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Federal Regulatory



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October 20, 2005

**EX PARTE**

Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12<sup>th</sup> H Street, SW, Portals  
Washington, DC 20554

**Re: Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices, CS Docket 97-80**

Dear Ms. Dortch:

On October 20, 2005, Paul Brigner, Dan O'Callaghan, William Johnson, Mahasti Pourdastan, and David Young from Verizon met with Steven Broeckaert, Rick Chessen, John Gabrysch, Alison Greenwald, William Johnson, Walid Kassem, John Kiefer, Michael Lance, Priscilla Lee, Andrew Long, Sarah Mahmood, Wayne McKee, Mary Beth Murphy, John Norton, Michael Perko, Samuel Rodriguez, Natalie Roisman, Erik Stallman, and John Wong of the FCC to provide an engineering overview of Verizon's FiOS TV network architecture and discuss Verizon's positions on two-way plug-and-play. The attached presentation was distributed at the meeting and covers the major points of discussion.

If you have any questions about this matter or need more information, please do not hesitate to contact me directly.

Sincerely,

A handwritten signature in black ink that reads "Paul Brigner".

Attachment

cc: Steven Broeckaert Michael Lance John Norton  
Rick Chessen Priscilla Lee Michael Perko  
John Gabrysch Andrew Long Samuel Rodriguez  
Alison Greenwald Sarah Mahmood Natalie Roisman  
William Johnson Wayne McKee Erik Stallman  
Walid Kassem Mary Beth Murphy John Wong  
John Kiefer



Verizon **FiOS TV**

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**Briefing for the  
Federal Communications Commission  
October 20, 2005**



- 
- ◆ **Verizon Launches FiOS TV!**
  - ◆ **Introducing FiOS TV**
  - ◆ **FTTP Architecture**
  - ◆ **FiOS Network Implementation**
  - ◆ **FTTP ONT**
  - ◆ **One-Way Plug and Play Support**
  - ◆ **Evolution of Home Environment**
  - ◆ **Objectives for Two-Way Plug and Play**
  - ◆ **Alternative Paths for Two-Way Plug and Play**
  - ◆ **Consumer Benefits**

*Verizon FIOS TV Has Arrived in Keller, TX*

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Highlight video of the FiOS TV Launch in Keller, TX, shown here.

See [http://i.tnpv.us/2005/VER200510/Verizon\\_FIOS\\_01.mpg](http://i.tnpv.us/2005/VER200510/Verizon_FIOS_01.mpg)

# Introducing FiOS TV



## Great Value for the Consumer...



**More Choices.  
Right Before Your Eyes.**

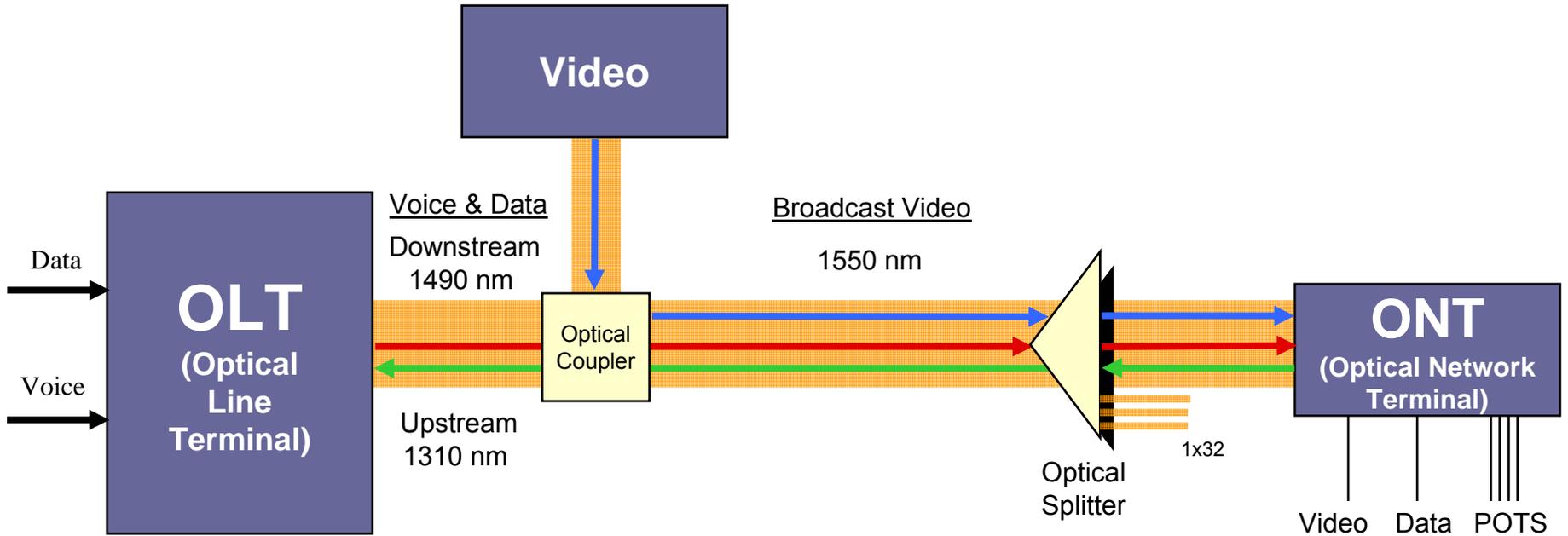
- 100% digital
- 330 channels
- 23 HD channels
- 100% VOD capable
- 800+ VOD titles
- 120 hour DVR
- Advanced IPG
- Simple, compelling packaging
- Genre-based channel line-up
- \$39.95 Expanded Basic<sup>1</sup>

*... and it'll keep getting better*

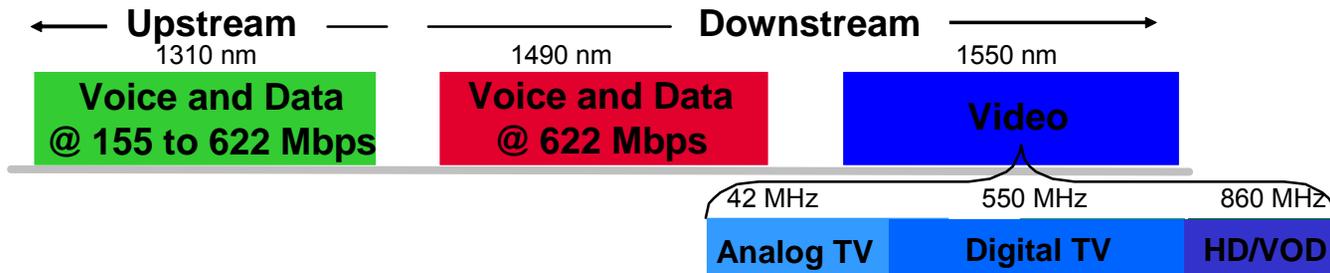
<sup>1</sup> Price of service offering in Keller, TX at launch. Pricing in other markets may vary.

# FTTP Architecture:

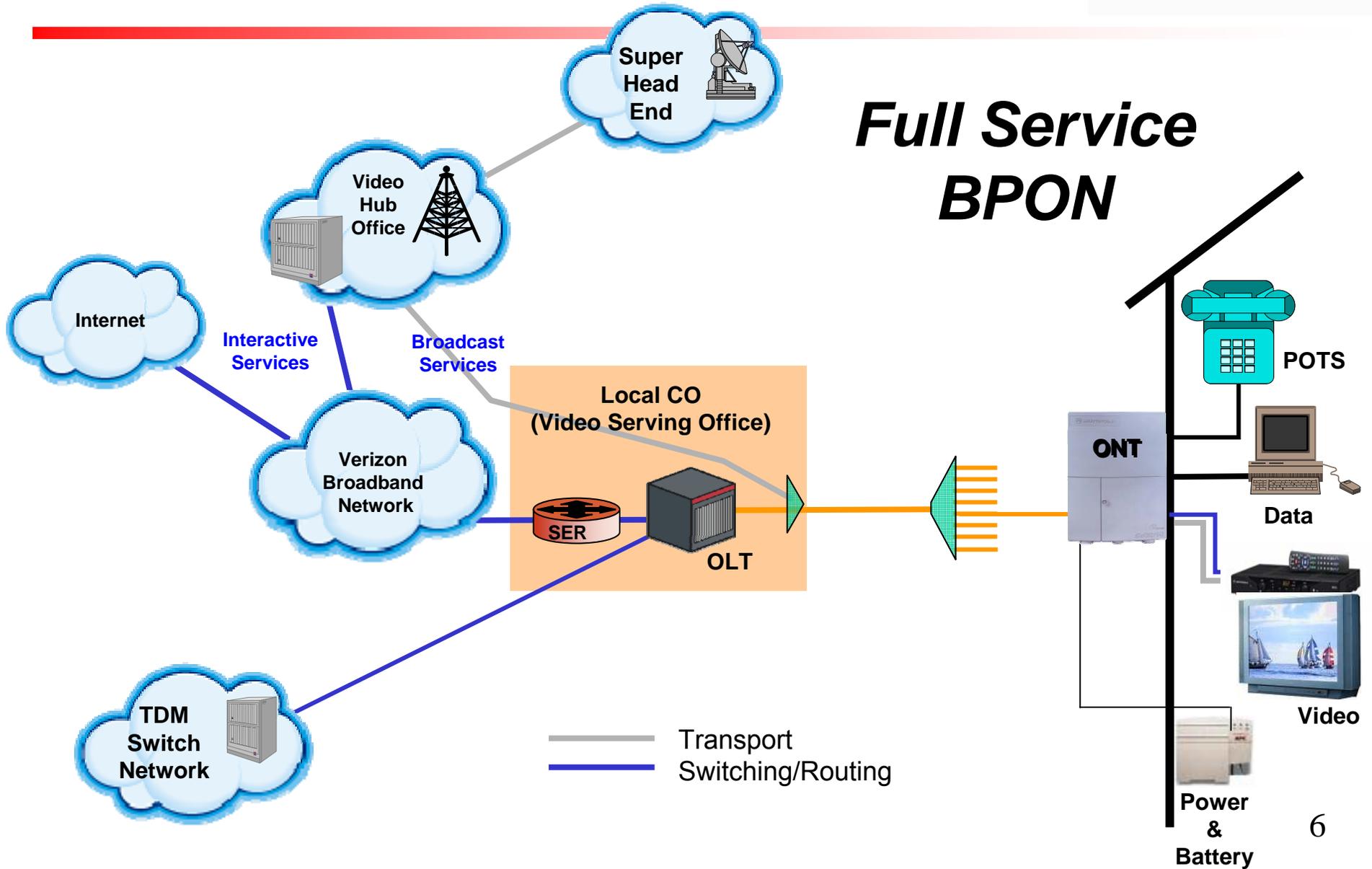
## ITU Standard G.983 Broadband Passive Optical Network



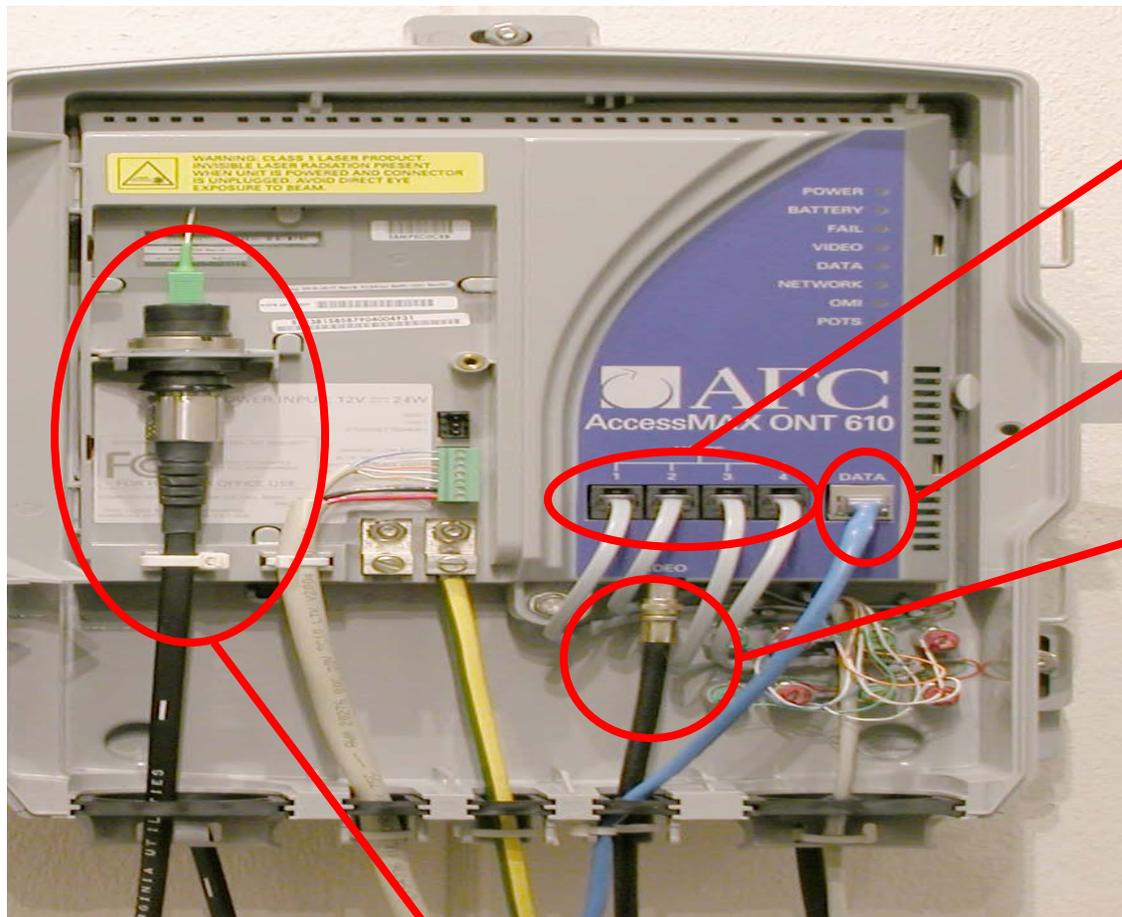
### Bandwidths & Services



# FTTP Architecture Implementation



# FTTP: Optical Network Terminal



- ◆ RJ-11 Telephone Connections for Phone Service
- ◆ RJ-45 Ethernet Connection for 2-Way Data
- ◆ Standard Coax 'F' Connector for Multichannel Analog and Digital Video (note: There is no upstream RF return capability)

◆ Fiber Interface to PON



## One-Way Plug-and-Play (PnP) Support

- ◆ **One-Way PnP standards are cable-centric**
  - Developed through negotiations between NCTA & CEA
  - Encapsulated in a Memorandum of Understanding (MOU)
  - Technical specifications developed by CableLabs
  - Interfaces based on cable architecture and proprietary algorithms
- ◆ **Work Around Required**
  - We selected an open standard (DVB) for our digital video delivery
  - Our supplier has developed new PODs for us to support the DVB open standard
- ◆ **Our deployment supports One-Way PnP**
- ◆ **Two-Way PnP Standards must not be cable centric: Another work-around would defeat the purpose of PnP and not be economically viable**

### DVB

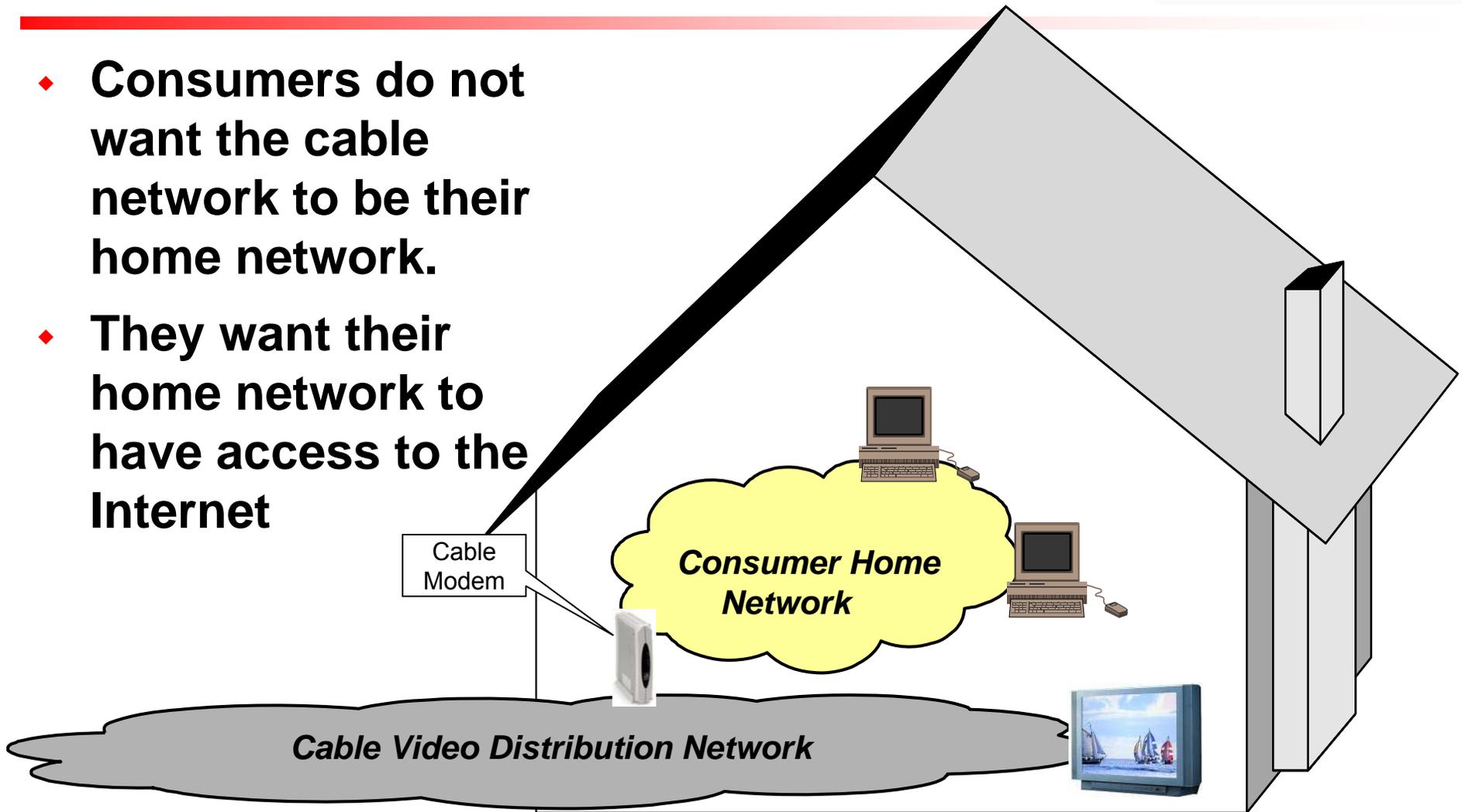
From Wikipedia, the free encyclopedia.

**DVB**, short for **Digital Video Broadcasting**, is a suite of internationally accepted, [open standards](#) for [digital television](#) maintained by the *DVB Project*, an industry consortium with more than 300 members, and published by a *Joint Technical Committee* (JTC) of [European Telecommunications Standards Institute](#) (ETSI), [European Committee for Electrotechnical Standardization](#) (CENELEC) and [European Broadcasting Union](#) (EBU). The standards can be obtained for free at the [ETSI website](#) after registration.

# *Cable Modem – Operator's Plans vs. Consumer Preference*



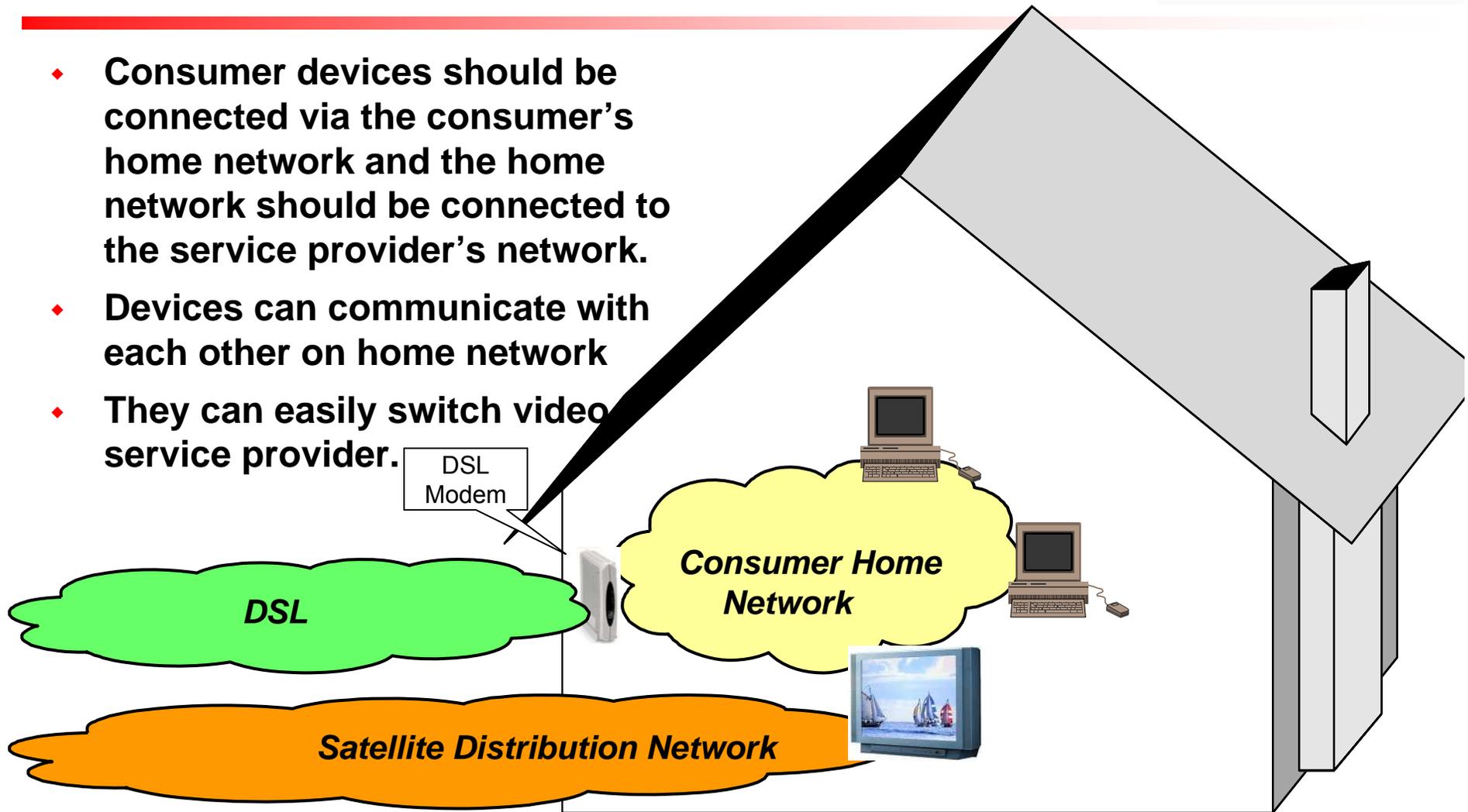
- ◆ **Consumers do not want the cable network to be their home network.**
- ◆ **They want their home network to have access to the Internet**



## *Benefit to Consumer of Home Network*



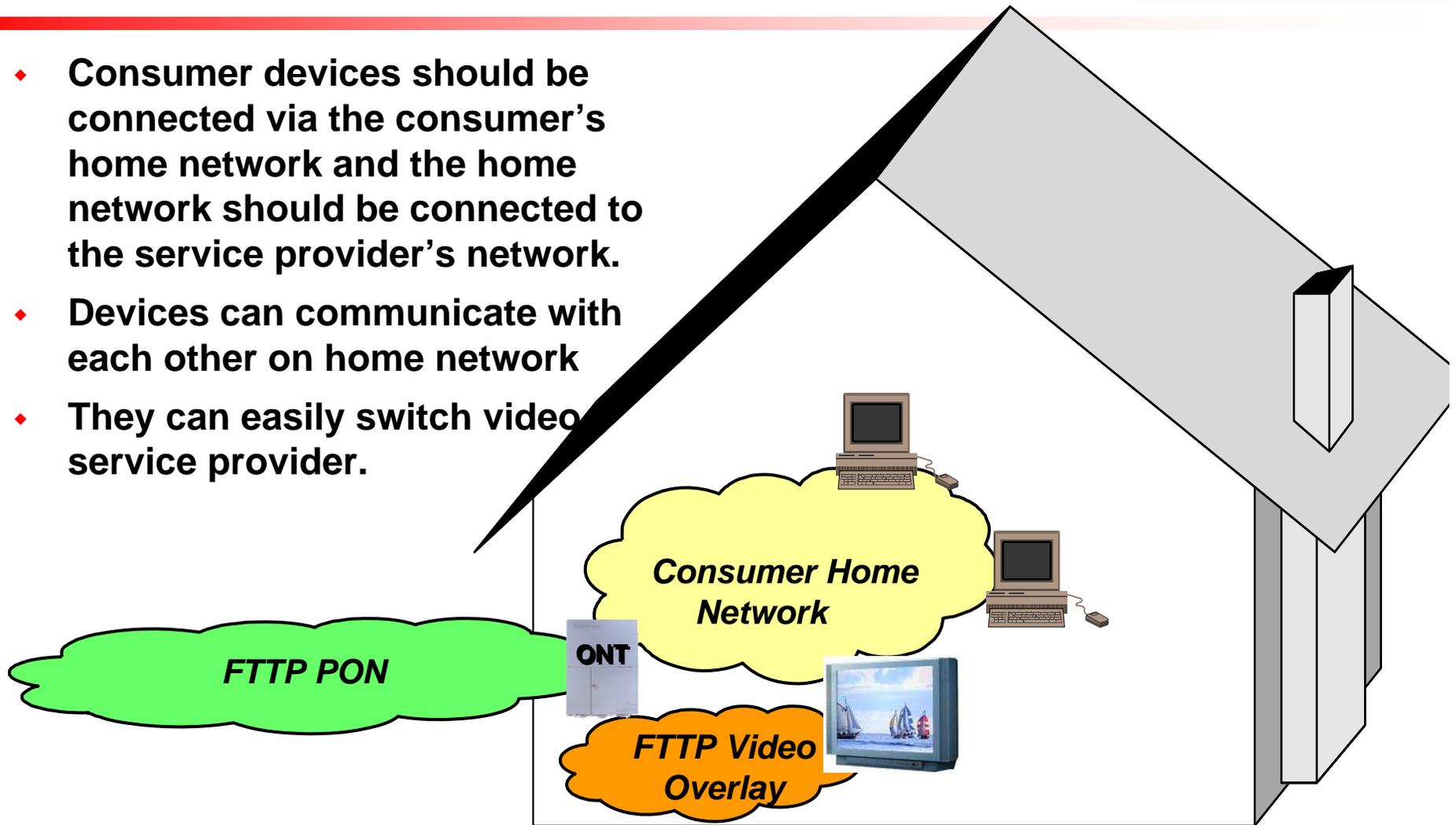
- ◆ Consumer devices should be connected via the consumer's home network and the home network should be connected to the service provider's network.
- ◆ Devices can communicate with each other on home network
- ◆ They can easily switch video service provider.



## *Benefit to Consumer of Home Network*



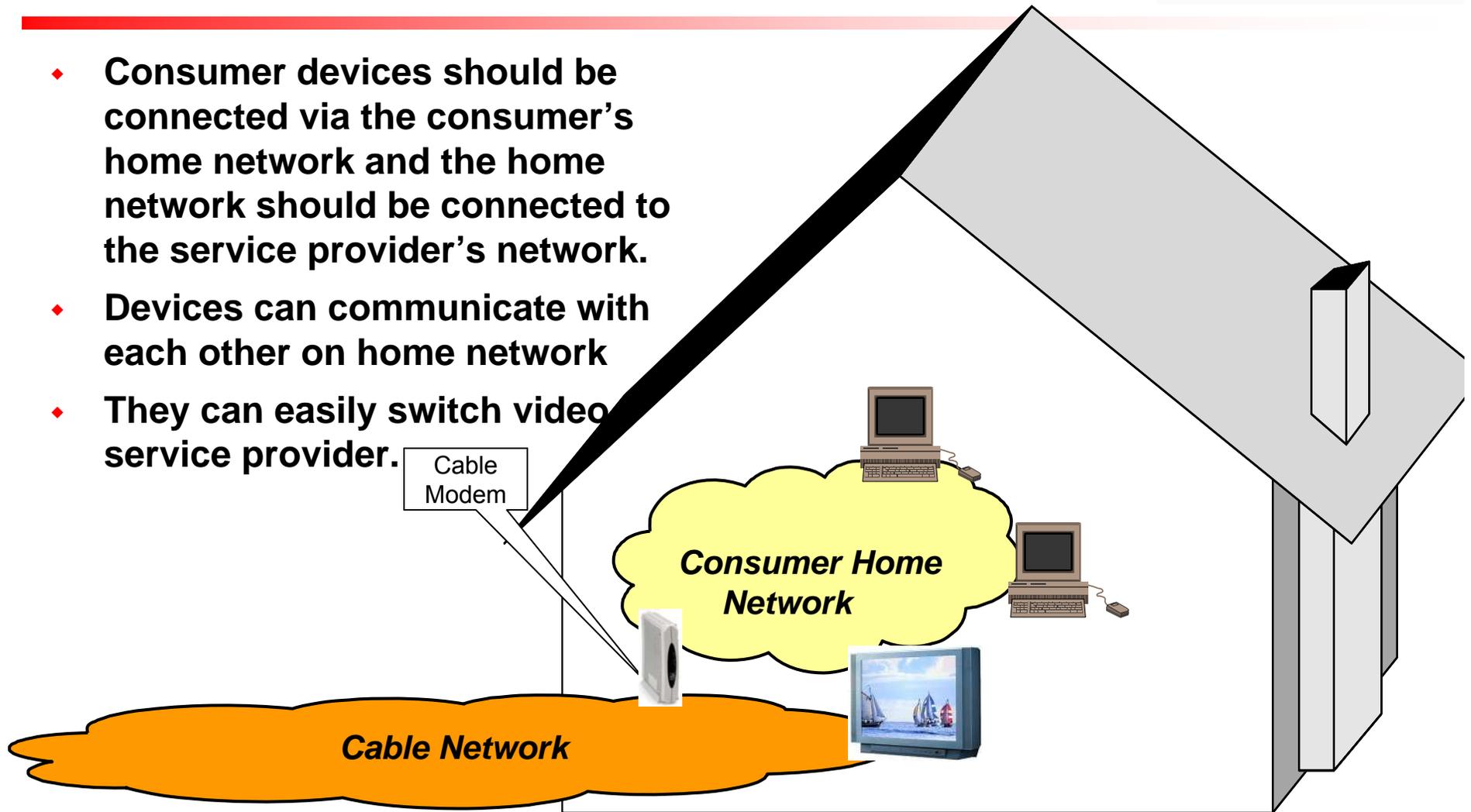
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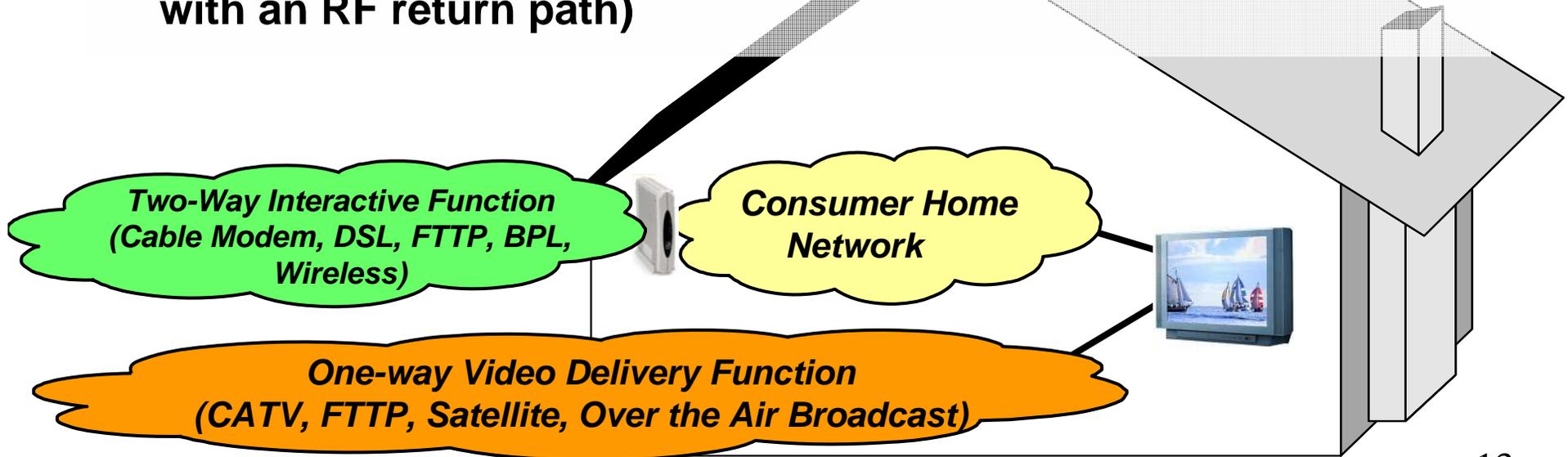
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- ◆ **Devices can communicate with each other on home network**
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## *Two-Way Plug and Play*



- ◆ Same goals of consumer portability and interoperability
- ◆ Allows interactive and on-demand features to be implemented in compatible consumer electronics
- ◆ Requires two-way communication capabilities
- ◆ Should support the delivery of both IPTV and QAM-based broadcast services to the TV
- ◆ Should not be tied to a particular network architecture (i.e., one with an RF return path)



# Devices for the Networked Living Room Are Here Now With More Coming Every Day...



home  **Exclusive TiVo® Service Features**

**What is TiVo?**  
**Buy TiVo**  
**Setup & Support**

**Get connected, get more!**  
Get five additional TiVo® service features just by connecting your TiVo Series2™ DVR to your home network. It's easy. [We'll walk you through the whole thing.](#) **Get Ready**



Media Center PC



TiVO



SlingMedia



Replay TV



Xbox

- ▶ Digital music player
- ▶ Digital photo viewer
- ▶ Multi-Room viewing
- ▶ TiVo Desktop
- ▶ Getting started
- ▶ FAQs
- ▶ Partner offers
- TiVo community
- Developers
- Tips & tricks

Plus, get more B...

- Hear new
- Nikon feat...

month's p...

Just select "Music & Photos" from TiVo Central and go from there.

see this

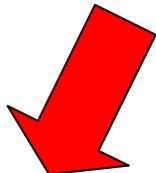
# Two-Way Plug-and-Play: Two Paths Forward



Solution Targeting Single Segment of Industry



Undue Reliance on Standards Pushed by Representatives of Only One Segment of Market



DOCSIS Return Path Solution for interactivity (favoring Cable Industry)

***Cable-centric Model Severely Limits Competitive Alternatives and Defeats Purpose of PnP***

Solution Focused on the Entire Industry



Open Standards venue allows full participation of all Industry Players



Standard Ethernet interface for interactivity supporting current and future IP-Enabled Devices

***Open Competitive Environment, Lower Cost, Innovation!***



## *What are we doing?*

- 
- ◆ **Working with ATIS on open standards for IPTV**
  - ◆ **Reaching out to CEA and others for an open standards-based approach to Two-way Plug and Play**
  - ◆ **Reviewing filed progress reports of the CableLabs approach to Two-Way Plug and Play**
  - ◆ **Communicating with the FCC about our architecture and progress**

## *What can the FCC do?*



- 
- ◆ **Don't lock the industry into a cable-centric standard for two-way plug and play support**
  - ◆ **Require an open, standard-setting body to guide the development of two-way plug and play standards**
    - Promote a cross-industry initiative to determine the appropriate body that is both ANSI accredited and represents the interests of the entire industry



## *How Will Consumers Benefit?*

- 
- ◆ **Rules based on open standards developed through the participation of all industry participants will ease the transition to Digital TV by promoting competition, convenience and simplicity for consumers**
    - Consumer electronic devices will be transparent to the video delivery network
    - Open, technologically-neutral standards will create an environment of innovation that encourages new applications
    - The consumers experience with home networking will be simplified and drive demand for products & services
    - Digital TV devices will more readily share applications with PVRs, PCs and other home electronic devices
  - ◆ **Establishes an environment that encourages new entrants and creates more consumer choice**