

# The Role of the Networked Public Sphere in the U.S. Net Neutrality Policy Debate

## **Abstract**

This paper studies the public debate over net neutrality in the United States in 2014. We compiled, mapped, and analyzed over 16,000 stories published on net neutrality, augmented by data from Twitter, bit.ly, and Google Trends. Using a mixed-methods approach that combines link analysis with qualitative content analysis, we describe the evolution of the debate over time and assess the role, reach, and influence of different media sources and advocacy groups. By four different measures, we find that the pro-net neutrality forces succeeded in dominating the public debate online. We conclude that a diverse set of actors working in conjunction through the networked public sphere played a central role in turning around the Federal Communications Commission policy on net neutrality.

## Introduction<sup>1</sup>

On February 4, 2015, the chairman of the Federal Communications Commission (FCC), Tom Wheeler, announced that he would circulate new net neutrality rules that would reclassify broadband providers as telecommunications carriers, which would place the FCC's jurisdiction over Internet access services on a firmer footing than it has been in over a decade (Wheeler, 2015). The full commission voted to adopt this proposal later in the month, marking a political victory that few would have believed possible a year earlier.

In this paper, we track the evolution of the net neutrality debate in digital media from January 2014 through President Obama's November 2014 announcement of his direct support for reclassification. We show that the networked public sphere weighed decisively in favor of net neutrality and helped to organize social mobilization efforts and demonstrate public sentiment in favor of governmental action. Opposition to net neutrality in the networked public sphere failed to gain traction. This strong verdict in digital media aligns with the unprecedented volume of public comments, which were interpreted as a reflection of broad public support for strong net neutrality rules. This public outpouring exerted undeniable though difficult to measure pressure on the FCC in its deliberations, and likely interacted with President Obama's decision to declare his support for reclassification, a declaration that was a critical moment in the politics of net

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<sup>1</sup> We thank the many people that supported and contributed to this research, particularly <people who work with the authors and foundations that have provided grant support>.

neutrality. We conclude that the networked public sphere played a central, arguably decisive, role in turning around the FCC policy on net neutrality.

## Methods

This research is part of a larger debate over how networked communications have affected political participation, through agenda setting, media engagement, and political mobilization.<sup>2</sup> The analysis and observations in this paper are based on several sources of data, analytical approaches, and perspectives on digital media. First, this paper draws on data collected and analyzed using the Media Cloud platform.<sup>3</sup> We identified just over 16,000 stories during the eleven-month period and look at the connections between media sources formed by the more than 10,000 links between these stories. Tracking the link economy offers a detailed view of the interests and attention of the active participants in the debate, and in aggregate, a measure of the most influential sources and stories. Second, we track the evolution of the debate on Twitter. We gathered data on tweet volume over the course of the debate using the Crimson Hexagon platform. In addition, we tallied the number of times different media stories and resources were shared over Twitter during this time period based on data collected using Twitter's API. Third, we collected data from the bit.ly API in order to calculate the number of times each of the stories was clicked. This offers a useful proxy of interest and attention among a wider population of readers. Fourth, we collected data from Google Trends to gauge the variation in search volume over time. This provides a measure of the magnitude of general public interest in net neutrality

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<sup>2</sup> For an extensive literature review see <Paper published by Authors>

<sup>3</sup> Further details on this methodology and the Media Cloud platform can be found at: <http://mediacloud.org/category/blog/tool-blog/>

over the course of the debate. Finally, for each of these sources of data, we hand coded the top 30 stories to ascertain which stories offered support for neutrality, which were in opposition, and which presented opinions from both sides of the debate. From the set of Media Cloud stories we generated link network maps by building a graph with media sources as nodes and links between media sources as unweighted edges. The graphs were laid out using the Graphviz neato algorithm.<sup>4</sup> The images of the maps were generated with Gephi.<sup>5</sup>

<b>Media Cloud</b>	Collection of 16k+ media stories and categorization by media type Network mapping Analysis of links between different media sources and stories
<b>Twitter</b>	Volume of tweets over time Most frequently shared links
<b>Bit.ly</b>	Stories that received the most clicks
<b>Google trends</b>	Relative volume of net searches over time
<b>Content analysis</b>	Hand coding of top stories, links shared on Twitter, and clicks via bit.ly

*Table 1. Data Sources and Analytical Approaches*

## Overview of the debate

Tracking and tabulating the inlinks to different stories and media sources offers a measure of the prominence and popularity of different voices and viewpoints among the cohort of authors that

<sup>4</sup> <http://www.graphviz.org/>

<sup>5</sup> <https://gephi.github.io/>

write about the issue. The more than 10,000 inlinks from this network are distributed across 4,390 stories representing 925 media sources.

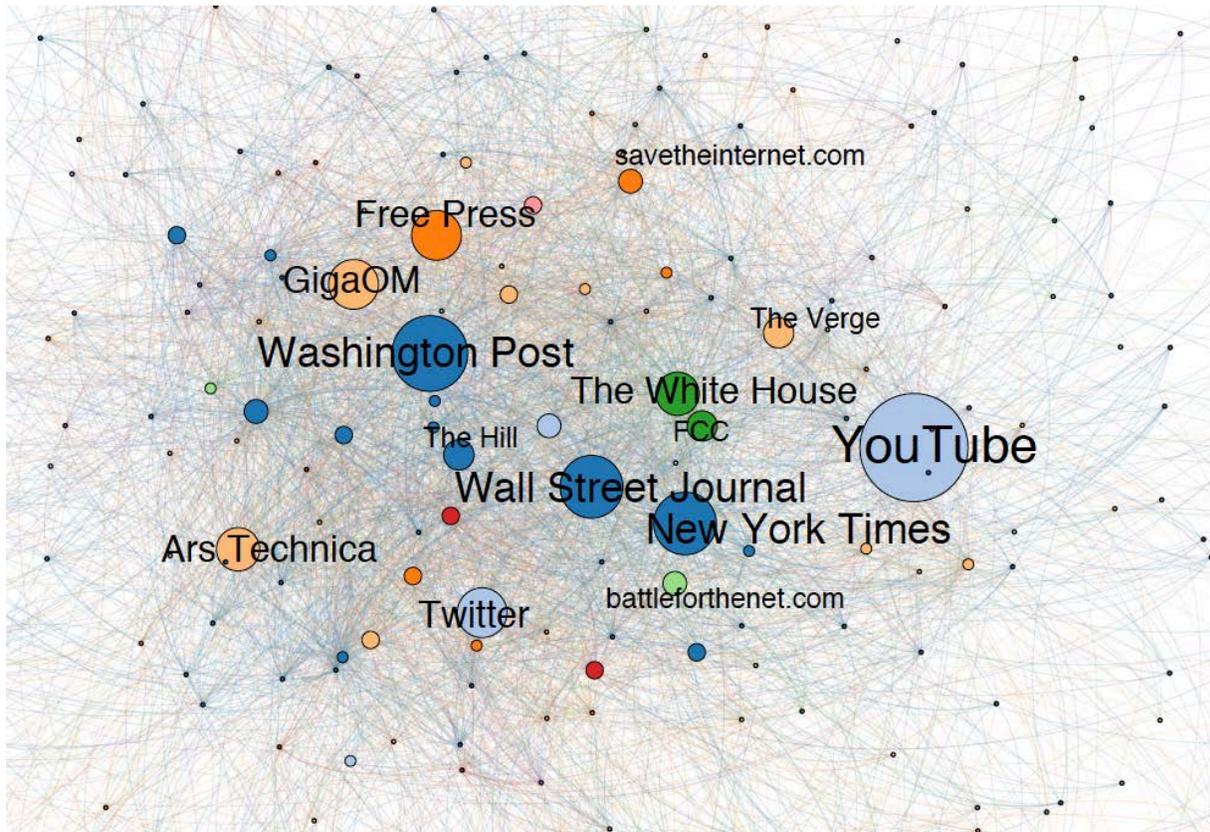


Figure 1. Map of Media Sources, January 1 – November 17

As seen in Figure 1, a diverse set of media sources played prominent roles in the net neutrality debate in 2014. In this figure, the size of each node reflects the total number of inlinks to the media source and the colors denote different media types. YouTube, a user generated media site, is the source that received the most inlinks. These inlinks are distributed across more than 150 videos that received at least one inlink. John Oliver’s June 1 video was the most popular with nearly 200 inlinks. Twitter appears among the top ten media sources with inlinks spread across many accounts.

Media Source	Inlinks	Outlinks	Stories
YouTube	547	4	173
Washington Post	402	103	341
Wall Street Journal	326	32	251
New York Times	326	80	205
Free Press	281	70	116
Twitter	279	0	129
GigaOM	266	264	294
The White House	254	7	25
Ars Technica	229	178	279
The Hill	184	21	155
FCC	178	0	10
The Verge	171	89	135
battleforthenet.com	156	4	3
Wikipedia	152	0	27
Huffington Post	141	317	270
savetheinternet.com	128	35	31
Netflix	123	0	2
Yahoo!	119	80	408
Wired	117	87	95
EFF	111	43	38
CNET	108	80	131
Guardian	103	48	86
Comcast	98	1	22
Public Knowledge	97	16	52
National Journal	96	22	52

*Table 2. Inlinks, outlinks, and stories by media source*

After YouTube, three mainstream media sites received the most inlinks: the Washington Post, Wall Street Journal, and the New York Times (Table 2), suggesting that a good portion of the

upper end of the power law distribution followed the traditional media playbook. Two government sources are in the top ten: the White House and the FCC. A number of tech media organizations were among the most linked-to sites, including GigaOm, Ars Technica, and the Verge. These and other tech media outlets covered the story in depth for the duration of the debate.

Advocacy organizations not only provided coverage of the events in a fashion similar to traditional media but also helped to mobilize public support for net neutrality. Free Press, the Electronic Frontier Foundation (EFF), Public Knowledge, and net neutrality campaign sites—most notably BattlefortheNet—are consistently among the most linked-to sites throughout the controversy. Public statements by corporate actors were also featured in the debate: Netflix came out as a strong voice in favor of net neutrality, while Comcast, AT&T, and Verizon offered strong opposition, although among the corporate opposition, only Comcast appears in the top 25 media sources. As we describe later, the attention paid to the major broadband providers was primarily through links from stories that are either critical or neutral of those companies, not from supporters.

## The 2014 Net Neutrality Debate in Nine Acts

We describe the arc of digital media coverage of the net neutrality debate surrounding nine key events. Six of these nine events are driven by government action: a court decision in January, FCC policy proceedings, and a major policy statement by the president. Both mainstream and non-traditional media play important roles in the coverage of these events. The remaining three events were not tied to government action. The uptick in March was in response to a blog post by the CEO of Netflix. The spike in traffic in the first week of June was instigated by John Oliver. The upsurge in September was precipitated by the social mobilization efforts of Internet activists.

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January 14th	Federal circuit court strikes down FCC's existing net neutrality rules
February 18th	White House responds to petition; FCC reports plans to rewrite net neutrality rules
March 20th	Netflix makes policy statement in support of net neutrality
April 23rd	Coverage of forthcoming FCC rule making
May 15th	The notice of public rule making (NPRM) announcement by the FCC on May 15 <sup>th</sup>
June 1st	John Oliver video in support of net neutrality
July 15th	Deadline for submitting first-round public comments to FCC
September 10th	Internet slowdown day prior to September 15 deadline for FCC comments
November 10th	President Obama supports reclassification and strong net neutrality rules

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*Table 3. Key Milestones in the Net Neutrality Debate in 2014*

As seen in Figure 2, the relative distribution of stories in digital media and Twitter activity related to net neutrality are closely aligned over time. Obama's November 10 public statement in

support of strong net neutrality garnered the most attention, followed by the FCC’s May 15 release of draft net neutrality rules.

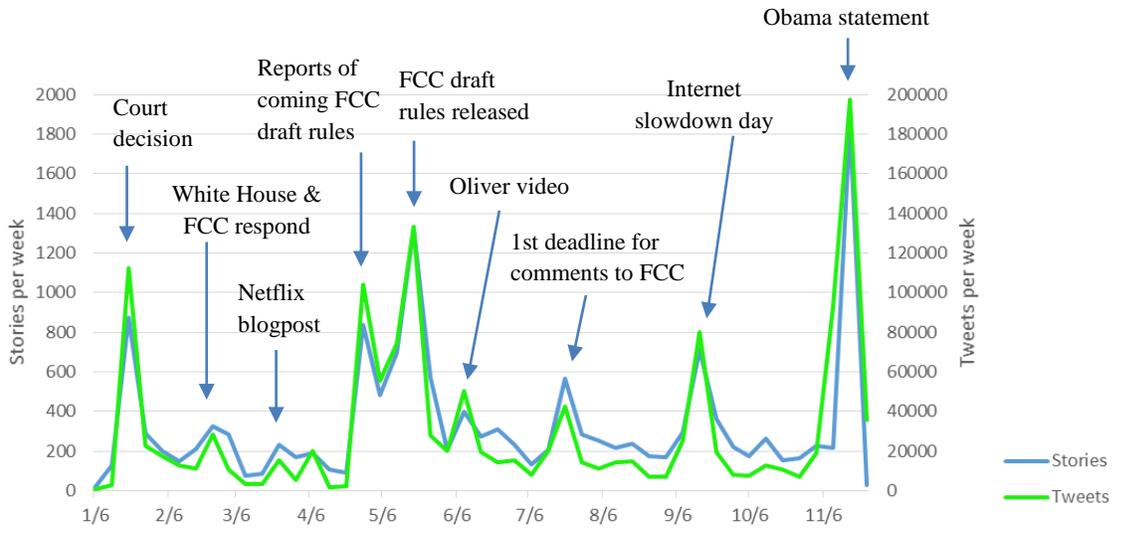


Figure 2. Volume of stories and tweets over time

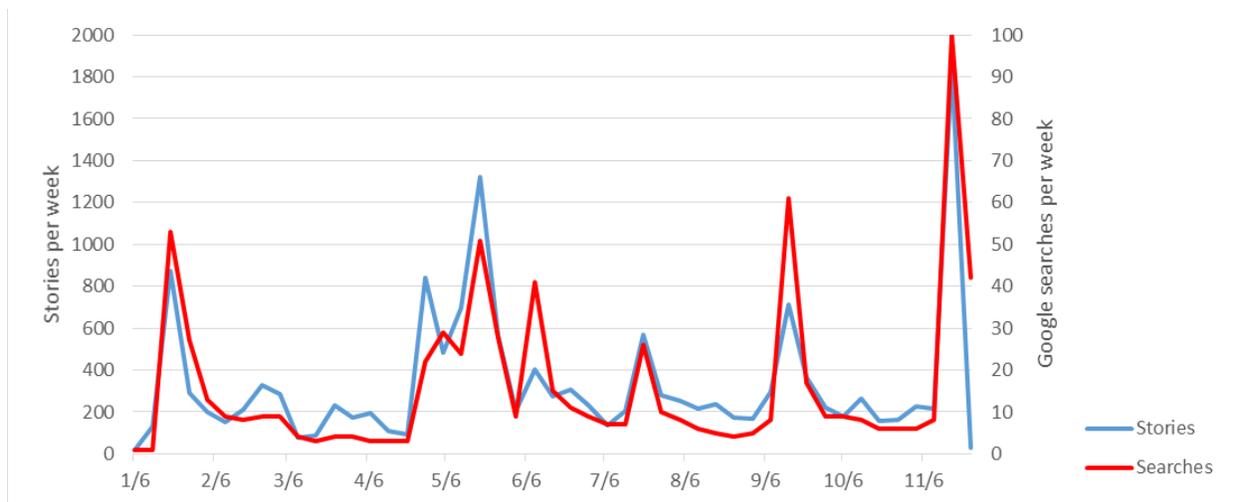


Figure 3. Volume of stories and Google searchers over time

The relative volume of Google searches over time also follows the profile of digital media stories with a few notable differences (Figure 3). The reporting of events in February and March did not prompt a commensurate rise in Google searches. In April, while Google searches rose sharply

with the news of a forthcoming FCC ruling, the searches did not keep pace with the media coverage. The other two outliers are the disproportionate volume of searches in June (coinciding with the John Oliver show on net neutrality) and the Internet slowdown day in September.

## **Act 1 – D.C. Circuit Court strikes down FCC net neutrality rules**

The first burst of activity occurs on January 14 when the D.C. Circuit Court issued a ruling that struck down the FCC’s 2010 Open Internet Order that embodied the net neutrality guidelines in place up to that point (Federal Communications Commission, 2010). Observers from both sides of the debate noted that the D.C. Circuit decision was not a clear victory for either side; the outcome would depend in part on the FCC’s next move, and the inevitable court challenges that would follow (Hall, 2014; Tech Freedom, 2014; Werbach, 2014; Benjamin, 2014). A great fear among those opposed to government regulation of Internet access and hope for those in favor of government intervention was that the January court decision so constrained the range of net neutrality rules the FCC could pass that it might have provided just enough impetus for the FCC to seek to solidify its regulatory power by reclassifying broadband as a telecommunications service and ultimately issue stronger net neutrality rules. Marvin Ammori (2014) aptly framed this possibility in a piece in Slate titled: “The Net Neutrality Fight has been Lost; Now We Can Finally Win the War.”

We identified almost 900 stories that covered net neutrality during the week of January 14th. The most linked-to stories came from a broad range of media sources, including FCC Chairman Tom

Wheeler’s response, a blog post by venture capitalist Fred Wilson, the text of the court decision, and coverage by traditional and tech media outlets (Table 4).

Story	Media Source	Inlinks
Ensuring an Open Internet Now and for the Future	FCC	18
DC Net Neutrality ruling	scribd.com	18
VC Pitches In A Year Or Two	A VC	18
Appeals Court Strikes Down FCC’s Net Neutrality Rules	Wall Street Journal	17
Court strikes down FCC's net neutrality rules	GigaOM	17

Table 4. Stories with most inlinks, January 13 - 20

## Act 2 – Responses from the White House and FCC; Netflix and Verizon scuffle

There was a modest increase in media coverage in the middle of February when the White House responded to a petition on the We the People website that asked the President to direct the FCC to reclassify Internet service providers as common carriers (Table 5). This petition received over 100,000 signatures. The response from the White House deferred to the FCC: “The FCC is an independent agency. Chairman Wheeler has publicly pledged to use the full authority granted by Congress to maintain a robust, free and open Internet -- a principle that this White House vigorously supports.” (Sperling & Park 2014). The FCC also announced the same week that it would issue new net neutrality rules later in the spring. The ongoing conflict between Netflix and Verizon received attention as well. This had been fueled by the release of data by Netflix showing that the delivery of its videos were slowing over time (Kastrenakes, 2014).

Story	Media Source	Inlinks
Restore Net Neutrality By Directing the FCC to Classify Internet Providers as Common Carriers	The White House petition	10
Reaffirming the White House's Commitment to Net Neutrality	The White House petition response	9
FCC Plans to Issue New Net Neutrality Rules	Wall Street Journal	6
Verizon using recent Net Neutrality victory to wage war against Netflix	davesblog.com	5
Netflix performance on Verizon and Comcast has been dropping for months	Ars Technica	4

Table 5. Stories with most inlinks, February 17 - 24

### Act 3 – Netflix takes center stage

An uptick in activity occurred in the middle of March (Table 6), instigated by a blog post by the CEO of Netflix, Reed Hastings (“Internet Tolls and the Case for Strong Net Neutrality”) and a response from AT&T (“Who Should Pay for Netflix”). The Netflix statement would become a point of reference for subsequent coverage and discussion. This blogpost is the third most-linked-to story overall in the controversy, behind only the John Oliver video to come in June and President Obama’s November statement.

Story	Media Source	Inlinks
Internet Tolls and the Case for Strong Net Neutrality	Netflix Blog	53
Who Should Pay for Netflix?	AT&T Public Policy Blog	12
Netflix & Level 3 Only Telling Half The Story, Won't Detail What Changes They Want to Net Neutrality	streamingmedia.com	5
"Chicken"   A Game Played as a Child and by some ISPs with the Internet	Level 3 Communications Blog	4
Hey FCC, Netflix thinks peering should be a net neutrality issue too	GigaOM	4

Table 6. Stories with most inlinks, March 17 – 24

#### Act 4 – News of forthcoming draft net neutrality rules

The next spike in activity started when the Wall Street Journal reported on April 23 that the FCC planned to propose new net neutrality rules that would allow broadband providers and content providers to negotiate deals to prioritize traffic (Table 7). This news was met with a barrage of condemnations coming from net neutrality advocates. The title of Tim Wu's (2014) article in the New Yorker conveyed the sentiment well: "Goodbye Net Neutrality; Hello Net Discrimination". Over 800 stories comprised the coverage during this week. While stories by the Wall Street Journal, New York Times, and Washington Post received the most inlinks, a range of other prominent sources included tech media, government, companies, and advocacy organizations shared attention. This is the only phase of the debate in which mainstream media sources occupied the top several positions in the link economy.

Story	Media Source	Inlinks
FCC to Propose New Net Neutrality Rules	Wall Street Journal	80
F.C.C., in a Shift, Backs Fast Lanes for Web Traffic	New York Times	47
Goodbye, Net Neutrality; Hello, Net Discrimination	The New Yorker	23
The FCC is planning new net neutrality rules and they could enshrine pay for play	Washington Post	19
Internet Tolls and the Case for Strong Net Neutrality	Netflix Blog	16

*Table 7. Stories with most inlinks, April 21 – 28*

The compromise solution devised by Wheeler appeared to satisfy few. Coverage of the story over the following two weeks remained high as advocacy efforts kicked into gear. Internet activists, politicians, and companies issued statements, some urging the FCC to adopt stricter net neutrality rules and others to abandon them altogether. A number of tech companies, including Amazon, Facebook, Google, Microsoft, Netflix, Twitter, and Yahoo! wrote a letter on May 7 to the FCC commissions indicating that rules permitting paid prioritization would represent “a grave threat to the internet.”

### **Act 5 – New draft net neutrality rules are released**

On May 15, the FCC voted in favor of a preliminary proposal that appeared to open the door to paid prioritization of traffic if shown to be “commercially reasonable”—Wheeler contested this interpretation, saying “I’ve consistently said, there is only one Internet. There is not a fast or slow Internet.” (Romm, 2014) His assertions were met with skepticism by many (Kang, 2014;

Higginbotham, 2014; Brodtkin, 2014). The attacks came from both sides. The issue of the draft proposal, a Notice of Proposed Rule Making (NPRM), marked the opening of a period for the public to comment on the proposal. The first commenting period extended to July 15, and a second period to allow public responses to comments ran into September.

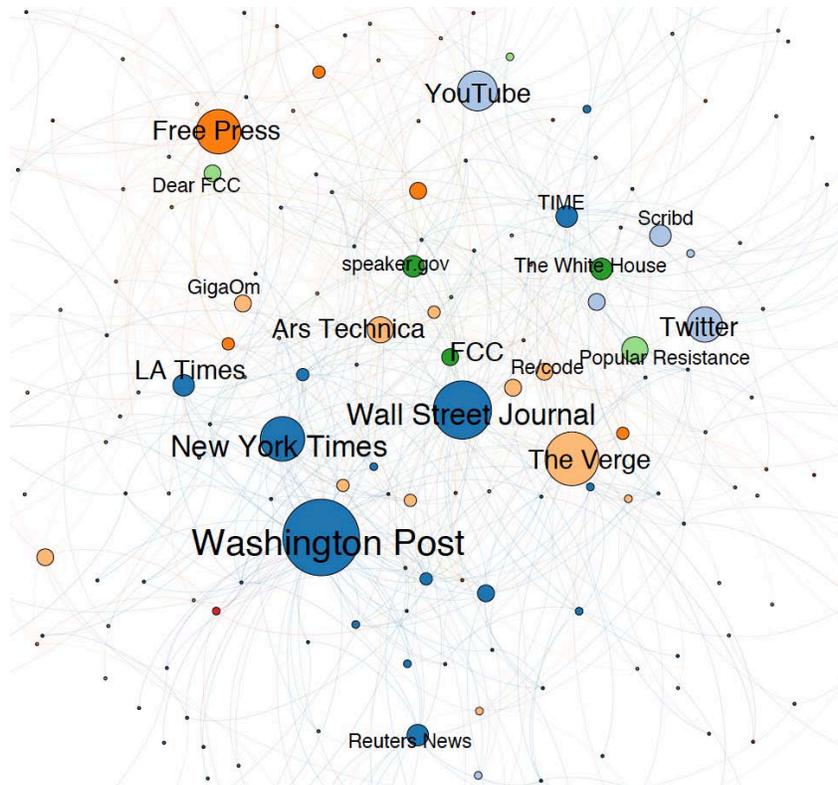


Figure 4. Map of Media Sources, May 12 – 19

Story	Media Source	Inlinks
FCC to Propose New Net Neutrality Rules	Wall Street Journal	15
Dear Chairman Wheeler:	speaker.gov	15
Maintain True Net Neutrality	White House petition	15
Dear FCC,	dearfcc.org	12
Here's that FCC net neutrality compromise everyone demanded. And here's the problem.	GigaOM	12

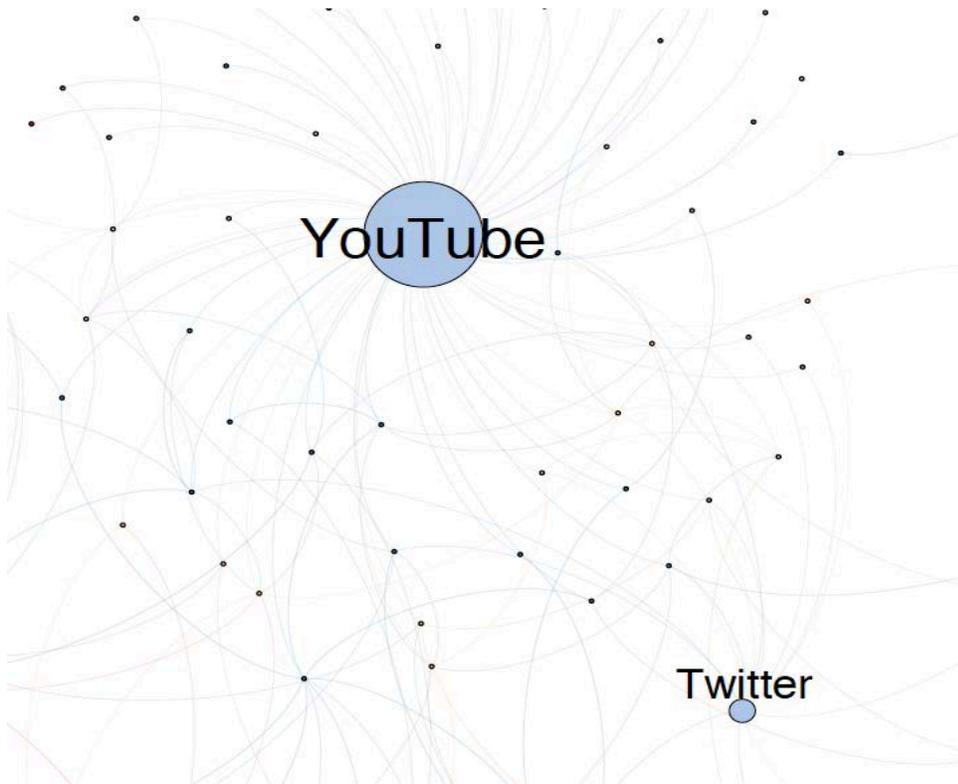
*Table 8. Stories with most inlinks, May 12 – 19*

The week of the May 15 announcement saw another surge of media coverage with more than 1,300 stories. A broad range of sources received inlinks, although in a relatively flat distribution of inlinks (Table 8). Topping the list were a White House petition urging strong net neutrality, a letter from Speaker Boehner and colleagues coming out against net neutrality, a Wall Street Journal article, and DearFCC.org, an advocacy site put up by EFF to promote and facilitate public submissions to the FCC in support of net neutrality.

### **Act 6 – John Oliver delivers segment about net neutrality**

Advocacy efforts in support of net neutrality ramped up through May and June with protests at the FCC and coordinated efforts to call and write to the FCC. There was another rise in coverage in the first week of June (just over 400 stories) driven in large part by links to a YouTube video of John Oliver's show in which he aims his caustic wit at the FCC and net neutrality opponents (Table 9). This video would become a prominent touch point for net neutrality advocates and the

most popular link in the course of the controversy. The YouTube video had been viewed over 7 million times by January 2015 with the ‘likes’ outnumbering the ‘dislikes’ at a rate of 100:1.



*Figure 5. Map of Media Sources, June 2 - 9*

Story	Media Source	Inlinks
Last Week Tonight with John Oliver: Net Neutrality	YouTube	72
Internet Tolls and the Case for Strong Net Neutrality	Netflix	11
Dear FCC	dearfcc.org	6
Cable Companies Are Astroturfing Fake Consumer Support to End Net Neutrality	vice.com	6
Twitter / FCC: We've been experiencing technical difficulties with our comment system due to high traffic.	Twitter	5

Table 9. Stories with most inlinks, June 2 - 9

There was a surge in comments submitted to the FCC fed by the Oliver video. Well into the commenting period, the FCC reported that its website had problems handling the high volume of submissions.



Image 1. John Oliver's clip on Net Neutrality uploaded June 1



*Image 2. Tweet from the FCC's official Twitter account, June 2*

Netflix continued to play a provocative role in the debate and contribute to the media agenda: this time by sending its users an error message that attributed problems with video streaming to Verizon: “The Verizon network is crowded right now.” (Seward, 2014). An article by Vice in this week presented evidence that industry groups were funding advocacy groups to oppose net neutrality, “astroturfing fake consumer support.” (Fang, 2014).

## **Act 7 – Advocacy efforts ramp up; closing of first public commenting period**

Coverage rose again the week of July 14 to almost 600 stories, bolstered by the end of the first round of comments to the FCC, while Oliver’s video continued to attract many links (Table 10). A number of organizations that support net neutrality, including EFF, Free Press, Demand Progress, Engine, the Nation, and CredoAction, offered online forms to make it easy for people to submit comments to the FCC. BattlefortheNet, which would rise in prominence over the next several months, makes its first appearance in the link economy with the backing of “Team

Internet.” The most popular of the campaign sites opposed to net neutrality, DontBreaktheNet, would not launch until September.<sup>6</sup>

Story	Media Source	Inlinks
Last Week Tonight with John Oliver: Net Neutrality	YouTube	20
This is why your Internet is slow. And it'll get worse. Unless you take 1 min to do this, now.	battleforthenet.com	8
Keeping Track of the Open Internet Comments Submitted to the FCC	FCC	6
Net Neutrality and Modern Memory	AT&T Public Policy blog	5

Table 10. Stories with most inlinks, July 14 - 21

While John Oliver’s call for the Internet “monsters” to write to the FCC received much media attention and was undoubtedly responsible for a significant increase in activity in June, the response in mid-July was several times higher (Bray, 2014), bolstered by the efforts of advocacy organizations. Analysis by the Sunlight Foundation found that comments linked to five advocacy efforts (CredoAction, BattlefortheNet, EFF, Daily Kos, and Avaaz), accounted for close to half of the 800,000 comments received in the first submission window (Lannon & Pendleton, 2014).

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<sup>6</sup> <http://dontbreakthe.net/>

## Act 8 – Internet Slowdown Day

Advocacy efforts coalesced around September 10 protests dubbed the “Internet slowdown.” Protest organizers recruited websites to display the “spinning wheel of death” on their sites to remind users of the frustration of waiting for websites to load. Participating websites also urged visitors to contact law makers and demand action on net neutrality. The organizers reported that over 40,000 websites participated in the online protests.

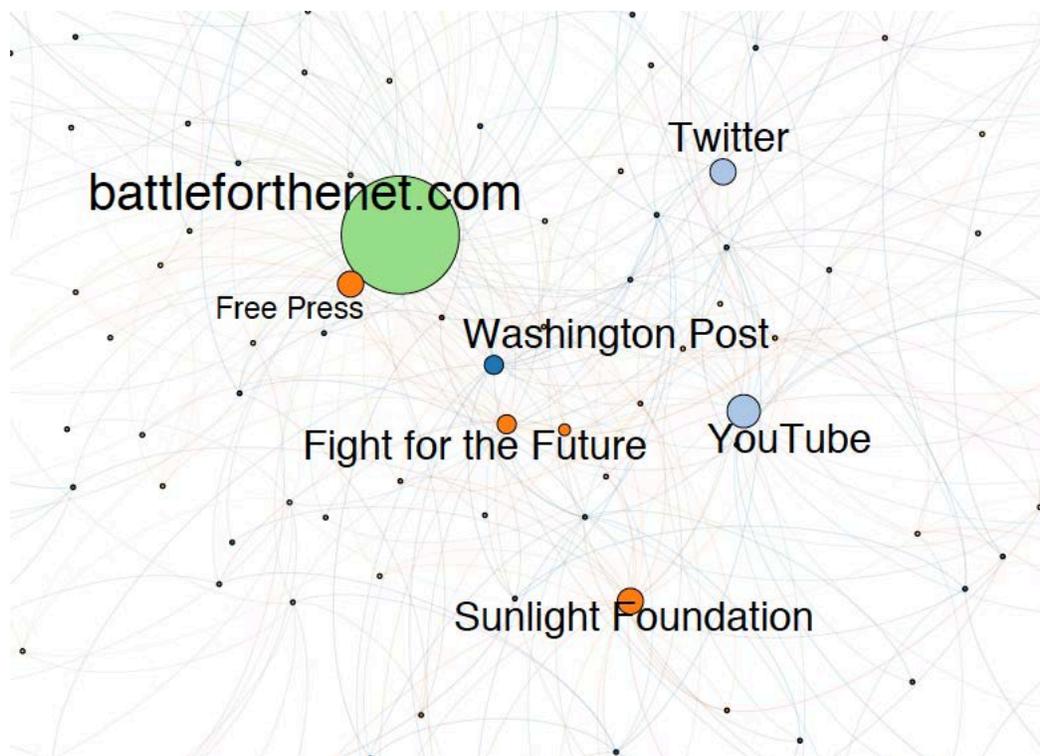


Figure 6. Map of Media Sources, September 8 – 15

In addition to drawing wide media coverage—coverage exceeded 700 stories that week—the Internet slowdown protest activities appear to have inspired a large number of people to contact the FCC, Congress, and the White House. The organizers behind the site BattlefortheNet alone

counted up over two million emails sent, more than three hundred thousand phone calls, and close to eight hundred thousand additional comments to the FCC (BattlefortheNet, 2014).

Story	Media Source	Inlinks
Battle For The Net	battleforthenet.com	66
This is why your Internet is slow. And it'll get worse. Unless you take 1 min to do this, now.	battleforthenet.com	37
Last Week Tonight with John Oliver: Net Neutrality	YouTube	21
What can we learn from 800,000 public comments on the FCC's net neutrality plan?	sunlightfoundation.com	20
Save the Internet: Net Neutrality	savetheinternet.com	12

Table 11. Stories with most inlinks, September 8 – 15

The success of the pro-net neutrality camp in driving eight hundred thousand comments in July led to a response from the anti-net neutrality camp. Unlike the prior round, the second round of the commenting period included a large number of responses opposing net neutrality. The Sunlight Foundation again analyzed the results and reported (Pendleton & Lannon, 2014):

In marked contrast to the first round, anti-net neutrality commenters mobilized in force for this round, and comprised the majority of overall comments submitted, at 60%. We attribute this shift almost entirely to the form-letter initiatives of a single organization, American Commitment, who are single-handedly responsible for 56.5% of the comments in this round.

They also reported that the sentiment among the non-form letters was similar to that of the first round with only about 1% of responses opposing net neutrality.

Perhaps because the anti-net neutrality mobilization efforts by American Commitment appears to have been an email marketing campaign (Koebler, 2014), its footprint was almost completely absent from the link economy. Although the total balance of pro- and anti- comments submitted to the FCC was roughly equal by the end of the second comment period, the public debate over the meaning of the comments was won by the pro-net neutrality forces. In part because Sunlight Foundation's analysis of the first round identified public comments as overwhelmingly in favor of net neutrality, in part because reporting on the second comment round emphasized comments from the pro-net neutrality side rather than the total balance, and in part because reports on the anti-net neutrality side tended to emphasize the email marketing aspect of the campaign, the meaning of the two million comments introduced by the anti-net neutrality camp was inverted. By the time of President Obama's November statement, the sheer number of comments (4 million) became the headline number, and all comments were effectively treated as supporting net neutrality. Mobilizing large numbers of citizen contacts without systematically winning the public interpretation of these contacts backfired and strengthened the pro-net neutrality camp's position.

## Act 9 – Obama backs strong net neutrality and Title II reclassification

On November 10, President Obama spoke out in favor of strong net neutrality rules and Title II reclassification of broadband, bringing about the largest surge in media attention during the year. Over 1,850 stories on net neutrality appeared in this week, with a large proportion of the inlinks going to the official White House statement (Table 12). After the White House announcement page (150 inlinks), Ted Cruz’ response via Twitter received the second most attention with 29 inlinks. Responses from Verizon and Comcast were also in the top five, with 24 and 19 inlinks respectively.

Story	Media Source	Inlinks
Net Neutrality: President Obama's Plan for a Free and Open Internet	The White House	143
Net Neutrality is Obamacare for the Internet; the Internet should not operate at the speed of government. (Sen. Ted Cruz)	Twitter	29
Verizon Statement on White House Title II Announcement	Verizon Policy Blog	24
Last Week Tonight with John Oliver: Net Neutrality	YouTube	19
Surprise! We Agree with the President’s Principles on Net Neutrality	Comcast Voices	19

Table 12. Stories with most inlinks, November 10 - 17

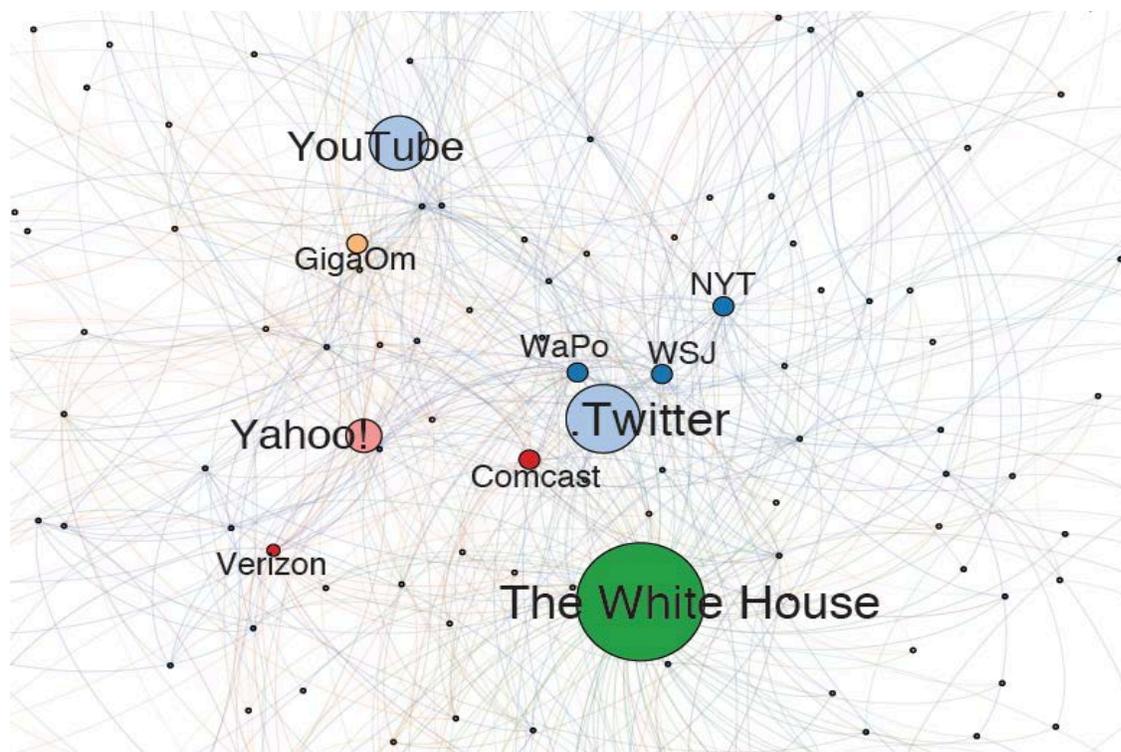


Figure 7. Map of Media Sources, November 10 - 17

## The Link Economy Backs Net Neutrality

Among the more than 16,000 stories that we identified that discussed net neutrality from January to November 2014, there are a wide range of opinions on the merits of net neutrality regulations and the likely impact on innovation, democracy, economic growth, and investment in high-speed broadband infrastructure, along with many other angles.

As suggested by the top media sources shown earlier in Table 2, the link economy gravitated primarily to sources that either presented both sides of the debate, or came out in favor of net neutrality. This trend holds true when we look at the top stories, as shown in Table 13. Pro-net

neutrality stories form the majority of the top stories, with John Oliver, President Obama, Netflix, and BattlefortheNet comprising the top four. Six of the top ten stories explicitly support neutrality, and nine of the top fifteen. Many of these are advocacy organizations who are strong proponents of net neutrality, e.g. Free Press, EFF, Fight for the Future, and Demand Progress. Among the top link recipients, the neutral stories are mostly from mainstream media with Wikipedia and the FCC also represented.

Title	Media Source	Inlinks	+/-
Last Week Tonight with John Oliver: Net Neutrality	YouTube	192	
President Obama's asking the FCC to keep the Internet open and free	The White House	151	
Internet Tolls And The Case For Strong Net Neutrality	Netflix blog	122	
Battle For The Net	battleforthenet.com	100	
FCC to Propose New Net Neutrality Rules	Wall Street Journal	98	
Net neutrality	Wikipedia	77	
F.C.C., in a Shift, Backs Fast Lanes for Web Traffic	New York Times	66	
Free Press	Free Press	57	
Finding the Best Path Forward to Protect the Open Internet	FCC	55	
This is why your Internet is slow. And it'll get worse. Unless you take 1 min to do this, now.	battleforthenet.com	55	
Open Internet	FCC	51	
What can we learn from 800,000 public comments on the FCC's net neutrality plan?	Sunlight Foundation	49	
Protecting Net Neutrality and the Open Internet	Mozilla Policy & Advocacy	38	
Goodbye, Net Neutrality; Hello, Net Discrimination	The New Yorker	37	

Save the Internet   Join the fight for Internet Freedom	savetheinternet.com	36	
Net Neutrality	savetheinternet.com	34	
FCC Net Neutrality Plan Calls for More Power Over Broadband	Wall Street Journal	34	
We the People: Your Voice in Our Government	The White House	32	
The Open Internet	FCC	31	
The FCC is planning new net neutrality rules. And they could enshrine pay-for-play.	Washington Post	30	
Net Neutrality is Obamacare for the Internet; the Internet should not operate at the speed of government. (Sen. Ted Cruz)	Twitter	29	
Appeals Court Strikes Down FCC's Net Neutrality Rules	Wall Street Journal	28	
VC Pitches In A Year Or Two	A VC	28	
Federal appeals court strikes down net neutrality rules	Washington Post	26	
Who Should Pay for Netflix?	AT&T Public Policy Blog	26	
Comcast's deal with Netflix makes network neutrality obsolete	Washington Post	25	
Ensuring an Open Internet Now and for the Future	FCC	25	
Court strikes down FCC's net neutrality rules, agency may appeal	GigaOM	24	
DC Net neutrality ruling	Scribd	24	
Verizon statement on White House title II announcement	Verizon	24	

Table 13. Inlinks by story

We have to travel far down the list to find views and voices opposed to net neutrality. The first example, 22nd on the list, is the tweet from Senator Ted Cruz: "Net Neutrality is Obamacare for the Internet; the Internet should not operate at the speed of government." However, it occupies this position only by virtue of the links it receives criticizing his position; none of the 29 inlinks are in clear support of his tweet. Verizon appears in 25th place with 26 inlinks to a November

10th story in opposition to Obama's statement; one of those 26 inlinks comes from an article that takes a clear anti-net neutrality stance. A blogpost from AT&T in March responding to the Netflix blog post by Reed Hastings also received 26 inlinks; none of the inlinks come from anti-net neutrality articles. Only at the very fringes of the link economy can one find evidence of like-minded organizations linking to opinions in opposition to net neutrality.

There are many strong voices in opposition to net neutrality from think tanks (e.g. Gattuso 2014), blogs (Seton, 2014), and media (Shapiro, 2014; Babcock, 2014). None of them receive more than a few inlinks. DontBreaktheNet,<sup>7</sup> sponsored by Tech Freedom, appears to be the anti-net neutrality campaign with the greatest number of inlinks. Of the 15 inlinks it receives, only two come from supportive sources: Cato.org and an article in Forbes written by Larry Downes.<sup>8</sup> In the link economy, the only prominent platform for opponents of net neutrality is coverage of their views in traditional media.

## **Net Neutrality Links on Twitter**

The most frequently linked-to sites on Twitter (Table 4) offer many differences compared to the results presented earlier drawing on a broader digital media landscape (Table 4). BattlefortheNet is far and away the most frequently shared site on Twitter; links to this site were shared on Twitter more than the next eleven most-shared sites combined. Other popular sites shared frequently on Twitter include The Oatmeal, Netflix, John Oliver, President Obama, and a

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<sup>7</sup> <http://dontbreakthe.net/>

<sup>8</sup> <http://www.cato.org/blog/net-neutrality-or-destroying-internet-innovation-investment>  
<http://www.forbes.com/sites/larrydownes/2014/09/12/vcdc-when-internet-neutrality-principles-conflict-with-engineering-everyone-loses/>

petition to the White House. This list is comprised largely of explicit calls to action: 16 of the top 25 promote action to support net neutrality. The number of mainstream media stories is far fewer. Except for four balanced stories, all of the top stories are in support of action on net neutrality. Compared to the broader digital media landscape, Twitter appears to be used disproportionately more as a vehicle for social mobilization and less as a citation platform. In this instance, the mobilizing is heavily concentrated on the side of net neutrality.

Title	Media source	Twitter shares	+/-
This is why your Internet is slow. And it'll get worse. Unless you take 1 min to do this, now.	BattlefortheNet.com	131869	
Battle For The Net	BattlefortheNet.com	43058	
Dear Senator Ted Cruz, I'm going to explain to you how Net Neutrality ACTUALLY works	The Oatmeal	31920	
If you hate this symbol, join Netflix and defend #NetNeutrality on Sept. 10th	Netflix	23724	
Last Week Tonight with John Oliver: Net Neutrality	YouTube	21720	
President Obama's asking the FCC to keep the Internet open and free	White House	21505	
White House Petition: Maintain True Net Neutrality	White House	13046	
Net Neutrality News, Videos, Reviews and Gossip	Gizmodo	11185	
The Open Internet: A Case for Net Neutrality	theopeninter.net	11031	
F.C.C., in a Shift, Backs Fast Lanes for Web Traffic	New York Times	10997	
White House Petition: Restore Net Neutrality By Directing the FCC to Classify Internet Providers as "Common Carriers"	White House	8999	
Net neutrality News, Videos, Reviews and Gossip	Kotaku	7885	
*Everyone* at the FCC can help save net neutrality or destroy it.	CalltheFCC.com (EFF)	7750	

Save the Internet   Join the fight for Internet Freedom	SavetheInternet.com	7006	
Net Neutrality in the US: Now What?	YouTube: Vi Hart	5875	
Net Neutrality: Join the Fight with Namecheap	NetNeutrality.com	4816	
Verizon using recent Net Neutrality victory to wage war against Netflix	Davesblog.com	4720	
Obama says FCC should reclassify internet as a utility	The Verge	4371	
FCC approves plan to consider paid priority on Internet	Washington Post	4359	
President Obama's Statement on Keeping the Internet Open and Free	YouTube	4125	
Why Net Neutrality Matters (And What You Can Do To Help)	YouTube: College Humor	3891	
You Have Until Midnight to Yell at the FCC About Net Neutrality... Sort Of	Gizmodo	3866	
Last chance to save Net Neutrality	BoingBoing	3649	
Internet Citizens: Defend Net Neutrality	You Tube: C.G.P. Grey	3634	
Obama Calls for Strict Net Neutrality Policy	New York Times	3590	

Table 14. Links shared on Twitter

## Clicks on Net Neutrality Stories via bit.ly

Drawing on data from bit.ly, we can estimate which stories in the debate receive the most clicks on shortened URLs that have been shared via social media. This data serves as a proxy for the social media attention across a broader online audience. The overwhelming majority of clicks reported by bit.ly come from some combination of Twitter and Facebook.

Title	Media source	Bitly clicks	+/-
Porn Stars Explain Net Neutrality	Funny or Die	204678	
The wrong words: how the FCC lost net neutrality and could kill the internet	The Verge	40474	
Huge coalition led by Amazon, Microsoft, and others take a stand against FCC on net neutrality	The Verge	39775	
How the Net Neutrality Ruling Will Affect Your Netflix Habit	ABC News	33113	
This hilarious graph of Netflix speeds shows the importance of net neutrality	Washington Post	30942	
Maintain True Net Neutrality	White House petition	25484	
Obama just announced his full support to preserve net neutrality	Mother Jones	23771	
This is why your Internet is slow. And it'll get worse. Unless you take 1 min to do this, now.	battleforthenet.com	23182	
The FCC is about to axe-murder net neutrality. Don't get mad - get even	Guardian	20640	
The FCC Just Approved A Proposal That Will Completely Change The Internet As We Know It	Silicon Alley Insider	20448	
Netflix blasts Comcast and Verizon on net neutrality: 'some big ISPs are extracting a toll'	The Verge	19363	
Dear Senator Ted Cruz, I'm going to explain to you how Net Neutrality ACTUALLY works	The Oatmeal	18941	
Former Comcast and Verizon Attorneys Now Manage the FCC and	Vice	18603	

Are About to Kill the Internet			
The real battle for net neutrality just began	The Verge	15669	
Why you should be scared of the Comcast / Time Warner Cable merger	The Verge	14731	
Google Fiber teams up with Netflix in fight against Comcast's internet tolls	The Verge	13846	
AT&T's Sponsored Data is bad for the internet, the economy, and you	The Verge	13552	
Your corporate internet nightmare starts now	The Verge	12959	
Cable companies are astroturfing fake consumer support	Vice	12365	

Table 15. Bitly clicks by story

We have to be cautious in interpreting this data as not all media sources use bit.ly as a link shortener. For example, since YouTube does not use bit.ly, clicks on YouTube videos are not represented here. Another possible bias is that some sites promote sharing of their articles on social media via a mechanism that shortens links using bit.ly. As seen in Table 15, the Verge is particularly adept at getting users to share its stories on social media.

This list offers a significantly different view of the media landscape. At the top of the list is a video by Funny or Die in which porn stars explain net neutrality. There are several familiar sites found in this list: a White House petition to maintain net neutrality and the BattlefortheNet site. Compared to the most shared links on Twitter, the stories with the most clicks via bit.ly are more often news reporting of the issue, likely reflecting common use of bit.ly URL shortening in share buttons on mainstream new sites. The list is also largely populated by stories that are supportive of net neutrality. Fourteen of the top twenty back net neutrality, the other six do not explicitly take either side.

Each of these data sets offers a different view of the media landscape, capturing different sets of users and different behavioral choices. While there are some common stories and media sources found across the top sites in Twitter, bit.ly, and the broader set of digital media, there are also interesting differences. A common feature that is unmistakable is the overwhelming support for enacting strong net neutrality rules (Figure 8).

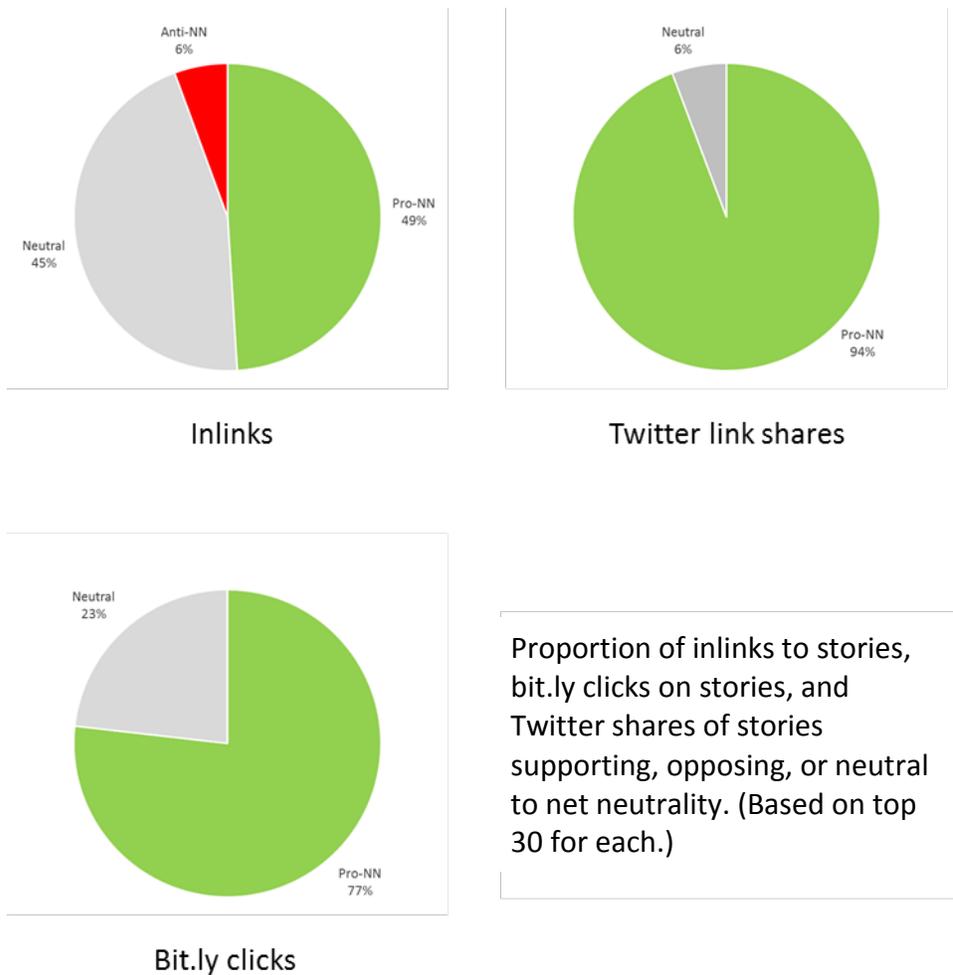


Figure 8. Proportion of media stories that support, oppose, or take no position on net neutrality

## Discussion and Conclusions

The debate in digital media over net neutrality is heavily skewed towards proponents of net neutrality. Independent polling on the topic is rare but also shows public opinion overwhelmingly in support of net neutrality, with 81% saying they are opposed to allowing Internet service providers to charge websites or streaming video providers extra for faster speeds (Center for Political Communication, 2014). In the net neutrality debate, we see a strong example that highlights the power and reach of networked collective action. The likely significant role of lobbying activity taking place behind closed doors makes any claims about the true extent and impact of the networked public sphere and digitally-mediated social mobilization on policy outcomes uncertain. Nevertheless, the evidence indicates that civil society and non-traditional media activity played an instrumental and perhaps decisive role in turning around this debate.

The day after Wheeler's February 4, 2015 announcement, the Wall Street Journal published a deep “insiders” story that suggested that the battle was primarily won by the CEOs of nimble startups Etsy, Tumblr, or Kickstarter and younger, more Internet-savvy White House staff, outmaneuvering not only Comcast, Time Warner, AT&T, and Verizon, but also Google's Eric Schmidt's exhortations of the White House to side with the big companies on the question of net neutrality (Nagesh & Mullins, 2015). The National Journal, by contrast, offered a more nuanced story, that combined both this inside story and a remarkable story of online social mobilization. Both stories focus on the fact that President Obama's speech on November 10 was a turning point, and that it was likely influenced by the fact that the President had given up on working with congressional Republicans after their election victory, and was focusing on victories for his

agenda that he could achieve without congressional cooperation (Sasso, 2015). Both stories made it amply clear that Washington lawyer and long-time net neutrality fighter Marvin Ammori played a central role in orchestrating the startups' efforts with both Chairman Wheeler and the White House staff, and in explaining to them that reclassification was critical to Internet startups. How much of the President's ultimate decision was based on this insiders' game and the internal political consideration of a President seeking to make his legacy in the teeth of a hostile Capitol Hill is hard to gauge from publicly available data. One thing is apparent: by November the actions of millions of people online had made it abundantly clear that net neutrality was an area where assertive Presidential action would be embraced by millions of people willing to call their Senators and Representatives, file comments with the FCC Commissioners, sign petitions, and argue their case publicly. It would strain credulity to believe that the effect of the public mobilization involving millions of active participants online was completely overshadowed by the balancing of lobbying efforts by the cable and telephone industry versus the startups.

Individual and non-traditional voices were important actors in this debate. Parody and satire played a particularly strong role in communicating the issues, in promoting awareness, and in generating interest in a complex and highly technical issue. John Oliver, the Oatmeal, Funny or Die, and College Humor were all popular touch points in the outreach campaign. Individual experts are commonly cited in digital media (e.g. Marvin Ammori and Tim Wu).

We see the blurred distinction between media and audience in agenda setting, framing, and mobilization, and the integration of communication and action among civil society activists.

There is no direct evidence to this effect, but the size of the civil society response suggests that activism efforts reached a significant number of people that otherwise would not have become involved. The inadvertent audience appears to live on. Online media that are distinctly not

political or aimed at a mobilized audience played a critical role, parallel in some senses to the role general-audience television was long hypothesized in political communications to play, of drawing in audiences removed from politics into the political.

This campaign is in many ways more impressive than the campaign mounted in opposition to SOPA-PIPA, a prior benchmark of effective digital activism, given the active, but ineffective, efforts by anti-net neutrality activists to influence the debate in the networked public sphere. And unlike SOPA-PIPA, this campaign was in support of a public policy initiative rather than seeking to prevent the passage of legislation. Moreover, Net neutrality appears to be a conventionally defined partisan issue. Public conservative voices are generally opposed to net neutrality; there is little evidence of prominent political figures crossing the aisle. The media coverage of this controversy appears to be divided cleanly across partisan lines. After reviewing coverage of conservative and liberal media sources, we found that the coverage in conservative media, blogs, and think tanks, the views were consistently in opposition to net neutrality. This includes coverage in the Washington Examiner, RedState, American Enterprise Institute, Breitbart, Daily Caller, the Blaze, the Heritage Foundation, Hot Air, and PJ Media. We similarly found liberal media to consistently support net neutrality, for example, in Slate, Salon, the Guardian, the Nation, the Atlantic, and Mother Jones. We also find that there are more liberal sources reporting on the issue than conservative sources.

The networked public sphere acted to filter and highlight different opinions on a complex topic. The public interest groups, policy experts, and academics that support net neutrality proved to be more credible sources of guidance on this issue; broadband providers failed to convince many that their arguments would well represent the interest of consumers. There is still room for debate over the merits of different approaches and there are well respected independent policy

experts that have misgivings about government-mandated net neutrality. The overriding public sentiment on this issue is not in doubt.

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