



SIPconnect and Cable Networks

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...Revolutionizing Cable Technology®

Overview of Presentation

- Who is CableLabs?
- What drives Cable Business Services?
- Importance of SIPconnect

Who is CableLabs?

- Non-profit R&D consortium
- Members are exclusively cable system operators
 - » CEO Governance
 - » CTO Technical Leadership
- Our 50 member companies represent 82.5 million cable subscribers in North and South America, Europe and Asia



Our Mission

- Provide central forum for technical strategy
- Develop new technologies for cable companies
- Give guidance to equipment manufacturers through standards-based specifications
- Transfer innovation into operating companies
- Expand services available to cable customers

Large Member Companies

- Advance/Newhouse
- Cablevision
- Charter
- Comcast
- Cox
- Insight
- J:COM (Japan)
- Mediacom
- Rogers Cable (Canada)
- Shaw Cable (Canada)
- Time Warner Cable
- UPC Broadband (Europe)
- Videotron (Canada)

Smaller Market Members

- Armstrong Utilities
- BendBroadband
- Bresnan Communications
- Buckeye Cablevision
- Buford Media
- Cable America
- Cable One
- GCI
- Lake Hughes Cable
- Massillon Cable
- Midcontinent Communications
- Suddenlink
- Sunflower Broadband
- Tele-Media
- WinDBreak Cable

CableLabs Value

“ The whole surge of the modern cable industry relies on IP telephony and DOCSIS modems. By creating standards for those technologies, CableLabs has been an enormous boon to the industry“

- John Malone, Chairman Liberty Media

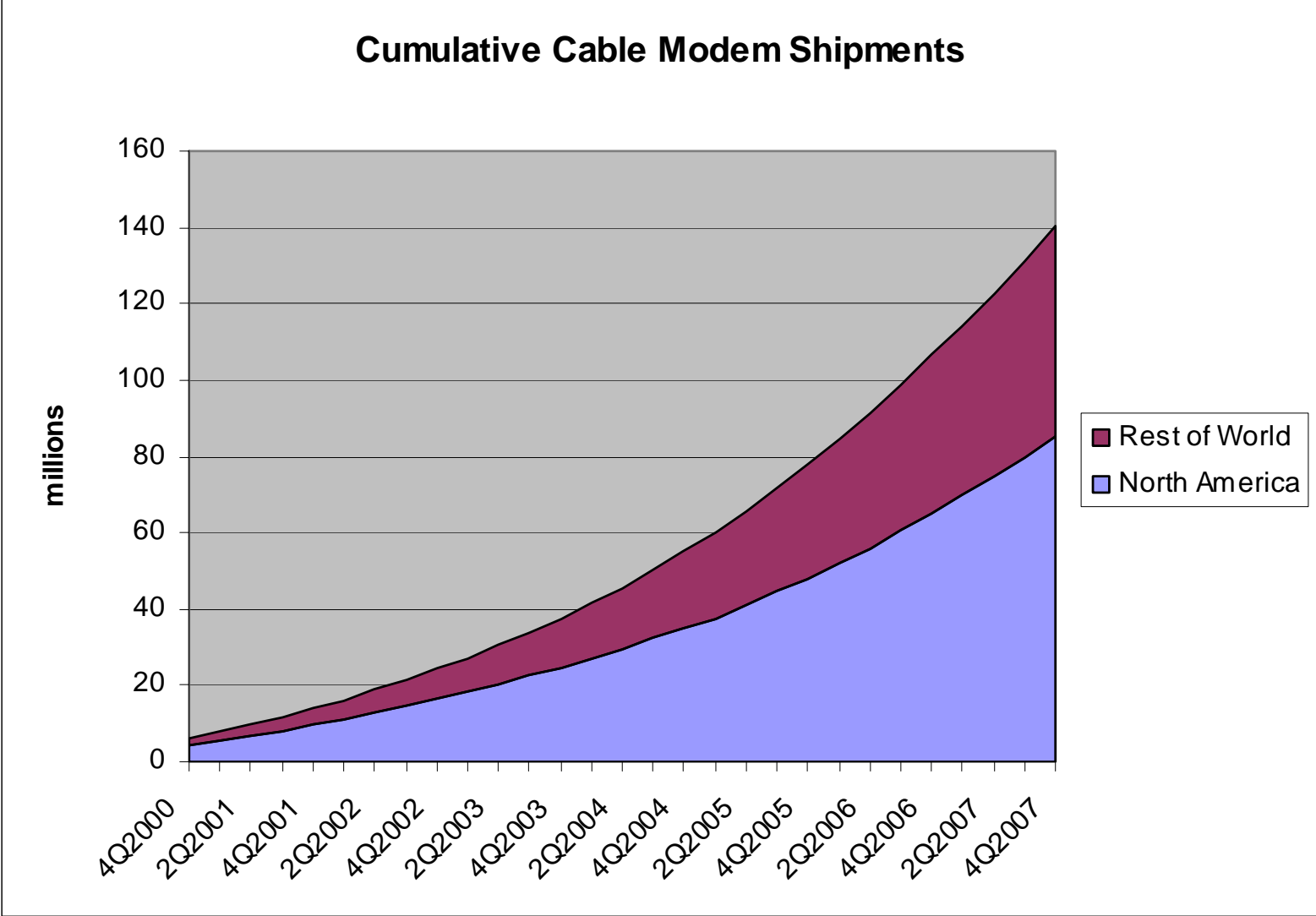
“ With over 16 million digital phone customers already, this innovation alone is estimated to provide \$100 billion in savings to consumers and small businesses over the next five years.”

- Kyle McSlarrow, President, NCTA

“ Telcos, lacking a CableLabs-like organization, probably came to market with TV offerings “a couple years later than we could have.”

- Marilyn O'Connell, CMO Verizon Telecom

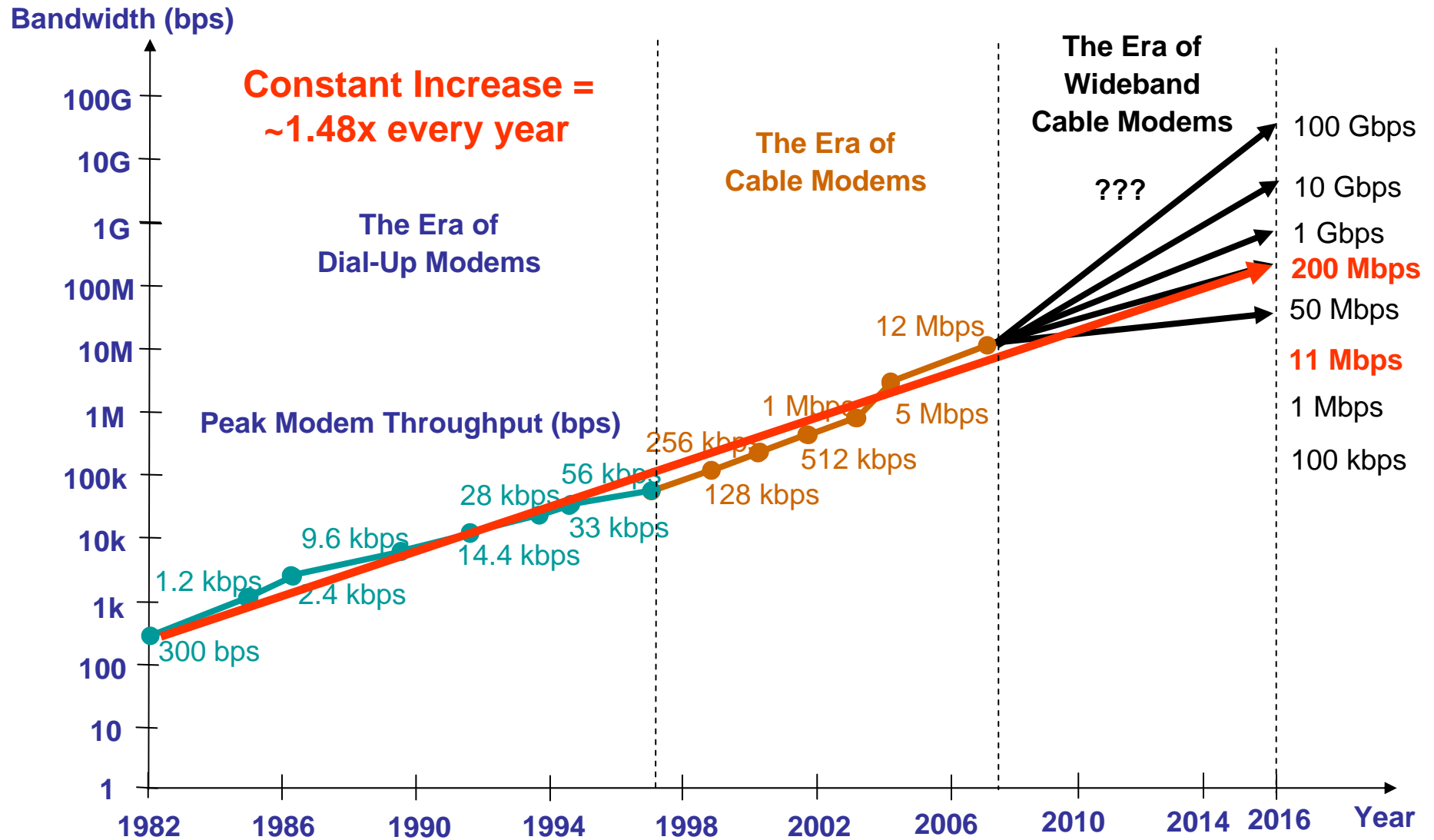
The Cable Modem – Over 100M served!



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From Broadband to Wideband



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Graph courtesy of ARRIS

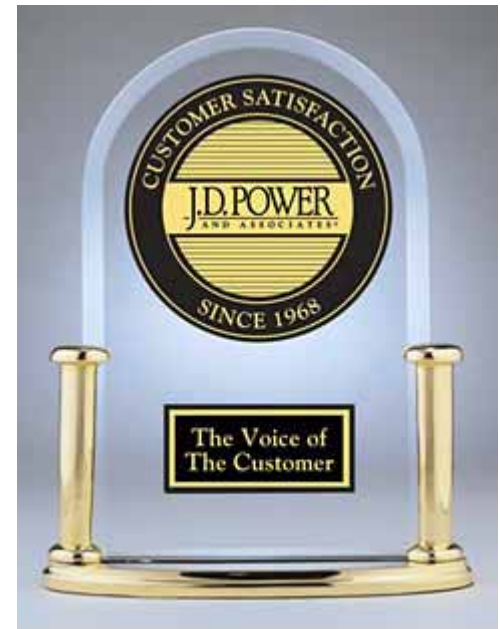
DOCSIS 3.0

- Channel Bonding: using multiple channels to get a larger logical channel
- Bonding 4 upstream and 4 downstream channels provides 160 Mbps downstream, 120 Mbps upstream
- Enables high-speed symmetric services needed by businesses, and small office



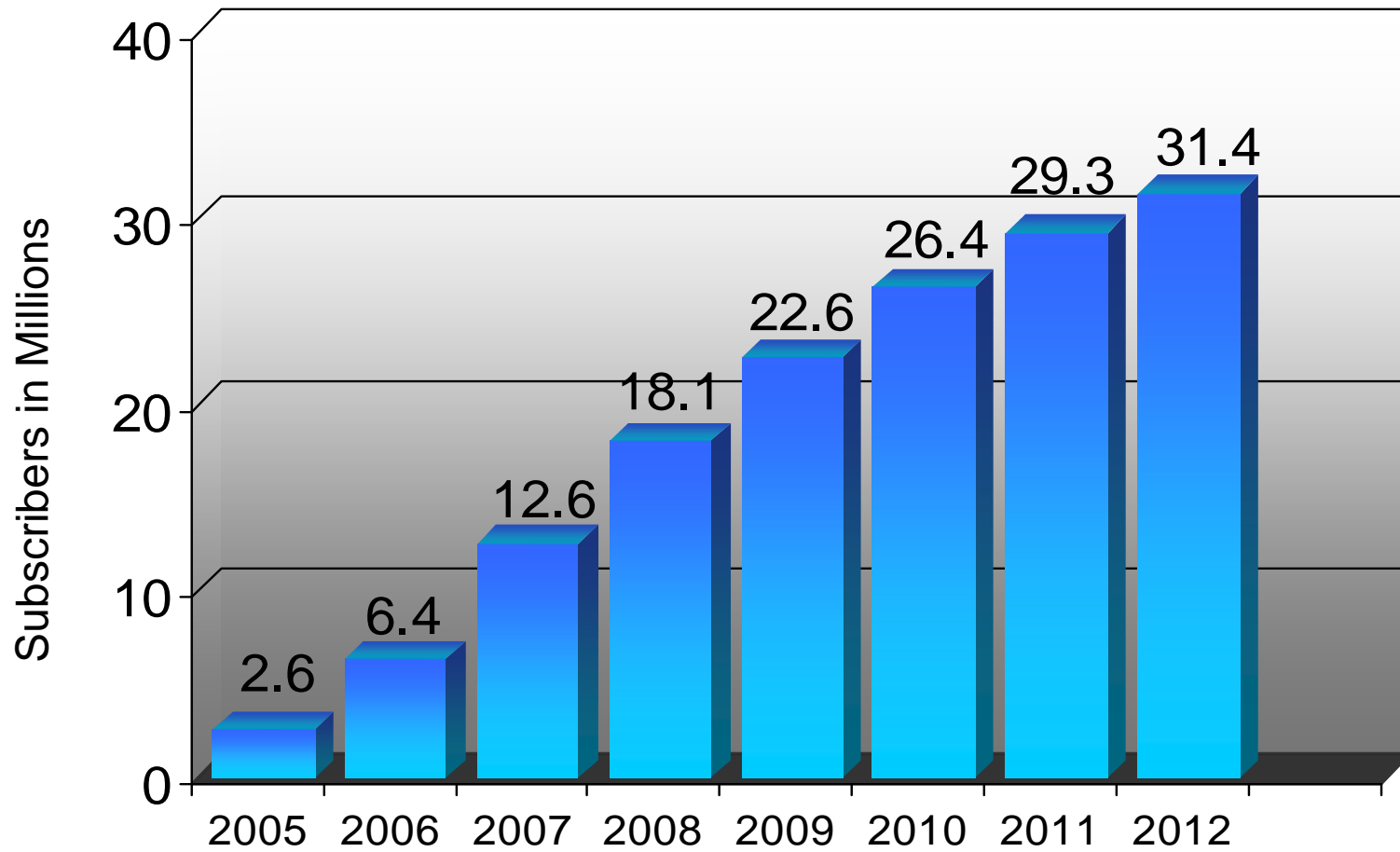
Cable Digital Voice

- Most North American cable operators offer digital voice service based on the PacketCable architecture
 - » Over 16M cable voice subscribers
 - » Subscriber additions and penetration rates continue to exceed expectations
- Customers like the service
 - » Features, Quality, Reliability
 - » ‘Triple Play’ service bundle



COURTESY: J.D. POWER

Digital Voice - More Growth Ahead



Source: SNL Kagan

**The Signs are Good
For Cable SMB Initiatives**

**Cable Companies Connect
With Small and Midsize
Businesses**

*Metro Ethernet opening enterprise doors for
cable operators*

**Cable TV Operators Targeting
Small Business**

Phone Customers Means Phone
Companies Lose \$4 Billion Over Five
Years, Says Insight Research Corp.

**Charter, Time Warner
To Collaborate To
Support Business
Services**

Cable is Bullish on Business

- Business Services market is huge
 - » \$113 Billion annual revenue^a
 - » Small-Medium Business (SMB) market is \$24B
- Industry Analysts:
 - » Cable will generate \$8.5 billion in commercial revenue by 2011^b
 - Up from \$1.5B in 2006, \$2.2B in 2007
 - Primarily in SMB segment, Voice Services
 - » RBOCs will lose 10 million SMB lines, \$5B in revenue by 2012^c
 - » “The heart of the (Cable’s Business Services) opportunity – the T1 Market, where a 1.544Mb/s connection delivers only half the downstream speed of a cable modem connection but sells for 8-10x the residential monthly price is perhaps the single most profitable market in all of telecommunications.”

Craig Moffett, Sanford Bernstein Research, May 1, 2006

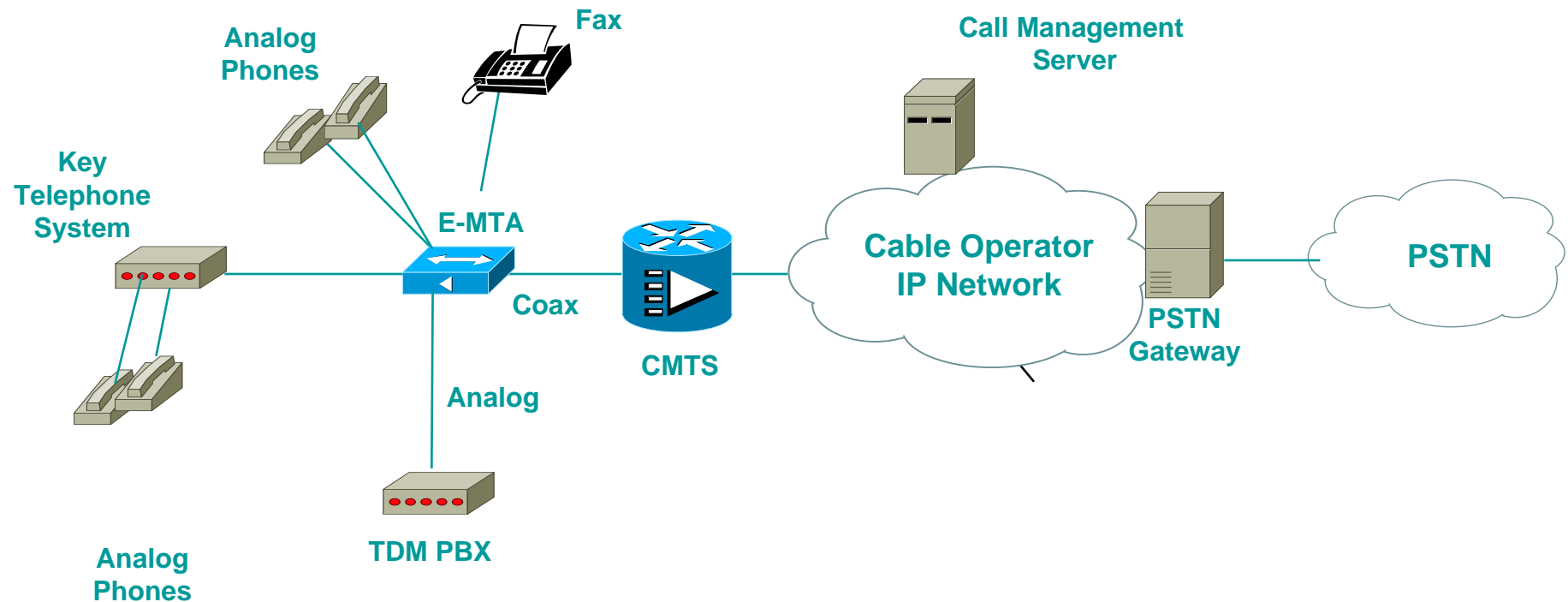
^aBuckingham Research, ^bKagan Research, ^cKagan Research

The Small Business Opportunity

- Cable plant passes millions of small business
- Customer needs are very similar to residential
 - » Triple-play bundle: voice/data/video
 - » Value: Basic features, good price
 - » Voice: Local calling with unlimited LD
 - » Data: High speed internet, email, best-effort services
- The 'Local' advantage
 - » "Halo effect" carry-over from cable residential
- Small businesses have been under-serviced
 - » Traditionally overlooked by RBOCs who focus more on higher revenue, medium and large enterprises
 - » CLECs and ITSPs have been successful in this market, capturing over 20% of business lines

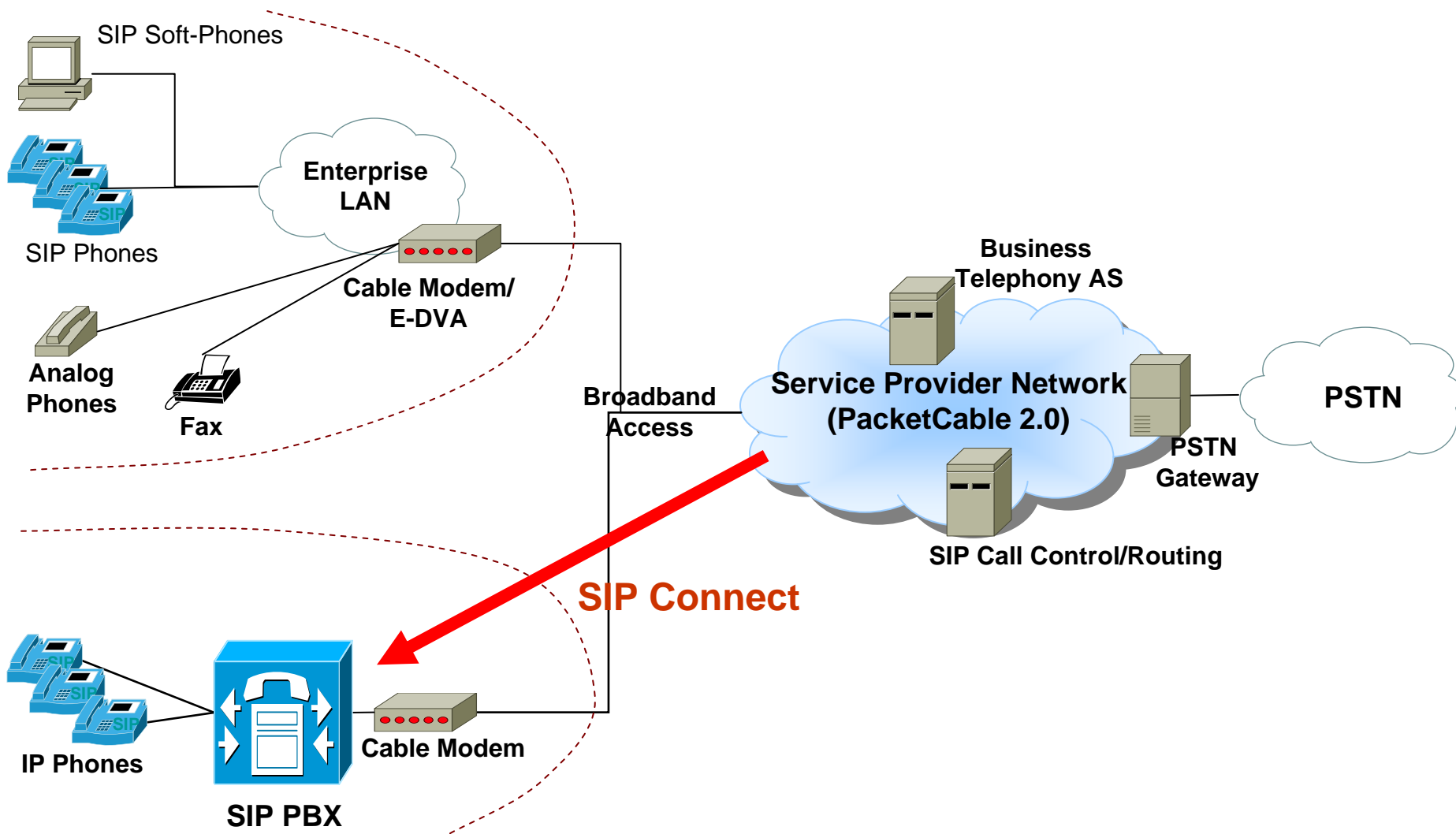
Current Architecture for SMB Voice

PacketCable 1.5



- New CPE for Businesses: E-MTAs with 2, 4, 8, 12, 24 lines
- Provides customer with Voice and High-speed data service
- Business features include hunting, call forward

PacketCable 2.0 and SIPconnect



Cable Supports SIPconnect

- Opportunity to fundamentally change the cost and service delivery structure for business voice
- Key Service Providers and PBX vendors involved
- Value of a single approach
- Strengthen technical specification and help accelerate vendor interoperability and deployment

