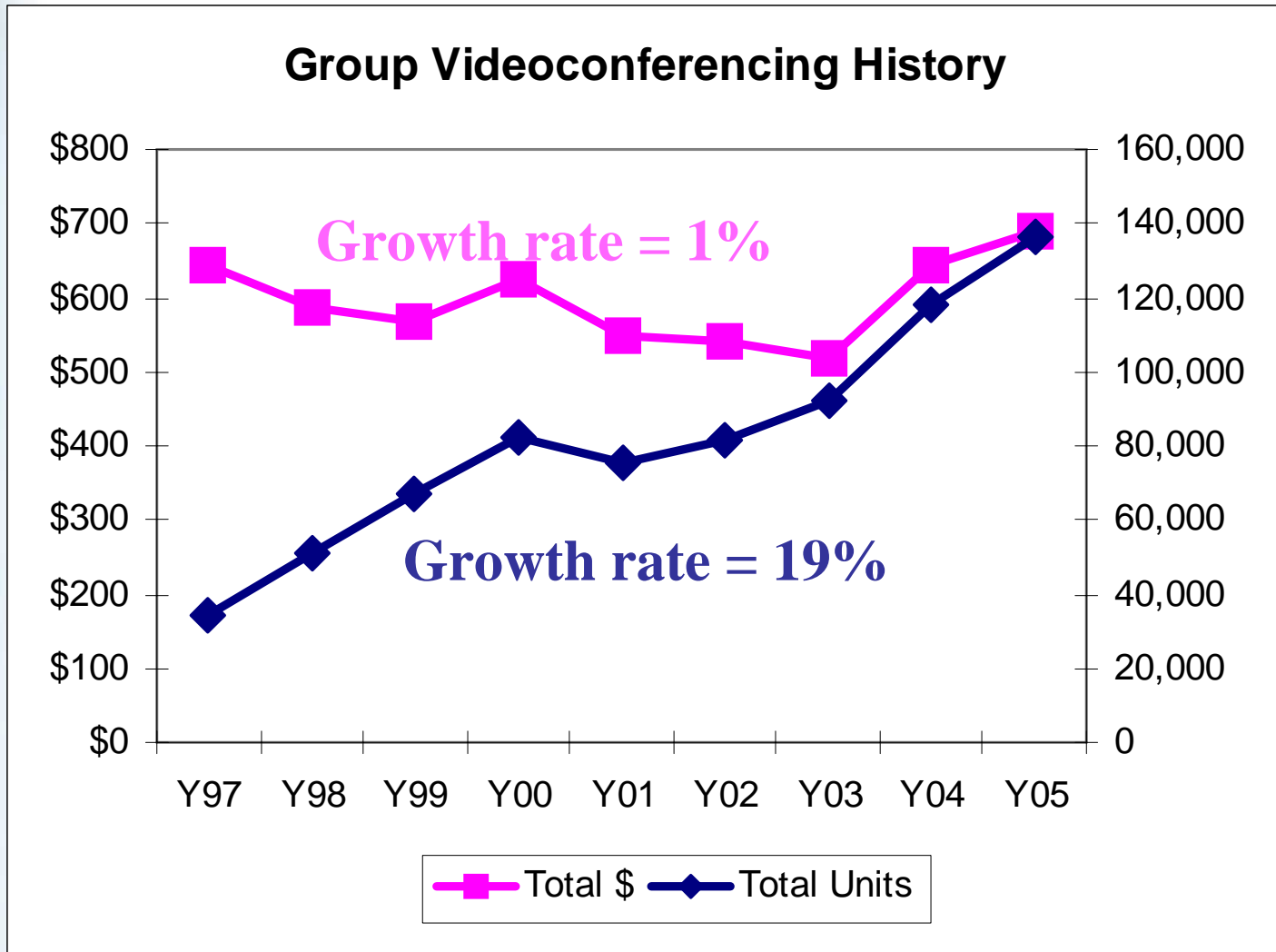
Is Video ready for Mass Deployment?

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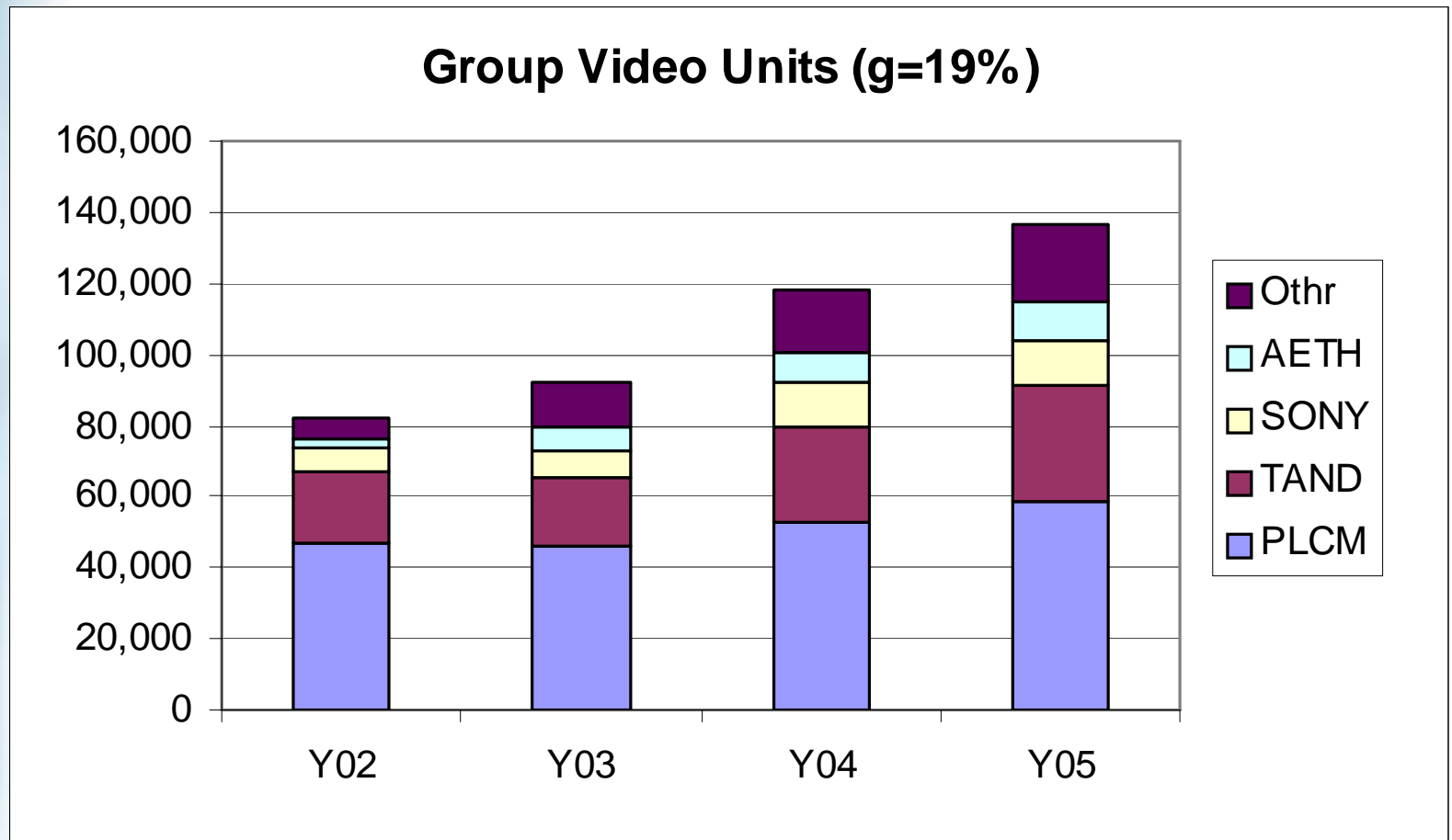
Today's Topics

- Market Statistics
- Drivers and Dynamics
- Points to Ponder
- Questions for discussion

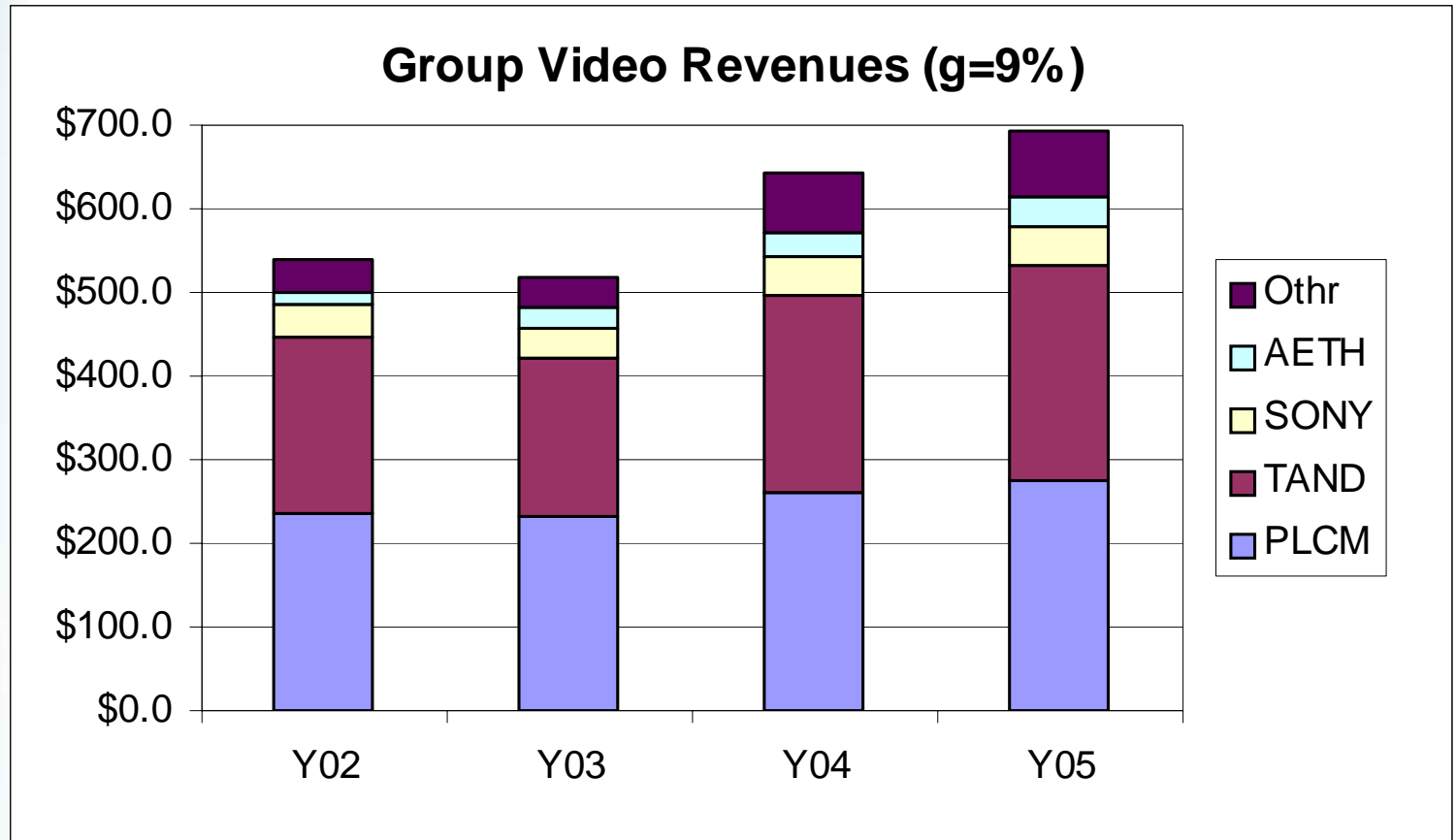
Group Videoconferencing



Group Videoconferencing



Group Video Conferencing



Major Verticals

- Government
- EDU
- Enterprise
 - Pharma
 - High tech with global deployments

Normal Business Drivers

Business pressure drives efficiency concerns for individual workers and teams

- Dispersed teams
- Global partners
- Cost cutting
- Outsourcing
- Human efficiency and quality of life: employee retention
- Huge inefficiencies in business travel
- Cisco and Microsoft educating the market

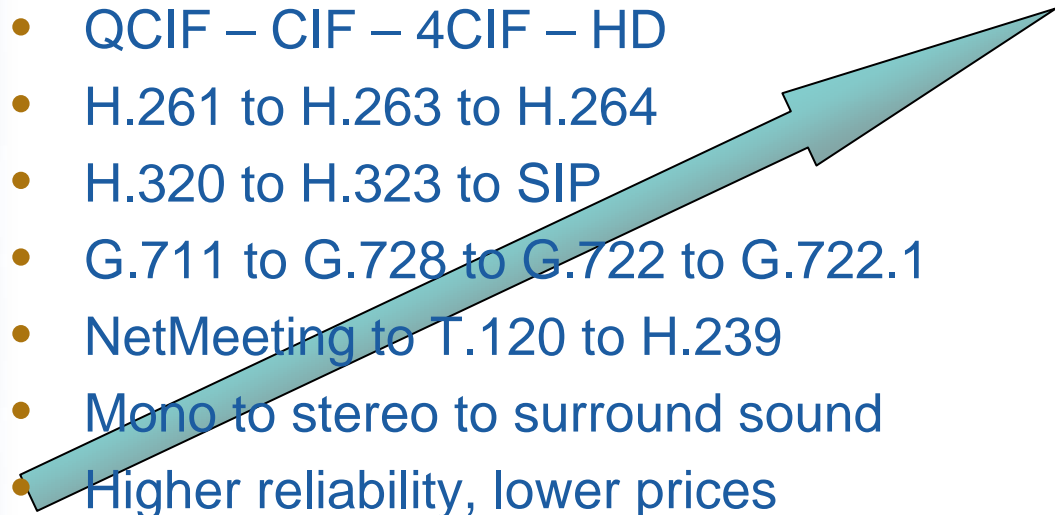
Abnormal Business Drivers:

- Terrorism
 - Longer security delays in traveling
 - More inconvenience (no liquids)
- Energy Crisis
 - Travel more expensive
 - Possible rationing
- Global warming
 - Renewed emphasis on being “green”
- Health Emergency
 - SARS, bird flu,

Can you keep your business running if people are forced to stay home or are afraid to travel or cannot afford to commute?

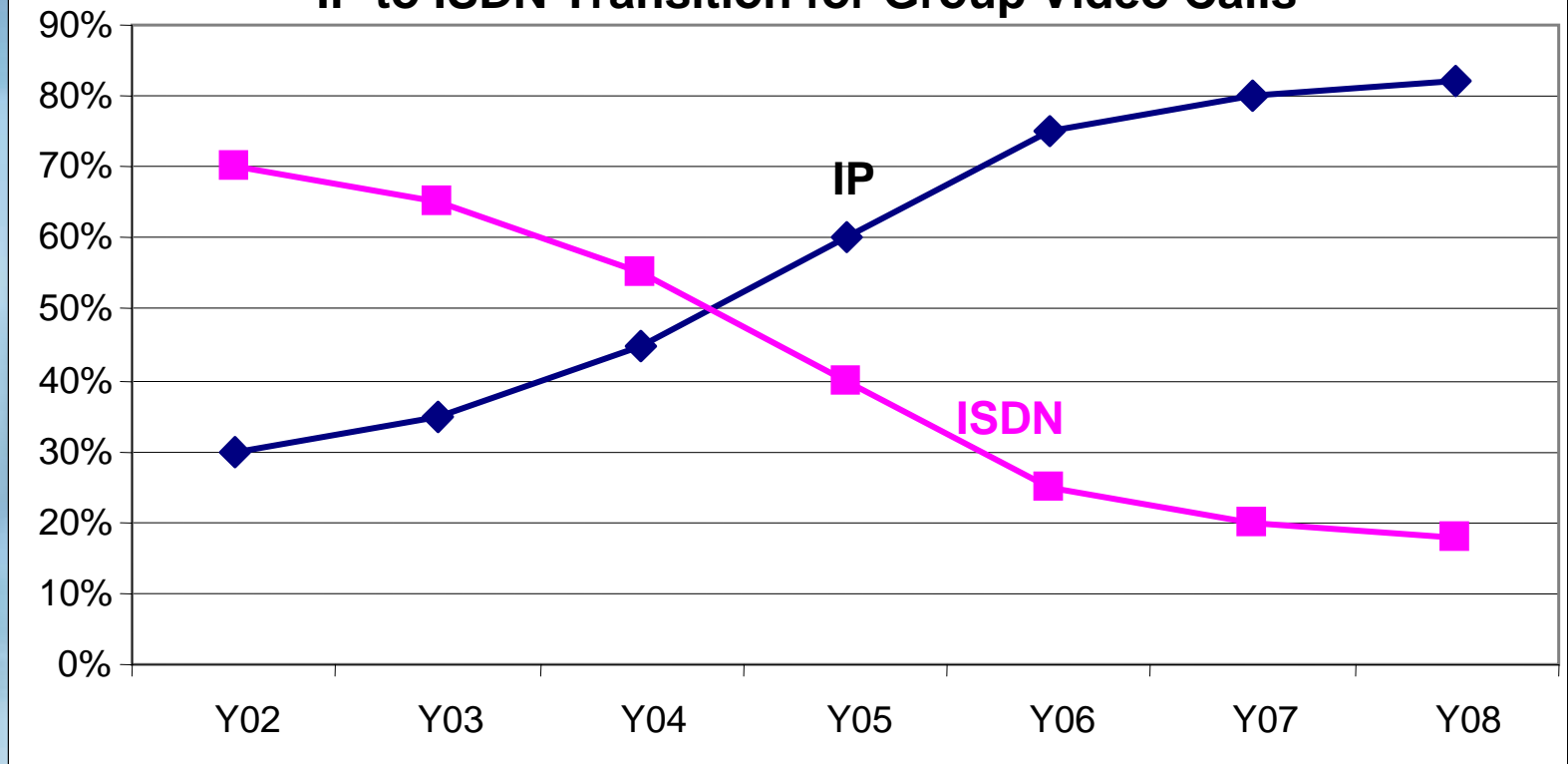
Truth: technology history is evolutionary

Every year.... more VC performance, more features, more functions, and lower prices...

- QCIF – CIF – 4CIF – HD
 - H.261 to H.263 to H.264
 - H.320 to H.323 to SIP
 - G.711 to G.728 to G.722 to G.722.1
 - NetMeeting to T.120 to H.239
 - Mono to stereo to surround sound
 - Higher reliability, lower prices
- 

**Continuous
Improvement,
but this is old
news**

IP to ISDN Transition for Group Video Calls



HD: an important evolution

- Resolution
 - 1280 x 720p – available today in VC (9x CIF)
 - 1920 x 1080i/p
- Frame rate
 - Minimum of 24 fps
- 16:9 Aspect ratio



HD will accelerate growth

- Provides for the first time audio and video quality that people have long wanted in their videoconferencing systems
 - End users will not want to go back
 - Will populate VC product lines up and down
- Consistent with or better than consumer TV
- HD represents the greatest convergence of price, performance, and plumbing (IP) we have seen in 10-20 years

Room
Videoconferencing ↔ Evolutionary

Desktop
Videoconferencing ↔ Revolutionary

The Desktop is Mutating

- Video is evolving from a stand-alone application to a software-based feature
 - Dedicated videoconferencing apps (Tandberg, Polycom)
 - Video-enabled IP-PBX handsets (Cisco, Avaya, Nortel)
 - Video-enhanced web conferencing (WebEx, InterWise, Adobe)
 - Video-based IM chat (AOL, Yahoo, MSN, Skype)
 - Presence-based collaboration portals (RVSN)
- Culture of anywhere, anytime connectivity is driving the future
- Presence-enhanced desktop applications

Desktop Convergence

- All information workers have two tools in common
 - The telephone
 - The computer
- These tools are converging
- In 3 years, which one will be preferred?



3G Video

- One way delivery of content
 - Movies, news, entertainment, TV, adult content
- One way delivery of user content
 - See what I see
- Two-way interactive videoconf ?
- Fixed-Mobile Convergence
 - Interface to conferencing
 - Will mobile phone replace office handset?



Points to Ponder

- Will HD drive interest and market growth?
- Impact of HD on network strategies?
- Impact of Cisco, HP pushing video solutions?
- What is mass deployment anyway?
 - Room systems vs. desktop penetration

Unified Communications (Weapons of Mass Communications)

- Large scale enterprise adoption likely over next 3-5 years with Presence a key factor
 - Integration will reduce behavior changes needed
 - All companies will need UC to compete
- Integration with enterprise workflow & team portals will change the way applications are sold & serviced
- Short term focus will be on voice integration
- Most applications have not yet been invented

Industry Challenges

- Industry must help customers evaluate collaboration applications as part of larger business process
 - Better, faster decisions, improved efficiency
 - Big payoff is in speeding transactions, not just travel reduction
- Video must be positioned as PART of the big picture, integrated with voice and web
 - Cost and accessibility give audio an advantage
 - Are video and mobility mutually exclusive?
- New solutions must be easier to use than to NOT use
- New services will be needed to support integrated solutions
 - Challenge to existing VC industry channel partners
- 3G is on the horizon, but impact unclear

Remember

The four elements needed for videoconferencing adoption have not changed

- Voice quality competitive with telephone
- Video should add to the experience
 - Good resolution, frame rate, image size
- Easy to make the call
- Ubiquitous (Metcalfe's law)



Today's Panel Discussion

- What role will video play in the future of enterprise communications?
 - Is Unified Communications (Cisco-Nortel-Avaya-Mitel, etc) really all about presence-enabled VoIP?
 - Are customers really demanding video?
 - Is video incompatible with the trend towards mobility?
- Does enterprise use of video today differ from past?
 - Has IP networking changed anything?
 - If most calls are internal, will SMB really need video
- Will room and desktop video converge or diverge?
- What can the industry do to spur market growth?