THE BROOKINGS INSTITUTION

INNOVATION, INTERNET GOVERNANCE AND FREEDOM OF EXPRESSION AROUND THE WORLD

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P R O C E E D I N G S

MR. WEST: Good morning. I'm Darrell West, vice-president of Governance Studies and director of the Center for Technology Innovation at the Brookings Institution and I would like to welcome you to our event today on Internet governance and freedom of expression, and we are webcasting this event live, so I'd like to welcome our viewers around the country and around the world.

We are archiving this video, so anyone who wishes to view it after today, will have the opportunity to do so at Brookings.edu. We welcome any questions and comments that you have. We have set up a Twitter feed at #techCTI. So, if you wish to post any comments or ask any questions during the event, feel free to do so.

So, today is an exciting time in the history of the digital world. There are tremendous opportunities that are popping up in many different parts of this ecosystem. There are exciting new products and devices that are coming online, consumers are having great opportunities to take advantage of applications in a variety of different areas, and so it's a great time in terms of experimentation and innovation.

But yet, at the same time, there are a number of challenges that face policymakers and private sector innovators in the United States as well as around the world.

Internet freedom is threatened by regulation at a time when the open Internet is critical to our nation's future. There also are risks of censorship and balkanization as officials restrict various aspect of the open Internet. So, there are questions about privacy and how to balance innovation on the one hand with privacy on the other hand.

So, today we are going to discuss both the opportunities and the challenges facing the Internet and how we can promote a free and open Internet.

To help us with this discussion we are very pleased to welcome Mr. Gary Shapiro to the Brookings Institution. As all of you know, Gary is the president and CEO of the Consumer Electronics Association. This is the U.S. trade association representing more than 2,000 consumer electronics companies. This association operates the world's largest innovation trade show, the International CES. I was out there in Las Vegas a couple years ago and it is such an amazing event. I mean, just walking through the exhibition hall is very inspiring, seeing all the cool new things that months and years down the road become commonplace in the consumer world.

They also have an education mission there, have great speakers, panel discussions, and so on. So, it's really a tremendous event.

Gary is someone who has tremendous respect throughout the public and private sector world dealing with technology. He has testified before Congress on numerous occasions. He has been named by *Washington Life Magazine* as one of the 100 most influential people in Washington. He is a book author. His most recent book was "Ninja Innovation: The Ten Killer Strategies of the World's Most Successful Businesses". He also is the author of "The Comeback: How Innovation Will Restore the American Dream".

So, please join me in welcoming Gary Shapiro to the Brookings Institution.

(Applause.)

MR. SHAPIRO: Thank you very much, Darrell, and what an honor it is to be at Brookings especially on this day, which if you think about it, it was 25 years ago today that in Tiananmen Square scores of people were killed because they simply wanted some basic freedoms that we take for granted. They wanted freedom of speech, freedom of the press, they wanted the ability to create a privately run newspaper.

And, my, how things have changed in 25 years. Obviously, China has grown from a sleepy, backwards behemoth to a very active, still repressive country and the challenges that have been discussed in Tiananmen Square that people wanted are still issues that we're facing today. Fortunately, the United States, I think, at least in my recollection, we had nothing like that going back to Kent State where some students were killed by our government for protesting, but we can get up and say what we want and that's what, I think, unites both Republicans and Democrats and Independents, is our ability -- our First Amendment is such a precious right.

But around the world, the Internet has changed things. In Iran, after the 2009 election, the government disabled Internet servicers and so protesters turned to Twitter.

Just recently in March, Turkey blocked Twitter access after reports of government corruption were posted and the Prime Minister said, "We'll eradicate Twitter. I don't care what the international community says. Everyone will witness the power of the Turkish Republic."

And just recently, in Thailand, where Brookings was well-represented by a communications person, on her honeymoon, the military junta rounded up senior politicians, protest leaders, and members of the press. And even more significantly, I think, in terms of the consequences, we're still seeing some restrictions from places we don't even expect it. The European Union announced that it doesn't matter what the facts are, there's an affirmative obligation by Internet search providers to eliminate history if a person who has been convicted of a crime and paid their dues -- has paid their dues and they request it, which is an extraordinary affront, in my view, on not only the First Amendment, but the very definition of history itself.

So, if you erase the mechanism for the transmission of facts, you do not

erase the facts themselves.

But to me what's really important is how blessed we are to live in the United States. Our issues are interesting, they're different. We are so protective of the First Amendment that our debates occur around the fringe of how far that goes. So, when there are protests at military funerals, we let them occur even though to probably everyone in the room they're offensive and degrading and inappropriate and wrong, but our First Amendment protects those protesters who are trying to desecrate the memories of the most painful times for the families of these heroes that are being buried.

And (inaudible) and divided even the Democrats and Republicans and there was a hearing on just yesterday is a Supreme Court decision, Citizens United, which defined the First Amendment -- and I challenge any of you to actually read the decision, because if you read that decision it is basically a tribute to the First Amendment and what President Obama said in the State of the Union, and he spoke right to the Justices and he said that decision was wrong, the Supreme Court actually said the First Amendment is so important as an institution that to separate the corporation from owning a newspaper, from others giving free speech, is something which we must protect.

And it's a great decision for the First Amendment. Many of us view it is not really healthy in the political debate to be selling so much without transparency and disclosure, and that is the extraordinary debate, which went on with President Obama and the Supreme Court and went on yesterday where there's an incredible hearing where the Senate Majority and Minority Leader actually testified and one of them is proposing a Constitutional Amendment which would affect the First Amendment to change that decision.

So, our First Amendment is alive and healthy here. Some are arguing it is too healthy. And it's really interesting because the First Amendment, in my view, has

been one of the fundamental bedrocks of what has made us the most innovative country in the world.

And first I want to talk about why we are the most innovative country and how that fits in. So, if you look at the definition of innovation, which people spend a lot of time on, you can come up with it any way you want. If you want to be objective you can do the number of patents per person. In fact, if you use that metric, we're not the most innovative, actually probably Israel is in terms of real innovation in patents, but in a broad scale, because we have a lot of people, we are -- actually, though, China, by that definition, is catching up because there's a goal in the 10-year plan of China that there be a certain number of patents -- I think it's like 2.2 patents per 10,000 people, so everything is being patented. But a lot of it is just variations on the same theme thousands of ways and they're not really important breakthroughs occurring in China the way there are in United States or Israel, frankly.

But if you accept the premise that we're the most innovative country on the basis of just looking at the Internet alone, from every major Internet company, from Yahoo to Google to eBay to Amazon to Wikipedia to Zynga, it's the U.S. where they were created, they're developing, they're growing, they're expanding, and the list is very long and if you look around the rest of the world and say, where are the innovative Internet companies, I mean, there's a couple that have variations on a U.S. theme, even in China, but they're in the U.S.

If you look at the chip companies, if you look Apple and HP and Qualcomm and TI, if you look at Hollywood, the music industry, the biotech industry, where we talk about innovation and creativity, it's in the U.S. that it has occurred. We are very good at innovation and the reasons we're very good is multifactoral. One is we have our First Amendment, which I cannot overstate the importance of. It's just no -- the First

Amendment doesn't just protect the press, it really protects anyone with a good idea that's challenging the status quo to get that idea out there and not have the government shut them down immediately. That's how I view the First Amendment in terms of its relation to innovation.

It also allows us to do things in our schools which other countries are less comfortable doing. We bemoan the state of our schools and we say, oh, my gosh, our kids are 18th or whatever number it is, in some standardized rote learning test involving math or science or something, but what we cannot measure, but we're really good at, is the fact that we raise kids to ask why or why not and that is something that is so important that the Chinese today have 200,000 -- 200,000 -- students in the United States at younger and younger ages because they have figured out that we are innovators, we are asking questions, we are a culture where innovation occurs and they are not.

It starts with our culture of kids having lemonade stands and selling Girl Scout cookies and doing really cool things where they're out there risking money, starting things, doing things and learning, and engaging, and that's the behavior we reward, and it's part of the fact that we are blessed, I think, and cursed, by the fact that we are the most heterogeneous culture in the world. We have more different races and religions and backgrounds and we're young in the sense of -- compared to other countries in the world of who we are, and that allows, in a business and innovation setting, diversity, which produces great ideas.

You go to some of the Asian cultures and everyone is agreeing with each other and they don't even know how to have words for no and bad ideas surface up and a lot of it is duplication of what someone else has done and following the herd. Here, we're not like that. Diversity is our strength. And it's the First Amendment, which helps

protect that diversity.

But frankly, it's also our weakness. On social issues, we just haven't figured it out. We disagree on our passions -- and our disagreements are very passionate, whether it's abortion or gay marriage or something else, we have not yet reached the point that other cultures have where we just kind of walk in lockstep. So, we have passionate debates, which divide us, sadly, but what we are united by is the fact that we are an innovative country and we're looking out for the next generation, and genetically, we even come one or two or three or four or a few generations out from someone else who has come here for a better life, for the most part, not totally, but basically that's what we derive from, people who left something because they wanted their kids to have a better life and they came here and they wanted to do it better.

We are risk takers, and that's who we are.

So, we have all the ingredients here for innovation and we have the results to prove it. In my view, our only -- the biggest concern we have is that we've become complacent. We've become complacent in our immigration policy, so we're excluding people that we're training that we used to attract the best and brightest and want them, and now, although our political leaders say they agree on getting the best and brightest, you know, immigration legislation is moribund, even though you've seen legislation and the President, they all agree, highly skilled immigration, nothing has happened.

Same thing with patent litigation reform in other areas, which is really hurting our nation being innovative.

So, because of our diversity, because of our culture, because of who we are, because of our First Amendment and our legal framework, we have good results to date and our issue is complacency. And our First Amendment, though, being an

important bulwark, we know, though, that although we stand up and we tell the rest of the world that we're great because we have a First Amendment, let's be honest, it's not absolute. It's not only the case of *Near v. Minnesota* where you can't give away the troop locations in the field of battle, it's also things we have to deal with today, like child pornography. That's something which we put restrictions on the Internet. It could be gambling, we put restrictions on the Internet, so we have to be careful when we talk about -- you know, things that are illegal elsewhere are illegal on the Internet. Conspiracy to commit murder, things like that.

And there is also a tension that's very real between the principles of intellectual property, especially in copyright, and the First Amendment. Copyright is a -- obviously comes from the Constitution and Congress has given copyright owners enormous authority and power to control the distribution of their work and take things off the Internet.

The First Amendment is a right not only -- I mean, the Constitution words have to do with that Congress shall make no law abridging the freedom of the press and of speech, but it's not only the freedom to send it out, it's the freedom to receive it, because without that freedom to receive something, the freedom to transmit is different, and what the Internet has dramatically changed is who the press really even is.

We're all press now. And this is funny because we run the largest event in the country, if not the world, it's 160,000 people focused on innovation converging on Las Vegas, 40,000 people from outside the United States, 3,500 exhibiters, over 5,000 media that come, and increasingly we, like every other event or organizer, have to deal with who is the press that gets all those press credentials and special treatment and ability to get special seats and all that. Who is the press, we have asked ourselves. Is it a blogger? We've resolved it as a private organization by saying that if you get a certain

number of unique visitors a month or web hits you qualify as press. Just because you produce something -- if you produce something and no one reads it, you're not press in our view.

But on the other hand, that's not the same thing that the government can do. Just as the government couldn't just down the town crier of 50 or 100 years ago who stood in the square and espoused political views, so too can the government not shut down someone who says something on the Internet that we may disagree with, either because it's factually wrong about vaccinations or because it's even other things, which may be considered more harmful.

So, in terms of the copyright law, we came very close just a few years ago to essentially giving anyone the power to shut down anyone else on the Internet with PIPPA/SOPPA. It went through the Senate Judiciary Committee unanimously because the copyright lobby was so strong and so convincing to Congress that the Internet is the enemy and that copyright is more important than the First Amendment rights to send something and to receive it. In my view what happened is the world woke up in a very short period of time and five million people contacted Congress in one week and more legislators took their name off that legislation in a few days than anything ever done in the history of Congress in terms of switching positions.

So, PIPPA/SOPPA was defeated, so now those two words are like the name Adolph. You don't use them anymore to name anything.

But we still are always facing a concern that the rights -- the legitimate rights of intellectual property owners to protect their work have to be weighed against the right of the public to public access in the encouragement of creativity.

So, how does it come up today though? It certainly has come up in different ways. There are two big issues, which are, in a sense, alive, front and center

stage. One issue has to do with net neutrality, or what's called -- I guess we're not allowed to call it "net neutrality" anymore, I'm told by our staff. In fact, just Monday night, John Oliver on his new show on HBO said, "Net neutrality: the two most boring words in the history of mankind." His show on just Monday night was downloaded 1.6 million times already, I checked before I left this morning, and it's all about net neutrality and reportedly today it shut down the FCC switchboards because so many of his viewers called in to complain and have their positions known on net neutrality because it has become the SOPPA/PIPPA issue of today.

So, that is a very big issue, the issue of the open Internet. The other second big issue has to do with the transfer of authority from the U.S. government to ICANN, and that is something which is being debated and discussed. It was a little bit of a surprise move by the NTIA where they announced that they would be shifting over to ICANN. It caught a lot of Republicans by surprise. I don't think it was probably surfaced enough with them in private meetings before, and there's been a reaction, strong reaction on both sides. There's many groups and legislators who said this is a great thing. The rest of the world has been bugging us about it at least since the 1990s. They think, why should the U.S. government be involved in overseeing the Internet? And there was a lot of pressure. There was a big effort by the International Telecommunications Union a few years ago, and I was part of the State Department Advisory Committee, and I was thrilled under the leadership of Ambassador David Gross to see how the entire U.S. government, the Administration, the Congress -- the House voted I think 434 to 0 on a resolution on this, and the private sector were united in saying, this is a bad idea. The ITU -- the other governments around the world were taking a position where they said, we want to put up a blockade in countries around the Internet.

A number of developing countries have seen the revenue stream from

the interconnection charges for long distance services going close to zero because of services like Skype over the Internet. They want to be able to deny their citizens access to important sites, in my view, like CNN, Wikipedia, other sits that are information dispensing sites, and they wanted to charge their citizens access to that.

I thought that was terrible. Other governments, like some of the European governments and others, just wanted to put a wall around the Internet. I was really privileged at the invitation of the French government to participate in President Sarkozy had what's called the EG8 summit before the G8 summit a few years ago. Anyway, the whole thing was his effort to actually get the G8 to take a position that governments had a right to put borders around the Internet.

Fortunately for us the U.S. delegation, which was composed of many of the leading names in the Internet world, got together the night before and we agreed that this was a really bad idea and we would do everything we did to oppose it, and what we did is we spoke against it and we cheered or booed against it and we brought the crowd of 1,000 or so people along with us so when Sarkozy, and at that point, Christine Lagarde, who was this person pushing this effort who now has shifted onto a bigger job, when they talked about this they did not have the support of the crowd and it never became part of the G8 discussions and still, even though there are other efforts in France today to do some rather crazy things regarding the Internet, such as the most recent one is denying -- there's apparently -- you cannot contact your employees by the Internet and send them emails after business hours and employees are not allowed to open up business emails after business hours. You know, there's crazy things like that, this effort to put up borders, at least officially by the French government, have evaporated.

But at the same time now, we face this effort to shift away from the U.S. government. And to me, you know, it's shocking to me, to be perfectly candid with you,

since it was announced that I was speaking here at the Brookings and talking about this subject, I received a lot of input from people about what it is I should think and say, including our own staff who are very concerned, sitting in this room, they're listening, they're watching, and they're screaming right now, but to me, there is this discussion about the open internet and net neutrality. It's a very important discussion that could occur, but you know what? It's the U.S. government. We could change it if it doesn't work. We could experiment if it doesn't work. And the results will not be fatal.

In this case, the Internet has worked really, really well and if we make a mistake, the results are fatal. The worst world that I can envision is one where there are borders around the Internet in every country and we can't communicate and share information. So, I want to make sure we get it right. And there's definitely a consensus that it is the right thing in the international community to, number one, keep this away from the International Telecommunications Union with their rather primitive ideas of blockading off the Internet, and we want to deal with the international community, which feels a little bit under the U.S. thumb and has for some time, the fact that the U.S. invented the Internet and has a theoretical control over it.

So, there's a general consensus that we have to move to some type of international regime, and I think that's a healthy discussion, which has to occur, and it will occur.

So, my understanding is, we have a contract. There's two two-year extension allowed. The original discussion was maybe it would shift over in 2015, now we're talking 2017, possibly 2019, but I think we have to talk about -- and this is what the NTI has raised correctly, what it is -- so, what conditions we should shift over the internet to an international body so that everyone is comfortable that it will be not under the control of any government, that the things that we value, of openness, of cross-border

traffic, of, in a sense, neutrality and not political influence over the Internet, will be something that we preserve for the world, because this is the U.S. gift to the world.

The Internet is one of the best things, I think, history will prove that the U.S. has done, and I think given what's at stake, we have to have that type of discussion and debate occur and the NTI has indicated very clearly that they want input on what conditions under which we shall cede our admittedly rather limited ability to control the Internet in a way that will satisfy the world so that they feel they own it, but in a way so that no government can interfere and own it, and that's the direction we're going in.

The Internet, in my view, has been not only important for changing things in the world, but it's been important for innovation. Never before in the history of the world have you been able to create a business absolutely with just a broadband connection and some type of device and create a global business, which could create billions of dollars of wealth, literally overnight, whether it's a Facebook or any of the other services which have been created, and that's really, really important.

Now, over 11 years ago, we were part of a group that went to the FCC and we made it very clear that our view of the world as part of the high tech broadband council was that the government should have very minimal regulation of the Internet, that they should not treat it the way they treat a utility, that they should not have all these rules on interconnection and how devices connect and things like that, and our argument was, we want investment in broadband deployment, that the best thing that could happen for the growth of innovation and progress and people moving forward, and this was over 10 years ago, was we want competition of broadband, we want broadcasters to compete with cable, cable should be providing broadband, satellite should be providing broadband. We still talk about it, though it really hasn't happened, you could actually have broadband over a power line where your electricity comes. It's a pretty hostile

environment, but theoretically it keeps being proven that it's capable, and in the wireless world we are going to broadband and we want to protect that and we need wireless, we need spectrum for that, we need license spectrum and unlicensed spectrum. Licensed spectrum allows investment by major companies like the Verizons and AT&Ts of the world, to build and make this huge investment necessary so we could have broadband, and unlicensed spectrum allows a great way of getting broadband that last mile, where would we be without Wi-Fi today? The system would, I think, collapse in terms of our ability to receive things almost anywhere.

So, the strategy of providing competition and providing spectrum, unlicensed and licensed spectrum, I think has worked out remarkably well, but we still need more spectrum because now we've gone to full motion video and Netflix and there's been a dramatic change in how people view things, so instead of sitting at a computer, you're walking around with a tablet or a smart phone and indeed, two-thirds of the American public now own smart phones and that's how they're getting a lot of information.

And, you know, smart phones and tablets did not exist just a few years ago and now they're a dominant way of how we're receiving information, and that requires an enormous amount of spectrum, and that's why we fought for and achieved a law which said that the broadcaster spectrum -- broadcasters should be permitted to auction off through the federal government that spectrum, and indeed, Congress as passed, and the President has signed a law, and the FCC is doing their work to prepare for that spectrum, and we're very hopeful that broadcasters will participate. We'd like to see some leadership where broadcasters are encouraged to participate rather than discouraged, and we applaud the FCC for working so hard to try to get that additional spectrum and for keeping it on the top of their agenda.

We're releasing a new study tomorrow, which talks about how people get their video signals and their video information, and about half of U.S. households now watch video programming via the Internet on at least one TV. The percentage of people in homes relying on antenna only TV for programming has gone to an all time low. You know, it used to be, when I was a kid, and I'm older than many of you, you know, 100 percent of our viewing was free over the air, we had a choice of three -- if you counted, four, PBS -- stations and we shared a common experience and we thought it was great.

Then cable came along and broadcasting wasn't interested in cable because it was too small a market. And obviously cable came along and gave us a lot more choice and satellite came along and then the Internet came along, prerecorded video came along. So many things have happened and changed dramatically that now the percentage of the people who are actually relying on free over their television you can almost count on one hand, but yet there's still a tremendous amount of spectrum, very valuable spectrum, which is used for that service to this tiny percent of our population, and that's why, in part, Congress responded and said, let's auction off some of these eight-year licenses, which are lent to broadcasters, and that's the process we're in.

But I think we have to keep looking at that and looking at the spectrum usury defense (inaudible) because if you want full motion video and you want to get it anywhere at any time, and you want your devices to work anywhere, we need that spectrum to make it work.

We're also announcing that the percentage of households relying exclusively on the Internet for television programming is about to surpass those relying on antenna only. So, in other words, the people who are just using the Internet is almost more important now than the people just using the antenna and it's because Americans

are more connected.

And I want to leave you with a couple things. Where we're shifting to for some reasons I'll share with you is a world where we are connected -- and I think it's a very good world -- and not just by our telephones, but by our things, and for some people, I guess, there's pluses and minuses like anything. But there's something called MEMS, they're micro electro mechanical devices. These are the tiny sensing devices and there are several of them in your smart phones, they're accelerometers, they're little GPS things which figure out where you are, they can sense temperature, they can sense pressure, they can sense your fingerprints, they can record information. They do all sorts of things and because there's about a billion smart phones out there today, they have gone down to literally pennies per unit for component, and very clever people are putting them together in all sorts of different devices and different things and at a very low power usage, hooking them up to each other and the Internet. And they're going to change life as we know it.

They're already changing -- look how you rely on your smart phone and, you know, the biggest panic moment I get every day is when I feel like I've lost or forgotten my smart phone somewhere and there's three seconds where I panic, and I know all of you have had that experience and it's because we rely on -- that is our entire briefcase of yesteryear and database and computer and it's all right there.

And what's really interesting, as an aside, as the Supreme Court is about to rule on that, about whether they could look at your smart phone, and I think they're going to say, correctly, that it's like looking -- it's no longer like looking at your address book, it's like looking at your entire diary of lifestyle and you do need a warrant to look at that because it's so personal and private.

But there's a massive amount of data, which is not only in your smart

phone, but are going to be in devices in a very good way, and what we're shifting to in our world is where because of the power of computing and getting small and sensing devices and Moore's law and computing power is a lot of things are going to change very quickly. For one, we're in the middle of this revolution of the measured self. We're measuring what we do and that's helping us become more healthy, it's helping or will soon help us communicate with our doctors, it will help us as we aggregate data through one of the good things about Obamacare is it will be measuring a lot of things. We're going to get massive amounts of data as to what works and doesn't work in healthcare and what about our bodies is when we should go to a doctor and when we shouldn't and what works in terms of healthcare, that's important information, but it's not just healthcare, it's almost everything. It's use of energy, it's agriculture, it's water, we are coming up with things -- when you should water crops, there will be sensing devices. And there's a lot of things to happen, there's other products, which are coming, which will be connected. There will be drones, which we hear about. Well, drones are very useful, they're not just killing machines, frankly, they're observing machines, so they could go and find when your crops need to be fed or go to dangerous places like the top of power lines and figure out what the problem is, and they'll do a lot of things, which are very, very helpful.

And it will be part of the connected car, the connected car will be the driverless car, and I have given speeches just about that, but to summarize, picture a world where there's almost, you know, 95 percent of the car accidents go away and we don't have the emergency room doctors that we need, we don't have all the rehabilitation people we need, the tow truck operator -- I was talking about this to my five-year-old son, and he said, dad, but what will the tow truck operators do? I said, what do you think? He said, I think they should be trained for a year and then get different jobs.

But the point is, you know, there will still be mechanical problems and cars will break down, but imagine the lack of deaths, imagine how that will affect auto insurance companies, imagine how it will affect all the people who have jobs driving now. That will have an impact, but it will be -- overall, like many changes in technology and innovation, they'll be disruptive, but in the long-term, I think it's better not to have car accidents, and if you're disabled, if you're elderly, or if you just want to use your time in the car productively, it's a good thing, or if you're just drunk and you want to get home, the whole drunk community are celebrating.

So, we are going to a world of also 3D printing where you'll be able to create things in your home and not have to travel, and if you put all this together, today, if you want something you have a choice, you can go on the Internet and get it downloaded to you or you can buy it at your local store. Those are your choices.

In the future we'll have a world where you'll have different choices in addition to those. You'll have a drone that could deliver to your house. You'll have a driverless car that could deliver to your house, or you'll have a 3D printer, which you can make it yourself. But those are convenience things and they're really nice things and there's going to be a whole lot of innovation and we are really just crawling on the way to adulthood in terms of innovation in technology that the Internet and these sensing devices and this computing (inaudible), because there's a lot of clever people creating a lot of very, really, cool, useful things, to close, which I think are going to solve the biggest problems on earth in terms of agriculture and food supply and water and hunger and health. Just the mapping of the genome and the acceleration and all the different things that are going to happen to make us better and have better lives and healthier and not deal with the problems that are perplexing us today are going to be solved if we do it right, if we have the spectrum, if we don't mess it up with regard to (inaudible) Internet.

And I want to close with one thing and talk about with a lot of the debates that we're seeing in Washington come down to one word, and it's trust. Now, though I am the cheerleader for the innovation world and the technology industry for 2000 companies, and a lot of what we're doing today can be done remotely and some people are watching us over the Internet, the truth is, we go to events like this, and you all are in this audience today because you wanted the five-sense, face-to-face experience that you can get and you can evaluate using all your judgment as to whether I have something to say that's credible and I personally am credible. And that is not going to go away and be replaced by technology, in my view.

But there is a breakdown of trust that's occurring. It's not only fostered by our political leadership and the acrimony between the two parties, it's been broken down by some of the things we've done to each other. It's broken down by the fact that we had someone reveal a lot of -- Snowden revealed a lot of what our government is doing that has caused us -- and other things -- not to trust our government anymore or the world to trust the U.S.

We have had attacks on the Internet and cyber issues which we're dealing with where we just don't trust when we open up an email or not or a link. We just -- and what's going on in the Internet world with those two big issues, both of those come down to trust, both of those, what opponents and concerned people are saying is, the internet is working really, really good today and I like it. I liked everything equal. I like the fact that the U.S. government is -- it's not broke. So, what are you fixing? And they're very fearful of the unknown. They're fearful of a switch to a regulated world, they're fearful of a switch to a world where the U.S. government is not the ultimate stop for the Internet, and somehow we have to figure out between us how we rebuild trust so that we can have the relationship where we trust our government, where we trust private bodies

and we go forward in a way where we allow innovation to occur without, frankly, being strangled by a lot of people with good intentions but they want to set out a lot of rules. And in my personal view, the best way to do that is for the government to lay out objectives and challenge industry and the NGOs to say, come up with a way of meeting that. And that's what was done with the transition to high-definition television, which is one of my proudest moments, is I think the government played an appropriate role there. They challenged the industry to come up with the best system possible for the United States and we did, by all accounts, best system in the world in terms of diversity and our diverse geography and getting things out there. It's totally robust and I could spend a lot of time talking about that, but I won't.

But the bottom line is when government challenges -- and I want to point to Europe, actually, which did something better than the U.S., which I very rarely say, but having dealt with the Target scandal, with the credit card interceptions, Europe has a more secure system, they use chips, and the way they did that is European Union government said, industry, come up with something or we'll do it for you. So, they did and they came up with something and now when you go to Europe everyone has chips and they look at us like, we don't take that credit card. You don't have a chip. It's a little annoying and I'll be in Europe next week talking about some of these issues, but the fact is, they did do it better than us in this case and I am shameless in copying good ideas from other people and I think, in this case, the role of government is not to mandate, the role of government is to set the principles to agree on the facts and to challenge those to come up with solutions.

Having said that, I think my time is totally expired. I would love to shift to some questions.

(Applause.)

MR. WEST: Gary, thank you very much. He's very visionary, he's very energetic in articulating his ideas, so you focus on consumer electronics. So, Apple made news this week about its announcement of new apps to connect people with their homes, apps to turn on the lights, raise or lower the thermostat, turn on home security systems. We're also hearing a lot about smart appliances and smart cars. How do you think consumers are going to react to all these smart devices? Should people start to worry about their refrigerator?

MR. SHAPIRO: Well, I always thought the best product in history would be the refrigerator/TV, the combined unit, because you could reach for your beer while watching the game, but no one manufacturer has adopted that recommendation.

I think people will respond the way they respond to other products. They'll figure out whether it performs something they want to be done. I mean, one of the great products of all time, in my view, is the remote control, but when that first came out, people -- I remember people saying, why would I want that? Or the garage door opener. Or other great products like the microwave oven. When products are introduced people say, why would I want that? And then once they become accustomed to it becomes -- that becomes the standard by which you must have -- and if you go to a hotel that doesn't have stuff like that, like a remote control of the TV set or HDTV, you think the place stinks.

So, it's a matter of comfort. The marketplace has a wonderful way of determining what works and what doesn't and Apple has been a terrific company of, if you think about it, the iPod was revolutionary because it was designed and easy to use. It was not the first MP3 player. It was like third generation. There were plenty of them out there that cost a lot of money and just weren't simple to use, same thing with the tablet. There were a lot of tablets -- Microsoft came out with a really cool table a dozen

years ago and it didn't sell. It didn't have a lot of the advantages that -- what Apple came out with their iPad.

And the smart phone I think was a little unique in terms of what they did, but those are three revolutionary products that Apple created. They're going to other areas. I think if Apple introduced an Apple car tomorrow, it would sell a million units next year because they're Apple, people love what Apple stands for. Apple has a brand and an image and a promise -- a brand promise of simplicity, ease of use, plus the bonus of that coolness factor, that white look where you could show off to the rest of the world how cool you are, and that's one of the reasons I think the acquired Beats. Beats has the coolness factor, these big headphones -- you know, it's a walking status symbol and it shows that you have a certain view of life.

It's like, why do cars sell different ways in different demographics? It's portable. You're showing people who you are with your technology.

MR. WEST: So, in your talk you mentioned this recent European Union decision on Google and the so-called right to be forgotten. I'm just curious, your sense of that decision. Did the EU make the right decision here?

MR. SHAPIRO: I don't think the EU made the right decision. I think it's absurd. I think history is something which should not be forgotten and I think when there are facts, they are facts, and they're out there forever, and that may be harmful to individual people, and obviously, you know, minors deserve a degree of protection, we have a history of that, we erase court records for kids, but if you are convicted of murder, and even if you've served your 10 or 20 or 30 years, that is a historical fact which should not be erased from the public record, and I think it's absurd and I think it's -- you know, the challenge I think we're facing as a society, and this has to do with Uber, it has to do with (inaudible), it has to do with AirBNB, it has to do with Tesla, is that we are shifting a

paradigm of how we do transaction and what we do with business because of the Internet, and we have to accept the fact that the laws we used to have, have to be looked at and revised and we shouldn't try to fit these new business models and advantages to consumers to these laws which existed years ago.

And the EU -- look, they're not the model of innovation. They do not have the culture of risk taking. They have antiquated employment laws. It's tough to come up with more than five companies and name them from the EU which have any recent innovations, so they are not my model -- I would rather use the U.S. framework as my model for what we do. We're great at capital formation, we have worker flexibility, we have an innovation environment, you could fail here and move forward. So, the EU is wrong on this. They could do whatever they want, but my view of what a good political party would be -- would start with the phrase, let's not be stupid, and if you just start with that premise and get rid of stupid things, you'd go really far. And honestly, I don't want to say anyone by name is stupid, but I come as close as I can in this case, it's just not very bright.

MR. WEST: It's funny you mention this. Next week I'm actually going to Italy to give a talk and the topic that they asked me to speak about was innovation in Europe. Now, I was worried about that, but then the subtitle was, "what Europe can learn from the United States" and I thought, okay, I can talk about that.

MR. SHAPIRO: You know, I've gone to European conferences on innovation and, you know, they're populated by European bureaucrats who have thousand-page plans, all of it involving government action and studies in history and all sorts of things as if the government somehow is going to create innovation, and what the government's job in innovation, in my view, is to create the ingredients for innovation, to provide the basic education that's necessary, the financial markets so capital could be

raised, so risks can be disclosed, so people could start a business quickly, so they could get in and out quickly, to have bankruptcy laws, which say, look, sometimes businesses fail.

Government has a huge role in innovation, but frankly, it's not 1000-page plans.

MR. WEST: Okay, one more question and then I'm going to open the floor to questions from the audience. This week marks the one-year anniversary of the Snowden disclosure, so -- and obviously, over the last year we've had lots of discussions here as well as around the world about the NSA data collection activities. How should we view Snowden at this point and his disclosures?

MR. SHAPIRO: Well, everyone has a personal view on that and they're all over the map. I mean, as an American I was dismayed in two ways, one of the fact that I felt our own government was doing a lot more than any of us imagined and I felt a little bit of breach of trust there. I think some of it was exaggerated. Like, to me, if you're tracking phone numbers of people who called phone numbers, I understand that. There are bad guys in the world. There are people out to kill us and get us and our government's fundamental obligation is to protect us in a defense world, and they have to do things, which I may personally find unpleasant.

I don't find unpleasant that people are looking at who I called if I've spoken to someone who's spoken to a bad guy. If they're listening to everyone's calls and tracing them out and doing all sorts of things, obviously, there's gradations that different people are comfortable with.

I also feel personally that although Snowden has been -- people have tried to make him a hero, I think when you make a promise to your government that you will keep secrets, you should keep them, and that, to me, is -- he is not in my hero

column.

MR. WEST: Okay. Let's open the floor to questions from the audience. So, right here on the aisle, there's a young woman -- there's a microphone coming. If you can give us your name and your organization, please.

MS. YEN: Hi, Gary. My name is Sunny Yen. I'm from the U.S.-Asia Institute, and I just had a question regarding your point that the Internet changes all of us into members of the press, because it seems that not everyone has the resources or the skill set, necessarily, to access the Internet. So, I was wondering if maybe you could talk about the issue of access and whether or not access is important to innovation.

MR. SHAPIRO: Well, to me, access to the Internet is just a matter of time. I mean, it's getting there. I mean, the U.S. population, I think it's -- was it 95 percent of the population is connected to the Internet? At least in the United States, we're almost 100 percent. We're getting there. It's a matter of time. I think we're doing the right things to get there.

For the rest of the world it's gradually -- I mean, I think China has more Internet users than the U.S. now. We're getting there and it's cheap to get there and, you know, having a phone which helps access the Internet is a leap because you don't need the wires, you don't need a lot of the other things you used to need.

So, the goal is for the world to get to the Internet, and I think the Googles and Yahoos and other search engines of the world have done a great job in getting people -- you don't have to be brilliant to use the Internet.

What the problem becomes that I see, and I try to go to both conservative and liberal websites, is that the level of discourse on the Internet is the lowest common denominator and I think people make a mistake if they just go to Internet sites and television stations that agree with them because you're only seeing half a

picture there, and a lot of so-called facts -- and I would give the one about the so-called harm of vaccination is just total BS and harmful to society overall as an example of where a lot of misinformation is put on the Internet.

I respect the right of any site to basically require that if you're going to post a comment on the Internet, you have to have a true statement of who you are. I respect those sites, including -- my son actually writes for *Cracked*, which is the number one -- I say, you know, I write something, if I get 100,000 views I'm ecstatic. He gets 800,000 views for what he writes, it's the number one humor website in the world, but what's really interesting are the comments. You wouldn't expect the comments on a humor website to be super intelligent. They have a policing mechanism and they are really intelligent, you know, several hundred comments and every one of them is a good, insightful comment, and I find that amazing, because you don't expect -- this is an under 30-years-old website. You don't expect that. But then you go to -- I don't want to call out -- well, I write for both of them, so what the heck -- the Huffington Post and the Daily Caller, one very liberal and one very conservative. I've published a lot on both of them. When I read the comments, I'm disgusted, frankly, for the lack of intelligence -- I feel like all the effort I put into writing something very into writing something very intelligent and it's greeted with incredibly -- I had something published today in *The American Spectato*r, you know, a conservative magazine about how the Senate has jumped the shark under Harry Reid. And because I said some good things about democrats in there, there isn't one positive comment about what I wrote. It's the inability of anyone to see anyone else's view.

My view of the world (inaudible), and I'm struggling with this, I even posted something on my Facebook page, is our failure in Washington stems from our inability to agree on facts and an inability to agree on what the issue is. Like, if you'd take

a healthcare debate and said, would Americans agree that no American should suffer from a lack of healthcare, I think we would have agreed. And when we agree what the facts are, but you have the democrats saying our healthcare system here is horrible and you had republicans saying that, you know, we're going to have death panels, and they were both making stuff up out of thin air using selective facts that were, frankly, irrelevant.

I mean, our healthcare -- the reason we're not very healthy here is our own lifestyle choices. We're fat, we get pregnant at age 16, we eat crappy, we don't exercise compared to the rest of the world. That's not our healthcare system, it's the choices we make.

Things like that I would rather see debated in a way -- like, can you have an agreement on facts anywhere, and institutions like Brookings and others could play a very positive role by just trying to get agreement on facts and issues and then debate the policy measures. That's my view of a more perfect world.

MR. WEST: I agree. That is one of the biggest challenges today. And in addition to Gary's op-eds you can follow him on Twitter @garyshapiro. I think he has over 50,000 followers.

In the very back there's a question. There's a microphone coming over to you.

MR. BEN-YEHUDA: Hi. Thank you. I'm Gadi Ben-Yehuda, I'm the Innovation Fellow for the IBM Center for the Business of Government, and thanks to the Internet I can give you this quote, it's actually by Proust. "There is no man however wise who has not, at some period in his life or his youth, said things or lived a life, the memory of which is so unpleasant to him that he would gladly expunge it." And I think it's one thing -- and I agree with you that, you know, we shouldn't allow, you know, someone running for political office to go back and selectively edit their online lives, but I think it's

different, you know, when you look at people who have essays from high school, essays from early college that are online and that, you know, 30 years later are coming back and people are saying, hey, you said this thing and it seems very immature and irrational -- when you were 18.

The other thing that I would point out is that there are websites that will look through mug shots, people who have not been convicted of anything, but have been arrested, and they make money by putting up these mug shots and having people pay to take them down. So, I think that this does kind of indicate that people should have the right to say, I want this particular content taken off the Internet. No?

MR. SHAPIRO: That's an interesting point. I mean, the stakes are higher because of the Internet for youthful indiscretions, but to me, if that is a -- that's capable of being handled in our present legal system under tort law, and if necessary, states or even the federal government could create new torts where there's a judgment made that the interests in society of protecting a vulnerable individual are -- versus the other interests in society of not erasing history, you could weigh those out, but that doesn't mean the government should step in and ban stuff. It means that private -- like, if you're being extorted by someone who's posted your mug shot, perhaps there should be a new tort created for that.

I don't know enough about it, but you raise valid concerns. But the way to address those concerns is not to give a new right to be forgotten. I don't think that is something -- and you impose that on the search engines? But the websites themselves will still be there, old links will still be there. It's an impossible task, almost impossible to execute on.

MR. WEST: Actually, if you could wait for the microphone.

SPEAKER: In Montgomery County, you get a red camera light. To go

out and view it, you have to go out to something that lists criminal sites and when my wife got a ticket and she went out, she says, I'm not a criminal. What he said is exactly true. People are taking your information and they're putting it out there and there's no way for you to police it. I mean, I had a Facebook friend, (inaudible), I took down a post I made. The next thing I know he's calling me all kinds of names and so there has to be -- I was on Auto Den -- you've never heard of Auto Den, I'm sure, the Automatic Digital Network that the military used as a predecessor to email in 1968, so I've seen it progress a long ways, but the privacy of it, to have your name -- to get back to the original thing -- to have your name on a site that lists people with mug shots and all you've done is get a speeding ticket is kind of -- really weird. There needs to be some policing there.

MR. SHAPIRO: I hear what you're saying and I don't disagree with you that it is grating, but that -- sometimes the fix is worse than the crime, and I think that you should deal with those issues with a set of laws that deal with those issues rather than saying you as a citizen have a right to be forgotten no matter what you've done, because if you've murdered someone, part of the deterrent effect of that conviction that you have in murder is the public shame for the rest of your life.

So, you're right, there's scales and gradations, but it's a debate that should occur. IN my view, if like the Supreme Court of the United States just said you have a right to be forgotten here, I mean, they can't do that, but that is something where you have a discussion and a debate and attention, not just you have a right no matter what. So, that -- you know, I don't want to get off on that issue alone, but I think that it's dangerous here because we have a First Amendment. I think the First Amendment is so important in our culture and our tradition and our success that I'd be very reluctant to mess with it.

MR. WEST: Okay. We have time for one last question, so this

gentleman up here, if we can get a microphone up to you.

MR. HEDENBERG: Hi. I'm Marcus Hedenberg with Broadband Census. I'm a little weary about asking this question but I'm going to ask it anyway, it has to do with net neutrality.

MR. WEST: It sounds like a perfect closing question.

MR. HEDENBERG: Yeah. You said earlier that government can't, on its own, create innovation but that it plays a role in aiding innovation. I wanted to ask you what role should government have in regulating Internet service providers? You know, a lot of people worry that, you know, the Comcasts and the AT&Ts could, you know, they could potentially get a monopoly on the whole industry, but historically looking at some of the biggest tech giants, like, say, IBM and Microsoft, a lot of people worried in the '80s that they would completely dominate, but they weren't regulated and they didn't get a monopoly, or at least not completely, you know, today.

So, I wanted to ask you, what do you think the government's role is in that type of regulation?

MR. SHAPIRO: Well, first our government should recognize that we have some of the most successful companies in the world here, not just the ones you mentioned like IBM and Microsoft, but, you know, Google and Apple and Intel and Qualcomm and others. And every time, for some reason, we feel the need to go after them, that is catnip to European regulators and others who all of the sudden come down on them hard and literally extort billions of dollars to just shift to those places from our greatest companies.

So, we are the only country in the world that treat our best companies less well than we should, and I think that's a travesty and that's not a good national strategy, because they're being seduced and encouraged to move their headquarters

and their employees overseas by our immigration laws, by our tax laws, and by the treatment of our own government. You know, it goes to the lack of trust, which is increasingly created when a company like Boeing cannot open up a billion dollar facility, when a company like Gibson gets storm troopers into their office over some non-violation of the law. You have increasingly the U.S. business community not trusting our government to look out for their best interest and, in fact, coming after them.

That's not your question, but your question is how they should be regulated, and when you take a Comcast or an AT&T or Verizon, these are companies that we want to encourage to invest as much as possible in the infrastructure of the United States because we need their broadband. And you have to be very cautious. At the same time, we want that broadband to deliver things the way we're accustomed to getting them.

So, we're all very fearful, at this point, of change. I, personally, am fearful of all of the sudden sending those companies into a new area of regulation like utilities, where you used to regulate every connection and every device so it took 100 years from the invention of the telephone to get to the point where we didn't have black telephones, the big deal was the princess telephone of a different color, and it took us way too long to get to the point of competition in telephones and it was unhealthy.

And I am fearful of regulation, but I do want what I have today, which is the ability to get anything I want on the Internet, so I like things the way they are. I would rather they not be changed, and government should do minimal harm first, and good intentions scare me. I think they should be challenging the industry to come up with what they view as the best practices and let industry and bodies like this one, NGOs, come up with principles. And if the principles are violated, then act.

MR. WEST: Okay, Gary, thank you very much for sharing your views

and thank you all for coming out. Thank you very much.

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