Streams of Connectedness & New Media:
Fragmentation, Innovation and Democracy

Report of the 32nd Annual Aspen Institute Conference on Communications Policy

John B. Horrigan, Rapporteur

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Dedicated to Vanu Bose,
software pioneer, humanitarian and friend of the
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Foreword

For the past 32 years, a group of leading experts and policy-makers in the communications field have gathered at the Aspen Institute for a three-day intensive discussion of key issues in American communications policy. In the summer of 2017 these leaders from government, business, academia and the non-profit sector addressed the impact of the new video environment, namely, the increasing use of broadband services to gain access to video programs, social networks and other media. This is a report of that conference written in a way aimed at framing issues, setting forth differing positions, and reporting group recommendations to bring positive change to the field.

As a backdrop to designing impactful policy recommendations, we asked participants to consider the principles laid out by current Federal Communications Commission Chairman Ajit Pai in a speech made several months prior to the conference. Specifically, participants tried to bring to their recommendations elements of the four principles Pai laid out: the importance of digital empowerment, the need for ubiquitous Internet access, the power of competitive free markets and light-touch regulation.

But the meeting took place in mid-August 2017, just days after the horrors of racial confrontation in Charlottesville, Virginia. The racial divide that afflicted the country made a strong impact on conferees, who normally look at rather technical communications policy issues. This year, the importance and immediacy of racial issues in the United States played an important role in focusing the group's gaze on how to reduce divides, use the media to be more inclusive, and if possible, less confrontive.

This last point deserves elaboration. Participants in this conference, as in virtually all Aspen Institute events, ranged significantly in philosophical outlook, political affiliation, cultural perspective and personal experience. Yet, despite the current state of political confrontation in this country, the members of this gathering engaged in respectful, thoughtful dialogue on substantive controversial issues. That is to say, dialogue among people with diverse views and approaches can be civil, tolerant and dignified. And these individuals modeled that.

I am proud that this group of telecommunications experts and leaders went beyond their normal comfort zone to reflect on and address the racial and ideological divides in this country, and recommended measures for greater inclusion of all through communications media.

These are difficult and acrimonious times. But the dialogue at the Aspen Institute Conference on Communications Policy exemplified, I believe, the best in our system of advocacy and policy-making.

Finally, the conclusions that follow were drawn by the rapporteur to reflect the general sense of the group. However, not every participant is expected to agree with every statement. Nor do such statements necessarily reflect the views of their employers including the government agencies at the meeting.

Acknowledgments

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Executive Summary

The impact of new media on politics, culture and society is at an inflection point. For a generation, forces have been building that have gradually altered how people entertain themselves, learn about civic matters and consume news. Since the late 1980s, more than half of American households have had basic cable service and therefore far more choices of programming since the early days of television. Beginning in the early 2000s, more than half of Americans have had internet service at home, giving them access to more sources of news and information than the prior generation. These forces have put pressure on the economics of media industries. Newspapers, entertainment companies, broadcast and cable news organizations have faced intense competitive pressures in the past 20 years.

The pace of change has quickened markedly in just the past few years. Most Americans now have multiple ways to access digital media; networks are more ubiquitous and faster than a decade ago. Social media, for many Americans, is the stage on which media consumption plays out, guiding people to news or entertainment. Even if social media is not a central player for a lot of people, its influence shapes what they find on traditional platforms.

These changes hold great opportunity for society, but they are far from unalloyed goods. The ease of participation in new media means groups who, in the past, have not been well represented in mainstream media have a chance to do so now. Greater consumer choice in media can spur greater civic participation and more diversity of creative voices. But there is also an underside to the new media environment. It can breed fragmentation of social discourse, which in turn can degrade public debate. Business models fueled by "clickbait" can divide people rather than drive them to common ground. Agreement on what counts as a fact can be hard to come by when voices are too many and opportunity for deliberation is interrupted by the next Facebook or Twitter notification.

Participants in the Aspen Institute's 32nd annual Conference on Communications Policy, while underscoring the tremendous opportunities in the new media environment, identified two issues stakeholders should confront going forward.

Inclusion. With new media playing such a large role in politics and culture, ensuring that all parts of society have access to new media tools takes on special urgency. Parts of the country may have networks whose speeds significantly lag those in urban areas. The digital divide may be smaller than in the past, but home broadband adoption remains short of saturation rates and some population segments struggle with affordability of service and digital skills.[*]

It is also important to draw a diversity of participants into new media—both in terms of job opportunities in the industry and production of content.

Content quality. The tenor of public discourse has all too frequently hit the wrong notes in recent years. Media—old or new—are not necessarily the cause of this phenomenon, but there is a real worry that new media may exacerbate it. Addressing the factors in new media that may degrade civic discourse is therefore a priority, even if regulation is not the answer.

These issues unfold as market dynamics for new media businesses are in flux. Barriers to entry for the new media market are low. The tools to create and share content are less expensive than in the past. The power of gatekeepers, media companies or news organizations with power in the marketplace to choose what content has a chance to find an audience, is less than it once was. Nonetheless, the new media market has frictions. Even though the power of traditional gatekeepers has waned, a middleman function has not vanished. New online distribution platforms—Facebook, Google, Amazon and Twitter—play a large role in connecting media content to the audience. New media start-ups may face a fairly smooth path to getting online, but a tougher path to being discovered by an audience.

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[*]   John B. Horrigan and Maeve Duggan, "Home Broadband Adoption 2015." Pew Research Center, December 21, 2015. That report finds that, when permitted to choose multiple reasons for not having broadband, the subscription cost is the leading reason cited. When asked to cite the main reason, monthly subscription cost is also the leading reason. Lack of relevance as a reason has declined over time. See http://www.pewinternet.org/2015/12/21/3-barriers-to-broadband-adoption-cost-is-now-a-substantial-challenge-for-many-non-users/.

To address challenges in the new media landscape, participants put forth three proposals:

1.   Investment in access and inclusion

- The federal government should consider funding pilot programs that award grants to communities that develop plans to reduce the cost of network deployment, stimulate demand for broadband adoption in locations and population segments in need, provide subsidies to low-income individuals for the communications devices and services they choose, and bring digital tools to bear on improving educational and economic opportunity.

- For rural areas with deficits in network quality, reverse auctions should be the mechanism to allocate federal funds.

2.   Changes in regulation to promote network deployment

- The Federal Communications Commission (FCC) should initiate a Notice of Inquiry (NOI) on the feasibility of promoting infrastructure sharing among carriers as a way to spur network deployment. This will be especially relevant for the 5G networks.

- With consumers embracing "over-the-top" (OTT) video services at a rapid rate, policymakers should take a fresh look at media rules, taking a "clean slate" approach to reviewing current regulations. Policymakers should consider undertaking a thought experiment that begins with a clean regulatory slate and evaluates whether or not present laws and regulations are appropriate to the new media market. The accumulation of regulation over time has created a series of constraints on marketplace participants. For instance, current rules may inhibit incumbents' competitive responses to OTT platforms and also constrain access to content for OTT players. As a general matter, regulation should be technology-neutral and apply to all market participants equally, with exceptions rigorously justified.

- Anti-trust policy must evolve to take into account the nature of digital industries, especially given the role consumer data plays in many digital products. Traditional metrics such as price effects from mergers may be less relevant to antitrust analysis in new media markets, while potentially negative impacts on innovation due to concentration of consumer data in merging firms may be applicable. While antitrust enforcement may often be a lead tool for policing anticompetitive practices in digital industries, other tools may be appropriate as well.

3.   Leadership and education

- With new media sometimes serving as an accelerant to heated rhetoric in an already divided public, leaders in government, business and the non-profit sector should provide a calming influence, especially when public discourse is fueled by information not based in fact. Any government intervention—likely prohibited by the First Amendment—would not effectively address this, which thus puts the onus on leaders to step up.

- The public has an obligation to educate itself on new media—its merits and its shortcomings. Stakeholders in the public and private sectors should develop information literacy tools and resources for the public to use. Stakeholders should also explore whether models to promote digital or media literacy could be adapted or scaled to address information literacy, that is, people's ability to evaluate and effectively use information, in the new media environment.

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Introduction

The pace of change in the American media landscape has accelerated in the past few years. New technology is profoundly changing the way people consume content, which in turn challenges a media ecosystem already buffeted by long-term challenges to business models. This is unfolding at a time when the stakes surrounding media—the obligations of industry, the role of public policy—seem greater than at any time in recent history. Americans are divided politically, making public discourse often heated and sometimes deeply disturbing. Trust in government is at historic lows, with 20% of Americans saying they trust government to do the right thing always or most of time, less than half the level (44%) recorded in 1984.[1] Policymaking at the federal level is hamstrung and the new media marketplace, to some observers at least, makes it harder for people to find common ground on important issues of the day.

This context framed the 32nd Annual Aspen Institute Conference on Communications Policy, "Developing Policies for the New Media Landscape." Although a settled definition of "new media" is hard to come by, the term generally refers to the digital tools that allow people and organizations to create and exchange images, text or audio. What makes new media "new" and constantly evolving is the nature of the digital tools at people's disposal. These tools are more portable and powerful than ever before and the networks that connect them are faster and more pervasive. New media is bringing, and has the potential to bring even more, new participants to the worlds of entertainment, news and information-exchange. Similarly, new media offers a platform for wider participation in public debate.

Such optimism, though, is tempered by some difficult economic and social realities in new media. Economically, even though it is easier and less costly than ever before to create media content, reaching an audience for new content creators still has significant challenges. Socially, even though digital technologies offer on-ramps for more (and more diverse) voices to participate in the marketplace of ideas and culture, new media platforms and better social discourse do not always go hand-in-hand.

> ### … new media platforms and better social discourse do not always go hand-in-hand.

The upshot is that the new media environment is brimming with potential, yet is accompanied with a strong sense of foreboding. This gives an urgency for stakeholders in the public and private sectors to take action that, on the one hand, does not upset the apple cart of dynamism while, on the other, steers the output of new media away from degrading the public square. Striking the right balance in devising policy approaches that balance these two imperatives is not easy. Participants approached the task by proposing policy ideas aimed at improving the environment for new media while also asking more from leaders and citizens who participate in media-enabled public debate.

Changing Economics of Media in a New Landscape for Generating and Sharing Content

The economics of the media business has had a settled set of characteristics for a number of years. Companies who succeed at producing and distributing news and entertainment have relied on two ingredients. The first is scale, which means getting a lot of people to read your newspaper, listen to your audio or watch your TV shows. Given the cost structure of the media industries (the high fixed cost of creating content and the low variable cost of distribution), having more customers really ramps up profits since the cost of that extra copy consumed is small.

But scale cannot work effectively without a second ingredient—the editorial or curation functions. That is the ability of editors, report-

ers, entertainment executives and creative people to make compelling media content. In the context of journalism, editors play the role of deciding what news about politics and policy is relevant. In the entertainment world, media executives with an eye for talent and production values are essentially curators making decisions on what music and video people enjoy.

That model sustained itself fairly well in an era in which people had a limited set of ways to follow the news or entertain themselves. Three broadcast channels and major markets typically supporting one or two newspapers gave these distribution platforms reasonable opportunities to reach a wide audience. There were also a limited number of distribution platforms at the time with the technological capability to reach a mass audience. News and entertainment companies curated content people would consume and aided them in discovering it.

> ### … peers—not inhabitants of entertainment companies or news organizations—can take on the role of curators of content.

This model has been under pressure for more than a generation. As cable TV emerged in the 1980s and 1990s, many sounded the alarm that standards for news and entertainment—and ultimately political discourse and culture—would decline. But the pressures are greater today because of the pace of change. Distribution networks now connect most corners of the world. Consumers expect them to carry any lawful content that the Worldwide Web contains. Services and devices to access digital content are widely available and, though not universally adopted, have witnessed uptake at rates that are unprecedented.

This presents real problems for companies that have been part of the media business for many years. Consumers do not necessarily need them to discover what is worth reading or watching, since digital networks give people a workaround. And peers—not inhabitants of entertainment companies or news organizations—can take on the role of curators of content.

But the changes also create exciting possibilities for those who want to participate in society by using media. On a global scale, content creation by the public has grown rapidly. There are now some 1 billion content creators around the world, with most of them amateurs who pursue the activity as a hobby.[2] The rate of growth in the number of content creators globally is striking—a compound annual growth rate of 23% from 2012 to 2016.[3] Many of these content creators are so-called "pro-ams"—that is, professional-amateurs who create content on a regular basis with the hope of attracting a paying audience.

One example, as Larry Downes from the Georgetown Center for Business and Public Policy recounted, is the popular YouTube series "Binging with Babish." The series' creator, Andrew Rea, has become a YouTube star by showing viewers, in short segments, how to make dishes shown on people's favorite TV shows and movies. His weekly ten-minute show has 1.8 million subscribers and he has only been doing this since March 2017.

The business model for Babish, emulated by many other YouTube stars, generates revenue from a range of sources—patrons who might pay $10 per month, YouTube ads, sponsors and endorsements. The cost side is inexpensive—a digital camera, a business internet subscription, video editing software and the materials to prepare the food. For a single episode, $500 in total cost of production is, for Rea, on the expensive side. Rea is just one example of a "new media elite," that has changed how Americans interact with media content.[4] These changes are far-reaching and fall very much along generational lines.

For Baby Boomers (born between 1946 and 1964), new media sources and new access devices have drawn them away from the tradition of sitting in front of the screen and watching a few broadcast or cable channels. New sources of content have intruded upon their video habits; Amazon Video, Netflix and Hulu have accounted for one-third of Emmy nominations in recent years, underscoring how quality content from those sources are now part of the picture for Baby Boomers and others. Additionally, with "skinny over-the-top (OTT) bundles" proliferating (e.g., Disney announcing that it will pull its content from Netflix and start its own streaming service), traditional multichannel video programming distributors (MVPDs) are losing subscribers.[5] For baby boomers, the result is that the television is less and less the preferred means to watch video. Last year, just 23% say watching video on TV is their preferred way to do it, a steep 50% decline from two years prior.

But at least, from the perspective of the established content business, Baby Boomers are watching long-form programming. For Generation X (born between 1965 and 1980), video watching often comes in ten minute spurts, or perhaps "binge watching" programming typically found on YouTube that is a series of episodes whose length is about 10 minutes.

… the television is less and less the preferred means to watch video.

Where GenXers may gravitate to the ten-minute video short form, millennials (born after 1980) take it to another level. This age cohort is all about content that is short and self-produced, with little regard as to whether it is done professionally or by an amateur. Content that a millennial might consume might only be one minute in length and on a platform such as Twitch, Vimeo, Simplicity or Instagram.

These changes in how people view video has manifested itself in cord-cutting—the phenomenon by which people discontinue their pay-TV subscriptions in favor of OTT services such as Hulu, Netflix or Amazon that rely on a home broadband subscription. New Street Research estimates that pay-TV subscriptions fell by approximately 970,000 in the second quarter of 2017 and that the prior four quarters saw a decline in pay-TV subscriptions of 2.7 million.[6] Overall, according to the Pew Research Center, though 59% of Americans say a cable or satellite subscription is the primary way they watch TV, 28% of U.S. adults say streaming is the main way they view TV. Strikingly, for the 18 to 29 age cohort, 61% say streaming is the main way they watch TV, about twice the figure (31%) for cable or satellite subscriptions.[7]

The Boston Consulting Group finds similar patterns in terms of consumption of non-linear viewing of video, which would include time-shifted TV video and time-shifted OTT video. BCG finds 23% of such non-linear video in 2015 (14% is OTT and 9% is time-shifted TV), but the group forecasts a huge growth in non-linear viewing by 2018—with OTT more than doubling to 35% of viewing and time-shifted TV growing to 14% of all video viewership.[8]

Even though digital technologies have drastically altered consumption patterns and the production of content, the new media market still has frictions. Established content providers often loom large in the new media world, newer platforms perform a curatorial function and the sustainability of the new media business model is open to question. Additionally, it is not clear how well new media meets social goals of expanding the diversity of voices participating in media and facilitating constructive public discourse. Here are some issues and frictions in the new media market that participants identified.

a) **Content is king:** Scholar Roslyn Layton noted how new media content often works off of large content providers. A prime example is Babish who recreates foods from popular shows, such as his dish based on a "Game of Thrones" episode. Thus, though the production costs of 10-minute episodes such as the ones Babish produces are small, he relies on content that is expensive to produce. Another issue is production value. Participants widely agreed that consumers value content that looks and sounds good. This puts the onus on creators to have the tools to make a video or audio appealing. Those tools may be cheaper than before, but they still have a cost.

b) **Distribution platforms still have power—it is just more diffuse than it used to be:** Even though "Binging with Babish" turns a profit, it can be difficult for people to discover new content. Ease of entry into the marketplace is not the same as finding consumers. Curation is an answer, which is to say an agent or entity between the content creator and the marketplace, which helps guide users to content that will suit their tastes and be of sufficient quality. Related to discovery is finite leisure time and attention to explore new things. Social media, such as Facebook or Twitter, or even e-commerce sites such as Amazon, can facilitate discovery, but people can devote only so much attention to discovering compelling new media products. Ads on these sites can facilitate discovery, but ad dollars are finite, just as people's leisure time is. That said, Norman Ornstein of the American Enterprise Institute pointed out that digital devices have a subtle way of expanding people's leisure time, in that they can consume media on the go with portable devices in ways not possible in the past.

c) **The new media business model has uncertainties:** The question of whether new media tools add up to a viable business model was the subject of considerable discussion. As Reed Hundt put it, the internet may wind up "turning dollars into dimes" for new entrants to the content market. YouTube, noted Emmis' Jeff Smulyan, loses $2.5 billion per year, although Johanna Shelton from Google added that Google does help numerous providers monetize content. A YouTube channel needs at least 10,000 subscribers before it can have ads. Proprietors of YouTube channels also have to (or should) deal with issues such as sponsored content (which, if not handled correctly, can run afoul of the Federal Trade Commission), copyright and other issues. Shelton also noted that revenue is not always the goal for content creators. The top five most-watched kinds of YouTube videos are "how to," which typically are not intended to generate revenue for those who post them.

All this raises the real possibility, as Rick Kaplan from the National Association of Broadcasters noted, of consolidation in the new media market in the next five years. This might raise barriers to entry in the media market. Such consolidation may help U.S. companies compete globally, noted guest scholar Eric Karikari, especially as Chinese companies can take advantage of scale to challenge American companies. This sets up a dynamic by which consolidation strengthens the global competitiveness of American companies, but potentially undercuts competition in the U.S. domestic market.

At present, however, the balkanized new media market is a challenging money-making proposition for anyone. The result is a new media market where technology has lowered barriers, yet where market dynamics nonetheless introduce significant ones. It may be easy to make 10-minute videos on a topic that may interest a lot of people. But it is not as easy to get noticed, especially in the face of so much other content competing for people's attention. And it takes resources to produce it in a way that it is compelling to people.

Beyond the concern that the new media market may not create much economic value, worries arose about other media values—such as localism and diversity. Jessica Gonzalez of Free Press observed that, when she was growing up, it was rare to see Latinos on TV. Today she can—and

often that will happen on online platforms. Yet, as she and Larry Irving from the Mobile Alliance for Global Good noted, it is not necessarily the case that new media solves all challenges connected to encouraging diversity in media; in fact, they said, there is ample evidence that communities of color are not well represented in new media. Localism is another concern, as Brooking Institute's Nicol Turner-Lee said. Established news organizations are finding it difficult to invest in local content—and it is no sure bet that new media will fully address that. Recognizing this problem, Google News Lab has recently launched, in partnership with several philanthropic organizations, "Report for America" to send young journalists to local newsrooms around the country.[9]

There was also the worry about the kind of discourse that social media often fosters. Robert Pepper of Facebook recalled the quote by Les Moonves of CBS who said of the 2016 presidential campaign: "It may not be good for America, but it's damn good for CBS."[10] The strident nature of campaign debate may not have fostered an especially productive public discourse, but it did sell a lot of ads for television networks. People have incentives to monetize "clickbait," noted Jeff Smulyan, but often the content of such material is harmful to public debate.

Policy Principles

Policymakers, Professor Kevin Werbach said, find themselves thrust into new media environments with policy tools that may not be well-suited to contemporary challenges. On the one hand, policymakers face a new media market when enduring societal values related to media and communications—universality and affordability of access, localism, diversity of content (and content creators), a dynamic and competitive marketplace, privacy, security and more—remain as important as ever.

> **… the current political and economic climate demands more from communications policy than in the past.**

Yet there was a palpable sense that the current political and economic climate demands more from communications policy than in the

past. Political issues divide Americans in ways rarely seen in our history. According to the Pew Research Center, the gap between Democrats and Republicans across 10 key political values stands at 36 percentage points today, more than twice the gap (17 points) recorded in 2004.[11] This contributes to public discourse that is often filled with invective. And although the health of the economy seems by many measures to be sound, many Americans feel anxiety about economic change and disconnected from economic growth. This put three values into play with respect to communications policy:

a) **Inclusion:** With new media having growing influence in society, inclusion takes on a greater urgency. It is important that all Americans have access to the tools for participating in new media. Additionally, new media should encourage a diverse set of Americans to become involved in the environment.

b) **Common culture:** New media should help Americans find common ground on issues of the day, whether that refers to political ones or on the rules of civic discourse.

c) **Truth discovery:** New media should result in a convergence in what the public commonly understands to be the factual underpinning of a particular public issue. The "marketplace of ideas," whereby truth emerges from a competition of ideas in the give-and-take of free expression, may suffer from market failure in the world of new media.

There was a sense among many participants that new media falls short in fostering inclusion, developing common culture and enabling truth discovery, but much less agreement on how or whether policymakers should try to address the shortfalls. The discussion around inclusion, for instance, touched on the theme of economic inequality and whether media policy might help narrow wage gaps between high-income and lower- and middle-income Americans. Norman Ornstein argued that media and economic inequality are more connected today than in the past. In schools in some low-income neighborhoods, more than half of students only have access to a networked computer at school. This puts them at a severe disadvantage in developing skills for today's economy.

… new media falls short in fostering inclusion, developing common culture, and enabling truth discovery….

Others were less sanguine that digital media tools and associated policy initiatives could bear the weight of reducing economic inequality or lifting public discourse. Brent Olson of AT&T noted that it may have been an historical irregularity for media to have provided a common voice for society in the post-World War II era. Rick Kaplan added that, to the extent that ensuring that the media support a common culture means examining content on media platforms, government is ill-suited to police content.

Nonetheless, two issues emerged as topics for policymakers to consider. The first is access to the audience. As Arun Palakurthy from Dodge and Cox noted, in 1980 the top 10 television shows reached 50% of the audience, whereas today the top 100 shows reach 50% of the audience. The costs of creating content have fallen, which opens a pathway to the audience to many more people in the past. But actually reaching them is a problem. As Jessica Gonzalez observed in the context of new media and equity, "More speech as a counter to hate speech only works if some of the groups who have traditionally not had a voice in the media have access to [the] audience." A generation ago, groups subject to hate speech had limited access to the media. New media allows them to raise their voices, but that only works if they have access to the audience.

And access to the audience remains an issue in the world of new media. As the Boston Consulting Group notes, there is significant market concentration in the OTT market, with five global companies (Facebook, YouTube, Hulu, Netflix and Amazon Prime) earning half of the $25 billion in global OTT revenues.[12] Companies such as Facebook, Google, Amazon and Twitter now play a role in connecting creators of content to the audiences they want to reach. That role, Arun Palakurthy noted, may warrant regulatory scrutiny.

The other issue is inclusion—a notion that encompasses several different topics. For some, this means diverse participation in new media.

Even if the ease of participation in new media is greater than a generation ago, it is not necessarily the case that diverse voices will be part of new media platforms. Moreover, some segments of the population may lack the rudiments that enable inclusion for new media—such as a home internet service plan or a network in their neighborhood whose speed permits full participation.

… the contemporary new media ecosystem means that fragmentation sells; extremism and hyper-partisanship attract audiences….

Inclusion may also mean public discourse that facilitates common understanding of societal issues. As noted above, the contemporary new media ecosystem means that fragmentation sells; extremism and hyper-partisanship attract audiences, so there is money to be made for those who create and distribute such content.

Policy Proposals

Matching aspirations for new media to concrete policy proposals resulted in strategies calling for new investment of network connectivity conditioned on community collaboration, regulatory changes that improve market efficiency and foster network buildout, and a call for vocal leadership to help shape new media-driven public discourse.

Investment in Access and Inclusion

A large portion of the proposal on investment aims at inclusion and seeks to target areas that need better connectivity. One idea built on FCC Chairman Ajit Pai's Gigabit Opportunity Zone proposal.[13] The specifics of Chairman Pai's proposal, whose broad goals are to create incentives for broadband deployment and encourage local government to streamline regulations that may inhibit broadband deployment, are as follows:

- To be eligible to become a Gigabit Opportunity Zone (GOZ) an area's median income could be up to but no more than 75% of the national median income;

- State and local lawmakers must adopt policies (e.g., regarding access to rights-of-ways and utility poles) that are friendly to broadband deployment;

- Significant tax incentives would be provided to spur private investment in gigabit capacity networks, and;

- Tax credits in an amount that offsets the employer's share of payroll taxes would be provided to entrepreneurs who create jobs in these zones.

The group sought to build on the ideas underlying the Chairman's proposal by recommending:

- Pilot programs whereby communities commit to a plan to improve broadband deployment;

- Demand-side initiatives to increase broadband adoption in targeted areas to 80%.

The pilot program proposal, as Julia Johnson described it, revolves around the federal government funding five pilot projects (in cities) per year over a period of three years.[14] This comes to a total of 15 pilot projects. Funding levels would be $500 million per year (or $1.5 billion over the three-year life of the initiative). Applicants would be cities, but the notion is that cities assemble a community-wide coalition to submit the application, a coalition that would include entrepreneurs, internet service providers, local non-profits and educational institutions.

Applicants must submit a three-year plan that aims to:

- Extend broadband build-out with an identified internet service provider (ISP) or other provider. The provider must commit to obtaining 80% of community subscribers at the end of three years.

- Improve the digital readiness of the community by identifying community partners or educational institutions to provide digital literacy and tech job skills training for existing residents so that residents benefit from the investment and increased opportunity.

- Attract new businesses, or expand existing local businesses, via tax credits or other incentives on the condition that businesses agree to provide or fund job skills training, internships and employment targets for community residents.

A key underpinning of the idea is to catalyze collaboration across different parts of the city. Applicants should bring together a wide range of the community, from entrepreneurs to established businesses to community groups. There should be a focus on outreach to minority and women-owned businesses, economically disadvantaged businesses, as well as disabled and veteran owned firms. Part of the expectation is that the entities involved in the application will provide services to city residents digitally and with a plan to engage populations that may have reluctance in embracing these services. City governments, for instance, have an interest in encouraging people to communicate and transact with them online, so do many financial institutions who would likely be important parts of the coalition that develops the application. Finally, the application should include a plan to remove local barriers to deploying new infrastructure by modernizing local permitting rules to leverage private investment.

Applicants must also build into their plans ways to change community outcomes, like rates of employment or educational attainment, not just build new or faster networks. The goal is not only to attract new investment to an area, but also to ensure that the existing community benefits from the expansion. The community as a whole should have the potential for improved digital skills and high home broadband adoption rates. These skills are intended to translate into greater economic opportunity and higher incomes for all segments of the community.

Stimulating Demand for Broadband. The other part of the picture is stimulating demand in target areas for broadband service and its uses. Lack of broadband adoption at home follows expected patterns whereby lower-income Americans are far less likely to subscribe to broadband at home than more well-off ones. Just more than half (53%) of households whose annual incomes are $30,000 or less have broadband at home; for homes whose annual incomes exceed $75,000, some 93%

have broadband.[15] In particularly poor neighborhoods in some U.S. cities, broadband adoption rates fall below one-half of households. To narrow these gaps, the federal government should, as part of a national infrastructure plan, establish a fund that addresses broadband affordability for targeted neighborhoods, facilitate access to devices for online connectivity, and provide resources for digital skills and information literacy training. The funds could go to "model digital communities" that have removed barriers to deployment of broadband infrastructure.

In the context of the pilot programs described above, this demand-stimulation notion could be part of the plan communities submit as part of their application for funding. This would bring community anchor institutions into the community-wide coalition for improving broadband infrastructure and adoption. Anchor institutions could provide digital skills and information literacy training and serve as "demand aggregators" to help distribute vouchers to those eligible for them that would defray the cost of service.

Participants deliberated over which agency would have jurisdiction over this proposed program. Chairman Pai's GOZ program argues that any new funding for broadband infrastructure should be managed by the FCC, not the National Telecommunications and Information Administration (NTIA) in the Commerce Department. Larry Irving, a former NTIA Administrator, said that having the FCC manage a grant program could present problems. First, it would put the FCC in the position of giving grants to companies that it regulates. Second, it is unclear whether the FCC has the capacity and expertise to manage a grant program. Finally, based on his experience, it is helpful to have a Cabinet official who can advocate for a grant program in, for instance, budget discussions. The head of a regulatory agency is not in a position to do that.

Investment in Rural America. Rural America is also in need of investment connectivity. Such areas garner special attention because the quality of networks in parts of rural America suffers in comparison to networks in more densely populated areas. Home broadband adoption rates also lag the national average in many rural areas.

In considering ways to improve rural broadband infrastructure, conference participants debated about whether there is truly a "rural

broadband crisis." Wireless provides coverage to nearly every corner of the continental United States at speeds sufficient to carry out online tasks, argued Reed Hundt. There was, however, disagreement about this proposition. One participant said that 4G wireless speeds may not be fast enough for use cases in education or health care—although Hundt responded that he thought 4G would suffice for those uses. Arun Palakurthy pointed out that software developers create applications aimed at the 90% of American households who have wireline broadband speeds that will always exceed wireless. Grace Koh of the White House National Economic Council added that wireless speeds are not likely to be sufficient for economic development in rural communities. Roslyn Layton pointed out that advances in network speeds significantly outpace consumer adoption and that there is a difference between the political desire for ubiquitous fast networks (of which there is abundance) and the economics of ubiquitous buildout (for which there is a scarcity of funds).

As to the means for allocating funds, participants settled on the reverse auction as the proper mechanism for investment. This method is in its early stages of use at the FCC, with the Commission having announced in September 2017 that it would devote $198 million over the next 10 years to auction to eligible carriers in geographic regions that meet certain criteria.[16] Rather than support the financial ability of carriers to build networks in areas expensive to serve through financial models regulators create or price-cap regulation, a reverse auction allocates dollars from the Connect America Fund by asking qualified carriers to bid on serving certain areas. With enough carriers bidding on particular locations, a low-cost bid emerges that covers buildout of the network at a cost determined by the market, not the government.

Participants noted successful reverse auctions require careful thinking on the rules that structure them. The rules on who can participate are crucial, as Rebecca Arbogast of Comcast NBCUniversal pointed out. Enough carriers must be eligible to ensure that robust bidding can make the auction mechanism work. It is also important that public funds be devoted to fund network deployment, not operating costs for carriers managing the networks.

Finally, participants noted that an important underpinning for their proposal is improving data collection about broadband. A strong recommendation was to gather accurate data on topography, middle-

mile infrastructure and its proximity to unserved areas, and places (preferably at the neighborhood level) where home broadband is low. Additionally, as the FCC's Wayne Leighton said, the government would benefit from having the same knowledge base on the industry as the private sector. Many participants said research firms that typically have Wall Street clients have excellent data, and that this should be shared with government officials where appropriate.

Regulatory Changes to Promote Network Deployment

The accumulation of legacy regulations over time was a prominent theme in describing the challenges regulators face in the rapidly changing new media market. Larry Downes presented a long list of regulations to which multi-channel video programming distributors (MVPDs) and networks are subject—such as cross-ownership bans, set-top box rules, copyright, cable ownership and affiliated channel caps, the national TV ownership cap, and more. New players are subject to few of these rules.

To deal with the accretion of regulation, participants recommended that policymakers conduct a thought experiment that would start with a clean regulatory slate and add back rules as needed. The experiment would start with existing law, such as antitrust or copyright, and examine whether they are appropriate to current conditions. The recommendation also noted that government mandates should be avoided and that any solutions to market failures should avoid technology-specific approaches. Additionally, any regulatory interventions should apply to all firms in all affected industries unless there is a valid reason to deviate from this principle.

Rules that impact MVPDs are one example of where legacy regulations impact market dynamics for new media. These entities face competitive challenges from "over-the-top" (OTT) video services such as YouTube, but they are, said Larry Downes, shackled by legacy rules that require MVPDs to transmit local broadcast signals and pay retransmission fees for programming. These rules complicate the market. For incumbents, they make it harder to respond to competitive threats by entrants if entrants are not subject to, say, must-carry rules. For potential entrants, they can raise the cost of negotiating with content providers, such as broadcast networks, that OTT firms need to make their offerings appealing to consumers.

The FCC's response has been to consider whether to expand the definition of a MVPD to encompass new OTT entrants. Leveling the playing field is laudable, but participants also suggested that it is better to begin with a blank slate, rather than start from the regulatory structure as it exists today. The idea is to come up with only those regulations that fit the new media landscape rather than try to fit the new media landscape into the existing regulatory structure, which is based on legacy markets and technology.

Another area where it is preferable for government to treat all sectors equally is social regulation. Rather than take an overly prescriptive approach to regulation in this arena, two mechanisms emerged to address current challenges. The first is industry-wide collaboration. There are circumstances under which allowing companies to coordinate efforts make sense. As a participant observed, Disney's Circle device, which allows parents to monitor online activity of all connected devices in the home, is an example of a collaborative effort across firms to give parents a tool to track the surfing habits of kids.

The other promising mechanism is innovation. Well-publicized "grand challenges"—with monetary prizes attached to them—could provide incentives for innovators to develop new ways for rating content or ease the use of technology for those with disabilities. The virtue here is that the market develops the solution, with government (or perhaps charitable foundations) spurring an innovation competition by providing prize money.

In rounding out non-regulatory approaches to addressing the new media market, the obligations of consumers came into play. Individuals bear some responsibility in learning the ins and outs of the new media market, but need tools to help inform themselves. For that reason, programs for public education and digital literacy for the new media landscape have a role in an evolving new media market.

All this said, the notion of beginning with a clean slate on regulation was not something everyone signed on to. Although regulation designed to treat entrants and incumbents equally is a worthy goal, Jessica Gonzalez noted that it may make sense for new marketplace entrants to have little regulation, with regulatory burdens potentially growing as companies grow. Reed Hundt expressed concern over whether the emphasis on less regulation would get the FCC out of the

regulatory business. With net neutrality rules on the brink of being weakened or removed, the FCC should retain some authority to police anti-competitive actions, especially exclusive deals among content providers and internet service providers.

Antitrust. Another mechanism that might substitute for regulation is antitrust, whereby government action takes place only *after* inquiry by antitrust authorities. Harms may be addressed by structural means (e.g., prohibiting a transaction or requiring divestments among parties) or behavioral ones (e.g., conditions to which parties must agree before a transaction's approval). This contrasts with regulatory rules that seek to proscribe anti-competitive behavior that, given the structure of a market, companies may have incentives to undertake. The virtue of antitrust enforcement is that any action taken addresses only the case at hand, whereas regulatory rules that apply industry-wide may have unintended consequences.

There was a strong sentiment that antitrust law is preferable to regulation, but that it has to evolve given the nature of the digitally-driven new media industry. Rob Atkinson from ITIF recommended that antitrust officials embrace the thinking of Howard Shelanski and others in considering competition policy in the current digital landscape. This school-of-thought acknowledges risks of over-enforcement in the digital markets, in that errors in over-enforcement could have large negative consequences for innovation in these industries.

Yet this does not mean little or no competition enforcement; rather, there should be a shift in focus to customer data and innovation in the markets that rely on digital platforms. For many digital products, customer data is a crucial input to the product, which means that the metrics that receive antitrust scrutiny when mergers happen (e.g., price effects, whether the merger is vertical or horizontal) may not be as relevant as they have been.[17] A proposed merger of digital firms may result in an entity with a lot of data on customer behavior and preferences. The merged entity may not raise prices, but its store of customer data has the potential to foreclose innovation-driven entry from competitors.

At the same time, excessive reliance on antitrust enforcement to police new media and telecom markets was met with some skepticism. One

participant argued that antitrust actions might not occur quickly or vigorously enough to deal with anti-competitive behavior in digital markets.

Infrastructure Sharing. A more ambitious idea on how to use regulation to promote entry into the market pertained to infrastructure sharing. This notion gained currency in recent years in developing countries where people are heavily reliant on mobile technology for communication, demand for data is on the rise, and it is very expensive to deploy communications infrastructure. In developing markets, mobile network operators (MNOs) often find it advantageous to share networks to expand into unserved areas or to serve dense urban areas where it is expensive to acquire additional sites for antennae.[18] Typically, the market is the driver for infrastructure sharing, not mandates from regulators. The role for regulators is not to set out terms for sharing, but to ensure that there are not barriers to parties entering into sharing arrangements.[19]

… the cost of deployment makes infrastructure sharing potentially attractive for 5G…and policymakers will have to develop the knowledge base to participate in the debate.

The advent of 5G networks brings infrastructure-sharing into the U.S. policy debate. Emerging 5G networks rely on millimeter wave radio signals, which in turn call for a density of cell sites that is an order of magnitude greater than for earlier generations of wireless. This means carriers will have to find numerous sites in cities and town to build 5G networks. Acquiring the permits to deploy antennae at the local level has substantial transaction costs. Even if those cost fall—and many localities are working to do this—the cost of deployment makes infrastructure sharing potentially attractive for 5G.[20]

This makes infrastructure-sharing, in some form, a real possibility, and policymakers will have to develop the knowledge base to participate in the debate. Such arrangements might unfold with relative

ease, with firms entering into sharing agreements through contracting. At the same time, 5G deployment is in its early days, so contractual arrangements may encounter issues that draw the attention of policy-makers. For that reason, the group recommended that the FCC initiate a notice of inquiry (NOI) into the effectiveness and viability of shared infrastructure services.

Leadership & Education

Investment initiatives, grant programs and regulatory changes are all levers available for policymakers, but participants were passionate that the context of the current new media environment needs to be addressed. Political polarization is the "new normal" in the United States and that has undermined the ability of the federal government to function effectively. To the extent that media content is a cause of polarization, government intervention to address this is likely to do more harm than good. It would also run up against First Amendment protections for freedom of speech.

Citizens have an obligation to bolster their capacity to be effective participants in the new media landscape.

Although regulatory or legislative action is likely to be unwise in addressing media content, participants thought that leadership (from government officials, business leaders and community leaders) could play a constructive role. In the aftermath of the incidents in Charlottesville, Virginia, where white nationalist protests resulted in the death of one protester, Reed Hundt said that statements by public officials can have an impact. FCC Commissioner Brendan Carr, for instance, quickly condemned the actions of "racists & white national-ists" following the unrest in Charlottesville.[21]

Education is another topic that participants raised and, in a sense, it is the other side of the coin when thinking about leadership. Citizens have an obligation to bolster their capacity to be effective participants in

the new media landscape. People should devote time to understanding issues and exploring the reliability of the sources of information about issues of the day. Information literacy—recognizing when information is needed and having the ability to locate, evaluate and effectively use the needed information—is something for society to cultivate.[22]

Information literacy – recognizing when information is needed and having the ability to locate, evaluate and effectively use the needed information – is something for society to cultivate.

At present, there may not be well-developed models on how to foster information literacy in the digital age. One possibility for a place where models for information literacy might take hold is the public library. According to a survey of local government officials, commissioned by the Aspen Institute Dialogue on Public Libraries and the International City/County Management Association, half (51%) of government officials see digital literacy as a high or very high priority for their communities and nearly two-thirds (65%) of government officials say digital literacy should be an important or very important priority for libraries.[23] Although digital literacy pays attention to skills and not on how to determine whether information is reliable, the public's high regard for libraries suggests that libraries could constructively provide resources for the public on information literacy.

Non-profit models are also worth exploration. For example, Common Sense Media develops information and advice to help "kids thrive in a world of media and technology." Recent events in the United States suggest that such resources might benefit all ages. It is also worth noting the John S. and James L. Knight Foundation's recent announcement of an initiative to support trusted journalism in the service of a healthy democracy.[24] Participants did not endorse any single approach to education and information literacy, but the discussion on leadership and education underscores the need to have those two forces working in tandem.

Conclusion

The new media market is innovative, remunerative and, for many participants, a whole lot of fun. But, when it organizes and unleashes forces that bring out the dark side of our national character, new media can do harm to our social fabric. The current new media environment brings tremendous innovation to a sector that touches one of America's most important values—free expression. Neither innovation nor free expression typically thrives when large institutions try to intervene in a heavy-handed way.

That is why the recommendations in this report approach policy for new media with a strong dose of humility. Government efforts to legislate or regulate improvement to new media—whether that means shaping the innovation system to meet social goals or improve market access—do not have a good chance of success. By the time any rules are put in place, the market will have moved on. The law of unintended consequences would be all too relevant in the face of any such actions.
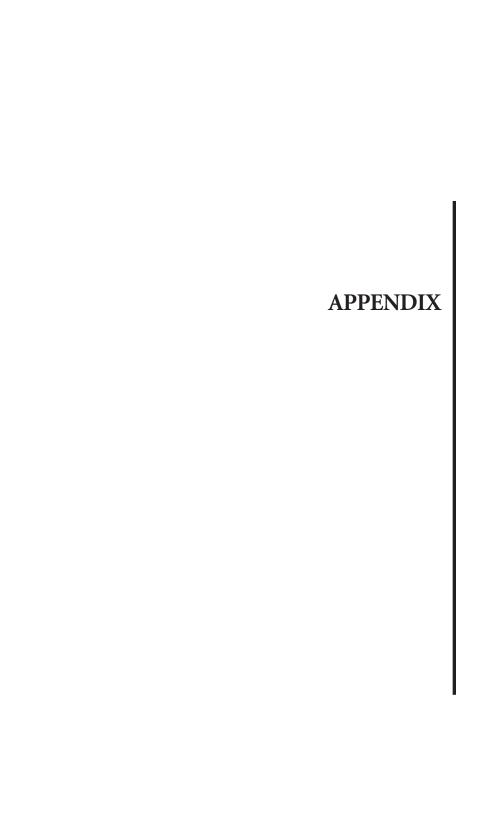
For that reason, the approach has been to take actions that can lay the groundwork to supporting and shaping the new media market in a way that adheres to the values of inclusion, promoting common culture and truth in public discourse. Grant programs that aim collectively to increase broadband adoption, bolster digital skills, promote entrepreneurship and improve network deployment will not necessarily raise the level of public debate. But, with vocal leadership and models to aid information literacy, the tenor of public discourse may improve over time. Changes in regulations that may ease the path for more OTT and other forms of new media, whether curated by video start-ups or more established players radically changing their business models, might not immediately improve the diversity of voices in the media. But in conjunction with initiatives to improve the digital readiness of communities in need, a more diverse media may unfold over time.

The hopes for new media—that it inform, entertain, connect people, spur creativity, expand knowledge, improve standards of living, and more—make it ripe for policy scrutiny. The market is fast-changing and has an inherently public dimension to it. Policymakers and other stakeholders will have to know when to be hands-off, without planting them in their pockets for too long, while also recognizing when to be hands-on, without having too tight a grip.

Endnotes

1. Pew Research Center, "Public trust in government remains near historic lows as partisan attitudes shift," May 3, 2017. Available online: http://www.people-press.org/2017/05/03/public-trust-in-government-remains-near-historic-lows-as-partisan-attitudes-shift/1-19/.

2. The Boston Consulting Group, "The Future of Television: The Impact of Video Production Around the World." September 2016, p. 11.

3. Ibid., p. 12.

4. Larry Downes, "One recipe at a time, YouTube's 'Binging With Babish' is disrupting the content industry." *Washington Post*, August 4, 2017. Available online: https://www.washingtonpost.com/news/innovations/wp/2017/08/04/one-recipe-at-a-time-youtubes-binging-with-babish-is-disrupting-the-content-industry/?utm_term=.cefa567a0f03.

5. Ahiza Garcia, "Disney to pull content from Netflix." CNN Media, August 9, 2017. Available online: http://money.cnn.com/2017/08/08/media/disney-netflix/index.html.

6. Cited in "AT&T shares slump after it warns of video losses." Available online: https://www.cbsnews.com/news/shares-of-tv-providers-drop-as-at-t-warns-of-video-losses/.

7. Pew Research Center, "About 6 in 10 young adults in U.S. primarily use online streaming to watch TV." September 13, 2017. Available online: http://www.pewresearch.org/fact-tank/2017/09/13/about-6-in-10-young-adults-in-u-s-primarily-use-online-streaming-to-watch-tv/.

8. BCG, op.cit. p.14.

9. Jennifer Peters, "Report For America Launches At Google News Lab Summit." *News Media Alliance*, September 19, 2017. Available online: https://www.newsmediaalliance.org/report-for-america/.

10. Paul Bond, "Leslie Moonves on Donald Trump: 'It May Not Be Good for America, but It's Damn Good for CBS'." *The Hollywood Reporter*, February 29, 2016. Available online: http://www.hollywoodreporter.com/news/leslie-moonves-donald-trump-may-871464.

11. Pew Research Center, "Key takeaways on Americans' growing partisan divide on political values," October 5, 2017. Available online: http://www.pewresearch.org/fact-tank/2017/10/05/takeaways-on-americans-growing-partisan-divide-over-political-values/.

12. BCG, op.cit., p. 15-16.

13. Remarks of FCC Chairman Ajit Pai at the Brandery (Cincinnati, OH) "A Digital Empowerment Agenda," September 13, 2016. Available online: https://apps.fcc.gov/edocs_public/attachmatch/DOC-341210A1.pdf.

14. This idea is modeled loosely on the U.S. Department of Transportation's "Smart City Challenge" that asked cities to submit plans using data, applications, and technology to improve the transportation of goods and people in cities. See: https://www.transportation.gov/smartcity.

15. See the Pew Research Center's "Broadband Fact Sheet." Available online: http://www.pewinternet.org/fact-sheet/internet-broadband/.

16. Those eligible to participate in the reverse auction are price-cap carriers that have declined model-based financial support, extremely high-cost census blocks (with exclusions in some states), and other census blocks removed from model-based support. To remain eligible, a census block must not have service from an unsubsidized carrier or price-cap carrier that offers at least 10 Mbps down and 1 Mbps up service. See: https://www.fcc.gov/connect-america-fund-phase-ii-auction.

17. Howard Shelanski, "Information, Innovation, and Competition Policy for the Internet." University of Pennsylvania Law Review, 2013. Vol. 161: 1663.

18. GSMA, "Mobile Infrastructure Sharing." Available online: https://www.gsma.com/publicpolicy/wp-content/uploads/2012/09/Mobile-Infrastructure-sharing.pdf.

19. Joe Marino Garcia and Tim Kelly, "The economics and policy implications of infrastructure sharing and mutualisation in Africa." World Bank, November 2015. Available online: http://pubdocs.worldbank.org/en/533261452529900341/WDR16-BP-Infrastructure-Mutualisation-Garcia.pdf.

20. Doug Brake, "5G and Next Generation Wireless: Implications for Policy and Competition." Information Technology & Innovation Foundation, June 2016. Available online: http://www2.itif.org/2016-5g-next-generation.pdf.

21. POLITICO, "FCC officials denounce white nationalists in Charlotteville." August 14, 2017. Available online: http://www.politico.com/tipsheets/morning-tech/2017/08/14/fcc-officials-denounce-white-nationalists-in-charlotteville-221859.

22. See online the American Library Association for a definition of information literacy. Available online: http://www.ala.org/Template.cfm?Section=Home&template=/ContentManagement/ContentDisplay.cfm&ContentID=33553#ildef.

23. John B. Horrigan, "The Role of Libraries in Advancing Community Goals." Survey jointly produced by ICMA, Aspen Institute, Public Library Association. Available online: https://www.aspeninstitute.org/publications/icma-survey/.

24. Knight Foundation, "Knight Foundation Announces Major Trust, Media and Democracy Initiative to Build a Stronger Future for Journalism." September 25, 2017. Available online: https://knightfoundation.org/press/releases/knight-foundation-announces-major-trust-media-and-democracy-initiative-to-build-a-stronger-future-for-journalism.

APPENDIX

Developing Policies for the New Media Landscape

Aspen, Colorado
August 13-16, 2017

Conference Participants

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About the Author

John B. Horrigan is a Senior Fellow at the Technology Policy Institute and a Senior Advisor at the Urban Libraries Council. Previously, he served as a Senior Researcher at the Pew Research Center where he focused on libraries, communities and technology adoption. He joined the Pew Research Center in January 2015, having been with Pew before from 2000 to 2009. In 2009, he joined the leadership team at the Federal Communications Commission and he led development of the broadband adoption and usage portion of the National Broadband Plan. He is a nationally recognized leader on home broadband adoption patterns, the impact of connectivity on individuals, and strategies for closing adoption gaps. At Pew, he has authored recent reports on broadband adoption, and lifelong learning and technology. As a consultant, Horrigan is author of landmark reports on Comcast's Internet Essentials program. The reports, "The Essentials of Connectivity" and "Deepening Ties" demonstrate the impact of online access for low-income families with children and make recommendations on how to accelerate broadband adoption and usage. Horrigan has a Ph.D. in public policy from the University of Texas at Austin and his undergraduate degree from the University of Virginia.

About the
Communications and Society Program

www.aspeninstitute.org/c&s

The Communications and Society Program is an active venue for framing policies and developing recommendations in the information and communications fields. We provide a multi-disciplinary space where veteran and emerging decision-makers can develop new approaches and suggestions for communications policy. The Program enables global leaders and experts to explore new concepts, exchange insights, develop meaningful networks, and find personal growth, all for the betterment of society.

The Program's projects range across many areas of information, communications and media policy. Our activities focus on a broad spectrum of ICT issues such as artificial intelligence, broadband and spectrum policy, racial inclusion in communications, institutional innovation, and diplomacy and technology. Its major activity for 2017-18 is conducting the Knight Commission on Trust, Media and Democracy. The program also runs a project on the future of public libraries.

Most conferences employ the signature Aspen Institute seminar format: approximately 25 leaders from diverse disciplines and perspectives engaged in roundtable dialogue, moderated with the goal of driving the agenda to specific conclusions and recommendations. The program distributes our conference reports and other materials to key policymakers, opinion leaders and the public in the United States and around the world. We also use the internet and social media to inform and ignite broader conversations that foster greater participation in the democratic process.

The Program's Executive Director is Charles M. Firestone. He has served in this capacity since 1989 and is also a Vice President of the Aspen Institute. Prior to joining the Institute, Mr. Firestone was a communications attorney and law professor who has argued two cases before the United States Supreme Court and many in the courts of appeals. He is a former director of the UCLA Communications Law Program, first president of the Los Angeles Board of Telecommunications Commissioners, and an appellate attorney for the U.S. Federal Communications Commission.

Previous Publications from the Aspen Institute Communications Policy Project

Revisiting Spectrum Policy: Seven Years after the National Broadband Plan, by David Bollier

The 2016 Roundtable on Spectrum Policy took place in Queenstown, MD, October 23-25, 2016. The Roundtable reexamined the spectrum recommendations contained in a landmark 2009 report of the Federal Communications Commission setting forth a National Broadband Plan (NBP). That Plan is most remembered for its innovative recommendation that spectrum be repurposed from broadcasting to newer uses through the mechanism of an incentive auction, a process that took place in 2016-17. The intervening time has seen even more demand and new uses arise such as the need for spectrum for controlling drones and for billions of devices to communicate as part of the Internet of Things. In this context, the report provides recommendations for incorporating emerging technologies, considers various licensing approaches, and frames U.S. spectrum policy from a global perspective. 2017, 48 pages, ISBN Paper: 0-89843-660-5, $12.00

Setting the Communications Policy Agenda for the Next Administration, by Richard Adler

The 31st Aspen Institute Conference on Communications Policy took place in Aspen, CO, August 14-17, 2016. This report is a series of chapters, written by rapporteur Richard Adler, that synthesizes the ideas that emerged from participants during the two-day dialogue. It explores areas where the new Administration should focus its efforts concerning communication policy. The report also includes recommendations to promote inclusion and expand opportunities for all citizens, how to encourage continued investment and innovation, and strategies to create a trust environment online to protect citizen's digital lives. 2017, 59 pages, ISBN Paper: 0-89843-655-9, $12.00

Preparing for a 5G World, by Richard Adler

The 2015 Roundtable on Spectrum Policy took place in Queenstown, MD, October 26-28, 2015. This report is a series of chapters, written by rapporteur Richard Adler, which synthesizes the ideas that emerged from participants during the two-day dialogue. It examines the range of needs that the next generation of wireless innovation, 5G, is intended to address and seeks to understand the technological options for meeting those needs. 2016, 67 pages, ISBN Paper: 0-89843-646-X, $12.00

Skirting Bottlenecks: Policies to Support Network Evolution, Digital Inclusion and Data Security, by John B. Horrigan

The Thirtieth Annual Aspen Institute Conference on Communications Policy, titled "The Future of Broadband Competition," took place on August 12-15, 2015 in Aspen, CO. Robust competition among communications providers has always been a crucial goal for policymakers, leading to robust, innovative and efficient delivery of services. But what does the competitive communications marketplace of the future look like? 32 leading communications policy leaders and experts gathered in Aspen to investigate policy goals that can ensure this robust, competitive marketplace, and consider how broadband markets can promise delivery of economic and social benefits that improve the quality of life in America for all. The report, written by rapporteur John B. Horrigan, offers five recommendations for the future of broadband competition. 2016, 44 pages, ISBN Paper: 0-89843-643-5, $12.00

Rethinking Communications Regulation, by Richard Adler

As the Internet and other information and communications technologies grow exponentially, and as a new ecosystem is emerging that could conflate previously distinct methods of communication into a single digital medium, questions arise as to whether the traditional silos of regulation are still appropriate. The report resulting from the 27th Annual Aspen Institute Communications Policy Conference addresses the overarching concern as to whether the Communications Act needs a radical revision. Written by rapporteur Richard Adler, the report considers the key goals of a new communications regime and offers regulatory and non-regulatory approaches for achieving these goals in a digitally connected world. 2013, 65 pages, ISBN Paper: 0-89843-583-8, $12.00

The Reallocation Imperative: A New Vision for Spectrum Policy,
by Preston Marshall

 The report resulting from the 2011 Aspen Institute Roundtable on Spectrum Policy addresses new ways of allocating, clearing, using and/or sharing spectrum controlled by private parties and government agencies. Written by rapporteur Preston Marshall, the report attempts to step back and establish a broad vision for reallocating spectrum in the United States in the public interest, discussing new approaches that will facilitate more effective and efficient spectrum use. A number of recommendations are laid forth to guide future spectrum policy development, Congressional actions, and technology explorations. 2012, 54 pages, ISBN Paper: 0-89843-570-6, $12.00

Updating Rules of the Digital Road: Privacy, Security, Intellectual Property, by Richard Adler

 Given the current growth and importance of the Internet, the report of the 2011 Aspen Institute Conference on Communications Policy titled *Updating Rules of the Digital Road: Privacy, Security, Intellectual Property*, highlights the elements that will allow for greater use of broadband as the common medium: security, privacy and intellectual property regulation. Written by rapporteur Richard Adler, the report explores a range of threats that plague the use of today's communications media and provides a series of recommendations which aim to ensure that users' communications are secure, private and protected. 2012, 70 pages, ISBN Paper: 0-89843-563-3, $12.00

Spectrum for the Next Generation of Wireless, by Mark MacCarthy

 Spectrum for the Next Generation of Wireless explores possible sources of spectrum, looking specifically at incentives or other measures to assure that spectrum finds its highest and best use. It includes a number of recommendations, both private and federal, of where and how spectrum can be repurposed for wireless use. In November 2010, the Aspen Institute Communications and Society Program convened the Aspen Institute Roundtable on Spectrum Policy, where 31 experts and leaders addressed the consequences and solutions to the increasing demand for spectrum. Spectrum for the Next Generation of Wireless is the report resulting from the Roundtable discussions. 2011, 68 pages, ISBN Paper: 0-89843-551-X, $12.00

Making Waves: Alternative Paths to Flexible Use Spectrum,
by Dorothy Robyn

The 2014 Aspen Institute Roundtable on Spectrum Policy (AIRS) gathered 26 of the top telecommunications policy experts at the Aspen Wye River Conference center in Queenstown, MD, to investigate whether the U.S., in light of recent progress in alternative approaches to spectrum allocation, should make the more drastic move to a regime that has all spectrum, other than some carved out for specific public benefit, to be considered general use spectrum eligible for the highest and best use available. The report, written by Roundtable rapporteur, Dorothy Robyn, tackles the task of describing what general purpose spectrum actually is; discusses the practical, political and institutional limits and ways to overcome them; and details the necessary technical advances and regulatory actions to make general purpose spectrum a reality. 2015, 68 pages, ISBN Paper: 0-89843-625-7, $12.00

The Atomic Age of Data: Policies for the Internet of Things,
by Ellen P. Goodman

The Twenty-Ninth Annual Aspen Institute Conference on Communications Policy, titled "Developing Policies for the Internet of Things," took place August 13-16, 2014 in Aspen, CO. As the world becomes increasingly connected and more objects become embedded with sensors, the Internet of Things is poised to explode, with estimates of 25 billion connected devices by 2020. 35 knowledgeable participants gathered to examine how specifically should communications policies accommodate the new Internet of Everything? This report explores the nascent promises and challenges of the IoT. In examining the interplay between the vast increase in data created on the Internet of Things (IoT), and the resultant strain on the networks that carry this information, and the group came to a realization. Data needs to be thought of as "infra-structure." 2015, 72 pages, ISBN Paper: 0-89843-623-0, $12.00

Video Veritas: Building a 21st Century Video Platform for a High-Performance Society, by John B. Horrigan

The Twenty-Eighth Annual Aspen Institute Conference on Communications Policy focused on the future of video regulation. The resulting report, written by John B. Horrigan, looks at the changing land-scape of video regulation and the fundamental shift in how video is being

viewed. While cable and broadcast television continue to be the dominant modes of transmission, over the top delivery of content via the Internet provides new ways to distribute personalized and targeted programming directly to the viewer. This, and the proliferation of mobile devices and tablets can deliver video to the viewer anywhere, anytime. As a result, the advertising-based broadcast business model is undergoing significant challenge and change. This report examines the evolving video ecosystem and offers recommendations for policy that can accommodate the new video market. 2014, 54 pages, ISBN Paper: 0-89843-603-6, $12.00

Spectrum as a Resource for Enabling Innovation Policy,
by William Webb

The 2012 Aspen Institute Roundtable on Spectrum Policy (AIRS) convened shortly after the presidential election to consider ways that spectrum policy could improve the economy through innovation. The 32 leading communications policy experts in attendance focused on how spectrum policies could help create an environment that makes it easier to use spectrum as a resource for innovative new goods and services. The participants first identified problems facing new entry and innovation today, and then recommended solutions, looking specifically at the interstices among licensed and unlicensed approaches, spectrum sharing and flexibility, and new institutional arrangements to manage these solutions. The report, written by British spectrum expert William Webb, sets forth 11 recommendations that he gleaned from the conference dialogue to guide future spectrum policy development with regard to facilitating innovation. 2013, 45 pages, ISBN Paper: 0-89843-584-6, $12.00

Rewriting Broadband Regulation, by David Bollier

The report of the 25th Annual Aspen Institute Conference on Communications Policy in Aspen, Colorado, considers how the United States should reform its broadband regulatory system. Participants looked at international models and examples and examined how data and communications should be protected in the international arena. The resulting report explores a range of policies for U.S. broadband regulation, many of them derivative of the National Broadband Plan adopted by the Federal Communications Commission only a few months before the conference.

Participants also ventured into new and interesting territory with the novel concept of "digital embassies." They saw this as a way of dealing with jurisdictional issues associated with the treatment and protection of data in the cloud, i.e., data that is provided in one country but stored or manipulated in another. The concept is that the data would be treated throughout as if it were in a kind of virtual embassy, where the citizenship of the data (i.e., legal treatment) goes along with the data. This policy seed has since been cultivated in various other regulatory environments. 2011, 37 Pages, ISBN Paper: 0-89843-548-X, $12.00

Scenarios for a National Broadband Policy, by David Bollier
    The report of the 24th Annual Aspen Institute Conference on Communications Policy in Aspen, Colorado, captures the scenario building process that participants used to map four imaginary scenarios of how the economy and society might evolve in the future, and the implications for broadband policy. It identifies how certain trends— economic, political, cultural, and technological—might require specific types of government policy intervention or action. 2010, 52 pages, ISBN Paper: 0-89843-517-X, $12.00

Rethinking Spectrum Policy: A Fiber Intensive Wireless Architecture, by Mark MacCarthy
    Rethinking Spectrum Policy: A Fiber Intensive Wireless Architecture is the report resulting from the Aspen Institute Roundtable on Spectrum Policy, held at the Aspen Wye River Conference Center in November 2009. Written by rapporteur Mark MacCarthy, the report captures the insights of the participants, exploring innovative ways to respond to the projections of exponential growth in the demand for wireless services and additional spectrum. In addition to discussing spectrum reallocations, improved receivers, shared use and secondary markets as important components for meeting demand, the report also examines opportunities for changes in network architecture, such as shifting the mix between fiber and wireless. 2010, 58 pages, ISBN Paper: 0-89843-520-X, $12.00

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