DUDE, YOU'RE GETTING A GIG:

The Perils and Promise of Ultrafast Access Networks



Philip Nutsugah

VP, Broadband Access Products
Cox Communications

Cox is Committed to Meeting Customer Demand for Speed...

Now and in the **Future**

- Launched Gigablast in Phoenix in October 2014
- Equipping **all new developments** with fiber to the home and Gigablast
- Increased overall broadband speeds1,000% over the last 14 years
- Beginning preparations to deploy DOCSIS 3.1

Why Offer Gig Speeds Now?









THE NEED FOR SPEED

- The #1 purchase driver
- 75% of Cox customers are on 50-Mbps-or-higher speed tiers

CHANGING USAGE PATTERNS

- 56% of total Internet traffic is now video
- The line between personal and professional usage is blurring

MORE SMART DEVICES AND HOME NETWORKS

- The "demarc" has moved into the living room, the kitchen, the bedroom, the wrist ...
- Smart devices are fueling the need for high-speed, always-on connectivity

UPSTREAM BANDWIDTH

 The ever-increasing amount of multimedia content being shared and stored, calls for faster upstream connectivity

OUR GUIDING PRINCIPLES

- Broadband is central to the lives of residential and business customers and the communities we serve
- Enablement of the network must stay ahead of customer need and demand
- New applications and use cases have always materialized to fill the broadband pipe



But Who Really Needs 1 Gig Today?

Total estimated bandwidth needs for a heavy-user family of four today is only 40-130 Mbps



2 family members streaming HD video on tablets in separate rooms





5-7 Mbps each for HDTV



1 family member watching Ultra-HD 4K IPTV, but also distracted on their phone





- 10-48 Mbps for 4K TV
- 1-5 Mbps for web surfing



1 family member watching Ultra-HD 4K IPTV, but also distracted on their phone





- 10-48 Mbps for 4K TV
- 1-5 Mbps for web surfing



Active home automation and wearables



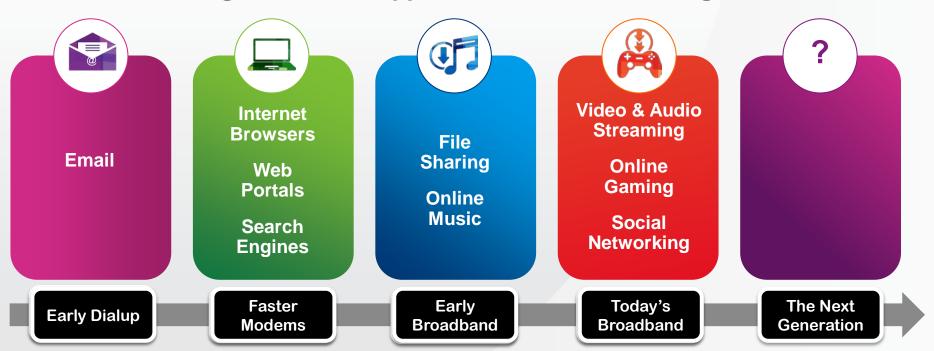


<10 Mbps (primarily driven by security cameras)



Gigabit Speeds Enable the Future

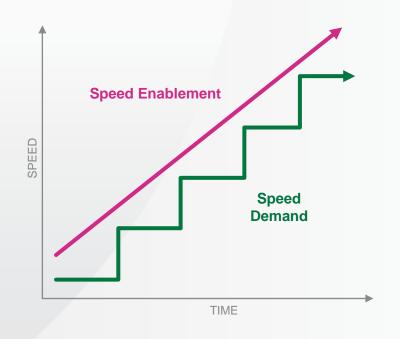
Every past innovation in bandwidth has enabled a new generation of applications to take advantage of it





Enabling the Next Generation of the Internet

- The speed demand curve is always shifting to the right
- The enablement curve has to stay ahead of the demand curve to meet customer needs and desires
- Gigabit speed represents the next generation of broadband access, which will enable the next generation of applications





WHAT COULD GIGABIT SPEEDS ENABLE?

What Could Gigabit Speeds Enable?

NEXT-GENERATION SOCIAL NETWORKING

- High-resolution, instantaneous and always-on personal telepresence
- "Be" and "act" in multiple places at the same time

- IMMERSIVE, VIRTUAL/SIMULATED REALITY IN COMMUNICATIONS AND ENTERTAINMENT
 - COMMUNICATIONS AND ENTERTAINMENT
 - REAL-TIME, CONSTANT STREAMING AND DISPLAYING OF INFORMATION

HEALTH CARE AND MEDICINE REVOLUTIONIZED

EDUCATION DELIVERED MORE EFFICIENTLY

- Immersive, two-way gaming environments integrated with real life
- Virtual participation in entertainment events
- · Context-aware, highly customized
- person-to-person, person-to-machine and machine-tomachine information flow
- Real-time, life-like interactions with health care and wellness personnel, unconstrained by distance
- commonplace robotic and remote surgery
- No distinction between "real" and "virtual classrooms"
- · New forms of instruction and instructors



Cox's G1GABLAST



Speed

1 Gig Download & Upload

Fiber to the Home or Apartment

Features

1 Terabyte Cloud Storage

10 Email Boxes

Cox Security
Suite & Family
Protection

WiFi

802.11ac Home WiFi Router

Cox WiFi & Cable WiFi access

Bundle Options

Cox Contour TV (2TB DVR)

Premium Channels

Cox Digital Telephone

Cox Home Security



What Gig Customers Are Saying

Gigabit speed delivers a better Internet experience

- Better streaming
- Better large file upload and download
- Better work from home
- Better simultaneous device performance

I didn't have any expectations that it was going to make my Internet experience that much better...it's just that it will make it better in the future.

Now it's just so easy. I had no idea I needed a gigabit, but I knew I needed something faster.

[] can do my work in less time now. **77**

Now it's fast enough for all of us to use at the same time.



In Summary

- Our customers want gig speeds and we've begun delivering that via fiber to the home
- DOCSIS 3.1 will enable even wider deployment of 1 Gig, and we're making preparations to begin nationwide rollouts in late 2016
- We have increased speeds 1,000% over the last 14 years and will continue to do so
- In 2014, we doubled the speeds of our two most popular tiers.

 This year, we have increased speeds for our two entry level tiers
- Cox is committed to bringing the faster speeds
 that our customers want and enabling the next generation of internet

