Cole, Raywid & Braverman, L.L.P.

ATTORNEYS AT LAW
1919 PENNSYLVANIA AVENUE, N.W., SUITE 200
WASHINGTON, D.C. 20006-3458
TELEPHONE (202) 659-9750
FAX (202) 452-0067
WWW.CRBLAW.COM

PAUL GLIST
DIRECT DIAL
202-828-9820
PGLIST@CRBLAW.COM

LOS ANGELES OFFICE
2381 ROSECRANS AVENUE, SUITE 110
EL SEGUNDO, CALIFORNIA 90245-4290
TELEPHONE (310) 643-7999
FAX (310) 643-7997

July 28, 2004

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: Ex Parte Presentation, MB 04-227 and CS 97-80

Dear Ms. Dortch:

Pursuant to Section 1.1206 of the Commission's Rules, this is to advise you that on Tuesday, July 27, 2004, Dick Green, President and CEO of CableLabs and Paul Glist of Cole, Raywid & Braverman held separate meetings with Jordan Goldstein, Legal Advisor to Commissioner Michael J. Copps; Commissioner Kevin J. Martin and Catherine Crutcher Bohigian, Legal Advisor on media issues; Commissioner Kathleen Q. Abernathy and Stacy Fuller, Mass Media Legal Advisor; Jonathan Cody, Legal Advisor to Chairman Michael K. Powell; and Johanna Shelton, Legal Advisor to Commissioner Jonathan S Adelstein. CableLabs provided a briefing on the attached presentation.

Sincerely,

Paul Glist

Enclosure
cc: Jordan Goldstein
Commissioner Kevin J. Martin
Catherine Crutcher Bohigian
Commissioner Kathleen Q. Abernathy
Stacy Fuller
Jonathan Cody
Johanna Shelton

182225_1.DOC

CableLabs®

Introduction to CableLabs

Richard R. Green, Ph.D.
President and Chief Executive Officer
Cable Television Laboratories, Inc.
858 Coal Creek Circle
Louisville, CO 80027-9750
www.CableLabs.com

© Cable Television Laboratories, Inc. 2004. All Rights Reserved.

CableLabs®

Agenda

- Introduction
- Impact of CableLabs' Projects
  - Widespread Broadband Deployment
  - Lower costs
  - Voice Competition
  - Home Networking
  - Digital Transition
  - PnP Verification
  - New CableCARD DTVs
- A look behind-the-scenes

  (How we do it)

  -Promoting Investment

  -Specifications and Standards

  -Flexible Innovation

  -Development Support

  -Testing

  -Clearing Intellectual Property

  -Homeland Security

© Cable Television Laboratories, Inc. 2004. All Rights Reserved.

CableLabs®

Introduction to CableLabs

- Founded 1988 as non-profit research and development consortium for cable industry.
- 200 resident individuals
  - 150 employees
  - 20 consultants
  - 31 on-site visiting engineers, 8 off-site contributing engineers from 23 Manufacturers
- Dick Green, chief executive officer
  - research scientist
  - Background at PBS, CBS, and ABC; organized and established ATSC
  - Chairman, International Telecommunications Union (ITU) Study Group G9 (worldwide standards for cable)
- Other senior staff at http://www.cablelabs.com/about/seniorstaff.

© Cable Television Laboratories, Inc. 2004. All Rights Reserved.

Impact of CableLabs' Projects

© Cable Television Laboratories, Inc. 2004. All Rights Reserved.

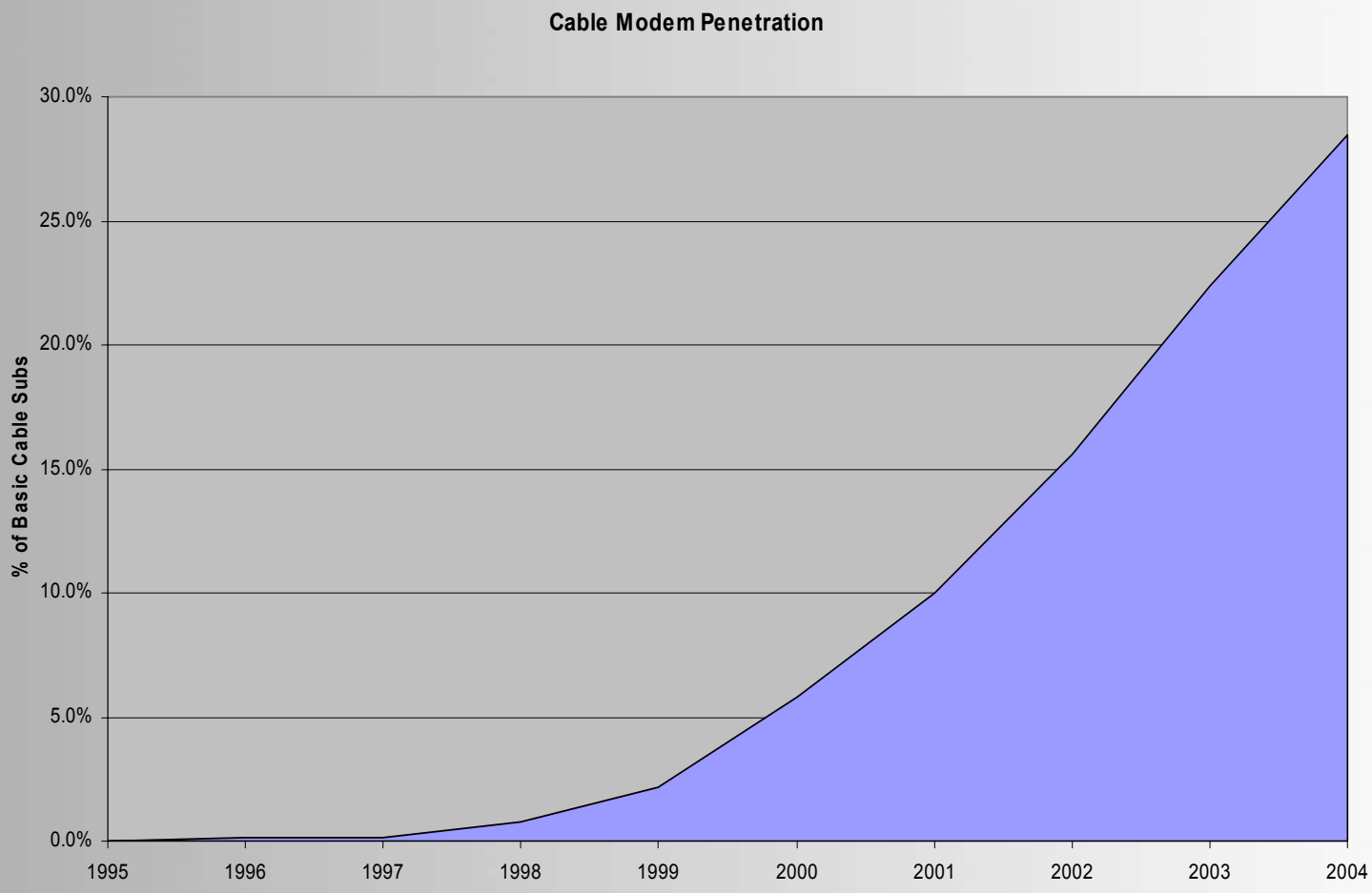
CableLabs®

DOCSIS = Broadband deployment

- Common cable modem specification cut retail price of DOCSIS cable modem from over $500 to under $50.
- Over 370 retail cable modems certified from over 65 vendors.
- Rapid cable modem penetration
- Contrast: telcos spent years arguing over ADSL, DSL, VDSL.

© Cable Television Laboratories, Inc. 2004. All Rights Reserved.

Cable Modem Penetration



© Cable Television Laboratories, Inc. 2004. All Rights Reserved.

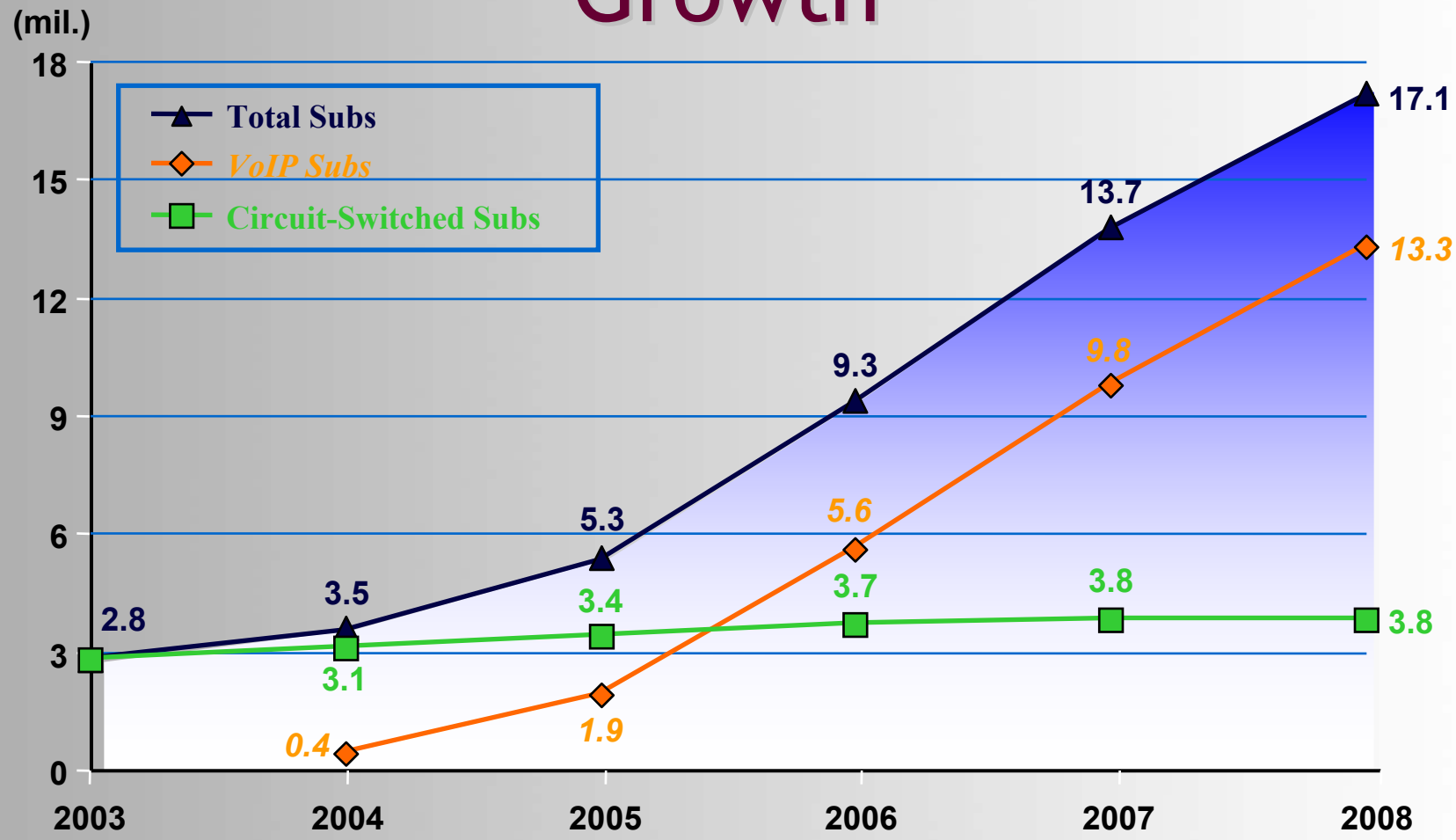
PacketCable = Competition in Voice

- VoIP services launched based on the PacketCable architecture
  - Time Warner Digital Phone
  - Cablevision Optimum Voice
  - Cox Digital Telephony
  - Charter targeting 1M VoIP HHP in 2004
  - Liberty Cablevision (Puerto Rico)
- More trials and plans pending

© Cable Television Laboratories, Inc. 2004. All Rights Reserved.

CableLabs®

Cable Telephony Subscriber Growth



© Cable Television Laboratories, Inc. 2004. All Rights Reserved.

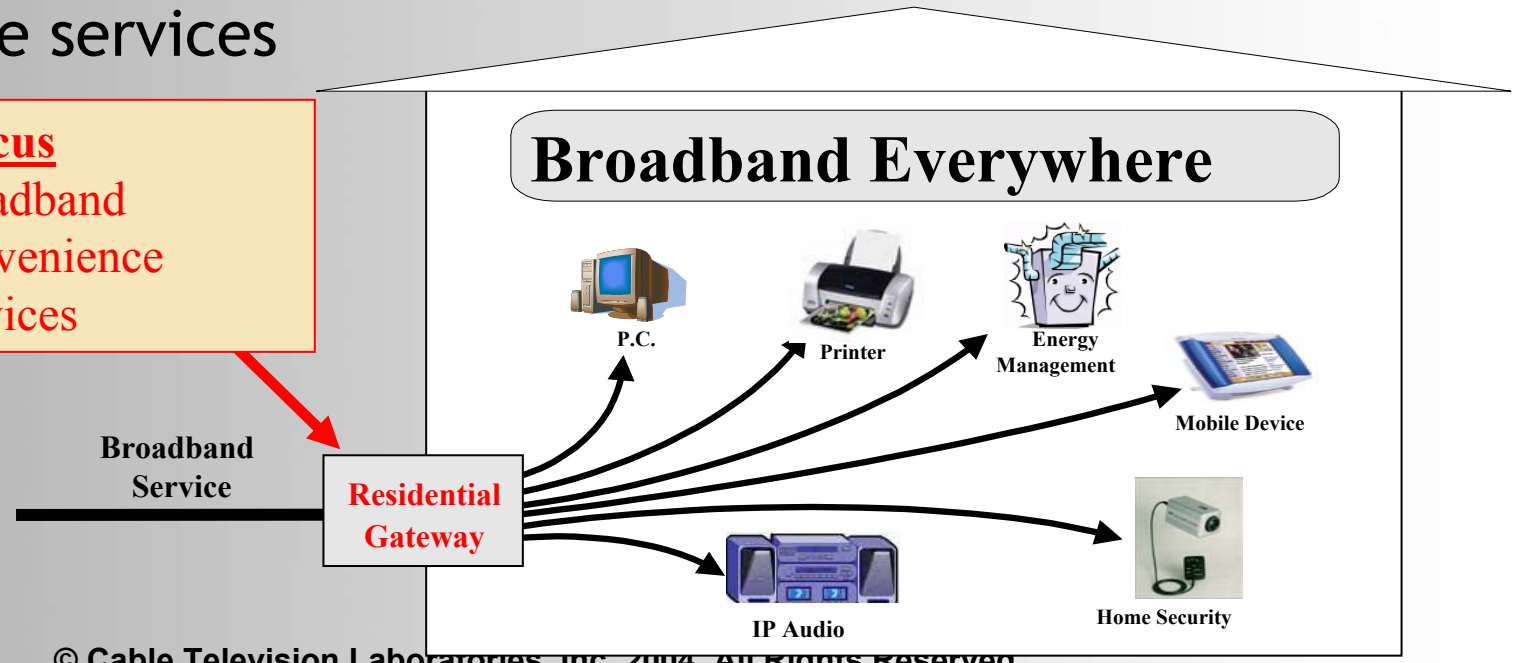
Source: Kagan Research, 2004

CableHome = Broadband Everywhere

CableLabs®

- Focus is on residential gateway device
- Independent of home networking technology
- Enables a trouble-free installation, configuration, and management of the subscriber's home network
- Provides a managed IP platform, enabling many possible services

CableHome Focus
Gateway to broadband
Gateway to convenience
Gateway to services



© Cable Television Laboratories, Inc. 2004. All Rights Reserved.

CableLabs®

OpenCable = Ushering in the digital transition

- Met July 1, 2000 POD deadline.
- Developed specifications for February 22, 2000 CEA/NCTA agreements for “integrated” DTV connected to digital cable systems.
- Leader in support for copy-protected digital connectors (1394/5C and DVI/HDCP)
- Initiated and funded OpenCable well before any FCC requirements
- Created OCAP to enhance portability of STBs, DTVs, and applications such as program guides.
- Industry-wide testing for Digital Program Insertion equipment (e.g., HD splicing and editing)

© Cable Television Laboratories, Inc. 2004. All Rights Reserved.

Plug & Play

- Plug & Play devices are a subset of OpenCable unidirectional defined devices
- Plug & Play devices provide:
  - Integration of STB into TVs to penetrate digital services to more rooms (50% have no STB)
  - Retail presence to capture more consumer attention and interest
  - Portability (customer can move set-top functionality to different cable operator—unlike DBS)
- Go2BB features “DCR” availability

© Cable Television Laboratories, Inc. 2004. All Rights Reserved.

CableLabs®

Plug & Play Verification

- Built Upon a A Proven Process
  - Published agreed-upon test procedures. Detailed reports for passing or failing Verification
  - Appeals process
  - Multiple Verification Waves to meet CE retail schedules
  - Confidentiality
  - Objective Review Panel comprised of non-manufacturers
- With New Twists
  - Self-Verification permitted after first Verified product
  - Allowed changes from tested unit to production unit
  - Recourse to an FCC appeal—***but none filed***
- Above & Beyond the Call of Duty
  - Allowed alternative test suites
  - Opened lab ahead of schedule
  - Free lab time
  - Lab hours extended…sometimes to 2AM!

© Cable Television Laboratories, Inc. 2004. All Rights Reserved.

New CableCARD DTVs

Panasonic (15 models)

Samsung (3 models)

Hitachi (3 models)
LG Electronics (1 model)
Sony (1 model)
Thomson (1 model)
Mitsubishi (1 model)
Philips (1 model)
Sharp (7 models)
… and more each month

© Cable Television Laboratories, Inc. 2004. All Rights Reserved.

A look behind-the-scenes

© Cable Television Laboratories, Inc. 2004. All Rights Reserved.

CableLabs Promotes Investment by Cable

- Creates common specifications for volume production
- Creates common specifications for competition among suppliers
- Volume and competition lowers wholesale and consumer retail cost
- Promotes wide deployment of technologies among all operators
  - Basic HFC Architecture (early promotion by CableLabs)
  - Use of MPEG-2 (initiated by CableLabs)
  - Broadband data services built on DOCSIS
  - VOIP built on PacketCable

© Cable Television Laboratories, Inc. 2004. All Rights Reserved.

CableLabs®

Creating specifications and standards that work

- Cooperative development of specification with manufacturers and developers
  - >120 companies participated in PacketCable VoIP specification review
  - Over 500 companies (CE, IT, cable) are on the OpenCable reflector list
  - For just 2003-2004, 300 ECRs have been filed, with over half being filed by CE/IT participants. Any company or individual may submit an ECR
  - CE Manufacturers actively participate in, and write, the specifications and test suites
  - 31 on-site visiting engineers, 8 off-site contributing engineers from 23 Manufacturers
  - Interoperability events
  - OCAP developers' forums
- With input from Manufacturers, we write specifications that Manufacturers will build to!
- Allows rapid development of (competitive) cable specifications in climate of rapid technological change.

© Cable Television Laboratories, Inc. 2004. All Rights Reserved.

Creating specifications and standards that work

- National and Worldwide adoption of CableLabs Specifications
  - DOCSIS, PacketCable and OCAP are all ITU and ANSI approved standards
  - Maintain US leadership in world marketplace
- We work closely with complementary standards bodies and industry groups
  - SCTE (ANSI-accredited)
  - ITU (part of U.N.)
  - DVB-MHP (Europe) in OCAP
  - ATSC
  - UPnP
  - CEA

© Cable Television Laboratories, Inc. 2004. All Rights Reserved.

CableLabs Promotes Flexible Innovation

- CableLabs offers more flexible approach than DBS, to encourage and enable individual CE innovation
- OpenCable and Plug and Play
  - Specifications developed with input from many participating CE Manufacturers
  - Sets baseline interface only
  - Allows manufacturers to combine functions promotes multi-purpose devices: TV (cable and OTA), DVR, gaming, photo-viewers, etc.
  - CableCARD can create competition among suppliers, to lower consumer cost of STB.
- Through development and testing process, CableLabs helped manufacturers make better products for consumers.

© Cable Television Laboratories, Inc. 2004. All Rights Reserved.

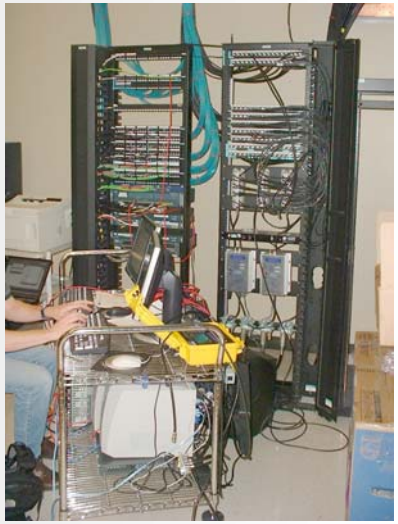
CableLabs Supports CE Development of Cable Products

- Development and Interop Lab Space and Time: ~10 different manufacturers use labs for development every month
- CableLabs offers state of the art SA, Moto, and NDS headends
  - Can be adjusted (e.g., to trigger EAS signals and perform firmware downloads)
  - Key for interoperability testing
- "Practice run" testing
- Specialized test tools available
  - With consultant, CableLabs developed HPNx tool for testing CableCARD-Host binding. This tool is now widely available and used by CE Manufacturers.
- Access to CableLabs' experts with specialized knowledge of specifications, equipment, tests and cable operations
- Many CE Manufacturers perform "Self-Verification" at our labs
- Website with additional resources, including third party testing and development resources.

© Cable Television Laboratories, Inc. 2004. All Rights Reserved.

CableLabs®

Development Lab



© Cable Television Laboratories, Inc. 2004. All Rights Reserved.

CableLabs®

Interop Lab

© Cable Television Laboratories, Inc. 2004. All Rights Reserved.

CableLabs®

Cable Labs Certification and Verification

- Security and content protection is essential to cable operators' entire, core business
- CableCARD-enabled DTVs must "tune and display" as intended by cable provider and not impair cable services
- We do not want Windows-style "critical updates" for UDCPs
- We need to assure interoperability and portability

© Cable Television Laboratories, Inc. 2004. All Rights Reserved.

CableLabs®

Certification in other industries

- Underwriters Laboratories
- Dolby Laboratories
- THX Ltd. (digital cinema equipment and movie theatres)
- BellCore's Network Equipment Building Systems ("NEBS") (1984 to 1997)(central office equipment)
- Verizon Wireless Phone Quality Assurance Lab
- "Cisco Powered Network"
- Dish Network & DirecTV (acceptance testing)
- Microsoft certification for Windows Server 2003 applications
- WiMAX (including Intel Corp. and Nokia) (wireless broadband)

© Cable Television Laboratories, Inc. 2004. All Rights Reserved.

CableLabs®

CableLabs Certification and Verification

- Published, objective tests drafted in cooperation with CE Manufacturers
- Trained professionals
- Quality assurance, review panel, appeal processes
- Unaffiliated with manufacturers submitting the products
- Confidentiality of Test Results
- Six weeks start to end
- Compare Underwriters Labs: delays so long that many manufacturers will not integrate a power supply/transformer inside a consumer product.

© Cable Television Laboratories, Inc. 2004. All Rights Reserved.

CableLabs®

CableLabs Certification and Verification

- DOCSIS® Cable Modems and CMTS (ITU & SCTE/DSS Standards):
  - 415 certified cable modems
  - 60 qualified cable modem termination systems
- CableHome™ Residential Gateways (ITU Standard):
  - 18 certified devices
- PacketCable™ VoIP Terminals and Systems (ITU Standards):
  - 7 certified embedded multimedia terminal adaptors
  - 20 qualified VoIP enabled CMTSs, Call Management Servers, Media Gateway Controllers, and Media Gateways
- OpenCable™ Set-tops and Integrated DTVs (SCTE/DVS Standards):
  - 3 qualified CableCARD™s
  - 18 certified Integrated Digital TVs
  - 19 verified Unidirectional Digital Cable Products

© Cable Television Laboratories, Inc. 2004. All Rights Reserved.

CableLabs Certification and Verification

- DOCSIS certification
  - E.g., Motorola, Toshiba, Samsung, Pioneer, Panasonic, Thomson, Cisco, Matsushita, Sony, Philips, etc.
- OpenCable and Plug and Play
  - E.g., Panasonic; Samsung; Hitachi; LG Electronics (Zenith); Sony; Thomson; Mitsubishi; Philips; Sharp; Scientific-Atlanta; Motorola; NDS; etc.
- CableLabs' schedules testing "waves" coordinated with product deployment cycle
- Upon Certification, CableLabs offers on-line service to access security certificates
  - allows just-in-time manufacturing.

© Cable Television Laboratories, Inc. 2004. All Rights Reserved.

CableLabs®

CableLabs Facilitates Intellectual Property Clearance

- We facilitate private IPR agreements that open the market
- Royalty free patent pools for DOCSIS, PacketCable, CableHome, VOD MetaData
  - OpenCable is RAND
- DFAST is licensed royalty free with RAND
- Digital Security certificates managed at cost

=> Lower costs for consumers

=> Reduced IPR risk for manufacturers

© Cable Television Laboratories, Inc. 2004. All Rights Reserved.

CableLabs®

CableLabs Supports Homeland Security

- We require EAS and test for EAS
- We designed and adjusted PacketCable to assure CALEA compliance for VOIP
- We lead and facilitate a multi-MSO Security Group to address common security breaches
- Specifications designed for “robust” products and services

© Cable Television Laboratories, Inc. 2004. All Rights Reserved.

CableLabs®

CableLabs Supports New (Secure) Interfaces

- CableLabs reviews and approves new interfaces for CableCARD-enabled devices
  - DBS specifies its own specs, standards, security for its STBs
- Approval of new outbound interfaces from MVPD networks necessary to prevent a "digital hole."
- Studios (program suppliers) may also authorize new interface.

© Cable Television Laboratories, Inc. 2004. All Rights Reserved.

CableLabs Supports New (Secure) Interfaces

- CableLabs is only one of two paths for approval of new interfaces
- CableLabs' role in output approval endorsed by CEA, MPAA, others
- Evaluates necessary security elements
- Does not "discriminate" for or against PCs, CE.
- Allows engineering and cost tradeoffs to be made
- CableLabs action subject to *de novo* review at FCC

© Cable Television Laboratories, Inc. 2004. All Rights Reserved.

CableLabs®

Sincere flattery

- "The CableLabs certification process was professional and highly efficient in the evaluation of our DTVs." — Panasonic
- Telecom executives are "envious" of CableLabs' ability to set industry-wide standards because compatibility is so important. "We have to work together to produce the kind of volume that CableLabs represents." —Bill Smith, BellSouth chief technology officer, chairman of the Alliance for Telecommunications Industry Solutions (at SuperComm 2004)
- Certification program so successful that it is imitated by WIMAX
- Specification process so successful that it is imitated by DSLHome
- OpenCable adopted in Korea, the nation with enviously rapid digital transition.

© Cable Television Laboratories, Inc. 2004. All Rights Reserved.

CableLabs®

Summary

- Broadband deployment
- Competition in Voice
- Home networking
- Investment by cable
- Lower wholesale and consumer retail cost
- Innovation in services and equipment
- Digital transition (HD, retail, portability of STBs, DTVs, and applications)
- New digital program choices
- Royalty free or low cost patent pools in essential IP
- Rapid development of innovative specifications
- Coordination with ANSI and international standards bodies
- Cooperation among CE, IT, cable in specs and product development
- Programs adopted by “digital” nations and our competitors
- Non-discriminatory path for future innovation

© Cable Television Laboratories, Inc. 2004. All Rights Reserved.