

Comments of

Larry Downes¹, Project Director
Georgetown Center for Business and Public Policy

In the Matter of

Applications of Comcast Corporation and Time Warner Cable Inc. for Consent to Assign or
Transfer Control of Licenses and Applications, MB Docket No. 14-57

August 22, 2014

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

*RE: Applications of Comcast Corporation and Time Warner Cable Inc. for Consent to Assign
or Transfer Control of Licenses and Applications, MB Docket No. 14-57*

Dear Ms. Dortch:

I write in support of the proposed applications and the pending transaction between Comcast and Time Warner Cable Inc.

I am attaching as appendices copies of several relevant articles I have written on the transaction specifically, as well as papers addressing more generally the rapidly-changing dynamics of the Internet, voice and video markets. Much of this work is based on my research both with the

¹ Larry Downes, based in Silicon Valley, is Project Director of the Evolution of Regulation and Innovation project, Georgetown Center for Business and Public Policy, McDonough School of Business, Georgetown University. He is the author of several books on innovation and regulation, including UNLEASHING THE KILLER APP (Harvard Business School Press 1998), THE LAWS OF DISRUPTION (Basic Books 2009) and, most recently, BIG BANG DISRUPTION: STRATEGY IN THE AGE OF DEVASTATING INNOVATION (co-authored with Paul Nunes) (Portfolio 2014).

Georgetown Center for Business and Public Policy and in cooperation with the Accenture Institute for High Performance.

As discussed in these articles and below in detail, I believe powerful technological and business forces, poorly understood by most commentators, are driving this transaction. Taken in the proper context, these developments support a finding that the transaction is not only in the public interest but essential not only for customers of both parties but for all consumers:

1. **The Comcast-Time Warner Merger is not a Sign of Strength**² - This article explains why the pending transaction is defensive in nature, aimed at generating economies of scale across the business and improving bargaining power relative to video programmers. This is a necessary response if the two companies are to remain competitive in the face of new and largely unregulated video competition from over-the-top (OTT) video services that are revolutionizing the relevant industries.
2. **Reading the Tea Leaves in the Netflix-Comcast Deal**³ - The peering agreement between Netflix and Comcast, I argue, is proof not only that the Internet ecosystem remains healthy and dynamic but also underscores the reality that with the rapid rise of video traffic, continued light-touch regulation of business and technical innovations in network management are essential tools, not signs of apocalyptic failure. I also identify the increased leverage that Netflix has in its dealings with Comcast and other ISPs, and how Netflix has been exercising it. Understanding this reality is relevant because some claim that the deal should not be approved because it will enhance Comcast's bargaining power in the broadband ecosystem.
3. **Big-Bang Disruption**⁴ - This article introduces the research behind my recent book, and explains how technology-driven disruption has changed the nature of innovation. It calls for new forms of strategic response for incumbents hoping to survive in fast-emerging new markets that threaten existing business models. As noted, incumbents such as Comcast and Time Warner Cable, whose core products are being disrupted and who face regulatory obstacles to responding quickly to changing circumstances, are most at risk.

² Larry Downes, *The Comcast-Time Warner Merger is Not a Sign of Strength*, HARVARD BUSINESS REVIEW, Feb. 18, 2014 available at <http://blogs.hbr.org/2014/02/the-comcast-time-warner-merger-is-not-a-sign-of-strength/>.

³ Larry Downes, *Reading the Tea Leaves in the Netflix-Comcast Deal*, CNET NEWS.COM, March 6, 2014, available at <http://www.cnet.com/news/rereading-the-tea-leaves-in-the-netflix-comcast-deal/>.

⁴ Larry Downes and Paul F. Nunes, *Big-Bang Disruption*, HARVARD BUSINESS REVIEW, March, 2014, available at <http://hbr.org/2013/03/big-bang-disruption/ar/1>.

4. **Creating a Politics of Abundance to Match Technology Innovation**⁵ – This article reveals the true motives behind “doom and gloom” claims that the U.S. has fallen behind in deploying Internet technologies, and why the opposite reality calls for continued light touch regulation of the relevant industries and incumbent providers.

These attachments cover a variety of topics I believe should prove determinative in the Commission’s review of the transaction. They include:

- The changing nature of innovation and its impact on markets for voice, video and data in which the parties operate. In an era of rapid innovation, the Commission should assess this deal by reference to a dynamic market where traditional business structures are constantly being attacked by disruptors, and incumbents need to evolve merely to stay competitive.
- The technical and business evolution of peering, network interconnection, content delivery networks and other forms of network management essential to quickly-evolving consumer demands in Internet access and applications. The Commission should look at the impact of this deal on the relative bargaining power of Comcast and others in the Internet ecosystem, looking at both access providers and content providers. In particular, the Commission should look at the increased bargaining power that Over the Top (OTT) services such as Netflix wield by providing much sought-after content, and how they and other content providers leverage their enormous traffic volumes in negotiations over transit and CDNs with ISPs.
- The profound transformation of the video market in particular in the face of unprecedented business, technical, and regulatory challenges. The Commission should look at the parallel development, for example, of user-financed, produced and distributed original content in the largely unregulated OTT ecosystem, and the pressure they are putting on regulated MVPDs who cannot experiment with new business models with the same speed or freedom of movement.

That last topic is worth amplifying. There is no doubt that Comcast and Time Warner Cable, along with every other incumbent enterprise in the video market, have powerful incentives to respond to the disruptive challenges presented by an explosion of largely unregulated new businesses offering competing and complementary products and services using the Internet, which has seen cable continuing to lose market share to new competitors.

⁵ Larry Downes, *Creating a Politics of Abundance to Match Technology Innovation*, FORBES.COM, Jan 3, 2013 , available at <http://www.forbes.com/sites/larrydownes/2013/01/03/creating-a-politics-of-abundance-to-match-technology-innovation/>.

Behind much of the disruptive innovation in video markets is the exploding availability of increasingly better and cheaper core technology components, a factor largely ignored by most commentators.

Nearly fifty years, Intel co-founder Gordon Moore made a startling but prescient prediction that computing technologies, notably semiconductors, would continue to double in power and capacity every 12-18 months while price held constant, an unprecedented economic phenomenon known as Moore's Law.⁶

Thanks to Moore's Law, it is now the regular and predictable improvements in technology that dominate the market behaviors of both consumers and producers, providing a more potent form of competitive pressure than any strategic moves by traditional rivals or other participants in mature supply chains.

This phenomenon is nowhere more visible than it is in markets for computing, communications, and entertainment.⁷ The related trends of technology cost deflation and collective consumer behavior have sped up the pace of change for every participant in the video ecosystem. Providers are now racing to compete not so much with each other as with an inevitable future of constant disruption.

Most significantly, these trends have led to the convergence of vastly different forms of content and specialized networks for transporting them onto the single platform of broadband Internet. We now have genuine competition between cable, satellite, fiber, and hybrid networks, all supporting new products and services that combine video, voice, and data.

Rapid engineering improvements are taking place across the board, with infrastructure providers investing billions not only to compete with each other but to meet insatiable consumer demand for more of everything, in more forms and combinations and under more business models.

The lines between video, voice and data have been erased, at least as far as consumers are concerned. We watch "TV" on our tablets, and use social media on our television sets to comment on programming as it airs. Standalone voice is giving way to native video conferencing and other forms of collaboration. Content begun on one device is expected to be available on all

⁶ Gordon E. Moore, *Cramming more components onto integrated circuits*, ELECTRONICS MAGAZINE, April 19, 1965.

⁷ Larry Downes and John W. Mayo, *The Evolution of Innovation and the Evolution of Regulation: Emerging Tensions and Emerging Opportunities in Communications*, presented at FCC "Future of Broadband Regulation" workshop, May 29, 2014 (working paper).

the others, and the network is expected to keep track of where we were, our playlists and favorites, and to recommend related content and interactivity through the cloud.

New platform technologies are adding to the disruption. Both the quality and reach of mobile networks from a variety of providers is expanding, setting up mobile broadband to become a true intermodal competitor for wired broadband in many markets and applications. Cord cutting is a growing phenomenon, except by younger consumers, who never had a cord to cut in the first place.

The question now is whether Comcast and Time Warner Cable have the ability to respond effectively with their own experiments and disruptions. The proposed transaction will enable the combined company to better generate responses and enhance its ability to compete in the long-term as the video market continues its rapid reconfiguration.

The challenges, it should be noted, are both regulatory and technological. Both companies must innovate from within the constraints of a dense thicket of Multichannel Video Programming Distributor (MVPD) regulations that have built up over the last few decades in response to earlier disruptive technologies, including once-experimental technologies for distributing video content over satellite, microwave, coaxial cable, copper, cellular and fiber-optic cable.

To protect important public interests including localism and the preservation of traditional advertising-supported over-the-air broadcast television, Congress, the FCC and the courts have cobbled together a series of compromises that, whatever their continuing value, severely limit the flexibility and adaptability of MVPDs in the face of substantial disruptive innovation in the over-the-top market.

The complex interactions of must-carry, retransmission consent, network nonduplication, the compulsory license and other rules and regulations, and their unintended impact on private negotiations between content providers and MVPDs, constrain the ability of incumbent video providers to innovate. They cannot easily offer more personalized packages of channels, or experiment with new kinds of payment options including ad-supported, on-demand, subscription, "freemium" and others.

Such regulatory constraints are almost entirely absent in the OTT market, which is why we see such remarkable experimentation going on, not only with traditional content but with new forms of user-created programming.

OTT content providers are experimenting with abandon, finding new ways to produce, collect, distribute and monetize a cornucopia of new and old programming. Today, more than 50% of American households subscribe to at least one paid OTT service. OTT providers including Hulu, Netflix, iTunes and Amazon already have larger customer bases than the largest MVPDs, and have begun producing their own proprietary, premium programming. Netflix alone has more than 30 million customers in the U.S.

The result is an expansive new world of video products and services, built on increasingly better and cheaper video production equipment, cloud computing, bootstrapped funding sites including Kickstarter, and new aggregators such as YouTube and Vimeo.

On YouTube alone, users upload 100 hours of original programming every minute, and not all of it about cats. Broadcaster and unaffiliated domain-specific sites, including VSauce (science), Machinima (gaming), and Funny or Die (comedy), are among the most visited sites on the Internet.

Popular channels on these sites support tens of millions of subscribers, and maintain a level of interactivity unheard of in the stagnant world of traditional media. Producers ask the viewers what shows they want to see next, and promptly produce them. Fans share the programming they like on large-scale social networks including Twitter, Reddit, and Facebook.

Fans are also increasingly involved in the funding for new productions. So far, more than 14,000 film and video projects have been successfully funded just on Kickstarter. Seven have been nominated for Oscars, while hundreds of others have premiered theatrically or at major festivals. A Kickstarter-based project to revive the television series “Buffy the Vampire Slayer” raised \$6 million, breaking records.⁸

As traditional markets disappear and customers embrace the disruptors, the strongest incumbents sensibly look to pool their technical strengths as well as their combined customer bases both to compete with new entrants and to broaden the range of engineering and business innovations they can introduce themselves. MVPDs need larger audiences to improve their bargaining position with programmers, and to achieve economies of scale for the content they license. And to participate in—let alone compete with—the expanding universe of OTT services,

⁸ Elizabeth Weitzman, *Crowdfunding Sites are Making Hard-to-Finance Indie Films Easier to Achieve*, THE NEW YORK POST, July 13, 2014, available at <http://www.nydailynews.com/entertainment/movies/crowdfunding-indie-films-easier-finance-article-1.1859003>.

no MVPD can long survive without the native ability to integrate broadband Internet with produced content.

With the addition of TWC's customer base, Comcast would have considerably more bargaining leverage with increasingly powerful content providers such as Disney, CBS, and FOX. With the larger scale, the combined company will also be better positioned to experiment with even more innovations, such as Comcast's X1 platform, which gives customers enhanced interactive TV functionality, improving the combined company's competitive position relative to OTT providers.

Without the merger, the ability of either company to respond effectively to these challenges will be significantly reduced. In part, this is a function of increased pressure on incumbents from their content suppliers. Consolidation in the content industry (a function of its own disruptive changes) has tipped the balance in carriage negotiations strongly to the side of the producers. There's little doubt that programming costs, the largest component of variable cost for MVPDs, have grown dramatically in the last several years, perhaps as much as 50%.

For the most popular produced content, MVPDs have little leverage but to accept the terms offered. And while the FCC finds that overall the average price per channel has declined, the number of channels continues to expand, on average from 44 to 150 since 1995.⁹ Leading content aggregators pressure MVPDs to accept larger bundles of channels at higher prices.¹⁰ Premium channels carry premium prices, and are often used as bargaining chips to promote less popular content.

As I explained in a recent article in **The Washington Post**¹¹:

⁹ Larry Downes, *Why the Case against the Comcast-Time Warner Cable Merger is Evaporating*, CNET NEWS.COM, April 23, 2014, available at <http://www.cnet.com/news/why-the-case-against-the-comcast-time-warner-cable-merger-is-evaporating/>. See also Edward Wyatt, *As Services Expand, Cable Bill Keeps Rising*, THE NEW YORK TIMES, Feb. 14, 2014, available at http://www.nytimes.com/2014/02/15/business/media/as-services-expand-cable-bills-keep-rising.html?_r=1 ("The most recent F.C.C. study on cable industry prices shows that the average monthly price of expanded basic cable service, which had an average of 150 channels, was \$61.63 for the year ended Jan. 1, 2012. That was up from \$22.35 for the same tier of service in 1995, when the average expanded basic service had only 44 channels. So while the total cost increased, the price per channel decreased by about 10 cents.").

¹⁰ Alex Sherman, *Your Cable Bill is Going up Again, but Forget A La Carte Pricing*, BLOOMBERG, Jan. 13, 2013, available at <http://go.bloomberg.com/tech-blog/2013-01-31-your-cable-bills-going-up-again-but-forget-a-la-carte-pricing/>

¹¹ Larry Downes, *A Tale of Two Video Markets: Welcome to the Post-Aereo World*, THE WASHINGTON POST, July 2, 2014, available at <http://www.washingtonpost.com/blogs/innovations/wp/2014/07/02/a-tale-of-two-video-markets-welcome-to-the-post-aereo-world/>.

For video consumers, as for the residents of Napoleonic Paris and London in Charles Dickens's classic novel, it is the best of times and the worst of times.

Those who rely on traditional broadcast, cable and satellite television are living in a world where fewer content providers own and control the bulk of the programming, using their leverage to force operators to take ever-larger bundles of channels at higher prices that are passed on to consumers. As much as 60 percent of the average cable bill, for example, goes directly to mega-producers such as Disney, Fox and CBS. The average cable viewer pays nearly \$6 just for ESPN, whether they watch it or not.

Trapped by bloated channel packages and limited flexibility, consumers are voting with their feet. Pay TV networks have lost millions of viewers in the last few years, bringing into serious question how much longer its mature model of content aggregation and distribution can last.

Where are consumers going? The Internet, of course. And why not? For those who have cut the cord (or, for a growing segment of younger consumers, never had a cord in the first place), the world is much brighter and the focus far sharper. Much of the network programming they want is available on demand from the programmers' own Web sites, or from virtual bundlers including Hulu, Amazon, Apple and Netflix, either for free or at a fraction of the cost of a standard cable subscription, offered through customizable a la carte, subscription, and ad-supported options.

But beyond content traditionally available from cable, satellite or broadcast, a vast new world of video has opened up, built on increasingly better and cheaper video production equipment, cloud computing, bootstrapped funding sites including Kickstarter, and new aggregators such as YouTube and Vimeo. On YouTube alone, users upload 100 hours of original programming every minute, and not all of it about cats.

Popular channels on these sites support tens of millions of subscribers, and maintain a level of interactivity unheard of in the stagnant world of traditional media. Producers ask the viewers what shows they want to see next, and promptly produce them. Fans share the programming they like on large-scale social networks including Twitter, Reddit, and Facebook.

As I also noted in the **Post** article, in the long-term consolidation in the video market itself will not overcome the unintended constraints on regulated MVPDs imposed by the existing legal

regime. While I believe the proposed transaction will give a new lease on life to traditional MVPD services, ultimately (and soon) the Commission, in concert with Congress, will need to effect long-stalled regulatory reform to preserve competition inside and outside the traditional video industry.

* * *

I offer these papers in the hopes they will assist the Commission in recognizing the importance to consumers and the public interest of the swift approval of the pending transaction between Comcast and Time Warner Cable.

Respectfully submitted,



Larry Downes, Project Director
Georgetown Center for Business and Public Policy
Evolution of Regulation and Innovation Project

Attachments

APPENDICES

1. **The Comcast-Time Warner Merger is not a Sign of Strength**
2. **Reading the Tea Leaves in the Netflix-Comcast Deal**
3. **Big-Bang Disruption**
4. **Creating a Politics of Abundance to Match Technology Innovation**

Appendix I



The Comcast-Time Warner Merger Is Not a Sign of Strength

by Larry Downes | 9:12 AM February 18, 2014

[The announcement late last week](#) of Comcast's \$45 billion merger with Time Warner Cable set off a predictable frenzy of hyperventilating by much of the technology media and self-appointed consumer advocacy groups. The deal, we heard, would be a "[disaster for consumers](#)," and "[bad for America](#)." It would create a "bully in the schoolyard" who could "cement the kind of monolithic monopolies that have plagued cable subscribers all along" and lead to a long-feared "[media dystopia](#)."

But when the smoke clears and the details of the transaction become clear, the merger will reveal itself to be a much simpler affair, one that is much more defensive than it is strategic.

No Harm to Competition

For one thing, thanks to a long history of exclusive municipal franchising regulations that didn't end until 1992, the two companies don't overlap in any market—TWC customers will become Comcast customers (and get arguably better technology and service in the process), but no local market will see a decline in the number of competitors.

The combined entity will control thirty percent of total U.S. cable subscriptions, or about [25% of all U.S. homes](#), nothing close to a monopoly in the legal or any other sense of the word. Still, the deal will receive close scrutiny from both the FCC and antitrust regulators, and could take up to a year to approve. But rejecting it will be hard to justify under current law.

What Industry is Consolidating?

Looking at the merger in terms of continued consolidation within the cable industry, however, misses the bigger picture. There is no cable industry. Cable is just a technology, increasingly one of many, for transmitting information, whether video, voice or data.

Where cable was once the only technology used to distribute television programming—a vast improvement in speed, quality, and quantity over antennas—it now competes with fiber, copper, satellite, and mobile broadband, each with their own pluses and minuses, and each promoted by

companies large and small, who together continue to spend heavily to upgrade their assets. ([According to the FCC](#), broadband access providers across technologies have invested over \$40 billion a year in capital improvements every year since 1996.)

As formerly siloed content has converged on the all-digital Internet protocols, each of these technologies is now communicating the same bits, often in hybrid networks created to provide for optimized responses to consumers' insatiable demands for more content in more forms on more devices. Cable systems offer WiFi for mobile access; mobile networks rely on cable, fiber, and even copper for backhaul.

A Tidal Wave of Content

Beyond creating new kinds of competition, the convergence of technologies and content types has put the longstanding and often highly-regulated business practices of all infrastructure providers into an existential crisis as content creators proliferate and rapidly find new markets. That's because the digital revolution has now made it possible to develop, produce, and distribute information in regular waves of better and cheaper technologies—the pre-conditions for what Paul Nunes and I have called "[Big Bang Disruption](#)."

Today, [a hundred hours of new video is uploaded every minute to YouTube alone](#), much of it from individual producers using technologies that would have cost a fortune only a few years ago. Add in Vimeo and other Internet-based platforms, and [crowdsourced funding](#) from companies such as Kickstarter and Indiegogo, and anyone can now create, broadcast, and monetize their own channel. Many of us do.

At the high end, Netflix, HBO, iTunes, and Hulu each have millions of customers. Along with Amazon and other Internet giants, many of these distributors are beginning to produce their own original content. Netflix, which already has far more customers than the post-merger Comcast, just released a new season of its self-produced and Emmy-winning series "House of Cards." [As many as 15% of all Netflix customers](#) watched it on the first day.

This is a true golden age for consumers, who are demanding innovation in both the packaging and pricing of content. Different segments want different channels bundled, others subscription-based, and still others advertiser-supported. We've just begun sorting out the new business arrangements for a tidal wave of new content.

No Sign of Strength

Mergers and acquisitions among traditional infrastructure providers is not a sign of their growing power, in other words, but of increased pressure on their traditional business models, another sure sign of Big Bang disruption in process. The multi-front digital onslaught will inevitably generate more consolidation among incumbents, and ultimately the emergence of a new industry structure.

As weaker competitors fail to adapt, the remaining incumbents are likely to increase their market share, as for example when Circuit City and other electronics retailers closed in response to new

competition from Amazon and other better and cheaper Internet retailers. Best Buy looked to be a winner, but the real story was about [the growing dominance of digital commerce](#), which continues to squeeze the shrinking number of big box stores.

Likewise, the actual driver of accelerating consolidation among technology and media companies is the growing leverage of content providers large and small.

The average cable subscriber's monthly bill, for example, includes \$5 the operators must pay Disney just for ESPN, whether they want it or not. Beyond ESPN, Disney owns, well, pretty much everything.

Among newer companies, Netflix [has already dispatched physical video giants such as Blockbuster](#). Now, its growing subscriber base and its original programming has changed the equation in negotiations over access to every form of distribution infrastructure.

Last year, for example, [the company introduced new high-definition streaming](#), but only for access providers who meet the requirements of its "Open Connect" program, which requires on-site installation of equipment that gives priority to Netflix traffic.

That's the sense in which Comcast's merger with TWC is largely defensive. Since 2005, cable companies have lost ten million subscribers, many to satellite and others to cord-cutters who get all their content from the Internet. So in addition to the obvious economies of scale the larger entity can achieve, a bigger Comcast may have improved bargaining power in negotiations with fast-growing content providers. Some of those rending their garments over the deal argue a bigger Comcast will use the merger to get better prices for its customers for premium programming, an odd argument for consumer advocates to make.

Miles to Go

Beyond consolidation, Comcast, along with other media incumbents, must find new ways to innovate products and services. That was clearly the incentive behind the [2011 acquisition of NBC Universal](#), which gave the company access to a massive library of old and new content.

Indeed, those who fear that Comcast's merger with TWC will upset the balance of power in the dynamic and rapidly-evolving information industry can take solace in both the process and outcome of the more strategic NBC Universal deal. Regulators took over a year to approve that transaction, and along the way extracted over thirty pages of [legally-binding concessions and conditions](#), many of them unrelated under the most generous reading.

[These include](#) protections for producers offering programming for minority communities, low-cost Internet access for low-income homes, and a commitment by Comcast to abide by the FCC's "Open Internet" rules despite the fact that a federal court last month threw most of them out as wildly exceeding the agency's legal authority. (Those commitments will now extend to TWC's customers and markets.)

No doubt the advocacy groups, as well as Comcast's many competitors in the emerging information ecosystem, are drawing up Christmas lists of new conditions even now. Many of them will probably make the final cut when the transaction closes, whenever that is. Hopefully, their unintended side effects won't wind up making things worse for consumers.

More blog posts by [Larry Downes](#)

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[Larry Downes](#)

[Larry Downes](#) is co-author, with Paul Nunes, of [Big Bang Disruption: Strategy in the Age of Devastating Innovation](#) (2014, Penguin Portfolio). His previous books include [Unleashing the Killer App](#) and [The Laws of Disruption](#).

Appendix II



Rereading the tea leaves in the Netflix-Comcast deal

Commentary - Commentators appear to have assumed the worst about Netflix's recently announced paid peering deal with Comcast. What's the real message in the deal? The Internet isn't broken.

by [Larry Downes](#) - March 6, 2014 11:38 AM PST



Netflix

Ever since Netflix and Comcast [announced an interconnection agreement](#) aimed at improving streaming performance for Netflix users, commentators have been trying to read the tea leaves to determine what -- if anything -- this deal says about the future of the Internet and network relationships.

A few, including [Dan Rayburn on Seeking Alpha](#), have hailed the agreement as a sign of the continued health of this largely unregulated market. (According to the multinational Organization for Economic Co-Operation and Development, [more than 99 percent of interconnection deals are so straightforward](#) that they're agreed to without a written contract.)

But most of the coverage of the brief announcement from Comcast and Netflix instead saw foreboding dark clouds between the undisclosed lines of the deal.

The Washington Post, for example, saw it as the [beginning of the end for backbone providers](#) such as Cogent, who would be displaced by direct connections between large content providers and ISPs (Internet service providers). While noting that this might make the Internet more efficient, the Post said the Netflix-Comcast deal could also make the Internet less competitive since there are many competing backbone providers, like Cogent, but only a few big ISPs.

Meanwhile, The Wall Street Journal implied that Netflix, whose customers were recently experiencing declining streaming performance, [had no choice but to give in](#) to Comcast's demands. Over on The Verge, the [headline reporting the agreement](#) was even clearer, if crude: "The Internet is Fucked."

On the one hand, it's understandable that critics of the deal are both confused and conflicted. Like nearly all peering agreements, neither the negotiations nor the terms of the Netflix-Comcast agreement have been made public. The [very brief announcement](#) has become something of a Rorschach test, allowing anyone who interprets it to impose their own preferred narrative, positive or negative, on a deal that, frankly, no one knows much about.

One important aspect of the arrangement, however, became clearer this week when Netflix Chief Financial Officer David Wells, [speaking at a San Francisco communications conference](#), confirmed that the company is not paying Comcast significantly more for direct access to its networks than it was previously paying to a range of providers of content delivery networks (CDNs) and backbone services.

Indeed, the company may actually be saving money with the new direct connection, as well as improving the performance of its service for customers who access it through Comcast's Internet service. One analyst calculated the fee Netflix is paying Comcast at \$12 million per year, which would, if correct, mean Netflix was getting bargain basement pricing for transit.

Wells was specific in confirming that whatever the cost of the Comcast arrangement, it would have zero impact on revenue forecasts previously made to Netflix investors.

That's a far cry [from earlier reports](#) that simply assumed the unstated costs of the deal would translate to higher prices for consumers. In fact, whether Netflix is paying Comcast the same or less for the direct connection than it previously paid to intermediaries, the amount represented by the deal is too trivial to affect the cost Netflix charges users for access to its service.

Netflix's growing leverage is the best Net neutrality rule

The Internet is saved, at least for now.

In fact, the interconnection deal with Comcast -- and possible similar deals that may be in the works with other large ISPs -- reflects, if anything, Netflix's growing leverage. As its user base has [grown to over 44 million](#) and its share of Internet traffic reaches, at peak viewing periods, up to 30 percent of total network activity, the company's bargaining position in all manner of business dealings has increased.

Now that the company's original programming, including the release of a new season of its popular series "[House of Cards](#)," has become essential, ISPs have little to gain from offering anything but the best terms to rapidly-evolving video content giants.

Netflix, in fact, has been flexing its new competitive muscle for some time. In January 2013, the company began pushing its [Open Connect Content Delivery Network](#), the proprietary CDN it developed exclusively for its own content. The technology was developed and deployed largely in Europe, but in 2013 the company tried to speed up adoption in the US by announcing that only ISPs who met the technical and business requirements Netflix was offering would be allowed access to new SuperHD and 3D programming.

That restriction led some, including GigaOm's Paul Sweeting, to accuse Netflix of [performing a kind of "Net neutrality jujitsu."](#) Instead of an ISP blocking content, now it was a content provider doing the blocking, holding its own customers hostage in a gambit to get better terms than other CDNs for connections and co-location of its equipment at the ISPs' key distribution points.

As I wrote at the time, however, the early squabbles over Open Connect merely demonstrated how quickly networks were adapting to the onslaught of high-bandwidth video content, and how wise the Federal Communications Commission had been to exclude such arrangements from its 2010 Open Internet order.

Most of that order was rejected in January by a federal appellate court as exceeding the FCC's legal authority. But new FCC Chairman Tom Wheeler has now launched a proceeding to try again, grounding a new set of so-far unannounced Net neutrality rules on a different provision of the Communications Act that the court suggested might support them.

Netflix's repeated acknowledgments that it can achieve favorable terms for Open Connect with ISPs, including Comcast, without incurring significant costs that affect either consumers or investors, should give Wheeler pause. The Internet ecosystem is and remains dynamic. When transit disputes occur, they are resolved quickly, and without the need for slow-moving courts and regulatory agencies either to set the rules or to enforce them.

The system could, of course, break down in the future. If so, the nature and timing of that failure can hardly be known today. "Prophylactic" rules (as the FCC repeatedly called its 2010 effort) will almost certainly be addressed to the wrong problems, and are likely instead to generate both unnecessary costs and unintended negative consequences of their own.

Even without enforceable rules from the FCC, in fact, antitrust and anticompetitive laws can and are applied to the Internet ecosystem by both the Department of Justice and the Federal Trade Commission. They have been the regulatory cop on the beat both before and after the FCC's ill-fated effort to wade into the thicket. So far, they seem to be providing all the incentive industry participants have needed to keep the Internet market working as well as any.

The Internet isn't dead. It isn't broken. That's the real message of the Netflix-Comcast deal, which simply doesn't fit the alternative narrative of its critics and the alternative reality in which they live.

About the author



[Larry Downes](#)

[Larry Downes](#) is an author and project director at the [Georgetown Center for Business and Public Policy](#). His new book, with Paul Nunes, is “[Big Bang Disruption: Strategy in the Age of Devastating Innovation](#).” Previous books include the best-selling “[Unleashing the Killer App: Digital Strategies for Market Dominance](#).” [See full bio](#)

Appendix III

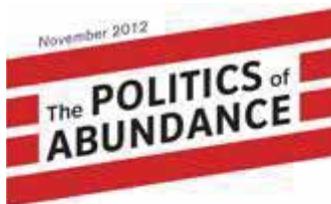
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Appendix IV

Creating a "Politics of Abundance" to Match Technology Innovation



[Larry Downes](#)
Contributor



How Technology
Can Fix the Budget,
Revive the American
Dream, and Establish
Obama's Legacy

REED
HUNDT BLAIR
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A provocative new book by two former federal regulators urges President Obama to adopt policies more closely aligned with the power of Moore's [Law](#), in which key measures of computing performance double every two years while price holds constant.

The book, "[The Politics of Abundance](#)," (Odyssey Editions 2012) was published soon after the President won a second term last year. Its broad ambition and optimism are well-captured in its subtitle: "How Technology can Fix the Budget, Revive the American Dream, and Establish Obama's Legacy."

Authors Reed Hundt and Blair Levin argue from a unique vantage point, with deep immersion in both the policy and business end of technology deployment. Hundt is a former Chairman of the Federal Communications Commission and is now CEO of the non-profit [Coalition for Green Capital](#). Levin was the principal author of the FCC's 2010 [National Broadband Plan](#) and is currently executive director of [Gig.U](#), a consortium of universities working to encourage deployment of [ultra high-speed broadband networks in university towns](#).

According to Hundt and Levin, it was the technology-friendly policies of the Clinton-Gore White House that "enabled" the creation of the Internet economy. "Pursuant to the growth strategy of the Clinton-Gore Administrations," the authors write, "wireless and the Internet became the platforms for innumerable firms as well as not-for-profit organizations." (Hundt was appointed Chairman of the FCC by Clinton, where Levin was his chief of staff.) And despite stock market setbacks in 2000 and 2007, those policies led, [according to a study by consulting firm McKinsey & Co.](#) cited in the book, to the creation of 2.6 new jobs for every one job lost to efficiency gains.

Now the authors are calling on the Obama Administration, in its second term, to commit itself to similar growth-oriented policies, stimulating private investors to rebuild the nation's communications and power infrastructures to deliver orders of magnitude more capacity and

efficiency; to “double down on what is doubling up” as they put it. With abundant communications and abundant power, they argue, entrepreneurs will be inspired to invent the next generation of killer apps, jump-starting the economy and catapulting the U.S. back to the top in key measures of economic and technological progress.

The high optimism of Hundt and Levin stands in sharp contrast to a lingering dyspepsia in current economic theory. Neo-Malthusians argue that key economic resources remain limited and that market behavior continues to be oriented around maximizing profits by managing scarcity. The authors note specifically [the work of economist Robert Gordon](#) and journalist Thomas Byrne Edsall. Gordon, for example, argues that the growth bump of the information age has largely finished. And Edsall’s recent book “The Age of Austerity,” equated increasingly rigid partisan politics with [growing scarcity for key resources](#), including energy.

These pessimistic views—what the authors call the politics of scarcity—have even infected some Silicon Valley leaders. PayPal co-founder Peter Thiel, for example, [has argued since the most recent stock collapse](#) that only dramatic new breakthroughs in energy and food production technologies will save the economy from an extended period of Malthusian zero-sum behavior.

Hundt and Levin, at least, fully expect those breakthroughs will arrive, if only the government can create the right incentives for private investors to create the kinds of platforms entrepreneurs require to unleash their creativity.

I’m certainly in their camp on the first half of that equation, at least as far as the information technology revolution. (I’m not qualified to comment on the energy sector or the book’s ambitious recommendations for saving it). Moore’s Law has made it possible to build capacity well ahead of demand at ever-lower costs, leaving entrepreneurs free to concentrate on serving customers rather than worrying about the cost or design of infrastructure needed to deliver their products and services. Which is to say that demand always catches up, and new supply is always available. At least so far.

The authors provide impressive data on the undeniable benefits to consumers of this continuing information revolution. And in that regard, “The [Politics of Abundance](#)” also stands in stark and welcome contrast [to increasingly noisy doom-and-gloom](#) from both legal academics and self-styled consumer advocates, who argue implausibly that our current communications ecosystem has fallen into 19th century monopolist stagnation, leaving the U.S. wallowing in disgrace with regard to use of technologies largely invented here.

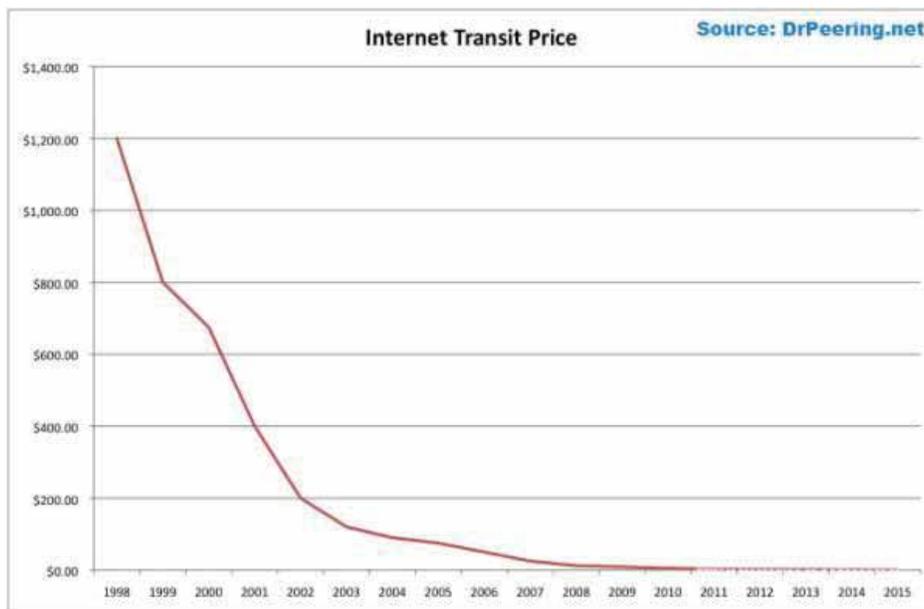
Selectively abusing data (when they bother with data), the “America-last” crowd compare U.S. broadband deployment, pricing, and adoption to that of countries with small geographies, concentrated urban populations, and a long history of government-owned and/or subsidized telecommunications industries. Somehow, contrary to what every consumer with an Android phone, iPad or unfathomable access to diverse programming content experiences every day, they find nothing but misery and despair.

(What’s especially galling about these fantastical arguments is that the real data isn’t even hard to get. Start with the [Organization for Economic Co-Operation and Development’s Broadband Portal](#) to see just how the U.S. really stacks up, assuming national comparisons are even the relevant metric. At the end of 2011, for example, the U.S. had over 85,000,000 fixed and mobile broadband subscriptions, nearly as much as the next three countries—[Japan](#), Germany and France—combined. And that is by no means the only measure on which the U.S. ranked a distant first.)

Delicately plucking the jingoistic heartstrings of lawmakers, the doomsayers call on the White House, Congress, the FCC and state and local regulators to save us from our broadband backwater by taking firm control of the reigns of the Internet ecosystem. Some even argue in favor of nationalizing existing infrastructure, in hopes that doing so will magically build out next generation networks with unlimited mobile bandwidth and fiber optic connections to 100% of the U.S. population, [whatever the cost](#).

Hundt and Levin, however, are having none of this. Twice the percentage of Americans, they note, use the Internet as do the Chinese, and ten times the percentage in India. Every relevant measure of price has declined: “The price of transmitting bits has steadily dropped, as indicated in the falling cost of Internet transit,” they note. The U.S. leads the world in high-speed mobile broadband, with almost twice the number of users of second-place Japan.

And cable providers, the supposed Standard Oil of the 21st century, have “upgraded their networks so that they can now provide 1000 megabits per second to 82 percent of all homes, roughly 40,000 times the speed of narrowband Internet access provided by a telephone line in 1994”– despite the presumed lack of competitive pressure.



(From Reed Hundt and Blair Levin, “The Politics of Abundance”)

Indeed, according to [a report today in the Wall Street Journal](#), the cable “monopoly” is facing increased competition in ultra high-speed broadband from new entrants including Verizon, Google Fiber, and a start-up called Gigabit Squared, which is working closely with Levin’s Gig.U. According to the article, “in addition to Verizon FiOS, which is available to 17 million people, primarily in the Northeast, more than 700 rural telephone companies that used to provide slow-speed Internet over copper wires have reinvested in building fiber-to-the-home network.” All without the need for radical government intervention, thanks very much.

We can quibble about how much the Clinton-Gore policies and related legislation, including the largely-deregulatory 1996 Communications Act, actually contributed to the growth of the Internet ecosystem. But Hundt and Levin are surely right that the combination of deregulation and wise use of the executive branch’s bully pulpit played a key role. The moral of the story is also clear: there is much that governments can do to stimulate more innovation with little direct cost to taxpayers.

These include setting an example for industry by being early adopters of more efficient technologies, and of stimulating new thinking with modest challenge grants and prizes. In this regard, the authors include several detailed recommendations, many of which fall into the category of common sense:

1. Shift government services to the Internet as quickly as possible.
2. Set “race to the moon goals” for education and health care – using digital technology to deliver a customized educational environment for students and personalized health care for patients.
3. Allocate some Universal Service funds for challenge grants to encourage better use of grants already used for Internet access in schools and libraries.
4. Build a robust public safety network using \$7 billion allocated last year by Congress, and lease unused capacity to private networks to generate needed revenue to fund on-going operations and improvements.
5. Encourage more competitive projects along the lines of Google’s high-speed fiber deployment in Kansas City, which generated over a thousand applications.
6. Reallocate part of the Universal Service “high cost” fund to offer prizes “for firms that find new ways to deliver faster, cheaper broadband to rural areas.”
7. Consolidate all government spectrum holdings under a single agency, perhaps the Office of Management and Budget, making it easier to determine which frequencies are unused or underutilized.

Hundt and Levin are fully aware of the current budget stalemate and the austere climate in Washington. But the proposed expenditures, at least in communications, are modest. They suggest, for example, \$1 billion for states to implement broadband assessment and measurement tools, \$3.8 billion for training new computer engineers, and \$500 million in subsidies for small businesses who buy employee broadband in high cost areas.

Proposed revenue from other recommendations would more than offset these costs. The authors, for example, encourage the government to go beyond existing plans to recover radio frequencies from broadcast television and auction them for use by mobile networks. Consistent with the National Broadband Plan, they believe it essential to reclaim an additional 200 MHz of spectrum. And auctioning that additional spectrum could raise \$40 billion for the treasury.

Those of course are only the direct revenues. The bigger point is that nudging Americans into next-generation networks for communications and power will unleash profound entrepreneurial growth, creating jobs and revitalizing the economy. Refilling depleted tax coffers at the federal, state and local levels would be little more than a happy side-effect.

But the authors, unfortunately, have less to say about ways governments large and small can jump-start growth by eliminating existing regulations that no longer contribute any value, but which increasingly slow the very investments in infrastructure for which Hundt and Levin argue so convincingly. Even as the Centers for Disease Control [reported last week](#) that less than half of all American homes still have a landline telephone, for example, legacy [carriers continue to operate under costly and inefficient “dominant carrier” rules](#) that were developed when landline phone service was a legal monopoly of the Bell System.

[Carriers eager to retire legacy copper networks](#) in favor of the fiber and wireless solutions that would natively transmit all information using Internet protocols may still need FCC permission to change or discontinue services even when better and cheaper alternatives are being offered. Hundt and Levin don't mention it, but it's no surprise that in its roll-out of fiber-based services in Kansas City, [Google recently dropped plans](#) to offer phone service over the new infrastructure, citing regulatory rather than technical obstacles.

“We looked at doing that,” said the Google VP for Access Services. “The cost of actually delivering telephone services is almost nothing. However, in the United States, there are all of these special rules that apply.”

“Special rules” indeed—more like pointless rules. And such overheated regulation isn't limited to communications. In judging the competing entries from local communities, Google earlier noted that oppressive environmental reporting requirements [disqualified every application](#) from cities in its home state of California.

[\(The FCC has recently begun a process](#) to facilitate rather than impede the transition to what I've called “Internet Everywhere.” It has also [created a new task force](#) to look for opportunities to accelerate the final stages of Internet convergence. These are small and much-delayed steps in the right direction.)

Beyond the unnecessary cost of legacy regulations, Congress and the FCC must also do more to rein in the inefficient and sometimes corrupt practices of local zoning regulators, [who delay or deny applications for new infrastructure](#) investments essential to meeting the exploding demand of mobile broadband users. Not only do these authorities impede efforts by private parties to add

additional cell towers, they also unreasonably delay requests to upgrade equipment on existing towers and on the roofs of buildings.

Indeed, the U.S. Supreme Court [recently granted review](#) of a lawsuit brought by some local authorities challenging the efforts of the FCC to impose a modest “shot clock” on pending infrastructure applications. If the FCC loses, it will be up to Congress to take action to keep the mobile revolution going.

As Hundt and Levin note, private investors “spent more than \$1 trillion to build the digitized, packet-switched, wireless and wired platforms” over the last decade, including increased spending during the worst years of the recession. They would have spent more, had governments and regulators let them do so.

If President Obama is really interested in establishing a “legacy,” as the authors hope, the easiest way would be to get slow-moving governments out of the way of technology innovators who are trying to reinvent the American dream for a new generation.

That, at least, would be the policy agenda with the fewest costs and the greatest benefits.