NET NEUTRALITY
PUBLIC NARRATIVES

Aspen Institute FOCAS
August 11, 2014
Quid characterized the landscape of influence for net neutrality through news, blogs, twitter, FCC public comments, and lobbying reports

**Data Sources**

- Scanned over 50,000 news sources and 200,000 blogs to identify ~8,400 news articles related to net neutrality from Jan 1 – July 18th
- Parsed through ~250,000 FCC public comments
- Sampled 20,000 tweets with #NetNeutrality from June 22 – July 22
- Examined ~2,500 lobbying filings from 2009-2014 Q2 Senate LDA reports

**Outcomes:**

- Understand how the story is developing and who is influencing it
- Identify the narratives captured in the FCC public comments and compare to media narratives
- Gauge public perception and identify new influencers in Twitter
- Quantify company’s influence and relationships via lobbying
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1. What are the narratives associated with net neutrality?

2. What has been the public response in FCC comments?

3. What is the breakdown of lobbying spend?

4. Who are the dominant influencers?

5. Who is engaged in the conversation, and who is not?

Appendix
FCC announcements and court decisions drove news coverage and social sharing

**Net neutrality news volume and social sharing** in global news & blogs, from Jan. 1 to July 18

_n = 8,430 unique articles_
May 31 – July 18: Oliver’s criticism of the FCC and comments posted on FCC’s public filings led the conversation

Net Neutrality news network
labeled by community (cluster), sized by degree
1,640 unique stories

Top communities
10 communities represent ~65% of total unique stories
A. John Oliver helps crash FCC’s Net Neutrality comments (12%)
B. People/Companies file comments On FCC site (10%)
C. Netflix - Verizon Battle / FCC to investigate deals between content companies & providers (9%)
D. Internet companies press for Net Neutrality in FCC filings / Internet Association voices concerns about FCC’s Net Neutrality proposal (6%)
E. FCC extends Net Neutrality comment period (6%)
F. Tim Wu to run for lieutenant governor / FTC suggested as Net Neutrality authority at congressional hearing (6%)
G. Democrats unveil bill to ban internet fast lanes (5%)
H. Occupy Google protestors arrested while defending Net Neutrality (4%)
I. Cable companies bankroll fake consumer groups to end Net Neutrality (3%)
J. Pew Research interviews internet experts to detail threats to Internet’s future (3%)
### May 31 – July 18: Narrative analysis

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Cluster Size</th>
<th>Social Sharing</th>
<th>Dominant Co</th>
<th>Co % of Cluster</th>
<th>Centrality</th>
<th>Burstiness</th>
<th>% Local</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>190</td>
<td>32,731</td>
<td>Comcast</td>
<td>0.37</td>
<td>0.19</td>
<td>8.25</td>
<td>8.40%</td>
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<tr>
<td>B</td>
<td>163</td>
<td>8,787</td>
<td>Verizon</td>
<td>0.46</td>
<td>0.23</td>
<td>0.89</td>
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</tr>
<tr>
<td>C</td>
<td>144</td>
<td>9,976</td>
<td>Netflix</td>
<td>0.81</td>
<td>0.14</td>
<td>1.4</td>
<td>4.20%</td>
</tr>
<tr>
<td>D</td>
<td>104</td>
<td>7,926</td>
<td>Comcast</td>
<td>0.34</td>
<td>0.24</td>
<td>19.5</td>
<td>6.70%</td>
</tr>
<tr>
<td>E</td>
<td>104</td>
<td>688</td>
<td>Google</td>
<td>0.62</td>
<td>0.2</td>
<td>15.5</td>
<td>3.80%</td>
</tr>
<tr>
<td>F</td>
<td>93</td>
<td>3,073</td>
<td>Comcast</td>
<td>0.35</td>
<td>0.19</td>
<td>1.45</td>
<td>4.30%</td>
</tr>
<tr>
<td>G</td>
<td>78</td>
<td>4,370</td>
<td>Netflix</td>
<td>0.54</td>
<td>0.17</td>
<td>9.67</td>
<td>6.40%</td>
</tr>
<tr>
<td>H</td>
<td>64</td>
<td>1,461</td>
<td>Google</td>
<td>0.55</td>
<td>0.2</td>
<td>1.63</td>
<td>7.80%</td>
</tr>
<tr>
<td>I</td>
<td>52</td>
<td>38,100</td>
<td>Comcast</td>
<td>0.46</td>
<td>0.15</td>
<td>1.29</td>
<td>9.60%</td>
</tr>
<tr>
<td>J</td>
<td>51</td>
<td>1,305</td>
<td>Google</td>
<td>0.53</td>
<td>0.12</td>
<td>0.64</td>
<td>7.80%</td>
</tr>
</tbody>
</table>

**Legend:**
- **June 14th**
- **July 14th**

**Notes:**
- John Oliver Helps Crash FCC’s Net Neutrality Comments
- People/Companies File Comments On FCC’s Website
- Netflix - Verizon Battle / FCC To Investigate Agreements Between Content Cos. And ISPs
- FCC Extends Net Neutrality Comment Period
- Internet Association Voices Concerns About FCC’s Net Neutrality Proposal
- Tim Wu To Run For Lieutenant Governor / FTC Suggested As Net Neutrality Authority
- Democrats Unveil A Bill To Ban Internet Fast Lanes
- Occupy Google Protestors Arrested While Defending Net Neutrality
- Cable Companies Bankroll Fake Consumer Groups To End Net Neutrality
- Pew Research Interviews Internet Experts To Detail Threat’s To Internet’s Future
Six net neutrality narratives have propagated through the media in 2014

<table>
<thead>
<tr>
<th>Haves and have nots</th>
<th>Pro</th>
<th>“Telco companies are [trying to] turn the internet into a segregated highway of fast and slow lanes, haves and have-nots.” - Alexis Ohanian, Reddit Co-Founder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher costs for consumers</td>
<td>Pro</td>
<td>“[Americans] want an internet...based on merit rather than based on a financial relationship with a broadband provider.” - Patrick Leahy, Senator D-VT</td>
</tr>
<tr>
<td>FCC conflict of interest</td>
<td>Pro</td>
<td>Appointing Wheeler to run the FCC was “the equivalent of needing a babysitter and hiring a dingo.” - John Oliver, HBO host</td>
</tr>
<tr>
<td>David and Goliath battle – startups vs. telcos</td>
<td>Pro</td>
<td>We support “nondiscrimination and no blocking rules to protect consumers, startups, and continued innovation”- Michael Beckerman, Internet Assn. Pres.</td>
</tr>
<tr>
<td>The internet is a right / utility</td>
<td>Pro</td>
<td>“Common carrier rules are basically free speech; we have all these protections for what happens over landline phones” - Craig Aaron, President Free Press</td>
</tr>
<tr>
<td>No free lunch for content providers</td>
<td>Anti</td>
<td>As we all know, there is no free lunch, and there’s also no cost-free delivery of streaming movies,” - Jim Cicconi, AT&amp;T lobbyist</td>
</tr>
</tbody>
</table>
Net Neutrality stories were much more present in tech and political sources, under-represented in local and financial

### Distribution of net neutrality stories by news source category

compared to random sampling of news

<table>
<thead>
<tr>
<th></th>
<th>Mainstream</th>
<th>Local</th>
<th>Financial</th>
<th>Political</th>
<th>Tech</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net neutrality</strong></td>
<td>26%</td>
<td>6%</td>
<td>9%</td>
<td>39%</td>
<td>18%</td>
<td></td>
</tr>
<tr>
<td><strong>All news</strong></td>
<td>41%</td>
<td>27%</td>
<td>17%</td>
<td>14%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Distribution for top 200 sources
2. Other includes sports, entertainment, blogs, magazines, video game, and other sources
The #NetNeutrality discussion on Twitter represents the emotional response of activists as well as the public.

Retweeted 117 times

Fight for the Future @fightfortheftf · Aug 7
Even if we win #netneutrality, the web will never be safe until we address root of the problem goldenfrog.com/take-back-your... pic.twitter.com/y1bLx1x7f9

Fight for the Future @fightfortheftf · Jul 3
Retweet this. Don’t let @Google hide while #netneutrality dies.
recode.net/2014/07/03/whe... pic.twitter.com/OrvijDnPy8

Google hasn’t mentioned the words “net neutrality” in a company blog post in four years.

Source: http://recode.net/2014/07/03/wheres-google-in-the-net-neutrality-fight/
The #NetNeutrality discussion on Twitter is 80% activist oriented

<table>
<thead>
<tr>
<th>User Name</th>
<th>Tweet</th>
<th>RT</th>
<th>Followers</th>
</tr>
</thead>
<tbody>
<tr>
<td>fightfortheftfr</td>
<td>Retweet this. Don't let @Google hide while #netneutrality dies</td>
<td>507 #8</td>
<td>43K</td>
</tr>
<tr>
<td>colesprouse</td>
<td>Pay attention to the current #NetNeutrality issue, or forever regret it. The unhindered flow of information is very important for citizens.</td>
<td>419 --</td>
<td>1,200K</td>
</tr>
<tr>
<td>rob_sheridan</td>
<td>This #NetNeutrality piece from @LastWeekTonight is excellent &amp; hilarious, watch the whole thing and pass it on</td>
<td>329 #13</td>
<td>46K</td>
</tr>
<tr>
<td>PopResistance</td>
<td>If u think @google shouldnt have called 911 on @occupygoogle &amp; supported #netneutrality retweet</td>
<td>272 #3</td>
<td>9K</td>
</tr>
<tr>
<td>EspuelasVox</td>
<td>#Netneutrality is the last hope of American democracy</td>
<td>TheHill via @TheHill @HouseDemocrats @SenateDems #TNTweeters</td>
<td>243 #8</td>
</tr>
<tr>
<td>TomWheelerFCC</td>
<td>We’ve received about 647k #netneutrality comments so far. Keep your input coming -- 1st round of comments wraps up July 15.</td>
<td>234 #1</td>
<td>4K</td>
</tr>
<tr>
<td>Criticl_me</td>
<td>A friendly reminder from your local NSA Data collector. #ResetTheNet #NetNeutrality #privacy #startup</td>
<td>174 #3</td>
<td>13K</td>
</tr>
<tr>
<td>RonWyden</td>
<td>Retweet to support #NetNeutrality. Without it the next big thing never leaves the garage.</td>
<td>163 #9</td>
<td>31K</td>
</tr>
</tbody>
</table>

Based upon sample of 20,000 tweets with #netneutrality from June 22 – July 22. 80% activist based upon sample of all tweets that were retweeted over 50 times.
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1. What are the narratives associated with net neutrality?
2. What has been the public response in FCC comments?
3. What is the breakdown of lobbying spend?
4. Who are the dominant influencers?
5. Who is engaged in the conversation, and who is not?

Appendix
FCC Comments: Clusters emerging from the FCC Comments echo the media

Map of 250K FCC net neutrality public comments, colored by topic cluster, sized by degree

- A. A pay to play system will harm the **diversity of the internet** (15%)
- B. Need for equality in promoting the **American Dream** (7%)
- C. Fast lanes will **destroy the internet** (7%)
- D. The **government is corrupted** by corporate interests (6%)
- E. New regulations would strengthen **ISP monopolies**, harming competition (6%)
- F. All **content** should be equally accessible (9%)
- G. Fast lanes **inhibit innovation** (5%)
- H. New regulations would only help **ISPs become more profitable** (5%)
- I. New regulations allow big business to **harm startups** and American people (3%)
- J. **Tom Wheeler’s telco background** is a conflict of interest (3%)

Percentages based on unique comments from sample of 250K comments. Templated responses have been collapsed into 1 node.
FCC Comments: Internet diversity and the American Dream are central stories

Map of 250K FCC public comments, colored by topic cluster, sized by degree

E. Danger of strengthening ISP monopolies
“IT’s bad enough that you allow these cable monopolies to exist. Now you want to give them the power to say “I don’t like this form of speech, let’s slow it down to the point of inaccessibility.”-- William Braver, Austin, TX

B. Importance to the American Dream
“I’ve always seen this country as “the land of opportunity”—this is what made me move to this place and eventually become an official citizen. I would hate to see for many people’s opportunities and dreams to disappear simply because of there not being any net neutrality...”– Annette Almonte, Atlanta GA

A. Need for diverse voices on the internet
“As a phenomena, [the internet’ has done more to connect me to people of different views, races, religions, and cultures than any other portal, outlet, or institution.”-- London O’Connor, San Marcos, CA
### FCC Comments: ~30% of the 250K FCC comments sampled were based off of a template

<table>
<thead>
<tr>
<th>Template Text Excerpt</th>
<th>Pro / Anti</th>
<th>Count*</th>
<th>Source(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Net Neutrality is the 1\textsuperscript{st} Amendment of the Internet, the principle that ISPs treat all data equally…”</td>
<td>Pro</td>
<td>~45K</td>
<td>Battle For The Net Template</td>
</tr>
<tr>
<td>“Reclassify ISPs as common carriers”</td>
<td>Pro</td>
<td>~8K</td>
<td>Voices for Internet Freedom, Peace Team, NHMC</td>
</tr>
<tr>
<td>“As an American citizen, I wanted to voice my opposition to FCC’s crippling new regulations…”</td>
<td>Anti</td>
<td>~3.5K</td>
<td>Stop Internet Regulation</td>
</tr>
<tr>
<td>“Reclassify broadband internet as a title II common carrier telecom service.” and variations</td>
<td>Pro</td>
<td>~3K</td>
<td>CGPGrey, Reddit, Ebaumsworld video</td>
</tr>
<tr>
<td>“Reclassify the internet as a common carrier”</td>
<td>Pro</td>
<td>~2K</td>
<td>Creative Resistance</td>
</tr>
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</table>
FCC Comments: The west coast is over-represented in the FCC comments about Net Neutrality, and the southeast is predominately under-represented.

Over- & under-representation of FCC public comments by state, based upon delta to U.S. population:

- **California**: +2.9% #1
- **Oregon**: +1.3% #4
- **Washington**: +2.4% #2
- **Florida**: -1.6% #4
- **Texas**: -2.1% #1
- **North Carolina**: -0.9% #3
- **New Jersey**: -0.7% #4
- **Massachusetts**: +1.9% #3
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Appendix
Lobbying Dollars: Telcos contributed the most towards net neutrality lobbying

Lobbyist dollars, top 20 clients by net neutrality focused filings
2009 Q1 – 2014 Q2

Verizon
Comcast
AT&T
Google
Recording Ind Assn Of America
NCTA
Viacom
Time Warner
Charter Communications
Expedia Inc
National Music Publishers' Assn
Broadcast Music Inc
Writers Guild Of America
Microsoft
Level 3 Communications
Aol Inc.
Dish Network
Hughes Network Systems
Frontier Communications
Tekelec

Net Neutrality focused Filing
Net Neutrality mentioned

*Data obtained from Senate LDA reports 2009-2014Q2
**Lobbying Dollars:** Lobbying spending peaked in 2010 and 2011 with the FCC Open Internet Order

**Lobbyist dollars, top 20 clients over time**
2009 – 2013

<table>
<thead>
<tr>
<th>Year</th>
<th>Against</th>
<th>Pro</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>$310M total</td>
<td>$65 M total</td>
</tr>
<tr>
<td>2011</td>
<td>$65 M total</td>
<td>$65 M total</td>
</tr>
<tr>
<td>2012</td>
<td>$65 M total</td>
<td>$65 M total</td>
</tr>
<tr>
<td>2013</td>
<td>$65 M total</td>
<td>$65 M total</td>
</tr>
</tbody>
</table>


**Pro –** Expedia, Level 3, Dish, Microsoft, Google
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Appendix
There are three main channels of influence – tech companies & the FCC drive news volume, while advocacy groups take to social media.

<table>
<thead>
<tr>
<th>Influencer</th>
<th>News mentions</th>
<th>Retweets</th>
<th>Lobbying Filings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulatory body</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FCC</td>
<td>6921</td>
<td>41</td>
<td>--</td>
</tr>
<tr>
<td>Tech</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Netflix</td>
<td>3839</td>
<td>0</td>
<td>0</td>
</tr>
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<td>Google</td>
<td>3533</td>
<td>0</td>
<td>54</td>
</tr>
<tr>
<td>Comcast</td>
<td>3455</td>
<td>10</td>
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<td>Telco</td>
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<td>Verizon</td>
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<td>1802</td>
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<td>197</td>
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<td>Time Warner</td>
<td>1421</td>
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<td>57</td>
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<td>Advocacy groups</td>
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<td>Free Press</td>
<td>385</td>
<td>96</td>
<td>15</td>
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<tr>
<td>EFF</td>
<td>68</td>
<td>429</td>
<td>0</td>
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<tr>
<td>Startup</td>
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<tr>
<td>Etsy</td>
<td>42</td>
<td>179</td>
<td>0</td>
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</tbody>
</table>
1. What are the narratives associated with net neutrality?
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Appendix
The net neutrality media discussion skews wealthy & male, no age bias

**AGE**

- 0% to 50%
- 50% to 100%

**INCOME**

- 0% to 68%
- 68% to 100%

**GENDER**

- 0% to 69%
- 69% to 100%
The conversations are nuanced within a demographic

**AGE**

*Older:* Rumors about the two-tiered internet

*Younger:* AT&T insists that Comcast should pay for connectivity

**INCOME**

*Higher income:* Reactions to Netflix-Comcast deal

*Lower income:* John Oliver helps crash FCC Comments site

**GENDER**

*More male:* Netflix CEO speaks out on Net Neutrality

*Less male:* Reactions to Net Neutrality court ruling
Females are highly under-represented in the net neutrality debate

**#netneutrality**

- **Actual:** 27%
- **Expected:** 50%
- **Actual:** 73%
- **Expected:** 50%

**FCC comments**

- **Actual:** 29%
- **US Pop.:** 51%
- **Actual:** 71%
- **US Pop.:** 49%
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| Appendix |
Quid networks visualize relationships between objects and ideas

**Similar nodes typically cluster together and clusters are grouped by color**

Each **node** represents a news story; node sized by degree represents number of connections (i.e., similarity) to other nodes

**Connections** represent similar language used across nodes

A node **bridging** two clusters can indicate a story that synthesizes multiple topics

**Spread out** clusters contain highly differentiated stories

**Dense** clusters contain highly similar stories

**Less distance** between clusters indicates a high number of inter-related stories

**Greater distance** between clusters indicates a low number of inter-related stories

**Centrally located** stories are core to the conversation, indicating central topics or bridging of ideas

**Peripheral clusters** are less central to the conversation but are more unique
T1 (Jan 1 – Feb 19): FCC’s court case and related stories dominated the conversation in T1

**Net Neutrality news network**
labeled by conversation, sized by degree

- Netflix speaks out on net neutrality
- Why net neutrality is worth preserving
- Democrats introduce new net neutrality bill
- FCC court case and related stories
- AT&T announces sponsored data plan
- Verizon accused of throttling customers
T1 (Jan 1 – Feb 19): FCC’s court case and related stories dominated the conversation in T1

Net Neutrality news network
labeled by community (cluster), sized by degree
2,090 unique stories

Top communities
10 communities represent ~55% of total unique stories

A. Netflix speaks out on Net Neutrality (7%)
B. Federal Appeals Court rules against “Net Neutrality” section of FCC’s Open Internet Order (6%)
C. AT&T announces subsidized data program, sparks Net Neutrality concerns (6%)
D. US Democratic lawmakers look to restore Net Neutrality (6%)
E. Reactions to court Net Neutrality ruling (5%)
F. Commentary on the impacts of the loss of Net Neutrality (5%)
G. FCC to draft new Net Neutrality rules by summer (5%)
H. Reactions to Net Neutrality ruling (5%)
I. Impacts of Net Neutrality ruling and possible merger of TWC and Comcast (5%)
J. Court rules against FCC Net Neutrality (5%)
**T1 (Jan 1 – Feb 19): Heatmap**

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Cluster Size</th>
<th>Social Sharing</th>
<th>Dominant Co</th>
<th>Co % of Cluster</th>
<th>Centrality</th>
<th>Burstiness</th>
<th>% Local</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>146</td>
<td>45,881</td>
<td>Netflix</td>
<td>0.88</td>
<td>0.12</td>
<td>13</td>
<td>2.10%</td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>B</td>
<td>131</td>
<td>6,605</td>
<td>Verizon</td>
<td>0.81</td>
<td>0.28</td>
<td>20.5</td>
<td>7.60%</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>C</td>
<td>127</td>
<td>18,252</td>
<td>At&amp;t</td>
<td>0.64</td>
<td>0.21</td>
<td>0.91</td>
<td>7.90%</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>123</td>
<td>11,312</td>
<td>Verizon</td>
<td>0.54</td>
<td>0.21</td>
<td>2.4</td>
<td>8.90%</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>114</td>
<td>4,947</td>
<td>Verizon</td>
<td>0.66</td>
<td>0.24</td>
<td>9.33</td>
<td>6.10%</td>
</tr>
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</tr>
<tr>
<td>F</td>
<td>113</td>
<td>37,165</td>
<td>Verizon</td>
<td>0.65</td>
<td>0.27</td>
<td>8.67</td>
<td>4.40%</td>
</tr>
<tr>
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<tr>
<td>G</td>
<td>107</td>
<td>27,516</td>
<td>Verizon</td>
<td>0.74</td>
<td>0.25</td>
<td>68</td>
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<tr>
<td>H</td>
<td>102</td>
<td>63,957</td>
<td>Verizon</td>
<td>0.77</td>
<td>0.26</td>
<td>10.33</td>
<td>7.80%</td>
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<tr>
<td>I</td>
<td>99</td>
<td>5,584</td>
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<tr>
<td>J</td>
<td>98</td>
<td>60,128</td>
<td>Verizon</td>
<td>0.74</td>
<td>0.29</td>
<td>13.5</td>
<td>9.20%</td>
</tr>
</tbody>
</table>

**Legend:**
- **Cluster Size:** Number of comments in the cluster.
- **Social Sharing:** Average social sharing within the cluster.
- **Dominant Co:** Dominant company mentioned in the cluster.
- **Co % of Cluster:** Percentage of comments by the dominant company.
- **Centrality:** Centrality score of the cluster.
- **Burstiness:** Burstiness score of the cluster.
- **% Local:** Percentage of local comments within the cluster.
T2 (Feb 20 – Apr 10): Reactions to the FCC’s court ruling and plans to write new rule led T1 in addition to Europe’s strong net neutrality law.

Net Neutrality news network
labeled by conversation, sized by degree

Foreign actions to preserve net neutrality

Corporate reactions

FCC plans to write new net neutrality rules
**Top communities**
10 communities represent ~75% of total unique stories

A. European Parliament passes strong Net Neutrality law (16%)
B. Netflix calls for strong Net Neutrality as it's forced to pay tolls (13%)
C. FCC to draft new Net Neutrality rules by summer (12%)
D. Netflix to pay Comcast to solve speed issues (9%)
E. Brazilian lawmakers approve Bill Of Online Rights (6%)
F. Reactions to Netflix-Comcast deal (4%)
G. Franken makes a case for Net Neutrality / FCC shoots down Netflix's call to expand scope of Net Neutrality (4%)
H. Comcast takes Time Warner merger to Washington (4%)
I. AT&T insists Netflix should pay for Net Neutrality (3%)
J. Apple wants its own path to Comcast's network for video service (3%)

**Net Neutrality news network**
labeled by community (cluster), sized by degree
1,266 unique stories

**T2 (Feb 20 – Apr 10):** FCC’s plans to draft new rules and responses to the impacts of the net neutrality ruling dominate the T2 conversation
# T2 (Feb 20 – Apr 10): Heatmap

<table>
<thead>
<tr>
<th>Cluster Name</th>
<th>Cluster Size</th>
<th>Social Sharing</th>
<th>Dominant Co</th>
<th>Co % of Cluster</th>
<th>Centrality</th>
<th>Burstiness</th>
<th>% Local</th>
</tr>
</thead>
<tbody>
<tr>
<td>A European Parliament Passes Strong Net Neutrality Law</td>
<td>204</td>
<td>9,068</td>
<td>Netflix</td>
<td>0.38</td>
<td>0.04</td>
<td>11.8</td>
<td>7.60%</td>
</tr>
<tr>
<td>B Netflix Calls For Strong Net Neutrality As It's Forced To Pay Tolls</td>
<td>167</td>
<td>38,345</td>
<td>Netflix</td>
<td>0.98</td>
<td>0.1</td>
<td>36.5</td>
<td>10.30%</td>
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<tr>
<td>C FCC To Draft New Net Neutrality Rules By Summer</td>
<td>155</td>
<td>167,374</td>
<td>Verizon</td>
<td>0.63</td>
<td>0.07</td>
<td>21</td>
<td>7.30%</td>
</tr>
<tr>
<td>D Netflix To Pay Comcast To Solve Speed Issues</td>
<td>110</td>
<td>15,672</td>
<td>Netflix</td>
<td>0.89</td>
<td>0.13</td>
<td>7.8</td>
<td>0.00%</td>
</tr>
<tr>
<td>E Brazilian Lawmakers Approve Bill Of Online Rights</td>
<td>76</td>
<td>7,372</td>
<td>Google</td>
<td>0.5</td>
<td>0.06</td>
<td>0.6</td>
<td>5.60%</td>
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<tr>
<td>F Reactions To Netflix-Comcast Deal</td>
<td>54</td>
<td>26,056</td>
<td>Netflix</td>
<td>0.8</td>
<td>0.16</td>
<td>1.63</td>
<td>7.80%</td>
</tr>
<tr>
<td>G Franken Makes A Case For Net Neutrality / FCC Shoots Down Netflix's Call To Expand Scope</td>
<td>51</td>
<td>2,701</td>
<td>Comcast</td>
<td>0.9</td>
<td>0.19</td>
<td>0.33</td>
<td>6.40%</td>
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<tr>
<td>H Rumors About Two-Tiered Internet</td>
<td>47</td>
<td>1,899</td>
<td>Netflix, Comcast</td>
<td>0.57</td>
<td>0.2</td>
<td>0.25</td>
<td>3.00%</td>
</tr>
<tr>
<td>I AT&amp;T Insists Netflix Should Pay For Net Neutrality</td>
<td>33</td>
<td>10,430</td>
<td>Netflix</td>
<td>0.97</td>
<td>0.21</td>
<td>1.75</td>
<td>3.10%</td>
</tr>
<tr>
<td>J Apple Wants Its Own Path To Comcast's Network For Video Service</td>
<td>32</td>
<td>3,411</td>
<td>Comcast</td>
<td>0.88</td>
<td>0.11</td>
<td>7.5</td>
<td>3.10%</td>
</tr>
</tbody>
</table>

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**T2 Heatmap**

- **C**: European Parliament Passes Strong Net Neutrality Law
- **D**: Netflix Calls For Strong Net Neutrality As It's Forced To Pay Tolls
- **F**: Reactions To Netflix-Comcast Deal
- **H**: Rumors About Two-Tiered Internet
- **I**: AT&T Insists Netflix Should Pay For Net Neutrality
- **J**: Apple Wants Its Own Path To Comcast's Network For Video Service

**Dates**: February 21st to April 7th

**Clusters**:
- **A**: European Parliament Passes Strong Net Neutrality Law
- **B**: Netflix Calls For Strong Net Neutrality As It's Forced To Pay Tolls
- **C**: FCC To Draft New Net Neutrality Rules By Summer
- **D**: Netflix To Pay Comcast To Solve Speed Issues
- **E**: Brazilian Lawmakers Approve Bill Of Online Rights
- **F**: Reactions To Netflix-Comcast Deal
- **G**: Franken Makes A Case For Net Neutrality / FCC Shoots Down Netflix’s Call To Expand Scope
- **H**: Rumors About Two-Tiered Internet
- **I**: AT&T Insists Netflix Should Pay For Net Neutrality
- **J**: Apple Wants Its Own Path To Comcast's Network For Video Service

**Centrality** and **Burstiness** values indicate the importance and activity level of each cluster.
T3 (Apr 11 – May 30): The public and individual companies began to react strongly to the FCC’s rulings in T3

**Net Neutrality news network**
labeled by conversation, sized by degree
**T3 (Apr 11 – May 30):** FCC’s controversial ruling allowing fast lanes and Hastings net neutrality comments were the most prominent stories

**Net Neutrality news network**  
*labeled by community (cluster), sized by degree  
3,434 unique stories*

**Top communities**  
*10 communities represent ~40% of total unique stories*

A. Google, Facebook, and 100 tech companies come together to defend Net Neutrality (5%)
B. FCC advances controversial rules that could allow internet fast lanes (5%)
C. Netflix CEO comes out against Comcast - Time Warner merger (5%)
D. FCC Wheeler revises broadband proposal ahead of vote (4%)
E. Net Neutrality is dead; will only be saved if citizens have an outcry (4%)
F. FCC Chairman promises to set high bar in new Net Neutrality rules (4%)
G. NetMundial’s conference in Sao Paulo / Brazil’s internet Bill Of Rights (3%)
H. FCC Chairman stands by proposed Net Neutrality Rules (3%)
I. How to support Net Neutrality (3%)
J. FCC pressured to regulate broadband as a utility / ISPs strike back against Net Neutrality (3%)
## T3 (Apr 11 – May 30): Heatmap

<table>
<thead>
<tr>
<th>Cluster Name</th>
<th>Cluster Size</th>
<th>Social Sharing</th>
<th>Dominant Co</th>
<th>Co % of Cluster</th>
<th>Centrality</th>
<th>Burstiness</th>
<th>% Local</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Google, Facebook, And 100 Tech Companies Come Together To Defend Net Neutrality</td>
<td>186</td>
<td>58,362</td>
<td>Google</td>
<td>0.67</td>
<td>0.18</td>
<td>43.5</td>
<td>4.30%</td>
</tr>
<tr>
<td>B FCC Advances Controversial Rules That Could Allow Internet Fast Lanes</td>
<td>162</td>
<td>33,505</td>
<td>Netflix</td>
<td>0.43</td>
<td>0.27</td>
<td>29.5</td>
<td>6.80%</td>
</tr>
<tr>
<td>C Netflix CEO Comes Out Against Comcast - Time Warner Merger</td>
<td>160</td>
<td>37,082</td>
<td>Netflix</td>
<td>0.88</td>
<td>0.14</td>
<td>1.82</td>
<td>5.60%</td>
</tr>
<tr>
<td>D FCC Wheeler Revises Broadband Proposal Ahead Of Vote</td>
<td>137</td>
<td>8,954</td>
<td>Netflix</td>
<td>0.47</td>
<td>0.23</td>
<td>9</td>
<td>5.80%</td>
</tr>
<tr>
<td>E Net Neutrality Is Dead; Will Only Be Saved If Citizens Have An Outcry</td>
<td>131</td>
<td>48,437</td>
<td>Comcast</td>
<td>0.44</td>
<td>0.18</td>
<td>3</td>
<td>4.60%</td>
</tr>
<tr>
<td>F 4/24 FCC Chairman Promises To Set High Bar In New Net Neutrality Rules</td>
<td>125</td>
<td>14,840</td>
<td>Netflix</td>
<td>0.44</td>
<td>0.2</td>
<td>8</td>
<td>0.80%</td>
</tr>
<tr>
<td>G NetMundial's Conference In Sao Paulo / Brazil's Internet Bill Of Rights</td>
<td>117</td>
<td>3,195</td>
<td>Google, Facebook</td>
<td>0.38</td>
<td>0.04</td>
<td>2.67</td>
<td>0.90%</td>
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<tr>
<td>H FCC Chairman Stands By Proposed Net Neutrality Rules</td>
<td>117</td>
<td>23,764</td>
<td>Comcast</td>
<td>0.38</td>
<td>0.28</td>
<td>2</td>
<td>6.80%</td>
</tr>
<tr>
<td>I How To Support Net Neutrality</td>
<td>109</td>
<td>20,002</td>
<td>Netflix</td>
<td>0.4</td>
<td>0.22</td>
<td>1.15</td>
<td>8.30%</td>
</tr>
<tr>
<td>J FCC Pressured To Regulate Broadband As A Utility / ISPs Strike Back Against Net Neutrality</td>
<td>108</td>
<td>8,131</td>
<td>Verizon, Comcast</td>
<td>0.42</td>
<td>0.25</td>
<td>17</td>
<td>13.00%</td>
</tr>
</tbody>
</table>

### Diagram

- **Legend**:
  - **A**: Google, Facebook, And 100 Tech Companies Come Together To Defend Net Neutrality
  - **B**: FCC Advances Controversial Rules That Could Allow Internet Fast Lanes
  - **C**: Netflix CEO Comes Out Against Comcast - Time Warner Merger
  - **D**: FCC Wheeler Revises Broadband Proposal Ahead Of Vote
  - **E**: Net Neutrality Is Dead; Will Only Be Saved If Citizens Have An Outcry
  - **F**: 4/24 FCC Chairman Promises To Set High Bar In New Net Neutrality Rules
  - **G**: NetMundial's Conference In Sao Paulo / Brazil's Internet Bill Of Rights
  - **H**: FCC Chairman Stands By Proposed Net Neutrality Rules
  - **I**: How To Support Net Neutrality
  - **J**: FCC Pressured To Regulate Broadband As A Utility / ISPs Strike Back Against Net Neutrality

### Timeline

- **April 14th**: Cluster C
- **April 28th**: Cluster B
- **May 1st**: Cluster A
- **May 7th**: Cluster D
- **May 14th**: Cluster I
- **May 21st**: Cluster J

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T4 (May 31 – July 18): The FCC comments dominated the news coverage in T4

Net Neutrality news network
labeled by conversation, sized by degree

- Leahy and Vermont urge D.C. to support net neutrality
- Tim Wu to run for governor
- Verizon lobbyists say net neutrality hurts people with disabilities
- Occupy Google
- Cable companies bankroll fake customers
- T-Mobile’s music freedom plan may end net neutrality
- FCC comments and related rulings
- John Oliver net neutrality segment
- Pew Study
T4 (May 31 – July 18): Oliver’s criticism of the FCC and comments posted on FCC’s public filings led the conversation

Net Neutrality news network
labeled by community (cluster), sized by degree
1,640 unique stories

Top communities
10 communities represent ~65% of total unique stories
A. John Oliver helps crash FCC's Net Neutrality comments (12%)
B. People/Companies file comments On FCC site (10%)
C. Netflix - Verizon Battle / FCC to investigate deals between content companies & providers (9%)
D. Internet companies press for Net Neutrality in FCC filings / Internet Association voices concerns about FCC’s Net Neutrality proposal (6%)
E. FCC extends Net Neutrality comment period (6%)
F. Tim Wu to run for lieutenant governor / FTC suggested as Net Neutrality authority at congressional hearing (6%)
G. Democrats unveil bill to ban internet fast lanes (5%)
H. Occupy Google protestors arrested while defending Net Neutrality (4%)
I. Cable companies bankroll fake consumer groups to end Net Neutrality (3%)
J. Pew Research interviews internet experts to detail threats to Internet's future (3%)
# T4 (May 31 – July 18): Heatmap

<table>
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<tr>
<th>Cluster</th>
<th>Cluster Size</th>
<th>Social Sharing</th>
<th>Dominant Co</th>
<th>Co % of Cluster</th>
<th>Centrality</th>
<th>Burstiness</th>
<th>% Local</th>
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<tr>
<td>A</td>
<td>190</td>
<td>32,731</td>
<td>Comcast</td>
<td>0.37</td>
<td>0.19</td>
<td>8.25</td>
<td>8.40%</td>
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<td>B</td>
<td>163</td>
<td>8,787</td>
<td>Verizon</td>
<td>0.46</td>
<td>0.23</td>
<td>0.89</td>
<td>4.30%</td>
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<td>C</td>
<td>144</td>
<td>9,976</td>
<td>Netflix</td>
<td>0.81</td>
<td>0.14</td>
<td>1.4</td>
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<td>D</td>
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<td>7,926</td>
<td>Comcast</td>
<td>0.34</td>
<td>0.24</td>
<td>19.5</td>
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<td>104</td>
<td>688</td>
<td>Google</td>
<td>0.62</td>
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<td>15.5</td>
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<td>93</td>
<td>3,073</td>
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<td>Netflix</td>
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<td>6.40%</td>
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<td>1,461</td>
<td>Google</td>
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<tr>
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<td>38,100</td>
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<td>1.29</td>
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<td>J</td>
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<td>1,305</td>
<td>Google</td>
<td>0.53</td>
<td>0.12</td>
<td>0.64</td>
<td>7.80%</td>
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</table>

## Cluster Descriptions
- **A**: John Oliver Helps Crash FCC’s Net Neutrality Comments
- **B**: People/Companies File Comments On FCC’s Website
- **C**: Netflix - Verizon Battle / FCC To Investigate Agreements Between Content Companies And Providers
- **D**: FCC Extends Net Neutrality Comment Period
- **E**: Internet Association Voices Concerns About FCC’s Net Neutrality Proposal
- **F**: Tim Wu To Run For Lieutenant Governor / FTC Suggested As Net Neutrality Authority
- **G**: Democrats Unveil A Bill To Ban Internet Fast Lanes
- **H**: Occupy Google Protestors Arrested While Defending Net Neutrality
- **I**: Cable Companies Bankroll Fake Consumer Groups To End Net Neutrality
- **J**: Pew Research Interviews Internet Experts To Detail Threat’s To Internet’s Future

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### Heatmap

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<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>A</th>
<th>I</th>
<th>C</th>
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<th>H</th>
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<th>D</th>
<th>E</th>
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