INTELLECTUAL PROPERTY AND STRATEGIC COMPETITION WITH CHINA: PART I

HEARING

BEFORE THE

SUBCOMMITTEE ON COURTS, INTELLECTUAL PROPERTY, AND THE INTERNET

OF THE

COMMITTEE ON THE JUDICIARY

U.S. HOUSE OF REPRESENTATIVES

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WEDNESDAY, MARCH 8, 2023

INTELLECTUAL PROPERTY AND STRATEGIC COMPETITION WITH CHINA: PART I

Wednesday, March 8, 2023

HOUSE OF REPRESENTATIVES

SUBCOMMITTEE ON COURTS, INTELLECTUAL PROPERTY, AND THE INTERNET

COMMITTEE ON THE JUDICIARY

Washington, DC

The Committee met, pursuant to notice, at 10:02 a.m., in room 2141, Rayburn House Office Building, Hon. Darrell Issa [Chair of the Subcommittee] presiding.

Members present: Representatives Issa, Fitzgerald, Cline, Gooden, Kiley, Lee, Fry, Johnson of Georgia, Nadler, Ross, and Schiff.

Mr. ISSA. [Presiding.] The Subcommittee will come to order.

Without objection, the Chair is authorized to declare a recess at any time.

I want to welcome everyone to today's hearing, the first hearing of the Intellectual Property Subcommittee of Judiciary. Intellectual Property and Strategic Competition with China was chosen to be our first hearing—chosen not because we have exclusive jurisdiction over China, but because it was incredibly important that we look at what is now the third-largest applicant for patents and an organization that has a strategic plan.

As we will hear from our witnesses today, America, the heartland of innovation, is, in fact, fertile ground for China's investment in our patents. America's national security is at risk because of China's government's quest to achieve superiority using both internal and externally gotten technology. They will use both legal and illegal means to gain technology that they take to China and often use to create secondary patents—meaning steal the technology from here; patent back here again; sue, then, here.

Our witnesses represent a broad group of experts in the area, and I believe they will both educate us and, to a certain extent, scare many of us.

The fact is we understand that China is one of our largest trading partners. China is, arguably, our peer in total GDP and has a growth rate that is likely to exceed ours in the coming years. Normally, that would be a good thing. Ever since Nixon went to China, we have believed that engagement with China and the growth of

private enterprise and wealth of the Chinese people would, in fact, moderate the behavior of the Chinese Communist Party.

As we will hear from our witnesses today, not on the dealing of the Chinese Party, but on the dealing of the government relative to their desire to take from America and Europe technology for Chinese global advantage. What is the price tag of that? To the U.S. economy, it represents anywhere from a low of $250 billion to estimates that reach or exceed $600 billion a year. That is more than the GDP of many aspiring countries. It is more than any one corporation would ever dream of making in a year, and it might, in fact, below in our estimations.

Entities funded by the government are also flooding the Patent and Trademark Office with dubious patent applications. In fact, not only are they dubious, but they often end up in the hands of non-practicing entities who specialize in suing firms—meaning they get the patents that are pretty useless, except to sell to trolls. They sell them to trolls.

Many companies are involved in this, but I will mention today, Huawei. I will mention them because, in addition to being one of the largest stealers of technology, including 5G technology, they also represent a national threat to any country that puts their products in, so much so that the United States has chosen to ban their products. We ban their products; we do not ban the revenue they receive, both directly and indirectly, from dubious patents that are filed against U.S. companies.

To make matters worse, they don't just do it in Article III courts; they use our ITC as though they were a domestic producer to sue, and often stop, an American company from producing a product that they, the American company, invented.

It should not be surprising, then, that the fastest-growing foreign country of origin for U.S. patents is China. It went from fourth in 2018 to second in 2022, exceeding Japan and our other allies.

As troubling as that sounds, it could be worse. The World Trade Organization, the WTO, with support of the Biden Administration, adopted a waiver that permitted China and other nations to disregard IP rights on COVID vaccines held by American companies. That is, essentially, a transfer of technology to China and other countries, and I would mention China and India as the two major beneficiaries.

What is more troubling is the desire to make this a regular practice of, essentially, after someone has invested millions or billions, to simply set aside their patent rights. When patent rights are set aside, there are two sets of damage that can occur.

The first set is the obvious, that your foreign markets disappear because the technology is available, and instead of buying your product or licensing your patent, they simply produce the competing product. What makes matters worse is this technique also can create the seed for companies that otherwise would never be able to catch up to catch up or even pass us, and essentially, put the U.S. innovator out of business by flooding the market with products that are the fruit of a patent not paid for, but given away.

Many of these things would appear at times to be partisan issues, and certainly, the fact that President Biden has made this decisionmakes it seem partisan. Let there be no doubt, many Presi-

dents of both parties have wanted to look on the world stage as though they cared more about the rest of the world than they cared about American ingenuity being properly awarded, as the Constitution requires.

So, although I make this point, and I will be introducing or have introduced the No Free TRIPS Act, I want to make it clear: We expect this to be, and continue to be, on this President and those that follow a bipartisan issue—one in which Members who are about domestic intellectual property production will side with making it stronger, and those who care about a global view may choose to be on the other side. I don't believe that will come out on partisans' lines as much as it will come on ideological lines. Many of my best partners over my 24 years in Congress—23, going on 24—have, in fact, been Members on that side of the dais, and I expect that to continue to be.

Unfortunately, China has learned to capitalize on developments of certain U.S. States, in addition to that. Today, we will touch, to a certain extent, on noncompete agreements. I expect this will not be the only time. My home State of California has effectively made noncompete illegal.

As a result, anyone who takes a job in California has a free ticket to go from California with any technology they have gained, including trade secrets, and simply go to another country with it and sell it. There are countless examples of that, including Qualcomm, Intel, Google, and Apple, who have been the victims of technology developed/trade secrets developed simply going to another country. Again, if they go to China, they often end up in patents that are the fruit of that otherwise unknown or developing technology.

Simple noncompete agreements that simply invalidate a year or two after someone leaves from being able to patent something that they learned about in their first company have been invalidated in California. There is an effort to make that national.

Let there be no doubt; we support the idea that people should be able to leave a job and go to another job. No noncompete should bar somebody from being able to continue to operate with the knowledge and training that they came in with. There is a huge difference between a salesman going from one company to another and a salesman leaving with the price list, the customer list, and all the data, and simply moving over to another company and saying, "I come with the information that I took from my company."

That is easy for people to understand. It is more complicated, often, to understand when you have intellectual property or the knowledge that is in a nascent way, but extremely valuable.

So, as you can see, today's hearing, the first of many, is necessary because this, not just by China, but our intellectual property is under attack; our system is under attack. This Committee is absolutely committed to both give it airing, so the public understands it, and do legislation to protect the American inventor.

With that, it is my pleasure to introduce my new Ranking Member from Georgia, Mr. Johnson, who I have worked with in the past on this Committee, and I look forward to working with on these and other subjects. The gentleman is recognized.

Mr. JOHNSON of Georgia. Thank you, Mr. Chair, and it is a pleasure to be the Ranking Member on the Committee that you are the

Chair of the Subcommittee. I want to commend you for your bipartisanship as we approach the bipartisan issues of this Subcommittee.

I share the grave concerns of my colleagues about the Chinese government's theft of the intellectual property of our Nation's innovators. We know that the scale of China's IP theft is enormous. We know that it hurts our inventors' ability to compete and succeed, and we know that we need to improve our laws and policies to not only protect America's intellectual property from the Chinese government, but also to mitigate the damage already done.

The solutions to the problems resulting from the Chinese government's concerted and systematic IP theft will, no doubt, be complex. For this reason, I am glad to hear from our panel of witnesses today, who I understand are leading experts on the relationship between China's IP theft and our national security and economy.

Thank you for testifying and for sharing your knowledge on this important topic, and I plan to take to heart your testimony and suggestions for how we in Congress can ensure the continued success of our Nation's innovators.

In particular, I hope to hear from the witnesses on how we in Congress can do more to protect the intellectual property of our Nation's small businesses. Small businesses are the backbone of America's economy. They create most of our country's net new jobs. They drive our economy and our responsible for a substantial portion of our gross domestic product.

Small businesses also drive innovation in our country. They are more likely to develop and bring new and disruptive technologies to market than large businesses. In my view, small businesses need strong intellectual property rights to protect their innovations. This helps not only the small businesses, but America's economy as well. Small businesses that apply for patents and other types of intellectual property protections are more likely to grow quickly, hire engineers and scientists, and succeed than those businesses that do not engage in intellectual property protection.

As we learned in the last Congress, however, small businesses are struggling to protect their intellectual property. Any patent that is valuable has become subject to repeated attacks at the Patent Trial and Appeal Board, often by actors who have no substantial monetary or public interest in the underlying technology. Their game is to drive small businesses into bankruptcy, as few small businesses have the financial backing to survive repeated attacks on their intellectual property rights.

We already know that Chinese companies steal U.S. technology and sell it back to us. I hesitate to think what will happen when actors backed by unlimited resources of the Chinese government will go after these small businesses at the PTAB.

I want to make clear that, to maintain our Nation's innovative superiority, we don't need to rely on prejudices and hate. Our country has seen an alarming rise in physical assaults, civil rights violations, and other general harassment of Asian Americans—for no reason other than being Asian. I want to be clear that we are talking about a concerted effort by the Chinese government, not the Chinese Americans and not others with Asian heritage, to steal U.S. intellectual property.

We are in an innovation war with China, but we don't win that war by giving up our values and giving into hate. In my view, we win by strengthening our intellectual property laws and policies and by placing our American inventors, regardless of race, ethnicity, or national origin, in the best position to out-innovate the Chinese government.

So, I call on each and every one of us in this Subcommittee, from both sides of the aisle, to work together toward solutions. We must get to work right away. There is no time to waste.

With that, Mr. Chairman, I yield back.

Mr. ISSA. I thank the gentleman.

It is now my great pleasure to recognize the Ranking Member of the Full Committee, my long-time partner on this Subcommittee, for his opening statement, Mr. Nadler of New York.

Mr. NADLER. Well, thank you very much, Mr. Chair.

Mr. Chair, a little over 20 years ago, the free world undertook an experiment and allowed the People's Republic of China to become part of the World Trade Organization—granting that nation permanent access to some of the most important markets in the world. Among other changes, this concession meant that China and Chinese companies had permanent access to our patent and trademark systems on the same terms as our own nationals.

I voted against China's entry into the WTO because I had serious concerns about the impact that globalization would have on American workers—a concern that, unfortunately, has largely been borne out. I was also skeptical that many of the promised benefits of free and open trade with China, such as democratic liberalization and improved human rights for its people, would come to pass. Sadly, this concern, too, has largely been vindicated.

Today, we see a government in China that has become increasingly authoritarian, using a vast array of technology to track its citizens and subjecting many of its people, most notably, the Uyghur population, to shocking human rights abuses.

On the economic front, China's entry into the free-market system has failed to encourage the PRC to obey the rules and customs that govern the international economic order. Rather, it has simply enabled the Chinese government to manipulate those rules to its advantage.

For example, the requirement that in certain high-tech sectors U.S. companies work with their Chinese counterpart has become one of many vehicles that the PRC has used to force technology transfer to their nation. This sometimes means requiring U.S. companies to disclose key aspects of their technology to obtain licenses to operate within the PRC, among others.

Unfortunately, there are also many documented instances of the PRC using outright illegal means to access U.S. technology, including cyber espionage and trade secret theft. In sum, while the PRC was welcomed into the free market system, it has failed to honor many of the hallmarks of good global citizenship. This is a serious challenge to a system that has historically relied in large part on assumptions that the players will act in good faith.

With the announcement of a series of national policies aimed at making China the technological leader in all important emerging areas of innovation, we cannot afford to be blind to the illicit and

questionable means that the PRC is using to leapfrog the rest of the world.

Their actions create an uneven playing field for other nations, their people and their companies, compounded by research showing that China's patent system and courts do not always treat foreigners equally.

This is certainly a broad topic worthy of our Subcommittee's extended attention. While we are primarily focusing on trade secrets and patents today, I would be remiss if I failed to mention that on the copyright front piracy in China also continues to do damage to the U.S. economy and to hurt the American creative community. I hope that we will be able to explore this and other topics, such as competition in the artificial intelligence space and cryptocurrency, in the future.

I want to express, however, that our need to have a serious conversation about the behavior of the Chinese government should in no way be interpreted to call into question the patriotism and the substantial contributions of our many citizens of Asian descent. We have seen all too often how the lack of nuance in our rhetoric can turn into suspicion and violence against some of our own people. Not only is this morally wrong, but it also tears apart our national fabric, which plays right into the hands of our adversaries.

It is through the united front and the full empowerment of our tremendous human capital that we in the United States have been the world leader in innovation for so long. We must embrace and expand on that great advantage of ours, in addition to doing the careful legal work of this Subcommittee to ensure that our intellectual property laws and policies meet this moment of global competition.

I thank the witnesses for their participation in today's important hearing and I look forward to their testimony.

With that, Mr. Chair, I yield back.

Mr. ISSA. I thank the gentleman.

I now have the pleasure to introduce today's witnesses.

Mr. William Evanina is the founder and CEO of Evanina Group. He has served in the Federal Government for 31 years, including the Director of the U.S. National Counterintelligence and Security Center; Chief of the Central Intelligence Agency's Counter Espionage Group, and Assistant Special Agent in Charge of the FBI's Washington Field Office, where he led operations in both Counterintelligence and Counterterrorism Divisions.

Mr. Jamieson Greer is a partner of an international trade team of King & Spalding, where his practice covers trade remedies, trade policies and negotiations, trade agreement enforcement, export and import compliance—exactly what we are talking about now—and CFIUS matters. He previously served as Chief of Staff to the U.S. Trade Representative under the previous administration.

Mr. Mark Cohen is a Distinguished Senior Fellow and Director of the Asian IP Project at the Berkeley Center for Law and Technology. He previously served as Senior Counsel to the U.S. Patent and Trademark Office and its first representative of the USPTO in China.

Mr. Charles Duan is a policy fellow and adjunct professor in the Program on Information Justice and Intellectual Property at Amer-

ican University College of Law. He serves as a member of the Patent Public Advisory Committee of the USPTO.

We want to welcome our witnesses and thank them for appearing today.

We will begin by swearing in, as is the rule of the Committee. Would you please rise and raise your right hand?

Do you solemnly swear or affirm, under penalty of perjury, that the testimony you are about to give will be true and correct to the best of your knowledge, information, and belief? Please say aye if you do.

Please be seated.

Let the record show that all witnesses answered in the affirmative.

Then, I am supposed to say, "Thank you. Be seated," but I am rusty at this.

Please know that, although your testimony is limited to five minutess, all your written statements, opening statements, any additional information you want to submit within five days after this hearing, will be placed in the record. So, feel free to abbreviate.

You are all pretty good at looking at clocks. Please try to stay right on that five minutess or as close as possible.

With that, we start with Mr. Evanina.

STATEMENT OF THE HONORABLE WILLIAM EVANINA

Mr. EVANINA. Chair, Ranking Chair, Members of the Subcommittee, it is a humbling pleasure to be here with you today.

As the Chair referenced, I spent over 31 years in the U.S. Government with the FBI, CIA, and as the first Senate-confirmed Director of the National Counterintelligence and Security Center. However, I am here today as the CEO of my own company, where I spend most of my time dealing with CEOs, boards of directors, and executives fighting the economic war we're currently in with the Communist Party of China. That certainly starts at the very beginning with the protection of their intellectual property, trade secrets, and business rules.

Economic security is national security. There could be no doubt to that. Our economic prosperity and security of such thrives on a prosperous economy which provides for the best national security, military security, and military apparatus the world has ever seen.

However, let's be clear and honest. Our economic global supremacy, stability, and long-term vitality is not only at risk, but, clearly, in the crosshairs of Xi Jinping and his Communist China regime.

So, how does China steal intellectual property? The Communist Party of China uses intelligence services, science and technology investments, academic collaboration, research partnerships, joint ventures, front companies, mergers and acquisitions, and outright theft, insider threats, and cyber intrusions. This whole-of-society approach utilized by the Communist Party of China sets the comprehensive and strategic framework for how China implements their grand strategy.

It is currently estimated, as the Chair referenced, the economic loss from the theft of intellectual property and trade secrets just from the Communist Party of China, and just from what we know via prosecutions, is between $400–$600 billion per year. To make

it more relevant and personal, that equates to about $4,000–$6,000 per American family of four after taxes. The economic cost of intellectual property theft is real.

China's ability to holistically obtain intellectual property and trade secrets via legal, illegal, and sophisticated hybrid methods is like nothing we have ever witnessed. Actually, it is said by many to be the largest theft of intellectual property in the history of the world, and that just happened in the past decade.

So, what intellectual property does China steal? Well, everything. China's priorities for obtaining U.S.-based intellectual property, trade secrets, ideation, and technology is pursuant to the publicly available Made in China 2025 plan. It is clear, concise, and at the same time, strategic and comprehensive.

Just to name a few, aerospace, deep sea technology, biotechnology, information technology, manufacturing, clean energy, electric battery technology, and DNA genomics—just a few.

Any CEO, board of directors in any of these critical industries must be acutely aware of the threat posed to them. They must work efficiently and aggressively with their security teams, legal counsels, and outsiders to identify risk-based mitigations to this threat. This needs to occur yesterday.

The proverbial salt in the wound of intellectual property theft is when the Communist Party of China steals our thoughts, ideas, patents, and technology, and then, manufactures that same technology inside China, and then, turns around and sells it back to American companies, States, and localities.

We need to look no further than the American Supercomputer Corporation just for a glimpse of the long-term pain and impact of intellectual property theft and espionage. Additionally, one must factor in all the manufacturing plants which are not built in the United States and the tens of thousands of jobs which are not created because China, via its theft, beat the United States to the global market and sold that same U.S.-created product, idea, and patent at a significant reduction in real costs.

Just this past November, Xu Yanjun was sentenced to 20 years in Federal prison for targeting American aviation companies—recruited employees to travel to China and solicited the proprietary information/intellectual property on behalf of the government of the PRC. He's a highly trained intelligence officer, Deputy Director of China's Ministry of State Security.

Coincidentally, next month, China will roll out the first flight of the COMAC airliner. It is 95 percent stolen of intellectual property from the United States and around the world. Its clear intention in this effort is both to compete and, eventually, overtake Boeing and Airbus.

So, why does this all matter? Because continuing to combat this threat begins at Subcommittees and hearings like this where the American public and Members get to understand the significance of the threat we face every day of the Communist Party of China and why it matters.

I thank the Subcommittee for your attention and look forward to your questions.

[The prepared statement of the Honorable Evanina follows:]

STATEMENT OF WILLIAM R. EVANINA
CEO, THE EVANINA GROUP

BEFORE THE HOUSE JUDICIARY SUBCOMMITTEE ON THE COURTS, INTELLECTUAL PROPERTY AND THE INTERNET

AT A HEARING CONCERNING "INTELLECTUAL PROPERTY AND STRATEGIC COMPETION WITH CHINA: PART I"

MARCH 8, 2023

Chairman Issa, Ranking Member Johnson, and Members of the Committee — it's an honor to appear before you today. I have spent 31 years of my adulthood working the U.S. Government. Twenty-four of which were with the FBI, CIA, and as the Senate Confirmed Director of the National Counterintelligence and Security Center.

I am here before you today as the CEO of The Evanina Group, LLC. In this role, I work closely with CEOs, Boards of Directors, and academic institutions to provide a strategic consulting in an effort to mitigate corporate risk in a complicated global environment. This most certainly is inclusive of protecting the theft of intellectual property and trade secrets.

Getting right to the point. Xi Jinping has one goal. To be THE Geopolitical, military, and economic leader in the world. XI, along with the China's Ministry of State Security, People's Liberation Army, and the United Front Work Department, drive a comprehensive and whole of country approach to their efforts to invest, leverage, infiltrate, influence, and steal from every corner of the U.S. This is a generational battle for XI and China's (CCP) Communist Party, it drives their every decision.

This existential threat TO America begins with the comprehensive, pernicious, and strategy-based theft of U.S. Intellectual Property and Trade Secrets.

ECONOMIC SECURITY

Economic security is national security. Our economic prosperity, and security of such, drives our prosperous economy which also provides for the greatest military and national defense the world has ever seen. However, let us be clear and honest, our economic global supremacy, stability, and long-term vitality

is not only at risk, but squarely in the cross hairs of Xi Jinping and the communist Chinese regime.

REAL COSTS

In 2020, the estimated economic loss from the theft of intellectual property and trade secrets, JUST from the CCP, and JUST from known and identified efforts, is estimated between $300 Billion and $600 Billion per year. To make it more relevant, and personal, it equates to approximately $4,000 to $6,000 per American family of four…after taxes.

China's ability to holistically obtain our intellectual property and trade secrets via illegal, legal, and sophisticated hybrid methods is like nothing we have ever witnessed. Actually, it is said by many to be the largest theft of intellectual property in the history of the world….and it happened just in the past decade.

HOW CHINA STEALS INTELLECUAL PROPERTY

The threat from China pertaining to U.S. academia is additionally both wide, and disturbingly deep. Intelligence services, science & technology investments, academic collaboration, research partnerships, joint ventures, front companies, mergers and acquisitions, and outright theft via insiders and cyber intrusions, set the comprehensive and strategic framework for how China implements their grand strategy.

Additionally, we see creative investments into our federal, state and local pension programs, collaborative academic engagements, Sister-City Programs, Confucius Institutes on U.S. campuses, Talent Recruitment Programs, investments in emerging technologies, and utilization of front companies frequently manifesting the strategy into our corporate, research, and academic ecosystems. All of these strategic, and coordinated, efforts continue to be a frequent part of strategically acquiring the thoughts and ideas of our researchers, as well as development of those ideas pre and post patent application.

China also continues to successfully utilize "non-traditional" collectors to conduct a plurality of their nefarious efforts here in the U.S. due to their successful ability to hide in plain sight. The non-traditional collectors, serving as engineers, businesspersons, academics, and students are shrouded in legitimate work and research, and oftentimes become unwitting tools for the CCP and its intelligence apparatus.

WHAT IP DOES CHINA STEAL?

Everything. China's priorities for obtaining U.S. based intellectual property, trade secrets, ideation, and technology, pursuant to their publicly available "Made-in-China 25 Year Plan", is clear, concise, and at the same time strategic and comprehensive. Aerospace, Deep-Sea Technology, Biotechnology, Information Technology, Manufacturing, Clean Energy, Electric Battery Technology, and DNA/Genomics are just a short list of the CCP's published wish list. But any intellectual property, or trade secret, that may further China's military or civilian advancement is prime for the taking.

To illustrate the CCP's diversity of theft, prosecutions emanated from the theft of hybrid seeds (Monsanto), titanium dioxide (white paint, Dupont), glass insulation (Pittsburg Corning), and hundreds of other mind-expanding theft opportunities. In the Monsanto instance, CCP intelligence offices were captured at the airport after literally digging up the seeds in a Monsanto farm in the Midwest.

As of 2022, every itemized technology on China's "Made-In-China 2025 Plan has representation in corporate theft reporting, FBI investigations, and/or DOJ legal actions. The correlation is both stark and debilitating. The CCP puts the U.S., and the world, on notice of their requirements.

ECONOMIC WAR REQUIRES AWAARENSS AND ACTION

Any CEO, or Board of Directors, in any of these critical industries must become aware of the threat posed to them. They must work efficiently and aggressively with their security and legal apparatus, as well as outside experts, to identify risk-based mitigation strategies. This needs to occur yesterday.

The proverbial salt in the wound of intellectual property theft is when the CCP steals our thoughts, ideas, patents, and technology, and manufactures that same technology inside China, and the sells it back to American companies and around the world. One needs to look no further than the American Superconductor Corporation (AMSC) for just a glimpse of the long-term impact to economic espionage and theft of intellectual property. Additionally, one must factor in all the manufacturing plants which were not built in the U.S., and the tens of thousands of jobs which were not created because China, via its theft, beat the U.S. to the global market and sells that same U.S created product and a significant reduction in real costs. The short-term pain hurts, but the long-term economic loss is debilitating.

I would like to reference just a few recent criminal cases which depict the comprehensive strategy, depth of strategy and criminality, and success of the CCP's nefarious efforts to steal our intellectual property and trade secrets.

MICRON TECHNOLOGIES

The Micron investigation meticulously lays out the structured process for China's strategy and process in illegally obtaining intellectual property and trade secrets to benefit China's military and civilian advancements. In this particular case, China knew they could not develop the technology and subsequently manufacture "chips" to compete with the U.S. Hence, they decided to illegally steal the technology from MICRON instead. To best illustrate, I have incorporated some narrative from DOJ's indictment.

According to the indictment, the defendants were engaged in a conspiracy to steal the trade secrets of Micron Technology, Inc. (Micron), a leader in the global semiconductor industry specializing in the advanced research, development, and manufacturing of memory products, including dynamic random-access memory (DRAM). DRAM is a leading-edge memory storage device used in computer electronics. Micron is the only United States-based company that manufactures DRAM. According to the indictment, Micron maintains a significant competitive advantage in this field due in large part from its intellectual property, including its trade secrets that include detailed, confidential information pertaining to the design, development, and manufacturing of advanced DRAM products.

Prior to the events described in the indictment, the PRC did not possess DRAM technology, and the Central Government and State Council of the PRC publicly identified the development of DRAM and other microelectronics technology as a national economic priority. The criminal defendants are United Microelectronics Corporation ("UMC"), a Taiwan semiconductor foundry; Fujian Jinhua Integrated Circuit, Co., Ltd. ("Jinhua'"), a state-owned enterprise of the PRC; and three Taiwan nationals: Chen Zhengkun, a.k.a. Stephen Chen, age 55; He Jianting, a.k.a. J.T. Ho, age 42; and Wang Yungming, a.k.a. Kenny Wang, age 44. UMC is a publicly listed semiconductor foundry company traded on the New York Stock Exchange; is headquartered in Taiwan; and has offices worldwide, including in Sunnyvale, California. UMC mass produces integrated-circuit logic products based on designs and technology developed and provided by its customers. Jinhua is a state-owned enterprise of the PRC, funded entirely by the Chinese government, and established in February 2016 for the sole purpose of designing, developing, and manufacturing DRAM.

According to the indictment, Chen was a General Manager and Chairman of an electronics corporation that Micron acquired in 2013. Chen then became the president of a Micron subsidiary in Taiwan, Micron Memory Taiwan ("MMT"), responsible for manufacturing at least one of Micron's DRAM chips. Chen resigned from MMT in July 2015 and began working at UMC almost immediately. While at UMC, Chen arranged a cooperation agreement between UMC and Fujian Jinhua whereby, with funding from Fujian Jinhua, UMC would transfer DRAM technology to Fujian Jinhua to mass-produce. The technology would be jointly shared by both UMC and Fujian Jinhua. Chen later became the President of Jinhua and was put in charge of its DRAM production facility.

While at UMC, Chen recruited numerous MMT employees, including Ho and Wang, to join him at UMC. Prior to leaving MMT, Ho and Wang both stole and brought to UMC several Micron trade secrets related to the design and manufacture of DRAM. Wang downloaded over 900 Micron confidential and proprietary files before he left MMT and stored them on USB external hard drives or in personal cloud storage, from where he could access the technology while working at UMC.

HUAWEI TECHNOLOGIES

The Huawei indictment, which included charging their Chief Financial Officer, WANZHOU MENG, illustrates not only the perniciousness of the CCP's efforts, but also as how high in China's civilian corporations' explicit direction is provided to stop at nothing to succeed. Later in this document I list the Chinese laws which mandate partnership, collaboration, and sharing of data between the CCP government, military, and every civilian business, without exception. Below is just a piece of DOJ's indictment illustrating the theft of intellectual property and trade secrets.

The 16-count superseding indictment also adds a charge of conspiracy to steal trade secrets stemming from the China-based company's alleged long-running practice of using fraud and deception to misappropriate sophisticated technology from U.S. counterparts.

As revealed by the government's independent investigation and review of court filings, the new charges in this case relate to the alleged decades-long efforts by Huawei, and several of its subsidiaries, both in the U.S. and in the People's Republic of China, to misappropriate intellectual property, including from six U.S. technology companies, in an effort to grow and operate Huawei's business. The misappropriated intellectual property included trade secret information and copyrighted works, such as source code and user manuals for internet routers, antenna technology and robot testing technology. Huawei, Huawei USA and Futurewei agreed to reinvest the proceeds of this alleged racketeering activity in Huawei's worldwide business, including in the United States.

The means and methods of the alleged misappropriation included entering into confidentiality agreements with the owners of the intellectual property and then violating the terms of the agreements by misappropriating the intellectual property for the defendants' own commercial use, recruiting employees of other companies and directing them to misappropriate their former employers' intellectual property, and using proxies such as professors working at research institutions to obtain and provide the technology to the defendants. As part of the scheme, Huawei allegedly launched a policy instituting a bonus program to reward employees who obtained confidential information from competitors. The policy made clear that employees who provided valuable information were to be financially rewarded.

Huawei's efforts to steal trade secrets and other sophisticated U.S. technology were successful. Through the methods of deception described above, the defendants obtained nonpublic intellectual property relating to internet router source code, cellular antenna technology and robotics. As a consequence of its campaign to steal this technology and intellectual property, Huawei was able to drastically cut its research and development costs and associated delays, giving the company a significant and unfair competitive advantage.

GENERAL ELECTRIC

General Electric (GE), founded in 1892, is one of the oldest, proudest, most recognizable brands, and influential corporations in our nation's history in both the corporate landscape, as well as in partnering with our national security apparatus.

Because of this success and history of delivering technology and capability, GE has unfortunately been a targeted victim of the nefarious efforts of the CCP in recent years. One example I wish to provide the subcommittee illustrates the strategy of the CCP to illegally obtain intellectual property and trade secrets which benefit both China's military growth and competitiveness, as well as their economic and civilian growth and competitiveness.

This past November, YANJUN XU was sentenced to twenty years in federal prison for "targeting American aviation companies, recruited employees to travel to China, and solicited their proprietary information, all on behalf of the government of the People's Republic of China (PRC)." (DOJ Press Release 11/16/2022)

XU was not the typical non-traditional collector the CCP sends to the U.S. to obtain intellectual property and trade secrets. XU is a highly trained intelligence officer. XU is a Deputy Director in China's Ministry of State Security (MSS). XU was the leader of the CCP's global effort to obtain aviation technology to benefit China's civilian and military programs. In this instance, it was GE Aviation's composite aircraft engine fan module. GE was the only company in the world to develop and possess this proprietary acoustical technology.

This particular case clearly draws a direct and bold line from President XI to the CCP's "Made in China 25" plan, to the MSS, and right to GE. Additionally, and not to be minimized, this was the first time an intelligence off er from China's MSS was indicted and convicted under the economic espionage statute. Additional and related indictments set forth XU's recruitment of other "insiders" in the U.S. to illegally obtain intellectual property and trade secrets from U.S. corporations, research institutes, and academia.

THE GE BIGGER PICTURE

As I stated in the beginning of the statement for the committee, XI has one goal, to be THE global leader. This includes civilian aviation.

Next month China will roll out the first flight of their COMAC 919 (C919) single isle passenger airliner. The C919 is a narrow-body passenger jet built by the Commercial Aircraft Corporation of China (Comac), a state-owned company based in Shanghai.

The clear intention of this effort is to both compete, and eventually overtake, both Boeing and Airbus, as the leader in global passenger transportation. China can build their aircraft quicker and cheaper, and as most of their stolen technology which eventually makes its way into the global market, is stolen technology delivered at half the market price.

As recently depicted and illustrated by CROWDSTRIKE, and other media outlets, almost the entire make-up of the C919 is stolen technology from numerous aviation and technology industries from around the world. (I have attached the graphic for the subcommittee).

NO LIMITS TO TARGETED VICTIMS

The past ten years of indictments and prosecutions have highlighted just the surface of the insidiousness of China's approach to obtaining early and advanced technologies, ideation, research, intellectual property and trade secrets.

Boards of Directors and investment leaders must not only have a comprehensive understanding of the CCP's intentions, but as well look beyond the next fiscal quarterly earnings call and think strategically with respect to how their decisions and unawareness of the long-term threat impact their businesses and industries, which is woven with our national security, economic stability, and endurance of our republic.

CHINA CREATS UNFAIR PLAYING FIELD

In 2017, the Communist Party of China issued new state laws to facilitate the perniciousness of their efforts to obtain data, from everywhere, but a whole of Chinese society approach. Three specific portions of those laws should be understood, and be an enduring reminder to CEOs, General Counsels, Chief Data Officers, CIOs, and CISOs, throughout our private sector ecosystems.

The first is Article 7 of the People's Republic of China National Intelligence Law summarily stating that all business and citizens *shall* cooperate with China's intelligence services and *shall* protect all national work secrets.

The second is Article 77 of the same National Security Law summarily stating that Chinese citizens and business *shall* provide anything required or requested by the Chinese government or intelligence services.

The third is Article 28 of the 2016 Cybersecurity Law summarily stating that all network operators *must* provide data to, and anything requested by, national, military or public security authorities.

Hence, if you are a U.S. business seeking to enter a business relationship with a company in, or from, China, your data will be obtained and provided to the

MSS or PLA for their holding and ultimate usage. This includes third party data as well. The analogy is a U.S. company enters into a business deal or partnership with a company from another country. The U.S. company must provide all relevant and requested data from their company, as well as the partner company from another country to the NSA, CIA and FBI.

Additionally, China plays by their own rules. China does not conform to any normalized set of regulations, guidelines, norms, laws or value-based agreements throughout the global economic ecosystem.

To further the Communist Party of China's unleveled economic playing field, out of the 15 largest companies inside China, 13 are either owned by the CCP or run by the CCP.

Hence, for a prospective business deal with a company in the U.S., the Chinese company can partner with China's intelligence services to assist in negotiations, vulnerabilities, and utilization of any already acquired data from said U.S. company. Again, this is akin to a U.S. based company calling he CIA and NSA for assistance on preparing a bid to merge with a company outside the U.S. and use all types of classified collection to form a proposal or use during negotiations and obtain the requisite funding to from the Federal Reserve Bank.

INSIDER THREAT

The Insider Threat epidemic originating from the CCP has been nothing short of devastating to the U.S. corporate world and their success in obtaining intellectual property. Go to Department of Justice's web site and search economic espionage. The result is hard to contemplate and will surely provide a disbelieving cognitive pause. And those listed cases are just what was identified, reported by a U.S. company, and then prosecuted.

In one particular example, in April 2021, a former scientist at Coca-Cola and Eastman Chemical was convicted of economic espionage & theft of trade secrets, on behalf of the CCP. The scientist stole trade secrets related to formulations for bisphenol-A-free (BPA-free) coatings for the inside of beverage cans. The scientist was working with a corporate partner inside China to monetize the stolen data utilizing the new company in China. The CCP had invested millions in the shadow new company in China. The stolen trade secrets cost US companies approximately $120 million to develop per open-source reporting. This is one example from the dozens identified in the past five years.

When you combine the persistence of intent and capability of the CCP's cyber intrusion programs, with the onslaught of insiders being arrested, indicted and convicted by the FBI/DOJ over the past decade, it creates a formidable mosaic of intellectual property theft at seemingly insurmountable levels.

So, what is current and next in the targeted areas of the CCP? Look no further than President Biden's economic growth agenda and proposed congressional legislation detailing our strategic movement in the next few years. Look at every grain of it. Electric vehicles, battery technology, bio agriculture, precision medicine and sustainable green energy.

WHY IT ALL MATTERS

In closing, I would like to thank this subcommittee, and the Judiciary Committee, for acknowledging the significant threat posed by China, not only by holding this hearing. Continuing to combat the threat posed by the CCP will take a whole of nation approach with a mutual fund analogous long-term commitment. Such an approach must start with robust and contextual awareness campaigns. The WHY matters. Regarding these awareness campaigns, we must be specific and reach a broad audience, from every level of government to university campuses, from board rooms to business schools, educating on how China's actions impair our competitive spirit by obtaining our research and development, trade secrets and intellectual property, and degrading our ability to maintain our role as economic global leaders. I have provided some recommendations for this committee, the IC, the administration, academia, research and development, as well as CEOs and board of directors in our holistic efforts to detect and deter these threats, as well as educate, inform, and compete. Our nation needs strategic leadership now more than ever, particularly when we face such an existential threat from a capable competitor who is looking beyond competition to the global dominance.

Lastly, I would like to state for the record the significant national and economic security threat we face from the Communist Party of China is NOT a threat posed by Chinese people, as individuals. Chinese Nationals, or any person of Chinese ethnicity here in the U.S., or around the world, are not a threat and should NOT be racially targeted in any manner whatsoever. This is an issue pertaining to a communist country, with an autocratic dictator who is committed to human rights violations and stopping at nothing to achieve his goals. As a nation, we must put the same effort into this threat as we did for the terrorism threat. The threat from China, particularly with respect to the long-term existential threat is hard to see and feel, but I would suggest it is much more dangerous to our viability as a nation.

Recommendations:

The holistic, and existential threat posed by the CCP is one of the few bipartisan areas of concern in the US Congress today. Congress must take this opportunity expeditiously advise, inform, and detail the threat to every fabric of our society, and why it matters. We must, as a nation, compete at the highest level possible while at the same time understand why we are doing so, and what is at stake.

1. Enhanced and aggressive real time and actionable threat sharing with private sector. The CCP delivers their Five-Year Plans, which are public, and clearly designate the technologies they require, and hence, becomes a framework for their comprehensive theft machine. Add to this plan, the clandestine collection by our Intelligence Community designating their modes operandi and provide this framework directly to targeted industries. Create an Economic Threat Intelligence entity which delivers this actionable, real time threat information to CEOs, Boards of Directors, state and local economic councils to enable risk-based decision making on investments and partnerships. The analogy would be the Financial Services ISAC. This intelligence delivery mechanism should include the Intelligence Community, FBI, and CISA and have at is core constituency state and local entities at risk and utilize existing vehicles such National Governors Association and the Chamber of Commerce to increase threat awareness of illicit activities investment risk at the state and local level.

2. Close governance and oversight of proposed China Competition legislation with measurable outcomes and effectiveness reviews to ensure the CCP is not already in the process of stealing congressionally funded research and technology.

3. Create a panel of CEOs who can conversely advise and inform Congress, the IC, and U.S. Government entities on perspectives, challenges, and obstacles in the investment arena and private sector. Currently, there is no such venue existing. I would recommend a *Business Round Table* type of framework. Membership should be diverse and include but not limited to the following sectors: Financial Services, Telecommunications, Energy, Bio Pharmaceutical, Manufacturing, Aerospace, Transportation, Private Equity and Venture Capital. Select key government participants

and encourage actionable outcomes. This entity should be co-chaired by a CEO form this group.

4. Create a domestic version of the State Department's Global Engagement Center. The IC, and U.S. government needs a "sales and marketing" capability which can partner with U.S. business and academia to guide new and emerging threat intelligence, answer pertinent questions, and construct awareness campaigns against the threat from the CCP and other similar issues.

5. Establish an over-the-horizon panel to discuss, in a public forum, emerging threats posed to the long-term economic well-being of America. The first topic should take a close look at the strategic investments the CCP is making into state and local pension plans, as well as the Federal Thrift Savings Plan, and the U.S investment into green energy.

6. Create a bipartisan commission to evaluate the efficacy and effectiveness of the current U.S. Paten process to create modernization and baseline security to prevent our adversaries from stealing the technology during the long patten process.

Mr. ISSA. Thank you.
Mr. Greer?

STATEMENT OF JAMIESON GREER

Mr. GREER. Good morning, Chair, Ranking Members, Members and staff.

You should know before beginning that I'm appearing in my personal capacity and none of my comments today can be attributed to any current or former employer or client, although I hope that many of them agree with me.

I'm heartened to hear the consensus between the Chair and the Ranking Member on these important issues. Mr. Nadler, I'm right there with you on China's entry into the World Trade Organization.

I'm grateful for the opportunity to appear before this Subcommittee to address one of the most important issues for our U.S. economic and national security; that is, our strategic competition with the People's Republic of China and the role of IP in that competition.

As a former officer in the U.S. Armed Forces, former Chief of Staff in the Office of the U.S. Trade Representative, and a practicing international trade attorney in the private sector, I view these issues through both an economic and a national security lens. I've heard directly, and hear directly, from U.S. businesses and workers on how the Chinese approach to IP has injured their economic prospects, those of U.S. businesses. I've worked to develop and implement U.S. policies to counter these harmful practices, and I've been part of U.S. teams tasked with negotiating with Chinese officials on these critical issues. These experiences all underscore for me the seriousness of this challenge and the continuing and urgent need to take strong action.

It's difficult to overstate the importance of IP for the U.S. economy and workers. The U.S. Patent and Trademark Office found that IP-intensive industries account for 41 percent of domestic outcome and 44 percent of U.S. jobs. That was a 2019 study.

U.S. military superiority and accelerating Chinese military capability are driven by IP-intensive technology. U.S. innovation must be defended, including through negotiation of concessions by China to protect IP rights and, where necessary—and this is increasingly important—very strong enforcement of trade agreements and rules to obtain compliance.

The optimal policy prescriptives for dealing with China's approach to IP are tied to how one views the overall challenge posed by China. I'm concerned, as you all are, that China has used its access to Western technology to try to become a hegemon and to eliminate key Western industries and our economic strength. Those who don't share this assessment will have a different view of the appropriate policy response, but we need to make sure we have all the facts before us. So, this hearing is very helpful.

I won't go into detail on the ways that China steals technology. Mr. Evanina has done that, and I think we will discuss it in more detail. We've also heard about the harm Chair Issa talked about, upwards of $600 billion in cost to U.S. industry every year.

It's important to me that we all understand the historical context of this issue, which, unfortunately, is not new. The administrations

of George H. W. Bush and Bill Clinton each made efforts to negotiate improved IP rights and enforcement in China in 1989, 1992, 1995, and 1996. Each of these efforts resulted in small agreements with commitment by China to change. They didn't change, and unfortunately, there was no enforcement following that.

As Mr. Nadler pointed out, despite all that, China was—the red carpet was rolled out for China to enter the World Trade Organization and became part—also, as part of that, the Agreement on Trade-related Aspects of Intellectual Property, TRIPS.

Then, we saw, under the Bush Administrations and Obama Administrations, a series of dialogs where China, once again, agreed to make changes. In fact, you can see that, if you look from 2010–2016, there are 10 occasions, some including Xi Jinping himself, where China agreed that they were going to make changes on IP. Again, promises are great; discourse can be helpful, but there was no enforcement.

Fast forward, then, to 2017, when President Trump directed my former boss, Bob Leitheiser, to investigate China's practices under Section 301 of the Tariff Act of 1930, and most importantly, to take action, if warranted. The Section 301 investigation, which I have the report right here in my hand—I hope some of you have it, too—it found that China was harming the U.S. economy through its practices.

We can talk about all these different things, like I said, but some of the most beneficial outcomes of the Section 301 investigation have been:

First, imposing tariffs on high-tech items from China to prevent our dependence on China for such items that are often produced from stolen IP. Think here electric vehicles, robotics, aerospace items, like Mr. Evanina was discussing.

Second, is we did obtain commitments from China to improve its IP system, particularly for trade secrets, and to eliminate forced technology transfer. Now, we're not naive in thinking that China can sign a piece of paper and we would get them to change, but that's why the tariffs were kept in place—to maintain leverage.

The Biden Administration in the past has stated that they embrace the Phase One deal that came out of this investigation, including the tariffs. Although the Chinese have made some changes consistent with their Phase One agreement obligations, stakeholders agree that these efforts, although welcome, are insufficient.

So, where do we go from here? I'm happy to talk throughout the hearing today about how we can use existing tools to combat IP theft by China and how we might develop new tools as well.

There are a number of tools at hand, but the underlying use of any of these tools, you have to have the political will across parties and administrations, and importantly, in the U.S. business community. Absent the sustained will, it will be increasingly difficult to protect the U.S. economy and American workers from the negative impact of China's policies and practices on IP.

Thank you.

[The prepared statement of Mr. Greer follows:]

WRITTEN TESTIMONY OF JAMIESON L. GREER

BEFORE

THE U.S. HOUSE OF REPRESENTATIVES JUDICIARY COMMITTEE

SUBCOMMITTEE ON COURTS, INTELLECTUAL PROPERTY, AND THE INTERNET

"INTELLECTUAL PROPERTY AND STRATEGIC COMPETITION WITH CHINA: PART I"

MARCH 8, 2023

I. Introduction

Good morning. I am grateful for the opportunity to appear before this Subcommittee to address one of the most important issues for our U.S. economic and national security: our strategic competition with the People's Republic of China[1] and the role of intellectual property ("IP").[2] Reports and data from the private sector, civil society, and governments document in granular detail how the Chinese government sponsors, directs, and permits forced technology transfer of IP and know-how from the United States and other countries. These practices and policies accelerate China's push to achieve regional hegemony, undermine U.S. technological, security, and economic leadership, and cost U.S. innovators and workers hundreds of billions of dollars. All of this is happening at a time of increased ambition by China and as part of a generational effort by the Chinese government to support its national champions across all sectors of its economy.

As a former officer in the U.S. armed forces, former Chief of Staff in the Office of the U.S. Trade Representative, and practicing international trade attorney in the private sector, I view these issues through an economic and national security lens. I have heard directly from U.S. businesses and workers on how the Chinese approach to IP has injured their economic prospects, I have worked to develop and implement U.S. policies to counter harmful practices, and I have been part of U.S. teams tasked with negotiating with Chinese officials on these critical issues. These experiences underscore for me the seriousness of this challenge and the continuing and urgent need to take strong action.

It is difficult to overstate the role of IP for the U.S. economy and workers. According to a 2022 report by the U.S. Patent and Trademark Office ("PTO"), IP-intensive industries accounted for 41 percent of domestic output and 44 percent of U.S. jobs in 2019.[3] U.S. military superiority – and accelerating Chinese military capability – is driven by IP-intensive technology.[4] U.S. innovation is one of the crown jewels of our system and must be defended, including through negotiation of concessions by China and other trading partners to protect IP and, where necessary, strong enforcement of agreements and trade rules to obtain compliance. To be sure, there can be short-term costs to strong enforcement efforts, including economic and supply chain realignment resulting from managing or restricting certain types of trade and investment between the United States and China. But the cost of failure in addressing Chinese forced technology transfer is enormous: continued off-shoring of jobs and key industries, a loss in military superiority, and economic dependence on China.

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[1] References to "China" are references to the government of the People's Republic of China ("PRC"), the Chinese Communist Party ("CCP"), or instrumentalities thereof, as appropriate.
[2] I am appearing today in my personal capacity and not on behalf of any current or former employer or client.
[3] Intellectual Property and the U.S. Economy: Third Edition, U.S. Patent and Trademark Office (2022), at iii, *available at* https://www.uspto.gov/sites/default/files/documents/uspto-ip-us-economy-third-edition.pdf.
[4] *See, e.g.*, Jon Bateman, U.S.-China Technological "Decoupling," Carnegie Endowment for International Peace (2022) at 57, *available at* https://carnegieendowment.org/files/Bateman_US-China_Decoupling_final.pdf.

The optimal policy prescriptions for dealing with China's approach to IP are tied to how one views the overall challenge posed by China. As former Deputy National Security Advisor Matt Pottinger often says, we should take Chinese leadership at their word. Chinese military textbooks attribute to Xi Jinping the following statements: "our state's ideology and social system are fundamentally incompatible with the West. Xi has said 'This determines that our struggle and contest with Western countries is irreconcilable, so it will inevitably be long, complicated, and sometimes even very sharp."[5]

Thus, I view Chinese ambitions – as currently articulated and pursued – as an existential threat to the American way of life: our physical safety, our personal privacy and freedom, our economy and jobs, and even our system of government. I am concerned that a powerful Chinese Communist Party ("CCP") and a powerful People's Liberation Army ("PLA") – fueled by access to Western technology – are using and will continue to use their power not only to limit U.S. influence abroad but also to eliminate our key industries and economic strength here at home. Those who do not share this assessment of the situation obviously will have a different idea as to the appropriate policy response. It is certain that the United States will need to find a constructive way to coexist with China, and this will mean continued trade in some sectors. But everyone needs to work from a set of common facts to develop good policy responses, and I intend to present some of those facts today along with some policy ideas. My hope is that this can inform the conversation and provide some insight into what China does, how it affects the United States, and what we should do.

II. China's Policies and Practices Regarding Forced Technology Transfer

China has a number of legal regimes and processes related to the administration and enforcement of IP rights. I would like to focus my testimony on China's efforts to obtain U.S. and foreign IP through nonconsensual means, a practice broadly referred to as "forced technology transfer." This strategy by the PRC is well-documented, and Chinese efforts to obtain IP through coercion or unfair practices are not new.

There is a very good exposition of Chinese forced technology transfer practices in the 2018 Section 301 Investigation report by the Office of the U.S. Trade Representative ("USTR") titled "Technology: Protecting America's Competitive Edge" ("Section 301 Report"). In the Section 301 Report, USTR identified several ways that China effectuates forced technology transfer. These methods include the following:

a. ***Foreign Ownership Restrictions and Administrative Review and Licensing Processes.*** This includes "opaque and discretionary administrative approval processes, joint venture requirements, foreign equity limitations, procurements, and other mechanisms to regulate or intervene in U.S. companies' operations in China, in order to require or pressure the transfer of technologies and IP to

[5] Matt Pottinger, Matthew Johnson, and David Feith, "Xi Jinping in His Own Words," Foreign Affairs (Nov. 30, 2022).

Chinese companies. Moreover, many U.S. companies report facing vague and unwritten rules, as well as local rules that diverge from national ones, which are applied in a selective and non-transparent manner by Chinese government officials to pressure technology transfer."[6]

b. ***Discriminatory Licensing Restrictions.*** These restrictions "deprive U.S. companies of the ability to set market-based terms in licensing and other technology-related negotiations with Chinese companies and undermine U.S. companies' control over their technology in China. For example, the Regulations on Technology Import and Export Administration mandate particular terms for indemnities and ownership of technology improvements for imported technology, and other measures also impose non-market terms in licensing and technology contracts."[7]

c. ***Strategic Outbound Investment.*** The Chinese governments "directs and/or unfairly facilitates the systematic investment in, and/or acquisition of, U.S. companies and assets by Chinese companies to obtain cutting-edge technologies and intellectual property and generate large-scale technology transfer in industries deemed important by Chinese government industrial plans."[8] It also uses subsidies to fuel this strategy of broad, sectoral acquisitions.

d. ***Intrusion into U.S. Commercial Computer Networks and Cyber-Enabled Theft of Intellectual Property and Sensitive Commercial Information***. The Chinese government and state actors "conduct{} or support{} unauthorized intrusions into U.S. commercial computer networks or cyber-enabled theft of intellectual property, trade secrets, or confidential business information, and whether this conduct harms U.S. companies or provides competitive advantages to Chinese companies or commercial sectors."[9]

e. ***Pretextual National Security or Cybersecurity Measures***. "China increasingly is incorporating into its commercial regulations protections allegedly needed for 'national security' or 'cybersecurity' purposes. . . . Companies have raised particular concerns about the *Cybersecurity Law of the People's Republic of China (Cybersecurity Law)*," China's Regulations on Classified Protection of Information Security, also known as the Multi-Level Protection Scheme, data localization requirements, China's encryption regulations, and the China Compulsory Certification testing regime for information security products."[10] All of these measures require or induce disclosure of information to the Chinese

[6] Section 301 Report at 5.
[7] *Id.*
[8] *Id.*
[9] *Id.*
[10] *Id.* at 177 – 79.

government or Chinese persons, or otherwise increase the risk of disclosure of information without consent.

f. ***Inadequate Intellectual Property Protection***. USTR also identified "inadequate IP enforcement mechanisms available in China {and} . . . substantial obstacles to civil enforcement and ineffective and inconsistent criminal and administrative enforcement by the government of China."[11] Although there have been incremental improvements in the Chinese system over the years, the size of the Chinese economy and China's role the foremost U.S. competitor makes these issues more severe. Improvements in the Chinese IP system at the margin do little to address the systemic acquisition of U.S. technology on a non-market, nonconsensual basis.

g. ***China's Anti-Monopoly Law***. "China uses the *Anti-Monopoly Law of the People's Republic of China* as a means to obtain U.S. IP, citing as examples the AML agencies' multiple draft guidelines. . . . {concern that} certain enforcement actions allegedly addressing abuse of dominance in the exercise of IP rights." There is also concern regarding "State Administration of Industry Commerce *2015 Rules on the Prohibition of Conduct Eliminating or Restricting Competition by Abusing Intellectual Property Rights* and the March 2017 draft State Council *Anti-Monopoly Commission Guidelines Against Abuse of Intellectual Property Rights*."[12]

h. ***China's Standardization Law***. China's *Amendments to the Standardization Law of the People's Republic of China* raise the possibility that "U.S. companies will be required to transfer valuable IP or license it on non-market terms as a condition of participation in standards setting bodies. Stakeholders assert that the amendments impose unique and potentially damaging requirements on enterprises to publicly disclose functional indicators and performance indicators of their products or services, which may result in unnecessary costs and risks. Furthermore, the Amendments reportedly endorse a preference for indigenous innovation in Chinese standards, to the detriment of U.S. and other non-Chinese companies."[13]

i. ***Talent Acquisition***. The Chinese government and state-owned enterprises have implemented medium- and long-term plans to recruit foreign talent and Chinese persons overseas to boost their national champions. These programs are global but are concentrated in U.S. universities and Silicon Valley. These programs reportedly attract top talent and technology executives "by paying well above

[11] *Id.* at 179 – 180.
[12] *Id.* at 180.
[13] *Id.* at 181.

market compensation—enabled by government financing, direction, and support."[14]

There are also other practices that were not highlighted in the Section 301 Report that bear mentioning. These include the following:

j. ***Joint Research Efforts with PRC or PLA Officials***. Recent literature reviews claim that PLA organs and officials have collaborated with Western scientists to conduct research and development.[15] An investigative report in Italy found that over the past twenty years, 3,000 European studies were carried out in collaboration with scientists and institutions "directly linked" to the PLA.[16]

k. ***Anti-Suit Injunctions***. Chinese courts in some instances have been willing to enjoying foreign litigants from bringing suits in non-Chinese jurisdictions to enforce patent rights. This is often in the context of "standard essential patents," where companies notionally agree to negotiate IP licensing terms, even while the patents are in use by the licensee. This permits Chinese courts to assert global jurisdiction over such disputes.[17]

According to USTR's most recent review of Chinese IP policies, although there has been some improvement regarding certain of these methods for forced technology transfer, substantial concerns persist.[18] Full implementation of Phase One Agreement commitments, discussed in more detailed below, continues to be lacking. It is yet to be seen whether implementation of written amendments and regulations are carried out by courts and administrative bodies in China with jurisdiction over IP rights and enforcement. Moreover, issues with bad faith trademarks, counterfeit goods, and online piracy continue to fall well short of international norms.[19]

III. Effect on the United States

It is difficult to overstate the impact of Chinese forced technology transfer policies. The Section 301 Report provided a conservative figure, estimating the harm to the U.S. economy as approximately $50 billion in 2018.[20] However, the bipartisan Huntsman Commission on the

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[14] *Id.* at 182.

[15] *See, e.g.*, Jeffrey Stoff, "Should Democracies Draw Redlines Around Research With China?," The Center for Research Security & Integrity (2023), *available at* https://researchsecurity.org/wp-content/uploads/2023/01/Click-here-to-download-the-full-publication.-Stoff-DrawingRedlinesFINAL.pdf.

[16] *See* "In the EU, 3,000 Research Projects Develop Technologies with Scientists Linked to the Chinese Army," Investigative Reporting Project Italy (May 19, 2022), *available at* https://irpimedia.irpi.eu/finanziamenti-ricerche-cina-europa-applicazioni-militari/.

[17] *See, e.g.*, "China Wields New Legal Weapon to Fight Claims of Intellectual Property Theft," Wall Street Journal (Sept. 26, 2021), *available at* https://www.wsj.com/articles/china-wields-new-legal-weapon-to-fight-claims-of-intellectual-property-theft-11632654001.

[18] *See, e.g.*, 2022 Special 301 Report, USTR (2022) at 44 – 53, *available at* https://ustr.gov/sites/default/files/IssueAreas/IP/2022%20Special%20301%20Report.pdf.

[19] *Id.*

[20] *Notice of Determination and Request for Public Comment Concerning Proposed Determination of Action Pursuant to Section 301: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 83 Fed. Reg. 14906, 14907 (Office of the U.S. Trade Rep. Apr. 6, 2018).

Theft of American Intellectual Property (the "Huntsman Commission") "estimate{s} that the annual cost to the U.S. economy continues to exceed $225 billion in counterfeit goods, pirated software, and theft of trade secrets and could be as high as $600 billion. It is important to note that both the low- and high-end figures do not incorporate the full cost of patent infringement—an area sorely in need of greater research."[21] In terms of jobs, the Information Technology & Innovation Foundation estimated that forced technology transfer caused 3.4 million lost U.S. jobs between 2001 and 2015.[22]

Manufacturing tends to be the hardest hit sector when intellectual property is stolen or otherwise obtained through force or non-market means. Manufacturing and IP go together. Indeed, the U.S. PTO reports that manufacturing is the most patent-intensive industry in terms of employment numbers.[23] It should come as no surprise that, after China joined the WTO in 2001, corporations took advantage of a Chinese economy with permanent access to the U.S. and other Western markets and invested heavily in the country. The Economic Policy Institute reports that United States lost approximately 3.7 million manufacturing jobs to China in the years following China's accession to the WTO,[24] and the towns and regions hardest hit by this have not recovered. And this has impacted American innovation: recent research from MIT and Harvard found that "U.S. patent production declines in sectors facing greater import competition."[25]

IV. U.S. Efforts to Combat Chinese Policies and Practices

So what has the United States done to address this persistent threat to our economy and national security? In the same way that Chinese forced technology transfer efforts are not new, U.S. efforts to mitigate this issue have gone on for decades. The administrations of George H.W. Bush and Bill Clinton each made efforts to negotiate improved IP rights and enforcement in China in 1989, 1992, 1995, and 1996, and each of these efforts ended in a bilateral agreement where the Chinese committed to reform.[26] But the United States took no enforcement actions in connection with these agreements (or their subsequent violation).

The Clinton Administration laid the foundation for China to join the World Trade Organization in 2000, a policy continued and brought to fruition by the Bush Administration. Accession to the WTO for China also meant membership in the WTO Agreement on Trade-

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[21] Update to the IP Commission Report, Huntsman Commission (2017) at 9, *available at* https://www.nbr.org/wp-content/uploads/pdfs/publications/IP_Commission_Report_Update.pdf.
[22] Section 301 Report at Appendix A, p. 10.
[23] Intellectual Property and the U.S. Economy: Third Edition, U.S. Patent and Trademark Office (2022), at 6, *available at* https://www.uspto.gov/sites/default/files/documents/uspto-ip-us-economy-third-edition.pdf.
[24] Robert E. Scott and Zane Mokhiber, "Growing China Trade Deficit Cost 3.7 Million American Jobs Between 2001 and 2018," Economic Policy Institute (Jan. 30, 2020), *available at* https://www.epi.org/publication/growing-china-trade-deficits-costs-us-jobs/.
[25] David Autor, David Dorn, Gordon Hanson, Gary Pisano, and Pian Shu, "Foreign Competition and Domestic Innovation: Evidence from U.S. Patents," (Jan. 2019), *available at* https://chinashock.info/wp-content/uploads/2020/06/ADHPS_foreign_competition.pdf.
[26] *See, e.g.*, Massey, Joseph A., "The Emperor Is Far Away: China's Enforcement of Intellectual Property Rights Protection, 1986-2006," Chicago Journal of International Law: Vol. 7: No. 1, Article 10 (2006) at 232, nn. 4-7, *available at* https://chicagounbound.uchicago.edu/cjil/vol7/iss1/10.

Related Aspects of Intellectual Property ("TRIPS"). TRIPS requires countries to provide for and protect basic IP rights.[27] But again, there was a general failure of the Bush administration, and then the Obama administration, to rigorously hold China to account for trade violations, including violations of TRIPS.[28] China was violating numerous TRIPS rules and the underlying international treaties on IP during this time. However, the United States was led into repetitive "dialogues" – on China's terms – to talk about issues rather than resolve them or take appropriate enforcement action. In these discussions, China's practices and U.S. conditions seem to have been treated with moral equivalence, and developing a positive joint statement with China appears to have been the primary goal of U.S. government officials rather than securing protection for American IP. Below, I have reproduced a chart from the Section 301 investigation showing ten times during just the Obama Administration that China made commitments on forced technology transfer:

[27] Agreement on Trade-Related Aspects of Intellectual Property Rights (as amended on 23 January 2017), *available at* https://www.wto.org/english/docs_e/legal_e/31bis_trips_01_e.htm.
[28] The Bush Administration brought one WTO case in 2007 against China regarding enforcement of copyright and trademark rights under TRIPS. The United States prevailed in that case, and China claimed to have brought its laws into conformity with the ruling. *See* China — Measures Affecting the Protection and Enforcement of Intellectual Property Rights, DS362, *available at* https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds362_e.htm.

Table I.1 China's Bilateral Commitments Relating to Technology Transfer, 2010 - 2016

Year	Mechanism	Commitment
2010	S&ED	China reaffirmed that the terms and conditions of technology transfer, production processes, and other proprietary information will be determined by individual enterprises.
2011	JCCT	China confirmed that it does not and will not maintain measures that mandate the transfer of technology in the New Energy Vehicles Sector. China further clarified that "mastery of core technology" does not require technology transfer for NEVs.
2012	S&ED	China reaffirmed its commitment that technology transfer is to be decided by firms independently and not to be used by the Chinese government as a pre-condition for market access.
2012	Xi Visit Commitment	China reiterated that technology transfer and technological cooperation shall be decided by businesses independently and will not be used by the Chinese government as a pre-condition for market access.
2012	JCCT	China reaffirmed that technology transfer and technology cooperation are the autonomous decisions of enterprises. China committed that it would not make technology transfer a precondition for market access.
2014	JCCT	China committed that enterprises are free to base technology transfer decisions on business and market considerations, and are free to independently negotiate and decide whether and under what circumstances to assign or license intellectual property rights to affiliated or unaffiliated enterprises.
2014	JCCT	China confirmed that trade secrets submitted to the government in administrative or regulatory proceedings are to be protected from improper disclosure to the public and only disclosed to government officials in connection with their official duties in accordance with law.
2015	Xi Visit Commitment	China committed not to advance generally applicable policies or practices that require the transfer of intellectual property rights or technology as a condition of doing business in the Chinese market.
2015	Xi Visit Commitment	China committed to refrain from conducting or knowingly supporting cyber-enabled theft of intellectual property cyber-enabled theft of intellectual property, including trade secrets or other confidential business information, with the intent of providing competitive advantages to companies or commercial sectors.
2016	Xi Visit Commitment	China committed not to require the transfer of intellectual property rights or technology as a condition of doing business.

Source: USTR, CATALOGUE OF JCCT AND S&ED COMMITMENTS (2016); 2016 USTR REP. TO CONG. ON CHINA'S WTO COMPLIANCE 7.

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Other U.S. government agencies have made substantial efforts to stop forced technology transfer. In 2014, the Department of Justice announced that it had indicted 5 suspected hackers

[29] Section 301 Report at 8.

from a Chinese military unit responsible for obtaining technology from U.S. companies' and labor unions' computer systems. While the indictments were important for the United States to signal its displeasure to China and highlight our capability to identify threats, the indictments were largely symbolic, as the 5 hackers were not in the United States and were not extradited by China.[30] The indictment was one of the catalysts for further discussions with China on forced technology transfer issues. Following this, General Secretary Xi Jinping himself reportedly promised to change China's policies and practices regarding forced technology transfer. Xi's 2015 commitment to President Obama to stop cyber intrusions was hailed as a breakthrough moment. But this commitment was simply reported in a White House fact sheet following the meeting, and was not echoed in Chinese press releases or put down on paper with wet signatures.[31] There was no enforcement mechanism for this agreement. It seems impossible to obtain a weaker commitment than this.

Thus, in 2017, the U.S. government found itself again in the situation of needing to address these issues. As noted earlier, at the direction of President Trump, USTR undertook a Section 301 investigation on forced technology transfer covering all of the policies and practices discussed at length above. After more than six months of research, public comment and hearings, analysis, and interagency coordination, USTR released the Section 301 Report in March 2018. At the same time, the President directed the appropriate agencies to take action to obtain the elimination of China's policies and practices. These directives included:

- Imposing tariffs on IP-intensive products from China, including high-tech items linked to the "Made in China 2025" initiative;
- Bringing a WTO dispute settlement case with respect to China's violations of TRIPS obligations regarding licensing; and
- Strengthening investment screening by the Committee on Foreign Investment in United States ("CFIUS") to prevent the strategic acquisition of critical technologies by Chinese actors.[32]

With respect to tariffs, USTR imposed 25 percent tariffs on $50 billion worth of Chinese imports as compensation for the economic harm caused by China's policies and practices. This is the first time the U.S. actually levied a penalty on China after decades of forced technology transfer. Tariffs were initially focused on IP-intensive sectors and sectors where China has articulated a desire to dominate global markets. One key example is a 25 percent tariff on electric vehicles made in China. At the time, there were few imports of such vehicles from

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[30] "U.S. Charges Five Chinese Military Hackers for Cyber Espionage Against U.S. Corporations and a Labor Organization for Commercial Advantage," May 19, 2014, *available at* https://www.justice.gov/opa/pr/us-charges-five-chinese-military-hackers-cyber-espionage-against-us-corporations-and-labor.

[31] *See* FACT SHEET: President Xi Jinping's State Visit to the United States, Sept. 25, 2015, https://obamawhitehouse.archives.gov/the-press-office/2015/09/25/fact-sheet-president-xi-jinpings-state-visit-united-states.

[32] *Actions by the United States Related to the Section 301 Investigation of China's Laws, Policies, Practices, or Actions Related to Technology Transfer, Intellectual Property, and Innovation*, 83 Fed. Reg. 13099 (Mar. 27, 2018).

China. Now, China has increased its exports to the world of electric vehicles dramatically,[33] but Chinese electric vehicles still take up only a fraction of the U.S. market.[34] There is no question that the Section 301 tariffs are partially responsible for this dynamic and continue to defend our IP-intensive industries (and other industries) from unfair competition enabled by forced technology transfer.

USTR also brought a WTO case regarding certain licensing regulations, which China ultimately adjusted to remove patently discriminatory provisions. The case was resolved without full litigation during the course of negotiations with China. And the Administration worked closely with Congress to implement the Foreign Investment Risk Review Modernization Act of 2018 ("FIRRMA") to strengthen CFIUS review.

But it is important to understand that China's reaction to the Section 301 investigation began with condemnation and then morphed into disbelief that the United States would take any meaningful action. The Chinese can be forgiven for expecting this because certain U.S. business interests were successful for many years in staving off any serious enforcement efforts against Chinese unfair trading practices and IP theft. In fact, certain U.S. businesses were quite comfortable sharing important technology if it meant getting a foot hold, seeing a jump in quarterly earnings, and potentially accessing the Chinese market. I have heard this same argument from companies in other Western countries. (This is a discussion for another time, but the Chinese market has always been elusive even for companies that are "all in" in China, as China's primary economic policy has been and continues to be the promotion of indigenous innovation and production, and not free trade.) In 2018, instead of responding positively to the findings of the Section 301 investigation and changing their policies and practices, the Chinese went through the motions of yet more dialogue and changed nothing. Once the United States took the step of imposing tariffs, the Chinese continued to refuse to make any changes, and instead imposed their own tariffs, without any domestic administrative process at all.

Tariffs escalated until the negative economic effects brought the Chinese to the table for discussions on how to deescalate the situation. The ensuing negotiations over several months ended with a "Phase One" agreement between the United States and China. The Chinese were only willing to make limited – but important – commitments on forced technology and intellectual property. Notably, the Agreement did not require the United States to remove the tariffs. Instead, these were kept in place to serve as continuing leverage and a verifying tool to promote compliance and to compensate for China's unfair practices until they are eliminated.

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[33] *See* Dan Wang, "The EV Export Opportunity," Gavekal Research (Feb. 9, 2023), *available at* https://research.gavekal.com/teaser/the-ev-export-opportunity/; *see also* "China Has Emerged from the Pandemic as an Auto Export Powerhouse," Gavekal Research (Feb. 17, 2023), *available at* https://twitter.com/Gavekal/status/1626512012196081664?lang=en.

[34] Census Bureau data report that in 2022, 3.6 percent of imported electric passenger vehicles, by value, came from China relative to the value of imports from main auto exporting trading partners (*i.e.*, Canada, China, Germany, Japan, Korea, and Mexico). Similarly, for hybrid electric vehicles, Chinese imports made up 0.1 percent, by value, of total imports of such vehicles in 2022. *See* https://usatrade.census.gov.

The Phase One Agreement covered a wide swath of U.S.-China trade, but for purposes of this testimony, I have set out below the key provisions on IP and forced technology transfer:

a. Chapter 1 of the Phase One Agreement covers IP and Chapter 2 of the Agreement covers technology transfer. While not comprehensive, these chapters commit China to significant changes in IP and technology policies. There is no question that these were the right commitments to obtain from the Chinese government. Of course, no commitments are helpful unless they are implemented and enforced. A review of some of the key obligations demonstrate (1) that the Chinese government is willing

b. With respect to IP, the agreement required China to address numerous longstanding concerns related to trade secrets, patents, pharmaceutical-related IP issues, geographical indications, and IP enforcement. The IP chapter required China to produce an "Action Plan" for compliance with the Agreement, and the United States and China agreed to cover additional IP issues, data protection, and certain copyright matters in future discussions. Some key examples of Chinese commitments include:

    - expanding the scope of civil liability for trade secret theft beyond entities directly involved in the provision of goods and services to any natural or legal persons, such as former employers or cyber hackers;
    - expanding the definition of trade secret theft to include electronic intrusions and similar activities;
    - shifting the burden of proof to defendants in a trade secret case in appropriate circumstances, and making it easier for trade secret owners to obtain a preliminary injunction;
    - lowering the bar for criminal investigation and enforcement of trade secret theft;
    - providing patent term extension for pharmaceuticals in the event of unreasonable patent and marketing approval delays;
    - invalidating or refusing bad-faith trademark applications;
    - taking action against online infringement using notice and takedown;
    - increasing enforcement actions against counterfeit goods;
    - ensuring that government agencies use only licensed software;
    - establishing deterrent-level civil and criminal penalties for IP theft, such as through increasing the range of minimum penalties;
    - ensuring expeditious enforcement of judgment violations of IP rights;

- streamlining or eliminate authentication practices for foreign litigants seeking to enforce IP rights; and
- providing an opportunity for witness examination in civil proceedings.[35]

c. On technology transfer, Chapter 2 of the Agreement commits China to eliminate the following:

- technology transfer requirements as a condition for obtaining market access, administrative approvals, licenses, or subsidies;
- investment-related technology transfer requirements in connection with acquisitions, joint ventures, or other investment transactions;
- indigenous technology requirements, including a requirement for U.S. companies to transfer their technology to Chinese partners so that the technology can qualify as "indigenous;"
- technology licensing that is not voluntary, mutually agreed, and market-based;
- support or direction to Chinese companies to make outbound foreign direct investment to acquire foreign technology;
- discriminatory enforcement of laws and regulations;
- forced disclosure of unnecessary technical information;
- ensuring confidentiality of sensitive technical information disclosed during any administrative, regulatory, or other review process; and
- transparency and due process in administrative proceedings.[36]

As noted above, China has made some efforts to comply with several provisions of the Phase One Agreement.[37] However, the opacity of the Chinese system make it difficult to assess whether such compliance efforts have been effective in eliminating discrimination against U.S. companies and reducing instances of forced technology transfer. The Global Innovation Policy Center reports that despite positive movement by China, including Phase One Agreement

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[35] *See generally* ECONOMIC AND TRADE AGREEMENT BETWEEN THE UNITED STATES OF AMERICA AND THE PEOPLE'S REPUBLIC OF CHINA FACT SHEET: Intellectual Property, *available at* https://ustr.gov/sites/default/files/files/agreements/phase%20one%20agreement/Phase_One_Agreement-IP_Fact_Sheet.pdf.

[36] *See* ECONOMIC AND TRADE AGREEMENT BETWEEN THE UNITED STATES OF AMERICA AND THE PEOPLE'S REPUBLIC OF CHINA FACT SHEET: Technology Transfer, *available at* https://ustr.gov/sites/default/files/files/agreements/phase%20one%20agreement/Phase_One_Agreement-Technology_Transfer_Fact_Sheet.pdf.

[37] Special 301 Report at 44 – 53, *available at* https://ustr.gov/sites/default/files/IssueAreas/IP/2022%20Special%20301%20Report.pdf.

reforms, "licensors and rightsholders have continued to face substantive challenges to doing business in China on fair, nondiscriminatory, and equal terms."[38] Strong policy backed by political will is the necessary way forward to defend U.S. innovators.

V. Potential Policy Steps

Chinese efforts to resolve U.S. concerns on forced technology transfer have been slow and inadequate, at best. The United States can implement a number of policies to address this long-standing problem of forced technology transfer that fuels Chinese ambition for military and economic dominance. The following steps are not comprehensive by any means, but I offer them as suggestions for consideration by policymakers as responses to this specific problem:

a. ***Sanctions***. The Administration should impose and enforce sanctions on persons that are instrumental in or benefit from China's forced labor policies and practices, including companies, government bodies, non-governmental organizations, and individuals – including those outside China. Sanctions are strong medicine, and there is ample authority under the International Emergency Economic Powers Act ("IEEPA") for such action. In fact, Executive Order 13694 issued in April 2015 specifically authorizes sanctions in many situations, including where a person "caus{es} a significant misappropriation of funds or economic resources, trade secrets, personal identifiers, or financial information for commercial or competitive advantage or private financial gain."[39] Moreover, Congress has provided additional statutory authority for sanctions regarding intellectual property by way of the recently enacted Protecting American Intellectual Property Act.[40]

b. ***Phase One Agreement and Section 301 Enforcement***. The Administration should enforce the Phase One Agreement as promised by the current USTR, Katherine Tai.[41] This means using the dispute settlement structure of the Agreement, escalating issues as appropriate, and then taking action where commitments are not met, up to and including tariffs. As part of this process, USTR should, at a minimum, assess China's compliance and share that assessment with Congress. I note that USTR is currently undertaking a

[38] International IP Index, Global Innovation Policy Center (2023) at 103, *available at* https://www.uschamber.com/assets/documents/GIPC_IPIndex2023_FullReport_final.pdf.
[39] Executive Order 13694; Blocking the Property of Certain Persons Engaging in Significant Malicious Cyber-Enabled Activities, 80 Fed. Reg. 18077 (Apr. 1, 2015); 31 C.F.R. § 578.201(a)(2)(i)(D).
[40] *See* Protecting American Intellectual Property Act of 2022, P.L. 117-336. It should be noted that the Act unfortunately prohibits a sanction on imports from a party designated as being complicit in abuse of U.S. IP holders' rights. It is a serious failure in the bill that a party that unfairly obtains or uses a U.S. person's IP rights can still potentially obtain indirect access the U.S. market to sell the product of the stolen IP.
[41] *See* Remarks as Prepared for Delivery of Ambassador Katherine Tai Outlining the Biden-Harris Administration's "New Approach to the U.S.-China Trade Relationship," (Oct. 2021) ("As we work to enforce the terms of Phase One, we will raise these broader policy concerns with Beijing."), *available at* https://ustr.gov/about-us/policy-offices/press-office/speeches-and-remarks/2021/october/remarks-prepared-delivery-ambassador-katherine-tai-outlining-biden-harris-administrations-new.

statutorily-required review of the Section 301 tariffs, and has indicated that it may modify these tariffs to some degree. Although some modifications may be warranted for a variety of reasons, absent meaningful improvement by the Chinese, stopping the Section 301 enforcement action at this time would be a major benefit for China.

c. ***Export Controls.*** The United States should continue to develop and implement export controls, including with respect to Chinese persons that are complicit in IP theft and forced technology transfer. There have been some examples of this, such as expanded use of the Entity List that prohibits the export of U.S. items to designated persons and creative use of the Foreign Direct Product Rule to capture U.S. content used to make downstream items in third countries for shipment to China. These types of action have had powerful effects and should be a focus for the Bureau of Industry and Security and other export control agencies.

d. ***Government Incentives***. It is a positive development that recent funding opportunities under the CHIPs Act and other laws are specifically scrutinizing applicants' involvement with "foreign entities of concern," including with respect to research and development and IP. It seems like common sense, but federal dollars should not fund IP that may be shared with strategic industry players of our main geopolitical competitor. The U.S. government should explore ensuring that federal funding is not benefiting the development or sharing of IP with persons involved in forced technology transfer.

e. ***U.S. International Trade Commission ("ITC")***. The ITC has a strong tool under Section 337 of the Tariff Act of 1930 to exclude from import items that infringe on IP rights. The Huntsman Commission has issued several interesting recommendations to strengthen this tool that should be considered, including "establish{ing} a quick-response capability within the ITC for sequestering goods that incorporate stolen, pirated, or otherwise illegally procured materials or forms of IP."[42]

f. ***Courts***. Our courts should be empowered, by statute if necessary, to address the unique challenges posed by Chinese anti-suit injunctions.

g. ***IP agencies***. Our IP agencies should be empowered, again, by statute if necessary, to assess and scrutinize eligibility of applicants for patents and other IP rights and registrations. Such scrutiny and appropriate action should apply to persons associated with the Chinese government, CCP, PLA, or any instrumentalities thereof. Care should be taken to avoid unintended consequences

[42] Recommendations Regarding the Trump Administration's Section 301 Investigation, Huntsman Commission (Mar. 2018) at 3 ("Huntsman Commission Comments"), *available at* https://www.nbr.org/wp-content/uploads/pdfs/publications/IPC_Recommendations_to_Section_301_Investigation_March2018.pdf.

with respect to U.S. persons and the timely and effective granting of patents and recognition of other IP rights.

h. ***Special 301 Report on IP Rights and Enforcement***. USTR has repeatedly placed China on its "Priority Watch List" following its annual review of IP protection and enforcement in major U.S. trading partners. However, it could designate China as a "Priority Foreign Country," which automatically makes such a country subject to a Section 301 investigation.[43] This could be an appropriate step given the slow progress of China under the Phase One Agreement commitments.

i. ***CFIUS***. The Huntsman Report also recommended ensuring that the CFIUS review process "evaluate{s} major new foreign investments on the basis of the demonstrated level of protection afforded to U.S. companies' IP, including assessments of a foreign entity's historical record of IP theft. . . . It should assess whether acquiring companies have damaged or threatened U.S. national security or the national security of U.S. treaty allies through the illegal acquisition of American IP, or other activities against U.S. security polices and interests."[44] CFIUS addresses aspects of these recommendations through its normal review processes, including a general focus on "critical technology"[45] but a dedicated scrutiny on protecting IP and specific questions to transaction parties on the facts of IP protection and access could help assess risks and vulnerabilities.

j. ***Coordination with Like-Minded Countries to Take Action***. The United States should push like-minded countries with IP-intensive economies to take action against China beyond disapproving public statements and the occasional trade dispute settlement case. U.S. trading partners should also impose measures – whether they be tariffs, curtailed investment rights, restrictions on services, or other tools – to compensate for economic harm caused to their workers and businesses by China's practices. Forums like the U.S.-EU Trade and Technology Council may be helpful vehicles to share information and ideas, but they could be transformative if our European allies felt it was in their interest to strongly respond to Chinese government policies and aligned action with U.S. efforts to punish and deter harmful and unfair practices related to IP.

k. ***Monitoring and reporting***. It could be helpful to unify monitoring and reporting of forced technology transfer, given that a variety of agencies have tracked this issue and at times provided reports on intelligence. The IP Enforcement Coordinator may be a natural choice for this task, and could serve to centralize the

[43] 2022 Special 301 Report, USTR (2022) at 83, *available at* https://ustr.gov/sites/default/files/IssueAreas/IP/2022%20Special%20301%20Report.pdf.
[44] *See* Huntsman Commission Comments, *available at* https://www.nbr.org/wp-content/uploads/pdfs/publications/IPC_Recommendations_to_Section_301_Investigation_March2018.pdf at 2-3.
[45] Executive Order 14083; *Ensuring Robust Consideration of Evolving National Security Risks by the Committee on Foreign Investment in the United States*, 87 Fed. Reg. 57369 (Sept. 20, 2022).

ongoing monitoring and reporting accomplished by USTR, law enforcement and intelligence agencies, the Commerce Department, and others.

VI. Conclusion

The United States has a number of tools at its disposal to address forced technology transfer by China and other harmful IP-related practices. Additional tools could also be developed. However, underlying the use of any of these tools is a need for political will, across parties and across administrations and – importantly – in the U.S. business community. Absent sustained will, it will be increasingly difficult to protect the U.S. economy and American workers from the negative impact of Chinese policies and practices related to IP.

Mr. ISSA. Thank you, Mr. Greer.
We now go to Mr. Cohen for five minutess.

STATEMENT OF MARK COHEN

Mr. COHEN. Thank you very much, Mr. Chair and Ranking Member, and Members of the Committee. It's my honor to testify before you today.

I'd like to use my five minutes to begin by answering a question that I am asked every day, and I suspect many of you are, too. The question is: Does China protect IP? The response is yes and no. The answer lies in what we know; what we do not know, and what is hidden from us.

Imagine three stacks of paper before me on this table.

Stack one is favorable to China. It contains empirical analysis of China's IP system. It contains reports of American companies, business surveys, and scholars who often praise the efficiency, low cost, and fairness of China's IP system. Although the opinions in this stack are contrary to the prevailing positions within the Beltway, there's actually a great deal of information in that stack.

Stack two, equally large, commands your attention with the stories of IP stolen by China. I won't repeat them because we've already heard quite a bit, and I'm sure we'll be hearing more about these stories. Typically, the case stories are anonymized because the victims also fear retaliation.

These two stacks describe one legal system. It functions very well until it doesn't. Chinese politics intervenes in an important, but a minority of high-value disputes in China's legal system. Many of these cases concern technology, and, yes, many of them concern Americans.

There is also a third stack on the table. It contains invisible records of the many cases and controversies which have never been published and about which we know very little. This stack includes cases where the CCP secretly intervened to compel a decision adverse to a party. It includes cases where there was national technology policy involved against an American company, perhaps antitrust, patents, or trade secrets. It also includes cases of lost business opportunities. There are numerous other invisible disputes. To fully understand this third stack, however, we would require greater transparency from China, and we have not gotten that.

Sadly, the Phase One agreement did nothing to resolve this problem. For example, it imposed no obligations on China to publish its trade secret cases; to make court dockets more available to the public, or to improve transparency of the administrative patent linkage decisions. These deficiencies haunt us today, as they have for the past two decades.

These three stacks tell us three complementary messages. Foreigners win IP cases in China. Foreigners are often victims of China's IP policies. The third, we still do not fully comprehend how foreigners are being treated in China.

Although these conclusions are treated by China—are compelled by China's lack of transparency, I believe that there are, nonetheless, tools that we can use to help us be better informed and make better strategic decisions. It's time for Americans, for the United States, to leverage the full range of data that we have on patents,

on scientific publications, on manufacturing investments, industrial policy, Customs intelligence, et cetera, to better assess our competitiveness and China's strategic goals.

We might reconsider instituting the Office of Technology Assessment, which conducted many trailblazing technology assessment practices here in this body for U.S. Government and industry. We need to develop future-oriented technology assessments in key technological areas of concern.

I've seen these reports from China in great detail where they've enumerated how they would deal with U.S. technological threats. We need to do the same.

For law enforcement, that means we should be expending our efforts based on risk assessments that target key technologies, not on targeting ethnic groups.

We should also consider reinstituting DS362, the WTO case from almost 15 years ago that sought to compel greater transparency for the Chinese IP system.

The good news in all of this is that China is in many respects a planned economy and many plans are published. So, it is really not too difficult to determine where China is targeting its efforts.

I'd like to close for a moment by referring back to a statement by the Chair about the Federal Trade Commission proposed rule to ban noncompete agreements. I agree completely with your assessment. In fact, I believe that California would be well-advised to suspend its ban on noncompete agreements when there is an international context. Right now, we have seen tremendous losses in California, and from the United States generally, when this poaching of U.S. employees or those disclosures of confidential information, in violation of NDAs or confidentiality agreements.

China's own statistics prove that noncompete agreements are much easier to enforce than bringing a trade secret case. The chance of winning a trade secret case in China today is about 30 percent; whereas, the chance of winning a case based on a noncompete agreement is anywhere from 66–90 percent. So, we're actually impairing the ability of our own companies to enforce their rights in China. Privately ordered noncompete agreements are critical to prevent loss of trade secrets. I am happy to provide more data to the Subcommittee on this topic.

Once again, thank you for inviting me to speak with you today.

[The prepared statement of Mr. Cohen follows:]

Statement of Mark A. Cohen, Director and Distinguished Senior Fellow

Berkeley Center for Law and Technology

University of California, Berkeley Law School

Optimizing US Government Engagement on Chinese IP and Tech Issues

Before the Subcommittee on Courts, Intellectual Property and the Internet of the Committee of the Judiciary hearing on

Intellectual Property and Strategic Competition With China: Part 1

March 8, 2023

Chairman Issa, Ranking Committee Member Johnson, distinguished members of this Subcommittee, it is an honor and a pleasure to appear before you again today on the important issues confronting the US government in addressing intellectual property protection in China.

I applaud the initiative of this Subcommittee to focus on China-related IP issues in its first hearing. I also applaud the creation of the new Select Committee on China under Rep. Gallagher's leadership.

I believe that my last appearance before many of you was in 2016 on the topic of "International Antitrust and China."[1] At that time I was working for the US Patent and Trademark Office as Senior Counsel for China.

My topic today is on Optimizing USG engagement on China IP and Tech Issues. This is not a new topic for me and is based on the challenges that I encountered while working in the United States government. I believe you will be hearing from other speakers who will address national and economic security concerns posed by China. These issues are is not the principal focus of my testimony, although I am happy to answer questions on these topics.

From my years of experience working with both parties, engaging with many governments, and spending time on detail to the Commerce and State Departments, I believe that I have come to understand the challenges that we face in the US government in creating a whole of government approach to the challenges posed by China and its intellectual property regime.

During my tenure at USPTO, I helped to restructure many aspects of how the USPTO engages with China. These included establishing a USPTO presence at the US Embassy in China (where I served for four years), creating a position of Senior Counsel for China in the Office of Policy and

[1] Press Release, *Hearing Advisory: Regulatory Reform Subcommittee to Hold Hearing on International Antitrust Enforcement with a Focus on China*, House of Representative Judiciary Committee (June 2, 2016), https://judiciary.house.gov/media/press-releases/hearing-advisory-regulatory-reform-subcommittee-to-hold-hearing-on.

International Affairs, establishing an IP Resource Center to provide empirical research support for policy initiatives, and participating in nationwide China IP roadshows to educate US businesses. Outside of the US government, I also established a Track II Dialogue with China on IP issues, which continues to be in effect to this day. I am a recipient of the Meritorious Honor award from President Trump for my work on technology transfer with China, which is the highest award in the civil service.

After leaving the USPTO in 2018, I joined the law faculty at the University of California at Berkeley as Distinguished Senior Fellow and Director of its Asian Intellectual Property and Technology Project. In that capacity, I have continued to teach the only comprehensive class in North America on intellectual property law in China, in addition to organizing courses and conferences on international trade, technology transfer, antitrust and related issues. My research concerns the intersection of international trade, intellectual property, and China.

In short, I believe that the only way that the United States can effectively compete or collaborate with China is through better strategic management of our own resources.

China today does present a peer-level economic and security threat in terms of its ability to innovate and its military and economic strength. Concerns over economic espionage, hacking and other forms of IP Theft are real. However, the risks they pose have often been misapprehended. I leave the subject of these risks principally to other speakers today.

Part of my message today is that we need to recognize that the United States faces new challenges that have little to do with "IP Theft." Many of these challenges reflect China's willingness to leverage its own IP system and command economy in order to surpass the United States in intellectual property matters. In some cases, opportunities have been presented to China by a weakening of the United States system in key areas, such as patent eligible subject matter or availability of injunctive relief.

China's efforts to develop a leading-edge IP regime have resulted in a national system of IP tribunals and courts, with over 2,000 IP judges, many of them trained at specialized IP faculties, and a nationwide annual court docket of 600,000 civil cases last year. The Chinese patent and trademark office also receive applications that are several multiples of the USPTO. IP has also been incorporated into industrial planning, including a national IP strategy, but also in metrics and expectations for a wide range of industrial policies. China has undertaken major revisions several times over the past 20 years to all its IP legislation, including to related laws such as the Civil Code, Criminal Code and Civil Procedure Law. Two of China's major IP institutions are modeled on US practice. In 2018, China combined its patent and trademark office into one agency, much like our own USPTO. In that same year, China established a nationwide appellate IP court with jurisdiction over patent and other complex IP cases that is modeled on our US

Court of Appeals for the Federal Circuit.[2] At the same time, China moved its copyright administration from the executive branch into the party propaganda bureau. This may signal less independence of the copyright administration from party policies, particularly those regarding propaganda and market access.

Many of the developments in recent years have been helpful to the foreign community, including to Americans. Business surveys also generally show that most US companies are satisfied with China's IP regime, with only a minority claiming unfair treatment.[3] There have been significant improvements in civil enforcement in many areas. For example, Microsoft achieved "win rates" of 100% in the 63 software piracy cases filed between 2010-2019.[4] Many academics and professionals have also reported high win rates in trademarks and patent litigation. Prof. Bian Renjun estimated that the "win rate" in the overall *published* civil patent docket for foreign patent litigants was 80%, while the injunction rate was 90%; these win rates are higher than for Chinese litigants in China. Damages for foreign patent litigants in China during the period that she studied, although small, were three times higher than for domestic litigants.[5] I emphasized "published" since, as discussed later, the unpublished docket is often more important than the published one.

The balance of my testimony is divided into four parts: (a) learning from the past; (b) examples of mistakes from the past; (c) balancing IP theft with other policies; and (d) concrete steps in the mid- and long-term.

A. How We Got Here

In the last two decades our views on China's interests in protecting IP and becoming an innovative economy have evolved to the near opposite of where they began. These changes in perception have accelerated since the Trump Administration.

1. We began with China joining the WTO in 2001. There was tremendous idealism about how the "open and rules-based trading system" in the WTO would affect economic and social change in China.

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[2] Mark A. Cohen, *A Federal Circuit with Chinese Characteristics? – The Launch of China's New National Appellate IP Court 中国特色的联邦巡回上诉法院?,* China IPR (Jan. 4, 2019), https://chinaipr.com/2019/01/04/a-federal-circuit-with-chinese-characteristics-the-launch-of-chinas-new-national-appellate-ip-court/.

[3] *See* AmCham China, 2023 China Business Climate Survey Report, fig. 40 (19% of respondents claimed unfair treatment by China's IP regime); fig. 57 (21% of respondents claimed that insufficient protection of intellectual property is a barrier to innovation); fig. 60 (36% of respondents report an improvement in intellectual property); fig. 61 (49% of tech and R&D respondents report that intellectual property concerns are limiting their investments in China).

[4] Mark A. Cohen, *An Update on Data=Driver Reports on China's IP Enforcement Environment*, China IPR (July 13, 2020), https://chinaipr.com/2020/07/13/an-update-on-data-driven-reports-on-chinas-ip-enforcement-environment/.

[5] *Id.*

2. After China joined the WTO, the United States expressed its desire for China to become a "responsible stakeholder," in the words of former World Bank President and US Trade Representative Robert Zoellick.

3. Our view of China's innovative capacity until about 10 years ago was that China was only capable of making "undifferentiated, incremental improvements" because of cultural handicaps as well as the limitations posed on Chinese society by the Communist Party.[6] As one example, an article in the *Harvard Business Review* noted, "the problem, we think, is not the innovative or intellectual capacity of the Chinese people, which is boundless, but the political world in which their schools, universities, and businesses need to operate, which is very much bounded."[7]

4. Most recently, we have recognized China as a peer-level competitive threat with a capacity to out-innovate the US in key areas. As but one example, a recent, empirically grounded report of the Australian Strategic Policy Institute noted that, compared to the United States, "China's global lead extends to 37 out of 44 technologies ... covering a range of crucial technology fields spanning defense, space, robotics, energy, the environment, biotechnology, artificial intelligence (AI), advanced materials and key quantum technology areas."[8] There are numerous other studies from national and international organizations which point to similar developments. The WIPO's Global Innovation Index, for example, reports that China today is the 11th most innovative global economy.[9]

5. Looking forward, I believe that China will become increasingly confident of its alternative model of state planned and controlled intellectual property rights. In addition, China may further weaponize its judiciary in response to US trade sanctions, increasing isolation or declining bilateral relations. Whatever steps China may take, its managed approach has also become increasingly inimical to fundamental concepts that the United States advanced in the TRIPS agreement, thereby posing a pressing ideological challenge to the global IP system of which the United States has been a major architect.

China's state-subsidized or state-inspired efforts have already caused and will continue to cause severe strains in our trademark system, impose difficult challenges on our courts, and overwhelm our agencies. The USPTO has been struggling for several years now with a flood of fraudulent, low-quality trademark applications from China. (Many IP agencies, including WIPO, have had to deal with patent application surges, including end-of-year patent surges from China

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[6] Gordon Orr and Erik Roth, *A CEO's guide to innovation in China*, McKinsey Quarterly (Feb 1, 2012), https://www.mckinsey.com/featured-insights/asia-pacific/a-ceos-guide-to-innovation-in-china.
[7] Regina Abrami, William Kirby, and F. Warren McFarlan, *Why China Can't Innovate*, Harv. Bus. Rev., Mar. 2014.
[8] Dr. Jamie Gaida, Dr. Jennifer Wonog Leung, Stephan Robin, and Dantelle Cave, *ASPI's Critical Technology Tracker*, Australian Strategic Policy Institute (Mar. 2, 2023), https://www.aspi.org.au/report/critical-technology-tracker.
[9] Press Release, *Global Innovation Index 2022: Switzerland, the U.S., and Sweden lead the Global Innovation Ranking; China Approaches Top 10; India and Türkiye Ramping Up Fast; Impact-Driven Innovation Needed in Turbulent Times*, WIPO, (Sept. 29, 2022), https://www.wipo.int/pressroom/en/articles/2022/article_0011.html.

that were filed to utilize end-of-year subsidies or other government incentives.) The consequences of China's embrace of intellectual property may also be felt in our courts. To date, China has principally been a defendant in foreign proceedings, but certain companies such as Huawei have also become active in initiating lawsuits or licensing their portfolios to patent aggregators. There have also been increasing concerns over Chinese-funded non-practicing entities in our judicial system.[10]

With this increased self-confidence, Chinese courts and its IP agencies will no longer want to be just a "follower of property rights rules" but rather to become a global "guide of international intellectual property rules."[11] Consistent with its growing power, China has also sought to expand its influence in Belt & Road countries and in international organizations. Chinese courts will also continue to promote policies and institutions to attract international litigation.[12] China will advance its vision of intellectual property and international trade through the Regional Comprehensive Economic Partnership Agreement and its proposed accession to the CPTPP. In 2021, China also established a specialized IP court in the Hainan Free Trade Port in anticipation of an expanded role in resolving cross-border IP disputes.

Chinese courts also have an explicit goal of "promoting the extraterritorial application of their IP laws and regulations," as set forth in the five-year judicial protection plan.[13] These goals are not dissimilar to the expansive jurisdictional reach of the antitrust agencies to exert greater foreign influence and lower foreign valuations of IP, about which I testified before, in 2016.

Today Chinese courts are also handling challenging technical issues in such diverse areas as the use of molecular markers in plant variety protection, IP protection of AI-created inventions and creative works, platform liability for patent, trademark and design infringements, and compensation for bad faith patent and trademark application activities. These cases, if well-

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[10] States Attorney Generals have also been raising concerns over these threats, including litigation financing involving Chinese entities. See Bob Goodlatte, *State Attorneys General Raise Concerns About Threats Raised by Litigation Funding,* Patent Progress (Jan. 18, 2023), https://www.patentprogress.org/2023/01/state-attorneys-general-raise-concerns-about-threats-posed-by-litigation-funding/; ILR Briefly, *A New Threat: the National Security Risk of Third Party Litigation Funding*, U.S. Chamber of Commerce Institute for Legal Reform (Nov. 2022), https://instituteforlegalreform.com/wp-content/uploads/2022/11/TPLF-Briefly-Oct-2022-RBG-FINAL-1.pdf/.

[11] 2020 Nian Zhongguo Fayuan 10 Da Zhishi Chanquan Anjian He 50 jian Dianxing Zhishi Chanquan Anli, Faban [2021] Yi Si Liu Hao (2020 年中国法院 10 大知识产权案件和 50 件典型知识产权案例，法办【2021】146 号) [Top 10 Intellectual Property Cases and 50 Typical Intellectual Property Cases in Chinese Courts in 2020, No. 146 [2021]] (promulgated by the General Office of the Sup. People's Ct. Apr. 22, 2021) Sup. People's Ct., https://www.court.gov.cn/zixun-xiangqing-297991.html (China).

[12] *See* Mark A. Cohen, *Three SPC Reports Document China's Drive to Increase Its Global Role in IP Adjudication*, China IPR (May 5, 2022), https://chinaipr.com/2021/05/05/three-spc-reports-document-chinas-drive-to-increase-its-global-role-on-ip-adjudication/.

[13] Renmin Fayuan Zhishi Chanquan Sifa Baohu Guihua (2021 – 2025 Nian) (人民法院知识产权司法保护规划（2021-2025 年） [The People's Court Intellectual Property Judicial Protection Plan (2021-2025)] (promulgated by the Sup. People's Ct., Apr. 22, 2021), Sup. People's Ct., http://www.court.gov.cn/zixun-xiangqing-297981.html (China).

reasoned, may also increasingly exert a soft influence on other courts and legal systems in the world.

The historic reluctance of the United States to recognize China's rise as a science and IP superpower is on a par with other major United States intelligence failures of my lifetime, including the exile of the Shah of Iran and the collapse of the Soviet Union. Our mistakes likely arose from many factors, including bureaucratic myopia, intransigence and hubris; poor organizational structures within the US government; inexpert handling of complex technical and legal issues involving China; and a reluctance to use the numerous multilateral and unilateral tools that we have available to advocate intelligently for our nation's interests with China. Today, we should not only be concerned with the economic and security risks faced by the United States in managing our relationship with an increasingly powerful China, but also the impact that China's rise will have on the global IP system.

B. Learning from the Past

The following is one example of US missteps in judging China's rise as a technology power, based on the public record:

China joined the WTO in December 2021. One month prior to accession, China's State Council enacted a regulation that discriminated against foreign licensors seeking to license technology to China by imposing mandatory licensing terms upon them that domestic licensors or Chinese technology exporters were not bound to follow. The regulation was the Administration of Technology Import/Export Regulations, or "TIER." In addition to affecting private licensing of intellectual property, it also prohibited sharing of improvements to technology licensed as part of government technology collaboration. Article 27 of the TIER required that "an achievement made in improving the technology concerned belongs to the party making the improvement."

Due its late enactment, the TIER was never reviewed as part of China's WTO commitments. The TIER entered into force January 1, 2002,[14] or about three weeks after China joined the WTO on December 11, 2001. It appears to have escaped the scrutiny of the WTO accession process.

In those early years, the focus of US government engagement in China was on counterfeiting, piracy and Chinese export of infringing goods. Despite the apparent violation of most favored nation treatment for foreign licensors in the TIER, there was no interest in elevating this technology transfer issue to a higher priority.

During the ensuing 16 years after the TIER's entry into force, the US government also continued to sign bilateral science and technology agreements with China in a range of technology areas. These agreements required sharing of technological improvements. The agreements were

[14] Regulations on Technology Import and Export Administration of the People's Republic of China (promulgated by the St. Council on Dec. 10, 2001, effective Jan. 1, 2002) https://wipolex-res.wipo.int/edocs/lexdocs/laws/en/cn/cn125en.html.

inconsistent with Chinese law, which prohibited such sharing arrangements pursuant to Article 27 of the TIER.

This issue surfaced again when the United States Government Accountability Office (GAO) prepared a report on clean energy cooperation with China. At that time GAO was advised by another US government agency to reach out to me, as I had voiced my concern about the legality of bilateral science agreements. I noted my concerns about the legality of US-China science cooperation. My concerns were thereafter downplayed in a published 2016 GAO report,[15] which euphemistically noted that the USPTO had identified a "potential discrepancy" in "defining how IP may be shared or licensed in each country," and that the USPTO was "discussing" the matter with other agencies. No further action was taken by GAO or any other government agency in response to those concerns.

The conditions imposed on US licensors were, however, consistent with the position of the Trump administration that China was forcing Americans to transfer technology against their will. On March 23, 2018, 17 years after the TIER enactment, the United States filed a WTO dispute on the TIER with China. China subsequently amended the law on March 18, 2019,[16] and the case has since been suspended presumably due to China enacting conforming legislative changes.[17]

Why did it take 17 years to bring a case which discriminated against foreigners in technology transfer, and where the United States government itself was a victim? In fact, we never initiated a WTO case on patent infringement or trade secret protection in China.[18] Were there other cases that the United States could have brought? We also hardly had a "whole of government" approach, despite numerous bilateral dialogues during previous administrations.

Very little has changed since then to address these problems. United States government agencies continue to choose to ignore the role that China plays in high-tech manufacturing, innovating and infringement. The most recent example of this is the FTC Notice of Proposed Rulemaking banning the use non-compete agreements by United States employers (the "NPRM").[19] The NPRM properly focused on the domestic impact of non-compete agreements, including their impact on poor and minority communities. However, the NPRM also completely ignores the impact this would have on protecting our technology from trade secret theft by

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[15] U.S. Gov't Accountability Off., GAO-16-669, U.S.-China Cooperation: Bilateral Clean Energy Programs Show Some Results but Should Enhance Their Performance Monitoring (2016), at 27.
[16] Mark A. Cohen, *The TiER is Revised…,* China IPR (Mar. 18, 2019), https://chinaipr.com/2019/03/18/the-tier-is-revised/.
[17] Dispute Settlement, *China-Certain Measures Concerning the Protection of Intellectual Property Rights*, WTO Doc. WT/DS542 (authority for panel lapsed on June 9, 2021).
https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds542_e.htm .
[18] There were also many more WTO disputes that could have been brought regarding China's IP system when the WTO still had an functioning appellate body. Mark A. Cohen, *The WTO IP Cases that Weren't*, China IPR (Dec. 11, 2020), https://chinaipr.com/2020/12/11/the-wto-ip-cases-that-werent/.
[19] Non-Compete Clause Rule, 88 Fed. Reg. 3482 (proposed Jan. 5, 2023) (to be codified at 16 C.F.R. § 910).

other countries. Indeed, words such as "CHIPS Act", "international" or "China" do not appear in the NPRM.

If implemented, this rule would legalize large-scale Chinese poaching of employees of US companies working in high tech industries, including the semi-conductor sector, by invalidating their existing non-compete agreements. US investment in new semiconductor fabs would become even more vulnerable to legalized Chinese poaching of US employees. It would also weaken the ability of US companies to protect themselves though the Chinese courts. Chinese data demonstrates that a party seeking relief from trade secret misappropriation is more than twice as likely to win if the employee has signed a non-compete agreement. Success rates for enforcing non-compete clauses are 66% to 90%, while success rates for trade secret misappropriation cases were 32.4% and 44.3% of the cases decided, respectively, by first instance and appellate courts.[20] Certain alternative means of protecting technology, such as through patents, may not be a viable alternative due to the need to protect proprietary information, and/or low grant rates that may exist for patents in technologies that China considers critical to its industrial policies.[21]

C. Balancing "IP Theft" with Other Policies

According to the FBI, IP Theft "focuses on the theft of trade secrets and infringements on products that can impact consumers' health and safety, such as counterfeit aircraft, car, and electronic parts." This definition would exclude copyright and patent infringement, as well as other actions by the Chinese government that could force technology transfer.[22] In addition, the definition fails to take into account other mechanisms used by governments such as China to reduce the value of intellectual property, such as by restricting market access for copyrighted content, restricting insurance reimbursements for innovative medicines, aggressive use of antitrust, and licensing or regulatory barriers.

The current focus on "theft" of IP also does not align well with how intellectual property is formally enforced in China, the United States and throughout the world. Intellectual property,

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[20] *Compare* Hui Shangguan, *A Comparative Study of Non-Compete Agreements for Trade Secret Protection in the United States and China*, 11 Wash. J. L. Tech & Arts 405 (2016) (This article looked at all final judgments on non-compete cases decided by intermediate or higher courts from March 2014 to February 2015. It found that "[t]hirty-six of these cases were related to the validity of the non-compete; twenty-four of which were regarded by courts as 'valid and enforceable.' In other words, two out of three non-compete cases were held to be 'valid and enforceable' by Chinese courts.) ; "in nearly all of the cases where the plaintiff prevailed (89% [in trade secret litigation in China], … there [were] one or more protective agreements in place, such as NDAs and confidentiality clauses in employment contracts" CIELA, *Trade Secret Litigation in China*, Rouse, https://rouse.com/media/n5uadjtn/ciela-trade-secret-litigation-in-china.pdf; *and* Jyh-An Lee, Jingwen Liu, and Haifeng Huang, *Uncovering Trade Secrets in China: An Empirical Study of Civil Litigation from 2010 to 2020*, 17 J. Intell. Prop. L. & Practice, Iss. 9, 761 (2022).

[21] See, e.g, ee Gaetan de Rassenfosse, and Emil Raiteri, *Technology Protectionism and the Patent System: Evidence from China*, J IND. ECON., 70: 1-43 (2022). https://doi.org/10.1111/joie.12261.

[22] FBI, Intellectual Property Theft, https://www.fbi.gov/image-repository/ipr-500.jpg/view#:~:text=It%20specifically%20focuses%20on%20the,%2C%20car%2C%20and%20electronic%20parts.

as a private property right, primarily relies upon civil remedies.[23] Criminal trade secret protection is not required by the TRIPS Agreement (Art. 61). Criminal prosecution of trade secret cases also remains difficult both in the United States and in China.

Looking at China's achievements in IP and the challenges it poses to the United States, it is important to keep in mind that autocratic advanced legal systems such as China's typically work fairly most of the time.[24] Due to a lack of systemic transparency, however, it is difficult to assess objectively how much foreign companies may be disadvantaged by China's IP regime. Transparency in China's IP regime was also not a significant part of the Phase 1 Trade Agreement. Although bias against foreigners and techno-nationalism are major concerns, another issue that is hardly noticed is low foreign utilization of this inwardly facing Chinese IP system. For example, only about 5 of 621 reported trade secret cases involved a foreigner as plaintiff.[25] In recent years, less than 1% of the IP court cases have been initiated by foreigners. Low utilization by foreigners, coupled with low transparency, also makes it very difficult to judge the extent of any bias in the courts. We therefore also have little insight into how many of the key deliverables of the Phase 1 Trade Agreement, such as improved trade secret protection and a patent linkage regime, are being implemented.[26]

In order to craft effective strategies to protect IP from the United States, the stories about China's IP regime that we often hear in the press and from our companies also need to be balanced against successful outcomes. As the data suggest, many US companies have also won significant cases in recent years. As one recent example, Emerson Electric for many years encountered bad faith trademark squatting activity on its InSinKerator trademark. In a path-breaking decision, the Chinese government required the squatter to pay civil damages to Emerson. China is also in the middle of a multiyear campaign intended to address bad faith trademark and patent registrations. Michael Jordan has also achieved considerable success in the courts in dealing with bad faith trademark registrations from archrival Qiaodan. New Balance also achieved success in addressing trademark squatter Xin Bailun. Many companies report that judgments have also become easier to collect after the judgments have been

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[23] *See* Mark A. Cohen, *The Criminal Bias in US Intellectual Property Diplomacy*, the National Bureau of Asian Research (July 22, 2021), https://www.nbr.org/publication/the-criminal-bias-in-u-s-intellectual-property-diplomacy/.

[24] Kathryn Hendley, *Legal Dualism as a Framework for Analyzing the Role of Law Under Authoritarianism* (October 1, 2022). 18 Ann. Rev. of L. and Soc. Sci. 211 (2022).

[25] Jyh-An Lee, Jingwen Liu, and Haifeng Huang, *Uncovering Trade Secrets in China: An Empirical Study of Civil Litigation from 2010 to 2020,* 17 J. INTELLECTUAL PROP. L. & PRACTICE, at p. 21 (2022), available at: http://dx.doi.org/10.2139/ssrn.4225187, at p. 21.

[26] Mark A. Cohen, *The Phase 1 IP Agreement: Its Fans and Discontents*, China IPR (Jan. 21, 2020), https://chinaipr.com/2020/01/21/the-phase-1-ip-agreement-its-fans-and-discontents/.

reported to China's social credit system. There are numerous other positive examples that are well-documented from both big companies[27] and small.[28]

Conversely, what we don't know about is what is not reported. Understanding Chinese law today is very similar to understanding pictures of Soviet Leaders in Red Square during the Soviet period: what matters most is not who is there, but who is missing or blurred out of the picture.[29] Certain major cases, such as the largest patent judgment in China involving Schneider Electric as a defendant, have never been reported. Another major decision that was not reported involved the granting of a preliminary injunction in a patent dispute against Veeco, a United States semiconductor manufacturing equipment supplier, at the request of AMEC, a pillar of China's efforts to achieve independence in the semiconductor sector.[30] China's vast administrative enforcement system, which authorizes its IP agencies to issue fines and order a cessation of infringement, is also highly opaque. Most of the patent linkage litigation in China to date has been through that opaque administrative system. In addition, unreported extra-legal threats to employees of foreign companies engaged in law suits in China have occasionally been reported.[31] As bilateral relations have become more tense, there are increasing concerns over use of Chinese courts to advance industrial policy.[32] Occasionally, Chinese judges and officials have openly advocated legal strategies to pursue foreign companies, implicitly suggesting that such cases will be successful.[33]

These politically driven actions by China have often had the impact of driving out any good news about the improvements in China's IP regime. For most of my legal career I have had to

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[27] See statement of Sharon Barner in "Fact and Fiction in US-China Intellectual Property Trade War" (Oct. 8, 2020) https://asiasociety.org/northern-california/events/webcast-fact-and-fiction-us-china-intellectual-property-trade-war. Ms. Barner is Vice President and Chief Administrative Officer of Cummins, Inc., and was the former Deputy Director of the USPTO.

[28] See Marketplace, Episode 900: The Stolen Company (March 15, 2019), concerning Abro Industries, Inc. https://www.npr.org/sections/money/2019/03/15/702643451/episode-900-the-stolen-company.

[29] Benjamin Liebman, Margaret Roberts, Rachel Stern, and Alice Wang, *Mass Digitization of Chinese Court Decisions: How to Use Text as Data in the Field of Chinese Law*. 8 J.OF L. AND COURTSs 177 (2020).

[30] Mark A. Cohen, *Semiconductor Patent Litigation Part 2 – Nationalism, Transparency and Rule of Law*, (July 4, 2018), https://chinaipr.com/2018/07/04/semiconductor-patent-litigation-part-2-nationalism-transparency-and-rule-of-law/.

[31] See, e.g., Chris Carr, Chris and Dan Harris, *Commercial Hostages in International Business Disputes*, 63 THUNDERBIRD INTL. BUS. REV. 523 (2021) (compiling data on detention of foreigners in China in civil disputes).

[32] Mark A. Cohen, Are Chinese Courts Out to Nab Western Technology – An Inconclusive WSJ Article (Feb. 24, 2023), https://chinaipr.com/2023/02/24/are-chinese-courts-out-to-nab-western-technology-an-inconclusive-wsj-article/ .

[33] See Renmin Fayuanbao (People's Courts Newspapers), Kuayue Taiping Yang to Jiaoliang[跨越太平洋的较量] (The Contest Across the Pacific Ocean) (Oct. 29, 2013), http://rmfyb.chinacourt.org/paper/html/2013-10/29/content_72138.htm?div=-1 ("QIU Yongqing, the chief judge, believes that Huawei's strategy of using anti-monopoly laws as a countermeasure is worth learning by other Chinese enterprises. QIU suggests that Chinese enterprises should bravely employ anti-monopoly lawsuits to break technology barriers and win space for development.").

grapple with the questions of what is missing in China's IP regime and the impact of what is not published.

D. Concrete short and mid-term steps

In the twenty years that I have been testifying on China's intellectual property regime before Congress,[34] the Chinese IP system has become vastly more complicated in both its formal aspects and in the external pressures and incentives that affect the implementation of its laws. China's increasingly complex IP regime demands concomitant changes from the US government in our laws and government structures. Currently, intellectual property involving China is handled by several agencies, many of which have overlapping mandates and all of which have limited resources. These agencies include USTR, ITA, USPTO, the Copyright Office, USDOJ, and the State Department. Absent effective cooperation and coordination, each agency is not only condemned to redundancy but also, considering the increasingly complex environment of China, to superficiality.

1. We Need to Make the Necessary Appointments

We need an IP Enforcement Coordinator in the White House. We also need a Deputy USTR for Innovation and Intellectual Property. I believe that we also need a Deputy Director for International Affairs to assist the Director of the USPTO and elevate the importance of the USPTO in international negotiations involving intellectual property. Currently the PTO Director is assisted by only one Deputy Director, which is not enough for the front office to focus on international concerns and to interact with the interagency at a sufficiently high political level.

Congress should also reconstitute the Office of Technology Assessment (OTA), which operated in these halls from 1974 - 1995. OTA was once a key institution in understanding China's technology plans. It also has an illustrious alumni group. Its publication "Technology Transfer to China" (July 1987) was prescient.[35]

2. We Need Better Data Tools

a) The US government should develop and implement tools, like those that our competitors are using, and that the Office of Technology Assessment pioneered, to improve innovation governance with regard to emerging technologies.[36] The adoption of Future Oriented Technology Assessments and related tools as applied to civil technologies can be especially critical where possible security threats are posed to the United States by the compressed development time frames of civil technology to a military application, or "civil-military fusion."

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[34] Ownership with Chinese Characteristics: Private Property Rights and Land Reform in the PRC: Roundtable Before the Cong.-Exec. Comm. on China, 108th Cong. 1 (2003) (statement of Mark A. Cohen, Attorney-Advisor, U.S. Patent and Trademark Office).
[35] U.S. Cong. Off. Tech. Assessment, *Technology Transfer to China*, OTA-ISC-340 (1987).
[36] Jeanne Suchodolski, Suzanne Harrison, and Bowman Heiden, *Innovation Warfare*, 22 N. C. J. L. & Tech. 175 (2020).

These analytical tools can also assess competitive risks from China in emerging technologies that are of concern to US economic and national security. USPTO, with the most extensive resources on all varieties of civil technology, is well-positioned to make a significant contribution to such an effort.

Congress may also wish to consider whether a standard nomenclature for classifying technology could be developed for use by all technology agencies. This classification system might be based on the USPTO's Cooperative Patent Classification system. This could facilitate improved understanding of how to assess trends and risks in such areas as export controls, CFIUS, patent grants, technology transfer and scientific research, and help in developing tailored responses.

b) Additional disclosure requirements regarding foreign government involvement in our IP system would be helpful in better addressing risks posed to our IP agencies and courts. Congress should direct the USPTO to require any applicants for patents or trademarks to disclose if they are receiving government subsidies or grants for the underlying R&D for the patent or the application itself. We currently require such disclosure of recipients of US government grants under the Bayh-Dole Act. We should require the same for foreign applicants. We also need to require disclosures for trademark applications due to their demonstrated ability to disrupt US government operations through subsidized applications.[37] This information is essential to anticipating threats posed by subsidization and other distortionary programs of foreign governments, including China.

Congress might also wish to consider requiring disclosures of foreign government involvement in IP litigation through declarations of real parties in interest and third-party litigation financing.[38]

c) Our BEA statistical reporting on technology transfers with foreign countries is unreliable. BEA categorizes technology licenses as "industrial processes." This data may omit important areas such as IP that are not related to industrial process (including designs), as well as licenses entered into as part of settlements of lawsuits.

3). We Need to Support Our Courts

[37] U.S.-China Econ. Sec. Rev. Comm'n, 2022 Report to Congress, at 177.
[38] Bob Goodlatte, *State Attorneys General Raise Concerns About Threats Raised by Litigation Funding,* Patent Progress (Jan. 18, 2023), https://www.patentprogress.org/2023/01/state-attorneys-general-raise-concerns-about-threats-posed-by-litigation-funding/.

a) The Solicitor General should begin exercising a more active role in US domestic litigation that involves Chinese patent IP assertions, particularly in issues that implicate the jurisdiction of our courts (such as anti-suit injunctions)[39] or the fairness of the Chinese legal system.[40]

b) Due to difficulties in securing evidence from China, US courts should be able to make adverse inferences if there are unnecessary delays in collecting evidence overseas through judicial channels. Responses to Hague Convention requests from China can taken a year or more. However, in most cases China will have completed a domestic IP litigation within six months.[41] These expedited timeframes in China provide a strategic advantage for Chinese litigants and can impair the effectiveness of a United States litigation. Chinese judicial rushes to judgment have often undermined the jurisdiction of the US courts which take far longer to decide cases, as was the issue in Huawei v. Samsung (N.D. Cal. Apr. 13, 2018).

c) The Judiciary Committee may wish to reconsider the risks posed by non-reciprocal extensions of benefits to Chinese courts. These could include recognition of Chinese judgments (pursuant to the Uniform Foreign Money Judgments Recognition Act), or evidentiary assistance provided to Chinese courts by amending 28 USC Section 1782.

4. We Need to Strengthen our IP System

a) I encourage this Subcommittee to investigate the impact of Section 101 jurisprudence on international competitiveness. During the years when the United States sought to better "balance" our IP system through restricting patent-eligible subject matter, China was taking nearly contemporaneous steps to strengthen its system through amendments to its examination guidelines. Patent applications have been refused by the USPTO but granted in China and/or Europe.[42] We need to have a better understanding on how the declining scope of patent eligible subject matter has affected US competitiveness with other countries, including China, by analyzing the impacts of those changes in US policy on entrepreneurialism, new product developments, technology licensing and labor mobility.

b) We need to address the increasing potential for fraudulent, short-term or low-quality trademark and patent filings from China. Trademark applications have been filed with fraudulent proof of use, or through use of fraudulent addresses and USPTO accounts. The trademarks appear to be primarily intended to satisfy e-commerce brand registry programs. Chinese applicants have occasionally appointed deceased or non-existent attorneys to prosecute these marks. Many of these trademarks benefited from trademark applications subsidies given by the Chinese government. Currently, USPTO appears to be primarily relying

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[39] See MARK A. COHEN, *China's Practice of Anti-Suit Injunctions in SEP Litigation: Transplant or False Friend?,* forthcoming in Jonathan Barnett, ed, INTELLECTUAL PROPERTY AND INNOVATION POLICY FOR 5G AND IOT (2023).
[40] See Mark Jia *Illiberal Law in American Courts*, 168 U. PA. L. REV. 1685 (2020).
[41] See Minning Yu, *Benefit of the Doubt: Obstacles to Discovery in Claims Against Chinese Counterfeiters*, 81 FORDHAM L. REV. 2987 (2013).
[42] Kevin Madigan and Adam Mossoff, *Turning Gold to Lead: How Patent Eligibility Doctrine Is Undermining U.S. Leadership in Innovation*, 24 GEO. MASON L. REV. 939 (2017).

upon attorney disciplinary efforts to deter this activity. USPTO needs a comprehensive program to address these problems as they arise, which may also involve deeper cooperation with the Chinese government to address cross-border malevolent actors.[43]

c) Congress should encourage the USPTO to become more actively involved in assisting on trade and economic sanction determinations. The USPTO is the only comprehensive civil technology agency in the US government. It is well staffed with STEM-educated and multilingual examiners, as well as a team of officials involved in international IP policy. Yet there are many areas where PTO is not consulted. Moreover, there is an increasing number of trade sanction matters where intellectual property knowledge is critical, such as in assessing proposed CFIUS decisions and understanding competitive threats from emerging technologies.

5. We Need a Task Force

Chinese IP issues are now implicated in areas of increasing concern to the government and American people, including economic espionage, China's increasing role in our courts and IP system, the role of export controls and CFIUS in addressing technology transfer, China's use of civil technological developments in advancing military technology, and the challenge of navigating China's complex IP environment.

Through my work with the Day One Project,[44] which is now a part of the Federation of American Scientists, I urged the Biden Administration to take broad steps to improve our strategies and understanding on China and intellectual property by establishing an interagency China task force.[45] In closing, I repeat the recommendations that were made in the 2021 report of the Day One Project, which I believe still have the same urgency:

Reorganize China IP Engagement for Greater Depth, Coherence and Efficiency

There is a broad consensus that US-China relations cannot and should not return to their pre-2017 form. At the same time, in dealing with China, the next administration has to show both strength and more intelligent strategies. Intellectual property and innovation policy hold both the prospect for cooperation and the need to address Chinese initiatives that negatively impact US interests. Currently, engagement with China on IP and innovation is spread over several agencies, including State, USTR, ITA, DOJ (Antitrust/Counterintelligence/CCIPS), FTC, ITC, USPTO, OSTP, NIST, DOD (including the Defense Innovation Unit), CFIUS, BIS and the White House "IP Czar." Most of these offices lack the staff and resources needed to address increasingly complex and cross-disciplinary issues. While the USPTO "China Team" is the most deeply resourced (between 20-25 people in three Chinese cities, including several China-admitted attorneys and

[43] See my forthcoming article in the Akron Law Journal, *Parallel Play: How the United States and China Engaged in Simultaneous Professional Responsibility Campaigns Against Unethical IP Lawyers and Agents and What Lessons Can Be Learned* (2023).
[44] https://www.dayoneproject.org/.
[45] Day One Project, *Transition Document for the United States Patent and Trademark Office* (Jan. 15, 2021) https://www.dayoneproject.org/ideas/transition-document-for-the-united-states-patent-and-trademark-office/.

STEM-educated officials), the agency has often been excluded from the US-China negotiating table – and even clearance chains on tech issues.

An executive order should establish an inter-agency "task force" to address China in intellectual property and innovation policy, with the understanding that this task force will be long-term, if not permanent. The task force should include State/various Commerce constituent agencies/USTR and representatives of the various science agencies, DoD, as well as CFIUS and BIS. The task force should have concrete mandates on seconded staff from other agencies, and the percentage of task force staff who have Chinese language skills, STEM background and ideally, Chinese legal experience. The task force staff should leverage extensive database and analytic tools, currently housed in a China Resource Center at USPTO (but also found in our intelligence and other agencies) to provide active support for other agencies, such as law enforcement, BIS/CFIUS, and DHS. The task force should develop coordinated USG responses to China's model of state-dominated IP planning, anticipated disruptions caused by China's intervention in technology and IP markets, Chinese efforts to dominate global standards setting bodies, state-sponsored economic espionage or technology misappropriation, and even bad faith applications from China in both patents and trademarks.

Contributor: Mark Cohen

Thank you for your invitation to speak here today, and I look forward to your questions.

Mr. ISSA. Thank you, Mr. Cohen.

We now go to Mr. Duan for five minutess. The gentleman is recognized.

STATEMENT OF CHARLES DUAN

Mr. DUAN. Good morning, Chair Issa, Ranking Member Johnson, and Members of the Subcommittee. Thank you for inviting me to testify today on this important topic.

Similar to Mr. Greer, the views I'll express in this testimony are my own, not those of any affiliated organizations or institutions.

Intellectual property is the infrastructure that underpins and shapes American innovation. As with any other infrastructure, its reliability and trustworthiness are critical to national security at a time when technological progress defines Americans' leader—American leadership around the globe.

My colleagues have discussed the defensive role of intellectual property, protecting against China's IP theft. I'd like to focus on a different aspect that, Mr. Chair, you've alluded to quite a bit in your discussion—an offensive role in which China and other competitor nations might exploit our IP system by obtaining and asserting U.S. patents in ways that unfairly harm American innovators.

My written testimony reviews a number of ways that China could and does offensively exploit American patents, but here I'd like to focus on one example that I found. Two years ago, the holdover patent on an autonomous vacuum cleaner demanded that Amazon remove a product listing of an allegedly infringing competitor. Under its patent-neutral evaluation rules, Amazon notified the seller. The seller almost immediately brought suit against the patent holder, charging that the patent had been wrongly granted and that it should be invalidated.

So far, this sounds like a typical story of a patent dispute, and indeed, it involves an American startup and a massive Chinese conglomerate. In this case, though, the patent holder was a billion-dollar company, Xiaomi Electronics, and its subsidiary, Beijing Roborock. The alleged infringer was a company based out in Washington State. In other words, you had a major Chinese firm asserting a U.S. patent against a U.S. business.

Now, we want to be clear. There's nothing wrong with a Chinese company obtaining, holding, or even asserting a U.S. patent. It would violate our international obligations to say otherwise. Discriminating against patent holders based on nationality would only encourage other nations to do the same, or even worse, to engage in a tit-for-tat sort of competition.

Additionally, I'd like to thank Mr. Ranking Member for mentioning the concerns about discriminating based on ethnic origins. I think that that's an important point that I want to carry through this hearing.

My point here, though, is simply this: Patents defend Americans from foreign IP theft, but that's not all they do. As, Mr. Chair and Mr. Ranking Member, you mentioned, trade secrets can often be the better tool for the sort of defensive job protecting us from IP theft because of the territorial limits of patents.

The more concerning role, in my mind, of U.S. patents is the sort of offensive use—companies like Huawei, as you mentioned, Mr. Chair, asserting them in the United States against small businesses and American innovators. Already, we know that over 50 percent of U.S. patents go to foreign, go to foreign applicants. China is poised soon to be the top filer of U.S. patent applicants over—likely to overtake Japan in just a couple of years, and particularly, is focusing on sensitive fields like 5G and artificial intelligence. If U.S. patents can be obtained too easily, or can be asserted unfairly, then China could strategically use them to hamper American innovators and slow down our technological progress.

How do we respond to this potential offensive use of patents? Well, just as trusted computing systems protect us from cybersecurity threats, we need a trustworthy patent system, one that protects American entrepreneurs from abusive patent assertion from China and elsewhere. We need to dedicate resources to patent examiners to ensure that patents are correctly reviewed. We need processes to validate the correctness of patents after the fact, knowing that patent examination is not perfect.

We need to champion fairness in the adjudication process. Courts in China and elsewhere, even in the United States—Mr. Chair, you mentioned the International Trade Commission—there is a race to the bottom of unfairly tilting the playing field in order to attract lucrative patent cases. We need to be a global leader on forum fairness, to put a stop to Chinese anti-suit injunctions and other judicial manipulation.

Finally, we need to engage the whole-of-government on technological leadership. IP rights are an important component, but not the only component, of that. Especially for dynamic fields like artificial intelligence, policy tools such as STEM education, high-skilled immigration, research funding, and diversity initiatives can have tremendous impact beyond what patent law alone can achieve.

I thank the Subcommittee for its attention to this issue and look forward to your questions.

[The prepared statement of Mr. Duan follows:]

INTELLECTUAL PROPERTY AND STRATEGIC COMPETITION WITH CHINA PART I

Testimony of Charles Duan*
Before the
Subcommittee on Courts, Intellectual Property, and the Internet
of the Committee on the Judiciary
U.S. House of Representatives

March 8, 2023

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CHAIRMAN ISSA, RANKING MEMBER JOHNSON, AND MEMBERS OF THE SUBCOMMITTEE:

The United States intellectual property laws are the infrastructure that underpins and shapes a great deal of American innovation. As with any other infrastructure, its reliability and trustworthiness are critical to national security at a time when technological progress defines America's leadership around the globe. I thank the Subcommittee for holding this hearing and focusing on this important topic.

Intellectual property intersects with international competitiveness in two distinct ways. The first is defensive. By providing a variety of national and cross-border remedies for infringement, the IP laws deter and prevent misappropriation of American research and development.[1] The importance of strong IP rights in response to IP theft, especially in China, is well-documented and undeniable.[2]

What has been less studied but requires this Committee's equal attention, however, is how abuses of IP can play an offensive role to the detriment of American innovation.[3] As I detail below, China and Chinese entities are flooding the U.S. Patent and Trademark Office with questionable

1. *See generally* KEVIN J. HICKEY ET AL., REPORT NO. R46532, INTELLECTUAL PROPERTY VIOLATIONS AND CHINA: LEGAL REMEDIES (Cong. Research Serv. Sept. 17, 2020), https://sgp.fas.org/crs/row/R46532.pdf.

2. *See, e.g.*, Jeanne Suchodolski, Suzanne Harrison & Bowman Heiden, *Innovation Warfare*, 22 N.C. J.L. & TECH. 175, 235–46 (2020); OFFICE OF THE U.S. TRADE REPRESENTATIVE, FINDINGS OF THE INVESTIGATION INTO CHINA'S ACTS, POLICIES, AND PRACTICES RELATED TO TECHNOLOGY TRANSFER, INTELLECTUAL PROPERTY, AND INNOVATION UNDER SECTION 301 OF THE TRADE ACT OF 1974 (Mar. 22, 2018), https://ustr.gov/sites/default/files/Section%20301%20FINAL.PDF; JON BATEMAN, U.S.–CHINA TECHNOLOGICAL "DECOUPLING": A STRATEGY AND POLICY FRAMEWORK 97–103 (2022), https://carnegieendowment.org/files/Bateman_US-China_Decoupling_final.pdf; Kayla Tausche & Jacob Pramuk, *White House Will Announce Tariffs Cracking down on Chinese Theft of Intellectual Property*, CNBC (Mar. 21, 2018), https://www.cnbc.com/2018/03/21/white-house-to-announce-ip-tariffs-on-thursday-sources.html.

3. I have previously discussed this issue in brief. *See* CHARLES DUAN, POLICY SHORT NO. 67, U.S. PATENTS AND COMPETITIVENESS WITH CHINA (R St. Inst. Feb. 27, 2019) [hereinafter *Competitiveness with China*], https://www.rstreet.org/research/u-s-patents-and-competitiveness-with-china/; Charles Duan, *Of Monopolies and Monocultures: The Intersection of Patents and National Security*, 36 SANTA CLARA HIGH TECH. L.J. 369, 387 (2020) [hereinafter *Of Monopolies and Monocultures*], https://digitalcommons.law.scu.edu/cgi/viewcontent.cgi?article=1655&context=chtlj.

patents, have taken steps to dominate international technological consortia, have recrafted patent adjudication in adverse ways, and have even used our own IP enforcement agencies against Americans. Not unlike how hackers exploit cybersecurity vulnerabilities in computer infrastructure, these efforts exploit the infrastructure of patent laws to entangle American innovators and stymie American technologies.

Mitigating China's offensive use of the IP laws in these ways is just like mitigating any other infrastructure vulnerability: We must take steps to ensure that the IP laws are resilient to the sorts of abuses that undermine our technological leadership and security. I outline four major approaches below:

- **Trustworthiness in patents.** Strong processes for vetting and validating that patents are correctly issued will separate hard-earned innovation from low-quality patent chaff that, left untouched, could tie up American innovators in pointless and costly litigation. Greater transparency in patent ownership and litigation would also help to detect, identify, and respond to any abuse.

- **Championing forum fairness.** The United States should lead in putting a stop to the ongoing, destructive race to the bottom on patent litigation practices. It should stand against "forum selling" practices, in China and elsewhere, of courts attracting lucrative patent lawsuits by tilting the playing field.

- **Focusing on competition.** A robustly competitive landscape promotes national security and technological progress. Policymakers should work to ensure that the IP laws enhance competition and cannot be turned into tools for suppressing competition.

- **The whole of government.** To ensure American leadership in technology and innovation, IP rights are an important component but not the only component. Especially for dynamic fields like artificial intelligence, patents can have complex and counterintuitive effects, and policy tools such as STEM education, high-skilled immigration, research funding, and diversity initiatives can have tremendous impact.

I. Patents' Territorial Nature and the IP Theft Misconception

To understand China's offensive use of IP rights, it is necessary to understand a key fact about IP law and patent law in particular. A patent confers a right upon one party, the patent holder, to block other parties from using certain technologies on penalty of infringement.[4] But while anyone can get U.S. patents, the only people who can be blocked by them are U.S. firms.

U.S. patents generally cannot stop foreign activity.[5] As the Supreme Court has repeatedly said, "Courts presume that federal statutes apply only within the territorial jurisdiction of the United States."[6] While there are limited avenues for asserting patents against importers of infringing products,[7] the act of importation confirms that patent law requires a domestic act before infringement can be found.[8] An American patent has no effect on a Chinese company operating entirely outside the United States, even if that Chinese company is exploiting technology squarely within the scope of the patent.

That Chinese company, however, can apply for and obtain as many U.S. patents as it wants. Patents are available equally to foreign and domestic applicants, and in compliance with international treaties, the patent laws give no preference to domestic patent holders.[9] Indeed, in 2020, 56% of U.S. patent applications were filed by foreign residents, and 53% of patents were issued to foreign inventors.[10]

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4. *See* 35 U.S.C. § 271.

5. *See generally* Bernard Chao, *Patent Imperialism*, 109 Nw. U. L. Rev. Online 77, 78–79 (2014), https://scholarlycommons.law.northwestern.edu/nulr_online/8.

6. *WesternGeco LLC v. ION Geophysical Corp.*, 138 S. Ct. 2129, 2137 (2018) (quoting *Foley Bros., Inc. v. Filardo*, 336 U.S. 281, 285 (1949)) (internal quotations omitted).

7. *See* 35 U.S.C. § 271(g) (providing for patent infringement when one "imports into the United States . . . a product which is made by a process patented in the United States").

8. *See* Chao, *supra* note 5, at 78 ("Although there are exceptions to patent law's territorial limitation, these exceptions are narrow.").

9. *See* Agreement on Trade-Related Aspects of Intellectual Property Rights, Annex 1C, art. 3, para. 1, Apr. 15, 1994, 1869 U.N.T.S. 299.

10. *See* U.S. Patent & Trademark Office, Performance and Accountability Report 201, 205, 209, 215 (2021), https://www.uspto.gov/sites/default/files/documents/USPTOFY21PAR.pdf.

The result of this asymmetry is that, as far as U.S. patent law goes, a Chinese firm can obtain a patent and charge an American company with infringement, but an American company cannot reciprocate.[11] For the American company to charge the Chinese company with infringement, it must obtain a Chinese patent and avail itself of China's intellectual property laws and procedures to obtain relief.

However unfair this arrangement may seem, it is the current law and it would be bad policy to change it. Patents cannot be given extraterritorial effect to reach foreign conduct, as U.S. courts lack jurisdiction to enforce judgments abroad. Nondiscrimination among patent applicant nationalities avoids a destructive race to the bottom, in which countries vie to attract companies to relocate based on increasingly discriminatory patent laws; it also avoids tit-for-tat retaliation against countries' respective innovators. The end result of policies favoring U.S. patent holders could be ultimately to disfavor them more greatly worldwide. Furthermore, determined foreign adversaries could probably game such policies easily through shell companies and obfuscatory corporate transactions, so attempting to disfavor Chinese patent applications legislatively would likely be futile.

Among other things, the territorial nature of patents explains why current concerns about IP theft in China are largely unrelated to U.S. patent law.[12] By both statute and constitutional requirement, the text of a patent is required to reveal the inner workings of a new technology with sufficient detail such that others are able to make and use the same technology.[13] That text is published such that anyone around the world can read the patent, and it makes little sense to say that anyone can "steal" publicly available information outside the ambit of U.S. patent law. Instead, IP theft typically refers to misappropriation of trade secrets and other proprietary information, through industrial espionage or forced disclosures through compelled joint ventures.[14] Trade secret and industrial espionage

11. *See Of Monopolies and Monocultures*, *supra* note 3, at 387 & n.105.

12. *See* HICKEY ET AL., *supra* note 1, at 15 ("A patent, for example, is a publicly available legal document granting the patent holder certain exclusive rights; . . . infringers do not 'steal' the patent."); *Competitiveness with China*, *supra* note 3.

13. *See* 35 U.S.C. § 112(a); *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1345 (Fed. Cir. 2010) ("[A] separate requirement to describe one's invention is basic to patent law.").

14. *See* OFFICE OF THE U.S. TRADE REPRESENTATIVE, *supra* note 2, at 19–23 (describing

laws would be the proper focus of this Subcommittee's attention to deal with such issues.

II. How China Can Use, and Uses, Patents to Harm American Innovators

The asymmetry between who can obtain U.S. patents and who can be sued under them helps to explain the offensive use of patents: Chinese firms, perhaps with backing or direction from the Chinese government, can obtain U.S. patents and assert them against American businesses. China's offensive use of patents has already manifested in at least four ways, as described below.

A. Flooding the United States with Low-Quality Patents

First, Chinese entities have been applying for U.S. patents at a staggering rate. In 2020, the U.S. Patent and Trademark Office ("USPTO") received 47,712 patent applications from China, the second highest filing volume from a foreign country.[15] That represents a nearly 50% increase in application volume since 2017, a rapid acceleration compared to the top foreign filing country, Japan, where applications have dropped by almost 25% over the same period,[16] and compared to an overall increase in U.S. patent application filings of about 7% between those years.[17] China appears to be on track to the top foreign filer of U.S. patent applications within just a few years.

This meteoric rise in patent applications from China is the result of state-sponsored policy. As the USPTO reported recently, China uses a variety of tools to induce patent filings: tax incentives, target metrics for institutional patenting, and (until recently[18]) even monetary subsidies to

China's use of joint venture requirements to compel technology transfers "behind closed doors").

15. *See* U.S. Patent & Trademark Office, *supra* note 10, at 210.

16. *See id.* at 211.

17. *See id.* at 201.

18. *See* Stephen Yang, *Ending Patent Subsidies in China*, Landslide (Am. Bar Ass'n), Jan. 2021, at 10, https://www.mondaq.com/china/patent/1150552/ending-patent-subsidies-in-china.

patent filers.[19] The report concludes that these inducements are a "major contributor" to China's high worldwide volume of patent filings.[20]

Yet those patents are also often of low innovative quality. A *Bloomberg* report found that the majority of Chinese patents are abandoned shortly after grant, suggesting their minimal asset value.[21] As the USPTO report also finds, China's use of subsidies and incentives "may in part explain why the commercial value of China's patents is low."[22] The report further finds that China's IP licensing receipts are comparatively low, "an additional indicator of the relatively low value of China's patents and other IP."[23] Although these studies focused on worldwide patenting by Chinese entities, there does not appear to be reason to believe that Chinese-filed U.S. patents are substantially different.

This glut of low-quality patents cannot be ignored for at least three reasons. First, it strains the USPTO's limited examination resources, potentially delaying the issuance of valuable patents representing commercializable innovation.[24] Second and more importantly, it crowds the space of potential liability for American innovators and businesses. A company

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19. *See* U.S. Patent & Trademark Office, Trademarks and Patents in China: The Impact of Non-Market Factors on Filing Trends and IP Systems 7 (Jan. 2021), https://www.uspto.gov/sites/default/files/documents/USPTO-TrademarkPatentsInChina.pdf; *see also* Dan Prud'homme & Taolue Zhang, China's Intellectual Property Regime for Innovation: Risks to Business and National Development 62 (2019), https://link.springer.com/content/pdf/10.1007/978-3-030-10404-7.pdf; Cheryl Xiaoning Long & Jun Wang, *China's Patent Promotion Policies and Its Quality Implications*, 46 Sci. & Pub. Pol'y 91 (2019), https://economics.harvard.edu/files/economics/files/long-cheryl_quality_implications_of_patent_promotion_policies_in_china_ec2342_seminar_1-25-17.pdf.

20. *See* U.S. Patent & Trademark Office, *supra* note 19, at 7.

21. *See* Lulu Yilun Chen, *China Claims More Patents than Any Country—Most Are Worthless*, Bloomberg (Sept. 26, 2018), https://www.bloomberg.com/news/articles/2018-09-26/china-claims-more-patents-than-any-country-most-are-worthless.

22. *See* U.S. Patent & Trademark Office, *supra* note 19, at 7; Prud'homme & Zhang, *supra* note 19, at 62–63 ("[O]verly simplistic patent targets set by the Chinese state since 2010 have incentivized recent patent filings without enough attention to their quality.").

23. *See* U.S. Patent & Trademark Office, *supra* note 19, at 9.

24. *Cf.* U.S. Gov't Accountability Office, GAO-16-479, Patent Office Should Strengthen Search Capabilities and Better Monitor Examiners' Work 49–50 (June 2016) (finding potential need for increased time for patent examination).

entering a market often conducts a "freedom to operate" analysis, assessing what patents cover a certain technological area and what licenses the company needs to negotiate. In doing that analysis, the company must wade through all the patents in the relevant area, high-quality or not. A mass of patents from China could multiply this search and legal analysis cost many times over.[25] Indeed, these filings may render it more difficult for American firms to protect their own IP rights, as they constitute facially cognizable prior art that could potentially draw out the patent examination process.[26]

Several pointers suggest how a glut of low-quality foreign patents could end up interfering with domestic innovation. In the analogous field of trademark law, scholars have already worried that high-volume applications for trademark registrations from China are crowding the market so much that the United States might be "running out of trademarks."[27] And in the early 2000s, a glut of software patents of questionable validity enabled a variety of patent assertion business models to spring up and harass technology companies and Main Street businesses for decades.[28] History suggests that China's strategy of inducing high-volume patent filings regardless of

25. *See* Christina Mulligan & Timothy B. Lee, *Scaling the Patent System*, 68 N.Y.U. ANN. SURV. AM. L. 289 (2012).

26. *See* Suchodolski, Harrison & Heiden, *supra* note 2, at 201–02. To be clear, the mere publication of prior art in a timely manner is not a bad act. But to the extent that a patent application is so low-quality that its text is non-enabling, that application is not actually prior art, but a later patent applicant would have to expend effort to prove this.

27. *See* Barton Beebe & Jeanne C. Fromer, *Are We Running out of Trademarks? An Empirical Study of Trademark Depletion and Congestion*, 131 HARV. L. REV. 945 (2018), https://harvardlawreview.org/2018/02/are-we-running-out-of-trademarks/.

28. Specifically, several judicial decisions around that time cut back on the patent eligibility doctrine that previously had limited the patentability of software. *See State St. Bank & Trust Co. v. Signature Fin. Grp., Inc.*, 149 F.3d 1368, 1370 (Fed. Cir. 1998). The effect of that decision has been widely criticized. *See* Fabio E. Marino & Teri H. P. Nguyen, *From Alappat to Alice: The Evolution of Software Patents*, 9 HASTINGS SCI. & TECH. L.J. 1, 6 (2017); James Bessen, *A Generation of Software Patents*, 18 B.U. J. SCI. & TECH. L. 241, 243 (2012); Richard H. Stern, *Alice v CLS Bank: US Business Method and Software Patents Marching Towards Oblivion?*, 2014 EUR. INTELL. PROP. REV. 619, 620; Andrew Chin, *Ghost in the "New Machine": How Alice Exposed Software Patenting's Category Mistake*, 16 N.C. J.L. & TECH. 623, 625 (2015) (describing the law during that period as a "category mistake"). *See generally* Charles Duan, *Examining Patent Eligibility*, 96 ST. JOHN'S L. REV. (forthcoming 2023) (manuscript at 11–12).

quality may have substantial implications for the American economy.

B. Asserting Patents Against American Firms

Besides complicating American companies' freedom-to-operate determinations, Chinese-held U.S. patents could be directly asserted against American companies, tying them up in potentially years of costly litigation. The Chinese telecommunications giant Huawei, for example, is reportedly the fourth most prolific patenting company in the United States, receiving 2,836 U.S. patents in 2022 alone.[29] In 2020, Huawei sued Verizon for infringement of several telecommunications patents; that lawsuit followed a 2016 suit against T-Mobile US.[30]

Huawei has close ties with the Chinese government,[31] and the idea that a national government might sponsor or coordinate patent litigation against American firms is not farfetched. Countries including France, Japan, and South Korea have established "sovereign patent funds" intended to aggregate and often monetize a country's patents around the world.[32] State-sponsored entities such as Australia's Commonwealth Scientific and Industrial Research Organisation have vigorously asserted patents against American companies.[33] And the U.S. Chamber of Commerce has warned

29. *See* John Koetsier, *Samsung Beats IBM, Apple, Intel, Google for 2022 Patent Crown; 56% of U.S. Patents Go to Foreign Firms*, FORBES (Jan. 14, 2023), https://www.forbes.com/sites/johnkoetsier/2023/01/14/samsung-beats-ibm-apple-intel-google-for-2022-patent-crown-56-of-us-patents-go-to-foreign-firms/.

30. *See* David Shepardson, *Huawei, Verizon Agree to Settle Patent Lawsuits*, REUTERS (July 12, 2021), https://www.reuters.com/legal/transactional/huawei-verizon-agree-settle-patent-lawsuits-sources-2021-07-12/; Lauren Goode, *Huawei Sues T-Mobile, Saying Carrier Violated Wireless Patents*, THE VERGE (July 8, 2016), https://www.theverge.com/2016/7/8/12133164/huawei-sues-t-mobile-saying-carrier-violated-wireless-patents; *Of Monopolies and Monocultures*, *supra* note 3, at 385–87.

31. *See, e.g.*, MIKE ROGERS & C.A. DUTCH RUPPERSBERGER, PERMANENT SELECT COMM. ON INTELLIGENCE, U.S. HOUSE OF REPRESENTATIVES, INVESTIGATIVE REPORT ON THE U.S. NATIONAL SECURITY ISSUES POSED BY CHINESE TELECOMMUNICATIONS COMPANIES HUAWEI AND ZTE 13–16 (Oct. 8, 2012), https://stacks.stanford.edu/file/druid:rm226yb7473/Huawei-ZTE%20Investigative%20Report%20%28FINAL%29.pdf.

32. *See* Josh Landau, *IPR Successes: A Bridge to Sovereign Patent Funds*, PAT. PROGRESS (Oct. 9, 2017), https://www.patentprogress.org/2017/10/ipr-successes-bridge-sovereign-patent-funds/; Xuan-Thao Nguyen, *Sovereign Patent Funds*, 51 U.C. DAVIS L. REV. 1257 (2018).

33. *See Commonwealth Sci. & Indus. Research Org. v. Cisco Sys., Inc.*, 809 F.3d 1295 (Fed.

about the possibility that China could use a sovereign wealth fund to instigate a "suit against an American company in a sensitive industry such as military technology," and thereby obtain "highly confidential documents containing proprietary information regarding sensitive technologies" through the ordinary and compulsory discovery processes of litigation.[34]

To be clear, the holder of a valid U.S. patent has and ought to have a right to assert that patent against infringers in the United States, regardless of the patent holder's nationality. The concern here is that state-sponsored entities could strategically take advantage of the costs and procedures of protracted litigation to the detriment of American firms, regardless of the merits of the underlying patents in suit.[35] Given the wave of low-quality patent applications already present as discussed above, that concern is especially potent.

C. Racing to the Bottom on Standard-Essential Patents

Information and communication technologies present another avenue for offensive patent use. Technologies such as Wi-Fi, 5G, video encoding, television broadcasting, and more depend on technical standards that provide a common framework for products from competing firms to connect and communicate with each other.[36] An Apple smartphone must be able to speak the same languages as Verizon and AT&T cell phone towers, Cisco routers, Dell computers, and Android devices in order for us to have the

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Cir. 2015).

34. Brief for Amici Curiae Chamber of Commerce of the United States of America and Lawyers for Civil Justice at 15, *In re Nimitz Techs. LLC*, No. 2023-103 (Fed. Cir. Nov. 30, 2022) (per curiam) (quoting Maya Steinitz, *Whose Claim Is This Anyway? Third-Party Litigation Funding*, 95 MINN. L. REV. 1268, 1270 (2011), https://www.minnesotalawreview.org/wp-content/uploads/2012/03/Steinitz_PDF.pdf).

35. *Cf.* FED. TRADE COMM'N, PATENT ASSERTION ENTITY ACTIVITY: AN FTC STUDY 3–4 (Oct. 2016), https://www.ftc.gov/system/files/documents/reports/patent-assertion-entity-activity-ftc-study/p131203_patent_assertion_entity_activity_an_ftc_study_0.pdf (describing different business models of patent assertion entities, including "Litigation PAES" that bring lawsuits "consistent with nuisance litigation").

36. *See Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1208–09 (Fed. Cir. 2014); Charles Duan, *Internet of Infringing Things: The Effect of Computer Interface Copyrights on Technology Standards*, 45 RUTGERS COMPUTER & TECH. L.J. 1, 11–12 (2019), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3391231.

efficient and connected technological environment we enjoy today.

Those common languages are technical standards, typically developed by groups of industry members and technical experts in national and international organizations.[37] Members of these organizations often hold patents covering critical parts of standardized technologies, and if those "standard-essential patents" could be asserted freely, any one patent could disrupt critical communications systems.[38] As a result, almost every standard-setting organization requires patent holders to commit to licensing their patents on fair, reasonable, and nondiscriminatory ("FRAND") terms, ensuring that those patents do not restrain competition and block companies seeking to use critical technologies such as Wi-Fi and 5G.[39]

China has been a dominant player in technical standards and patents. As of 2021, the USPTO identified about 106,000 patents declared relevant to 5G technology, with Huawei being the top firm in patent holdings; ZTE ranked among the top seven.[40] Consistent with overall Chinese patent filings, many have questioned whether Huawei's 5G patents represent high-quality innovation.[41] China apparently also has significant leadership control over key standard-setting organizations.[42] As standardized technolo-

37. *See generally* NAT'L ACAD. OF SCIS., PATENT CHALLENGES FOR STANDARD-SETTING IN THE GLOBAL ECONOMY (Keith Maskus & Stephen A. Merrill eds., 2013), https://www.nap.edu/catalog/18510/patent-challenges-for-standard-setting-in-the-global-economy-lessons.

38. *See id.* at 52–60; Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEX. L. REV. 1991 (2007), http://faculty.haas.berkeley.edu/shapiro/stacking.pdf.

39. *See* NAT'L ACAD. OF SCIS., *supra* note 37, at 51 ("While the specific language may differ, most SSOs ask rights holders to consent to license their rights on terms that are fair, reasonable and nondiscriminatory (FRAND), with or without a royalty payment.").

40. *See* U.S. PATENT & TRADEMARK OFFICE, PATENTING ACTIVITY BY COMPANIES DEVELOPING 5G 4–5 (Feb. 2022), https://www.uspto.gov/sites/default/files/documents/USPTO-5G-PatentActivityReport-Feb2022.pdf.

41. *See* ROBERT D. ATKINSON, INFO. TECH. & INNOVATION FOUND., HOW CHINA'S MERCANTILIST POLICIES HAVE UNDERMINED GLOBAL INNOVATION IN THE TELECOM EQUIPMENT INDUSTRY 17–18 (2020), https://itif.org/publications/2020/06/22/how-chinas-mercantilist-policies-have-undermined-global-innovation-telecom/ (collecting studies).

42. *See* Lindsay Gorman, *The U.S. Needs to Get in the Standards Game—with like-Minded Democracies*, LAWFARE (Apr. 2, 2020), https://www.lawfareblog.com/us-needs-get-standards-game%E2%80%94-minded-democracies; MELANIE HART & JORDAN LINK, CTR. FOR AM. PROGRESS, THERE IS A SOLUTION TO THE HUAWEI CHALLENGE

gies such as 5G become increasingly essential to American infrastructure and national security, China's IP-backed influence over technical standards demands scrutiny.

China also uses patents in an offensive role through litigation over these standard-essential patents. Since most standardized technologies are used worldwide, a holder of standard-essential patents in multiple countries can freely choose, among those countries, where to bring suit.[43] This lucrative litigation has created a "race to the bottom," well-documented by Professor Jorge Contreras among others, in which national courts compete to attract patent cases through legal enticements such as automatic preliminary injunctions, expedited proceedings, favorable legal methodologies, and worldwide damages awards that ignore the extraterritoriality principles of patents.[44]

Chinese courts have taken a leading position in this race. Recently, Chinese courts have taken a page out of the playbook of U.S. courts, issuing "anti-suit injunctions" prohibiting litigants from pursuing their infringement cases over standard-essential patents in courts outside of China.[45] As Professors Peter Yu, Contreras, and Yu Yang explain, China's use of anti-suit injunctions has the "objective of making Chinese courts the 'preferred place' for international intellectual property dispute settlement" and is coterminous with the Chinese government's efforts to promote indige-

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(2020), https://www.americanprogress.org/wp-content/uploads/2020/10/Solution-to-Huawei-Challenge-NEW.pdf.

43. *See, e.g.*, Erik R. Puknys & Michelle (Yongyuan) Rice, *Where Will Be the Most Favorable FRAND Forum?* (Mar. 2021), https://www.finnegan.com/en/insights/articles/CDMR-where-will-be-the-most-favorable-frand-forum.html; Eli Greenbaum, *No Forum to Rule Them All: Comity and Conflict in Transnational FRAND Disputes*, 94 WASH. L. REV. 1085, 1087 (2019), https://digitalcommons.law.uw.edu/cgi/viewcontent.cgi?article ("FRAND disputes can spawn litigation in each country in which standard-compliant products and services are made available.").

44. *See* Jorge L. Contreras, *The New Extraterritoriality: FRAND Royalties, Anti-Suit Injunctions and the Global Race to the Bottom in Disputes over Standards-Essential Patents*, 25 B.U. J. SCI. & TECH. L. 251 (2019), https://www.bu.edu/jostl/files/2019/10/1.-Contreras.pdf; Stefan Bechtold, Jens Frankenreiter & Daniel M. Klerman, *Forum Selling Abroad*, 92 S. CAL. L. REV. 487 (2019).

45. *See, e.g.*, Ken Korea, *Anti-Suit Injunctions—a New Global Trade War with China?*, MANAGING IP (Aug. 3, 2022), https://www.managingip.com/article/2afz8grsj5i3uyxp19ji8/anti-suit-injunctions-a-new-global-trade-war-with-china.

nous innovation by bulking up its patent system.[46]

By no means is a renewed focus on strengthening IP protections in China a bad thing.[47] But rejiggering litigation procedures in ways that tilt the playing field as part of a global race to the bottom over standard-essential patent litigation—the harms of that fall not just upon U.S. innovators but upon American national interests as a whole.

D. Using a Federal Agency, Designed to Protect American Innovators, Instead to Target Them

Maybe it is not such a surprise that Chinese patent holders can assert U.S. patents against U.S. companies. What is perhaps more surprising, though, is that one of the venues where Chinese patent holders do this is a federal agency established to protect U.S. companies from unfair foreign competition.

The U.S. International Trade Commission ("ITC") is an independent administrative agency that adjudicates unfair acts of importation into the United States.[48] Under section 337 of the Tariff Act of 1930, the ITC investigates patent and other IP infringement as a species of those unfair acts, and has powers to exclude infringing articles from importation.[49] Because the importer of infringing articles is sometimes outside the jurisdiction of federal courts, the agency serves an important purpose of policing and enforcing IP rights at the border, making the ITC investigation an important

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46. *E.g.*, Peter K. Yu, Jorge L. Contreras & Yu Yang, *Transplanting Anti-Suit Injunctions*, 71 AM. U. L. REV. 1537, 1604, 1610 (2021–2022); *see also* Mark Cohen, *China's Practice of Anti-Suit Injunctions in SEP Litigation: Transplant or False Friend?*, *in* SEAN M. O'CONNOR, 5G AND BEYOND: INTELLECTUAL PROPERTY AND COMPETITION POLICY IN THE INTERNET OF THINGS (Jonathan M. Barnett ed., 2023).

47. *See* OFFICE OF THE U.S. TRADE REPRESENTATIVE, SPECIAL 301 REPORT 50 (2022), https://ustr.gov/sites/default/files/IssueAreas/IP/2022%20Special%20301%20Report.pdf (noting that "[r]ight holders welcomed amendments to the Patent Law" in China); Yukon Huang & Jeremy Smith, *China's Record on Intellectual Property Rights Is Getting Better and Better*, FOREIGN POL'Y (Oct. 16, 2019), https://foreignpolicy.com/2019/10/16/china-intellectual-property-theft-progress/.

48. *See generally* SHAYERAH ILIAS, REPORT NO. RS22880, INTELLECTUAL PROPERTY RIGHTS PROTECTION AND ENFORCEMENT: SECTION 337 OF THE TARIFF ACT OF 1930 (Cong. Research Serv. Oct. 26, 2009), https://www.everycrsreport.com/files/20091026_RS22880_d48541cc65507232fb40666ea4d32e56fa3461d5.pdf.

49. *See* Tariff Act of 1930 § 337(d)(1), 19 U.S.C. § 1337 (as amended).

tool for mitigating IP theft by foreign nations such as China.[50]

Statutes make clear that the ITC is intended to support *American* inventors against foreign infringers. To qualify for an investigation to be brought, a complainant before the ITC must prove a "domestic industry," showing that it engages in productive activities under the relevant patent within the United States.[51] One cannot ask the ITC to block the importation of infringing computer chips, for example, without making the patented chips in the United States. The agency also must consider a list of U.S.-centric public interest factors before ordering any exclusion of imported articles.[52] Those public interest factors would seem an ideal way for the ITC to incorporate national security concerns into its decisionmaking.[53] Finally, since the agency's authority is limited to border control, American companies operating purely domestic businesses ought to be immune to the agency's jurisdiction.[54]

In recent years, though, every one of these protections has been undermined, in large part due to the ITC's efforts toward expansion of authority.[55] The agency (with support of statutory amendments) has interpreted

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50. *See, e.g.*, Jonathan R.K. Stroud, *The China Syndrome: The International Trade Commission's Rising Importance For Enforcing International Trade Secret Violations*, UPDATE, May–June 2013, at 10, https://digitalcommons.wcl.american.edu/cgi/viewcontent.cgi?article.

51. *See* Tariff Act § 337(a)(2) (providing for a remedy for patent infringement "only if an industry in the United States, relating to the articles protected by the patent, copyright, trademark, mask work, or design concerned, exists or is in the process of being established"); Colleen V. Chien, *Protecting Domestic Industries at the ITC*, 28 SANTA CLARA HIGH TECH. L.J. 169, 177–78 (2011).

52. *See* Tariff Act § 337(d)(1) (providing for orders excluding articles from importation "after considering the effect of such exclusion upon the public health and welfare, competitive conditions in the United States economy, the production of like or directly competitive articles in the United States, and United States consumers").

53. *See* Kenny Mok, *In Defense of 5G: National Security and Patent Rights Under the Public Interest Factors*, 88 U. CHI. L. REV. 1971, 1997–2010 (2021), https://chicagounbound.uchicago.edu/cgi/viewcontent.cgi?article=6274&context=uclrev.

54. *See, e.g., ClearCorrect Operating v. Int'l Trade Comm'n*, 810 F.3d 1283, 1290 (Fed. Cir. 2015) ("Thus, when there is no importation of 'articles' there can be no unfair act, and there is nothing for the Commission to remedy.").

55. *See generally* CHARLES DUAN & BILL WATSON, POLICY STUDY NO. 147, THE INTERNATIONAL TRADE COMMISSION'S AUTHORITY IN DOMESTIC PATENT DISPUTES (R St. Inst. June 2018), https://www.rstreet.org/wp-content/uploads/2018/06/Corrected-

"domestic industry" broadly, such that a foreign patent holder can minimally satisfy the requirement by licensing a patent to just one U.S. company, even one unwilling to participate in the investigation.[56] The public interest factors have received virtually no attention in ITC final determinations for decades.[57] And the agency has manufactured several ways to use purely domestic activity to support infringement findings, applying its exclusionary powers to block importation of staple articles that themselves infringe no asserted patents.[58]

The unsurprising result has been an influx of ITC investigations in which *foreign* patent holders target American firms. In a study of recent investigations, I found that there were over four times as many foreign-against-domestic ITC investigations as there were of the expected domestic-against-foreign type.[59] Excluding investigations involving American companies against each other or involving only foreign ones (both of which are odd for other reasons), the ITC appears to be more often used against American innovators than in support of them. And this does not count patent assertion entities for which the full chain of ownership is un-

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147-for-post.pdf.

56. *See* Tariff Act § 337(a)(3)(C); Stephen E. Kabakoff & Andrew G. Strickland, *Leveraging Standing and Domestic Industry Activities of Third Parties in Patent-Based ITC Investigations*, INTELL. PROP. & TECH. L.J. (June 2014), https://www.finnegan.com/en/insights/articles/leveraging-standing-and-domestic-industry-activities-of-third.html.

57. *See* Veronica Ascarrunz et al., *Public Interest at the ITC*, JD SUPRA (Mar. 15, 2022), https://www.jdsupra.com/legalnews/public-interest-at-the-itc-3044140/ ("The Commission, however, rarely denies remedies based on the public interest factors, and has only done so on three occasions, and not since 1984.").

58. *See Comcast Corp. v. Int'l Trade Comm'n*, 951 F.3d 1301, 1307–10 (Fed. Cir. 2020); Joe Mullin, *The International Trade Commission Is Opening the Door to Abusive Patent Owners and Endangering U.S. Businesses*, ELECTRONIC FRONTIER FOUND. (July 15, 2020), https://www.eff.org/deeplinks/2020/07/international-trade-commission-opening-door-abusive-patent-owners-and-endangering.

59. *See* CHARLES DUAN, POLICY STUDY NO. 246, THE U.S. INTERNATIONAL TRADE COMMISSION: AN EMPIRICAL STUDY OF SECTION 337 INVESTIGATIONS (R St. Inst. Nov. 2021), https://www.rstreet.org/wp-content/uploads/2021/11/REALFINAL_22Nov21_RSTREET246-1.pdf.

known.[60]

The ITC is often considered a favored forum for patent assertion because of its powerful remedies and expedited timelines.[61] As a protection for U.S. intellectual property against foreign misappropriation, this makes a great deal of sense. But the fact that the ITC has been turned on its head reflects not just a need for reform of the agency[62] but a more general lack of attention to the offensive exploitation of patents.

III. A Resilient U.S. Patent System

To protect the United States from foreign abuses of its own patent system, more than simplistic measures are required. Simple attempts like blocking China from using U.S. patents would be no more effective than trying to block cyberattacks based on Internet addresses.[63] Resilient IP laws require layers of trust and security to ensure that granted patents and other rights represent valuable innovation, not tools of exploitation. The following proposals work toward such a resilient IP system and merit the Subcommittee's attention.

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60. *See* RPX Corp., *Bell Semic Unloads Against Multiple Targets with Just One Among Thousands of Patents*, RPX Corp. (May 19, 2022), https://www.mondaq.com/unitedstates/patent/1194520/bell-semic-unloads-against-multiple-targets-with-just-one-among-thousands-of-patents (noting complex and incomplete ownership information for one ITC complainant in the semiconductor industry).

61. *See* William P. Atkins & Justin A. Pan, *An Updated Primer on Procedures and Rules in 337 Investigations at the U.S. International Trade Commission*, 18 U. Balt. Intell. Prop. L.J. 105, 110–11 (2010).

62. *See* Press Release, *Schweikert, Delbene Introduce Legislation to Protect American Industry, Workers, and Consumers from Patent Trolls* (Sept. 7, 2021), https://schweikert.house.gov/2021/09/07/schweikert-delbene-introduce-legislation-protect-american-industry/; Wayne Brough, *The Competition Issue Congress Isn't Talking About: Patent Abuse and ITC Reform*, The Hill (Sept. 22, 2022), https://thehill.com/opinion/international/3654836-the-competition-issue-congress-isnt-talking-about-patent-abuse-and-itc-reform/.

63. *See also* Jacob Schindler, *Rubio's Huawei Proposal Should Worry US Tech, Pharma Companies*, IAM Mag. (June 23, 2019), https://www.iam-media.com/law-policy/rubios-huawei-proposal-should-worry-us-tech-pharma-companies (identifying concerns with bill proposing to limit Huawei from enforcing U.S. patents); Kieren McCarthy, *You're Huawei Off Base on This, Rubio: Lawyers Slam US Senator's Bid to Ban Chinese Giant from Filing Patent Lawsuits*, The Register (June 21, 2019), https://www.theregister.co.uk/2019/06/21/huawei_patents_rubio/ (same).

A. Ensuring Trustworthiness in Patents

To defend against foreign abuses among other things, the patent system must be a trusted system, and the patents that it outputs must be trustworthy. Flooding the United States with low-quality, questionable patents exploits gaps in this trust, as does turning litigation systems against ourselves. These gaps must be identified and ultimately closed.

Correctness in patent grants is the cornerstone of this trustworthiness. The patent laws limit patents to novel,[64] nonobvious,[65] and sufficiently described[66] inventions within the range of allowable subject matter.[67] These statutory and constitutional[68] requirements work interconnectedly to ensure that patent rights inure to technologies of value to the public. But it is widely known, from government studies and outside commentary, that patent examiners have limited time and resources to give applications a full vetting.[69]

Dedicating greater resources to the USPTO for patent examination would be an important step in this respect. That is not to say that the agency should act unequally between foreign and domestic applications; again, discrimination by applicant nationality would be bad policy and have troubling repercussions. Instead, increasing the quality of patent grants across the board would discourage high-volume, low-quality patent filings from China and elsewhere, protecting American innovators from the costs of an unnecessarily crowded patent space.

Back-end procedures for validating the correctness of already granted patents are equally important for patent trustworthiness. The USPTO oper-

64. *See* 35 U.S.C. § 102.

65. *See* § 103.

66. *See* § 112(a)–(b).

67. *See* § 101.

68. *See, e.g., Graham v. John Deere Co. of Kan. City*, 383 U.S. 1, 6 (1966).

69. *See, e.g.*, U.S. Gov't Accountability Office, *supra* note 24; Michael D. Frakes & Melissa F. Wasserman, *Is the Time Allocated to Review Patent Applications Inducing Examiners to Grant Invalid Patents? Evidence from Microlevel Application Data*, 99 Rev. Econ. & Stat. 550 (2017), https://direct.mit.edu/rest/article-abstract/99/3/550/58437/Is-the-Time-Allocated-to-Review-Patent; Brian Fung, *Inside the Stressed-out, Time-Crunched Patent Examiner Workforce*, Wash. Post (Aug. 1, 2014), https://www.washingtonpost.com/news/the-switch/wp/2014/07/31/inside-the-stressed-out-time-crunched-patent-examiner-workforce/.

ates several procedures, including ex parte reexamination[70] and inter partes review,[71] that give the agency the opportunity to take a second look and make corrections to past actions.[72] These proceedings have proven their accuracy, with the Federal Circuit fully or partially affirming inter partes review decisions over 80% of the time.[73] These proceedings verify the patent system, and without verification there can be no trust.

The USPTO's ongoing focus on "robust and reliable patents" is very much consistent with patent trustworthiness.[74] A patent that is fully vetted by examination and verifiable after the fact is one that represents value, that can attract investment, that does not present potential for abuse, and that ultimately is robust and reliable.[75] Some have used the phrase "robust and reliable," however, to suggest that patents should effectively be incontestable by making those verification procedures less available and harder to use. To do this, though, could very well invite foreign adversaries to exploit a patent system with fewer validation measures, the harms from which would likely outweigh any benefit.

Transparency in patent ownership and assertion should be another area of focus. Patents and patent litigation can be veiled in layers of corporate shells and contracts in the same way that cyberattackers veil themselves with intermediary proxies. The USPTO previously initiated an effort to identify the real parties in interest owning patents,[76] Senator Leahy re-

70. *See* 35 U.S.C. § 302.

71. *See* § 311.

72. *See generally* Megan M. La Belle, *Patent Law as Public Law*, 20 GEO. MASON L. REV. 41, 50–55 (2012) (describing public importance of challenges to patent validity).

73. *See* Daniel F. Klodowski et al., *IPR, CBM, and PGR Statistics for Final Written Decisions Issued in October Through December 2022*, AT PTAB BLOG (Finnegan, Henderson, Farabow, Garrett & Dunner, LLP Jan. 31, 2023), https://www.finnegan.com/en/insights/blogs/at-the-ptab-blog/ipr-cbm-and-pgr-statistics-for-final-written-decisions-issued-in-october-through-december-2022.html.

74. *See* Request for Comments on USPTO Initiatives to Ensure the Robustness and Reliability of Patent Rights, 87 Fed. Reg. 60130 (Patent & Trademark Office Oct. 4, 2022).

75. *See id.* at 60130 (defining "robustness and reliability of patents" as "ensur[ing] that the patent rights granted by the USPTO fulfill their intended purpose of furthering the common good, incentivizing innovation, and promoting economic prosperity").

76. *See* Changes to Require Identification of Attributable Owner, 79 Fed. Reg. ?4105 (Patent & Trademark Office Jan. 24, 2014).

cently introduced a bill on the subject,[77] and a recent dispute in the U.S. District Court for the District of Delaware highlighted difficulties with transparency in patent litigation funding and control.[78] Knowing the avenues by which countries like China are using to take advantage of patents is essential to identifying systemic vulnerabilities.

B. Championing Forum Fairness, Not Forum Selling

Anti-suit injunctions and worldwide FRAND patent judgments are symptoms of a larger, global race to the bottom among courts to attract lucrative standard-essential patent lawsuits. Called "forum selling," an extensive scholarly literature has considered the perverse incentives and outcomes that result from courts jockeying to attract patent cases.[79]

The United States should position itself as a global leader for fairness across forums for patent litigation. Ending the race to the bottom likely requires coordination across major court systems either to return to national patents' traditional territorial limits,[80] or to establish a decisive worldwide procedure for standard-essential patent litigation.[81] A coordinated approach is superior to the alternative of participating in the race, by trying to make American courts more attractive to litigants or exacting penalties for outside FRAND litigation. Any such approaches must contend with the historically supported likelihood that other nations like China will trans-

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77. *See* Pride in Patent Ownership Act, S. 2774, 117th Cong. (Sept. 21, 2021), https://www.congress.gov/bill/117th-congress/senate-bill/2774.

78. *See In re Nimitz Techs. LLC*, No. 2023-103 (Fed. Cir. Dec. 8, 2022) (per curiam); Christopher Yasiejko, *Judge Behind Litigation-Funding Probe Unloads After Forced Pause*, (Dec. 2, 2022), https://news.bloomberglaw.com/ip-law/judge-behind-litigation-funding-probe-unloads-after-forced-pause.

79. Daniel Klerman & Greg Reilly, *Forum Selling*, 89 S. CAL. L. REV. 241 (2016) (noting procedural techniques by which the Eastern District of Texas preferentially treated patent cases); *see also* J. Jonas Anderson, *Court Competition for Patent Cases*, 163 U. PA. L. REV. 631 (2015); Bechtold, Frankenreiter & Klerman, *supra* note 44 (describing competition for patent cases across foreign jurisdictions); J. Jonas Anderson & Paul R. Gugliuzza, *Federal Judge Seeks Patent Cases*, 71 DUKE L.J. 419 (2021), https://scholarship.law.duke.edu/dlj/vol71/iss2/3 (identifying procedural issues in the Western District of Texas).

80. *See* Greenbaum, *supra* note 43, at 1117–19.

81. *See* Contreras, *supra* note 44.

plant those U.S. approaches and probably exaggerate them,[82] ultimately to the detriment of American innovators and the worldwide patent system overall.

At the same time, policymakers need to consider the ongoing problem of forum selling domestically.[83] Ongoing questions about patent litigation in the federal courts of the Eastern and Western Districts of Texas show that the forum selling problem is recurrent and problematic within the United States and not just across nations.[84] If the United States is to be a global leader in opposing unfair judicial competition, it must demonstrate to the world that its own court system can lead in fairness as well.

C. Promoting Competition as a National Security Defense

Competition is the foundation of a robust American economy. It delivers high quality goods at the best prices to consumers, it avoids the stagnation of monopoly, and it encourages firms to out-innovate each other in order to out-compete each other. Competition is also critical to national security, because it forces companies in sensitive industries to compete on product cybersecurity and mitigates the potential formation of technological "monocultures" that are especially vulnerable to cyberattacks.[85]

Ideally, patents and competition work in tandem. Patents grant temporary protection from immediate copying of a firm's innovations, while also encouraging competitors to develop alternative technologies that design around those patents.[86] In practice, though, gaps in the laws occasionally

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82. *See* Yu, Contreras & Yang, *supra* note 46; Cohen, *supra* note 46.

83. *See* Klerman & Reilly, *supra* note 79.

84. *See* Anderson & Gugliuzza, *supra* note 79; Susan Decker, *Chief Justice Backs Plan to Review Patent Trial Forum-Shopping*, BLOOMBERG L. (Jan. 1, 2022), https://news.bloomberglaw.com/ip-law/chief-justice-backs-plan-to-review-patent-trial-forum-shopping; Brian J. Love & James Yoon, *Predictably Expensive: A Critical Look at Patent Litigation in the Eastern District of Texas*, 20 STAN. TECH. L. REV. 1 (2017); Yan Leychkis, *Of Fire Ants and Claim Construction: An Empirical Study of the Meteoric Rise of the Eastern District of Texas as a Preeminent Forum for Patent Litigation*, 9 YALE J.L. & TECH. 193 (2007); Joe Mullin, *EFF Asks Appeals Court to "Shut Down the Eastern District of Texas"*, ARS TECHNICA (Oct. 30, 2015), http://arstechnica.com/tech-policy/2015/10/eff-asks-appeals-court-to-shut-down-the-eastern-district-of-texas/.

85. *See Of Monopolies and Monocultures*, *supra* note 3.

86. *See, e.g., Ill. Tool Works Inc. v. Indep. Ink, Inc.*, 547 U.S. 28, 43 n.4 (2006) (citing sources).

enable patenting of technologies that cannot be worked around competitively, without justifiable reasons.

In the context of technical standards, for example, a company cannot avoid a standard-essential patent without foregoing the entire market of standard-compatible products; one cannot feasibly sell laptops with alternative, incompatible Wi-Fi for example.[87] The FRAND obligation, requiring reasonable and nondiscriminatory licensing of standard-essential patents, exists precisely to mitigate the potential competition harm resulting from these patents.[88]

And in some cases, patents are cleverly written to cover regulatory schemes, such that to comply with the law, one must infringe those patents.[89] In one recent case, for example, the manufacturer of a half-century-old drug obtained a patent not on the drug or its formulation, but the regulatory safety procedure for distributing the drug, thereby precluding generics and even improved drugs from entering the market on the off-patent drug.[90] These "mandatory infringement" patents present major anticompetitiveness problems, but they are unsurprisingly highly attractive to those looking to exploit IP rights to the greatest extent.[91]

Minimizing anticompetitive uses of these kinds of marginal patents will enhance the resilience of the U.S. patent system against foreign adversaries hoping to offensively exploit it. Unfortunately, though, the focus on competition has occasionally been forgotten in the context of patents. Conversations about standard-essential patents sometimes treat the FRAND commitment as a mere private contract, despite the commitment's fundamen-

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87. *See, e.g.*, Fed. Trade Comm'n, The Evolving IP Marketplace: Aligning Patent Notice and Remedies with Competition 191 (2011), http://www.ftc.gov/os/2011/03/110307patentreport.pdf ("While firms may not formally commit to using a standard in producing their products, as a practical matter they will generally find it necessary to use standardized technology if it becomes successful in the marketplace."); Lemley & Shapiro, *supra* note 38.

88. *See, e.g.*, Fed. Trade Comm'n, *supra* note 87, at 191–94.

89. *See* Charles Duan, *Mandatory Infringement*, 75 Fla. L. Rev. (forthcoming 2023) [hereinafter *Mandatory Infringement*] (manuscript at 7–27), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4193947.

90. *See* Rebecca Robbins, *A Drug Company Exploited a Safety Requirement to Make Money*, N.Y. Times (Feb. 28, 2023), https://www.nytimes.com/2023/02/28/business/jazz-narcolepsy-avadel-patents.html.

91. *See Mandatory Infringement*, *supra* note 89, at 27–29, 30–35.

tal public role in protecting technological and market competition.[92] As the United States engages with the world as a leader on standard-essential patent litigation issues, as I recommend above, it should make competition the centerpiece of that engagement.

D. Engaging the Whole of Government on Innovation Policy

The policy goal is to maintain the United States' leadership in technology, not in patent counts. China itself, with its failed attempts to "innovate" by subsidizing patent filings, is a cautionary warning against equating patents with innovation: It is easy to boost quantities of patents at the expense of quality and actual technological growth.

Instead, the United States government must take a whole-of-government approach to technology. The patent system is an important part of that approach. But so are resources for STEM education that build the next generation of innovators. So are high-skilled immigration policies that brings in the best talent from abroad.[93] So are research grant and innovation prize programs that can provide different and additional incentives.[94] So are diversity initiatives that ensure that the next great scientist or inventor is not lost.

Artificial intelligence exemplifies the importance of accounting for the whole of government in innovation policy. There is little doubt that AI technology is a strategic asset of importance both to national security and national competitiveness.[95] The United States has made tremendous investments in AI and has looked to numerous arms of policy to implement the objective of being the forerunner in AI technology. IP law circles, though, have largely focused on a narrow equation that more patents mean more AI, so limitations on the granting of patents in the field are tantamount to impediments to American AI leadership.

The reality is not so simple. AI development in the United States often progresses as an especially high-value form of "user innovation," in which

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92. *See Microsoft Corp. v. Motorola, Inc.*, 795 F.3d 1024, 1052 & n.22 (9th Cir. 2015).

93. *See* Caleb Watney, *The Egghead Gap*, 63 NEW ATLANTIS 95, 90–91 (2021).

94. *See* Suchodolski, Harrison & Heiden, *supra* note 2, at 227–35 (describing role of federal research and development spending).

95. *See, e.g.*, NAT'L SEC. COMM'N ON ARTIFICIAL INTELLIGENCE, FINAL REPORT (2021), https://www.nscai.gov/wp-content/uploads/2021/03/Full-Report-Digital-1.pdf.

technologists advance the state of the art not just to sell products but to use the improvements in their own larger businesses.[96] A medical technology company might build a new natural-language data model for physician terminology, not because the company's clients want to buy the model, but to incorporate the model into online services that it provides—the company creates AI to use rather than to sell. In a wide variety of industries characterized by user innovation, research finds that widespread patenting can have unexpected and counterintuitive effects, since user-innovators often rely on different IP strategies and can find their efforts stymied by broad-scoped patents.[97]

Furthermore, not all AI patents are alike. As Professor Nikola Datzov explains in a forthcoming paper, a specific patent applying a trained AI model to a useful product domain is likely eligible for patenting, and such a patent is very much unlike a broadly stated patent on AI-based data processing that could span whole swaths of products.[98] These special characteristics of the AI technology environment help to explain Professor Datzov's findings of tremendous levels of AI investment and innovation in the United States in the years after the Supreme Court sharply demarcated patent eligibility law in 2014:[99]

> AI private investment in the U.S. has been substantially stronger than any other country in the world, rising from approximately $5 billion in 2014 to more than $52.8 billion in 2021. By comparison, China—which was the next closest—totaled $17.21 billion in private investment in 2021. In total private investment in AI from 2013 to 2021, the U.S. once again dominated with $149.0 billion compared to China's $61.9 billion . . . . [S]ubstantial existing research demonstrates the ability of AI startups, generally, to be competitive and successful in the absence of extensive patent protection.[100]

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96. *See, e.g.*, ERIC VON HIPPEL, DEMOCRATIZING INNOVATION (2005).

97. *See id.* at 112–17.

98. *See* Nikola Datzov, *The Role of Patent (In)Eligibility in Promoting Artificial Intelligence Innovation*, 92 U. MO. KAN. CITY L. REV. (forthcoming 2023) (manuscript at sec. IV.B), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4380405.

99. *See Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347 (2014).

100. Datzov, *supra* note 98, sec. V.C.3.

Based on this unintuitive relationship between patents and AI investment, Professor Datzov recommends a cautious approach to altering the law of patent eligibility, with a greater emphasis on policy for data resources that serves as a foundation for new AI development.[101] That approach exemplifies how, in an especially significant technological area, the focus for national competitiveness needs to be not narrowly on IP protection, but on the full range of policy tools available in the United States.

Conclusion

Maintaining American leadership over national competitors demands a multifaceted, nuanced approach across a wide range of domestic and international policies. With respect to intellectual property, the patent and other IP laws must offer both a defensive strategy to protect American innovators from misappropriation, and protection from offensive exploitation of U.S. patents and patent laws by China and others. To mitigate these offensive uses, we must treat the patent laws as infrastructure for innovation, securing it against abuse and misuse as we would secure any other national strategic asset.

I thank the Subcommittee for holding this hearing on this important topic, and am delighted to answer any questions you may have.

101. *See id.* sec. VI.

Mr. ISSA. Thank you.

I will forego my questioning for now and go to Mr. Fitzgerald.

Mr. FITZGERALD. Thank you, Mr. Chair.

Mr. Evanina, shortly after the Olympics, Summer Olympics, in 2008, I was able to travel to Beijing for 10 days, and I remember how shocking it was to see how the city had been cleaned up and Westernized for all those traveling for the Olympics.

It, also, was a period of time in which I think many American corporations were not only being lured to do business in China, but, certainly, were more than willing to do that. I wanted to preface kind of a question for you along those lines.

So, because the Chinese government has historically required foreign companies seeking to do business in China to establish the joint ventures with Chinese-based companies, particularly, in industries such as oil and gas exploration, medicine, insurance, and radio and TV items, and now, the National Bureau of Economic Research found in 2015 alone foreign companies set up slightly more than 6,000 new joint ventures in China. It accounted for almost $28 billion in foreign direct investment. Then, the same study also found that, as soon as three years after inception of these joint ventures—we all kind of know what is going on—the Chinese firms in that same industry not only exceed the technology that was brought to them by American corporations, but, then, also increase the productivity related to that entire industry.

So, my question to you is, sometimes I think we are our own worst enemies in this area, in that we continue to allow corporations to enter in these joint ventures. They, at the end of the day, come away with millions of dollars in new revenue and productivity, but are we kind of chasing our own tail in this regard? I am wondering if you could respond to that.

Mr. EVANINA. Congressman, thanks for the question.

A bit complicated response, but, simple in terms of the thought process. I think a couple of things are true with your statement.

First, we don't play by the same rules as the Communist Party of China. We have the greatest capitalist society country the world has ever seen, which results in businesses and industries wanting to invest globally to have a significant return on investment. That has been true for two decades with anything you invest in with the Communist Party of China or companies that are within that, that country. So, that is true. So, it's hard to say to a capitalist society business entity, "Don't invest in China," because of "X," because we are a capitalist society.

For the first time ever, I will proffer to the Subcommittee that we are in a space right now where our global supremacy, our capitalist mindset is clearly superseding and overlapping with our national security and national interests. I think it's going to be a crosshairs where we have to now look at what's the obligation of a financial industry, of a corporate, or startup to say,

> Listen, your investment in the Communist Party of China is fair from a capitalist perspective, but it's rife with security issues for you and the Nation. Let's look at your issues and your next quarter earnings versus the national interest and national security.

I think that's a really tough conversation to have, but we're going to have to have that.

Mr. FITZGERALD. I will just followup with, just as of this week, I have had colleagues in Congress say we need to set a path for many American corporations to wean themselves off this. I think that the only clear path of doing that is probably legislation at some point.

So, I am wondering, any thoughts on should we go that far, and if we do go that far, what the fallout might be?

Mr. EVANINA. Yes, that's a great legislative question, a policy question about that intersection between Congress and the private sector with respect to capitalism.

I will say that I believe, with the impending Taiwan situation and what happened in Hong Kong, and the course around with the Communist Party of China, that eventually investors in China will start to feel the pain, and I think they will start to begin to not be able to withdraw their money from investments. I think the Communist Party of China will start to force us to feel the pain of that investment. I think that will change the course of American investment in China.

Mr. FITZGERALD. Thank you very much. I yield back.

Mr. ISSA. I thank the gentleman.

We now recognize the Ranking Member of the Subcommittee for his questions.

Mr. JOHNSON of Georgia. Thank you, Mr. Chair.

Mr. Cohen, you testified that U.S. policies and laws weakening our patent system in key areas, such as patent-eligible subject matter, and the availability of injunctive relief, have given China an opportunity to surpass us in innovation. Can you explain in more detail how China has exploited our weakened patent system?

Mr. COHEN. Yes. Thank you for your question.

So, to someone who observes IP development on both sides of the Pacific, it was interesting to me to see that at the same time as cases like Myriad and Bilski were decided by the U.S. Supreme Court, China amended its examination guidelines to permit the very same subject matter, ineligible patents, to be granted in China.

Now, this was probably due in some small measure to the U.S. Supreme Court decisions and an opportunity perceived by the Chinese patent office, as well as China's own economic growth, that it was becoming very successful in thin tech, in genomic discoveries, and medical diagnostics, and related areas. So, there's a bit of self-interest here, as well as a bit of a competitive edge.

Studies that have been done by Adam Mossoff at George Mason, Dave Kappos, and others, have shown that in many cases patents that were ineligible in the U.S. were eligible in China and the European Union, and many other countries. That's one aspect.

The other aspect is eBay. Now, in China, injunctions are, basically, automatically granted if there's a finding of infringement. This is really critical to China because damages are low. So, having an enforcement injunction means that you actually have a useful remedy in China's huge market where so many goods are manufactured and sold.

So, that becomes an attractive position for China to play in attracting global litigation. I should say that part of this is not—it's by no means secret that China wants to be a center for global inno-

vation. So, it wants to attract these cutting-edge industries. We've seen it with companies like Alibaba and Baidu and Tencent, and others.

It also wants to be a center for international IP litigation. How that evolves is a bit unclear, but they do have a cadre of over 2,000 IP judges—2,000. Not only that, but many of these judges and IP officials have since been promoted to higher levels within the Chinese government. I think we have yet to appoint a Federal Circuit judge to the U.S. Supreme Court. China has had at least two IP judges appointed to—as justices of their supreme court. We've seen other promotions within the Chinese bureaucracy.

Xi Jinping—

Mr. JOHNSON of Georgia. Well, let me stop you right there.

Mr. COHEN. Yes, sure.

Mr. JOHNSON of Georgia. Let me ask you this question. In your view, how would making injunctions easier to obtain make U.S. corporations more competitive with China?

Mr. COHEN. Well, it makes China a more attractive place to litigate. Obviously, injunctions for—that are abusively asserted will not advance U.S. innovation, but the availability of injunctive relief for those who practice inventions, this is a significant advantage. There's no doubt in China that injunction available if there is a finding of infringement.

Mr. JOHNSON of Georgia. Thank you.

I would like to ask anyone who cares to respond: I am particularly interested in the ability of small businesses in advanced areas of technology to be able to grow and thrive. I believe this is one of our greatest sources of competitive strength against China. What challenges do you think that our small businesses face when they try to enter the Chinese market with respect to intellectual property rights that big businesses might not? Are there remedies that Congress should consider in response?

Mr. COHEN. I can tell you that, statistically, if I may answer, small businesses have a very low utilization rate of the Chinese IP system; that is, small foreign businesses. So, you're looking at less than 1 percent of the patent applications, for example, and probably a very small cohort of the litigation as well.

Mr. JOHNSON of Georgia. Why is that?

Mr. COHEN. Some of it is lack of knowledge. Some of it is that small businesses may be focused on the U.S. market, and they may be unaware that their products are being infringed, counterfeited. Their information may have been stolen in the Chinese market. So, there's that as well.

Barriers to entry, such as high legal costs, where they don't know how to secure the proper advice. The USPTO has a great outreach program, the China Road Show, where we do reach out to small businesses. This really was a core part of my function when I was attaché, and I know this has been expanded over the years as one tool that we have. I think it is a continuing problem, frankly, that small businesses have difficulties enforcing their IP rights in China, and frequently, don't even take the basic steps of securing the right to begin with.

Mr. JOHNSON of Georgia. Thank you.

Mr. EVANINA. May I just add on to the great points just heard, amplify a little bit of the defensive perspective? I see small businesses and startups with a significant inability to protect what they're doing at any cost. So, because they are mission-oriented and trying to drive a wedge into the new industry they're trying to develop, they don't spend a lot of money on robust security, CSOs, general counsels, people good at advising them at the form of the patent process. So, that, what makes them most vulnerable, their inability to protect that from ideation through manufacturing, provides an unbelievable vulnerability to attack from the Communist Party of China, which prevents them from getting that foothold in the marketplace.

Mr. JOHNSON of Georgia. Thank you, and I yield back. I thank the Chair for his indulgence.

Mr. ISSA. I thank the Ranking Member for his thoughtful questions.

We now go to the gentleman from Virginia, Mr. Cline.

Mr. CLINE. Thank you, Mr. Chair. I want to thank you for holding this hearing and I'm glad to see it is Part I, and there will be many more to follow.

When it comes to intellectual property, the Communist Party of China has been eating our lunch for many years across both parties' administrations. I wrote down, "They're eating our lunch." Now, I think it needs to be changed to "They've been stealing our lunch money and parading it in front of us."

We are in the Biden Administration. So, let's talk about the Biden Administration. Their own policies are further gifting the CCP with more ways to steal IP from American innovators and companies—three ways, in particular: Ending the DOJ's China Initiative; supporting the WTO's TRIPS waiver, and the FTC's recent proposed rule regarding noncompete agreements.

First, I want to go to Mr. Evanina and let's talk about the China Initiative. Last year, the Biden Administration shut down this initiative begun during the Trump Administration. The national security program focused on prosecuting IP theft by Chinese government agents.

In the weeks leading up to this decision, Director Wray called China "the biggest threat to U.S. security." Would you agree with that assessment, and can you talk about the national security implications for the United States if China continues to achieve its goals to move into the aerospace, pharmaceutical, and information technology spheres?

Mr. EVANINA. Congressman, thanks for that question.

I would proffer by saying there is no extent to hyperbole when it comes to the Communist Party of China. "Eating our lunch" is probably minimizing the risk and the theft. I concur with Director Wray and anyone else who talks about the reality and the facts behind what we see here.

To address your China Initiative issue, my information is that this was a decision to change the name of the initiative, right? So, from what I understand, the cases continue. There are still over a thousand Chinese cases of economic espionage, theft of trade secrets and intellectual property, that continue today. That was prob-

ably a political decision to satisfy constituents and get rid of the word, the name "Chinese." The issue continues to bear fruit.

I do think that this is a whole-of-society approach to defending what we're seeing every day, and it's going to take Congress and the entire country to help mitigate the threat.

Mr. CLINE. Thank you.

Mr. Cohen, let's talk about Chair Lina Khan's announced rule that would prohibit noncompete agreements nationally, coming on the heels of California weakening or eliminating the enforceability of noncompete agreements, which China has, as we know, capitalized on.

In your article "The FTC's War Against U.S. Technology Competition with China," you wrote about the relationship between noncompetes and trade secret protection. Can you talk about that? Can you talk about instances where California's refusal to enforce noncompetes has affected trade secret protection?

Mr. COHEN. Yes, thank you very much for your question. To get to the second part of your question first, I draw your attention to a case involving Gerald Yin from formerly at Applied Materials.

He went to establish his own company in Shanghai with about 30 other Applied Materials employees to engage in semiconductor manufacturing equipment.

Mr. Yin, I believe, according to the *Wall Street Journal* article, was placed on the Entity List by the Department of Commerce last October. This isn't a critical technology. It's directly competitive with our own companies and it would enable China to produce leading-edge semiconductor equipment.

I have no problems domestically with noncompete agreements, if that's what the country wants to do. I have a problem with facilitating poaching of U.S. employees by foreign companies overseas and this could actually create a great risk for the CHIPS Act. We're going to see several large fabs built in States which enforce noncompete agreements, not in California, regrettably.

If you can imagine TSMC sending a whole team of its best employees to Arizona to build a state-of-the-art fab, a Chinese company comes along and says, I'd like to bring out a team of 30 of your best employees to China and there's nothing to stop that if noncompete agreements are invalidated.

So, there's an important deterrent effect. The other thing is that trade secret litigation is usually after the fact, after the stuff is stolen. It's rarely granted as a preliminary—a matter of a preliminary injunction.

So, you're basically in a position where whatever remedy you got may be inadequate to address the loss and that's part of the reason noncompete agreements are the most effective, to your first question, because by being able to prosecute a noncompete agreement you don't have to prove that there's a trade secret.

You just have to prove that there was a violation of the obligation to not work for a competitor. This also mitigates the risk of secondary loss, which happens in a trade secret case when you reveal your confidential information to a court or to an administrative agency.

You don't want to have that happen and that's one of the reasons that some companies don't want to bring trade secret cases because they're afraid there will be a secondary loss.

So, a noncompete agreement is easier to enforce. It's cheaper. It mitigates the possibility of secondary loss, and as I mentioned earlier, the chances of success if you were to bring the case, for example, in China, and I believe in most other countries in the world, which permit noncompete agreements, are much higher than if you were to litigate a trade secret case, and less expensive.

Mr. ISSA. I thank the gentleman. We now go to the Ranking Member of the Full Committee, Mr. Nadler, for five minutess.

Mr. NADLER. Thank you, Mr. Chair.

Mr. Cohen, there are a lot of reasons why some of us favor noncompete agreements. What would you—but I understand the concern about China? What would you think about it if we were to pass a noncompete—national noncompete agreements, but say that it doesn't apply to Chinese companies?

Mr. COHEN. I think a—and my conflicts of law teacher would say you would have a renvoi provision. That is, that you would let it be governed by foreign law.

China has its own restrictions on noncompete agreements, and I think if you left it up to companies to draft noncompete agreements that comply with foreign law that would be a solution of it to addressing the problem of poaching of trade secrets by foreign companies of U.S. technology. So, that could apply to any country in the world. It doesn't necessarily need to only apply—

Mr. NADLER. So, you think it's a good idea?

Mr. COHEN. I think that's a good idea. I think actually that would be a good provision for California to add on to its existing ban on noncompete agreements, that a noncompete agreement would be enforceable in an international context. Frankly, before the FTC came up with that proposal I was trying to develop some momentum to amend the California law.

Mr. NADLER. Thank you.

Mr. Duan's written testimony makes the point of noting the low quality of Chinese-owned patents where Mr. Cohen's testimony cites research suggesting that China is currently the world leader compared to the United States in 37 out of 44 advanced areas of technology.

I find it difficult to reconcile these two statements. In particular, I'm concerned that we are unwittingly blinding ourselves to appreciating how serious our competition with China already is.

Mr. Cohen and Mr. Duan, would you like to comment on this? First, Mr. Cohen.

Mr. COHEN. Well, I think we have blinded ourselves for over 20 years in not dealing with the technological threats that China presents and if we had time, I could go through my own horror stories as a U.S. Government official where I have tried to get American agencies to recognize that trade secret protection is enormously important.

Technology licensing is enormously important. Patent protection, plant variety protection, all the technological areas of intellectual property need to be front and center.

China always had a goal of regaining its historic industrial revolution era supremacy in technology. This is nothing new. What is sad is that we did not recognize China's emerging competitive edge in so many areas, legitimate through legitimate practices and less legitimate practices of the type we have just heard from.

I think this really calls for a rethink in the U.S. Government not only of what went wrong but more importantly how we can come up with better strategic decisions that are based on facts that anticipate existing and likely future challenges.

Mr. NADLER. Thank you.

Mr. Duan?

Mr. DUAN. Yes. I think the first part of answering that question is distinguishing between patents and innovation, right.

It's possible to file a patent application on a very simple technology, one that doesn't really push the boundaries and what we have seen from a lot of Chinese patent applications and patents is that because of the subsidies that China has provided, because of the quotas that China has used, China has encouraged the filing of a lot of patent applications, but often ones that are of these sorts of low quality.

The pay patents that China offers that require less examination, provide less protection, and don't really demonstrate sort of innovative capacity that a full-fledged U.S. patent would provide.

Now, that's not to say that those patents are useless. In fact, we have examples from American law history in which a flood of low-quality patents ended up getting into the hands of entities that were often shady and we couldn't figure out what was going on with them becoming tools in which companies could assert them against small startups, against small businesses, preventing Main Street restaurants from putting menus—from putting electronic menu displays, upset things like that.

So, that's where I would be concerned that even though there are lots of low quality patents they might turn into these problematic tools.

Mr. NADLER. Thank you.

Mr. Cohen, a basic premise of the treaties governing IP to which the U.S. and China belong, the TRIPS agreement, is that foreign entities will have the same access to patenting and court enforcement of those patents as nationals.

According to your testimony, however, it seems that U.S. companies as well as other non-Chinese companies are not availing themselves of the Chinese court system to enforce the patents much at all.

In other words, it seems that we are de facto not getting the benefit of the bargain anticipated in the agreement. Do you agree with this and if so, how would you recommend we consider responding?

Mr. COHEN. Well, I agree with the statement, and I think this points to a problem that is little talked about, which is low utilization of the Chinese IP system by foreigners.

Now, this may be because some foreigners are frustrated. They have a lack of confidence of the system. When you try to take the low utilization rate and also compare it to the high success rate it's a dilemma that's very hard to resolve.

In some areas, like software piracy, Microsoft, for example, according to published data has had 100 percent success rate in litigating software piracy cases, as have most of the other large software companies.

In patent litigation numerous studies show that foreigners win at a higher rate than Chinese litigants in patent infringement cases, that they are more likely to get higher damages and that they're more likely also to get injunctive relief.

So, in one case, actually, the Beijing High Court for one year the success rate at that important court for foreigners litigating IP cases of all types was 100 percent.

So, how do we explain the low utilization? I think part of it is also attributable to the fact that many foreign companies view IP litigation as not so much a legal act, but a political act.

There's a cost. They're going to have to lobby the Chinese government. They may have to lobby the U.S. Government. There may be a public relations cost. When they put all those things together, they end up backing away from the Chinese IP system.

I have to point out one other thing, which is that litigation, whether successful or a failure in China, is a critical source of information for the kinds of discussions we're having today.

If you cannot sue the Chinese government or a State-owned enterprise, for example, for IP infringement, that is important information for us to know as we think about the proper policy going forward.

Mr. NADLER. Thank you. My time is well expired, and I yield back.

Mr. ISSA. I thank the Ranking Member.

With that we go to the gentleman from Texas, Mr. Gooden.

Mr. GOODEN. Thank you, Mr. Chair, and thank you, Mr. Evanina. I want to mention what we had just talked about with my colleague from Virginia about the China Initiative and remind people that in 2018 the Department of Justice established the China Initiative aimed at securing our critical infrastructure against foreign threats, specifically the CCP, and prosecuting bad actors engaged in theft of intellectual property.

Despite its overwhelming success, the Biden Administration suspended this program and I wanted to point out that yesterday I introduced a bill to reestablish this program and counter the CCP's economic warfare and corporate espionage.

Would you consider the CCP initiative started under President Trump a success?

Mr. EVANINA. Unequivocally, and I think regardless of what you call it, the ideation that the U.S. Government will begin the process of looking at the Communist Party of China and their effective and nefarious practices toward IP theft, economic espionage, no matter what you call that, I think it's the obligation of U.S. Government and Congress to defeat it.

Mr. GOODEN. I would agree with you and thank you. I want to also move on and ask what recommendations does the U.S. National Counterintelligence and Security Center have for strengthening trade policy tools to address IP theft by China?

Mr. EVANINA. Well, at the time, sir, and I left in 2021, I think robust education is the beginning of it all and I would proffer that

Members of this Subcommittee and Members of other Committees go back to their home districts and have dialogs with their Governors and their economic development corporations in their chambers of commerce to identify—to show the tools and techniques, the Communist Party's investment in their localities, and what that economic espionage and intellectual property theft looks like early before it happens because once the FBI comes to town and investigates the data and intelligence the intellectual property is already gone and I think that's where we have to get left of boom and start to educate our business leaders and local investment operators on how to protect it and see it first.

Mr. GOODEN. Thank you.

Mr. Greer, during your time what trade policy measures were being used to address this issue of intellectual property theft and do you think these measures have deteriorated? Are we in a better spot or worse off?

Mr. GREER. Thank you, Congressman. So, as I referred to in my initial testimony, we use Section 301 to investigate these practices by the Chinese. There are a lot of different things you can do to address this.

Typically, what other administrations have done is they've just had negotiations where they talk. They have a dialog with the Chinese where they talk and try to get some kind of a concession. What was always absent was enforcement and Section 301 was really focused on enforcement.

So, in addition to gathering all the information, having a very open comment process where any stakeholder could come in and talk to USTR and share its views, also do it on a confidential basis, which took care of some of the challenges that our businesses face, we were able to understand, quantify the problem, bring it to the Chinese, tell them about it, give them an opportunity to remedy it, and then when they didn't take an enforcement step.

We chose to use tariffs. We chose to put tariffs on IP intensive items. Is it effective? I want to use the example of electric vehicles. At the time we were not importing many electrical vehicles from China. It is a sector where China wanted to steal technology, where they did, where they forced JVs.

We put a 25 percent tariff on electric vehicles. Today there is news out there that China has become a major exporter of electrical vehicles which they weren't at the time, but they are not to the United States.

Imports of electric vehicles to the United States only 3.6 percent of those imports are from China because of that 25 percent tariff.

There are other things you can do with Section 301. Doesn't have to be a tariff. You can limit services. You can limit other kinds of access to the U.S. market. There are tools that we can use to enforce, and we need to have the political will to do it.

Mr. GOODEN. Thank you. I yield back, Mr. Chair.

Mr. ISSA. I thank the gentleman.

We now go to the gentlelady from North Carolina, Ms. Ross, for five minutess.

Ms. ROSS. Thank you very much, Mr. Chair, and thank you to the witnesses for sharing your expertise with us.

My district in North Carolina's Research Triangle is home to many innovators and creatives. Regardless of the size of their enterprises or the nature of their work, these innovators from independent singer/songwriters to investors in R&D share a common concern—Chinese infringement on the creative work into which they've poured their time, their money, and their dreams.

China has long relied on counterfeit goods to gain leverage over U.S. companies. However, China has recently turned to acquiring IP to leapfrog our Nation in technological innovation.

Unfortunately, uncertainty in our own IP system has not helped us maintain our edge. We have seen patent eligibility shift over the past 15 years, in part due to U.S. Supreme Court decisions, and while it's important to keep bad patents from clogging our IP system and hindering legitimate innovation, one analysis found that nearly 1,700 patent applications that were rejected in the United States were approved by both the EU, China, other countries, not ours.

This disparity in patent eligibility threatens to drive innovation out of our country and into systems with broader criteria. It's not only investors in R&D who are threatened by China's growing interest in U.S. IP.

As TikTok has recently risen in popularity, independent musicians sometimes find their music picking up listeners and even going viral on that app. However, the royalties on TikTok are hundreds of times lower than what other streaming services offer, leaving musicians under compensated.

I'd like to submit an article by Elias Light in *Billboard* magazine entitled, "TikTok pays artists almost nothing in music royalties and the industry is losing patience," into the record, Mr. Chair.

Mr. ISSA. Without objection, so ordered.

Ms. ROSS. So, my first question is for Mr. Greer. Apart from what we have been hearing today and what we might do with China on the legal end, shouldn't we also hold stores, retailers, and the distributors of counterfeit goods in this country accountable? What about the companies that sell products built from IP theft?

Mr. GREER. Congresswoman, thank you for that question.

Yes, I agree with that. When we talk about enforcement as being something that the Chinese understand and that the Chinese can react to, of course, we should be enforcing our own IP laws here in the United States.

We have heard about Section 337, which is really about imports coming in. To the extent you have violations here in our country and maybe it's a subsidiary of a Chinese headquartered company that's doing it right here, why wouldn't you enforce that? I think that's exactly the right approach.

Ms. ROSS. Thank you.

Mr. Cohen, is it true that China's patent system is more aligned to how our patent system worked decades ago and is China making their own patent laws stronger as they become more of an innovator nation?

Mr. COHEN. Great question. The Chinese patent system is basically modeled on the German system at its outset, and I think over the past 10–20 years has been a profound influence of the United States.

There was a tremendous reluctance in the 1980's for China to have a patent system. There was a sense that no individual in a socialist economy should have a private property right innovation and originally the patent system was largely catering to foreign interests.

China discovered that patents, when they were acquired by foreigners in China, were the opening door, if you will, to foreign investment.

So, their motives to have a patent system were actually intended very clearly to attract foreign investment, to attract foreign technology. That was really what they were trying to do at the outset.

The system has become stronger and more sophisticated. I mentioned the 2,000 IP judges. The growth of the patent office has been phenomenal. I mean, China's total patent applications are several multiples of the United States at this time.

They do a tremendous outreach effort, and they do a lot of support to their own companies in areas that are highly competitive with the United States.

For example, in Research Triangle Park you have a thriving biotech industry and I've heard Chinese patent commissioners and deputy commissioners talk about what they have to do for their generic companies so that they can compete better with innovative companies.

China has a nontransparent and opaque administrative enforcement system which has about 50,000–50,000 patent infringement cases per year. It heard about 24 patent linkage cases in the past year or so. That was under the phase one agreement system of linking marketing rights with noninfringement of patents.

Those cases are nontransparent. We do not know what is happening in those cases, and the 50,000 or so administrative cases suffered from the same problem. So, the system is getting stronger. It's also much more tightly geared to larger Chinese companies.

Xi Jinping gave an important speech about two years ago where he said he wanted to improve the quality of Chinese patents and we have seen a big increase in at least the filings by large companies, withdrawal of subsidies, which were a big distortion.

Overall, this seems to be having an effect of migrating a system that at one time was fairly tightly tied to small businesses in China to one that is really dealing more closely with State-owned enterprises and large Chinese private companies.

This, to me, is a looming, legitimate competitive threat. It could also have its illegitimate side, but it is a looming threat as China becomes more sophisticated.

You also see judges issuing more sophisticated and lengthy opinions, engaged in the kind of anti-suit injunctions that my colleague just spoke about, picking up on sophisticated tools that if applied to foreign companies could be very harmful.

Ms. ROSS. Thank you for your indulgence, Mr. Chair. I yield back.

Mr. ISSA. I thank the gentlelady.

We now go to the gentleman from California, Mr. Kiley.

Mr. KILEY. Thank you, Mr. Chair.

Mr. Evanina, I wanted to take a moment to reiterate a few aspects of your testimony. You say that Xi Jinping's goal is to be the geopolitical, military, and economic leader in the world.

You say that Xi, along with the Chinese Ministry of State Security, People's Liberation Army, and the United Front Work Department drive a comprehensive and whole of country approach to their efforts to invest, leverage, infiltrate, influence, and steal from every corner of the U.S.

This is a generational battle for Xi and the CCP. It drives their every decision. You go on to say that this is an extra existential threat to America and that the strategy of the Chinese Communist Party begins with U.S. intellectual property and trade secrets theft.

We also have statistics in the record today about how, according to the Department of Justice, approximately 80 percent of all economic espionage cases prosecuted by DOJ involve theft of trade secrets by the Chinese government or its instrumentalities or agents and approximately 60 percent of all trade secret misappropriation cases brought in the U.S. have a nexus to China,

Now, the Biden Administration about a year ago decided to end the China Initiative. This is a headline February 23, 2022, from *NPR*, "The Justice Department is ending its controversial China Initiative," and the head of the National Security Division was Assistant Attorney General Matthew Olsen, who said,

> While I remain focused on the evolving significant threat that the government of China poses, I have concluded that this initiative is not the right approach.

Instead, the article goes on, he said the current threat landscape demands a broader approach and Olsen also added that this is,

> I do believe that the China Initiative was driven by genuine national security concerns, but I'm also mindful that the department must maintain the trust of the people whom we serve.

So, you say this was simply a change in nomenclature as opposed to a substantive change in the initiative. What effect do you think the comments of the Assistant Attorney General and the decision to say we're ending this program have in terms of the message we're sending to the rest of the world about how much we tolerate intellectual property theft from China?

Mr. EVANINA. Congressman, thanks for the question. I'm not sure about the intent of the narrative of the Department of Justice statement on their impact of the China Initiative, but I can tell you the initiative has not ended. They may have changed it, but I think right now more than ever you're going to see an uptick in cases and investigations.

Also, despite that effort, the American companies are reporting nefarious activity more now than they ever did and I would say that to your numbers I think we have to also remember on data theft is an issue here with the Communist Party of China and that was also inclusive of the initiative.

We're looking at 80 percent of all Americans have had all their data stolen by the Communist Party of China. The other 20 percent just some of their data.

So, when you include intellectual property and data theft, it's unequivocal existential threat the Communist Party of China poses against the United States.

Mr. KILEY. Thanks very much.

Mr. Cohen, you quote a study in your testimony about how China's global lead extends to 37 out of 44 technologies right now when it comes to innovation in a number of crucial technology fields, and you also discuss how we need to have a better understanding on how the declining scope of patent eligible subject matter has affected U.S. competitiveness with other countries, including China.

So, it seems there's a few aspects of the problem we have been talking about. There's the Chinese theft—the theft of U.S. intellectual property by the Chinese Communist Party and its agents.

There is the growing capacity of China to produce its own intellectual property, and then there's perhaps in some ways our declining capacity in the United States to keep pace.

So, I just wanted to give you a moment to discuss the extent to which that third facet of the problem is something that we could address and what are some concrete steps to do so.

Mr. COHEN. Great question again. Thank you for that. This question relates to declining STEM education in the United States, reliance on foreign talented students coming here rather than our own people to be educated in STEM related disciplines.

Also, in terms of competitiveness with China I think the lack of Chinese-educated scientists, Chinese language-educated scientists and diplomats, also contribute to a lack of deep understanding of the Chinese competitive threat, if you will.

I'm always amazed when we talk about Chinese industrial policy that people always refer back to Made in China 2025. It's now 2023. Two years from now that's gone. Along the way we have had hundreds, perhaps thousands of five-year industrial policies out of China at a national level, a local level, a ministerial level, at a trade association level, and actually it's a rich trove of information, if you will, that could be used to determine the kinds of competitive threats that the U.S. Government and U.S. industry should consider when it invests and when it makes strategic decisions about American competitiveness.

So, we really need both sides of the equation. We need more scientists and engineers, more scientific talent, to be attractive to other countries so that citizens come here to study, to work, and to buildup new enterprises, and we also need better technology management and better understanding of the competitive threats to manage our relationship with China.

Mr. ISSA. I thank the gentleman. The gentleman's time has expired.

We now go to the other gentleman from California, Mr. Schiff.

Mr. SCHIFF. We have a lot of gentlemen from California on this Subcommittee. That's a good thing.

Mr. ISSA. Must be something about California's position in IP that drives us all here.

Mr. SCHIFF. There is indeed and, as the Chair knows, I've had a long history on this issue because I represent so many people in the creative industries and formed a bipartisan bicameral caucus to combat intellectual property theft.

Mr. Cohen, one frustration I've had deep frustration with the administration is we still don't have an intellectual property enforce-

ment coordinator. Why is this taking so long? Why is this a problem? I don't understand the delay.

Mr. COHEN. I wish I had the answer. I feel like we desperately need that IPEC role in place, I think the IPEC plays a critical role in coordinating the alphabet soup of U.S. Government agencies involved in intellectual property.

I think the average American is unaware of how extensive that alphabet soup is. It's the USPTO, DOJ, DHS, USTR, and the Copyright Office. It's any number of agencies that have an interest in intellectual property protection and enforcement and, of course, its relations with State and local governments as well.

To make that system work we need a coordinator in the White House. I would also like to see, frankly, a deputy PTO director in charge of international affairs because I think it's very hard to be running an office of 10,000-plus people and to consider the international implications of the issues that we're talking about today.

Mr. SCHIFF. Do we see the impact of not having these positions filled or is it a separate problem that in agreements like the Indo-Pacific Economic Framework there aren't stronger IP provisions?

Mr. COHEN. Well, I think this administration has taken a light approach to intellectual property, particularly in an international context. The free trade agreements are texts that are being discussed, have very little of IP in them.

If you contrast that to the RCEP agreement that China shepherded through, it's the largest free trade agreement in the world right now. It has about 30 percent of global trade under its roof.

There is an IP provision. There's an IP chapter in there. It's IP light but it's also a broad agreement. So, I don't know why the U.S. cannot be promoting intellectual property, which, at the end of the day, it is good for the companies that we're negotiating with as well.

Of course, it's critical for industries that have a high degree of vulnerability in the digital environment like motion pictures, music, and software.

Mr. SCHIFF. Just to followup on a couple of questions my colleagues asked about nondisclosure agreements, about China's abuse of the patent system, surreptitious funding of patent trolls, does it make sense to approach it not in a country specific basis—that is, single out you can have noncompete clauses vis-à-vis China?

Does it make more sense to try to identify those who are abusing the patent system or who are stealing intellectual property and have a standard where if you're a vexatious litigant as a foreign country or some metric by which we can provide greater protection rather than singling out a particular country?

Mr. COHEN. I'm concerned that if we start singling out particular countries, we weaken the framework that this country has invested in for so many years regarding most favored nation treatment in the TRIPS agreement and in Berne and Paris and other treaties that are basically the bedrock of the international system.

I think we should be singling out practices, not individuals, certainly, and not countries if we can. We have had successful, if you will, application of export controls against Fujian Jinhua, which was accused of stealing trade secrets from Micron.

That was about three or four years back, and, of course, there's been recent legislation in Congress to sanction foreign persons who steal U.S. intellectual property.

So, there are alternative mechanisms through export controls, in particular, visa denials and the like, that can be used if a system is completely intractable. I'm a little concerned about the legislation passed last December because I think we need to make a showing that you cannot protect your trade secrets in a given country, let's say China, and therefore we have to impose an export control measure denying access to U.S. capital and the like.

Mr. SCHIFF. Let me see if I can sneak in one last question here before the clock runs out on me.

China puts the limits, for example, on the screens that American films can exhibit on, et cetera. We have no limit on Chinese films exhibited here.

How do we better use our market strength to command fair treatment in other countries like China without giving them all the benefits to operate domestically and having none of those advantages when we operate there?

Mr. COHEN. The 34 screen—the 34 film quota has been a thorn in the side of Hollywood for quite a long time and one answer—it's not a complete answer by any means—

Mr. ISSA. A short one would be appreciated.

Mr. COHEN. Yes. OK. Is the vacuum filled by piracy, so we have to do something about the piratical content that's out there to drive legitimate content, and beyond that this is something where China is within its rights to deny market access under its TRIPS and WTO accession. So, our biggest tool right now is IP related.

Mr. SCHIFF. Thank you, Mr. Chair.

Mr. ISSA. Thank you. We now go to the gentlelady from Florida for five minutess.

Ms. LEE. Thank you, Mr. Chair, for holding today's hearing on this critical issue. These witnesses make clear the CCP is engaged in an insidious and expansive campaign to target U.S. economic interests and our national security through litigation and exploitation of U.S. policy.

The CCP is capitalizing on weak noncompete laws in states like California, filing excessive invalid patents and committing criminal espionage. In my home district, Chinese nationals and a Navy officer were indicted for attempting to steal a Navy vessel and take it to China.

Had they succeeded this one act would have provided the CCP with valuable information about our technology, our military, and our strategic defenses.

It is an example of the significance of this type of investigation and this type of work by our Federal law enforcement partners. The United States must do more to defend our country, to respect invention, and to encourage innovation.

We must protect research data and intellectual property from theft, misuse, and infringement, and where we see unlawful conduct, we must commit ourselves to swift and strong enforcement.

I thank our witnesses for their presence and their testimony today, which helps us shine a light on this threat to our economic strength and our national security. With that, Mr. Evanina, I

would like to return to your testimony and the discussion related to the China Initiative that you were offering earlier and, specifically, I would like to visit the subject of our institutions of higher learning and our universities.

Would you please speak to—we know that China has been attempting now very aggressively to infiltrate some of our universities, to steal intellectual property there, and to benefit from the innovation and research that is occurring on American university campuses. Would you please speak to what the China Initiative was doing in that regard and what we need to be doing, going forward, to protect those institutions?

Mr. EVANINA. Thanks for the question, Congresswoman.

I think we look at the question you pose in academic institutions. It's the bedrock for what makes America the best country ever and part of that is the collaborative mind set and ideology for a university setting.

Also, provides the most vulnerability for specifically to the Communist Party of China to penetrate that not only with students, with professors, with deans, to be able to take that early access ideation all the way up to the patent perspective in a free and open environment.

I've had the opportunity to speak to over 140 university presidents the last five years about this issue. It's a dire issue, but it's really complicated in facts and I think, from my perspective, when the FBI or law enforcement comes on the campus to investigate it's too late. The information is already gone.

I think we have to do two things here. We have to look at that ideation process and have a compliance structure that's not only put in place by academics but also supervising governed from a compliance perspective either by the States or U.S. Congress.

Second, for those Chinese students who come here every year to study, which is well over 3,000 per year, we're only really worried about a handful of postgraduate STEM programs.

I think if we as United States and the Congress gave every single student who came from China a cell phone, a mobile phone they could use that provides some independence from the Communist Party regime I think that'll go a long way with not only winning the hearts and minds of those students but also putting a perspective of compliance in place at the university.

Ms. LEE. A moment ago you mentioned a particular concern about data theft. Tell me how data theft plays into the overall threat we're facing from this adversary.

Mr. EVANINA. Sure. Well, I think data is the new global commodity and I think the Chinese Communist Party got to that fact way before we did, and I think if we look back over the last five to seven years at the amount of data theft that occurred from cyber breaches insiders it really connotates the direction for which Xi Jinping wants to not only drive their AI but they're targeting American citizens, global citizens around the world.

You can only have the best AI and quantum computing if you have the most data to run it against and that's been part of the strategic plan for the Communist Party of China is to acquire the global repository of data through theft and otherwise.

Ms. LEE. Then, Mr. Cohen, a followup question for you. A moment ago, you referenced the lack of transparency in the Chinese court system, and I know you made reference also to at times the failure to report decisions and how that can be an important aspect of us understanding the nature of the threat that we face in the arena of the courts.

Would you please elaborate on that lack of transparency and why it is important to protect American interests?

Mr. COHEN. I feel like I should be back at school teaching. This is a long lecture in my Chinese IP class.

About 2014, China started making its court decisions available online, probably the biggest development in rule of law internationally of the past decade.

I checked a few days ago. There were 1.4 billion visits to that web page, 131 million documents on that site. So, there's a lot of content there.

We have lit the proverbial candle in the dark room in terms of knowing something of how Chinese courts work, how IP decisions are made.

It's hardly fully illuminated and what is not illuminated are the cases that are hidden from us and these cases are not published for a variety of reasons. Many of them are small or inconsequential.

Many contain confidential information, particularly the trade secret cases, and China doesn't publish cases having confidential information. That's part of the reason we know so little about the trade secret environment in China.

In fact, of the published cases, about 600 of them over the past several years, only five of them involve foreigners. Five.

Were there more than that? Possibly. It's an extremely small cohort to make a decision.

So, encouraging full transparency, and the court system, by the way, is light years ahead of the administrative system, which has a docket nearly as big.

China had 600,000 civil IP cases last year—that is a huge number—and about 12,000 criminal cases. The lack of insight into how those cases function haunts us in so many ways.

Are we treated fairly? Are the courts handling things, technical matters, in an appropriate manner? How much bias is there? What about anti-suit injunctions or other remedies that China issues? I mentioned a company called—

Mr. ISSA. Mr. Cohen, I'm going to have to ask you to put the rest in for the record.

Mr. COHEN. OK. In any event, this is a critical issue to understanding the environment. Thank you.

Mr. ISSA. Thank you. This is the reason this is the first of several hearings on this subject. With that we go to the gentleman from South Carolina, Mr. Fry.

Mr. FRY. Thank you, Mr. Chair. I really appreciate you having this hearing today. To the panel, thank you for being here.

The Chinese government has a core mission to achieve technological parity—we have talked about that today—and eventual superiority over the U.S.

To this end, Chinese entities backed by the Chinese government are acquiring massive amounts of patents, IP rights, and trademarks that prove to be obstacles and potential threats to our own citizens and industries.

In 2015, the Chinese government announced, as we talked today, it's Made in China Initiative, which identified key technological areas and industries China intends to target. This includes, of course, aerospace, next-generation information technology, advanced rail systems, and biotech.

Professor Cohen, as China moves into the next phase in its development after it's Made in China 2025 Initiative, what do you anticipate the Chinese government will do in its strategic plan to target the U.S. in terms of our IP and technology?

Mr. COHEN. Well, China is very much aware that we're in a competitive situation, our two countries, and I think we're going to see increasingly—increasing targeting of industries that China views as critical to its own national economic development or security and particularly in areas where the U.S. is denying access.

I think semiconductors is probably foremost among them, and we could see in the constitution of the party politburo and other leading organizations where we have a higher cohort of STEM-educated party members as well as a higher cohort of semiconductor-oriented STEM educated officials.

So, it's very clear that this is way up there. I think biotech is some of the other areas we mentioned, particularly, in security applications involving AI—and anything involving national defense, including national defense patenting.

Mr. FRY. Thank you.

Finally this. Mr. Evanina and Professor Cohen, considering recent government findings regarding the risks of technology commercialized by Huawei and TikTok, what do you think are the dangers posed by Chinese technology being incorporated into international technical standards like 5G, 6G, Wi–Fi, et cetera?

We'll start with you, Mr. Evanina.

Mr. EVANINA. Thank you, Congressman. I think the threats are significant and U.S. Government, intelligence apparatuses and law enforcement need to do a much more effective job of educating the American public of why that matters, for instance, the current war on TikTok—the issue, the conversation, and the dialog.

It is not a political issue. This is a data driven issue, the nefarious not only capabilities but intent of the Communist Party to get into that software and they have access to your entire phone.

We just do not educate well enough what the threat is. With Huawei, while we got—again, the Chinese Communist Party strategically more than a decade ago saw vulnerability and our ability—inability to communicate, especially to the rural markets from telecommunications and they took advantage of that and those systems they put in place had also intelligence apparatuses combined to a legitimate business perspective.

So, I think when you look at how sophisticated they are with utilizing legitimate business enterprises as intelligence apparatus, we just need to educate more effectively what that looks like and make an educated consumer, whether it be a State, locality, or business person, what the risks are.

Mr. FRY. Thank you.

Professor Cohen?

Mr. COHEN. Yes. I think social media and apps on your phone are one risk. I think IoT, in particular, is another huge risk that this country has to deal with where our data will go back to the provider of the equipment, who in most cases is going to be based in China.

So, this is really a matter of evaluating the back door risks that are posed and I think we need to do better job of that task.

Thank you.

Mr. FRY. Thank you. Mr. Chair, I yield back.

Mr. ISSA. I thank the gentleman, and you know? That means it's my turn. I yield myself a little bit of time here.

We'll start with Professor Duan. Now, Huawei cannot produce products inside the United States, but they are second only to IBM for the most patents applied for every year or received. Would you give us a contrast of the quality of that amazing quantity and where some of those end up?

Mr. DUAN. Yes, so there are a couple of things that are going on here. The first is that there is a strategy across China and particularly with companies like Huawei to obtain large quantities of patents.

Now, one way to get a lot of patents is to just file as many things as you can and see what sticks to the wall and so we have had a number of studies looking primarily at China's international portfolio that have identified serious quality concerns with the patents that China is seeking.

Mr. ISSA. Is that because when you're a large company that applies for a lot you tend to have a team of lawyers that are just really good at squeezing through patents by whatever means you need to have them survive?

Mr. DUAN. It's that and it's also just a volume game, right. The more that you can file, the more words that you can put down onto the page, the more chances you have of getting through.

That's not to say that China is just sort of—or that Huawei is just filing sort of across the board. They're focusing on particular strategic areas, and we just had a conversation about technical standards and in communications.

China and Huawei particularly are leading in filing of applications that are required by the 5G and other technical standards. They've also taken other measures to be dominant in those standards-setting processes.

What that means is that those patents now must be used by any device that implements those technologies such as 5G. These are not ordinary patents anymore where somebody can say, OK, so we're worried about this patent—we'll figure out a way to work around them.

They are necessary to work with the infrastructure. That gives China have substantial leg up in enforcement when it comes to those sorts of technologies.

So, the way that companies have tried to deal with or the way that these standards organizations—

Mr. ISSA. Even my time can be limited.

Let me just sort of narrow the scope here. My understanding is Huawei also licenses out their patents, in many cases patents they are not using in the United States—license them out to venture organizations. Can you opine on that if you know?

Mr. DUAN. They do, and I think that I've seen a fair amount of evidence of transfers of patents, especially these sorts of standard essential patents to a variety of different entities.

Now, one problem is that, as Mr. Cohen alluded to, we don't know a lot about what's going on. We don't have the sort of transparency measures that let us know what happens to the finances of patents or patent litigation.

I think that one thing we can really try to build out is building out that transparency in patent ownership and patent litigation so we can see to the extent that Chinese-owned patents or that Chinese entities are controlling patent litigation. I think that's going to be an important point.

Mr. ISSA. Thank you.

Mr. Cohen, we have given you a lot of questions on trade secrets. It's fair to say that companies like Lam and Advanced Materials are global leaders, two of them.

Even when they have trade secrets, even when they produce unique product, their customers sometimes have trade secrets beyond that. Taiwan semiconductors makes chips using their equipment that other people using their equipment currently cannot.

Just briefly, Taiwan's noncompete and secrecy laws, as contrasted with us, are theirs tighter than California?

Mr. COHEN. Taiwan, like mainland China, permits noncompete agreements. As with many other European countries they're limited in duration, and you have to provide some form of reasonable compensation for the duration. So that limits the application of noncompete agreements to highly skilled compensated employees where it's really important.

Mr. ISSA. It's fair to say that we cannot compete against those countries if they have that kind of noncompete that are essentially protecting their trade secrets and their developments, and we don't?

Mr. COHEN. That's correct

Mr. ISSA. OK. Mr. Greer, one of the questions that I have for today, oddly enough, is the TRIPS waiver that the President did related to COVID–19.

One, would you and your old boss have recommended any sort of a waiver and if so, would you have limited the waiver to—not to the patents themselves but to production of the product, meaning you can produce the product but you cannot have, if you will, access to the technology, going forward?

Mr. GREER. Well, sir, the waiver was first requested in 2020 and was presented to Ambassador Leitheiser, who declined to endorse that.

Mr. ISSA. So, that part of the answer is yes?

Mr. GREER. That's right. So that's that. The TRIPS agreement already has space in it and was amended once already to provide clarity on what we call compulsory licensing, right. If you have a situation where voluntary licensing just doesn't work out, you can't come to terms, it provides for compulsory licensing.

So, this idea that you're going to have some additional TRIPS waiver is not only duplicative to some degree of what's in the TRIPS agreement, but also undermines international IP rights, going forward, at a time when the WTO is already on thin ice.

Mr. ISSA. Now, one quick question for law, and anyone can answer but, Mr. Greer, you might be the best, under international law if we refuse to supply a lifesaving product, including a vaccine, to a country they have an absolute right to source it themselves or to essentially invalidate the patent and produce it. Isn't that correct?

Mr. GREER. That's exactly right. World Trade Organization agreements they have exclusions for public health and safety. TRIPS agreement itself has a provision where if you can't come to terms in getting what you need Article 31, 31(b) allows you to do that kind of thing.

Mr. ISSA. So, there was no denial?

Mr. GREER. Exactly right, yes.

Mr. ISSA. OK. I'm going to take the liberty of just one quick followup question, and Mr. Evanina, you've been very quiet for a little while.

We have touched on but we haven't fully explored the current events that we see—balloons floating over our country, provocative acts—because it's outside our jurisdiction.

When we look at what the FBI director and others have said about the amount of theft being done and its effect, today we kept repeating the $600 billion as though money was the problem.

From a standpoint of the global conflict and the ability not to economically compete but militarily, would you close out this hearing with the—if you will, your view on what that means around the United States from a standpoint of our security with that much intellectual property being stolen every year, not in dollars but in risk to the American people?

Mr. EVANINA. Thank you, Chair. That's going to be a long answer, but I'll keep it brief.

Mr. ISSA. You're going to have to be a little short because a lot of people want to leave here.

Mr. EVANINA. Yes.

Mr. ISSA. You're the closer.

Mr. EVANINA. I think this hearing on intellectual property, a very minute aspect of the threat posed by the Communist Party of China.

I think your question of the threat to the homeland starts there but also looks at the surveillance and penetration of our critical infrastructure—our gas, natural oil pipelines, electrical grids, ports, and maritime facilities.

The preamble to any kind of future conflict, the Chinese Communist Party has spent a decade preparing for that battlefield for us not only in the corporate perspective, but a military perspective. It starts with energy, power, and financial services.

So, I think when we look at what the Chinese Communist Party looks at us is able to preconflict during conflict, prepare the battlefield, so we cannot act in that battlefield and that starts with critical infrastructure.

Mr. ISSA. Thank you. As much as I would like a second round I'm going to have to ask all of you, would you be willing to take questions for the record?

Since I have all yeses, all questions submitted will be left open for five days and a reasonable amount of time for the answers so we can have a complete record.

As I said in the introduction, this is the first. It is clear that we only touched on many of the areas we have to work on.

I will say that when we look at intellectual property, I deliberately closed out on the national security risk because I believe that this Committee has an obligation to look at IP protection, including those that might affect trade secrets and the like as being part of our national security and for that reason, I wanted to close on that.

I appreciate everyone's indulgence, and we stand adjourned.

[Whereupon, at 11:54 a.m., the Committee was adjourned.]

All materials submitted for the record by Members of the Select Subcommittee on the Weaponization of the Federal Government can be found at: *https://docs.house.gov/Committee/Calendar/ByEvent.aspx?EventID=115441*.

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