






Net Neutrality: Perspective from U.S.

A review of the policy debate

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Electronic Frontier Foundation

What is the Electronic Frontier Foundation?

- Nonprofit founded in 1990
 - 75% of funding from individual donations (41,000+), 20% from foundations, and 5% from companies
 - 80+ people: Lawyers, activists, technologists
- Primary Issues:
 -  Free speech
 -  Intellectual Property
 -  Innovation
 -  Privacy
 -  Transparency

Net Neutrality origins in Common Carriage from centuries ago

- Merchants faced economic discrimination based on value of goods transported
- Government declared equal treatment and no interferences with transit of goods.

CENTURY ADVERTISEMENTS-TELEPHONES

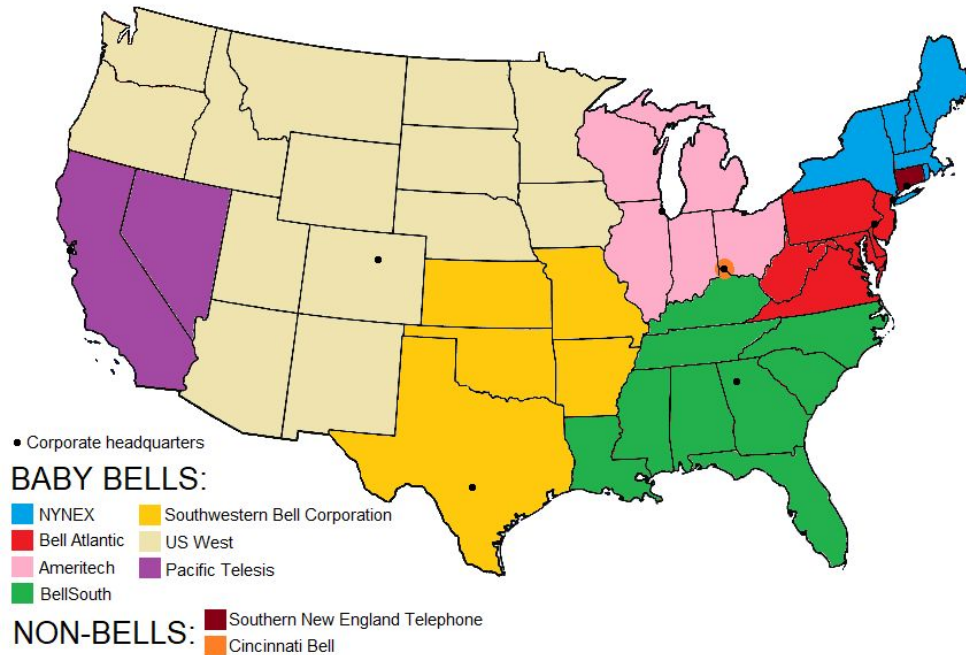


One Policy
One System
Universal Service

- US Telephone system starts as a monopoly subject to common carriage.

Terms of the AT&T Settlement

- 1) Elimination of past consent decrees on computing
- 2) Separated into regional telephone companies

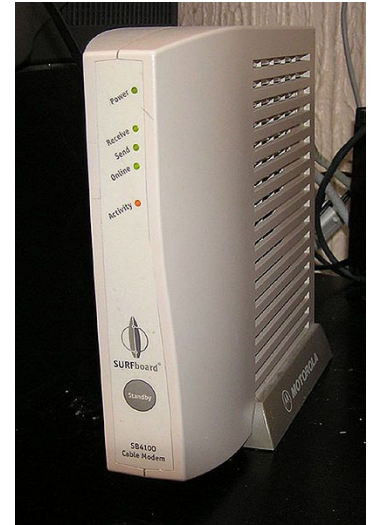


1996 Telecommunications Act - Convergence

- 1) Telephone wanted to get into television and Internet
- 2) Cable wanted to get into telephone and Internet, worried telephone was entering television
- 3) Regional Baby Bells wanted to get into long distance, “information services,” and manufacturing.
- 4) Newspapers worried about Telephone’s impact on classified ads
- 5) Long distance telephone wanted to get into local phone business.
- 6) Consumer groups worried about self dealing by regional bells, supported common carriage (eventually this becomes net neutrality)

Cable Television Companies Deployed Cable Modems

- Communications Act established two regimes.



- 1) Telecom services - Common Carriage
- 2) Information services - Not Common Carriage

FCC granted discretion by the courts to declare broadband to be either of these.

FCC Classifies Broadband As Information Service but Asserts Net Neutrality Authority

FCC Chair Powell asserts

4 Internet Freedoms.

- 1) Freedom to Access Content
- 2) Freedom to Use Applications
- 3) Freedom to Attach
Personal Devices
- 4) Freedom to Obtain Service Plan Information



Net Neutrality violations: Comcast & BitTorrent

- May 2007 – BitTorrent users on Comcast notice problems
- Sep 2007 – Comcast assures EFF it does not deliberately interfere with particular protocols
- Oct 2007 – EFF publishes an investigation, showing Comcast is injecting forged RST packets into BitTorrent TCP sessions
- Nov 2007 – Comcast still claims they're only “delaying” traffic

Blocking: AT&T and FaceTime

- Jun 2012 – Apple announces FaceTime available for use over cellular networks
- Aug 2012 – AT&T announces that only MobileShare plans could use FaceTime
 - Verizon and Sprint allow all customers to use FaceTime
- Nov 2012 – AT&T relents, allows FaceTime on tiered data plans
- May 2013 – AT&T blocks video chat on Google's updated hangouts
- Jun 2013 – FaceTime finally allowed on all plans

*Nothing to do with congestion, solely was about pricing of service

FCC Attempts and Fails to Enforce Net Neutrality over Information Services, Reasserts Common Carrier Authority



President Obama in 2008 makes a strong commitment for net neutrality and appoints FCC Chairs.



FCC Chairman made a final attempt at net neutrality without common carriage. Fails.



FCC Chairman Wheeler reasserts common carrier authority to support legally enforceable net neutrality.

FCC Efforts to Enforce Net Neutrality are Stifled in the Courts

- Landmark cases involve litigation initiated by Comcast and Verizon
- Courts state only common carriers can be regulated to be net neutral



Netflix-Comcast Deal Marks The End Of Net Neutrality

Average Netflix connection speeds on Comcast's broadband network



@StatistaCharts Source: Netflix

Peering is more efficient and beneficial for both parties but Comcast wanted extra fees (2014)

- Netflix estimated that 1 hour of video over Comcast's network if they allowed them to directly connect would cost Comcast ***a fraction of a penny and dropping.***
- ***1 Gigabyte of data = < \$.01***

Why did the FCC create the 2015 Open Internet Order?

- ISP behavior kept getting worse, not better
 - Blocking
 - Discrimination
 - Throttling
 - Interfering
- Lack of competition from ISPs (85% of highspeed a monopoly)
- Necessary to preserve innovation (virtuous cycle)

Virtuous Cycle

The lower the barrier of entry to create an Internet product or service, the more innovation will happen as a result.

As users derive more value from broadband due to new services, the more they value their broadband access service as well.

2017 FCC Decides to Deregulate Industry

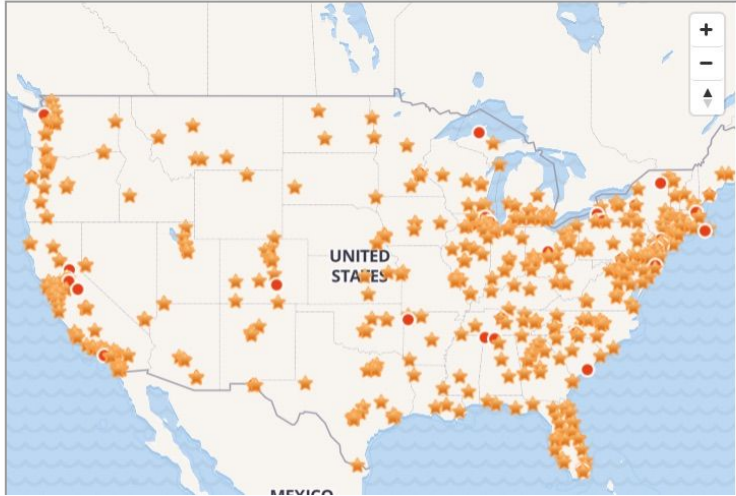
- Issues the “Restoring Internet Freedom Order” and declares ISPs no longer common carriers.
- Claimed ISP investment dropped as a result of net neutrality.



Extremely Controversial Decision



JOIN THE PROTEST
DEC 7 VERIZON STORES NATIONWIDE



The Most Commented on Federal Action in U.S. History

Opposition was vast and far reaching

- 1,000+ small businesses
- 900+ online video producers
- 41 Small ISPs
- 60 City Mayors
- Millions of Americans (85% public opposition)

Filters

Docket 17-108

Commission Documents

Small Business Impact

Restoring Internet Freedom

Bureau Name

Wireline Competition Bureau

Applicant

Date Created

4/26/17

Total Filings

23,951,671

Filings in last 30 days

159

+ New Filing / + Express

Date Ranges

Express Comment

Express Filings Only

Standard Filings Only

Filings

23,951,671 results (1602.557ms) RSS

25 50 100 A A A Date Posted:Descending

Dan Vierthaler

17-108

...preserve net neutrality and Title 2...

Received:8/30/2018

Posted:8/31/18

Express

COMMENT

TDS Telecommunications, Inc.

WC 17-108

18082902-1.pdf

Received:8/27/2018

Posted:8/30/18

LETTER

Britteny

17-108

...Without Net Neutrality the internet would no...

Received:8/29/2018

Posted:8/30/18

Express

COMMENT

Johnathan Robertson

17-108

...Bring back Net neutrality...

Received:8/29/2018

Posted:8/30/18

Express

COMMENT

Kirk Langevin

17-108

...I strongly support net neutrality backed by Title...

Received:8/30/2018

Posted:8/30/18

Express

COMMENT

FCC Actions

Consumer and Governmental Affairs Bureau

5/21/18

PUB NOTICE

Wireline Competition Bureau

5/11/18

PUB NOTICE

Wireline Competition Bureau

2/20/18

ERRATA

Wireline Competition Bureau

1/4/18

DEC RULING

Wireless Telecommunications Bureau



California Passes the Strongest Net Neutrality State Law in Country

- No blocking, no throttling, no paid prioritization rules.
- Bans zero rating practices where ISPs exerts preferential treatment for its own products or in exchange for a fee.
- Prohibits circumvention of net neutrality rules at the point of interconnection.
- Empowers State AG to investigate ISP practices.
- Bill now awaiting Governor Brown's signature, enjoyed support from both political parties.



California wins 1st round in court challenges by ISPs

Attorney General Becerra Announces Critical Net Neutrality Win

Press Release / Attorney General Becerra Announces Critical Net Neutrality W...



Tuesday, February 23, 2021

Case pends review from superior court, 9th Circuit Court

California law pushes AT&T to end zero-rating

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 17 MAR 2021
AUTHOR



**Diana
Goovaerts**

Diana is
Mobile World

Live's US Editor, reporting on infrastructure and spectrum rollouts, regulatory issues, and other carrier news from the US market. Diana came to GSMA from her former role as Editor of Wireless Week and CED Magazine, digital-only...

[Read more](#)

Public Safety a Driving Force on Net Neutrality in CA

Verizon Throttling Fire Fighters Over Weeks During Emergency

- Santa Clara Fire Department uses wireless to track resources in realtime to fight fire, uses gigabytes of information when active, virtually zero when inactive.
- Fire Department uncertain about the type of plan they were promised, believed it to be unlimited.
- Verizon throttles 4G LTE service down to kilobit dialup speed.
- No federal or state agency with responsibility to discipline Verizon for their errors.



v.
FEDERAL COMMUNICATIONS
COMMISSION and UNITED STATES OF
AMERICA,

1055, 18-1054, 18-1055, 18-1056, 18-1061, 18-1062, 18-1064, 18-1065, 18-1066, 18-1067, 18-1068, 18-1088, 18-1089, 18-1105

Respondents.

DECLARATION OF FIRE CHIEF ANTHONY BOWDEN

I, Anthony Bowden, declare:

1. I make this declaration in support of the Brief of the County of Santa Clara (“County”) in the matter referenced above. I know the facts herein of my own personal knowledge and if called upon to do so, I could competently testify to them under oath.
2. I was recently appointed the Fire Chief for the Santa Clara County Central Fire Protection District (“County Fire”). As Fire Chief, I also serve as Fire Marshal for Santa Clara County and as the California Office of Emergency Services (OES) Operational Area Fire and

Paid Prioritization a Major Concern

- What makes the Internet a powerful medium is how it allows small market players to topple giants until one day they are toppled.
- Paid prioritization would end this dynamic by allowing companies to pay for advantage rather than compete on product value to consumers.
- Network Slicing arguments at 5G appear to set the stage for paid prioritization.

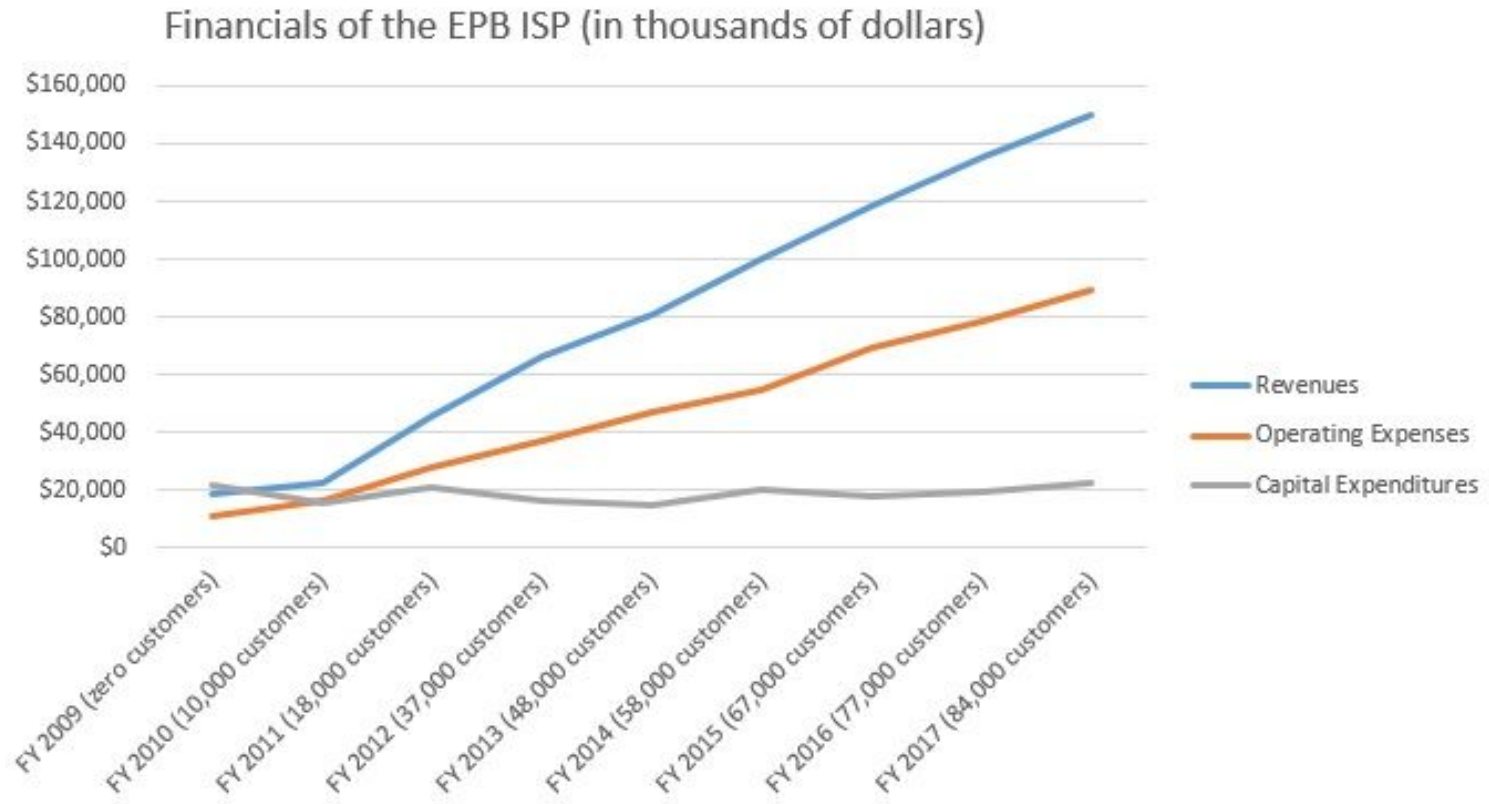
What Drives the Cost of Infrastructure?

- High (and one time) sunk costs in deployment
- Poor rights of way management and delays in construction by government
- Civil works (accounting for potentially 80% of the costs).

*Rather than explore additional fees, policy should primarily focus on reducing the one time high cost of deployment.

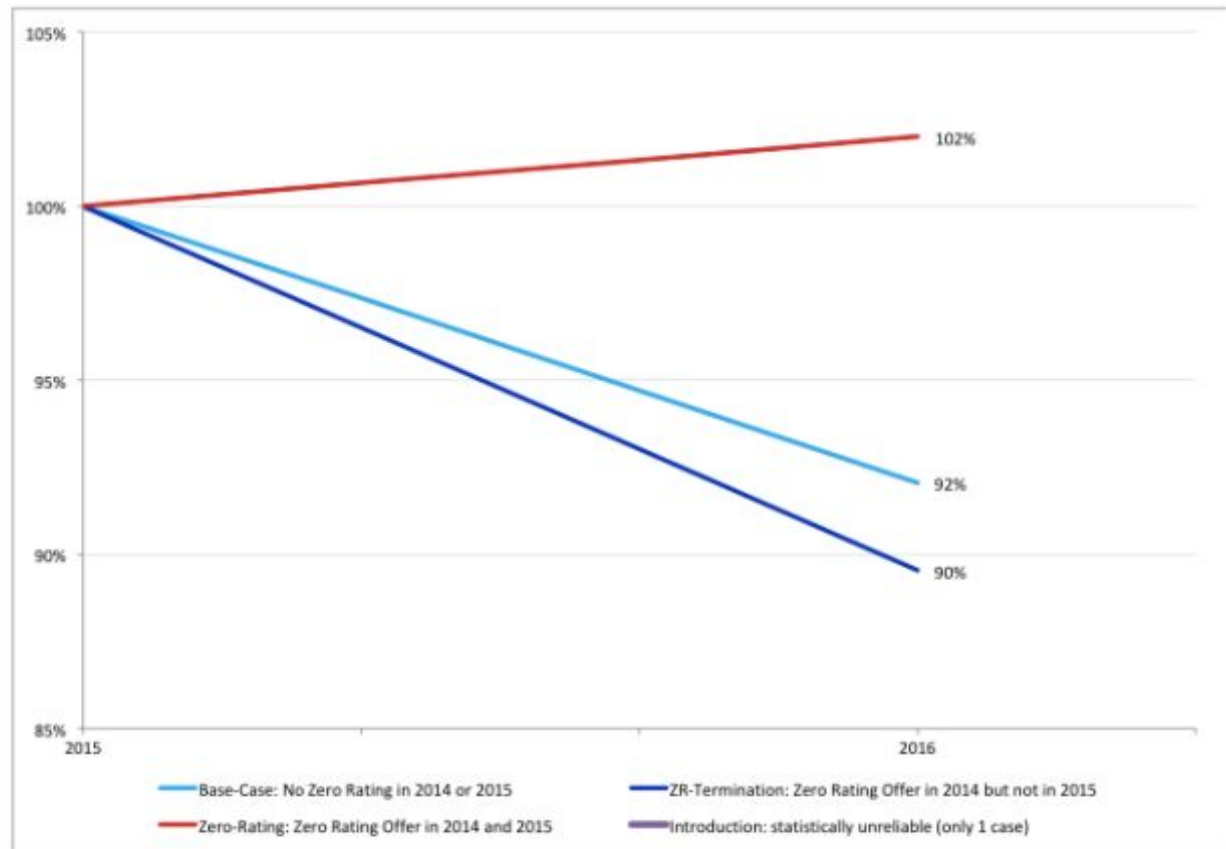
Assertions Regarding Cost for Infrastructure Need Scrutiny

- Government owned ISP in Tennessee (EPB Fiber Optics) is the world's fastest ISP a 10 gigabit symmetrical service for residents.
- Since it is publicly owned, it must report all of its financial information in great detail to taxpayers unlike private corporations.
- Fiber has incredible capacity, cheap to upgrade, and appears to be very profitable.
- U.S. Government contemplating investing \$100 billion in getting fiber connections to all residents in the country.



Countries With Zero Rating Have More Expensive Wireless Broadband Than Countries Without It

BY ERNESTO FALCON | FEBRUARY 5, 2019



Source: Epicenter.works study analyzing price changes between countries with and without zero rating practices.

 DONATE PARTICIPATE

Report: The Net Neutrality Situation in the EU

Date: Tuesday, 29 January 2019

Description:

Evaluation of the First Two Years of Enforcement

This report is released under a [Creative Commons Attribution 4.0 International \(CC BY 4.0\)](#) license.

Files:  [2019_netneutrality_in_eu-epicenter.works-r1.pdf](#) (5.14 MB)

Tags: [Net Neutrality](#)

https://en.epicenter.works/sites/default/files/2019_netneutrality_in_eu-epicenter.works-r1.pdf

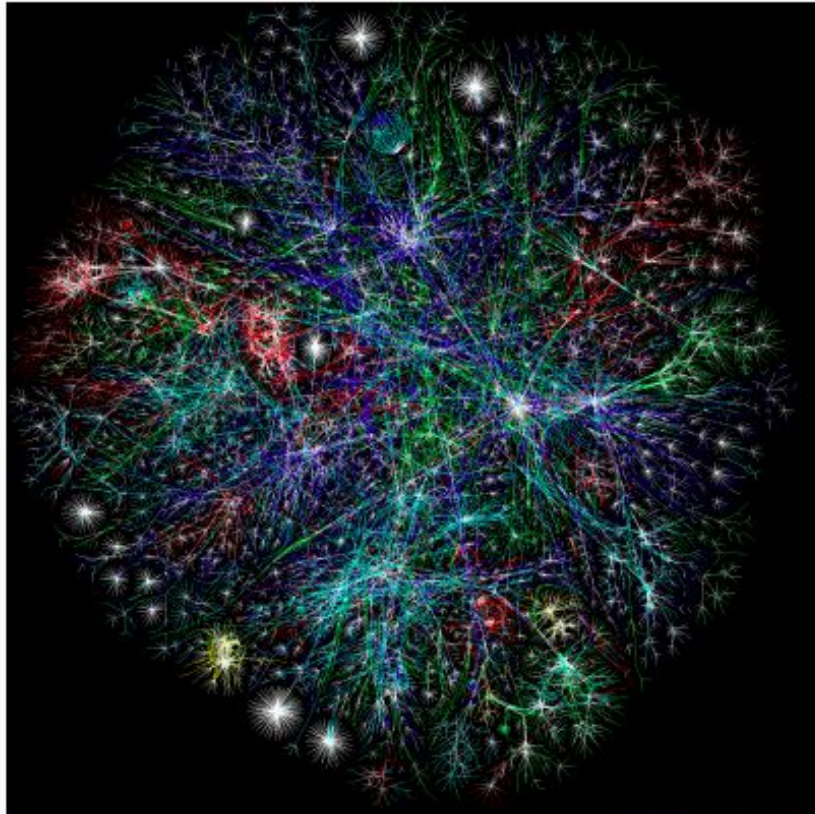
Why does Net Neutrality matter?

The Internet was Meant to Connect All of Humanity

When we can exchange culture and knowledge easily, we expand our horizons and grow closer.

Isaac Newton - I see further now because I stand on the shoulders of giants.

But rent seeking behaviors add friction to the benefits the Internet conveys.



(Visual representation of the the Internet from the [Opte Project](#).)

To Recap

- Where we are in U.S.:
 - Some ISPs have demonstrated some bad behavior
 - FCC wrote new rules to protect consumers
 - FCC repealed those rules
 - Repeal faces challenges in the courts, in Congress, the states, and overwhelming public opposition
- Where we're going:
 - ISP changes will be slow and subtle
 - Repeal may or may not be struck down by litigation
 - State laws may or may not be upheld
 - New challenges will emerge like public safety

Questions?

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