Statement before the National Telecommunications and Information Administration
Office of International Affairs
On International Internet Priorities

Team USA
Getting Americas internet policy stakeholders to play on the same team

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July 17, 2018
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National Telecommunications and Information Administration  
U.S. Department of Commerce, 1401 Constitution Avenue NW  
Room 4725  
Washington, DC 20230  
Attn: Fiona Alexander


Dear Ms. Alexander:

Thank you for the opportunity to participate in this inquiry. I applaud NTIA’s leadership to seek input and academic references to support its inquiry.

These comments reflect my academic research in comparative international internet policy, my education in international relations, and my practical experience as an American living abroad for almost 20 years. From being a high school exchange student in Japan in 1991 to working in the EU, Latin America and India from 2005 to today—including participation in the Internet Governance Forum from 2014 through the present—I have noticed how American leadership, once preeminent, has declined.

There has been a shift of the international view of America from the 1990s to today from one of respect and reverence to one of resentment. Moreover, foreigners’ views of America have declined. Pew Research Center’s Global Attitudes and trends reports that from 2014 to today, other nations’ opinion of the USA has diminished from preeminence to a tie with China as the world’s most popular nation.

This fall from grace did not happen overnight; it has occurred over a period in which America has been generous with foreign aid, forthcoming in international treaties and organizations, welcoming to millions of immigrants, sharing of its innovation and technology, and even spinning off its valuable internet resources. It appears that soft love is not working to improve international opinion of America. Tough love is needed.

The situation can be repaired, but it requires rebooting Team USA. These comments cover my recommendations for how the US should model its policy, reinvigorating the multistakeholder model for international internet policy, and leapfrogging the GDPR with a scientific approach to data protection.

I have received no compensation to submit these comments, and they reflect my own views.

Sincerely,

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Summary of Comments
NTIA International Internet Priorities

I. Internet policy is foreign policy

The internet makes the world more transparent and speeds information. Increasingly America’s companies are global, employ a greater number of Americans, and account for a larger part of the US economy. While domestic policy is governed by a set of national rules and institution, the conduct of international commerce and enterprise requires a harmonization of international rules and norms. Harmonizing international institutions with Constitutional concepts of rule of law and individual rights offers the most fair, rational, and humane regime for internet policy. To the maximum degree possible, the diverse set of American stakeholders should conduct this international dialogue and negotiation with a spirit of playing for the same team, Team USA.

The Olympics offers an ideal vision for a global multistakeholder model (MSM). While the nation is a team, its athletes compete in different events. Athletes are professional, sportsmanlike, and top-performing. They play by the transparent and agreed rules and win because of their skills, strategy, and passion on the field, not because of a deal with the judges. Athletes respect their opponents and share the camaraderie of experience. American stakeholders and enterprises are as diverse as America’s Olympic athletes and the sports in which they compete, but they should all play for the same team, Team USA.

The recent passing of Charles Krauthammer is an opportunity to review his international policy wisdom applied to internet governance. Krauthammer was both a physician and a policy expert, an intellectual steeped in the ethos of Democrats and Republicans, and above all, not an elitist. He communicated in way that everyone could understand. His book Things That Matter, which broke records for the popularity of a book of essays, emphasized the primacy of politics, without which nothing else matters. Indeed even the country with the most advanced internet technology, capable of solving every technical problem, would be no place to live if it had terrible politics.

The American Enterprise Institute awarded Krauthammer in 2004 and his acceptance speech “Democratic Realism An American Foreign Policy for a Unipolar World” examined the four contending schools of American foreign policy: isolationism, liberal internationalism, democratic realism, and democratic globalism. It is helpful to review these in light of NTIA’s inquiry into international internet priorities, which like any other policy, is the pursuit of national interest, the “shaping the international environment by projecting power abroad to secure economic, political, and strategic goods” within an international environment.

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3 Ibid
Isolationism

Krauthammer was no fan of isolationism, what he called of the hoarding of power and subsequent retreat. While the fantasy of turning inward to flourish without engaging abroad is not an option for the US today, it increasingly underpins the policies of nations which erect firewalls and protectionist measures to force enterprises to store data locally, inhibit the free flow of information, and create a Balkanized internet. The United States International Trade Commission provides an updated assessment of the importance of global digital trade (superseding commerce in many sectors of physical goods and services) and its many barriers. Some 34 countries have enacted barriers to restrict data whether financial, personal, government, telecommunications, or others against digital services. These isolationist countries claim that they need data localization to ensure cybersecurity, help the local digital economy, and ensure government access to data, but these reasons are unfounded. Cyber threats transcend borders, and data’s location is not a deterrent to cybercriminals. While firms take advantage of multiple locations for data centers, these centers have limited impact on economic growth. The proper strategy to support the local digital economy is to focus human capital to create digital goods and services in the country itself. Governments can get access to data when they need to with the appropriate court orders; the length of time of delivery is a matter of seconds.

Ironically internet isolationism has been driven by countries which have agreed to play by international norms and rules of treaties established by institutions such as the World Trade Organization. This suggest that these countries either disrespect the rule of law or take advantage of a world in which laws are not enforced. This likely has something to do with the decline in the US leadership over the last decade.

Liberal internationalism

While its roots are in the Wilsonian era, liberal internationalism had its heyday in the 1990s. Perhaps its greatest innovation is the multistakeholder model (MSM) which is employed today for internet governance in addition to other fields. The MSM was architected to evolve the practices of transnational corporations to some stakeholders’ preferences of “social goals.” However it is a fallacy that corporate goals are inherently opposed to social goals. Indeed, the pursuit of corporate goals has enabled some of the most important social goals, notably communications and connectivity.

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doi:10.1109/MIC.2015.15
The world’s fastest growing innovation is not the internet, but the mobile network. In a generation, private mobile operators have built networks that connect nearly every person on the face of the earth. Moreover, networks that were designed to deliver telephony have been upgraded to deliver the Internet, a powerful technological transformation. During that period, prices have fallen by 90 percent while data has increased thousands of times. This success was achieved by firms in pursuit of rational self-interest and profit without any MSM guidance. Access to the Internet has been enabled largely through private firms, and it has empirically improved quality of life by many measures. Indeed, the International Telecommunications Union (ITU) recognizes how connectivity has reduced poverty and starvation, boosted education, improved quality of life for women and girls, provided clean water and sanitation, increased energy efficiency, and stimulated economic growth.

It worthwhile to review Krauthammer’s critique of liberal internationalism, essentially a means for international actors to force actions and outcomes for the US that most American voters would never agree to at the ballot box. In that way, some international institutions can be undemocratic. He noted that the goals of liberal internationalism were to “reduce American freedom of action by making it subservient to, dependent on, constricted by the will—and interests—of other nations. To tie down Gulliver with a thousand strings.” Essentially the problem of this regime is that while the US keeps its part of the agreement, other nations don’t. Moreover, it legitimizes absurdities such as known human rights abusers Cuba, Venezuela, and Saudi Arabia sitting on the United Nations Human Rights Council. To the extent that international institutions can be aligned with American democratic principles, the more credible their actions will be with Americans.

**Democratic Realism**

Realism, or realpolitik, is the view that world politics is a field of conflict between actors seeking power. While it may seem cynical at the outset, realism can lead to practical outcomes. Realism rejects the notion that the nations of the world can be transformed into one big, happy family. It recognizes that what holds a country together is a central government which enforces laws and norms in addition to the goodwill, civility and common value of its citizens.

Krauthammer observes that what has kept the world going since the collapse of communism is the US playing a leading military role. To demonstrate the limits of liberalism he observes, “If someone invades your house, you call the cops. Who do you call if someone invades your country? You dial Washington.” The outcome of realist international policy is deterrence, making a show of force so that the opponent does not attack. Krauthammer notes that this does not work for suicidal opponents or “undeterrables”. In these cases, all that will work is preemption, dismantling their regime.

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The need for realism in internet policy is relevant for the application of cybersecurity. It was reasonable thing to trust the digital community in the days of the ARPA NET when the users were a handful of scientists and engineers. With billions of users today however, it is another situation altogether. Cyberattacks and threats are commonplace and demand to be addressed within the framework of defense. Perpetrators of cyberattacks, notably rogue states, should be punished by ending visas, freezing assets, and other punitive tools of international law. Modern cybersecurity requires advanced information-sharing among global partners, a market for cyber insurance, freedom of parties to exercise self-defense, and the augmentation government’s coordination with military, business, and hacker communities. Some suggest that the cybersecurity crisis is the outcome of obsolete networked computer architecture and demands a new paradigm of cryptography, the architecture of blockchain and its derivatives. It’s suggested that this emergent architecture will enable a new form of payments on the internet and topple reigning monopolies.

Democratic Globalism

Krauthammer also critiques the intellectual shortcomings of realpolitik with its focus on raw power. International policy needs to be driven by something beyond power. It needs to an expression of values.

So too it is with internet policy. The US won’t have any credibility if its international internet policy is just about American companies making money. The US must also export a value system that legitimately empowers and rewards other nations to participate in a free market internet economy, respect the rule of law and individual rights, limit regulatory distortion and abuse, protect property, and deliver measurable improvements in quality of life. This also includes measures to protect the vulnerable, notably children.

With democratic globalism, Krauthammer invokes John F. Kennedy’s call to the “success of liberty.” For the policy to work, it must deliver freedom and the peace that freedom brings. “Democratic globalism sees as the engine of history not the will to power but the will to freedom,” notes Krauthammer and its describes its pedigree with the Truman Doctrine of 1947, the Kennedy inaugural of 1961, and Reagan’s “evil empire” speech of 1983. Today’s struggle for global leadership of the internet is one of good vs. evil, the technologies of freedom which improve the human condition and individual freedom versus the totalitarian capture of technology to strengthen the power of the state.

While we can see totalitarianism in the indiscriminate and unlawful surveillance of governments over their citizens, it is also present in creeping regulation such as the European Union’s General Data Protection Regulation (GDPR), a regime that unduly empowers bureaucrats and litigants over citizens and prioritizes a state-centered view of data protection over natural rights.

Notably, the four foreign policy traditions practiced in America over 220 years are a source of learning and strength. Selecting the redeeming elements of each is the way to shape the ideal policy. The US

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need not be afraid for seeming to take a unilateral approach. “Unilateralism is the way to multilateralism,” Krauthammer declared. Indeed, many countries are looking for American leadership. The EU and China took advantage of the US ceding its position in the last decade. The US needs to assert the leadership role again.17

II. The US must model the internet policy it wants other countries to emulate

Reap what you sow.

When American companies do business abroad—whether they are hardware, software, content, or telecom—they want a rational, predictable, and consistent framework across the board. Such a framework allows the firm to minimize costs, maximizes profit, and ensure efficiency. To ensure the ideal framework abroad, companies should advocate for the ideal framework at home. Therefore, the policy should be a consistent set of rules for all players, grounded in modern, evidenced-based standards of antitrust, and delivered by the Federal Trade Commission.18

Cronyism, the unhealthy closeness between government and special interests, is a process to win government-granted privileges and favoritism.19 It upends the notion of public interest, that policymakers serve the broad social goals. Instead it demonstrates that government actors frequently reward private actors at the expense of the public. Over the long term, cronyism undermines the legitimacy of private sector and government. It also creates moral hazard, the situation in which an actor increases its exposure to risk because another party bears the cost of the risk. Taxpayers are too often left holding the bag. They revolt in elections.

For example, leading Silicon Valley firms have waged a campaign to impose internet regulation on the telecom industry to avoid interconnection fees and preclude the development of competitive business models for content and advertising.20 While it may a rational strategy for Silicon Valley, it is wrong and unfair to employ political means to secure price controls which undermine the efficient functioning of internet markets. This has been harmful in the US as well as abroad.

The imposition of price controls denies infrastructure providers revenue to build networks (and tax revenue for governments), undermines the emergence of business models which could support local content development for socially beneficial goods (particularly in developing countries), and unduly burdens consumers with the full cost of networks, a cost that falls disproportionately on the poor. Moreover, the exercise distracts scarce policymaking resources away from real problems, which are

18 Bennett, Richard and Eisenach, Jeffrey A. and Glassman, James K. and Howell, Bronwyn E. and Hurwitz, Justin (Gus) and Layton, Roslyn and Bret Swanson, Comments on Communications Act Modernization (January 31, 2014). Available at SSRN: https://ssrn.com/abstract=2388723
empirically demonstrated to be the malign acts of governments to censor people, services, and data.\textsuperscript{21}

Indeed, many internet related firms and industries have taken advantage of the regulatory process to win favorable treatment for themselves at the expense of their competitors and consumers. They now reap what they have sown in a global “techlash.”\textsuperscript{22} Foreign counterparts have learned from the rent-seeking behavior of Americans firms, and it has boomeranged. Now foreign governments find ways to regulate American firms to reward their domestic players.\textsuperscript{23}

While the freedom of speech restricts governments ability to censor and regulate content, it ensures individual sovereignty to do so. As such, private networks, platforms, and individual users have the freedom to control the content they deliver and consume. The best way to address perceived bias on informational platforms is to create alternatives. Rather than platform regulation, government should support the market forces that will support competition.\textsuperscript{24} Misguided FCC internet and privacy regulation has deterred innovation in advertising platforms, solidifying a monoculture of business models.\textsuperscript{25} Moreover price controls disguised as regulation for non-discrimination have deterred the evolution of a free market for data, forcing consumers to pay the full cost of broadband and denying them alternatives to lower cost. Internet penetration is at 76 percent in the US. The only way to close the gap is to allow flexible pricing and the freedom of different actors to create value propositions for consumers. I have conducted detailed assessments of the harm to the poor by regulatory prejudice and restriction on the flexible pricing of data. The most notable example is India’s total ban of differential pricing which keeps 2 of every 3 people offline.\textsuperscript{26} See a list of relevant papers below.\textsuperscript{27}


However, if the US can clean up its own cronyism, American stakeholders will have an easier time to shut it down when facing it abroad. Sowing the seeds of free market and Constitutional principles will bear delicious fruit. Voters and policymakers recognize that modernizing America’s regulatory institutions will be the most important step to maximize the welfare of the American people, its innovators, and its economy. Removing the incentives for regulatory arbitrage forces firms to compete on the merits of their goods and services—serving their customers, not policymakers. This approach is the most fair and rational.

Guiding principles for international internet policies

International internet policy should reflect American constitutional values, notably the rule of law and individual rights. To ensure its credibility, the US must align its national internet policies to be consistent with the Constitution and relevant US law.

Rule of law

The rule of law means freedom from the arbitrary exercise of power. It prescribes the limits of what government can do and ensures that individuals have life, liberty, and the pursuit of happiness. Historically the wisdom of American internet policy was its simplicity and the governing principle of freedom. The 1996 Telecommunications Act said very little about the Internet, only that the goal was to “promote competition and reduce regulation to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid deployment of new telecommunications technologies”(emphasis added). It noted that the policy of the United States is “to preserve the vibrant and competitive free market that presently exists for the Internet and other interactive computer services, unfettered by Federal or State regulation”(emphasis added). In short, this policy made the Internet the America’s greatest free market success story.

Importantly, Congress never authorized the Federal Communications Commission (FCC) to regulate the Internet. Moreover, it has not authorized any other federal actors to seek international internet regulation. While some federal agencies may have roles in which they interface and negotiate with representatives from other nations, they must respect the explicit mandate for which their agency was established. Agency representatives cannot interpret their agency mandate to enact policy for which they have not been authorized, however beneficial it may seem. Above all, the job of federal agencies is to follow the rule of law.

That Congress, through the will of the people, took this approach was informed by the rejection of a century of regulatory capture and abuse of the technologies of freedom. In The Political Spectrum: The Tumultous Liberation of Wireless Technology, from Herbert Hoover to the Smartphone Thomas Hazlett documents the systematic deterrence of new technology by bureaucracy. He blames not the regulators themselves, individuals who want new technologies, but the "administrative apparatus" and "regulatory gridlock" which require that every new technology must serve the "public interest,

convenience, and necessity.” Incumbent companies were allowed to nix technologies they believed to be threatening. Innovations such as market based spectrum auctions, cable TV, and cellular service were delayed for decades because of regulatory prejudice. As such, new technologies took years, if not decades, to get to market, if they ever arrived at all. Innovators died unrecognized, bankrupted, and demoralized.

The breakup of the government-sanctioned telephone monopoly was fresh on voters’ minds in 1996. Not only did consumers suffer for decades in the regulated monopoly era from usurious prices and lack of competition for devices and long-distance service, but innovators suffered from being unable to experiment with telecommunications technologies. However, for some communications scholars and regulatory advocates, having a system that ensures a minimum standard for everyone, a black rotary phone in every home (and where regulatory elites get to decide the price, technology, and conditions of connectivity), is preferable to a market where technologies compete and consumers choose the winners. There is no better example of the poverty of the state-centered approach to communications policy than Pethybridge’s assiduous accounts of life in the Soviet Union in the 1960s,

The telephone services are amongst the most underdeveloped and inefficient elements within the Soviet communications system. The Soviet authorities accorded relatively high priority to investing in mass media which serve the purposes of socialization in the official ideology. But they apparently saw no great merit in devoting major resources to the development of the mass telephone network for the convenient communication between private citizens. The telephone network was therefore at first developed almost exclusively for the needs of the regime -- for communication between the official bureaucracies and their members. However, for reasons of secrecy, telephone books were totally unavailable from the mid-thirties until several years after the death of Stalin. They are still a rarity even in such major centers as Moscow and Leningrad.

The downside of the decentralized, limited government approach is that many misinterpret, if not exploit, the regime of freedom as a power vacuum. In less than four years following the 1996 Act, regulatory advocates called for the implementation of state-centered control of the Internet to preserve its “freedom”. They argued that the existing statutes were grants of authority of the FCC to regulate the internet like the telephone network. Years of regulatory and courtroom battles have ensued because advocates disrespect the rule of law and the will of the people. While the policy has been restored with governance of the internet at the Federal Trade Commission as Congress intended, regulatory advocates unleashed their Constitutional animus among the states, cajoling state actors to disrespect the law. While justice can be rendered by the courts, the situation can only be resolved by Congress clarifying its decision.

Notably some 50 countries with internet regulation have created them in a forthright process in which specific laws are drawn up to define the regulatory authority and objective. These laws are then voted


and promulgated through a popularly-elected Parliament or Congress. To advocate for an administrative approach in which the FCC (or another federal agency) gets to decide how and whether the internet is regulated is a violation of Americans’ Constitutional rights.

The situation in the US created a bad example for other countries. It’s no coincidence that the European Union flexes its muscles on data protection regulation—imposing rules on every data processor on the face of the earth without ever discussing it at the World Trade Organization or in a global multistakeholder model. Now every nation on earth has been sucked into a misguided regulatory regime—and was never a part of the conversation. Now regulatory advocates in the European Parliament plan to torpedo the US-EU Privacy Shield, an agreement that governs more than $250 billion of annual transatlantic digital trade, including the processing of salaries of millions of workers with digital services.35

Freedom of speech and individual rights

In a society where free speech is embraced, information flows and ideas are shared, including controversial ones. Some find the free flow of information a threat to their status and power. Others recognize that the free flow of information provides opportunities for debate, engagement with critics, problem solving, and building consensus. Savvy policymakers have mastered the art of constructive controversy.36

The internet has not only increased and accelerated the flow of information, it has drastically lowered its cost. The free flow of information can also increase bad, false, and negative information. Therefore, some believe that it is government’s role to manage and control the flow of information. The current incarnation of the informational bogeyman is “fake news.”

Regulating the flow of information does not stand up to First Amendment scrutiny, which prohibits the government from regulating speech. However, that doesn’t mean that regulators haven’t tried. The history of communications policy can be viewed from the lens of government wanting to control the flow of information whether through spectrum applications, the public interest standard, the Fairness Doctrine, or net neutrality.37

The free flow of information is supported by a strong American tradition of free speech and jurisprudence. The Center for Civic Education lists the many organizations working to promote the study of the US Constitution in the US and abroad.38 Creating an effective international internet policy likely requires the promotion and partnering with organizations committed to the education of Constitutional principles.

Moreover, when representatives of NTIA and the US government engage in international policy

discussions, they can model free expression. Indeed, some of the most important ways to educate and instruct our international counterparts is to be the message we want to express. When giving speeches, policy representatives should describe the relevant Constitutional principles and tell stories. When engaging with counterparts abroad, American stakeholders should compare the merits of competing regimes, discuss shared histories, visit locations of historical importance, and so on. While international counterparts will get an impression of the US from the media, they form their opinion through their human interactions with Americans. As such, it is by “being there” that American policy actors can be a powerful, constructive force for policymaking.

III. America must reinvigorate its participation in the multistakeholder model (MSM)

The pros and cons of MSM

MSM is in fact an outgrowth of the self-regulatory process. It can be used to solve emergent issues and address concerns without having to resort to regulation. One of the world’s most advanced digital nations as measured by the ITU, Denmark, pioneered self-regulation and MSM for internet policy because industry stakeholders knew that they could deliver better social outcomes than regulatory officials. The MSM’s many virtues include incorporating the perspectives of different stakeholders, engaging stakeholders in a learning process toward a common goal, providing means to address power and conflict, and integrating both top down and bottom up problem-solving.

Indeed, building on a demonstrated record of success for self-regulation by mobile operators in Denmark, MSM for internet policy was practiced across the Nordic countries for some six years before EU-wide internet regulation was imposed in 2015. Not only were there no violations during this 6-year period, no litigation was lodged against regulators. Countries which employed MSM experienced greater levels of innovation in locally made mobile applications than countries with heavy-handed rules. Today Switzerland, Japan and South Korea employ soft approaches for the internet and enjoy highly innovative environments for internet applications and services. Importantly, the drive for internet regulation does not reflect findings of market failure by regulators, but rather collective action by advocates for preferred policies.

The MSM is not perfect, but it still affords the best model of internet governance. It is valuable to review its shortcomings to improve its operation in future and to underscore why US leadership is essential.

Some see the purpose of the MSM as a vehicle to change the fundamental world order and dismantle the nation state system. Participation in an MSM can give some stakeholders power, credibility, and

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visibility that they would not have otherwise. It can also empower foreign actors to force their will on Americans, to “gang up” on the USA as it were. Indeed, the MSM can even be abused by Americans who use it to force a regime on the USA which may fulfill their personal political conviction, but which does not conform to the will of the people as promulgated by Congress.

While some stakeholders may abuse the MSM, it does not make the model wrong. Stakeholders are special interests. James Madison was aware of special interests. He called them “factions”, and he believed that they could organize to usurp the rights of others. In Federalist Paper No. 10 Madison suggests resisting factions but harnessing their energy within the governance body so that each faction is represented but has little power. 44 The role of this body is to balance needs of various special interests, allowing each to air its views but not to tyrannize the rest.

The MSM is not a democratic body as such, but if the US government and American stakeholders play a leadership role within the MSM—displaying a faithful and authentic representation of American democratic values—the MSM can be source for good and can help the US regain its leadership position in international internet policy to amplify the policy Congress defined for the Internet.

Industry Strategy for MSM
The US tech economy was $1.6 trillion in 2018, 9.2 percent of gross domestic product (GDP). The numbers are even more staggering from an equities perspective; the American tech industry accounts for a quarter of the value of the US stock market, some $34 trillion.45 There are half a million tech companies in the US, with 34,000 new startups in 2017 alone.46 Globally, the tech industry topped $4.5 trillion in revenue in 2017 and is expected to reach $4.8 trillion in 2018.47 The US is the single-largest tech market in the world and accounts for 31 percent of the global tech market.48

The economics of the internet allow for the participation of many players. With the evolution to 5G, the next generation mobile standard, and the Internet of Things, this will only increase. Existing businesses will converge, and new ones will emerge. Consider how quickly the US reaped the gains from 4G mobile wireless networks and its associated technologies, apps, and services. Some $100 billion49 was added annually to the nation’s GDP. The windfall from 5G is projected to be even greater: the rollout of a 5G network should three million new jobs50 and contribute $1.2 trillion to the U.S. economy.

But global competition is tougher in 5G, and U.S. leadership is not assured.51 The Chinese government is aiming to help their country’s device, app, and service developers by being the first to deploy 5G. This would allow Chinese developers the distribution to a national market from the very beginning. China has

47 CompTIA, “IT Industry Outlook 2018.”
48 CompTIA, “IT Industry Outlook 2018.”
already replaced the U.S. as the world’s largest mobile app market\(^{52}\), unseating the U.S. in downloads and revenue in 2016. The US, caught up in crony squabbles over the last decade, took its eye off the ball. The *New York Times* reports that the real threat to Silicon Valley is not the nation’s 4,551 internet service providers, but Chinese internet giants, including Alibaba and Tencent, which make the US players look tame by comparison.\(^{53}\)

Unless it wants to capitulate for China, American industry needs to set aside its crony games and start to play for Team USA. Telecom, content, software, and hardware companies should all play for the same team. They should capitalize on each other’s strengths, leveraging the appropriate actors for the conversation. Moreover, Team USA should grow the bench and bring new actors to the MSM including retailers, integrators, investors, and so on.

**Individual and Independent Sector Strategy for MSM**

The internet policy conversation can also be broadened among Americans. Whereas today it is dominated by the digital elite (high net worth tech entrepreneurs, foundations, advocacy organizations, and Silicon Valley workers), the expanding internet economy across America will inevitably incorporate more diverse views.\(^{54}\) According to the Computing Technology Industry Association’s annual workforce survey, 6.1 million workers were employed in the tech industry in the US in 2017. An additional 5.4 million worked as technology professionals across the rest of the economy.\(^{55}\) The top 10 states for tech sector employment are California, Florida, Illinois, Massachusetts, Michigan, New York, Ohio, Pennsylvania, Texas, and Virginia.\(^{56}\) Together, these 10 states account for 249 of 538 election votes, some 46 percent. Of the top 20 best places to work in the Best Workplaces in Technology 2018 report, only half are in Silicon Valley.\(^{57}\) While Apple, Google, Facebook, and Twitter account for a large share of the media coverage of the tech industry, they have less than 100,000 employees combined in the San Francisco Bay Area.\(^{58}\) This suggests that internet policy discussions will by necessity be broadened to include more nuanced views that reflect the complexion of a diverse American workforce and electorate.\(^{59}\) The independent sector also provides a diverse set of robust actors from academia, think tanks, media, charitable organizations, hospital groups, civic societies, faith communities, and so on which can help broaden, deepen, and strengthen the conversation.

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IV. America can leapfrog the misguided EU approach to data protection with a scientific framework that supports consumer education and privacy enhancing technologies (PETs)

The National Institute of Standards and Technology (NIST) framework offers the most salient way forward to design a 21\textsuperscript{st} century paradigm of data protection. The focus on the scientific approach ensures the engineering trustworthiness of technology and its incorporate into society. Measurement science and system engineering principles can support the creation of frameworks, risk models, tools and standards that protect privacy and civil liberties.\textsuperscript{60} The current vogue of normative models for data protection such as the GDPR demonstrate the danger of “privacy overreach,” in which the drive to protect privacy becomes absolute, lacks balance with other rights, and unwittingly brings worse outcomes for privacy and data protection.\textsuperscript{61}

I have written on the problems of the GDPR, and more papers are forthcoming.\textsuperscript{62} This section will not revisit those issues in depth but instead focus on the solutions that US policymakers should pursue, notably consumer education and privacy enhancing technologies. However, the data is instructive. After a decade of GDPR-type regulations across EU, consumers report only a marginal increase in trust online. As of 2017 only 22 percent of Europeans shop outside their own country (a paltry increase of 10\% in a decade), suggesting that the European Commission’s Digital Single Market goals are still elusive.\textsuperscript{63} Moreover, only 20 percent of EU companies are highly digitized.\textsuperscript{64} These are primarily large firms, with small to medium sized companies investing very little to modernize their business and market to other EU countries. Given that GDPR compliance can cost a firm $1 million or more, small to medium first will probably be less likely to grow online.


Consumer education

While the GDPR claims to empower people, it offers nothing in the way to empower people to educate themselves about how to engage online responsibly. This is likely by design because regulatory advocates realize that if people were educated and empowered, they could make their own decisions about how to engage with platforms and would not require government supervision their online activities.

Where education policy dumbs down students by failing to instruct them in their Constitutional rights and freedoms, government can take increasing power in a society. Similarly with data protection, avoiding the educational element ensures that people will be helpless wards of the state who are forever dependent on Big Brother watching out for them and purporting to protect their privacy.

As my research details, the Eurobarometer notes that more than half of all Europeans fail to practice basic privacy-enhancing behaviors. This situation is ripe for improvement and represents a classic example of how consumer education can improve outcomes better, more quickly, and at a lower cost than regulation. Several private and public organizations have outlined the role of consumer education in online privacy more than a decade ago, but these assets were purposely ignored by the European Parliament in crafting the legislation. Notably the Organization for Economic Cooperation and Development published a study on Consumer Education for Digital Competence.\(^{65}\) Key learning points include

- Linking the concept of digital competence with critical thinking on technology and the media
- Education to provide a basis for developing an understanding of the structures and conceptual relationships understanding digital media, e.g. functioning of online market, ecommerce marketing techniques, and user tools.
- The how and why of protecting personal information when using digital media.
- Using media to promote the education of digital competence in compelling ways, e.g. games, videos, blogs, virtual worlds etc.
- Age-appropriate education
- Teacher training
- Strengthening multistakeholder cooperation to create educational partnerships.

The OECD also published a book to describe prevailing consumer education practices across the member nations, including the institutional frameworks and policy evaluation tools.\(^{66}\) For example in the US, the “Teaching Privacy Curriculum” by Serge et al. offers interactive instruction of 10 Principles of Online Privacy over three weeks in a university setting has proven effective to educate and empower users to manage their privacy.\(^{67}\)


Innovation in privacy-enhancing technology (PETs)

The second area with only limited discussion in the GDPR is the role of privacy enhancing technology. In its report “Privacy Enhancing Technologies: Evolution and State of the Art,” the European Union Agency for Network Information and Security (ENISA, now called the Cybersecurity Agency) describes privacy enhancing technologies (PETs) as “a system of ICT measures protecting informational privacy by eliminating or minimizing personal data thereby preventing unnecessary or unwanted processing of personal data, without the loss of the functionality of the information system.”

The ENISA report describes a wealth of technologies but the GDPR only mentions two, encryption/pseudonymisation and data minimization.

In the report “Privacy and Data Protection by Design,” ENISA explains privacy by design including not only encryption, but protocols for anonymous communications, attribute-based credentials, and private search of databases in addition to a range of strategies of multiple practices that firms can employ. The report states that there is a large body of literature on privacy by design, but that its implementation is weak and scattered. Indeed, privacy and data protection features are, overall, new issues for engineers, designers, and product developers when implementing the desired functionality. To address this, ENISA has stewarded the discussion on how to develop a repository of such technologies.

It could be that because privacy by design technologies are nascent, policymakers are reluctant to describe them in further detail, though this also contradicts the implicit assumption of the GDPR that data supervisors know best. However, the GDPR chosen approach of regulation creates path dependency and inevitable outcomes. It clearly puts the thumb on the scale in favor of regulation over innovation.

Such frameworks can have indirect effects in that firms, concerned about inadvertently violating many of the tenets of the regulation and facing steep fines, will choose not to innovate. The GDPR’s Article 25 on Privacy by Design and By Default offers little in the way of incentives. There is no safe harbor for data processors to experiment or to implement new privacy by design technologies, so enterprises are at risk of significant fines if their technologies fail, even if they have an entrepreneurial willingness to employ improved technologies.

A review of the literature on the impacts of economic regulation in the information communications technology sector shows a detrimental impact of regulation on innovation. Regulation can create a dead weight loss in the economy as resources are diverted to regulatory compliance and away from welfare-enhancing innovation. A study across all major industries from 1997-2010 found that less regulated industries outperformed overregulated ones in output and productivity and grew 63 percent more. Overregulation increases barriers to entry for entrepreneurs, which slows economic growth.

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Moreover, regulation can crowd out efforts to create new and better systems.\textsuperscript{72}

Indeed, there is a non-trivial issue in that the European regulatory actors with an ambition to control American platforms with a complicated weave of antitrust concessions and data protection compliance requirements put themselves at risk for capture, inuring themselves to the firms they regulate, rather than facilitating market entry. The GDPR could strengthen the market position of large players because compliance may prove too costly for small firms. It is highly unlikely that new European firms will emerge in this environment because the entry costs of data protection compliance are too high. Indeed, many firms have stopped serving the EU altogether because of the confusion and expense.\textsuperscript{73}

As early as 2010, the International Conference of Data Protection and Privacy Commissioners resolved that efforts to promote privacy by design needed to be more deeply embedded in policy.\textsuperscript{74} The EU could offer grants or rewards for designing better technologies, but those approaches were declined in the regulation.

For years Europe has fallen behind in the digital economy. It continues to watch the US, and increasingly China, capture the world market for internet innovation and revenue. So rather than compete on making better internet products and services, the EU competes on regulatory standards. While the EU claims that its GDPR regulates data processing for “mankind,” its motives are geopolitical, not humanitarian. Indeed, had the regime been for humankind, then every person on the earth should have had a chance to weigh in by voting the EU Parliamentary elections.

The EU made a similar gambit for world dominance in mobile standards by forcing the adoption of 3G/GSM, hoping to trounce the CDMA platform that American operators had invested in. For a time, the strategy gave the European mobile industry (including its six phone manufacturers) a leg up, but the US — rather than following the Europeans — jumped ahead to 4G and became the world leader in mobile.

As such, Americans can develop a better regime through science, technology, and innovation. Policymakers can incentivize this with partnerships for grants, prizes, award, competitions and safe harbors for innovation to ensure that innovators can innovate without punishment.


V. Like Olympic athletes, Americans need to play for Team USA on internet policy

America has no shortage of talented stakeholders with innovative ideas, but it lacks coordination on international internet priorities and in multistakeholder fora. NTIA can play a valuable leadership role to help the diverse set of stakeholders regroup, even if only a few government actors. The process of the NOI is a valuable first step.

America has over two centuries of foreign policy experience. It can develop the ideal policy by incorporating the best elements of earlier approaches. America’s Constitutional precepts of rule of law and individual rights are the proper and appropriate values to inform the framework of internet policy and to model behavior. American industrial stakeholders, in moving to the transformational 5G mobile standard, need a consistent, harmonized framework globally. That should be underpinned by a national framework of a consistent set of rules for all players, grounded in modern, evidenced-based standards of antitrust, and delivered by the Federal Trade Commission. Having integrity in national policy will allow American firms greater credibility when challenging the protectionism of foreign actors.

American internet policy must legitimately support citizens and consumers with data protection education so that they can make informed decisions. Moreover, innovators should have incentives to create privacy enhancing technologies to improve the design of systems and practice of data protection. American internet policy must legitimately empower participation in a free market internet economy, respect the rule of law and individual rights, limit regulatory distortion and abuse, protect property, and deliver measurable improvements in quality of life. Americans should be proud to be part of Team USA.