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AI IN THE EVERYDAY: CURRENT APPLICATIONS AND

FUTURE FRONTIERS IN COMMUNICATIONS AND TECHNOLOGY

WEDNESDAY, JUNE 4, 2025

House of Representatives,

Subcommittee on Communications

and Technology,

Committee on Energy and Commerce,

Washington, D.C.

The subcommittee met, pursuant to notice, at 10:32 a.m., in Room 2123, Rayburn House Office Building, Hon. Richard Hudson [chairman of the subcommittee] presiding.

Present: Representatives Hudson, Allen, Latta, Bilirakis, Carter of Georgia, Dunn, Joyce, Fulcher, Pfluger, Cammack, Obernolte, Houchin, Fry, Kean, Goldman, Fedorchak, Guthrie (ex officio), Matsui, Soto, Clarke, Peters, Dingell, Kelly, Barragan, Menendez, Landsman, McClellan, Castor, and Pallone (ex officio).

Staff Present: Jessica Donlon, General Counsel; Sydney Greene, Director, Finance and Logistics; Kate Harper (O'Connor), Chief Counsel, Communications & Technology; Megan Jackson, Staff Director; Noah Jackson, Clerk, Communications & Technology; Sophie Khanahmadi, Deputy Staff Director; Brayden

Lacefield, Special Assistant; John Lin, Senior Counsel, Communications & Technology; Joel Miller, Chief Counsel; Elaina Murphy, Professional Staff Member, Communications & Technology; Dylan Rogers, Professional Staff Member; Jackson Rudden, Staff Assistant; Chris Sarley, Member Services/Stakeholder Director; Hannah Anton, Minority Policy Analyst; Parul Desai, Minority Staff Director; Tiffany Guarascio, Minority Staff Director; La'Zale Johnson, Minority Intern; Dan Miller, Minority Professional Staff Member; Emma Roehrig, Minority Staff Assistant; Michael Scurato, Minority FCC Detailee; Johanna Thomas, Minority Counsel, Communications & Technology.

Mr. Hudson. The subcommittee will come to order. The chair recognizes himself for an opening statement.

Good morning, and welcome to today's subcommittee hearing on examining artificial intelligence and how it is being used in communications, technology industries. AI is top of mind right now, not just in this country but all over the globe. It has been used in different industries for many years, but recent advancements in large language models, machine learning, and generative AI have pushed this technology into the spotlight, capturing public attention and forever transforming how we live and how we work.

The applications for this new technology are widespread, and we are continuing to find new ways that AI can be used to benefit Americans' lives.

Whether you know it or not, almost everyone uses AI in our daily lives, like when you use ChatGPT to create a shopping list, or ask Siri for directions. Or even more specifically, when you called the ride share to get here this morning, it uses AI to find the fastest route based on traffic patterns. Your cell phone provider uses AI to reduce harmful spectrum interference on your phone, ensuring there is no lapse in service. The entertainment industry uses AI to predict what types of content viewers may enjoy and drives decisions on when that content should be produced. It is being used to develop content, and enhance the editing process. Our military uses AI to enhance efficiency with encrypted communications and perfect precision with drones like we have seen in the war in Ukraine.

Even the National Football League uses AI to create the perfect schedule to limit unnecessary travel for players, create an even playing field for teams, and maximize fan accessibility for the biggest games.

As demand for AI grows, we must consider what physical infrastructure will be required to continue advanced AI development.

Storage capacity and energy consumption demands that data centers are expected to skyrocket by 2030 due to increased AI use. As data capacity increases, we will need robust fiber optics and wireless connectivity to ensure powerful new AI systems can reach their fullest potential and enable every industry to grow.

But the United States is not the only country developing advanced AI. China recently released its DeepSeek AI model which showed their advancements. Our adversaries will stop at nothing to undermine our leadership in technological advancement and utilize AI to threaten our very way of life. We must continue to innovate and develop to prevent that from happening. Competition in AI is a global issue, and it is imperative that the United States maintains its leadership.

To do this, our country and Congress must encourage an environment where AI companies can innovate, compete, and excel on the global stage. Just like the light regulatory touch that gave rise to the Internet and some of the most successful and cutting-edge companies on the planet, AI must be given the same opportunity to ensure American companies set the standard for the rest of the world.

This is an exciting time, and an opportunity to talk about these issues. Navigating these new and evolving technologies will not be without its challenges, but it is our job to meet them head on.

Innovation has provided untold benefits to Americans and to our economy. Today we will hear from our witnesses about how artificial intelligence is being used across the communications and technology industries as well as what is required for the United States to maintain its leadership in developing AI models.

I look forward to hearing from the witnesses today about these issues and how Congress can stand ready as a partner.

I now recognize the ranking member, the gentlelady from California, for her opening statement.

Ms. Matsui. Thank you very much, Mr. Chairman.

I am glad we are holding this hearing today as connectivity and artificial intelligence go hand in hand. Already, AI is a part of everyday lives, from the improving GPS driving directions to extending the battery life of our cell phones and preventing network outages. As AI evolves, it will transform how we communicate, improve network resiliency, defending against cyber attacks, and supercharging connectivity for consumers and businesses.

To realize AI full potential and ensure AI benefits us all and not just a few, we must act with urgency to close the digital divide by investing in the infrastructure and skilled workforce that underpins AI's success.

Unfortunately, the Trump administration would rather pay lip service to American AI leadership than act. The reality is that they are undermining this exact goal by derailing our AI supply chain with tariffs, gutting our AI talent pipeline by attacking universities and slashing research dollars, and weakening our AI infrastructure by freezing Federal broadcasting funding.

Universal connectivity is the building block for universal AI access. This includes the fiber networks that provide reliable, scalable, and high-speed connections for AI applications to process large amounts of data. To achieve this, we must act quickly and fully carry out our Federal broadband programs to connect the tens of millions of Americans who still lack access to high-speed Internet.

And that is why I am alarmed that the President continues to sabotage the $42 billion Broadband Equity, Access, and Deployment, or BEAD Program.

BEAD is a once-in-a-generation investment from Congress to expand affordable broadband. States are at the one-yard line ready to reach the end zone and get shovels in the ground. But for almost 6 months, the Trump administration has put BEAD on ice, blocking our States from connecting more Americans, all while threatening to waste even more time with rule changes that would undo the work our States have already accomplished.

To make matters worse, President Trump is weakening our AI workforce through his cancellation of nearly $3 billion in digital equity grants. Congress established these grants with bipartisan support to provide communities with digital literacy skills, training in technology, to reap the full benefits of online access.

President Trump's attack on digital equity funds, including trying to cancel California's $70 million grant, is leaving behind our most vulnerable communities, including rural Americans, seniors, Americans with disabilities, and veterans.

This is unacceptable. To be the global AI leader, America also must lead on setting commonsense guardrails, responsible and safe AI. Otherwise, it will harm innovation by damaging consumer trust, and weakening protections for a fair, open, and competitive playing field for AI technologies flourish.

I have long championed policies that advance U.S. leadership in AI and other emerging technologies. This includes strengthening AI infrastructure from fiber and wireless connectivity to our semiconductor supply chain. I have also worked to preserve our States' roles in laboratories of democracy, to provide as critical insight on AI policies where innovation and competition thrive alongside commonsense safeguards.

Now is the time to learn from our States and work on bipartisan solutions to advance innovation and empower all Americans to access the benefits of AI.

And that is why the 10-year AI State moratorium that my Republican colleagues jammed through in their reconciliation bill, is so misguided and dangerous. We can't afford a 10-year hold on our States' ability to identify and protect the American people from AI-specific harms, not when AI is developing rapidly and spreading to all parts of our lives, and especially not without strong Federal AI safe guardrails in place.

I look forward to hearing from our witnesses about how we can strengthen our AI leadership. And with that, I yield the balance of my time.

Mr. Hudson. Thank you.

I now recognize the chairman of the full committee, the gentleman from Kentucky, for 5 minutes for his opening statement.

The Chair. Thank you, Chairman Hudson, and thank you, Ranking Member Matsui, for bringing us together for this important hearing, and thank the witnesses for all of you for being here and for your participation. I look forward to hearing about all the ways the artificial intelligence is currently being used and the promise that AI holds for the future.

AI is a top priority for the Energy and Commerce Committee this year. Committee's jurisdiction covers almost every layer of the AI tech stack, from energy needed to power massive amounts of

computing power, to the fiber optic cable and wireless connections needed to move the data through interconnected networks, to the data itself which underpins innumerable lines of code that together form the modeling needed to generate outputs for the consumer commercial application of AI technologies.

We started this Congress by holding multiple subcommittee hearings related to AI regulation and used cases spanning all the industries under this committee's jurisdiction, including the committee's first full committee hearing on the existential opportunities and risks of AI technology.

Today's hearing will focus on AI and the communications and technology sectors where we are committed to supporting the development of this transformational technology and to ensuring that American innovation continues to set the global standard for advanced networking and connectivity.

When ChatGPT came roaring into everyday life in 2022, it provided a clearer, accessible example of the power of AI for everyday consumer use. While it is a fantastic tool, it is only one example of how AI can be used, and there are many ways that AI technologies have been deployed over the last couple of decades to support other applications.

For example, some applications use AI technologies to detect and prevent spam robocalls. So hearing that is going up -- that is why I wasn't here at the very beginning -- two floors above us. A lot of times when we go home, we come back -- most people around here say, What are you hearing back home? Well, I can tell you robocalls is one of the number one priorities -- of everything going on in this Congress and this country, robocalls are one -- and spam is used to prevent -- I mean AI technology is used to prevent the spam robocalls.

And there are other areas to implementing sophisticating cyber security systems, to prevent secure -- to prevent and secure consumer data.

Law enforcement officers and other first responders in the field can utilize real-time language translation to help assist people facing language barriers. Even today, music artist Randy Travis is taking full advantage of AI. After suffering a stroke that reduced his ability to sing and speak, he used AI tools to recreate his own voice from his own recordings to continue producing new music.

I firmly believe that we are beginning to uncover the possibilities that AI has to offer. America is uniquely positioned to continue innovating as a global leader in this sector. But this requires a commitment on our part. It is vitally important that we hear from industry experts that is enabled AI technology to develop rapidly and how we can allow AI to continue to thrive in America while addressing potential risk along the way.

At the same time, our adversaries are also developing cutting-edge AI technologies in an effort to capture global technological dominance. We cannot allow countries that do not share our values to lead in technology as important as this. As I have said before, we do not secure -- if we do not secure AI leadership, China will fill the void.

Europe is not going to fill the void. They made decisions in their energy policy and their regulatory policy to eliminate themselves from this transformational technology that improves the quality of life of the people that live in our societies, and we need to do it correctly. And if we see development of AI technologies to China, which, as a nation, does not share the same ethical values we do, we will also see the ability to shape future development of these technologies in a free and democratic society.

As such, it is important that we take a measured approach and strike the right balance between facilitating innovation and providing principled guardrails where needed to address gaps in current law.

As we have seen with Europe's approach, as I said, on everything from energy production to data privacy, imposing heavy-handed regulation of AI stifles innovation and stunts economic growth.

If we can get this right, and we have to do this together, there is no limit to American innovation and artificial intelligence or the benefits it will unlock for all Americans.

I really appreciate our witnesses for being here. Mr. Pickering, welcome back to Energy and Commerce Committee. I am not sure there is any member here on our side of the aisle that served when you were here, but that wasn't that long ago. But thank you for -- maybe Mr. Latta might have served at the same time you did. But anyway, we really appreciate you being here and all of you being here, and we look forward to your testimony. And I yield back.

Mr. Hudson. Thank you, Chairman.

I now recognize the gentleman from New Jersey, the ranking member, for 5 minutes for his opening statement.

Mr. Pallone. You notice, Chip, that he said only there may not be a Republican, but definitely is a Democrat, me. But in any case.

We have now had numerous hearings this Congress on artificial intelligence, and we have heard about the benefits and risks of AI. And while we continue to hold hearings and debate the need to adopt commonsense guardrails to protect consumers from bad actors using AI, some States have already moved forward and adopted these laws providing basic consumer protections from the negative consequences of some uses of AI.

But instead of learning from what the States are doing, House Republicans last month passed a 10-year ban on a State's ability to enforce their own laws protecting consumers from AI's harms. And this provision, which was included in the budget reconciliation, is nothing more than a giant gift to big tech. And I hope -- you know, we are working to see if we can get the Senate parliamentarian to rule this out of order under the so-called "bird bath," but that is not because of the Republicans' efforts. It is because of the Democrats' efforts.

The problem is this provision would block enforcement of laws on the books right now that are protecting consumers from real-world harms. Some States have laws requiring companies to disclose when they are using AI. Others have laws protecting against the use of deep fakes in elections and protecting consumers when AI is used in health care, education, housing, and employment.

Now, Republicans want to be on the enforcement of all these State laws with absolutely no national bill ready to go to address these concerns. Instead of enriching big tech, we should be working toward strong Federal legislation to govern and guide the development of these powerful AI systems which are rapidly being incorporated into more and more aspects of our everyday lives.

The Trump administration also continues to undermine our progress in building the connectivity infrastructure needed to power the AI models of today and tomorrow. For no good reason, the administration continues to stand still in rolling out one of the key demands of AI, that is fiber. Broadband programs designed to bring high-capacity fiber to both data centers and our homes are critical if America wants to continue to lead the world in AI.

Any delays in connecting every home and business to reliable high-speed Internet only benefits our foreign adversaries. America's strength comes from our ability to build and deploy the most advanced technology here and then share it with the rest of the world.

But this can't happen if everyone in America does not have high-speed Internet access. And I therefore urge the Trump administration to get out of its own way and let the bipartisan infrastructure laws' $42 billion BEAD Program move forward as intended, letting the States deploy networks that are fast, reliable, and can meet the technological demands for decades to come.

Now, I also have to acknowledge that simply bringing the Internet to American homes will not allow us to lead the world in AI. To complete the task, Americans need to understand how to use AI. That is why House Democrats voted to include the Digital Equity Act as part of the Bipartisan Infrastructure Law. This Act funds programs that can help seniors, veterans, the disabled, and others learn the skills needed to fully participate in our digital economy.

Yet in the last couple of weeks, President Trump unilaterally and illegally, in my opinion, decided to stop the funding to these programs, falsely claiming that they are racist. I can't stress, teaching grandparents and veterans, the disabled how to use AI as well as protect themselves from scams and scheduling doctor appointments and applying for jobs online has nothing to do with race. The Digital Equity Act recognizes the digital divide, and it is not -- it is not a racial divide. I mean, there is an element of a racial divide, certainly, but it is because there is so many people who are seniors and veterans and disabled, regardless of their race or ethnicity, that need to know how to use it. And it has nothing to do with race. And it is just unfortunate that the administration is doing this.

Last thing I wanted to say, Mr. Chairman, is while we still need guardrails to govern and guide the development of AI, there is no question that AI has the potential to advance how our communications networks serve the public. For instance, AI models can be deployed in our networks to help enhance resiliency and reliability so that when natural disasters hit, or other life-threatening events occur, Americans can rapidly assess the damage and quickly get the help they need. And that is why it is crucial that we fund the deployment of Next Generation 911 across the country.

Again, it is a shame that the House Republicans want to use spectrum auction proceeds to fund this giant tax giveaway for billionaires and B corporations instead of helping fund Next Generation 911, which is obviously what I have been pleading all along. That is what we should be using that 80 -- $8 billion in spectrum auction, and not to pay for the -- well, you call it -- what do you call it? The Big Beautiful Bill. I call it the big ugly bill.

And with that, I yield back the balance of my time. Thank you, Mr. Chairman.

Mr. Hudson. Thank you.

We have now concluded with member opening statements. The chair reminds members that pursuant to the committee rules, all members' opening statements will be made part of the record.

We would like to thank our witnesses for being here today to testify before the subcommittee. Our witnesses will have 5 minutes to provide an opening statement, which will be followed by a round of questions by members.

The witnesses here before us today are Chip Pickering, Chief Executive Officer of INCOMPAS, and former member of this committee, as has been noted. Welcome back.

Ronnie Vasishta, Senior Vice President of Telecom for NVIDIA. Thank you for being here.

Jim Shea, Chief Executive Officer for DeepSig, Incorporated. Thank you, sir.

And Asad Ramzanali, Director of AI and Technology Policy, Vanderbilt Policy Accelerator, at Vanderbilt University. I believe you have been in this room before too. Glad to have you back. Thank you.

Mr. Pickering, you are recognized for 5 minutes for an opening statement.

STATEMENTS OF CHIP PICKERING, CHIEF EXECUTIVE OFFICER, INCOMPAS; RONNIE VASISHTA, SENIOR VICE PRESIDENT OF TELECOM, NVIDIA; JIM SHEA, CHIEF EXECUTIVE OFFICER, DEEPSIG, INC.; ASAD RAMZANALI, DIRECTOR OF AI AND TECHNOLOGY POLICY, VANDERBILT POLICY ACCELERATOR, VANDERBILT UNIVERSITY

STATEMENT OF CHIP PICKERING

Mr. Pickering. Mr. Chairman, Ranking Member Matsui, Chairman Guthrie, all the members on the committee, it is great to be back to what I consider my home, where I served for 10 years on the Energy and Commerce Committee. I love this committee. I love and respect deeply the role that it plays in this institution and in setting the policies, the critical policies of this country.

I am the CEO of INCOMPAS. And to talk a little bit about who we are and who I represent, we are the founding voice of competition in network policy. We advocated over 40 years ago for the breakup of the AT&T monopoly system, bringing the first competition to the telecommunication networks. And then as we went into the 1990s and into the current age, competition across all networks and the Internet.

And today, we have assembled something that is different than and unique from all other associations in our space. We now have members that are new energy companies, new SMR nuclear fusion companies, traditional gas and gas pipeline, transmission and grid companies that are on one side of the data center. And we have all the stack of data centers from small to regional to hyper scale. And then we have all of the broadband networks from fiber to fixed to wireless to satellite LEO systems.

And then on the other side of the market, we have all of the leading American technology companies, but we also have the new entrants, the new startups, the innovators, the entrepreneurs that are creating the new AI models. So both on the model side and on the -- what we now call "AI infrastructure" on both sides of the data center.

And we think that makes us uniquely credible. To be honest, we try to create a membership that matches your jurisdiction. You are the only committee in all of Congress that is on both sides of the data center and has the jurisdiction on all of the major elements and questions of AI policy.

And you have a serious obligation and responsibility to get this right. We are now in a race against China to win the future of an AI economy, an AI-driven national security and cyber security, and we need a national framework of AI policy on each of the major questions to win that race.

So today I would -- I want to start a conversation of how do we do that? And how do we win that race? And there are two major objectives: One is to maximize competition among all models because as you maximize competition, you get the greatest investment and the greatest innovation. In this race, unlike what we faced in the World War II and the nuclear race, and in the Cold War, the space race, those were Federal Government-funded initiatives.

The AI race is primarily funded by the private sector and private actors. So what we need to do is give the predictability and the certainty of a national framework so that the investments made to win that race will be made without a patchwork of unpredictability and uncertainty.

We need to be able to build -- this is the time to build the infrastructure of a new age that will bring back American manufacturing and bring enormous benefits in every sector of our economy and for the health care, education, and workforce of our country. And to do that, we need to build as fast as possible. We need bipartisan permitting reform to clear the obstacles that delay and cost our companies who are building -- fiber, wireless, satellite companies who are building the data centers and are building the new energy and the new energy supply and the transmission and grid that we need to power AI.

So I fully support the speed to BEAD, and the need to get the shovels in the ground to build the broadband networks.

We need to infuse, through spectrum auction authority, new spectrum into the marketplace. We need to do everything that we can to close the digital divide. And so, Congressman Joyce, and working on

a bipartisan basis -- how do we build fiber networks across the railroad so that we can close the digital divide without the railroad industry holding us up, delaying us, and charging exorbitant prices?

It is critical that in most communities, that you have to still cross the tracks to reach the full community and to close the digital divide.

In the Senate, there is a piece of legislation that makes sure that BEAD is not taxed, so we don't need to tax the broadband grants and defeat the purpose of the deployments to every corner of the country.

Finally, INCOMPAS fully supports the effort of this committee in creating a national framework to have a pause or temporary moratorium that would give you the time that you need to form a national framework around all AI issues. I want to commend Congressman Obernolte and Congressman Lieu and the bipartisan workforce that has created a set of recommendations and one of the most extensive reports in Congress and the leadership on a bipartisan basis. The moratorium is simply a means that we don't have 1,000 State actions that could slow, delay the investments we need on both sides of the data centers and the full models and the full stack of the AI ecosystem.

This committee has had a rich history, from 1934, of bringing telephone service to every American, electricity to every American, and Internet infrastructure, Internet age. Every time, it was this committee in this room that made those policies. And we need this committee, under present bipartisan leadership, to find a way to create the national framework so that we win the race and bring all the benefits and secure our national security and America's future. And I look forward to working with everyone to that purpose and to that end.

[The prepared statement of Mr. Pickering follows:]

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Mr. Hudson. Thank you.

Mr. Pickering. Thank you.

Mr. Hudson. Mr. Vasishta, you are recognized for 5 minutes for an opening statement.

STATEMENT OF RONNIE VASISHTA

Mr. Vasishta. Thank you very much.

Chairman Hudson, Ranking Member Matsui, thank you for -- and members of the subcommittee, thank you very much for the invitation to speak to you today.

As said, my name is Ronnie Vasishta, and I am Senior Vice President of Telecom at NVIDIA.

NVIDIA, as you may know, is an American full stack accelerated computing company, proud to be helping drive American technology leadership globally. We have spent over three decades inventing the technology that powers modern AI. As you have heard from the members' opening statements today, AI is not just another app or algorithm. It is the engine behind a new industrial revolution. And just like the roads and electric grids of the past, the countries that build AI infrastructure will reap the rewards of this next era.

At this critical point in time, there is also the need to redefine the telecommunications infrastructure around the world as well by leveraging AI. The convergence between AI and telecoms presents an unprecedented opportunity for renewed U.S. leadership globally.

But we must act quickly. Over the last few decades, the telecom industry has evolved through generations of standards known as 2G, 3G, 4G, 5G. And the industry is now working, as you may suspect, on 6G, with a target completion date of 2030.

Now, while 2030 might sound like a long time to go, we are actually -- already the train has left the station, and we are losing time.

The early deployments of 6G may start as early as 2028. What is already clear is that whoever seizes the advantage in the development and the deployment of AI-native, 6G will win the 6G race.

The United States invented the foundational cellular wireless technology, but today, there are no -- there are no American wireless equipment providers. Now is the time to act to regain the U.S. leadership in 6G.

And AI offers a number of advantages for the wireless industry. First, AI can be applied to network operations to increase energy efficiency, to enhance security, to improve network resiliency, and, very importantly, increase spectral efficiency.

Second, future networks will additionally support an entirely new kind of traffic, not just voice, video, and data, but AI traffic, the control and connectivity autonomous vehicles, smart glasses, robotics, and many more applications that we have yet to think of.

Third, putting wireless processing and AI on the same infrastructure -- that has never been done before -- will enable new economic opportunities for tele coes.

AI networks need to be software-defined. This will enable the same infrastructure to underpin both the telecommunications infrastructure and the AI infrastructure. New features and generations and new standards of wireless -- think of this -- will be software updates rather than the requirement to completely overhaul telecom infrastructure.

And fourth, AI will enable enhanced cyber security for telecom networks. AI is essential for real-time threat detection and automated remediation and incident response, as we have heard.

AI can process massive data streams, can quickly identify and neutralize attacks, whether they are occurring on a device or at the network edge, or in the cloud. This convergence of AI and wireless infrastructure will fundamentally reshape the global telecommunications landscape.

NVIDIA is working closely and actively with partners across industry and academia to provide the tools and platforms and to drive American innovation for this global ecosystem. Just for an example, in the last couple of days, we have been here with other members of the AI WIN Project, which was announced in

just March of this year. Booz Allen Hamilton, Cisco, MITRE, the ORAN Development Company, and T-Mobile were all working together to enable this U.S. leadership. This project will deliver American AI-native full stack software defined and secure wireless platform that will enable that U.S. leadership in 6G.

But ensuring U.S. leadership in next generation wireless networks requires industry and public sector to work together. Congress and the U.S. Government can help ensure this leadership by supporting R&D and continued innovation; by working with U.S. companies together as we set and place our requirements into universal global standards; and enabling and promoting U.S. companies to win at every layer of the AI infrastructure stack.

I am confident that together we can maintain U.S. leadership in AI and regain leadership in wireless communications through the development and global deployment of AI-native wireless telecommunications networks.

Thank you very much for the opportunity to speak to you today, and I look forward to all your questions.

[The prepared statement of Mr. Vasishta follows:]

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Mr. Hudson. Thank you very much.

Mr. Shea, you are recognized for 5 minutes.

STATEMENT OF JIM SHEA

Mr. Shea. Chairman Hudson, Ranking Member Matsui, and members of the subcommittee, thank you for the opportunity to be with you and testify today.

I am Jim Shea, CEO of DeepSig, a small business bringing artificial intelligence software for wireless communications and sensing to market. Today, I will outline how AI is transforming 5G, enabling superior spectrum management, and providing essential capabilities for national defense and everyday applications.

DeepSig, Inc., headquartered in Arlington, Virginia, was founded in 2016 by me and Dr. Tim O'Shea to evolve and bring to market AI wireless technology that Tim developed at Virginia Tech. The company's 48 employees are focused on delivering AI sensing and communications software to meet commercial and defense needs.

Working with partners such as Intel, NVIDIA, and Qualcomm, DeepSig's AI-based OmniPHY software replaces traditional wireless processing algorithms with AI and 5G systems. When you make a call, the signal from your mobile travels to a base station, often reflecting off of multiple buildings and obstacles while competing with interfering signals. Traditional wireless algorithms employ a simplified one-size-fits-all approach to pull signals out of noise.

AI, on the other hand, can learn the local wireless environment by monitoring received signals to rapidly develop AI models that better sort signals from noise and impairments, dramatically improving spectrum efficiency and reducing dropped calls.

This breakthrough extends to 5G massive MIMO technology, flight panel antennas that focus wireless signals at individual users. Traditional massive MIMO algorithms use a library of fixed antenna

beams, but AI can learn the best beam shapes and directions for each user to optimize performance and the user experience.

Taken together, these and other AI technologies are referred to as AI, wireless, native wireless. AI-native is seen as a key enabling capability in 6G as it evolves through the standardization process.

U.S. leadership in AI-native, coupled with Open RAN Access, ORAN, that replaces custom hardware with commodity servers, will dramatically reduce costs and offer a path to compete with Huawei and other concerning network vendors.

AI is enabling rapid sensing of the wireless environment. Traditional sensing approaches are painfully slow and require significant analysis by skilled engineers and weeks or months of effort to develop new code when new signals are encountered.

DeepSig's OmniSIG AI sensing software has been trained to detect, classify, and locate nearly all types of signals ranging from narrow band handheld radios to wide band radars, often up to 1,000 times faster than traditional approaches. Like other AI systems, OmniSIG can learn new signals in a matter of hours after being presented with new signal data.

Exponentially increasing mobile data needs for consumers, industrial and defense applications require more wireless spectrum. Sharing with DOD and other incumbent users is under study but only on a limited basis. The CBRS band shares spectrum with U.S. Navy ship-based radars. However, new proposed bands have incumbent ground and airborne users that move far faster than ocean-based ships. With the integration of AI, rapid detection can inform commercial networks to vacate or steer wireless beams away from the incumbent user.

Another important application involves addressing wireless intrusion and base station spoofing. Persistent and growing threats concern both network owners and the government due to their increasing scale and sophistication. By continuous monitoring the spectrum, AI can detect fake base stations such as those discovered last month in Turkey that were covertly transmitting information about local leader population back to China.

Finally, as we have seen in Ukraine, spectrum sensing and other electronic warfare are capabilities where the U.S. must regain leadership to protect our forces. Adversaries continually change their signals and can only be countered by timely detection. The ability to quickly learn new signals is paramount to ensure our defense systems can quickly respond to threats. Small innovative businesses, such as DeepSig, deliver off-the-shelf AI software, accelerating the likes of Anduril, CACI, Lockheed Martin, and other partners, giving them the ability to respond to rapidly changing threats.

Leadership in AI-native and wireless sensing technologies offers the U.S. a path to reclaim global leadership in mobile wireless technology. A special thank you to this committee for your leadership and helping the NTIA Public Wireless Supply Chain Innovation Fund become a reality. DeepSig has been honored to receive three grants in partnership with Airspan, Qualcomm, and Fujitsu, and is rapidly advancing our AI software into 5G and 6G to take part in the resurgence of U.S. wireless leadership. The convergence of AI wireless represents a transformative moment. The United States has been the innovative ecosystem, talent, and industrial partnerships necessary to lead this transformation. Working together, American industry and government can ensure that the next generation of wireless infrastructure and sensing technology is made in America.

Thank you for providing me the opportunity to testify, and I would be happy to answer any questions that the committee members may have. Thank you.

[The prepared statement of Mr. Shea follows:]

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Mr. Hudson. Thank you. Very well said and on time.

Mr. Ramzanali, you are recognized for 5 minutes for your opening statement.

STATEMENT OF ASAD RAMZANALI

Mr. Ramzanali. Chairman Guthrie and Hudson, Ranking Members Pallone and Matsui, members of the subcommittee, thank you for holding this important hearing and having me back to this room.

My name is Asad Ramzanali, and I am the Director of AI and Tech Policy at the Vanderbilt Policy Accelerator. I previously worked in the tech industry and in government, including for a member of this subcommittee. My testimony reflects my own views and does not represent Vanderbilt or anybody else.

Today I will speak to three things: First, I will share a framework for analyzing the whole picture of AI. Then I will describe how to achieve long-term American leadership in AI. And finally, I will describe this committee's history in enacting guardrails to mitigate real harms from powerful technologies.

To understand AI, many use the framework of a technological stack. My written testimony illustrates one version of that with four layers on how AI is used and developed. It is applications, models, cloud computing, and chips.

Let me go through that. Applications, like chat bots, are what you use. They sit atop models which are large pieces of software that operate in cloud computing data centers that are full of chips, often specialized for AI.

Of interest to this subcommittee, those data centers are connected to high-capacity fiber. This framework helps illustrate that each layer has distinct features and can be analyzed for its distinct policy questions and has known policy solutions.

Second. American leadership in AI is critical to our geopolitical competition with the People's Republic of China. Many interpret this to mean building larger versions of today's AI models. However, just building larger data sets for today's AI models will not yield a lasting national advantage. For long-term

American leadership in AI, we should pursue a strategy based on our historic technological advantages, like public investment in R&D, supporting startups, enabling all Americans to benefit from technology, and mitigating its harms.

I detail these in my written testimony, but I will focus on the latter two for now.

This subcommittee has led the charge to increased broadband access and adoption. Put simply, America can't truly lead in AI if not all Americans can benefit from AI. The bipartisan BEAD and Digital Equity Programs are critical to closing the digital divide, and they should get back on track.

Next, this committee should continue its tradition of encouraging powerful technologies while mitigating real-world harms through bipartisan legislation. During the second industrial revolution, at the end of the 19th century, society faced a different powerful technology. It was that of railroads. Chairman Hudson, you know that Franklin, Virginia, had its beginnings as a rail stop. Ranking Member Matsui, you know that Sacramento was the terminus for the Transcontinental Railroad. Farmers, however, got the short end of the stick for a long time. Railroads charged farmers more for their short-haul shipments than they charged large companies to ship across the country. So States stepped in and they passed laws to ban this kind of price discrimination. These laws didn't stop industrialization or slow the technology. They mitigated a real-world harm.

Based on State laws, Congress later stepped in to enact these kinds of protections nationally. Specifically, your predecessors on this committee passed bipartisan laws, like the Hepburn Act, named for the former chair of this committee, to require fair terms for farmers, price transparency for small businesses, and an end to vertical integration that harms competition. I tell this story to illustrate that State and Federal laws can encourage positive aspects of a powerful technology while mitigating its harms.

Just as they did with railroads, States today are leading the charge to mitigate the harms of AI. For railroads, Congress passed Federal laws commensurate with State protections. On AI, the House passed a 10-year moratorium on State guardrails. This is a different path representing a major policy shift in AI and from how powerful technologies have been regulated in the past. This moratorium would wipe away real

guardrails protecting real people and strip millions of Americans of rights promised to them by their State lawmakers without commensurate Federal protections.

This doesn't mean Congress shouldn't act on AI. As I said earlier, investing in R and D, supporting startups, those are necessary. The bipartisan House framework that

Mr. Obernolte and others have put together has a lot of really good ideas for policy.

This committee should also reinvigorate bipartisan efforts on privacy and to protect kids and work with the administration on advancing BEAD and Digital Equity Programs.

In closing, thank you for inviting me to be here with you today, and I look forward to your questions.

[The prepared statement of Mr. Ramzanali follows:]

******** COMMITTEE INSERT ********

Mr. Hudson. Thank you very much.

We will now begin the questioning, and I will recognize myself for 5 minutes.

Mr. Pickering, while advancement of AI has so much potential to improve efficiencies across many industries, it can also be used maliciously and cause serious damage. While we have seen a few instances of placing measured safeguards on certain uses of AI, we must balance any regulation with enabling innovation.

Can you also give us an example of how Europe has inhibited industry from advancing AI due to their overbearing regulations?

Mr. Pickering. Now, if you look at the European model which has shifted a lot of the AI investment to America and given us a comparative competitive advantage, it doesn't allow -- it is more of a permission-based system versus a risk-based system. And I think America should continue its tradition of light touch, risk-based rules and regulations at a national level on something of a national priority that needs a national framework.

And so if you look at how we have done in the Internet age, setting a national framework that allowed full competition of open Internet that -- whether you are a small business or a large business, you can have equal access to the Internet. The same is going to be true on the AI models. From open sourced to closed and proprietary, if you have a gatekeeper that is going to check whether a new entrant that will be punished the most from a regulatory framework of a European-type model, the large tech companies will be uniquely positioned and the resources to manage the complexity of whether it is 50 States or one regulatory framework that would be modeled after that -- our approach, I think, is the best, which is maximizing competition, not regulating in a way that slows innovation, the investment in the private sector, and letting all models compete against each other as quickly as possible.

And if we do that, we will be successful. And so thank you for the question.

Mr. Hudson. That makes a lot of sense.

Now, so one of our concerns is having a patchwork of State regulations. You mentioned this in your testimony. Are you familiar with Colorado and kind of what is going on with their State regulations?

Mr. Pickering. Yes. And the former member of this committee, Congressman Polis, has raised concerns and objections about what his State law and legislature has done that really could stifle investment in the Colorado economy and investment and what the AI economy means.

So whether it is Colorado -- there have been -- and Congressman Obernolte brought this up in the reconciliation markup -- 1,000 different pieces of legislation across the 50 States introduced. If you go back to this committee's history, it did The Cable Act in 1992, the wireless spectrum auctions in 1993, The Telecommunications Act of 1996, the commercialization of the Internet, privacy, COPA, copyright, privacy, Internet tax moratorium. So every category of the Internet regulatory framework, it was done in this committee. It was done by this leadership on a bipartisan basis.

And that is what we need today if we are going to win the race. We cannot afford the delay and the unpredictability of a patchwork approach when we need -- just like in the Cold War and the nuclear race in World War II, we need a national urgency of getting a framework in place. And again, I go back to Congressman Obernolte and Lieu and the leadership. There is enough bipartisan commitment and consensus on this issue. There is a lot of issues to fight over in the country and in Congress, but on -- AI policy is a place where we can find common ground and a sustainable policy that is of national urgency and imperative.

Mr. Hudson. I agree with you. I think this committee is prepared to work in a bipartisan way to address this.

What advice would you give us, though, to make sure that any regulations we do are reasonable and they don't stifle innovation?

Mr. Pickering. You know, the market of maximum competition has worked in every decade. So if you think through Ronald Reagan's breakup of the AT&T system in 1982, and then you had long-distance competition that replaced copper analog networks with fiber digital networks, then this committee passed

The Cable Act which brought cable and satellite into competition with one another. One was digital, one was analog. The competition made both of them build out the last mile of infrastructure that allowed the Internet to be commercialized and reach every American. The 1996 act, full competition of all networks of everyone competing against each other with interconnected, interoperable networks and devices, works.

So the only recommendation that I would give to this committee is, whatever you do, use maximum competition to achieve your objective. And that is the best way to regulate the market and to give consumer protection, and also to give you the innovation at this table for national security, cyber security, health, education, workforce solutions.

Mr. Hudson. Right. Thank you for that. My time has expired.

I will now recognize the ranking member, Representative Matsui, for 5 minutes for your questions.

Ms. Matsui. Thank you very much, Mr. Chairman.

Our State and local governments are on the front lines of leveraging the benefits of AI while protecting consumers from AI-specific harms and ensuring workforce protections keep pace with rapid technological change. As home to 32 of the world's 50 leading AI companies, California is a national leader in ensuring that innovation and competition thrive alongside commonsense safeguards.

Mr. Ramzanali, how would the 10-year AI State moratorium, as passed by the House Republicans, impact U.S. AI innovation and protections from millions of Americans?

Mr. Ramzanali. Thank you for that question, Madam Ranking Member. And I think your State of California has done great work, as you said, both on encouraging innovation and also mitigating its risks.

The way I like to think about it at the most simple level is responsible innovation shouldn't be afraid of laws that go after responsible practices. The kinds of State laws that have been passed go after deep fakes. They go after scams. There is a lot that require transparency as well. But that is how we know when issues pop up.

So, to me, there is a great way to do responsible innovation while also mitigating harms.

Ms. Matsui. Thank you very much. I always hear about -- I hear about moratorium and I hear about competition and innovation. They don't go together at all, as far as I am concerned. And so those are two sides of it that we have to really deal with, and I am sure that this conversation will take place on this subcommittee.

To lead the world in AI, America needs fast, reliable, and future-proof networks to power AI-driven data centers, networks, and homes.

Mr. Pickering, you mentioned the need to expand fiber networks to reach rural and underserved communities at risk being left behind in the AI economy. Why is this so critical for AI innovation?

Mr. Pickering. So the connectivity to every American gives the greatest opportunity for every American and to every small business, every community. It doesn't matter if it is my home State of Mississippi, which is primarily rural, or your district, which is urban. Connectivity, in today's world, is employment. It is opportunity. It is the greatest way to get both the opportunity that America has to offer, the education, the workforce, the health care. And so being able to have universal access to the fastest, highest capacity networks, it is a national commitment that members of this committee and Congress made coming out of the pandemic.

Ms. Matsui. Absolutely.

Mr. Pickering. We kept all Americans connected during the pandemic, and from that, a commitment to bring broadband to every community --

Ms. Matsui. To every household in America. Right.

Mr. Pickering. And I agree with you. We need to speed BEAD. I agree with Chairman Hudson.

Ms. Matsui. Right.

Mr. Pickering. We need to give clear guidelines, cut the red tape, get shovels in the ground, and --

Ms. Matsui. There are States waiting right now, ready to go.

Mr. Pickering. Yes.

Ms. Matsui. So I think we need to move forward.

I work hard to advance policies that support the development and deployment of open radio access networks, or as we call it "ORAN," including NTIs helping wireless supply chain innovation fund under The CHIPS and Science Act. Open RAN increases supply chain diversity, which has significant economic and national security benefits.

Mr. Vasishta -- right? And Mr. Shea -- how do technologies like Open RAN help us leverage AI technologies for next generation connectivity and maintain U.S. technological leadership?

Mr. Vasishta. Thanks for the question. Maybe I will take it up first.

So, as you quite rightly said, Open RAN was enabling interoperability in a system that was traditionally propriety in a closed system. What Open RAN was able to do, by enabling that interoperability, was enable new players to come into the industry as well as enable some of the interfaces to be more openly developed.

What we need to do now is really kind of accelerate Open RAN and make Open RAN competitive. One of the challenges also around Open RAN was the competitiveness of that compared to the proprietary systems. And so that first step that was made with Open RAN now, with what is called "AI RAN" --

Ms. Matsui. Right.

Mr. Vasishta. -- which is including AI into those open standards as well, and enabling the network to become software defined -- so you are completely writing new features and capabilities in software. You can now open up that ecosystem still further as well as create more competition in that ecosystem, while at the same time, taking advantage of AI to improve the spectral efficiency and operational efficiency.

Ms. Matsui. Okay. Thank you.

And I want to ask Mr. Shea to --

Mr. Shea. ORAN enabled our business in 5G and 6G. You know, when we first started the company, we traveled around to many of the vendors and we had great conversations, but they didn't want to give us any access to their code. With ORAN, working with initially Intel and now NVIDIA, we are

able to actually build operating 5G base stations. In fact, our headquarters in Arlington, Virginia -- we have two operating 5G base stations that are built based upon ORAN and are enabled with our AI technology, something that we couldn't have done previously with closed systems.

Ms. Matsui. Thank you very much. My time has run out. Thank you.

Mr. Hudson. Thank you.

The chair now recognizes chairman of the full committee, Mr. Guthrie, for 5 minutes --

The Chair. Thank you. Thank you. And the ranking member and I have been partners in spectrum, and -- I am over here on this far end -- spectrum and other things, and she just asked the first question I was going to ask. So we think alike. And there is a lot of cooperation on both sides of the aisle in trying to figure out how do we defeat China. All of us want to defeat China to make ensure that we are the platform that the world uses for AI.

So, Mr. Vasishta, we have been focused on -- almost every hearing that we have had has been focused on how do we beat China to AI. It is all subcommittee -- anything that brings all the jurisdictions of the committee together, it is AI. And so the big part is energy. A lot of guys will tell me that -- guys and ladies. I say "guys" generically. But men and women will tell me that in this industry that we have the brain power, we have the capital. We need the energy and we need the regulatory structure where we can succeed.

And so in terms of energy is producing the energy, but it is also being more efficient with energy that we have. If you look at the delta between China's production of energy and ours, it is scary, and we have to catch up. But we also have to get better with the energy that we have.

And so would you talk about, as a leading chip manufacturer in AI software, how NVIDIA is using advancements in chip technology and AI to improve data center efficiency in energy consumption?

Mr. Vasishta. Yeah. Absolutely.

Obviously, that is a very important point when it comes to the deployment of AI, but it is also a very important point in the design of AI.

AI, as we see, is generated from a hardware infrastructure do processing, networking, and many other functions. And as we move down that technology curve, what we are able to do is improve the efficiency and capability of those chips.

At the same time, what we have been able to see in the last few years, by using accelerated compute as opposed to the traditional compute, say, with CPUs only, we are able to achieve much higher energy efficiency. Think of it as performance per watt. Accelerated compute really has given the enablement -- led to the enablement of AI. And energy efficiency is really -- is created by that accelerated compute such that we can achieve the functions we want to achieve in the silicon technologies that we have.

The Chair. So my question -- so that -- thank you. That was my question. But also added to that, if you look at the gap between what China's producing in energy and we are producing in energy, can we make that up in efficiency alone? Or is it going to require us producing more energy?

Mr. Vasishta. I think there is going to be a requirement for more energy. Energy is, you know -- just the massive scale of deployment to be competitive in AI will require more energy even though we are improving energy efficiency of the infrastructure itself every generation also.

The Chair. Well, thank you. Thank you.

I had a question for Mr. Shea, but that was a question that Ms. Matsui asked. So I may get back if you want to follow up because I think you ran out of time.

But let me go to Mr. Pickering first. Can you elaborate on what kind of growth our networks will require to support American innovation in AI, and how soon this infrastructure needed -- how soon in this infrastructure needed so the United States can compete?

Mr. Pickering. Mr. Chairman, so if you think about fiber capacity to the data center, one of my member companies -- their CEO recently said in the next 5 years, fiber capacity to the data center is projected to multiply six times. Now, if any of you all were to go to the Northern Virginia data center hub,

and if you were to realize the abundance of fiber capacity into that data center hub is enormous -- to comprehend six multiples of capacity demand growth is really hard to emphasize how important that is.

And I see Chairman Latta here as well. The same thing is going to happen in our grid, our transmission, our energy supply and generation. And we no longer look at a separation between the energy market, the data center market, and the fiber market. It is converged into one AI infrastructure market. And those inputs, going in and meeting at the data center -- if you look at my home State of Mississippi, which has always been last in economic growth, this year they are second in GDP growth because of huge investments that have been made possible by a fiber route built by Zayo, one of our member companies, that went from Atlanta, Georgia, to Dallas. It passes through Birmingham; Meridian, Mississippi; Jackson, Mississippi; Vicksburg, Monroe. That has become AI alley, with tens of billions of dollars of data center investments, Birmingham, Meridian, Jackson, Vicksburg. It is causing all of our energy production -- grids, transmission -- to see massive growth and upgrades.

The Chair. Thanks. My time -- I know you know the rules here. My time expired --

Mr. Pickering. You got me excited because the growth in the economic development comes with all this new capacity.

The Chair. It is exciting. We are looking forward to working together on that. Thank you.

Mr. Hudson. Thank you, Chairman.

The chair now recognizes Representative Soto for 5 minutes for your questions.

RPTR MOLNAR

EDTR ZAMORA

[11:31 a.m.]

Mr. Soto. Thank you, Mr. Chairman.

We know AI is going to be an increasing part of our daily lives, in our homes, in our offices, small businesses, helping out with medicine and education, entertainment, and we are going to need advanced microchips, a strong internet connectivity, growing workforce, and huge amounts of storage in energy to make this happen.

It was recently announced a $70 million artificial intelligence partnership between UF and NVIDIA. We appreciate that.

At NeoCity in our district in Kissimmee, we are making advanced aerospace microchips and AI capacitor microchips. It has been named an NSF Engine, and Chris Malachowsky is a UF grad and co-founder, so we appreciate that partnership.

Mr. Vasishta, we see huge tariffs being levied, especially today, 50 percent on steel and aluminum. Ten percent across-the-board tariffs still remain in place, as well as higher elevated tariffs for places like Canada and Mexico. How does this affect manufacturing of advanced microchips?

Mr. Vasishta. Firstly, yeah, thank you very much for the acknowledgement of Chris Malachowsky, who is, as you said, a founder of NVIDIA, and very connected to University of Florida.

You know, my real specialty is telecommunications and AI, so I am going to have to defer on the question of tariffs if you don't mind.

Mr. Soto. So you don't use steel or aluminum to help make microchips?

Mr. Vasishta. I am sure they are used, but I don't get to see that on a daily basis.

Mr. Soto. I also want to talk about immigrant labor. You know that your CEO, Jensen Huang, is an immigrant. We see a lot of CEOs are immigrants who come into the country.

How important is it for some of these visas and to allow some of this highly skilled talent to stay, and what effect could deportations and a chilling effect on immigrants who come and want to be U.S. citizens and contribute to the economy for the future of microchip technology?

Mr. Vasishta. Yeah. So NVIDIA, we pride ourselves in being a global company. We have employees around the world, and also we have some amazing talent that has been able to come to the U.S. to really exhibit their talent and grow their talent. And I am actually a recipient of that, being able to come to the U.S. and grow my career, and now at NVIDIA.

So having the right availability of talent where you need it and when you need it, and the enablement of that talent to be trained on the most current technologies and bringing the brightest and best, and leveraging that across the globe I think is absolutely essential for us in the U.S. to grow.

Mr. Soto. So if we allow them pathways to stay, that could help the United States. If we let them go back to other countries, that actually increases the competition, especially if we are talking about nations that don't share our values.

We also see the CHIPS Act under attack, $52 billion for chips manufacturing. You had mentioned also the importance of telecom manufacturing, $1.5 billion to incentivize that.

How key is maintaining the CHIPS Act to helping have enough resources, both public and private, to develop advanced AI microchips?

Mr. Vasishta. Yeah. As I said in my opening remarks, I think the NTIA or public wireless fund that was created is absolutely correct. There is a requirement for public and private partnership when it comes to research. We have some of the best researchers on AI within NVIDIA, and we work constantly with research organizations. And we need -- they also need funding as well to enable them to do their best work.

Mr. Soto. Thank you so much. It has been 135 days since President Trump has taken office; 135 days of delays to the BEAD program, rural broadband, high-speed internet for folks in underserved areas; 135 days of nothing happening, even though 50 States have already approved their plans.

Mr. Ramzanali, what is the cost to places in rural America, like my district in south Osceola and east Orange, and to local agriculture and other small businesses in rural America by this delay to the rural broadband program?

Mr. Ramzanali. I appreciate the question. The cost is the delay, not just of people having access to world-leading tools that we believe should be developed in the U.S., but it is also the cost of the economic value that all of those people could be producing through jobs, through remote learning, through so many other things that the internet enables.

Mr. Soto. Thanks so much. It is time to get this done. And I yield back.

Mr. Hudson. I thank the gentleman.

I now recognize Representative Allen for 5 minutes to ask your questions.

Mr. Allen. Thank you, Chairman Hudson, for holding this important hearing, and I thank the expert witnesses for joining us today.

Mr. Vasishta, could you provide a working definition of AI and its impact in context of this hearing today?

Mr. Vasishta. Yeah. Obviously, everybody talks about AI, and we heard some examples of some of the uses of AI in your opening -- in the committee members' opening remarks. AI is really the ability for computers to predict, to think, to perceive as a human would do, and hence that is the definition of AI.

Mr. Allen. Mr. Pickering and Mr. Vasishta and Mr. Shea, let's talk about natural disasters. My district experienced a significant telecommunications disruption from Hurricane Helene. Took weeks in some areas for phone service to return to normal.

Could artificial intelligence help mitigate these disruptions in the future, and, if so, how? Mr. Pickering?

Mr. Pickering. The answer is yes. The AI applications, whether it is in our fiber, wireless, or any of our networks, is able to both manage and optimize redundancy, resiliency, and to be able to get systems back up and running and identify where issues are much more quickly than in the past.

As I mentioned, being from a State that is both tornado-, flood-, and hurricane-prone, this is a critical issue.

Mr. Allen. Right.

Mr. Pickering. And AI, just like in every sector, I think will give benefits of getting our communications back up, managing our networks more efficiently and effectively. And so I think it is a great application that we can all cite as one of the reasons AI is a good thing.

Mr. Allen. Mr. Vasishta?

Mr. Vasishta. Yeah. So AI has the capability -- and we are starting to develop some of that capability even more at NVIDIA -- to actually have some level of prediction of weather outcomes as well.

So the first stage is, obviously, when you start to enable predictions to happen and be able to proactively react and make decisions based upon those weather predictions and likely outcomes. A lot of work is happening with NVIDIA around that about -- with something that we call the Earth-2 model, and we are working with researchers around the world to make that happen.

And then, of course, there is the observe, orientate, decide, and act aspect of AI, which AI is able to then make those decisions real time autonomously, and then be able to act on those decisions autonomously and in an agentic way. This is really the year of AI agents that can make those kind of actions and decisions autonomously and rapidly, and then, of course, make decisions to be able to react afterwards to put the right logistics in place for a complex supply chain.

Mr. Allen. Mr. Pickering?

Mr. Shea. I have to, you know, go with Mr. Vasishta's comments that with digital twin technology we can predict what coverage we have left over with the resources that are existing after a natural disaster.

And the AI in particular is good, as I mentioned in my talk about pulling signals out of noise and interference. So although you may not get the full capacity, you can at least get some capacity to

everyone, so first responders and people in need will have some coverage no matter where they are in the cells' capabilities with what you have available.

So, yes, it is a great way to recover from a disaster, know where you need to put your resources to go, which cell sites to fix first, how to get the maximum capacity up to serve the people.

Mr. Allen. Right. Yeah, it was critical to our first responders and law enforcement and others in dealing with that disaster.

Mr. Pickering, how can AI be used to enhance efficiency within our communication networks?

Mr. Pickering. We already know and see in our wireless networks the optimization of spectrum, how you can more efficiently dynamically share, use spectrum beam and target spectrum, mitigate interference.

So the maximization and the efficiency that AI brings to our wireless networks can also be used in our fiber networks, it can be used in data centers, and it can be used in low Earth orbit satellite. So every communication system now is going to be embedded with AI efficiency.

The same thing is true in our energy networks in grid --

Mr. Allen. All right.

Mr. Pickering. -- and transmission.

Mr. Allen. Good, good.

Mr. Shea, I have got 20 seconds. How can we use AI to secure our communications infrastructure from malicious actors?

Mr. Shea. Well, with the infrastructure, you can actually locate fake base stations, denial-of-service attacks, and other type of capabilities that people, adversaries, might bring against you. So at the physical layer, it helps you protect it. Then you have your cybersecurity at the back end that can work hand in hand to protect our networks.

Mr. Allen. Good. Thank you, thank you all. I appreciate it.

And I yield back, sir.

Mr. Hudson. I thank the gentleman.

The chair now recognizes Representative Clarke for 5 minutes to ask her questions.

Ms. Clarke. Thank you very much, Mr. Chairman. Let me thank our panel of witnesses for appearing before us today.

Our committee has a long history of working in bipartisan manner on issues of connectivity and protecting consumers. More recently, we have had robust bipartisan conversations about AI regulation, including the opportunities and challenges associated with this emerging technology, which is why I am disappointed to see my Republican colleagues turn their back on our bipartisan work and sell out to Big Tech millionaires who have bought their way into our government.

Last month, Democrats sat in this hearing room for over 24 hours relentlessly combatting the bad provisions included in the big bad ugly reconciliation bill. And in the middle of the night, Republicans voted to approve a 10-year moratorium on State and local enforcement of their own AI laws and provided no Federal safeguards in their place.

So let me be clear. I say this is a giveaway to Big Tech at the expense of Americans' personal freedom, privacy, and safety online. And until my Republican colleagues finally get their act together, after 3 years in the majority, there will be no recourse or guardrails in more than half of the States that have responded quickly to their residents' concerns about the risks posed by AI.

New York City is one of the early movers in this space. Since 2023, we have had an effect on AI bias law designed to regulate the use of AI in employment decisions. This is just one of the hundreds of State and local laws my Republican colleagues would sweep away.

Mr. Ramzanali, can you please speak to some of the real-world harms and unintended consequences of the moratorium, especially those related to bias and discrimination?

Mr. Ramzanali. I appreciate the question. And the New York City law is a good example because the employment discrimination it is going after. Let me tell you the kind of harm that we have seen with AI systems, in resume-screening software in particular. There was a firm that was using resume-screening

software for computer science jobs, and it was screening out women. Now, the company dealt with that, but that is the kind of information that leads to huge problems.

The kinds of laws that are out there are not just the New York City employment discrimination law, but you also have laws that create transparency so that we can know when there is a problem.

Ms. Clarke. Thank you.

Ensuring that we have proper safeguards in place for sophisticated AI systems is only one piece of the puzzle. It is also critically important that consumers understand the abilities and shortcomings of AI systems that are poised to become an increasing part of our everyday lives.

AI is already disrupting the way we live and work, super-charging scammers, and refocusing our coal industries. Now perhaps more than ever before, digital literacy and AI literacy will decide who can participate in our modern economy.

That is why I am concerned with President Trump's misguided efforts to roll back the Digital Equity Act. This statute was a vital investment in making, not only internet access available, but it also educated users on how to use it. We have seen far too often during this administration, we were once again on the finish line of getting $2.75 billion of Digital Equity Act grants out the door, and then the President determined, by way of Truth Social, that this program was woke, racist, and unconstitutional, and directed the Department of Commerce to stop the congressionally authorized and appropriated funding. Apparently, he was triggered by the word "equity."

The truth is, gutting the digital equity program will only hurt vulnerable populations like seniors, veterans, low-income communities, and communities of color who already suffer from the digital divide. It will sacrifice critical AI trainings that would have helped seniors understand online scams, upskill workers, and help more Americans incorporate AI into their everyday lives.

Without these programs, we risk building AI bridges to nowhere, creating a new digital divide in which certain communities can benefit from these new technologies and others slip further behind. This

not only harms the economic health and well-being of our local communities but jeopardizes America's AI competitiveness that my colleagues on the other side of the aisle say they care about.

So I urge my Republican colleagues to join us in calling on President Trump to cease his efforts to destroy the Digital Equity Act programs.

Mr. Chairman, I would like to submit for the record a letter from the National Digital Inclusion Alliance describing the importance of the Digital Equity Act in making sure all consumers can take advantage of AI.

And with that, I thank you and I yield back.

Mrs. Fedorchak. [Presiding.] The chair recognizes -- excuse me.

The chair recognizes Mr. Latta for his 5 minutes of questions.

Mr. Latta. Well, thank you very much, Madam Chair. And to our witnesses, thank you so much for being here.

AI is on all of our minds, as many members have already said. So many questions, so little time.

Mr. Pickering, in your statement, you made very, you know, eye-opening remarks when you said that in 2024, the United States invested 12 times more into AI than the Communist Chinese, but that lead is not guaranteed.

And one of the things I know that we have talked about in the past is about permitting, and we got to get it done. And it is almost like the top, when we were talking about on the communications side and we were talking about on the energy side, and it is all coming together.

But could you talk briefly about, if we don't win this race, what is going to happen, especially if we don't get our permitting done in this committee and in the House?

Mr. Pickering. So as China builds out their infrastructure, both energy and fiber networks and data centers, they are not going to experience the type of permitting delays that the energy, data center, and fiber industry are experiencing.

I want to commend you for your leadership in the reconciliation on having a national framework on permitting for pipelines, that if it is a multi-State pipeline, that there is a means by which you can have a time-certain approach of a year, with an extension of 6 months.

Yesterday I met with Congresswoman Fedorchak about what they do in North Dakota and the accountability, the transparency. Shot clocks, and -- you can have an accountable, transparent process that protects our natural resources and communities, but to act in a timely way.

And so our industry, on both sides of the data center, wants to work on a permitting route reform that gets us, as quickly as possible, to build as fast as possible.

Mr. Latta. Let me ask you real quickly if I can just follow up because, again, if we are looking at if we don't get this done, and as you said, that lead is not guaranteed, how much time do we have left?

Mr. Pickering. It is time to build. It is time to go and -- you know, we have horror stories on fiber networks and railroad crossings and long processes that take, on the energy side, sometimes 10, 15 years; on the fiber side, 18 to 2 months [sic], when we need to be able to have shot clocks of 30, 60 days of getting the permits that we need to build.

Mr. Latta. Well, thank you very much.

Mr. Vasishta, you know, with so many data centers coming online that we are seeing across the country, can current telecom networks handle the amount of traffic that current and also future AI and data centers are going to bring?

Mr. Vasishta. Yeah. So you are right, there is a lot of data centers coming online. A lot of those data centers are actually connected through fiber to each other or to the telecommunications network. The traffic that comes over the telecommunications network, particularly the wireless part of the network, is continuously growing, and that is where we really see the need for AI, because that traffic is as the AI models are trained, and then as the AI models are inferenced and get consumed by the consumers and by enterprises, that traffic is going to grow considerably.

And AI is essential, and that is why the fusion, as I said earlier, of radio access network infrastructure on top of also the AI infrastructure will really help enable that AI traffic to be distributed and consumed.

Mr. Latta. Let me follow up with another question to you because, again, you know, when we were talking about the race to 5G, and now we are in the race to 6G, and I know I had asked, you know, different witnesses that were here, where are we at -- are we winning, are we losing -- and, you know, I always hear that we are doing well, and all of a sudden we are not hearing people saying we are doing that well.

I got a question. What if we don't win that race to 6G -- because also in your testimony you talk about the real threat, the detection, to automated remediation, and incident response, especially looking at some of these cyber attacks coming in. What happens if we don't win that race to 6G?

Mr. Vasishta. Yeah. So I think it is an imperative, but let me answer the question that you have stated. The challenge with this -- the challenge and benefit, the pro and con, of the convergence of AI and 6G standards is that there is really only one other country that is thinking about this, and that is China.

So traditional implementations of radio access network have not required AI. There is some AI infusing, but the ability to really take advantage of AI, I think, leaves us at a significant disadvantage from all different facets, both productivity but also security and overall growth.

So I think -- I hate to answer the question because I hope we never get to that point.

Mr. Latta. Well, we have a lot of work to do in this committee and in this Congress. And, again, I appreciate all the witnesses for being with us today.

And, Madam Chair, I yield back the balance of my time.

Mrs. Fedorchak. The chair recognizes Representative Peters for his 5 minutes of questions.

Mr. Peters. Thank you, Madam Chair.

First of all, I want to say where I think there is agreement here. I really do believe that permit reform is very important and have been working on that. Would love to see some bipartisan action around that.

Also, we had a privacy bill here passed with a single national standard, I think it was 55 to 2. I don't know where that bill is. We should bring that back, and we should pass it, because I believe that in some things, you really have to have a Federal standard. I would say this is one where we also have to have one Federal standard.

We should take the best ideas from New York City, take the best ideas from California, Mississippi, whoever is passing these bills, and we should put them in one Federal standard because it is impractical for us to have, not just 50 different States regulating it, but now localities, counties. I mean, this is nuts. That won't work. I agree.

Let me tell you my problem, Mr. Pickering, since you were in Congress. I heard all this talk about urgency, but the Republicans came up with this notion we should have a 10-year moratorium. What timing does that signal to this Congress is okay for setting a standard? Doesn't it really basically say you got 10 years?

Mr. Pickering. Two precedents to consider. The internet tax moratorium was a 3-year moratorium that was extended twice, and eventually it was made permanent by President Obama who signed a permanent internet tax moratorium. Now, the result of that, as e-commerce emerged, has been at least $5 trillion --

Mr. Peters. Yeah.

Mr. Pickering. -- in economic development because we didn't have, you know, hundreds of tax jurisdictions on e-commerce.

Mr. Peters. Sure. Yeah, yeah, yeah.

Mr. Pickering. The second precedent for the committee to consider was the beginning of spectrum auctions. It was in the Budget Reconciliation Act of 1993, which was President Clinton and Gore, and they included it in because the spectrum auctions would create revenue.

Mr. Peters. Right.

Mr. Pickering. And at the same time, they preempted any State regulation on the rates and on the entry because that would have devalued this new emerging technology.

The moratorium and modernization provision in reconciliation has the same principles and same concepts. We believe an all-of-government modernization of every government service -- from Department of Defense, to Energy, to Medicare, to Medicaid -- will have tremendous savings if they adopt AI uses and applications and technology. But if we have 50 different States regulating --

Mr. Peters. No. Actually --

Mr. Pickering. -- it undermines the basis of this --

Mr. Peters. I am not sure it can be done in reconciliation, and I don't disagree with the theory of it. I just think that 10 years -- in the face of this talk about urgency, we had Eric Schmidt come in here. You could have heard a pin drop when he talked about how important this was.

Ten years is completely out of line. You know, I think if you are talking about a mor- -- that is a ban. That is not a moratorium. A moratorium is 2 years.

Mr. Pickering. You know, to me, whether it is 10 years or something less than 10 years, as long as this Congress has a window of pause to set the Federal framework -- you just mentioned you are close on privacy. We are very close on permitting on the infrastructure.

Mr. Peters. We actually have a bill passed on privacy which we can't get back here to actually --

Mr. Pickering. So the question is, what is the right time to give you the opportunity on this committee to create a national framework on the major questions.

Mr. Peters. Okay. My answer is, this term, which has about a year and a half left. And that is the appropriate time for a moratorium. So I am all for doing all -- accomplishing all the goals, but if there is really a sense of urgency, let's get it done this term, is my answer.

Mr. Pickering. I agree.

Mr. Peters. I had another question for Mr. Ramzanali. Just this concept of normal technology. In your testimony, you stated that AI is a normal technology that needs normal regulation. I wish I understood what you meant by that.

But how can this committee treat AI like normal technology when it is so complex, and what maybe is the priority, you think, for us to attack first?

Mr. Ramzanali. I appreciate the question. So this framework of a normal technology is not meant to say it is not powerful. It is powerful. We should apply it across so many different domains. It is going to have really important impacts in a lot of scientific domains.

The idea is to say this is not the kind of problem where we don't have policy tools from our history that we can apply. So that is the idea, is we can treat it in a way where we can look to historical precedent, we can look to the policy toolkit we have, and apply that.

Mr. Peters. Okay. Well, I am looking forward to this. Mr. Pickering, I am just playing with you because you are a former Member of Congress. It is fun to see witnesses out there.

Mr. Pickering. And I want you to know, I agree, the sooner the better. We have a national --

Mr. Peters. Yeah. I think the thing is that I also want to indicate that this Democratic reason has to be a national standard. This Democratic reason has to be permit reform, but I just laugh at the notion that 10 years is the right timing. And if we are really -- if we really have a sense of urgency about it, this term.

I yield back.

Mrs. Fedorchak. The chair recognizes Mr. Bilirakis for his 5 minutes of questions.

Mr. Bilirakis. Thank you. I appreciate it very much, Madam Chair.

Mr. Shea, you briefly mentioned how technology and AI have been used to combat threats to the Uyghurs by both China and Turkiye. As co-chair of the International Religious Freedom Caucus, I have been a long-time advocate for the Uyghurs, so the importance of this really stuck with me.

Can you talk more about how AI is being used or can be used to prevent human rights abuses, war crimes, and other acts of persecution?

Mr. Shea. I think the thing you can do with proper monitoring, you can make sure that adversaries aren't getting into your network, putting up fake base stations, doing other types of things that they are then using for surveillance. Because, you know, the problem with the fake base station is they grab a call, and then suddenly the information going across there often can be deciphered.

So I think it is important for us to provide the tools, both to our partners and our country, to be able to protect these networks to make sure that it is not being used, you know, for hostile-type intent.

Mr. Bilirakis. Very good. Thank you.

At the same time as this hearing, of course, you know, the E&C is also having the oversight hearing on robocalls. So it is fitting to bring this topic up at this particular time, which is very important to my constituents.

So, again, with regard to robocalls, ever since the TRACE Act was passed, I think the average American became familiar with how AI capabilities have addressed spam calls. So we made some progress. People can now see a likely spam message pop up when an unknown number calls, helping prevent fraud, and that is great progress, it really is, toward protecting vulnerable people from identity theft. But we have to do more.

But actually catching these criminals continues to remain elusive, and prosecutions are rare, unfortunately.

So, Mr. Pickering, how can AI be used, utilized, to actually track down online and by-phone criminals that are preying on our seniors in particular and finally shut them down once and for all? If you could answer that question, I would appreciate it.

Mr. Pickering. Yeah. The great thing about AI is, if you give AI a problem, it will create a greater productive way and solution to attack any problem, whether it is fraud, criminal conduct, or find a good cure for cancer. It will be faster, it will be more productive, and it will be able to bring, you know, all the knowledge of any particular case to be able to solve it and to meet the objectives, whether it is in criminal justice or in national security or in energy or any other sector.

And so the applications and the growth of our large language models and what comes next with the quantifiable language models is really going to be an ever increasing way, whether it is robocalls or fraud, to be able to identify, authenticate, and recognize -- identify bad actors and then give tools to pursue them.

Mr. Bilirakis. Very good. Thank you.

One more question for Mr. Pickering. One of my senior staffers just got back from a trip, a delegation trip to Israel, including the Gaza Strip. One of the items discussed with Israeli leaders was the potential of AI to help identify and address the significant rise in anti-Semitism online. And with recent events in Colorado, it is clearly not only something of importance to Israel but a potential aid to a worldwide problem.

Mr. Pickering, again, can you explain how AI is currently being used by your member companies to identify threats of violence and potentially prevent violence against religious groups and what potential AI has in the near future to continue to address this particular issue?

I know you touched on it, but if you could elaborate, I would appreciate it.

Mr. Pickering. You know, this is a subject I am not as familiar or have not been privy to those types of applications. But I am confident if --

Mr. Bilirakis. In general, yes.

Mr. Pickering. In general, if there is an ability to, whether it is a prediction of a natural disaster or a cybersecurity or a potential crime, I think AI can be a resource and a tool for law enforcement, for national security, or for Homeland, to be able to better predict or identify, and then hopefully prevent disasters or attacks on the U.S.

So we have to have -- again, this is why -- I think a Federal framework in each category of the major questions so that we could use the full resources of the modernization of government services that include national security, cybersecurity, and homeland security.

Mr. Bilirakis. Thank you. I yield back. Thank you.

Mrs. Fedorchak. The chair recognizes Mrs. Dingell for her 5 minutes of questions.

Mrs. Dingell. Thank you, Madam Chair.

Artificial intelligence is transforming nearly every aspect of our lives, which we all know, with great potential benefits and serious risks. As AI becomes more powerful and more deeply embedded in our economy, we have got to take comprehensive action to assure this technology strengthens ourselves, our health, safety, economy, and national security so we can reap its benefits. But we also know that it has got serious potential harms. So, I mean, just some examples is AI-driven robocalls, deepfakes, and deceptive advertising. And we have to be mindful of how much AI would widen existing digital divides.

But I want to be positive too. There are real opportunities. When paired with next-generation connectivity like 5G and 6G, AI can revolutionize healthcare, improve customer service, and help power the future of the automotive industry, boosting innovation, creating jobs, and improving lives across the country.

But in the few minutes I have, I want to stay focused on robocalls. I think there is a growing threat of robocalls and robotexts, many of which are increasingly powered by AI and disproportionately target vulnerable populations. In 2024 alone, Americans received over 52 billion robocalls, nearly 200 calls per adult. Nearly half were scams or unwanted telemarketing calls. They are not just annoying; they are dangerous for a lot of people.

Consumers reported losing a record $12.5 billion to fraud, with $2.95 billion lost to imposter scams where bad actors used AI and deepfake tools to convincingly mimic trusted voices and identities.

Additionally, robotexts and phishing emails are tricking people into clicking malicious links or sharing sensitive financial information. Scams pretending to be from Medicare, law enforcement, bank accounts, or even family members in distress. We used to get the old one, I am, you know, stranded. Now they are mimicking these voices of family members. They are using cloned voices to build trust. They are getting more and more sophisticated.

And as AI voice cloning, spoofing, and deepfake tools become more accessible, threats continue to evolve, and Congress, the Federal Government, and regulators have to keep pace.

Mr. Ramzanali, can you speak to how bad actors are using artificial intelligence to exploit seniors, people with disabilities, other at-risk groups.

Mr. Ramzanali. I appreciate that question. And you are right, this is a pernicious problem. It is not just annoying. People are getting scammed in dangerous ways.

The robocall problem is accelerated by AI in a number of ways. Generative AI is being used to generate scripts that can be compelling for particular audiences. It is being used to build impersonation of specific people that a person might know, and it is being used to read that script on a call to try to scam somebody out of their money. That is a problem with the technology.

In my view, regulating a problem like that doesn't hurt national security. And so this is the kind of regulation where we can reduce real-world harms and not hurt our leadership in the world.

Mrs. Dingell. I want to build on that. Earlier this year, the FCC Chairman emphasized that cracking down on illegal robocalls remains a top priority. The Commission has committed to expanding the use of Do Not Originate lists and strengthening call blocking tools, both of which are essential to protecting consumers. Though I would say to you, I am on the Do Not Originate list, and I get 20 calls a day. So I am trying to figure out and get that figured out.

But we must ensure all providers are fully implementing these tools. Last month, the Commission adopted new rules that required caller ID authentication on non-IP networks, helping ensure uniform robocall mitigation across platforms.

Mr. Ramzanali, how can artificial intelligence and machine learning be leveraged not only to detect but proactively block or trace -- trace -- illegal robocalls and robotexts? How can AI be part of the solution?

Mr. Ramzanali. I appreciate that question. The FCC had a proceeding last year to ask that exact question and has some answers. But I would say, where you went, where you are on the Do Not Call list, I am too. We both get calls all the time. That is not acceptable. We can't be at a place where we accept that. We wouldn't accept that with bank fraud. We wouldn't accept that with our spam emails. So I do think it is worth continuing to push the FCC.

The other hearing that is happening on robocalls, the Consumer Federation of America has a lot of good ideas on what else can be done. I urge the committee to consider those.

Mrs. Dingell. Thank you.

I had questions for you, Mr. Pickering, but I am out of time. So I will yield back and submit them for the record.

Mrs. Fedorchak. The chair recognizes Mr. Obernolte for his 5 minutes of questions.

Mr. Obernolte. Well, thank you very much, Madam Chair.

Mr. Pickering, we have heard in your opening remarks about your support for the moratorium on the enforcement of State regulation of AI. And you have heard in the opening statements of several members here and then in some of the subsequent questions, answering, some assertions about the moratorium. So I wanted to ask you specifically about a few of them.

One of the assertions that we have heard is that the moratorium should be stripped out under the Byrd Rule because it is policy and isn't related to fiscal matters.

Now, as you know, the reason the moratorium was included is because we are making a $500 million investment in procuring AI to make Federal Government more efficient and effective, and it is nonsensical to make that enormous investment if all these Federal agencies are going to have to navigate this morass of 50 different State regulations.

Would you agree with the assertion that has been made that this should be stripped out under the Byrd Rule or would you disagree?

Mr. Pickering. I would disagree. And, again, going back to other precedent, 1993, Bill Clinton and Al Gore started spectrum auctions with a Democrat majority, both the House and the Senate, on a partisan vote. And it was in budget reconciliation, so that you would have all the value created by spectrum auctions. You would also create a competitive industry, and you would preempt States from regulating wireless entry and rates, so that you would get the maximum value.

I think that is one of the best parallel precedents to the AI moratorium so that we can maximize all of the savings and all of the efficiencies across government, if we were to adopt AI technologies. We think -- you know, just in the Department of Defense alone, we have an example of one of our companies, Granite, that does telecommunications services, replacing the old network and communications with new AI-generated options and services. And they believe just in one branch that they can save $100 million a year on changing that type of technology from obsolete, antiquated to new.

And if you do that across the board in every department, every agency -- you know, last night you were at the AI award dinner. The vice admiral that heads or is the director of the U.S. Geospatial Intelligence Agency has probably created more wealth in our country in the private sector with taking the geospatial and putting it in all of our devices that we now know as Google Maps, or Apple Maps, or precision farming, or transportation and distribution.

We think that the AI adoption governmentwide will have tremendous savings and also help us grow our economy once the government products and solutions also go into the commercial markets.

Mr. Obernolte. Well, thanks. It is helpful to point out that this has precedent. It has been done this way before.

Mr. Pickering. Yes.

Mr. Obernolte. Another assertion that was made by several of my colleagues in their opening statements is that the moratorium would prevent States from enforcing laws that protect consumer safety and prevent deceptive business practices. Would you agree with that assertion?

Mr. Pickering. I would disagree. The general application of law, whether it is civil rights, consumer protection, consumer fraud, criminal conduct, the language that is in the modernization and moratorium and the reconciliation does not disrupt any of the enforcement of those laws.

Mr. Obernolte. Right. Yeah. There is specific language in that bill that says that, as long as something isn't narrowly targeted on AI, it can be enforced.

Mr. Pickering. That is correct.

Mr. Obernolte. All right. Last assertion that has been made is that this is a giveaway to Big Tech. Is that something you would agree with or disagree with?

Mr. Pickering. As an advocate for competitors for 40 years, for the new entrants, the new technology, the upstarts, the innovators, the entrepreneurs, it is the exact opposite.

If you are a small startup, you cannot afford the patchwork of 50 States, the complexity of it, to create a model that you hope to deploy in 50 States and nationally and globally if you have to go through the hoops of every different State's regulation. It is the small startup that suffers the most under that system versus having one predictable national framework that then helps the new start and the competitor enter without a regulatory burden and cost that the big companies can afford and manage and have the resources in every State and here in Washington to manage. It is the small and the new entrant that does not.

Mr. Obernolte. Right. So this favors entrepreneurs and actually is anti-Big Tech because it encourages competition.

Mr. Pickering. And, you know, one of our --

Mr. Obernolte. I am sorry. I don't want to let you go over here. I am --

Mr. Pickering. Sure, sure. Well, okay, thank you.

Mr. Obernolte. I see we are out of time, but I thank you very much for your time.

Mr. Pickering. Thank you very much.

Mr. Obernolte. I yield back.

Mrs. Fedorchak. The chair recognizes Ms. Barragan for her 5 minutes of questions.

Ms. Barragan. Thank you, Madam Chair.

I would like to focus on AI's role in the real world, life-or-death situations. Nearly 68 million Americans speak a language other than English at home. That is 1 in 5 Americans. In addition to immigrant communities, millions of tourists contribute to our economy and their safety matters too. For all these

people, receiving emergency alerts or calling 911 in their own language can mean the difference between life and death.

AI can help bridge those gaps, translating weather alerts or 911 calls in real time. But if we are not careful, errors and delays in translation could cost lives. States need the power to enforce rules, and Congress must ensure these systems are safe, effective, and fair.

Mr. Ramzanali, in your testimony, you highlighted AI's potential for real-time language translation during 911 calls. How can AI and Next Generation 911 work together to better serve our diverse communities and save lives?

Mr. Ramzanali. Thank you for highlighting the community that has that need, and let me describe the problem. When someone calls into 911 -- someone who doesn't speak English -- there are translation services available. It just takes the operator time to even know what language is being spoken.

That time is critical life-and-death time. That is where technology can be helpful. Now, this is not at the like let's deploy it out to a hundred percent of the 911 operators today, but it has promise. I will also point out that the transparency requirements that a lot of States have, that is the kind of transparency requirements you want going hand in hand with deploying a technology in this kind of a situation.

Ms. Barragan. Well, thank you. That is one of the reasons I am disappointed that my Republican colleagues have abandoned a plan to fund NextGen 911, money that could have ensured that everyone, regardless of language they speak, could get help in an emergency. Instead, they gave billionaires yet another tax break, putting lives at risk.

Mr. Ramzanali, could you describe how AI translation technology has already been used to deliver life-saving information to millions of Americans who speak a language other than English?

Mr. Ramzanali. As I described, it is starting to be used in 911 systems today. Some of the vendors are rolling it out. It is not yet at mass scale, but it is something where we are seeing that happen and -- in fact, I heard from one of the government officials who works on NG911 this week that it can save up to 6

minutes in the delay between having access to 911 response in the language that somebody needs and not having that for 6 minutes.

Ms. Barragan. Wow, that is a lot of time when it comes to an emergency and response.

I would like to share another example. In 2023, the National Weather Service partnered with an AI translation firm to train a language model in weather terminology. Thanks to that collaboration, forecasters reduced the time to translate hurricane forecasts from an hour to less than 10 minutes, potentially saving countless lives.

When the Trump administration let that contract collapse in April of this year, they created a dangerous gap in information for millions of Americans. Even when helpful AI systems are in place, Republicans find ways to undermine them.

Despite impressive advances, I am concerned about letting the fast growing AI industry go unchecked, especially in critical areas like emergency communications. If House Republicans' reconciliation bill becomes law, States will lose the ability to enforce new AI regulations for 10 years.

Mr. Ramzanali, what are the risks of underregulating AI technology in emergency communications, and how might that endanger lives?

Mr. Ramzanali. I think you made the point well of when these systems aren't tested well, when they are deployed too quickly, that can endanger lives.

I also want to go back to your point on the weather data. The National Weather Service is part of NOAA, which is in the Commerce Department. Part of what these AI systems that can do weather, part of what they are trained on is data that NOAA produces. Think about buoys in the ocean that know when a tsunami is coming, because we too are a Pacific country, that data is managed by employees of NOAA. So when the science agencies hit a cut, that is the kind of work that I get worried about.

Ms. Barragan. Great. Thank you.

With that, I yield back.

Mrs. Fedorchak. The chair recognizes Mr. Carter for 5 minutes of questions.

Mr. Carter of Georgia. Thank you, Madam Chair, and thank each of you for being here.

You know, AI is fascinating, but it is also daunting, particularly for those of us who don't consider ourselves experts in this area. But just about every profession -- I am a pharmacist, and it is going to impact my profession. It is going to impact almost everything that we can think of. But it is daunting and it is -- we know that the advantages are immeasurable, but then again, we have got to be careful.

We know that it is going to help us in detecting cyber threats, increasing network reliability and spectrum efficiency, or combatting robocalls -- we all want that. So the benefits speak for themselves, but the innovation has got to be balanced. It is got to be balanced with responsibility. And I am very, very concerned -- I think we all are -- about that.

I am particularly curious about how AI can help us modify and improve and deploy broadband, especially in rural areas. I have the honor and privilege of representing the entire coast of Georgia, but I have a lot of rural south Georgia as well. In Georgia we say there is two Georgias. There is Atlanta and everywhere else. Well, I represent everywhere else, and there is a lot of rural area in south Georgia.

Mr. Pickering, how can Federal policy promote equitable access to AI-powered tools and services, particularly in rural and underserved areas?

Mr. Pickering. Well, one thing that this committee has spoken earlier this year to address is how the BEAD funds need to go out as quickly as possible, the speed to BEAD, and to be able to cut the red tape so that the deployment of broadband networks to rural parts of the country, like your district, can proceed as quickly as possible with as little regulatory red tape as possible.

AI can help us on the permitting side, both for the local mayor, city council, to be able to have the resources through AI to solve permitting issues, to make it faster so that you can build faster.

As many of the panelists have talked about, wireless coverage in rural areas can be improved by AI and the spectrum management and how our networks operate and interoperate. So for rural America, AI on our networks, on our broadband deployments -- I will give you one last example.

We have a company that is building in the Midwest, and they are able, through an AI software application, to know when a contractor is completing a fiber deployment by the square foot. And they can pay them in real time. And so the incentive is to build faster, because as soon as they build, they can get paid. And so that is just one example.

Mr. Carter of Georgia. That is a nice incentive. For someone who was in business for 32 years, I can assure you that is a nice incentive.

Another component of AI that I think is critical for our race is from 5G to 6G and the technology there. I believe that we are in another arms race with our adversary, such as China, and we need to be first in the world to reach 6G.

The Salt Typhoon -- all of you remember that -- last year. It was a Chinese-sponsored infiltration of nine major American telecommunications companies' networks and systems.

Mr. Shea, what lessons did the industry learn from the Salt Typhoon cyber attack? Did we learn anything? I mean --

Mr. Shea. I am not really qualified on cybersecurity to comment. I just know that, you know, it was a substantial penetration, and there certainly is a lot of concern in the industry.

Mr. Carter of Georgia. Anyone on the panel want to take a stab at that?

Good. I win. I baffled the -- I did it. I have been wanting to do that for 11 years, so thank you all.

What do you think is the role, Mr. Shea, of AI in improving spectral efficiency and resilience in national critical infrastructure?

Mr. Shea. Well, we think -- you know, as I mentioned in my testimony, we are trying to share bands with incumbent users that are very mobile. And prior attempts were very slow. They took maybe minutes to make a spectrum change.

I think with AI, you can, in a matter of milliseconds, understand what is happening in the spectrum and have the people that are using the band that are not the incumbent user make accommodation for the user. So I think it is opening a whole new world for spectrum sharing.

Mr. Carter of Georgia. Great. Again, I want to thank all of you for being here, and I want to remind you, for many of us -- for most of us, I would go as far as to say -- this is fascinating, but it is also daunting, and it is also, quite honestly, scary. So bear with us.

Thank you, and I yield back.

Mrs. Fedorchak. The chair recognizes Mr. Menendez for 5 minutes of questions.

Mr. Menendez. Thank you.

Madam Chair, I am deeply concerned that we are sitting here while our colleagues across the aisle push for deregulation of AI at the same time that the Trump administration is weaponizing AI to make Americans less safe.

Let me explain. People across the country are and should be concerned by recent reports that the Trump administration is using Palantir's AI technology to consolidate Americans' most sensitive data from across Federal agencies into one centralized database. This data could include Americans' medical history, disability status, bank account numbers, immigration status, and even real-time geolocation information.

Make no mistake, the Trump administration is taking this unprecedented step to create a surveillance apparatus and is doing so with zero oversight from congressional Republicans.

While I am in favor of making government more efficient, we have known for years that synthesizing this much sensitive information into one centralized database is ripe for abuse and makes us all vulnerable to cyber attacks.

Mr. Chairman, I ask unanimous consent to enter this article from The New York Times about the Trump administration using AI to merge government data into the record.

Mrs. Fedorchak. Without objection.

[The information follows:]

******** COMMITTEE INSERT ********

Mr. Menendez. Mr. Ramzanali, you highlight in your testimony that AI has been used in troubling ways, specifically as it relates to surveillance. In a few words, how could the Trump administration's use -- how could the Trump administration use Palantir's AI technology in a centralized database of Americans' most sensitive information to monitor and track our constituents?

Mr. Ramzanali. Citizens give a lot of government to their data, and they have to. That is part of the social contract we have. For the services you need to be able to do that.

In the 1970s when the Privacy Act was passed, the fear of a combined database that is going on right now, that was the exact fear for the reason that the 1974 Privacy Act was created, because they didn't think -- at that time, Congress thought that we should be afraid of a government that knows everything about its citizens.

Mr. Menendez. And think about how much more, right, data we are providing to the Federal Government to make government work for our constituents, right? And they should have confidence that in doing so, that information that they provide, some of the most sensitive information, will not be weaponized or used against them. Is that correct?

Mr. Ramzanali. That is right. When -- we want people to have trust that when they are providing information it should be truthful. We want people to give the IRS truthful information without fear that it will be abused somewhere else.

Mr. Menendez. Correct. And as AI tools become more advanced, is there a need for high-end consumer protections for the government's collection of sensitive data?

Mr. Ramzanali. Absolutely, yes.

Mr. Menendez. And can you expand on that?

Mr. Ramzanali. There is a lot of -- since the 1970s, not only has the technology changed, our thinking on privacy has also changed. There are new principles, like data minimization principles, that the Privacy Act has some of those, but we can go much further and not just collection, but we should minimize what we retain and what we process and how we link those databases.

Mr. Menendez. Great. The last piece of major Federal privacy legislation was passed in 1998. That is almost 30 years ago, before many of the major social media platforms were even launched. Even so, my GOP colleagues continue to sit here and repeatedly call for Congress to avoid any guardrails on the use of AI at both the Federal and State level. In fact, their reconciliation package that passed the House just 2 weeks ago include a decade-long moratorium on any State law that addresses AI.

Just yes or no, are commonsense AI guardrails critical for protecting Americans' data from being weaponized?

Mr. Ramzanali. Yes.

Mr. Menendez. And would the Republicans' moratorium of State AI legislation wipe away the current guardrails that protect Americans from their data being misused and weaponized?

Mr. Ramzanali. Yes.

Mr. Menendez. So while the Trump administration is using AI to collect and exploit Americans' sensitive data, House Republicans are rolling back AI regulations and preventing States from filling in the existing regulation gap with their own policies to -- with their own policies to protect our constituents. This will leave the American people without any protections as the Trump administration uses AI to act recklessly with their data, and we will miss a short window to pass meaningful legislation at both the State and Federal level.

The bottom line is that the Trump administration cannot continue to misuse sensitive data with impunity. Congress must act to implement commonsense guardrails on the government's use of AI technology.

Quickly, with respect to the consolidation of Americans' information across Federal agencies, it is not something that we have seen before, it is unprecedented, and does it make us more or less cyber secure as a country?

Mr. Ramzanali. Less. It makes us way more vulnerable.

Mr. Menendez. And if you were China or Russia or North Korea, right, and you knew that the Federal Government was consolidating our sensitive data into one database, would that not be your prime target to attack and hack?

Mr. Ramzanali. I would be shocked if it is not already their prime target.

Mr. Menendez. I agree. Thank you so much.

Mrs. Fedorchak. The chair recognizes Mr. Dunn for 5 minutes of questions.

Mr. Dunn. Thank you, Madam Chair.

This committee has vast jurisdiction over technologies, AI being no exception. And along with this committee, I also serve on Speaker Johnson's AI Task Force led by my friend, Mr. Obernolte, from California.

We focused on AI regulations, regulations on AI labeling, watermarking standards, harmful risks such as deepfakes, fraud prevention, cybersecurity protocols, et cetera. We need America to be at the forefront of the technology, not China.

President Trump also made important decisions around this, including his executive orders to remove barriers to American leadership in AI and advance AI education for American use. Congressional action is necessary to support these efforts and protect Americans from serious risks but also to support innovation.

Startups and small businesses are already benefiting from AI. And specifically with telecom, prioritizing advancement of the American global competitiveness in 5G and 6G growth is really on the top of everybody's mind.

So I would like to take everything into account on that. A current example is finding and acquiring the resources to build new data centers.

Representative Pickering, I want to pivot for a moment to the realities my district faces, which, due to natural disasters that affect the Florida panhandle, we rely heavily on emergency preparedness and response. And as technology advances, emergency alerts and updates to telecommunications networks

are a welcome advancement, and I support the FirstNet emergency telecom network in my district. FirstNet is up for reauthorization in 2027, and these emergency networks are crucial for us.

So given INCOMPAS' proven success in a wide range of communication networks and backup infrastructure, how do you see AI being used for public safety, and how do we protect emergency networks and systems from, you know, people in China?

RPTR KRAMER

EDTR ROSEN

[12:31 p.m.]

Mr. Pickering. It is a great question. And this is where ORAN and AI can really help on the public safety front and in predicting a natural disaster and the response to it. One of the great problems in any disaster is the communication of local public safety with Federal public safety, whether it is FEMA or Homeland Security. And by using AI to create better interoperability of the networks and the communications, the response and the recovery and the prediction of any natural disaster, I think, through AI, will be improved. And I would welcome any other comment from the panel, that this is really where we can strengthen first net with AI applications and the networks that are coming through the AI movement.

Mr. Dunn. Thank you for that.

Mr. Shea, you spoke about U.S. leadership in AI and DeepSig's tech, like your AI-native wireless capabilities, coupled with Open RAN networks will reduce costs to replace custom hardware and allow us to better compete with China and whatnot, specifically Huawei. Can you elaborate on your company's vision, how you see that entrepreneurship leading to the conversations, but also the actions of the companies in creating new technologies?

Mr. Shea. As I mentioned before, ORAN is just enabling this by disaggregating the network into, you know, components that can be built with individual commodity to base servers. So what it is letting companies like DeepSig do is participate with other companies to come up with very cost-competitive technology. You know, when you buy a server, you have many, many options. And so by getting away from custom hardware, you can go commodity on the actual hardware components of it.

And now, the actual radio units are what is left. And through the NTIA program, there has been a great effort to reduce the cost and simplify these radio units so they can also be part of the cost reduction.

So we think this is going to really help drive competition, which will ultimately drive down costs.

Mr. Dunn. Thank you very much.

In the few seconds left to us, Mr. Vasishta, can we utilize spectrum bands for wireless advancement? I mean, I think that is important. I know we are not in a classified setting, but to the extent that you can, will you share your thoughts on how our military can diversify spectrum usage to remain, you know, innovative and stay hidden?

Mr. Vasishta. Yeah. This is where, actually, the ability for AI to do dynamic spectrum allocation, dynamic spectrum sharing with 4G and 5G, and sensing of the spectrum can be really beneficial because many of those applications can be very beneficial for military applications as well as, you mentioned earlier, public safety.

So bringing AI and the spectrum together as well as, of course, additional spectrum that can be made available for the 6G domain, I think is one of the real benefits of AI.

Mr. Dunn. Well, thank you for mentioning dynamic sharing. That is what I wanted to get from you. I appreciate that.

I yield back.

Mrs. Fedorchak. The chair recognizes Ms. McClellan for 5 minutes.

Ms. McClellan. Thank you, Madam Chair.

This is probably one of the most important hearings that we are going to have all year. And I want to put this in a little bit of context about why I am so excited about it and to hear from you.

So I graduated law school in 1997, and rather than practicing toxic tort litigation, like I thought I was going to, I began working for an incumbent local exchange company implementing The Telecom Act and spent 25 years in that industry. And I saw the transition from the princess phone plugged into the wall, to this, to telephones in people's sunglasses, and how rapidly that transition changed as we got farther and farther away from 1997.

And at my last legal conference in that job, I heard some statistics -- this was in 2018. I heard some statistics about AI and the ability of AI to create fake news being on pace to outpace its ability to detect it.

And we talked about -- then, we were in the fourth industrial revolution. And we talked about how with each industrial revolution, just as it brought extraordinary advancements, they brought extraordinary challenges. I don't know if we are on the way to the fifth industrial revolution with the transition from 5G to 6G and how fast AI is evolving. But I think we are woefully behind getting ahead of the challenges.

Yesterday I was speaking to a group, and they asked me, specifically about AI, What is Congress not talking about that it should? And, What are industry leaders not talking about that they should? And lo and behold, there is an article in Axios on May 28th called "AI jobs danger, sleepwalking into a white-collar bloodbath," where Dario Amodei said that AI could wipe out half of all entry-level white-collar jobs and spike unemployment to 10 to 20 percent in the next 1 to 5 years.

Madam Chair, I would ask unanimous consent to introduce this article into the record so I can get straight to my questions about it.

Mrs. Fedorchak. Without objection.

[The information follows:]

******** COMMITTEE INSERT ********

Ms. McClellan. I am actually shocked we haven't heard any questions yet about workforce. But for all of the witnesses, how can industry and Congress work together to manage this workforce transition that is coming? It came in every industrial revolution. But the difference is here it is going to happen so fast that I don't know if we are going to have time to retrain workers. I don't know if there will be jobs to retrain them to. And I don't know if we can adjust school curriculum fast enough to teach today's students what they need when they graduate to succeed in this new world.

So what should we be thinking about to address that issue?

Mr. Pickering. One recommendation that I would have is in the BEAD Program, there is both deployment and nondeployment. Louisiana, which -- Republican State, on the forefront, they are using about 60 percent of their funding to deploy and connect every Louisianian and about 40 percent in workforce training.

So if you think about AI -- basically, what our AI networks that will take the AI applications and content over the broadband networks that we are building and the infrastructure that we are building, but you have to complement it with workforce. So Mignon Clyburn and I work together with INCOMPAS and the AI competition center, and one of our key pillars is AI workforce. And everybody at this table -- NVIDIA is extremely engaged in AI workforce training. Microsoft, Google, Amazon. The companies that are building the AI models realize that if we don't start from K through 12, community college and university and adult retraining and workforce, this huge transformation and the benefits could be jeopardized for the good that it could do. But we need to train now and use some of the BEAD money in flexibility for both deployment and training.

Mr. Vasishta. Maybe I will just quickly follow on from that.

AI gives tremendous opportunity for distribution training; the ability to provide individual students one-on-one tutoring rather than sitting in a classroom and listening to one teacher, trained at the same pace, for instance.

But that also requires communications network as well. And the ability to provide that connectivity to every person where they need it and every student when they need it, I think, enables us to train quickly. As mentioned before by Mr. Pickering, NVIDIA is very much engaged with many IS leads, meaning independent software vendors, developing those types of applications such that they can be delivered over the network.

And then, of course, as I said earlier, the ability to provide a very competitive U.S. telecommunications infrastructure provider will also bring many jobs into the U.S.

Ms. McClellan. Thank you, Madam Chair. I hope the other two will send me their responses for the record. And I yield back.

Mrs. Fedorchak. The chair recognizes Mr. Joyce for 5 minutes.

Mr. Joyce. Thank you, Chair and Ranking Member, for holding today's hearing. Thank you to the witnesses who have agreed to come here and testify.

My district in Pennsylvania, and throughout the Commonwealth of Pennsylvania, is on its way to becoming one of the epicenters of data centers throughout America. The energy resources that sit beneath the feet of my constituents is what makes these centers viable. While AI has the potential to continue to be developed, without the significant energy capabilities and the technology will ultimately become ineffective. This demand for massive energy capabilities fundamentally goes hand in hand with the need for fiber deployment.

Fiber provides the backhaul that is needed for data centers. But without the right permitting laws in place, we will be incapable of speedy deployment. If we continue to inhibit the growth and the deployment of fiber with obstacle after obstacle, then we are at risk of losing the AI race to China. You have all stated that and acknowledged that here this morning.

This is particularly true when it comes to deploying fiber under, across, and around railroad tracks. The continual delays, unreasonable permitting, the back-and-forth between providers and rail are causing

massive problems for my constituents whose homes reside near these tracks and rely on providers to deploy to their homes.

Mr. Vasishta, how are you developing and innovating your technology to address the growing demands of AI? Do you concur that fiber is the necessary backbone of this system? And what type of technology do you see becoming critical in the future to network security as the demand for AI continues to develop?

Mr. Vasishta. So, yes. We do agree that the backhauling of data centers is very important, and fiber plays a critical role in enabling that to happen.

If you think about the compute density of -- the density of compute required for AI, it can be at the chip level. It can be at the data center level. It can be at the campus level or multiple data centers. And the connectivity of all those points within a data center or data center relies often upon fiber networks.

One of the things that we are continuously doing is innovating in that ability to provide low power but also optical connections and fiber connections to enable that to happen.

Mr. Joyce. Mr. Pickering, INCOMPAS has been a great support of my legislation that is focused on streamlining the railroad permitting process. The intersection of fiber deployment and railroad tracks is just one of the many obstacles that providers, such as your members, face.

I am the grandson of Pennsylvania railroad workers. I know how important the rail was for connecting East to West throughout America. I know that Polish and Irish and German immigrants built that connectivities. And I feel the rail industry is no longer responsive to understanding the connections to occur via rail, but they need to connect with the ability for fiber to go between, under, and around those rail crossings.

How are these permitting relays delaying and giving that advantage to China when rail is not cooperative in United States?

Mr. Pickering. Thank you. And thank you for your leadership on this issue.

Whether it is our companies who are building long route fiber routes or fiber to the home and fiber to the community, when they get to the railroad track, there is a regulatory gap. It is one of the few places that, from a permitting right-of-way perspective, there is no regulatory oversight. So the FCC does not have oversight of rail crossings, and the Federal Rail Administration has no regulatory oversight. And as a result, there is no incentive for the rail industry to work with another network industry, the broadband fiber industry, to give them fair access, timely access, and an actual cost to cross their railroad.

And as a result, we have story after story of up to 18 months of delays of being able to build. And if you are a fiber company with capital that is just waiting and losing your money and your time to build to the other side of the tracks to close the digital divide, then you are not going to build there. Or you are going to avoid or -- just cost all the community the lost time and opportunity for a broadband connection.

The other thing. Sometimes we hear exorbitant fees of up to $40,000 of crossing, making deployments uneconomic to be able to build and deploy. So this is a major problem. And your legislation is a very important progress that I hope that we can make in this Congress and in permitting reform ahead.

Mr. Joyce. The connectivity that rail allowed America to achieve a century ago needs to continue today with the deployment of fiber. And the ability of rail to cooperate with this development, unfortunately, now needs to be legislated. I look forward to doing that.

I thank all of the witnesses for being present today. And I yield back the balance of my time. Thank you.

Mrs. Fedorchak. The chair recognizes Ms. Castor for 5 minutes.

Ms. Castor. Well, thank you, Madam Chair, and thank you to the witnesses for being here. I am excited about the potential for AI, all of the advancements and efficiencies in communications networks and in our lives. And thank you for pressing this committee on our responsibility to adopt a national framework.

The problem is that my GOP colleagues have abdicated that responsibility. And what they did in sneaking in this 10-year AI immunity moratorium takes us off track, takes us away from the debate we

should be having on that actual framework, and instead, we are going to have to fight over this big gift to big tech contained in the billionaire tax giveaway. It is really unfortunate.

And let me say to all of the State and local leaders out there, I really do appreciate everything that you have done while Congress has been absent, while Congress has abdicated its responsibility in this area. And I want to make sure that we know this is a bipartisan issue across the country. The National Association of Attorneys General, 40 of them have written to us that the impact of such a broad moratorium would be sweeping and wholly destructive of reasonable State efforts to prevent known harms associated with AI. They had previously recommended that the Congress act on a framework, especially addressing high-risk areas. But rather than follow the recommendation, instead, this immunity for big tech and AI, again, takes us off track.

So let me try to get us on track on some of these provisions. Yes or no for all of you. If Congress were to act in a framework, would you agree that we should address AI having highly sexualized conversation with minors, even encouraging minors to harm themselves? Is that an area that we should address? Yes or no.

Mr. Pickering. Yes. Child safety, yes.

Ms. Castor. Yes.

Mr. Pickering. At the Federal level.

Mr. Vasishta. Sorry. What was the question again?

Ms. Castor. Sure. When Congress is going to adopt a framework, is this a topic that we should address?

Mr. Vasishta. I think that is important topic. Yeah.

Mr. Shea. I would agree, for minors particularly. Yes.

Mr. Ramzanali. Definitely.

Ms. Castor. Yes.

How about -- you know, a number of cities have banned AI-driven rent-setting software used by large landlords after evidence that they were using algorithms colluding to push rents up and reduce housing availability. Is this a topic for a national framework? Yes or no?

Mr. Pickering. And let me just --

Ms. Castor. Can you do yes or no? I have limited time. Or you can pass.

Mr. Pickering. Well, existing civil rights laws, I think, cover that.

Mr. Vasishta. I think I have to pause if that is an option.

Mr. Shea. Likewise. I am not much into regulation. Thank you.

Mr. Ramzanali. Yes.

Ms. Castor. Okay. How about some of the -- let's see. There was another good example here. How about just plain transparency so that a consumer understands when they are -- that AI is on their phone or guiding their decisions? Yes or no.

Mr. Pickering. As long as it is in a Federal framework, yes. Fifty different State transparency requirements, no.

Mr. Vasishta. I think transparency is always important.

Mr. Shea. I agree with that. People should understand what they are being -- working with.

Mr. Ramzanali. Yes.

Ms. Castor. So I wonder also -- at the end of the last Congress in December, they issued a bipartisan House Task Force Report on Artificial Intelligence. Have you all read this? Yes, Mr. Pickering?

Mr. Vasishta. No.

Ms. Castor. No.

Mr. Shea. I haven't either. Sorry.

Ms. Castor. You haven't.

It is just very interesting. I am going to ask Madam Chair that we put in the record the key findings relating to preemption. That bipartisan work group that some of the members of the committee here sat

on, they said Federal preemption of State law on AI issues is complex. It has -- Federal preemption has benefits and drawbacks. It can allow State action subject to floor or ceiling. But the ultimate recommendation is that the Congress continue to study this. Nowhere in here does it say that we should sneak in a 10-year immunity moratorium for all AI regulation.

Mr. Ramzanali, is the Congress being consistent here?

Mr. Ramzanali. I think you had it right. Senator Blackburn recently had a very great reasonable view on this, which was Congress shouldn't have a moratorium, but it should consider preemption when reasonable protections are being put in place in a similar area. And that applies because her State of Tennessee has the Eldest Act.

Ms. Castor. Right.

Mr. Ramzanali. She has the Federal bill, but that makes sense to preempt when -- that debate should happen when it is time.

Ms. Castor. Thank you very much. I yield back.

Mrs. Fedorchak. The chair recognizes Ms. Houchin for 5 minutes.

Mrs. Houchin. Thank you, Madam Chair. Thanks to the witnesses for your testimony today.

Artificial intelligence is no longer a far-off concept. It is already changing how we live, work, and communicate, but its success still depends on the basics: fast, reliable broadband infrastructure, access to spectrum, cybersecurity, and reliable energy.

For rural communities, like in southern Indiana, like mine, and across the country, those fundamentals are not always guaranteed. That is why I am fighting to close the digital divide and make sure that those small communities aren't left behind. Today I want to highlight just a few key priorities.

First, we need commonsense permitting reform to cut red tape and get broadband and wireless projects off the ground faster.

Second, we should be harnessing the power of AI to speed up deployment and strengthen our cybersecurity. It is especially important for small providers who don't have the massive teams or unlimited

resources to keep up with compliance and ongoing threats. We should also be prioritizing the deployment of clean, reliable energy like SMRs, small modular nuclear reactors, to power AI and data centers. I hope we can focus on how Washington can be a partner, not a barrier, in driving innovation and expanding the reach of responsible AI across sectors in communities.

Mr. Pickering, you have emphasized that universal broadband access is a prerequisite to universal AI access. What specific barriers are your members running into most often, and where can Congress help?

Mr. Pickering. Well, you had mentioned earlier in your comments, commonsense permitting reform would be at the top of our list.

Creating AI connectors in corridors -- for example, you may be building a long fiber route from an urban area to a rural area like in Indiana. And it may not be economic to have the long route fiber that connects data center hubs. So making that eligible for BEAD as well as permitting reform -- because once you get the data center hubs, what will happen next is a second wave, which will be advanced manufacturing, that I believe will be coming to rural and remote parts of the country that would never be considered in the old world with old technology as a manufacturing hub.

But in AI, and with advanced manufacturing, as long as you have energy and if you have data centers and if you have fiber, then you will see the economic growth come to the middle parts of the country, not just the coastal.

And so, I would encourage permitting reform and BEAD flexibility.

Mrs. Houchin. Yeah. I have been a chief proponent for BEAD flexibility, removing some of the more costly aspects of BEAD that are not resulting in deployment of those funds to broadband as well as technology neutrality.

Is there a role for AI itself in helping to accelerate permitting? Could Federal support for AI-based project review tools actually make the deployment process faster and more predictable?

Mr. Pickering. The great thing about AI, it is going to be the greatest technological advancement in human productivity in the history of the world. And when you apply it to -- whether it is rushing new cancer treatments through FDA approval, the iterative ability to speed cancer treatment can also be applied to everyday practical things like how do we permit faster? How do we plan better? And the AI applications in every part of American life can make us more productive and faster in every area.

Mrs. Houchin. And what is your take on proposals that classify AI supporting infrastructure, like data centers or high-capacity fiber? What do you -- if we work to classify those as strategic infrastructure eligible for a fast track in permitting, is that necessary?

Mr. Pickering. Yes. We are in a critical race against China. And whatever we can do, especially on the multi State energy deployments and fiber deployments, we need some type of national framework that consolidates reviews, accelerates reviews, and approves in a time certain manner.

Mrs. Houchin. And to all the witnesses, if Congress could just pass one reform this year, whether it is related to permitting, interagency coordination, targeted incentives, what would have the greatest impact on unlocking AI's potential across the U.S. economy? Mr. Pickering, I will start with you.

Mr. Pickering. Just remember, infrastructure, whether it was the Internet infrastructure of the previous age, once we built fiber long-haul satellites that were digital, cable that was digital, and then we had all of the infrastructure in place, on the wireless and wired side, you could then do something like this.

The same thing is going to be true in AI applications. If you build the infrastructure that is now both energy and fiber and other broadband networks of all technologies, add the data center, it will unleash unlimited new research, new manufacturing, precision agriculture, and all of the different uses that we think will grow the economy.

Mrs. Houchin. Since my time has expired, agree? Disagree?

Mr. Vasishta. Agree.

Mr. Shea. Agree also.

Mr. Ramzanali. I would prioritize other things.

Mrs. Houchin. Okay. Thank you. I yield back.

Mrs. Fedorchak. The chair recognizes Mr. Landsman for 5 minutes.

Mr. Landsman. Thank you, Madam Chair.

I want to talk about the satellite versus fiber broadband, you know, which seems to be at the heart of this conversation in terms of where we go long-term and whether or not we have the capacity. I want to pick up where you just left off, which is your different priorities. I would love to hear those as it relates to what we should be doing.

But the question I have, fair or not, is whether or not broadband and fiber, which we know matters more -- it is more reliable, it is what is going to power all of this -- versus satellite -- that satellite has the advantage because of folks like Elon Musk, right? Because he has got Starlink, and this is what he is pushing. He has obviously got enormous influence. Maybe that has changed over the last 48 hours. I don't know.

Do you worry about this -- that satellite will somehow, you know, get the best of us? You all? In terms of resources? Do you see that? Is this sort of a -- just a Starlink thing? Where is the power coming from on the broadband fiber side? Mr. Pickering, I would -- and that is not a setup. I am just curious.

Mr. Pickering. So INCOMPAS has members that are fiber, wireless, fixed wireless, and LEO satellite, Amazon's Kuiper that just launched and is competing for broadband grants across the country and competing against Starlink. We think competition in LEOs and fiber and wireless and everything will make it better.

And we think that States having the flexibility to choose whatever technology is best for them -- Colorado may need satellite, and other places could densify their fiber and their fixed wireless, and that might be a better combination. But we think the States should decide -- look. The great thing is we have new deployments of new networks that I think are so much better on all fronts. Fiber is always going to be the foundational network that everything comes back to, wireless, fixed, and satellite.

Mr. Landsman. Fiber doesn't have at the moment -- and I am not trying to be funny or -- fiber doesn't have a, you know, the world's richest man saying, you know, Invest in fiber or broadband. And I agree. I mean, obviously every State is different. But we have to provide the regulatory and investment framework. And I am worried, as we all should be, that, you know, one guy and the thing that he owns, Starlink, is going to have more influence than what we know to be true, which is that, yes, every State is different, but for the most part, fiber and the broadband is the most reliable.

Can you just share what you were going to say? It was a good question in terms of where should we go and what we should be investing in. I just want to --

Mr. Ramzanali. It is a good question. I think you are right that -- I would actually say the work has already been done. This subcommittee -- this committee -- this Congress passed the Bipartisan Infrastructure Law that had specific instructions on how to implement the law. The work was done to think about what that means for different technologies and the NTIA.

This administration has paused that. They want to revisit -- they get the authority to put their policy priorities on top of it. But that work was done. That is how we got to a fiber preference.

The way I think about this historically is rural electrification. We got electricity to all of America. We would have never put up with a second-class technology for electricity going to rural Americans.

Mr. Landsman. That is a really good way to frame it. I do think speeding this up -- I mean, we have to get this stuff out much more quickly. And so hopefully that bipartisan commitment is there and that will get to a good place because it goes beyond BEAD and everything else, but we have got to get things out much more quickly.

That is all. Thank you so much. I yield back.

Mrs. Fedorchak. The chair recognizes Mr. Goldman for 5 minutes.

Mr. Goldman. Thank you, Madam Chair. Thank you to the panel very much for being here today.

Mr. Vasishta, how is NVIDIA ensuring that AI use and telecom infrastructure is resistant to foreign interference, especially from adversarial state actors like China?

Mr. Vasishta. So NVIDIA, we build the infrastructure that enables the AI to be leveraged by our ecosystem of partners, whether it be original equipment manufacturers or telecom operators or people developing software.

So as the vulnerabilities of the layers of the applications and the software on top of that, a lot of our partners are building that in. What we have done, though, is we have built in the infrastructure underneath that to enable much of that -- those software vulnerabilities to enable to be exposed.

And I will give you an example of what that means. Often, cybersecurity can be enabled and created by anomaly detection. There is a normal pattern of use and data, and then there is anomalies. And to be able to detect those anomalies fast and at line rate, meaning as they happen, can happen within that infrastructure that we build. We have some silicon capability that allows that to happen and the connectivity to allow that to happen, right at the edge of the network. So it doesn't have the opportunity to infiltrate into the cloud.

So that is just part of and just an example of some of the things that we are doing in working with our ecosystem.

Mr. Goldman. Thank you very much.

Mr. Pickering, Fort Worth and my district has a growing film industry with over 550 million in economic impact since 2015. How can INCOMPAS's work on AI-driven network improvements, like better 5G and fiber connectivity, help support Fort Worth film studios with real-time virtual production and data heavy post-production?

Mr. Pickering. Just like every sector of the economy, it is enabled by the network. It is enabled by the infrastructure. And if you have a creative movie production, the ability to use AI and then the networks will allow better quality, better performance, better distribution, and better and higher value. There is going to be great challenges as we look at the property rights and the intellectual property in this sector. But as far as the infrastructure that then enables every sector to grow, I am excited about the future for each sector.

Mr. Goldman. Great. Thank you very much.

And Mr. Shea, is DeepSig currently seeing any risk of IP theft or cyber infiltration targeting U.S. defense AI contractors? And what countermeasures are you developing?

Mr. Shea. No. We are very concerned with that. We are not aware of any exfiltrations happened of our data. But we spend a lot of effort protecting our information, you know, having cyber threat detection in our network. But it is a major concern because we know AI technology is right at the forefront of where the world is going, both on the commercial and defense side. So it is a high priority for us.

Mr. Goldman. All right. Thank you very much.

Madam Chair, that is all I have. I yield back.

Mrs. Fedorchak. The chair recognizes Mr. Fry for 5 minutes.

Mr. Fry. Thank you, Madam Chair. You are doing a great job today, so appreciate that.

Mr. Pickering, I was perplexed a little bit. You were talking with Ms. Houchin earlier about barriers that slow down AI-related infrastructure buildout. And two things that you mentioned were permitting reform and BEAD flexibility. And I think y'all talked about the BEAD flexibility a little bit. But specifically, when it comes to permitting reform, what do you envision that looking like from a specific policy standpoint? Like, what specifics --

Mr. Pickering. So I will give you an example of two successful permitting reforms that have happened in recent history. One was for the small sale deployments that went with 5G. We created a Federal framework with shot clocks and time certainty, and that if the jurisdiction did not approve within the time certain, it would be deemed granted.

And so the times of certainty and predictability is critical. "One touch, make ready," which means that if one fiber deploys on a pole, that they do all the deployments at one time, one touch, instead of doing six different, you know, service trucks for each different company. And that accelerate the deployment a long pole.

So there is some commonsense things, but everything is about one touch, did once, one review, time certainty, those types of principles on permitting reform. And if you can have national projects for grids, pipelines, transmission, fiber routes, that are multi-stake so that you can coordinate a whole-of-government approach to deploy the infrastructure that we need for the AI race against China.

Mr. Fry. At least when it comes to the permitting perspective of six different points, one different trigger -- or one trigger, would that also -- in your mind, if a permit was previously issued, say, a few years ago, would that also be almost grandfathered in, that you could use that existing permit for --

Mr. Pickering. I will give you an example. If you have multiple agencies -- a lot of times, they will all require their own environmental review when you should just have one environmental review that would then be adequate for all the different agencies. And if you have a review that is a year ago or 2 years ago and then you have a new part of a construction, that previous review should be considered as adequate for the current project if it is not substantially different.

And so those types of commonsense reforms that I think can protect and preserve our resources and our communities, and at the same time, speed the deployment that everybody needs today.

Mr. Fry. Thank you. Thank you for that.

Mr. Vasishta, NVIDIA is on the frontlines of both AI and the telecom infrastructure. What role do you see for AI-native wireless networks in the transition to 6G, and how can Congress support companies leading that effort in that transition?

Mr. Vasishta. Thanks for the question.

As I said in my opening remarks, AI-native wireless is really what 6G is going to be about. And what I said earlier is that there is a requirement, really, for help between public/private partnership to make that a reality. We need a lot of research to come straight to production. So with this AI WIN project that NVIDIA is part of with other companies, we are already embarking upon taking research from, say, MITRE to production with, say, T-Mobile as fast as possible and getting guidance from that.

A lot of that relies upon research that is coming out of the universities, and so the accelerant and the enablement of AI-native wireless research. There is only one other company -- I said earlier "China," but I really meant one other company that is kind of working on this AI-native approach, and that is Huawei, on the world stage. And so, once we are able to accelerate this within the U.S., we will then be able to take these same developed platforms out globally and once again be able to create a global platform for telecommunications within those standards committees.

Mr. Fry. Thank you for that.

You have emphasized software-defined networks as a game changer. How do these networks enhance both performance and cybersecurity compared to our traditional infrastructure?

Mr. Vasishta. Yeah. So traditional infrastructure has more of a closed propriety system. Now, you might think that is a positive, but the benefit of having software defined is continuous integration, continuous deployment. So you are able to add features very quickly. You are able to implement new capabilities much faster than if you had to do that in hardware.

AI-native approaches, like integrated sensing and communication, which can be -- can be threat detection. You can really sense the airwaves for threats. That can be a software-defined feature that can be integrated by defense but also in commercial reason -- commercial aspects.

Mr. Fry. Thank you for that. I see my time has expired. Madam Chair, I yield back.

Mrs. Fedorchak. The chair recognizes Ms. Kelly for 5 minutes.

Ms. Kelly. Thank you so much.

I am very excited to see the emergence of artificial intelligence. However, like many emerging technology needs to be implemented with care, weighing the risks posed to American consumers, like my constituents back home in Illinois.

As I discussed on a very long markup not too long ago, I joined many of my Democratic colleagues in concern about the reconciliation package including a 10-year moratorium on State and local enforcement of AI laws. Such a moratorium without Federal safeguards in place leaves Americans

unprotected from data-driven discrimination in critical areas, such as housing, employment, credit, education, health care, and insurance.

It is crucial that we stop balance of big tech and start doing our jobs to protect American consumers by addressing the potential for discriminatory outcomes, especially as AI technologies advance at an unprecedented pace, both domestically and internationally, which brings me to my next point. It is critical that the U.S. is positioned to win the race for global AI leadership, which I believe all of us want that.

Mr. Ramzanali, how will the BEAD Program's investment in future-proof internet infrastructure, like fiber, allow America to remain a world leader in AI innovation?

Mr. Ramzanali. I appreciate that question and your hard work in this area.

As I said in my opening, America can't lead in AI if all Americans don't have access to AI. The way that happens, especially as we think about where the technology might go that requires higher capacity throughput, is through future-proof networks like fiber.

Ms. Kelly. Does anyone have anything else to add? No?

In your testimony, you state that AI's power and usefulness will be fundamentally limited if all Americans are not able to access that use AI. Recognizing this, how does the President's unilateral decision to stop funding programs providing digital skills, including AI training to such groups as seniors, veterans, and the disabled, jeopardize America's ability to innovate in AI ahead of places like China or the Middle East?

Mr. Ramzanali. The way to think about the Digital Equity Act Programs -- maybe I will give a couple of examples that were in the letter to the record that was submitted earlier. There is a program in rural Kentucky that was hoping for a digital equity grant that helps seniors with digital skills, including how to use the internet for job applications. They were helping -- they were going to help the seniors also use AI in a way. And so that is one example.

Another example is in Hurricane Helene, the area that experienced that disaster, they were doing device access. Those are the kinds of people that need our help in a time like that. To me, those kinds of programs deserve our support.

Ms. Kelly. Thank you. And I yield back.

Mrs. Fedorchak. Thank you. The chair recognizes Mr. Kean for 5 minutes.

Mr. Kean. Thank you, Chairwoman. And thank you to our witnesses for being here today.

Mr. Shea, I recently heard from a constituent who lives in Warren County, a rural part of my district in New Jersey, her small town is tucked between two steep ridges that flank either side of the Delaware River. Because of the unique geographic features of this area, she and her neighbors frequently have unreliable cell service and even difficulty reaching emergency services.

In your testimony, you discussed the cases of integrating AI technology into consumer wireless communications. What about for an application like -- what about for an application like this? What integration of AI technology can help overcome the challenges posed by difficult geography, like this one, to keep people connected and able to reach first responders when needed?

Mr. Shea. Well, actually, the NTIA -- first NOFO award we received was about how to come up with better ways of measuring the local environment to assure high-quality service. So I think with AI, what is called "digital twin technology," we are getting a much better understanding of how signals propagate and where we can put in small cells to fill in these gaps.

So AI, I think, is going to be revolutionary for these type of applications where people have poor service. And I think we are going to be seeing the fruits of that technology within the next couple of years.

Mr. Kean. Thank you.

Mr. Pickering, in your testimony, you discuss how deployment of technologies, like fiber networks, is a necessary input to the management of AI applications. Given that responsibility for these regulations

shared among several different stakeholders, including the State and local level, how can Congress best facilitate smart, forward-looking policies that will enable us to compete in AI?

Mr. Pickering. I think there is a way in the permitting reforms that this committee will put forth that will respect the local jurisdictions and the counties and the States and how they have responsibilities on permitting. What we have tried to do as an industry is to create a blueprint of best practices and then find voluntary incentives and community engagement. But on national deployments, multi State, I do think that there is a rural and across Federal lands and Federal properties that this committee can really speed and accelerate the time to deploy.

I have been talking earlier, we are in a race with China. We need to build as fast as possible. They are not having permitting delays like we have, if they have permitting at all.

And so, we need to find a way to speed at every level and give the resources and the technology and the tools and the incentives for the best practices with time certainty, transparency, and the best technology tools to permit as fast as possible.

Mr. Kean. Thank you.

Mr. Vasishta, I agree with you as to the critical importance to making sure the United States is a leader in the future of wireless communications on the global stage. What steps do we need to take to make sure that American innovators are leading on AI within international standards setting bodies?

Mr. Vasishta. So let me take that as a telecommunications question.

Firstly, as we start to look at the definition of the 6G standards, which has already started to happen, America needs to have a very strong voice in the 6G standards, both corporately as well as from the NTIA. And I think that is starting to happen. But we need to really double-down on that to make sure that as we define those standards, those standards are defined in a way that is meaningful to our advancement as well as AI RAN, as we call it, which is the infusion of AI and the radio access network. And as I said before, that is probably something that many others are not really thinking about. But it gives us,

within the U.S., the opportunity to take that leadership position because we have that AI leadership position.

The other thing, of course, is to make sure that we have most of, if not all the developers in the world, developing AI on America infrastructure. That is very important. Many developers around the world don't reside within the U.S., but we need to make sure they have access to that American infrastructure because that is what improves the capability and the performance of our AI.

Mr. Kean. Thank you. I yield back.

Mrs. Fedorchak. The chair recognizes myself for 5 minutes.

So AI has been described as not only a powerful tool, but an incredible weapon. And I don't feel like the public necessarily understands that or sees it exactly that way. But given that China today produces 10,000 terawatt hours of power a year and the U.S. produces 4,000 terawatt hours of power a year, we are already quite behind.

So given this, I am wondering, you know, do you share this concern, Mr. Pickering, about maybe China being in a better position? If so, what do we need to do about that? And then also, to comfort me and my colleagues, what barriers is China facing in their deployment of AI?

Mr. Pickering. So far, you know, our country -- as you look at what is powering the data centers that are running the large language models, intensive energy demand. I think new solutions that would bring behind the meter are dedicated energy to the data center is a critical reform that is needed to meet the demand needs today that would not overtax the existing grid and the residential customer. So that is one solution.

Two. As we have talked about the permitting reforms, and this committee in reconciliation has something that addresses multi-State pipeline construction and being able to have a consolidated review in a time-certain review on that.

As we look at traditional energy meeting current demand, how can we also look at future options and solutions? And SMR technology, the small modular nuclear reactors, fusion technology, those types of

things that can give us clean energy, reliable, abundant energy, and a very small footprint that is much safer and much more sustainable, getting those technologies as quickly as possible into the market. So X-energy is one of our member companies that has a big agreement with AWS and Dominion utility in Northern Virginia. It came out of one of our DOE labs. It is an amazing advancement in nuclear technologies, very similar to what we do in our nuclear fleets.

And so those types of new solutions long-term. But in the short-term, building as fast as we can, and all-of-the-above strategy, and giving data centers the ability to have behind the meter solutions are dedicated solutions for the demand today.

And no, China does not have barriers or impediments that we do.

Mrs. Fedorchak. Shoot. I was hoping there were a few, at least.

I have questions for a few other of you, but I do want to invite you all -- my office. I am very concerned about having the power to meet the demand of the moment for AI. And so my office is leading an AI energy working group, and I would invite all of you to participate in it. I know, Mr. Pickering, you are, and hopefully others are as well. But we are very much working on this framework of solutions to meet the energy needs.

Mr. Shea, you haven't gotten a question for a bit. I wanted to ask you, from your vantage point as a smaller innovator, what are the specific barriers to deploying AI-driven wireless infrastructure, especially in rural underserved areas, and what kind of changes could Congress bring about to help that to address those barriers?

Mr. Shea. I think for Congress to continue the push at ORAN is probably the most help that can be provided because we are finding the ORAN vendors we work with more forward looking on AI. They are looking for ways to leapfrog technology, which is what we need to compete with China. So I think the openness of that type of standard is what is key to make this all happen quickly.

Mrs. Fedorchak. Excellent.

And, Mr. Ramzanali, how do you say your name?

Mr. Ramzanali. Ramzanali.

Mrs. Fedorchak. Ramzanali. You stated with Mr. Menendez that the moratorium -- or Mr. Menendez stated that the moratorium on new State regulations that we included in the One Big Beautiful Bill erodes the current frameworks passed by States, and you agreed with that statement. So help me understand how that is so when the moratorium is on new regulations and doesn't do anything to the existing regulations that States have already enacted?

Mr. Ramzanali. So there is questions about how it applies to privacy laws that are being -- privacy bills that are being considered and privacy laws that exist, because some of them use definitions for automated systems that could be caught up in the way that the bill is written. That is one way that it could directly go at the privacy concerns.

Mrs. Fedorchak. But you agree that the moratorium is on States developing new regulations, not the existing ones.

Mr. Ramzanali. I would have to read it more closely, but I believe there has been some debate about how that would be applied. And that is the kind of thing that would take a while for courts to work out, too.

Mrs. Fedorchak. Okay.

Let's see. Seeing there are no further members wishing to be recognized, I would like to thank our witnesses for being here today. I ask unanimous consent to insert in the record the documents included on the staff hearing documents list. Without objection, that will be the order.

[The information follows:]

******** COMMITTEE INSERT ********

Mrs. Fedorchak. I remind members they have 10 business days to submit questions for the record, and I ask the witnesses to respond to the questions promptly. Members should submit their questions by the close of business on Wednesday, July 18th.

Without objection, the subcommittee is adjourned. Thank you all.

[Whereupon, at 1:24 p.m., the subcommittee was adjourned.]