2016 Conference Report

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#igfusa2016

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About the 2016 IGF-USA

The Internet Governance Forum USA (IGF-USA) is a multistakeholder effort to illuminate issues and cultivate constructive discussions about the future of the Internet. It provides a domestic forum in the US to engage civil society, government, technologists, research scientists, industry and academia, helping to create partnerships, coalitions and dialogues that demonstrate best practices and help move policy forward. Keynotes and panels feature thought leaders from civil society, industry, academia, and government.

At the 2016 IGF-USA took place at the Center for Strategic and International Studies (CSIS) in Washington, DC on July 14, 2016.

IGF-USA Co-Chairs

Shane Tews – Logan Circle Strategies

David Vyorst – The Greater Washington DC Chapter of the Internet Society (ISOC-DC)

IGF-USA Web Addresses

- **Website**: http://www.igf-usa.org/
- **Complete videos:** https://www.igf-usa.org/igf-usa-2016-video/
- **Facebook**: https://www.facebook.com/InternetGovernanceForumUSA
- **Twitter**: @IGFUSA2016

Documenting IGF-USA Annual Conference: Imagining the Internet

Unique reporting and documentation has also been provided by Imagining the Internet, under the leadership of Janna Anderson and with support of her colleague, Colin Donohue, and their students. The reports of Imagining the Internet for IGF-USA can be found on the Imagining the Internet website, http://www.elon.edu/e-web/predictions/igf_usa/default.xhtml.

Key Metrics

- **281 People attended in person**
- **3,135 Livestream views**
- **1463 Facebook Video Views**
- **1423 Live Tweets**

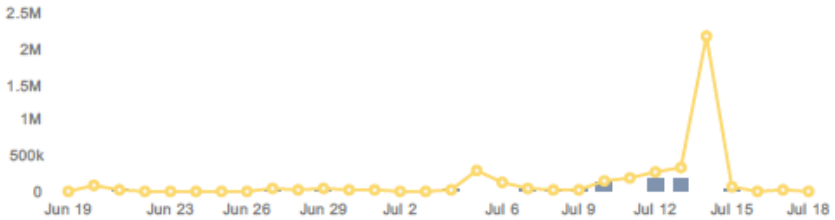
TWITTER TRACKER: IGFUSA

Jun 19, 2016 - Jul 18, 2016

By Day

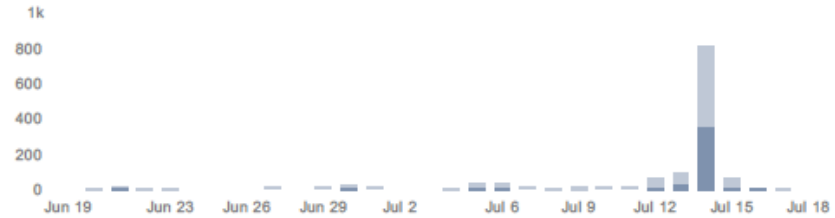
929.9k
POTENTIAL REACH

POTENTIAL IMPRESSIONS 4M
FREQUENCY 4.31



1,423
TOTAL TWEETS

TWEETS 626
RETWEETS 797



TWITTER HASHTAGS FOR: IGFUSA

Jun 19, 2016 - Jul 18, 2016

1 - 25 of 107 hashtags	TWEETS	RETWEETS	CONTRIBUTORS	IMPRESSIONS
#IGFUSA2016	858	496	241	2.6M
#igfusa_rights	162	94	62	518.7k
#IGFUSA_Cyber	181	104	66	368k
#CVE	45	27	24	275.7k
#igfusa_access	39	20	23	237.6k
#igfusa_IoT	103	52	34	233.2k
#igfusa_ICANN	125	69	44	231.9k

Sessions

Opening Plenary: Beyond Mere Access To Enhanced Connectivity For the Next Billion Online

Hashtag: #igfusa_nextbillion

Keynote

Lee Rainie
Director, Internet, Science and Technology - Pew Research Center
@lrainie

Fireside Chat

Moderated by Karen McCabe, IEEE

This session will be a dialogue between US government senior official and a leader in the tech community regarding the challenges faced to address connecting the next billions, including key challenges for the most under connected. It sets the stage for the next phase of the session.

Cathy Novelli
Under Secretary of State, US Government
@CathyNovelli

Marina Ruggieri
Full Professor of Telecommunications Engineering at the University of Roma "Tor Vergata"

Lightning Round

Moderated by Karen McCabe, IEEE

The Internet is recognized as a driver for social, cultural, and economic growth for all countries. Yet, many gaps exist in basic connectivity, but also in digital skills, and in applications that can make a difference to the 'under connected' and the 'yet to be connected' users of the United States, and users from all parts of the world.

The UN Agenda for Sustainable Development identifies ICTs and the Internet as horizontal enablers for development. Several of the SDGs recognize the importance of connectivity, specifically, paragraph 9-c. sets an important goal for the international community: "*Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020".* However, the uniqueness about the UN SDGs is that they are recognized as impacting developed as well as developing countries. Given ICTs and the Internet are so important to economic growth and development, the IGF2016 has established a focus on continued work on Connecting the Next Billions. Earlier in 2016, the US State Department and the World Bank, in

conjunction with IEEE, established a call to action for global support for bringing 1.5 billion more users online by 2020.

While many policy initiatives exist in the communications sector, the benefit to the under and unconnected comes from when applications exist that are meaningful to users, beyond today's applications and moving into delivering healthcare, education, and access to other generally useful information about daily life that makes going online relevant, and meaningful.. Recent submissions from the National and Regional IGFs into the IGF public comments regarding Connecting the Next Billions: Phase II have prioritized moving beyond mere access to digital literacy/key useful applications that users can benefit from.

This segment of the session will include lightning talks [4 minutes each] to advance thinking and contribute to the submission from the IGF-USA2016 to the Internet Governance Forum 2016 Connecting the Next Billions: Phase II.

Kevin Martin - Vice President for Mobile and Global Access Policy, Facebook
Carolina Rossini
Vice President, International Policy
@carolinarossini

Namema Amendi - Legal & Policy Fellow, Microsoft
@_AMENDI_

Jonathan Metzer - GBI Chief of Party, Nethope
Nilmini Rubin
Senior Advisor, U.S. House of Representatives Foreign Affairs Committee
@nilminirubin

Open Mic with brief statements or questions from the Participants

Summing Up and Commenting on the Proposed approaches to speed Connecting the Next Billion:

Manu Bhardwaj - Senior U.S. State Department official
@ManuUSG

Session Report

Lee Rainie *(digital divide (DD) in the US)*

- Pew doesn't have a policy position but rather facts and numbers for others to analyze.
- Previously, the problem was who gets access and who doesn't now DD includes more.
- Factors of DD:
  - Household income (the poorer → the less likely to use the Internet)
    - People have more access now (2000 vs. 2015)
    - Broadband (BB) plateaued in recent years.
    - Global connectivity has grown.
    - The richer people get the more Internet connectors/access devices they have.
    - Smartphone adoption is bigger than BB adoption.
  - Educational attainment (the higher education is the more likely to use the Internet)
    - College (and higher degree) → more likely to be smartphone users.
  - Race and ethnicity.

        - African Americans used to be less likely to use the Internet but now it's not the case.
        - Survey: are you an Internet user? White – 89%, black -81%, Hispanic – 81%.
        - Home BB: less for black and Hispanic but not the case for mobile connectors.
    - Age (the younger → the more likely to use the Internet, especially through smartphones)
    - Community type
        - The gap narrowed between rural and urban.
        - Mobile/BB/smartphone connection less likely to be used in rural areas.
        - People with disabilities are less likely to use the Internet.
        - Spanish-speakers are less likely to use the Internet.
- Changes in connectivity
    - Shift towards smartphone connectivity.
        - 7% are totally "smartphone dependent" of total adult population
        - 13% - don't even have BB
    - Why else do people don't use BB?
        - 21% - just not interested
        - 13% - don't have a computer
        - 10% - too difficult/frustrating
        - summary results:
            - 34% - relevance reasons (not interested, waste of time, too busy)
            - 32% - usability (too difficult/old, don't know how)
            - 19% - price (too expensive or no computer)
            - 7% - lack of available access.
    - Newer reasons for not using BB:
        - Over 30% - cost
        - ?% - assistance needed
    - Privacy and trust concerns post-Snowden
        - 30% took at least one step to hide/shield their information from the government.
        - 22% - changed the patterns of their use of technical platforms.
        - Most don't know what Tor, PGP, do-not-track browsers are.
    - Still issues with digital skills and readiness.
    - Evolution continues.

Cathy Novelli and Marina Ruggieri *(How to connect the next billion?)*

Cathy

- Global Connect Initiative (GCI):
    - Goal – connect another 1.5 billion by 2020
    - Joint project of the USG and WB
- WB report shows that 10% increase in connectivity = 1-2% increase in GDP.
- New approach to the Internet: we should view it now as traditional infrastructure (roads).
- Financing the project is a major component but it's not enough, digital readiness is also important.
- Various types of partnerships and cooperations are essential for success of GCI: connectivity and entrepreneurs, governments and international organizations.

- IGF helps IGC because this forum puts together the brainpower, outlines the major topics, and connects various layers of Internet government.
- Why GCI appeared now? Because it was finally proved (there is hard data) the positive outcome of connectivity: if you are not connected, you are totally left behind.

Marina

- GCI consists of four crucial components: technical, policy, educational, ethical.
- IEEE is interested in GCI because increased connectivity is one of the goals of IEEE and connectivity keeps world sustainable. Also, IEEE has its own initiatives (Internet, brain) that depend on the level of connectivity.
- Cooperation is necessary between tech and non-tech communities, members and non-members of IEEE.
- Engineers and scientists should care about connectivity because connectivity on its own is not enough, it should allow useful participation.
- We can't stop evolution of the Internet so we have to predict problems and solve them now.
- Connectivity between digitalized and non-digitalized sectors is important.
- The most significant technological challenges are architecture and softarization → network should be flexible; and compatibility and comprehensibility (in the future – distance reduction between a device and a user).

Q&A

- Data cap is a huge constraint (experience is different for users).
- Private sector should be involved in seeking solutions.

Lightning talks

Kevin Martin

- Facebook (FB) is interested in connectivity because one of the company's missions is to share.
- FB increases Internet capacity in rural areas (drones help a lot in hardly accessible areas).
- More work on awareness factor is needed.
- Cost of connectivity should ne decreased.

Namema Amendi

- Internet connection drives productivity, empowers people (e.g. through education); Internet is not just social media.
- Partnership is necessary for Internet connectivity.
- Microsoft is not an ISP but increased connectivity is key for any company.

Carolina Rossini

- Connection is just one step, then what? Privacy and security concerns.
- Connectivity is a link between sustainable development goals and decreased extreme poverty.
- Human rights should come with connectivity (by design).

Jonathan Metzer

- Digital divide is not narrowing but only growing.
- It's not only about access but it's also about what you do about it.
- Four issues for GBI:

- Policy (BB expansion; fund should be used effectively).
- Private sector (partnership + companies bring BB to poor countries)
- Cooperation
- Application (data caps → uneven use of the Internet)

Manu Bhardwaj

- Connectivity requires partnership and cooperation.
- Connectivity has effect on every part of people's lives.
- GCI should be connected to other global initiatives and goals.
- Issues: lack of infrastructure, digital readiness, and high cost.

Q&A

- Kevin: 50% of those who are not connected become subscribed in 30-60 days → the initiative was welcome in countries.
- Kevin: zero-rating is an important component.
- Kevin: FB tries to do everything for people to realize that access isn't everything.
- Kevin: to deal with data cap issues, FB makes a version of its website without pictures, videos, and ads.
- Carolina: Internet does not know evil and good; that's why problem is not in the technology but in people.
- Partnership with people on the ground is crucial for GCI.

Morning Breakout Sessions

Expanding Access, Adoption, And Digital Literacy Through Technology And Local Solutions

Hashtag: #igfusa_access

This panel will focus on emerging best practices to expand digital inclusion and broadband access and adoption to areas of the country that have been historically underserved, including rural, remote and Indigenous communities, people with accessibility challenges, and low income populations. The success of extending universal, affordable connectivity depends on the shared expertise, experiences, and creativity of the technology, technical, and policy communities. Ensuring affordability is a key shared challenge across markets. The panel will explore the divergent challenges in bringing broadband to underserved populations, and should help increase this understanding through its focus both on the needs of the remote, rural and Indigenous communities, as well as the disabilities and special needs communities. We will hear a first-hand experience of the struggles of the Native American Communities in obtaining Internet access, including the lack of the fundamental infrastructure that hampers efforts to bring broadband to these communities. We will also hear from two private sector companies about their innovative approaches to offering broadband connectivity to these areas, especially the use of white-space and other promising solutions that can offer lower cost solutions to bringing broadband to these communities. We will also hear from one of the Internet Service providers about the programs they have rolled out to help eliminate the digital divide and address digital literacy in both the lower income and remote rural areas of the US. Lastly, we will hear about the different programs and efforts that the FCC is doing in reaching those with disabilities and specific needs and making sure that Internet access and the benefits it provides is available to all.

Moderator

Lee Rainie - Director, Internet, Science and Technology - Pew Research Center
@lrainie

Panelists

Namema Amendi - Legal & Policy Fellow, Microsoft
@_AMENDI_

Jeff Blum - Senior Vice President and Deputy General Counsel, DISH Network

Olga Madruga Forti - Chief of the Global Strategy & Negotiations Division of the International Bureau of the FCC

Nonabah Lane - Indigenous Communities

Madura Wijewardena - Executive Director, Global Public Policy at Comcast Corporation

Session Report

This panel focused on emerging best practices to expand digital inclusion and broadband access and adoption to areas of the country that have been historically underserved, including rural, remote and Indigenous communities, people with accessibility challenges, and low income populations. Ensuring affordability is a key shared challenge across markets. The panel explored the divergent challenges in bringing broadband to underserved populations, and helped increase this understanding through its focus both on the needs of the remote, rural and Indigenous communities, as well as the disabilities and special needs communities.

Olga Madruga Forti - Chief of the Global Strategy & Negotiations Division of the International Bureau of the FCC started off the panel talking about the goals of the FCC and all the actions the FCC has been doing to help the disability and special needs community. She went through the various programs that the FCC offers as well as some of the rules and procedures that the FCC as the regulator of the spectrum established. These include Closed captioning requirements, common carriage requirements, telecom relay services, e-911. Also requirements that all phone, computer, and cable operators must have projects that adhere to standards so that the devices used by these community will be able to function as they are expected.

One of the seminal pieces of legislations on connecting the disabled was the ADA act in 1990. Within the ADA there is a regulation on nationwide telecommunications relay services. The FCC established this and the rules of all providers to ensure that this relay service functions correctly. Now that we are going into the digital area the FCC is working hard to ensure these same rules apply in the new environment. This means that 911 needs to work with telecom relay and also that people can text to 911. the Video and Communications Accessibility Act, the ADA, and Telecom Act bridges the gap between technology and the policy and regulatory provisions that makes technology available to the disabled and it ensures that people with disabilities are not left behind with a proliferation of the Internet and mobile innovations. The law enables the FCC to work with others to identify barriers at the design stage so they can be assured technology will work at the getgo and not have to work to figure out a work around. They are also working to incentivize industry to build in the necessary flexibility in their own device on their own at the production stage. The CVA law necessitates that Internet browsers must be accessible to persons who are blind or have visual impairment at very little or nominal cost and this took in to effect in 2013. It is backed up by enforcement and fines for companies that do not obey these laws. To help people in the disability and special needs group to be able to purchase these devices that interact with computers, phones, tvs, etc, the FCC has a program called the national deafblind equipment distribution program. It has a national budget. It has an annual budget of $10 million and it is basically a direct subsidy type of program.

FCC rules require that 100% of new programming have closed captioning. So this is different when being visually impaired and being able to enjoy television. This is being hearing impaired and being able to enjoy programming either on television or on the Internet. So 100% of new programming has to be capable in that regard. 75% of older programming, this is expensive, isn't it? So there is a provision that takes in to account that no provider should be required to spend more than 2% of annual revenue in complying with this provision. However, they do not require that user generated content be captioned although in the future there may be some requirements.

Next we heard from **Namema Amendi -** Legal & Policy Fellow, with Microsoft's Access Program. Microsoft's affordable access initiatives realizes that connectivity is a big problem and it becomes very difficult to support groups or to provide them with some of the products and services that Microsoft offers since everything today is cloud-based. As such they rely on the Internet to conduct business. Since Microsoft is not an ISP and do not have these big towers that lead to connectivity so they have to partner with other ISPs around the world and that is what they do. The Affordable Access Initiatives goes about the business of ensuring connectivity is through partnerships with ISPs, with other equipment providers. They also use a technology called White Space to bring this connectivity to remote rural areas. Microsoft

then talked about the work they are doing in rural Virginia where they are delivering Office 365 to about 7500 primary and secondary school children in 18 schools. The goal here is to close the homework gap. Kids today use the Internet to do their homework, write papers, and do research to upload their stuff. However in rural areas, kids do not have this ability or access to broadband connectivity, so Microsoft is working to provide the area with connectivity. Microsoft is providing Internet connection to just schools and by using TV white space they are able to provide broadband access to students all over this region. One of the biggest problems is that broadband service usually typically costs about $35 to $75 a month and it becomes really difficult when people don't have that much income to able to pay for this. Microsoft is partnering with the local Government and with the Federal Government through the lifeline program to help people in areas like rural Virginia to be able to afford Internet connectivity. Microsoft partners with small innovative companies, but for these companies access to capital is a big issue and so Microsoft works with these firms to introduce these ISPs to people who are able to fund them. Another thing we work on not necessarily in rural Virginia, power devices is a big issue across the world.

We then heard from **Nonabah Lane** about the struggles of the Native American Communities in obtaining Internet access, including the lack of the fundamental infrastructure that hampers efforts to bring broadband to these communities. Nonabah Lane is from the Navaho Nation told us that in her city there is no Internet access at all. Even for tribal meetings there is no Internet access and this could continue for days until the slow access that people do have is restored. She recalled that when she was writing her college applications and the applications for scholarship and these due or had fellowship applications due, and there was nowhere to get Internet services and so many people can not apply or apply late and then can not obtain the scholarship because of this. In many towns, there maybe the local tribal college library but that is it and the library often did not have access. Nona said that since her father was an educator she could go over in to his office and try to get online there, but others do not have this ability. Families use satellite Internet but this is vey expensive. Only the educational institutions have reliable public Internet access. In tribal areas you also have the U.S. Government entities, the Department of Interior, the U.S. Department of Health and Human Services that would provide public services to the tribal community and their Internet services is impeccable. But here again, because of security concerns no one could get on.

Tribal Governments have their own Internet access and often, broadband companies, reach out to them and offer low cost options, but these tribal governments do not allow the rest of the community to gain access to these special prices. Moreover, it is these same governments that are knowledgeable about grants and other benefits but do not share this knowledge with others in the community. She spoke about the huge amount of bureaucracy around and the difficulty in working through all the red tape in trying to do business with a lot of these tribal Governments that it takes years. She remains hopefully that forums such as these which tell the story of the problems that indigenous communities have on getting online tribes, that others will pressure the tribal leaders to reform or even recognize that they are putting there own people so far behind the rest of the world. Since each tribal government is different the best solution in her mind id to put together an action plan of what needs to be done and then pressure each community to get this done.

Jeff Blum, Senior Vice President and Deputy General Counsel, from Dish Network a satellite provider in rural and Native American populations told about how disheartened he is that today there are tribal communities in and about 10 million homes that don't have access to real broadband. He stated that there are two major obstacles to providing broadband to rural communities. First is the cost and second is infrastructure. He talked about the BTOP grant program where Dish had partnered with a rural community to provide satellite broadband at lower cost and they were successful in getting over 10,000 new customers. He talked about the need for more similar programs. He would like Dish Network to be included in the lifeline and other universal service programs so consumers in rural areas could choose a technology that is affordable and a provider that can provide the coverage to all areas. If satellite could go to a tribal community and provide broadband cheaper than fiber or other technologies than satellite should get the subsidy. It should be about getting broadband cheapest, most effective cost effective way to communities.

Lastly, we heard from **Madura Wijewardena** - Executive Director, Global Public Policy at Comcast, about their Internet essential program, which is their effort to eliminate the digital divide and address digital literacy in both the lower income and remote rural areas of the US. Comcast spoke about the two major problems of access and adoption. Comcast sought to address three main drivers of adoption. No. 1, relevance; 2, cost and 3, access to computer. Addressing one without the other is not going to solve the problem. Comcast wants to address all three of them so they can provide a high-speed connection 10 megabits down and WiFi router included for $9.95 a month. Since Comcast is not a computer company, they have created a partnership with others to provide a low cost computer (desktop or laptop) with Microsoft to include the Microsoft Office suite and Norton suite included at a subsidized cost of $150. Comcast is also offering a full suite of digital literacy, online training across a full range of topics in English and Spanish to anyone who is on the program or to anyone who is not on the program. So those are the elements of the program.

Additionally, Comcast is providing digital literacy training where they have partnered with over 9,000 organizations in the communities they service. Comcast provides the material about the programming in 14 languages and designs the material to fit with the particular needs of the community.They have also been working to expand eligibility and make it easier to enroll. The program is available to any family who has one child eligible for the free or reduced lunch program. For children who attend schools that have at least 40% of the population eligible for school lunch program everyone in that school is able to take advantage of the program. The entire school is automatically enrolled and the best part is that no one has to prove whether you are on are on the school lunch program.

The lack of broadband adoption in the US is not only with school age children but also with seniors, people who live in public housing, and students attending community colleges. These groups also have low broadband adoption so Comcast is piloting programs for these populations as well. The current pilot is targeting people living in public housing. These people are now able to get access to all three elements of the Internet Essentials program without having to go through the school lunch piece.

Content and Conduct: Countering Violent Extremism and Promoting Human Rights Online

Hashtag: #igfusa_rights

In the wake of the terrorist attacks in San Bernardino, Paris and Brussels and the ongoing fight against ISIS, countering violent extremism (CVE) has become a major policy agenda domestically and internationally. The UN has called on each country to develop its own national strategy, President Obama convened an international CVE summit last year, and throughout the role of the Internet in radicalization and recruitment has been front and center. While governments have a legitimate interest in combatting terrorism, there is discussion about the impact of the CVE agenda on human rights online.

The debate over countering violent extremism online poses critical questions about how to address human rights and legitimate national security interests online. This session will focus on how the various measures being taken in the United States to tackle online ‘extremism’ might impact the ability to enjoy human rights online; the potential impacts for marginalized and at-risk communities, journalists, and activists; and whether those measures are compatible with human rights standards.
Are there impacts for at-risk communities, journalists, and activists?
How can we find a balance between legitimate law enforcement goals and the needs of communities to enjoy human rights online?

What are the responsibilities of companies in an age of international terrorism?

Moderator

Courtney Radsch - Advocacy Director at the Committee to Protect Journalists
@courtneyr

Panelists

Yolanda Rondon - Staff Attorney for the American-Arab Anti-Discrimination Committee
@YolandaCRondon

JD Maddox - Director of Analytics, Global Engagement Center

Matt Mitchell - Black Lives Matter
@geminiimatt

Session Report

The countering violent extremism (CVE) panel examined the implications of CVE efforts on human rights, specifically in respect to marginalized communities, questioning the premise of balancing law enforcement and human rights, on the grounds that neither should restrict the other in any way.

The panel began with each panelist …. JD Maddox, Director of Analytics for the Global Engagement Center (GEC) began by identifying a key challenge in CVE being the imbalance in adherence to laws and legal norms, where violent extremist groups like ISIL , or ISIS, completely disregard laws, while agencies like the GEC adhere to U.S. law. The GEC's strategies include proactive efforts to understand and counter violent extremist messaging through direct campaigns and partnership with organizations in other parts of the globe.

Yolanda Rondon, Staff Attorney for the American-Arab Anti Discrimination Committee, raised the issue of the U.S. government inappropriately applying the CVE measures and attempting to use services on the internet as an extension of law enforcement, having certain kinds of speech flagged and removed. Her stance was that the best way to combat hate speech is with more speech. She argued that removal of content will drive extremists to corners of the dark web, where their views are not challenged by opposing opinions, instead of exposing their views to the criticisms and responses of their larger communities.

Matt Mitchell, from CryptoHarlem, talked about the technologies that analyze online content and seek to identify violent or potentially violent extremism. He pointed out that the technology is flawed, in that it cannot properly identify if an extreme view is going to develop into a violent expression, but also that even if that were possible determining the proper action is difficult. He addressed the use of hashes as a means of identifying and censoring certain videos that are deemed inappropriate for certain platforms and reiterated that blocking content through these means are not always a good solution, because it hinders expression and places the debate in the hands of software instead of public debate. Ultimately, he advocated for the use of technology in law enforcement, with the caveat that we understand what it is and isn't capable of and implement it accordingly.

Carl Schonander, Senior Director of SIIA, provided a business perspective. He explained that under U.S. law, companies, such as social media platforms, are not liable for what is shared over their networks, but that in exchange for the absence of liability there are expectations that companies will assume certain responsibilities, such as taking down violent extremist materials, while continuing to facilitate free speech. He stressed the difficulty of the addressing these issues from the companies perspective and that a variety of approaches He advocated for using annual data collection and analysis to determine the best way forward for companies in developing policies around these responsibilities.

Additionally, the panel raised the issue that there have been only 250 identified cases of people inspired by ISIL to travel since 2012, despite all of the funding and efforts dedicated to the issues, the unjust censorship of legitimate journalistic content as an unintended result of seeking to filter out violent extremist content, the danger in taking down certain types of content and the potential for other governments or interest groups to abuse that process to circumvent the probable cause that is required to have content through the legal framework.

Moreover, Yolanda expressed that the idea that the root cause of violent extremism is not the content itself, but the violation of human rights and that certain CVE measures, such as private companies censoring content, are actually disregarding human rights principles, compounding the problem. When asked, how to address the role and strategy that companies need to take in tackling this issue, Carl stressed that the most important practices that companies can take are engagement of different stakeholders and transparency.

Additional issues addressed were the different approaches taken by the U.S. and Europe and their respective effectiveness, including the the code of conduct agreement reached between tech companies and European governments.

The issue of CVE is a difficult one to address and there is a lack of data and research on what strategies and tactics are most effective, or whether CVE measures are effective at all. While there is obviously a consensus that violent extremism is bad, there is no such agreement on how to effectively deal with the problem. On one side of the spectrum, some advocate for allowing ideas to freely flow on the internet, enabling debate and discussion to be the countering measure. Others would argue that it is important to find and remove this content, because it is leading to violent expression of radical ideas. At the nexus of these disagreement are companies, such as social media providers that are on the frontlines and are forced to make a decision on which approach to take. Despite the differing opinions, all parties share the same objective of preventing violent extremism and there needs to be more research put into how this common goal can be achieved.

Trade Transparency - Opportunities For Input Into The Trade Negotiation Process, Their Strengths, Weaknesses, Need To Reform, With Specific Applicability To Internet Issues

Hashtag: #igfusa_trade

Controversy about trade agreements has reached a critical point. Internet issues and the transparency used to negotiate these agreements are among the most contentious issues facing our space. Awareness of the success of the multistakeholder process of engagement has cast doubt arguments made in favor of the closed input system used to currently support negotiation of trade agreements.

Building on work done in Brussels as part of the "Strategy Meeting on Catalyzing Reform of Trade Negotiation Processes," this highly participatory panel will look at the opportunities provided in the U.S. for input into the trade negotiation process, their strengths, weaknesses, need for reform, and specific applicability to Internet issues.

This panel will use the top five ideas generated in the Brussels meeting to facilitate discussion and debate among all attendees. Following the conclusion of the session, the moderator will correlate the ideas generated by the session with those surfaced during the Brussels meeting with the goal of providing information about the applicability of proposed resolutions and ideas to the U.S. trade negotiation process.

Moderator

Doug Palmer - Senior Trade Reporter, Politico
@tradereporter

Panelists

Ari Giovenco - Director of Trade and International Policy, Internet Association
@ari_stefan

Burcu Kilic - Legal & Policy Director, Public Citizen
@burcuno

Marc Rotenbergv - President, Electronic Privacy Information Center (EPIC)
@MarcRotenberg

David Snead - Board and Policy Working Group Chair of the Internet Infrastructure Coalition
@wdsneadpc

Jayme White - Chief Advisor for International Competitiveness and Innovation for the U.S. Senate Committee on Finance
@TradeSherpa

Session Report

Key issues raised:

- How transparent should free trade agreements like the TPP actually be?
- How does the lack of transparency affect the public?
- How does transparency impact the rights of online users and open internet?
- What impacts do closed door negotiations have on the future of Internet Governance?

Brief Summary of the Panel Discussion:
Promoting digital trade and protecting consumers

From the vast amount of trade done online to the amount of personal information stored by websites, the 21st century world has increased internet usage so immensely there is a need for internet governance. Trade agreements like the Trans-Pacific Partnership (TPP) are becoming conduits as means for this form of governance. These agreements are meant to be in the interest of the people, creating avenues for economic growth while maintaining privacy and secure data protection; however, the majority of the negotiations occur in private, disallowing any hopes for transparency. Panel participants are given an overview of the debate on trade transparency, and will then discuss whether or not the lack of transparency within these negotiations is in the best interest of the public and how this transparency affects a person's rights to privacy and data protection when it comes to internet usage. Regardless of the panel's stance on the Trans-Pacific Partnership (TPP) or similar free trade agreements (FTA), both those who support and oppose these agreements agree on two things: the importance of internet in trade, and how there is a lack of transparency within negotiations.

Summary of the Panel Discussion:
David Snead, Internet Infrastructure Coalition, noted that there are serious transparency problems with trade agreements that were discussed in Brussels. The IGF is an open forum on how we can discuss ways to change these issues that have raised the bar when it comes to negotiations like the TPP. He suggests that we need to move away from the idea that a trade agreement is a giant business transaction that has to remain secret until it is complete. He took the position that the concerns raised by public interest organizations need to be considered in the same context as those of business groups. Internet issues do not easily boil down to "business" and "public interest" issues, and should not be treated that way.
Burcu Kilic, Public Citizen, explained that Public Citizen represents consumers and has been very influential with their analysis of the TPP text since the text leaks began. However, the Ecommerce chapter was one of the best kept secrets of the TPP because it was only seen upon release. Everyone was proud of the provisions on the cross-border data transfers, localization; however the exceptions which would be applicable to privacy and data protection are really problematic. The Exception language was derived from the WTO exceptions for WTO-plus rules, which do not even work for WTO obligations (43 out of 44 cases failed). Exceptions fail to protect privacy & data protection, bottom line. The TPP Ecommerce chapter fails to protect the privacy and data protection of the US and the citizens of other TPP parties.
Ari Giovenco, Internet Association, noted that IA supports the TPP as they represent 40 online companies. International trade is essential and our sector is worth close to 6% of the GDP. We need to allow small businesses to access these markets and get into this international sector and the TPP allows this to happen. Historically no trade agreements have done much with the internet laws. There are major errors in internet governance around the world because it is so new. But we need the TPP in order to fix these issues, and can even be used to promote a democratic discourse and promote free speech worldwide.
Marc Rotenberg, EPIC, elaborated on how the internet is a consumer based industry and how good laws that protect rights are important for both consumers and the businesses which provide a product. He expresses the necessity of good data protection and transparency within negotiations. When online

organizations use and collect personal data they also assume the responsibility of protection. And GATs 14, creates an exception. He compares the absurdity of this trade off to trading voting rights for trade agreements. Although industry does not want transparency because it benefits them, the lack of transparency will ultimately harm their future business ventures as writing these provisions allows people to sneak through these privacy obligations. He argues that openness provides accountability and that the lack of transparency created provisions that will negatively effect on the online economy.
Jayme White, U.S. Committee on Finance, believes that a more transparent process leads to better collaboration and in turn better policy, but there is a struggle between the negotiators who want political space and the public's interest. A poorly written trade agreement has the potential to infringe on many rights including internet openness, online speech and collaboration, and intellectual property. At the same time, these trade agreements are good sources for the US to export policy. Transparency has always been a concern of trade agreements but the TPP is different because the scope much larger.

Conclusion/Key takeaways:

The controversy about the TPP demonstrates that the opaque model used to solicit input into trade agreements is not working. Rather than soliciting feedback in a binary manner, trade negotiators, and those working on trade issues should engage with the broader community on a continuous basis. Trade negotiators should not have to wait until an issue is brought to their attention to solicit, or receive feedback. The transparency that exists in the multistakeholder model, in particular with ICANN, provides a counter narrative to the story that all negotiations that involve business interests must be carried out in secret.

As society furthers itself into the digital era, the internet, privacy and data protection become more substantial and imperative topics during trade discussions. It is clear that the consumer's interests were not represented in the TPP and that large corporations capitalized on the lack of transparency because of their access to the text and negotiators. The TPP sets so-called "21st century" rules for the businesses, but the in-built exceptions fail to protect data protection and privacy of consumers.

Afternoon Breakout Sessions

How Better Broadband Benefits Everyone: Competition as a Lever Towards Progress

Hashtag: #igfusa_broadband

The spread of the Internet and the mobile phone has gone faster and further than the development of any communications technology in history. The benefits of increased access at higher speeds are key drivers of global economic growth as well as of freedom and social progress.

Advances in mobile and broadband access can create "virtuous cycles" of competition which excerpt market pressures towards greater access at greater speeds at lower prices, however, the roads to such virtuous cycles are fraught with challenges both at home and abroad.

Competition overseas has bigger impact on US consumers then most realize. More competition and investment in foreign countries can enable a "global upgrade" to IPv6, DNSSEC, better authentication, strong encryption, and better security--which will result in less spam, less phishing, and few cyberattacks in the US and globally.

Our panelists will examine how countries who encourage competition and innovation are reaping the rewards and describe lessons learned on how to achieve competition in other countries that have more protectionist policies. In addition, they will discuss specific policies that governments have adopted policies to encourage innovation and how mobile broadband can provide cheaper access to the Internet.

Moderator

Robert Pepper - Fellow, Communications and Society Program, The Aspen Institute
@rmpepper

Panelists

Blair Levin - Non-resident Senior Fellow The Brookings Institution
@BlairLevin

Jim Baller - President, Coalition for Local Internet Choice
@JimBaller

Kate Gage - Senior Policy Advisor, International Science and Technology, White House Office of Science and Technology Policy
@kategage

Eli Noam - Director, Columbia Institute for Tele-Information

Nitin Rao - CloudFlare
@NitinBRao

Session Report

Moderator Robert Pepper introduced the subject in regards to the benefits of competition in terms of price and beyond, especially in terms of Internet access.

Blair Levin commented about Brexit: one side was able to say things that make no sense and get away with it. Within 48 hours they were walking that stuff back, but were never called on. He related this to arguments about competition because it's very easy to state aspirations and ignore trade-offs.
There are 3 questions anyone who talking about broadband competition should answer:
What do you want competition to accomplish?
Where does competition come from?
What are the proper government levers?

What we want it to accomplish. There are lots of different things. Most people focus on lower prices, which isn't what we want to do. He would rather blow up markets and provide disruptive things. Speed latency security, how it's bundled are important.

The big point is that we want bandwidth never to be a constraint on economic growth and social progress. This affordable and abundant bandwidth is the objective. Where does it come from?
Existing players in the market:

- Greenfield new entrants
- Adjacent market entrants
- Resale entrants

It also comes from things in the economy. Intensified competition always requires capitalization, new capitalization or changes in capital allocation, which entails a change in markets or technology, and almost always follows government policy.
Government policy is the single biggest driver of changes in capitalization.

For example, the 1992 cable act created broadband competition.

Given current markets, what can governments do? Asymmetric market entry is the best strategy. Eg:

- Wireless
- Low-end broadband dsl
- High-end broadband

There's a prisoners dilemma factor in cable/fiber competition.

We want to get wireless more spectrum to force broadband competition, but the
Problem is that it takes a long time. Policy should foster adjacent market entrants.

The Moderation asked Jim Baller asks Jim, if there's no disrupter, what is his perspective on driving upgrades investment?

Jim Baller - been involved over decades with communities across the country and new entrants. From the standpoint of communities, the question is different.
Advanced commination's networks are drivers of everything they want. Communities are looking for business models to make networks work them, focusing on fiber networks. What do new entrants need in order to compete?

Nintin Rao talked about Cloudflare. At work buys a big Internet connection for 4 million websites.

Eli Noam - People have concerns for lack of competition in US but if you compare with 30 countries, US is heads and shoulders above most countries in terms of HHI. While most people are talking about platform infrastructure markets, the harder part is the applications on top of it.

Video is going to be the driver of infrastructure. As market power emerges, what are we doing about it? It's easier to regulate infrastructure. Re: video, we get into societal sensetivities of media power and cultural power and we haven't even started a discussion on market power and competition in those areas.

Kate Gage: There are quite a few government initiatives, including global connect initiative which is pulling many players together. Most government broadband programs are in light of the United Nations SDG's (Sustainable Development Goals). They focus on affordability, urban access, on the application side, driving infrastructure. They are exploring where the public sector can have a role in delivering affordable connectivity.

Jim Baller: Municipalities often give fiber to homes long before the private sector. Muni's can move fast in the capacity of partnering to bring broadband, and anti-trust is a meaningless solution at the local level, it's much too slow.

Jim also discussed barriers of entrance and series of exclusive arrangements by cable industry. i.e. wire-lines in buildings. For entry to work, it's important to work in a detailed way in all of the choke points.

Robert Pepper commented that in a mature market, new entry is difficult.

Managing the Opportunities and Risks of the Internet of Things and Big Data

Hashtag: #igfusa_IoT

The global potential of the Internet of Things (IoT) is enormous. In order for the IoT to succeed, we must be able to manage the opportunities and risks associated with protecting IoT privacy and security while enabling innovation. Within IGF, the IoT Dynamic Coalition has been active proposing a global framework for the IoT.

Following the DC IoT meeting during the IGF in Istanbul in 2014 and João Pessoa in 2015, we came to the conclusion that in order to foster both innovation and user trust in the Internet of Things, like the Internet, a careful balance should be struck between regulation and innovation. Consequently, we have started to explore what voluntary principles we should embrace to ensure that innovative and beneficial IoT applications can foster growth and at the same time society is comfortable with the way these products and services.

We came to understand that the way forward is to be found in taking ethical considerations into account from the outset, both in the development, deployment and use phases of the life cycle, thus to find a sustainable way ahead. This has resulted in a draft Statement that was presented and discussed during the IGF in Joao Pessoa in 2015. This panel will continue this discussion and discuss the many elements of IoT, such as privacy, security, and safety, as well as addressing societal challenges and raising general awareness around these issues.

Moderator

Dan Caprio - Co-Founder, The Providence Group
@dwcaprio

Panelists

Alan Davidson - Director of Digital Economy, US Commerce Department
@abdavidson

Michelle De Mooy - Acting Director, Privacy and Data Project, CDT
@MichelleDeMooy

Jeff Brueggeman - Vice President-Global Public Policy, AT&T

Ryan Hagemann - Technology and Civil Liberties Policy Analyst, Niskanen Center
@RyanLeeHagemann

Dean Garfield - President and CEO, ITI

Session Report

Moderator: Dan Caprio, Co-Founder, The Providence Group

Panelists:

- Alan Davidson, Digital of Digital Economy, US Department of Commerce
- Michelle DeMooy, Acting Director, Privacy and Data Project, Center for Democracy and Technology
- Ryan Hagemann, Technology and Civil Liberties Policy Analyst, Niskanen Center
- Dean Garfield, President and CEO, Information and Technology Industry Council
- Jeff Brueggeman, Vice President of Global Public Policy for AT&T

Dan Caprio

- As part of IGF, we have an Internet of Things dynamic coalition that brings together stakeholders from all over the world. We created the IoT DC in 2008. At Joao Paseo during IGF 2015, we discussed a set of global best practices for the IoT recognizing an ecosystem of connected devices representing the future of the Internet itself. A careful balance must be struck between regulation and innovation; protecting privacy and security and enabling innovation. We face a large number of social benefits and challenges but it is important to stipulate that the IoT is still in its infancy and it is still evolving rapidly.
-
- The goal of our panel today is to have a discussion on how we can build global trust in the internet of things, recognize the benefits and challenges that new technologies bring us, and to realize that the technology, while extremely exciting, itself is agnostic. When we have this discussion in the context of IGF, we must take a global approach.

Alan Davidson

- We are very excited about the IoT and its potential
- On some level, this has always existed (exactly why it's so difficult to understand now)
- Things are really different in its scale and scope, with 3B people online, with 4X that number of devices connected
- The scope is also part of what's interesting
  - There are so many different devices involved, the economics of it are breathtaking.
  - Literally trillions of dollars of additional GDP coming from the IoT
- We see huge opportunity and economic growth
- The industrial IoT can help with productivity and supply chain dynamics
  - With those huge opportunities come important questions
  - Interoperability
  - Privacy
  - Cybersecurity
    - Transparency/Accountability
  - Spectrum Usage
  - Standards

- What are we doing about it?
  - We've issued a request for comment.
  - We're holding a workshop and issuing a report in the fall to talk about our findings.
  - What are the benefits, what are the challenges, and what's the appropriate role of government?
  - How do we incentivize innovation here?
  - Recognition the IoT is global

Summary

There are a lot of benefits and challenges that we need to deal with involving the IoT, but it represents a huge opportunity the US economy. Therefore, the US Dept. of Commerce welcomes any and all opinions on this matter. We need to have collaboration with the private sector and civil society to achieve the potential of the IoT.

Michelle DeMooy

- There are a lot of emerging parts of the internet of things that are posing some difficult questions

- Health & Internet of Things
  - Fitbit
    - Map their internal research & Development
      - Especially for startups, the data that flows is the gasoline that fuels this entire piece of software and environment
      - Impacts how the company moves forward
      - We spent a year and a half working with Fitbit
      - Key Issues,
        a. Individual Dignity & Ethics
           i. A lot of privacy questions are becoming subjective to ethics
           ii. Important principle about consent, how to ask for information
        b. Data Stewardship
           i. This is important because we need companies to see themselves as active participants in this conversation that we're having globally and that they have responsibilities
              1. Allowing data access
                 a. In the health space, you also need to make it available to people
              2. Companies need to have formal policies for sustainable practices
                 a. Pivot Points
                    i. Ask more questions, that we helped to come up with a rubric
                       b. Social good

Summary

Identifies the various projects that CDT has been working on in the past year, with a focus on their partnership with Fitbit, and the results of those findings.

Ryan Hagemann

- Connecting human minds to one another = Internet 1.0
- The evolution of that system was to link that connection to the physical world = 2.0
- Makes sense to have a certain sense of continuity with government policy
- Recommend NTIA create a US Strategy for the IoT using the 1997 Clinton Administration Framework for Global Electronic Commerce
  - Coordinate US strategy for the IoT
  - How should the government approach regulation?
    - Private sector should lead

        - Government should support a simplistic, productive, legal environment
        - Government should avoid burdensome regulations on this
    - Consumer trust is invaluable
  - IoT does not present a fundamentally new or different issue

Dean Garfield

- The IoT will be completely transformative, NOT slowing down, IoT will blow that perception away
- Next iteration of humanity will be changed by the IoT
- Industries that we can't even imagine that will be created.
- This is an opportunity to improve on the internet in ways that we couldn't contemplate because of what the internet has come to be
- Opportunity to overcome digital divides
- It was a fairly exclusive group of people that defined the internet when it first arrived
- Not true for the IoT
- **Summary**
- We need to create an IoT that is INCLUSIVE BY DESIGN. The IoT produces near constant data on people. The IoT will produce data on all of us, providing a comprehensive view on the human race. The IoT is an opportunity to make innovation truly reflective in a way that represents inclusiveness.

Jeff Brueggeman

- Applaud IGF for taking on this issue
- AT&T has a very broad perspective on the IoT
  - We estimate that we have over 50 million devices connected to the internet of things
  - We are at the tip of the iceberg here
  - The IoT, including the Industrial IoT, is a vastly diverse set of technologies and devices (Cars, Shipping, Medical, Energy, Agriculture, Cities)
  - You can't have a one size fits all solution with this
  - There are going to be a lot of IoT related things that won't raise privacy concerns
  - We have a lot of devices connecting to the network
    - We need to do a lot more to connect throughout the ecosystem
    - Dept. of Commerce has an opportunity to examine these issues in a horizontal way

Privacy V. Security – Is There Room For Both Privacy And Security In The Internet's' Future?

#igfusa_cyber

The debate over encryption has been about our values of privacy and security. In this panel, we'll get specific about translating these values into legal standards and norms, both reflecting and protecting core U.S. values (like Privacy/Bill of Rights) and understandable at a global level. This panel will begin with several proposals currently before Congress and follow with a discussion about these proposals and the ideas they raise by an expert panel reflecting diverse constituencies and areas of expertise.

Lightning Talks

Joan O'Hara - General Counsel at Committee on Homeland Security

Andrew Lachman - Legislative Director for Congressman Ted W. Lieu
@AndrewLachman

Moderator

Tim Starks - Cybersecurity reporter at Politico
@timstarks

Panelists

Neema Singh Guliani - Legislative Counsel, ACLU
@neemaguliani

Justin (Gus) Hurwitz - Assistant Professor of Law, Nebraska College of Law
@GusHurwitz

Alex Joel - Civil Liberties Protection Officer, ODNI

Eugene Puryear - DC Black Lives Matter
@EugenePuryear

Amie Stepanovich - U.S. Policy Manager, Access Now
@astepanovich

Session Report

The privacy and security panel engaged in an excellent conversation about how to move past the crypto question. In addressing the “crypto question,” we decided that encryption is either a blue dress or a white dress: a dual-use tool that can be used for both good and evil.

The panel began with presentations about two proposals currently being considered in the Congress. One proposal from Senator Warner (D-VA) and Representative McCaul (R-TX) would establish a panel of experts to examine the complicated questions for law enforcement and provide recommendations to Congress. A second proposal from Representative Lieu (D-CA) would preempt states from passing any legislation that would restrict the sale or production of strong encryption.

In exploring the crypto question, panel participants turned to analogies and examples. Matt Mitchell of Crypto Harlem utilized the analogy of a “getaway car.” He said a “getaway car” is used by bank robbers, but we all need to drive cars. Likewise, encryption poses a difficult question because it is a modern tool used in novel ways - both by human rights defenders and by criminals.

Joan O’Hara, General Counsel for the House Homeland Security Committee, utilized human trafficking as an example of dual use of encryption. Human traffickers use encryption to hide their illicit trade, yet human rights advocates investigating whether governments turn a blind eye to human trafficking simultaneously use encryption to protect their researchers. Similarly, ISIS uses encryptions to hide communications, while those investigating war crimes in in Syria use encryption to protect their communications.

Moreover, Alex Joel, chief privacy officer within the intelligence community identified that the complexity of encryption is exacerbated by the involvement of tech and policy professionals: A coder sees the world as a 1 or a 0, while policy people see the world in shades of grey.

Encryption is also necessary for both cyber security and the application of human rights in the United States and around the world. Neema Singh Guliani of the ACLU and Matt Mitchell established that encryption is necessary for some communities to be able to participate in the democratic process However, efforts to undermine encryption are unfairly borne by ethnic and religious minorities.While both Guliani and Mitchell referred to the role of encryption in democracy at large, Mitchell detailed the relationship between encryption and free speech in the United States, declaring that, “Encryption allows us to be free and American.” Furthermore, Amie Stepanovich of the international human rights group Access Now said, “Encryption allows people to speak. That is essential to human rights.”

Finally, the panel addressed the issues of digital estates and what happens to your data when you die. The panel agreed that American leadership in this regards has been lacking, allowing for other countries like Russia and China to undermine both security and privacy. Gus Hurwitz of the University of Nebraska stated that America’s lack of leadership will result in countries like China and India -- which are larger markets for American companies -- writing the rules of digital estates resulting in negative results for human rights.

Plenary Panel Discussion: ICANN and the IANA Transfer: What's Next and What's at Stake?

Hashtag: #igfusa_ICANN

Keynote

Larry Strickling - Assistant Secretary for Communications and Information and Administrator, National Telecommunications and Information Administration, U.S. Department of Commerce

We are now on the last step in transitioning oversight for Internet address and domain name functions from the US Government to global stakeholders, a transition that was anticipated 18 years ago when the US established ICANN. It's said that "if you love something you have to let it go", but some in Washington aren't ready to let go of the unique role for US government in the domain name system.

This panel will summarize the transition plan and new accountability mechanisms for ICANN. Panelists with diverse views will debate whether that plan has adequately addressed concerns and questions from Congress and others. And each will offer views on what Congress and the Administration should do next.

Moderator

Shane Tews - President, Logan Circle Strategies
@ShaneTews

Panelists

Steve DelBianco - Executive Director, NetChoice

@SteveDelBianco

Gordon Goldstein - Managing Director, Head of External Affairs, SilverLake

John Kneuer - President and Founder of JKC Consulting LLC

Kristian Stout - Founder and Executive Director, International Center for Law and Economics
@kristianstout

Berin Szoka - President, TechFreedom
@BerinSzoka

Jonathan Zuck - President, ACT
@Jvzuck

Session Report

ICANN and the IANA Transfer: What's next and what is at stake?

Steve DelBianco: It is important to follow through to gain accountability on ICANN that NTIA does not have. A delay or trial period of one or two years doesn't make sense since nothing will happen in that time to radically change what has already been agreed on. Reneging on an 18-year agreement will cause the rest of the world to lose confidence in the US. We need to provide the tools to deal with future problems as well as create a claw black option if ICANN doesn't perform. As for a long view of the issues He says there needs to be a look at other means to ensure freedom/free expression within DNS/Internet.

Gordon Goldstein: Challenges to Multi-stakeholder model and control of DNS will continue since split comes on UN control of critical aspects of Internet governance. 10 years from now, there are a lot of questions that could raise significant concerns such as community acting cohesively consistently, Jurisdiction, adequate solutions to technology administration. He questions if current recommend reforms sufficient to protect DNS in an uncertain and unstable future.

John Kneuer: Bipartisan consensus no longer exists. Objective has long been to transfer DNS to private sector in order to insure stability and security. What will the community require as the US government steps out of control of ICANN? When the transition is complete those desiring intergovernmental organization will not go away. It is important to have a successful and accountable ICANN and to keep people in debate. Policy-makers and market participants must continue to be as engaged after the transition as they are now. For long term future it's impossible to come up with all of the legal mechanics within ICANN to ensure that consensus keeps together in the future.

Kristian Stout: Potential issues include jurisdiction of a California corporation since laws can change the accountability process. Post-transition, ICANN cannot censor as it did before. Important issue is how human rights are written into bylaws, as improper wording could be problematic. He questions if waiting a year ensure that bylaws and transition are handled more carefully and prudently would be better as NTIA has ability to revise terms with ICANN. For the long term future, he does not think a delay would cause a diplomatic problem, as long as it leads to constructive talks and helps resolve some of the issues.

Berin Szoka: Not against transition but consensus depends on Multi-Stakeholder System to protect community but the community is not currently empowered. Concerned that transition is rushed by an arbitrary deadline set forth by politicians. Is the community cohesive enough to operate efficiently? Some issues cannot and will not be resolved until after transition. Also current administration in white house has circumvented rights in transition to help clean up reputation after Snowden Leaks. ICANN voting mechanisms may not be effective to create accountability. He's concerned ICANN continue to morph from a tech administrative entity to a money pot and eventually into an uncontrollable government entity. He recommends the transition needs to address jurisdiction of ICANN/DNS. Constructive way to make sure issues are resolved is to extend contract to 2019. Issues range from jurisdiction, workstream 2 and California Law relating to ICANN's elaborate structure. As for a long term view the government structure is being created and its participant's/stake holders' civic virtue and nature will matter. Because of such,

dynamics of transition are extremely complicated and a trial period/claw back could act as a back up for community in case the move turns out to be negative.

Jonathan Zuck: Producing a large accountability document may have been a mistake as it was too easy to poke holes in. It was meant to continue process of reform and change and use the opportunity to put accountability measures in place. If one is not comfortable with ICANN developing accountability for IANA then one is not comfortable with Multi-stakeholder system. This could prevent community from coming together to form different outcomes. Community needs to be empowered to set forth direction of ICANN. For long term future we need to put in a mechanism for accountability in ICANN. It is important that the US government has a role in the Government Advisory Committee and has a veto vote on future decisions.

Closing Plenary Session

Panel Highlights - Reports on each session featuring key takeaways from each panel

Keynotes

Dr. David Farber - Adjunct Professor of Internet Studies and Distinguished Career Professor of Computer Science, school of Computer Science and Adjunct Professor of Engineering and Public Policy, College of Engineering, Carnegie Mellon University.
@farber

Ambassador Daniel A. Sepulveda - U.S. Coordinator for International Communications and Information Policy, U.S. Department of State. @DSePDC

To close out IGF-USA 2016, Dr. David Farber and Ambassador Daniel Sepulveda gave their reflection on the day. Dr. Farber began by discussing the profound impact that trade agreements, the TPP in particular, may have have on the Internet. He noted that there are certain policy within these agreements that do not have a clear means of implementation, highlighting the disconnect between technology and trade policy. He urged people to follow these developments, because issues such as data localization policies could have a meaningful, long-term impact on the way the Internet operates.

Dr. Farber also addressed the issue of Broadband Access and the underlying assumption that the speeds we have today will satisfy the needs of tomorrow. He posed that we may be approaching some significant changes in the Internet that are technically driven by advances in areas like virtual reality, which may have demands for speeds in the terabits range. He noted that our current protocols do not work well at those and that this was something that will need to be dealt with.

One of his biggest worries is that of security. He points out that while we have built an amazing infrastructure that powers our economy, safety, government, and more, but we do not have the ability to adequately secure it. In other words, we have critical resources running on resources that we cannot protect. He urged us to start paying attention to this issue, because it will be critical in the future of the Internet.

Ambassador Sepulveda began by speaking about the Global IGF and its important role as a venue for timely discussions on cross-cutting issues facing the Internet and noted the milestone achieved when at the WIS +10, the United Nations General Assembly agreed to renew the mandate of the IGF for ten

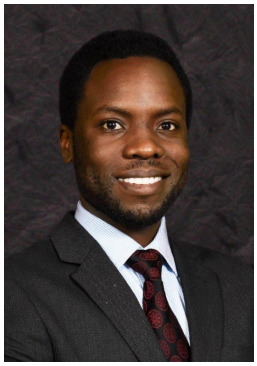
years. He praised the IGF-USA for being just as timely and useful at a national level. He noted that there were a diverse set of voices and new approaches to existing discussions, such as finding room for both privacy and security, instead of looking for a balance that limits both.

He encouraged the work of the Sustainability Working Group and its efforts to ensure that the U.S. continues to play a meaningful role in the global discussions. When comparing the state of Internet governance to that of 2014, he pointed out all of important events that have passed that were viewed as potential threats to the multistakeholder model and that each time the community found a way to overcome it.

As we look forward to 2016 and beyond, he pointed to the IGF's renewed mandate as an opportunity to ensure its growth and prosperity. He outlined all of the positive changes that the IGF has made in increasing transparency and producing more tangible outcomes. Another major opportunity is closing the digital divide through projects like the Global Connect Initiative, which has the goal of connecting an additional 1.5 billion people online globally by 2020.

Ambassador Sepulveda also stressed the importance of making the Internet p[olicy discussions more inclusive, particularly when it comes to the developing world, as well as young people and entrepreneurs. Ultimately, he expressed the importance of us to continue to engage in the discussions and to contribute to the future developments of the Internet to ensure its openness and all of the benefits that come along with that.

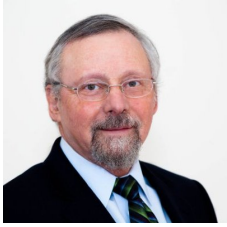
Speakers



Namema Amendi

Legal & Policy Fellow, Microsoft

Namema Amendi is a Legal & Policy Fellow in Microsoft's U.S. Government Affairs Policy team and a member of the company's Affordable Access Initiatives team. The AAI team works with governments, research institutions, companies, and NGOs around the world to foster new wireless technologies and business models that will reduce the cost of wireless bandwidth and enable billions of people to get online more easily. The team has established wireless broadband projects in places as varied as the rural heart of Kenya and the urban complexity of Singapore. The team also has projects in countries including the U.S., Philippines, South Africa, Tanzania, Ghana, and India. Prior to joining Microsoft Namema completed fellowships with Columbia University's Center on Sustainable Investment and Ciel Partners LLP, a New York-based venture incubator. He also worked as a consultant with Fanisi Capital, a Private Equity Firm with investments in five African countries. He received his bachelor's degree in Biology from Columbia University and his law degree from Columbia Law School where was an editor of the Columbia Science & Technology Law Review.



Jim Baller

President, Coalition for Local Internet Choice

Jim Baller is president of Baller Stokes & Lide, PC, a national law firm based in Washington, DC. The only law firm in the United States to be named to Broadband Community Magazine's FTTH Top 100 for each of the last four years, Baller Stokes & Lide represents clients in a broad range of communications matters nationally and in more than 35 states, including telecommunications, cable television, high-capacity broadband communications, the Internet, wireless communications, right-of-way management, pole and conduit attachments, barriers to community broadband initiatives, bankruptcy, privacy, and antitrust.

Manu Bhardwaj

Senior U.S. State Department official

Manu is a senior U.S. State Department official with responsibility over international economic and trade policy, including matters relating to Internet, technology and communications policy. As a senior political advisor, Manu reports to the Under Secretary of State for Economic Growth. At the State Department, Manu has reported directly to three U.S. Ambassadors, including as Chief of Staff. Over the past fifteen years, Manu has worked in all three branches of the federal government and in two private practice law firms. Manu served as a senior political advisor in the U.S. Department of Commerce, where he handled domestic technology policy. Manu was also an attorney at Willkie Farr & Gallagher in Washington, D.C., and at Butler Rubin Saltarelli & Boyd in Chicago, Illinois. In addition, Manu has served as a staff member at the White House Counsel's Office to the Honorable William J. Clinton, a legislative assistant at the U.S. Senate's Judiciary Committee to the Honorable Patrick J. Leahy, staff member to the Honorable Edward M. Kennedy of the United States Senate, and judicial law clerk to a U.S. federal judge. Manu graduated with a Bachelor of Arts from Northwestern University and a Juris Doctor from Michigan Law School.

Jeff Blum

Senior Vice President and Deputy General Counsel, DISH Network

Jeff Blum serves as Senior Vice-President and Deputy General Counsel of DISH, overseeing litigation and government affairs. He has been with DISH for over 7 1/2 years. Before coming to DISH, Jeff was a partner at the Los Angeles firm of Davis Wright Tremaine, where his practice focused on copyright, First Amendment and anti-piracy litigation. He received his J.D., summa cum laude, from Boston University School of Law in 1995, graduating first in his class and serving as Note Editor of the Boston University Law Review. He received his B.A. from McGill University in 1992. After law school, he clerked for Chief Judge Joseph Tauro of the United States District Court for the District of Massachusetts. Jeff currently serves as Chairman of the Satellite Broadcasting and Communications Association (SBCA). Jeff also serves on the boards of the Computer & Communications Industry Association (CCIA), and the Broadband Technical Advisory Group (BITAG).

Jeff Brueggeman
Vice President-Global Public Policy, AT&T

Jeff Brueggeman is Vice President-Public Policy and Deputy Chief Privacy Officer for AT&T. In this role, he is responsible for developing and coordinating AT&T's public policy positions on privacy, cybersecurity and Internet issues. Jeff leads the team that manages AT&T's privacy policies and provides guidance on data privacy and security issues. He supports AT&T's business in the operation of its global Internet network and deployment of cloud computing and other emerging services. Jeff participates in a wide range of legislative, regulatory and policy development proceedings involving privacy, cybersecurity and Internet issues. In addition, he represents AT&T in various international events and organizations related to Internet governance, including the Internet Governance Forum and ICANN. For the past four years, Jeff has been an active participant in a wide range of Internet governance activities, including the UN Public Consultation on Enhanced Cooperation, the East Africa IGF and the ICANN Security, Stability and Resiliency Review Team. Prior to joining AT&T, Jeff worked as a telecommunications attorney in private practice. He holds a law degree from the University of Virginia School of Law and a B.A. degree in Journalism from the University of Minnesota.

Dan Caprio

Co-Founder, The Providence Group

Dan is an internationally recognized expert on privacy and cybersecurity. He has served as the Chief Privacy Officer and Deputy Assistant Secretary at the Commerce Department, a transatlantic subject matter expert for the European Commission's Internet of Things formal expert group, a Chief of Staff for a Federal Trade Commission Commissioner and a member of the Department of Homeland Security Data Privacy and Integrity Advisory Committee. In 2002, Dan was a representative for the United States delegation revising the OECD Security Guidelines that formed the basis for the first White House Strategy to Secure Cyberspace.

Alan Davidson
Director of Digital Economy, US Commerce Department

Alan Davidson is the first Director of Digital Economy at the U.S. Department of Commerce and Senior Advisor to the Secretary of Commerce. Prior to joining the department, Alan was director of the Open Technology Institute at the New America Foundation in Washington, D.C. He also was a Research Affiliate at the Massachusetts Institute of Technology's Computer Science and Artificial Intelligence Laboratory (CSAIL), where he was a co-founder of the new MIT Information Policy Project and a Fellow at the Sloan School's Center for Digital Business. Until 2012, Alan was the Director of Public Policy for Google in the Americas. He opened Google's Washington, D.C. office in 2005, and led the company's public policy and government relations efforts in North and South America.

Michelle De Mooy
Acting Director, Privacy and Data Project, CDT

Michelle De Mooy is Deputy Director, Privacy and Data Project at the Center for Democracy & Technology. She advocates for data privacy rights and protections in legislation and regulation, works closely with industry and other stakeholders to investigate good data practices and controls, as well as identifying and researching emerging technology that impacts personal privacy. She leads CDT's health privacy work, chairing the Health Privacy Working Group and focusing on the intersection between individual privacy, health information and technology. Michelle's current research is focused on ethical and privacy-aware internal research and development in wearables, the application of data analytics to health information found on non-traditional platforms, like social media, and the growing market for genetic data. She has testified before Congress on health policy, spoken about native advertising at the Federal Trade Commission, and written about employee wellness programs for US News & World Report's "Policy Dose" blog. Michelle is a frequent media contributor, appearing in the New York Times, the Guardian, the Wall Street Journal, Vice, and the Los Angeles Times, as well as on The Today Show, Voice of America, and Government Matters TV programs. Before CDT, Michelle worked as a political campaign consultant for M+R Strategic Services, as a development and communications director at a capacity building organization aimed at nonprofits, and in the tech sector in product management and software engineering.

Steve DelBianco
Executive Director, NetChoice

As Executive Director, Steve works with NetChoice members to set and execute the NetChoice agenda.
Steve has become a well-known expert on Internet governance, online consumer protection, and Internet taxation. He's provided expert testimony in twenty-one Congressional hearings and many more state legislative sessions.
Steve advocates for NetChoice positions at the National Conference of State Legislatures and the American Legislative Exchange Council, where he serves on the Private Enterprise Board. Moreover, Steve regularly enters the lion's den at the Streamlined Sales Tax Governing Board, where he's the lone opponent of new tax burdens on Internet commerce.
Steve is frequently quoted on technology issues in the media, including a segment on 60 Minutes exposing barriers to innovation in residential real estate. Steve debated online taxes on CNN Situation Room, CNBC Larry Kudlow, PBS Nightly Business Report, CBS This Morning, and Marketplace Radio.

Dr. David Farber

Adjunct Professor of Internet Studies and Distinguished Career Professor of Computer Science, school of Computer Science and Adjunct Professor of Engineering and Public Policy, College of Engineering, Carnegie Mellon University.

Prof. Farber has long been a prominent defender of the Internet and has been involved in both critical policy and technology deliberations, including his role as Chief Technologist for the FCC; mentor to many Internet pioneers and as an adviser to companies and governments.
His students, including Jon Postel, Paul Mockapetris and David Sincoskie, among others, have contributed much towards making the Internet a vital economic and political force. Farber played a key role in many systems that converged into today's Internet, including the National Science Foundation's CSNet, in addition to helping to plan and develop NSFNet and NREN, efforts that led to the development of the current commercial Internet.

Kate Gage

Senior Policy Advisor, International Science and Technology, White House Office of Science and Technology Policy

Kate Gage is the Advisor to the Executive Director in the U.S. Global Development Lab at the U.S. Agency for International Development. She leads much of the Agency's engagement with the maker movement and access to early stage manufacturing tools in the developing world. Previously she led work on Open Data and the launch of many of USAID's initiatives on Science, Technology, and Innovation. Before joining the Obama Administration, she worked on the 2008 Barack Obama Campaign and graduated from Dartmouth College. She is originally from Berkeley, California.

Dean Garfield

President and CEO, ITI

Dean Garfield is the President and CEO of ITI, the global voice of the tech sector. Under Dean's leadership, ITI has defined the tech agenda for global policymakers, expanded its membership and influence, and launched a foundation that serves as the preeminent thought leader on innovation. Prior to joining ITI, Dean served in leadership positions for both the MPAA and RIAA. Dean serves on the boards of College for Every Student, the SEED School of Washington, D.C. and serves as the Board President of Aiden Montessori School. He received a joint degree from New York University School of Law and the Woodrow Wilson School of Public Administration and International Affairs at Princeton University.

Ari Giovenco

Director of Trade and International Policy, Internet Association

Ari Giovenco is Director of Trade and International Policy at the Internet Association. In his capacity, he is responsible for advocating for policies that enable the global internet community to grow and thrive. Prior to joining the Internet Association, Ari served in the Obama Administration in the Office of the United States Trade Representative and worked in the United States Congress.

Gordon Goldstein
Managing Director - Head of External Affairs, SilverLake

Gordon M. Goldstein joined Silver Lake in 2010. He is a Managing Director with responsibility for global external affairs, including domestic and international government relations, public policy, strategic communications and media relations for Silver Lake as well as key public affairs issues and initiatives for the firm's portfolio companies. Dr. Goldstein represented Silver Lake as a member of the United States delegation to the World Conference on International Telecommunications convened in 2012 in the United Arab Emirates and also served on the American delegation to the United Nations International Telecommunication Union Plenipotentiary Conference in South Korea in 2014. Dr. Goldstein currently serves on the Executive Committee and Board of Directors of the Private Equity Growth Capital Council, an industry trade group based in Washington, D.C.

Ryan Hagemann
Technology and Civil Liberties Policy Analyst, Niskanen Center

Ryan Hagemann is the technology and civil liberties policy analyst at the Niskanen Center. His research specialties include privacy and surveillance, robotics and automation, decentralized networks, Internet policy, and issues at the intersection of sociology, economics, and technology. He has previously authored works on the economic and social ramifications of autonomous vehicles with the Mercatus Center. He maintains an adjunct fellowship with TechFreedom, a libertarian nonprofit dedicated to advancing online freedom. He graduated from Boston University with a B.A. in International Relations, Foreign Policy and Security Studies and holds a Master of Public Policy in Science and Technology Policy from George Mason University.

Justin (Gus) Hurwitz
Assistant Professor of Law, Nebraska College of Law

Professor Justin (Gus) Hurwitz joined the College of Law faculty in 2013. His work builds on his background in law, technology, and economics to consider the interface between law and technology and the role of regulation in high-tech industries. He has a particular expertise in telecommunications law and technology, including data- and cybersecurity, and was recognized as a Cyber Security & Data Privacy Trailblazer by the National Law Journal. His work has appeared in the George Mason University, University of Iowa, Michigan State University, University of Pennsylvania, University of Pittsburgh, and other law review and journals. Professor Hurwitz has a background in technology having worked at Los Alamos National Lab and interned at the Naval Research Lab prior to law school. During this time his work was recognized by organizations such as the Federal Laboratory Consortium, R&D Magazine, Los Alamos National Lab, IEEE & ACM, and the Corporation for Education Network Initiatives in California. In addition, he held an Internet2 Land Speed World Record with the Guinness Book of World Records.

Alex Joel
Civil Liberties Protection Officer, ODNI

Alex Joel entered public service following the events of September 11. He joined the Central Intelligence Agency's Office of General Counsel in October 2002, where he provided legal advice relating to intelligence activities. Prior to his employment by the CIA, Mr. Joel served as the privacy, technology, and e-commerce attorney for Marriott International, Inc., where he helped engineer and deploy Marriott's global privacy compliance program, including the creation of their first privacy officer position. Before that, he worked as a technology attorney at the law firm of Shaw, Pittman, Potts & Trowbridge in Washington, D.C. (now Pillsbury Winthrop Shaw Pittman), and for four years as a U.S. Army Judge Advocate General Corps officer, as both prosecutor and defense attorney.

Burcu Kilic
Legal & Policy Director, Public Citizen

Burcu Kilic is an expert on legal, economic and political issues surrounding intellectual property law & policy, internet policy, trade, development and innovation. She provides technical and legal assistance to governments and civil society groups around the world and promotes their participation in international rule making. She has performed research and written extensively on these subjects.
She completed her Ph.D. at Queen Mary, University of London as a School of Law Fellow. She holds Masters degrees from University of London and Stockholm University in Intellectual Property Law and Law and Information Technology and a law degree from Ankara University. She is also a SARChI Research Fellow at Institute for Economic Research on Innovation, Tshwane University of Technology, South Africa.

John Kneuer
President and Founder of JKC Consulting LLC

John Kneuer is the President and Founder of JKC Consulting LLC and a Senior Partner at Fairfax Media Partners, a company organized to source, acquire, and manage transformative businesses in the telecommunications and media industries.
Prior to starting Kneuer LLC, Mr. Kneuer served as the Assistant Secretary of Commerce for Communications and Information. In this capacity Mr. Kneuer was the principal advisor to the President of the United States on telecommunications policy and the Administrator of the National Telecommunications and Information Administration ("NTIA").In addition to representing the Executive Branch in domestic and international telecommunications and information policy activities, NTIA also manages the federal use of spectrum; performs cutting edge telecommunications research and engineering, including resolving technical telecommunications issues for the federal government and private sector; and administers infrastructure and public telecommunications facilities grants.
Prior to his service at NTIA, Mr. Kneuer served as a Senior Associate at the law firm of Piper Rudnick in Washington, D.C., providing regulatory and legislative representation to corporate clients in the telecommunications, defense, and transportation industries. Earlier in his career, Mr. Kneuer served as the Executive Director for Government Relations at the Industrial Telecommunications Association, and prior to that served as an Attorney-Advisor in the Commercial Wireless Division of the Federal Communications Commission's Wireless Bureau. Mr. Kneuer received B.A. and J.D. degrees from the Catholic University of America.

Nonabah Lane
Indigenous Communities

Nonabah Lane has more than fifteen years working in the field of environment science and sustainability. Her professional work has focused on education, sustainability consulting, green entrepreneurship, land remediation, land restoration and environmental policy. As an entrepreneur, she has worked with Native American communities in developing strategies to help tribal enterprises and their industry partners. She has also co-authored environmental impact statements, environmental assessments, and land use planning grants that pertain to Indian Trust Land. Nonabah is a Leadership in Energy and Environmental Design Accredited Professional (LEED AP). As a member of the Navajo Nation, she has high regard for Native American people, traditions and languages, which provides her with a unique perspective and expertise on technology and environment related issues. She is a lifelong Sequoyah Fellow of the American Indian Science and Engineering Society (AISES), and has a strong commitment to science, technology engineering and mathematics (STEM) education, strategic planning, and leadership in Indian Country. Nonabah has a Bachelor's degree in Environmental Science and Policy from the University of Colorado at Boulder.

Andrew Lachman
Legislative Director for Congressman Ted W. Lieu

Andrew Lachman manages technology issues and serves as Legislative Director for Congressman Ted W. Lieu (D-CA) sponsor of the ENCRYPT Act, SPY Car Act and co-chair of the Cloud Computing Caucus and Virtual Reality Caucus. Andrew is also the founding co-chair of the Congressional Tech Staff Association and an alum of the Wilson Center for International Scholars Cybersecurity Lab. Prior to serving on the Hill, Andrew spent ten years as a technology licensing attorney, working for companies such as Paramount Pictures and Move.com as well as serving on the Congressional Internet Caucus Advisory Committee, Chair of the Democratic National Committee Small Business Owners Council and holding a Certified Information Privacy Professional certification. He received his B.A. from American University and J.D. from George Washington University where he served on the International Law Journal. He also participated in the Harvard University Kennedy School of Government Emerging Leaders program.

Blair Levin
Non-resident Senior Fellow The Brookings Institution

Blair Levin is a nonresident senior fellow with the Metropolitan Policy Program. He serves as the executive director of Gig.U: The Next Generation Network Innovation Project, an initiative of three dozen leading research university communities seeking to support educational and economic development by accelerating the deployment of next generation networks. He also serves as an advisor to a variety of non-profits with a mission of deploying or using broadband technology to advance social progress, including Case Commons, Volo and the LEAD Commission. Levin also advises both privately held and public companies in the telecom and technology sectors.

Previously, he worked with the Communications & Society Program with the Aspen Institute Communications and Society Program, following his departure in 2010 from the Federal Communications Commission where he oversaw the development of a National Broadband Plan. Levin rejoined the Commission in 2009, after eight years as an analyst at Legg Mason and Stifel Nicolaus. As Barron's magazine noted, Levin "has always been on top of developing trends and policy shifts in media and telecommunications … and has proved visionary in getting out in front of many of today's headline making events."

Levin served as chief of staff to FCC Chairman Reed Hundt from December 1993 through October 1997. During that period he oversaw, among other matters, the implementation of the 1996 Telecommunications Reform Act, the first spectrum auctions, the development of digital television standards and the commission's Internet initiative.

JD Maddox
Director of Analytics, Global Engagement Center

J.D. Maddox is the Director of Analytics at the interagency Global Engagement Center (GEC), housed at the U.S. Department of State. He also is an adjunct professor at George Mason University, where he teaches the graduate course National Security Challenges in the Department of Information Sciences and Technology. Prior to GEC, Mr. Maddox served as a branch chief in the CIA's Counterterrorism Center, as an intelligence advisor to the Secretary of Homeland Security, and in operational roles at the National Nuclear Security Administration and the U.S. Army Special Operations Command. He has testified to the U.S. Congress, deployed to the Iraq war zone twice, and conducted domestic law enforcement operations. He has been a Director of National Intelligence Galileo Award finalist, he was awarded the Lockheed Martin Star Award for his actions during the 11 September 2001 attacks, and earned the title of U.S. Army Special Operations Command Soldier of the Year (Reserve) in 1999. Mr. Maddox holds an M.A. from Georgetown University's National Security Studies Program and a B.A. in philosophy and history of science from St. John's College, Annapolis. He speaks Urdu, Russian and German.

Olga Madruga Forti

Chief of the Global Strategy & Negotiations Division of the International Bureau of the FCC

Olga Madruga-Forti has more than 25 years of experience as a senior executive and legal practitioner in the telecommunications and satellite industries, as well as extensive experience in commercial negotiations across numerous emerging markets in Asia, Latin America, and Africa. Currently, she is Chief of the Global Strategies and Negotiation Division of the Federal Communications Commission (FCC), International Bureau returning to the Commission after 17 years of private sector international telecommunications experience. At the FCC Ms. Madruga- Forti leads the agencies international dialogue on a global basis. Much of her work is dedicated to helping developing countries establish new regulatory approaches that spur ICT development. Prior to joining the FCC Ms. Madruga-Forti was based in Argentina where she represented regional telecommunications companies such as ARSAT S.A., an international satellite company, before the International Telecommunications Union. Ms. Madruga-Forti was also a Member of the Board for the Internet Corporation for Assigned Names and Numbers (ICANN) and an Adjunct Professor of Telecommunications Law and Negotiation at DePaul University Law School. Prior to this Ms. Madruga-Forti was Vice President, Regulatory and Legal, for several U.S. satellite companies heading global regulatory and market access operations. Earlier in her career Ms. Madruga-Forti served nine years at the FCC as Special Counsel for International Satellite Policy and also Chief of the Domestic Services Branch of the Common Carrier Bureau. She earned her law degree from Georgetown University Law Center, in Washington, D.C. concentrating on international business law and graduating as the Belgrano Scholar to the Organization of American States. Prior to that, she graduated summa cum laude from Emory University with a double major in both English and French Literature. She is fluent in English, Spanish and French.

Kevin Martin

Vice President for Mobile and Global Access Policy, Facebook

Kevin Martin is the Vice-President for Mobile and Global Access Policy at Facebook where he oversees, among others, Facebook's connectivity programs and communication regulatory issues. Previously, he served as Chairman (2005-2009) and Commissioner (2001-2005) of the Federal Communications Commission. During his tenure, the FCC adopted a non-binding policy statement on net neutrality which led to the 2010 Open Internet Order. After leaving the FCC he joined the Aspen Institute as a Senior Fellow at the think tank's Communications and Society Program, and later the law firm Squire Patton Boggs LLP as a Partner. He holds a B.A. from the University of North Carolina at Chapel Hill, an M.P.P. from Duke University, and a J.D. from Harvard

Karen McCabe

Senior Director, Technology, Policy and International Affairs, IEEE

Karen McCabe is a Senior Director of Technology Policy and International Affairs at IEEE, where she leads efforts to build and connect communities working in the technology policy ecosystem and where her focus is on the development and promotion of collaborative strategies that produce impactful outcomes among mulit-stakeholders to help advance technology for society and humanity benefit. Karen has over 20 years experience working at the nexus of mission-driven organizations, industry, NGO and government bodies to raise awareness, to educate and build capacity among stakeholders in the technology sphere. Through her career, Karen has focused on projects and initiatives to

expand global footprint, build communities, develop and execute integrated communications and global outreach programs and build and nurture relationships. During the last 20 years, Karen has held various leadership and senior management positions in the technology sector, with a specific focus in the global standards and technology development domain that is rooted in openness, transparency and inclusiveness. Today, Karen in engaged in efforts in Internet governance, ethics and technology and global standards in trade and policy. She leads the organization's engagement with the UN (SDGs, WSIS, etc.) and other international bodies with a focus on engagement of technical community and a focus on the intersection of policy and technology in ICTs. Karen is a member of the OECD Internet Technical Advisory, the Internet Society and works with an array of organizations and bodies to connect technologists, industry leaders and policy makers.

Jonathan Metzer
GBI Chief of Party, Nethope

Jonathan serves as NetHope's GBI Chief of Party, providing strategic leadership, guidance and oversight to all aspects of the joint program with USAID. Prior to joining NetHope, Jonathan served as Vice President of the Information Technology Applications Center at FHI 360 (formerly AED) where his projects included wiring schools in Macedonia, supporting ICTs across sub-Saharan Africa and connecting rural communities in Peru. Jonathan has been responsible for a variety of high-level projects: a regional ICT development program for USAID Asia and Near East Bureau; and USAID's Africa Bureau's Leland Initiative which focused on introducing the Internet in twenty-three sub-Saharan countries. Jonathan was also a founding member of the SatelLife HealthNet Program, the world's first multiple low-earth orbiting satellite email service.

Matt Mitchell
CryptoHarlem

Matt Mitchell is a security researcher, operational security trainer, and data journalist. Matt leads CryptoHarlem, impromptu workshops teaching basic cryptography tools to the predominately African American community in upper Manhattan. He worked as a data journalist and developer for The New York Times, CNN, Time Inc, and RadioOne/TvOne. Matt currently trains activists & journalists in digital security. Matt recently partnered with the organization, Global Journalist Security to offer digital security training inside newsrooms. His work focuses on marginalized, aggressively monitored, over-policed populations in the United States.

Eli Noam

Director, Columbia Institute for Tele-Information

Eli Noam is Professor of Economics and Finance at the Columbia Business School since 1976 and its Garrett Professor of Public Policy and Business Responsibility. Served for three years as a Commissioner for Public Services of New York State. Appointed by the White House to the President's IT Advisory Committee. Director of the Columbia Institute for Tele-Information, a research center focusing on management and policy issues in communications, internet, and media. He has also taught at Columbia Law School, Princeton University's Economics Department and Woodrow Wilson School, the University of St. Gallen, and the University of Fribourg. He is active in the development of electronic distance education. Noam has published 30 books and over 400 articles in economics journals, law reviews, and interdisciplinary journals, and is a regular columnist for the *Financial Times* online edition. His recent books and projects include: *Who Own's the World's Media?* (Oxford, forthcoming 2015), Media Ownership and Concentration in America (Oxford); Peer-to-Peer Video (Springer); Media Management (3-volumes, forthcoming); and the projects: A National Initiative for Next Generation Video; and Ultrabroadband.

Cathy Novelli

Under Secretary of State, US Government

Catherine A. Novelli was sworn in as Under Secretary of State for Economic Growth, Energy, and the Environment on February 18, 2014. In this capacity, she leads the State Department's efforts to develop and implement economic growth, energy, oceans, environmental, and science and technology policies to promote economic prosperity and address global challenges in a transparent, rules-based, and sustainable system. She is also the State Department's Senior Coordinator for International Information Technology Diplomacy. Prior to assuming her current duties, she was Vice President, Worldwide Government Affairs at Apple, Inc. In that role, Ms. Novelli headed a multinational international team responsible for Apple's federal, international, and state and local government relations and public policy. Formerly Assistant U.S. Trade Representative for Europe & the Mediterranean, Ms. Novelli coordinated U.S. trade and investment policy for the over 65 countries of Western Europe, Central Europe, Russia, the NIS, the Middle East and Northern Africa. She has taken a leading role in many of the most important U.S. trade negotiations in Europe, Russia, the Middle East, and North Africa. As the point person for the $1 trillion economic relationship between the United States and Europe, Ms. Novelli led efforts to ensure access to the European market for U.S. manufactured and agricultural products. Ms. Novelli was the lead strategist in creating the United States' free trade agenda with the Middle East. She led free trade agreement negotiations with Jordan, Morocco and Bahrain, Oman and United Arab Emirates. She chaired the Trade and Investment Framework Councils with a number of countries in the region, including Turkey, Egypt, Tunisia, United Arab Emirates, Qatar, Kuwait, Saudi Arabia, and Algeria. As the Deputy Assistant U.S. Trade Representative for Central and Eastern Europe and Eurasia, she negotiated most of the bilateral trade and investment agreements that underpin our economic relationship in that region. Ms. Novelli is a graduate of Tufts University, holds a law degree from the University of Michigan and a Master of Laws from University of London (with concentrations in international and comparative law at the London School of Economics and School of Oriental and Asian Studies).

Joan O'Hara
General Counsel at Committee on Homeland Security

Senior Congressional Counsel with a lifelong record of exceptional achievement and a commitment to team success; Former NCAA Head Coach and U.S. National Rowing Champion with a decade of professional leadership and teambuilding experience, and an instinctive commitment to excellence; Diligent, dependable Hill Staffer, dedicated to supporting lawmakers and colleagues in finding creative solutions to problems and achieving their goals; Successful negotiator with an appreciation for diverse viewpoints and demonstrated success in finding common ground, building consensus, and getting

Doug Palmer
Senior Trade Reporter, Politico

Doug Palmer is one of the most experienced trade reporters in Washington after nearly 15 years on the beat. He was on the scene when efforts to launch world trade talks failed in Seattle in 1999 to the delight of thousands of protesters who clashed with police throughout the week. Since then, Palmer has covered trade negotiations with more than a dozen countries as well as the long-running Doha round of world trade negotiations, which was launched in 2001 and still has not successfully concluded. Palmer's job currently includes keeping tabs on trade frictions with China and negotiations on two huge regional free regional trade agreements, the Trans-Pacific Partnership and the Transatlantic Trade and Investment Partnership.

Robert Pepper
Fellow, Communications and Society Program, The Aspen Institute

Robert Pepper works with governments across the world helping them develop strategies and address areas such as ICT and development, broadband plans, IP enabled services, wireless and spectrum policy, the Internet of Things, security, privacy and Internet governance.
Before joining The Aspen institute, Pepper led Cisco's Global Technology Policy team for more than a decade, including leading Cisco's Internet Governance agenda in international fora such as at the UN's World Summit on the Information Society, WSIS +10 review, the global and regional Internet Governance Forums, the ITU and the UN Broadband Commission.
He joined Cisco in July 2005 from the FCC where he served as Chief of the Office of Plans and Policy and Chief of Policy Development beginning in 1989 where he led teams developing policies promoting the development of the Internet, implementing telecommunications legislation, planning for the transition to digital television, and designing and implementing the first U.S. spectrum auctions.
Before joining the FCC, he was Director of the Annenberg Washington Program in Communications Policy. His government service also included Acting Associate Administrator at the National Telecommunications and Information Administration (NTIA) and initiating a program on Computers, Communications and Information Policy at the National Science Foundation.
Pepper received his BA. and Ph.D. from the University of Wisconsin-Madison. Aspen's Communications and Society Program focuses on the implications of communications and information technologies on society, the

impact of new technologies on democratic and social institutions, and the development of new communications policy models and options.

Eugene Puryear
DC Black Lives Matter

Eugene Puryear is a Washington, D.C.-based activist. As a high school student in Charlottesville, Va, Eugene organized a walkout when the war in Iraq began in 2003, and helped to organize a number of the large-scale demonstrations that took place against the continuing U.S. war and occupation of Iraq and Afghanistan. He was a key leader In the struggle to free the Jena Six in 2007, was a founder of the Jobs Not Jails coalition, DC Ferguson Movement and Stop Police Terror Project in Washington D.C., and is the author of the book Shackled and Chained: Mass Incarceration in Capitalist America.

Courtney Radsch
Advocacy Director at the Committee to Protect Journalists

Courtney works at the nexus of media, technology, and rights as the advocacy director at the Committee to Protect Journalists and is the author of a forthcoming report on the impact of countering violent extremism on media development for the Center for International Media Assistance at the National Endowment for Democracy.

Lee Rainie
Director, Internet, Science and Technology - Pew Research Center

Lee Rainie is the director of internet, science and technology research at Pew Research Center. Under his leadership, the Center has issued more than 500 reports based on its surveys that examine people's online activities and the internet's role in their lives. He also directs the Center's new initiative on the intersection of science and society. The American Sociological Association gave Rainie its award for "excellence in the reporting on social issues" in 2014 and described his work as the "most authoritative source of reliable data on the use and impact of the internet and mobile connectivity."
Prior to launching Pew Research Center's technology research, Rainie was managing editor of U.S. News & World Report. He is a graduate of Harvard University and has a master's degree in political science from Long Island University.

Nitin Rao
CloudFlare

Nitin Rao leads the strategic infrastructure team at CloudFlare, one of the world's largest networks that powers more than 10 trillion requests per month, which is nearly 10 percent of all Internet requests for more than 2.5 billion people worldwide. Nitin is a TED Fellow. He previously founded Sunglass, a cloud-based design technology company and received an MBA degree from the MIT Sloan School of Management.

Yolanda Rondon
Staff Attorney for the American-Arab Anti-Discrimination Committee
Yolanda Rondon is a Staff Attorney for the American-Arab Anti-Discrimination Committee (ADC), where she works on legal cases and policy issues related to surveillance, racial and religious profiling, hate crimes, employment discrimination and immigration.

Marc Rotenberg
President, Electronic Privacy Information Center (EPIC)

Marc Rotenberg is President of the Electronic Privacy Information Center (EPIC) in Washington, DC and a faculty member at Georgetown Law School where teaches privacy law and open government. He has worked with a wide range of national and international organizations, including the AAAS, ABA, ICANN, IGF, NAS, OECD, UNESCO, on Internet policy issues. He was a founding board member and former chair of the Public Interest Registry, which established and maintains the .ORG domain.

Carolina Rossini
Vice President, International Policy

Carolina Rossini is the Vice President for International Rights and Strategy at Public Knowledge and a 2016 World Economic Forum Young Global Leader. Alongside her work at Public Knowledge, she is a Global Partners Digital International Associate and an X-Lab fellow. She sits on several advisory boards, including at Open Knowledge Foundation, CodingRights, Instituto Educadigital, and InternetLab. Previously, Carolina was a Project Director at New America Foundation's Open Technology Institute, the International Intellectual Property Director at Electronic Frontier Foundation (EFF), and a Fellow at the Berkman Center at Harvard University. Back in Brazil, she was a in-house council for Terra Networks S/A, part of Telefonica Economic Group, and a law lecturer and project coordinator at the Center for Technology and Society and Fundação Getulio Vargas. Carolina has an LLM in Intellectual Property from Boston

University, a MBA from Instituto de Empresas, a MA in International Economic Negotiations from UNICAMP/UNESP, and a JD from University of Sao Paulo – USP.

Nilmini Rubin

Senior Advisor, U.S. House of Representatives Foreign Affairs Committee

Nilmini Gunaratne Rubin advises the U.S. House of Representatives Foreign Affairs Committee on global public policy issues ranging from trade and international finance to energy and technology. On behalf of Chairman Royce, she wrote the Digital GAP Act to promote internet access in developing countries. She also drafted the Electrify Africa Act to catalyze investment in power in Africa - a bill lauded in the Washington Post as "market-oriented development policy." Previously, Nilmini advocated on technology policy for the Information Technology Industry Council where she successfully influenced cybersecurity legislation. Nilmini served as a senior aide for the U.S. Senate Foreign Relations Committee where she built bipartisan coalitions in the Senate and House of Representatives as well as with investors, businesses and civil society to secure passage of groundbreaking transparency law that will allow citizens to track trillions of dollars paid by oil companies to governments, a law providing much needed debt relief for Haiti, and law requiring reform by the development banks. She secured governance reforms and contributions for the poorest countries as part of a $100 billion loan from the United States to the International Monetary Fund. Earlier, Nilmini worked at the White House's National Security Council as the Director for International Finance and the G-8. She helped lead international negotiations on trade, economic development, debt relief, HIV/AIDS, counter-terrorism, non-proliferation, and Africa for the 2003 G-8 Summit in Evian, France. She also served at the U.S. Department of the Treasury and the Federal Reserve Bank of New York. Nilmini was named a Young Global Leader by the World Economic Forum in 2006 and a "40 under 40" in international development by Devex in 2010. She is a member of the Council on Foreign Relations.

Marina Ruggieri

Full Professor of Telecommunications Engineering at the University of Roma "Tor Vergata"

Marina Ruggieri is the Vice President Elect of IEEE Technical Activities. She is also a Full Professor of Telecommunications Engineering at the University of Roma "Tor Vergata" and therein member of the Board of Directors. Marina is co-founder and Chair of the Steering Board of the interdisciplinary Center for Teleinfrastructures (CTIF) at the University of Roma "Tor Vergata". The Center, that belongs to the CTIF global network, with nodes in USA, Europe and Asia, focuses on the use of the Information and Communications Technology (ICT) for vertical applications (health, energy, cultural heritage, economics, law) by integrating terrestrial, air and space communications, computing, positioning and sensing. She is Principal Investigator of the 40/50 GHz TPD#5 Communications Experiment on board the European Alphasat satellite (launched on July 2013). Marina She also serves a Vice President of the Roma Chapter of AFCEA; proboviro of the Italian Industries Federation for Aerospace, Defense and Security (AIAD); member of the Technical-Scientific Committee of the Center for Aeronautical Military Studies.

Ambassador Daniel A. Sepulveda

U.S. Coordinator for International Communications and Information Policy, U.S. Department of State

Ambassador Daniel A. Sepulveda serves as Deputy Assistant Secretary of State and U.S. Coordinator for International Communications and Information Policy. In this capacity, Sepulveda has served as a Vice Chair to the 2016 OECD Ministerial Meeting on the Digital Economy, and as the lead U.S. negotiator for the 2015 World Summit on Information Society (WSIS) +10 Review, a United Nations General Assembly High-Level Meeting. Sepulveda led the U.S. delegation to the International Telecommunication Union (ITU) Busan Plenipotentiary Conference in 2014 and the ITU World Telecommunication Policy Forum in 2013, and has served as the lead coordinator for multiple bilateral dialogues with international counterparts.

Prior to joining the State Department in 2012, Sepulveda served as a Senior Advisor and member of Senator John Kerry's senior management team. In that role, his portfolio included managing issues related to commerce, trade, and business, including Senator Kerry's work as Chairman of the Commerce Subcommittee on Communications, Technology, and the Internet.

Neema Singh Guliani

Legislative Counsel, ACLU

Neema Singh Guliani is a legislative counsel with the American Civil Liberties Union Washington Legislative Office, focusing on surveillance, privacy, and national security issues. Prior to joining the ACLU, she worked in the Chief of Staff's Office at DHS, concentrating on national security and civil rights issues. She has also worked as an adjudicator in the Office of the Assistant Secretary for Civil Rights in the Department of Agriculture and was an investigative counsel with House Oversight and Government Reform Committee, where she conducted investigations related to the BP oil spill, contractors in Iraq and Afghanistan, and the Recovery Act. Neema is a graduate of Brown University where she earned a BA in International Relations with a focus on global security and received her JD from Harvard Law School in 2008.

David Snead

Board and Policy Working Group Chair of the Internet Infrastructure Coalition

David Snead is the General Counsel for cPanel – the largest web hosting automation company. He is responsible for cPanel's global legal operations and is a member of the company's management team. David has provided advice and counsel to technology companies since 1995 beginning with a practice based on technology exports. Since 1999, his practice has focused exclusively on the Internet infrastructure industry. In 2011 he co-founded the Internet Infrastructure Coalition (I2Coalition), an advocacy organization for the Internet infrastructure industry. He manages the group's global public policy portfolio and is Chairman of the Board. David received his J.D. in 1991 from Georgetown University Law Center, and his B.A. in 1987 in International Affairs from Trinity University in San Antonio.

Tim Starks
Cybersecurity reporter at Politico

Tim Starks has written about cybersecurity since 2003, when he began at Congressional Quarterly as a homeland security reporter. While at CQ Roll Call, he mainly covered intelligence, but he also had stretches as a foreign policy reporter and defense reporter. In 2009, he won the National Press Club's Sandy Hume Memorial Award for Excellence in Political Journalism.
He left CQ Roll Call in March of 2015. Before coming to Politico he spent several months freelancing, writing for the Economist, the New Republic, Foreign Policy, Vice, Bloomberg and the Guardian.

Amie Stepanovich
U.S. Policy Manager, Access Now

Amie Stepanovich works to ensure that laws and policies on surveillance and cybersecurity recognize and respect human rights. At Access Now, Amie leads projects on digital due process and responds to threats at the intersection of human rights and communications surveillance. Previously, Amie was the Director of the Domestic Surveillance Project at the Electronic Privacy Information Center, where she testified in hearings in both the Senate and the House of Representatives, as well as in State legislatures. Amie is a board member of the Internet Education Foundation and is the Committee on Individual Rights and Responsibilities' Liaison to the American Bar Association's Cybersecurity Working Group. She was co-chair for the 2014 Computers, Freedom, and Privacy Conference. Amie was named as a Privacy Ambassador by the Information and Privacy Commissioner of Ontario, Canada and was recognized in 2014 as one of Forbes magazine's 30 under 30 leaders in Law and Policy. She has a J.D. from New York Law School, and a B.S. from the Florida State University.

Kristian Stout
Associate Director for Innovation Policy at the International Center for Law and Economics (ICLE)

Kristian Stout, Associate Director for Innovation Policy at the International Center for Law and Economics (ICLE), has expertise in technology and innovation policy. As a technology professional and entrepreneur for over ten years, Kristian's scholarship is influenced by a practical understanding of the challenges facing innovators in the modern economy. Kristian has previously been a lecturer in the computer science department of Rutgers University, is frequently invited to speak on law and technology topics, and has been published in law journals and legal treatises. Kristian is an attorney licensed to practice law in New Jersey and Pennsylvania, is counsel at A&S Technologies, a software services firm, and sits on the board of CodedByKids, a nonprofit organization that provides STEM education to underprivileged children.
Kristian graduated magna cum laude from the Rutgers University School of law, served on the editorial board of the Rutgers Journal of Law and Public Policy, and was additionally awarded a Governor's Executive Fellowship from the Eagleton Institute of Politics.

Larry Strickling

Assistant Secretary for Communications and Information and Administrator, National Telecommunications and Information Administration, U.S. Department of Commerce

Lawrence E. Strickling was sworn in as Assistant Secretary for Communications and Information at the Department of Commerce in June 2009. In this role, Strickling serves as Administrator of the National Telecommunications and Information Administration (NTIA), the Executive Branch agency that is principally responsible for advising the President on telecommunications and information policy. A technology policy expert with more than two decades of experience in the public and private sectors, Strickling's focus at NTIA includes leading initiatives to expand broadband Internet access and adoption in America and to ensure that the Internet remains an engine for continued innovation and economic growth. After joining NTIA, Strickling oversaw the development of an approximately $4 billion Recovery Act broadband grants program and now manages the rigorous oversight of these nationwide broadband projects to ensure they deliver timely and lasting benefits to the American public. Additionally, under Strickling's leadership, NTIA launched America's first public, searchable nationwide map of consumer broadband Internet availability and crafted a ten-year plan that the agency is now implementing to nearly double the amount of commercial spectrum available for wireless broadband, as directed by President Obama. Strickling also oversees NTIA's efforts on a host of domestic and global Internet policy and administrative issues, including playing a key role in the Commerce Department's Internet Policy Task Force; advocating the U.S. Government's policy positions abroad; and promoting the stability and security of the Internet's domain name system through its participation on behalf of the U.S. government in Internet Corporation for Assigned Names and Numbers (ICANN) activities.

Berin Szoka

President, TechFreedom

Berin Szoka is the President of TechFreedom. Previously, he was a Senior Fellow and the Director of the Center for Internet Freedom at The Progress & Freedom Foundation. Before joining PFF, he was an Associate in the Communications Practice Group at Latham & Watkins LLP, where he advised clients on regulations affecting the Internet and telecommunications industries. Before joining Latham's Communications Practice Group, Szoka practiced at Lawler Metzger Milkman & Keeney, LLC, a boutique telecommunications law firm in Washington, and clerked for the Hon. H. Dale Cook, Senior U.S. District Judge for the Northern District of Oklahoma.

Szoka received his Bachelor's degree in economics from Duke University and his juris doctor from the University of Virginia School of Law, where he served as Submissions Editor of the Virginia Journal of Law and Technology. He is admitted to practice law in the District of Columbia and California (inactive).

He has served on the Steering Committee for the D.C. Bar's Computer & Telecommunications Law Section, and currently serves on the FAA's Commercial Space Transportation Advisory Committee (COMSTAC). Szoka has chaired, and currently serves on, the Board of Directors of the Space Frontier Foundation, a non-profit citizens' advocacy group founded in 1988 and dedicated to advancing commercial opportunity and expansion of human civilization in space.

He blogs for the Technology Liberation Front.

Shane Tews
President, Logan Circle Strategies

Shane Tews is a visiting fellow at the American Enterprise Institute's (AEI's) Center for Internet, Communications, and Technology Policy, where she works primarily on cybersecurity and Internet governance issues. She is also the chief policy officer at 463 Communications, a firm that advises high-tech organizations on Internet policies.
Tews dealt with Internet security and domain issues as vice president of global policy for Verisign Inc. She is currently vice-chair of the board of directors of the Internet Education Foundation, a nonprofit organization whose mission is to promote a decentralized global Internet. She began her career on Capitol Hill as a legislative director for a member of Congress and worked in the George H. W. Bush White House, in the Office of Cabinet Affairs and at the US Department of Transportation.
Tews studied communications at Arizona State University and at American University, where she graduated with a bachelor's degree in general studies with an emphasis on communications and political science.

Jayme White
Chief Advisor for International Competitiveness and Innovation for the U.S. Senate Committee on Finance
Jayme White currently serves as Chief Advisor for International Competitiveness and Innovation for the U.S. Senate Committee on Finance, serving as the top advisor on international trade to Democratic Senators on the Committee. In this position, White works to develop, and conduct oversight on the implementation of, U.S. trade objectives, particularly as they relate to digital trade issues, as well as identify other policies that can improve American businesses' and innovators' ability to compete at home and in foreign markets.
White played an instrumental role in the development and enactment of Trade Promotion Authority, renewal and expansion of the Trade Adjustment Assistance program, trade preferences for Africa under AGOA, and the recently-enacted Trade Facilitation and Trade Enforcement Act.
White has served in the Congress for 16 years. Before taking his position for the Finance Committee under the leadership of Senator Wyden, he served as Wyden's Legislative Director and led his work on technology policy, including the fight to defeat SOPA. He also worked in the House of Representatives for senior Ways and Means Committee Member, Representative Jim McDermott.
Before becoming a public servant on Capitol Hill, White worked in the private sector in Seattle, his hometown, where he operated a successful independent record company. He holds a bachelor's and master's degree from Georgetown University.

Madura Wijewardena
Executive Director, Global Public Policy at Comcast Corporation.

Madura Wijewardena is the Executive Director, Global Public Policy at Comcast Corporation. At Comcast, Madura focuses on industry structure and competition in broadband access and pay-TV sectors. He supports the company's Internet Essentials program by collaborating on survey research on customer behavior.
Prior to joining Comcast in March 2013, Madura was the Director of Research at the National Urban League (NUL) in Washington, D.C. where he undertook macroeconomic research. He also served in advisory roles to the U.S. Census Bureau on survey design.

Prior to NUL, Madura worked for a consulting firm in Chicago where he used demographic data analysis to assist service providers to target services. He also assisted advocacy campaigns to use data analysis and community organizing methods to build affinity groups and affect public opinion.
For the first eight years of his career, Madura was a transactions attorney in telecoms, media and technology. He was based in Australia with clients in Australia, Asia and the Middle East. He focused on joint ventures, acquisitions and alliances. Madura holds a master's degree from the University of Chicago concentrating in economics/statistics, and a law degree and a bachelor's degree in economics from the University of Sydney, Australia. He holds a certificate in executive leadership from the Darden School of Business, University of Virginia.

Jonathan Zuck
President, ACT

Jonathan Zuck is a widely known and respected leader in the technology industry. As a former application developer and IT executive, he brings more than fifteen years of experience running small business technology companies to his leadership of ACT | The App Association.
Since becoming President of ACT | The App Association, Mr. Zuck has steered its growth into one of the most influential organizations at the intersection of technology and politics. ACT |The App Association is widely recognized as industry leader representing small business software and technology companies that drive innovation and job creation.
Mr. Zuck is in high demand as a speaker, traveling across the globe to address trade conferences about the potential impact of government regulation on innovation and small businesses. In the U.S., he has testified numerous times before Congress and his guidance is regularly sought by government leaders throughout Washington.

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