Senate Committee on the Judiciary, Subcommittee on Intellectual Property

May 14, 2025

Hearing on

"Foreign Threats to American Innovation and Economic Leadership"

Written Testimony of

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It is my honor to testify before you today on "Foreign Threats to American Innovation and Economic Leadership."

Today's topic presents a near existential problem: is America's innovation and economic leadership under threat? What can be done about it?

I agree with the urgent need to address these issues. I also believe that an appropriate response to this threat requires support from more than the federal government, including state and local governments, academics, industry, and NGOs. It is necessarily multifaceted and interdisciplinary. It is also not solely an IP-related issue, although IP is a key part of the response.

During the past few years, many have argued that China should no longer be characterized as a "near peer" competitor or a "pacing" competitor.[1] As early as 2020, the China Military Power Report prepared by the Pentagon, noted that "'China has already achieved parity with—or even exceeded—the United States in several military modernization areas.'"[2] China's role as a peer competitor has since been widely acknowledged by academic and government observers.

What is the role of IP in this competition with China? Former Chinese Premier Wen Jiabao famously said in 2004 that "The future competition in the world is in intellectual property." While China has acknowledged the centrality of IP to its further technological development, a principal concern of mine is with the agnosticism or indifference of many

[1] Mackenzie Eaglen, "It's Time to Retire the Term 'Near-Peer' Competitor When It Comes to China" (AEIdeas June 6, 2023), https://www.aei.org/foreign-and-defense-policy/its-time-to-retire-the-term-near-peer-competitor-when-it-comes-to-china/.

[2] Department of Defense, Annual Report to Congress, "Miliary and Security Developments Involving the People's Republic of China" (2020), https://media.defense.gov/2020/Sep/01/2002488689/-1/-1/1/2020-DOD-CHINA-MILITARY-POWER-REPORT-FINAL.PDF#page=11.

in the IP community of the United States to these challenges. I believe that the IP system can play an important part in analyzing, reducing, and resolving both business and military risks. It can strengthen our market economy by providing protection to IP as a private property right and providing incentives to innovation. Additionally, it can create platforms for cooperation with other countries including our allies and China.

The IP system is a key tool in our economic statecraft toolbox. These various roles of IP policy are the principal focus of my testimony today.

Self-Strengthening

Our competitiveness begins with our domestic policy. Recent legislative proposals, including the Promoting and Respecting Economically Vital American Innovation Leadership (PREVAIL) Act, the Patent Eligibility Restoration Act (PERA), and the Realizing Engineering, Science and Technology Opportunities by Restoring Exclusive (RESTORE) Patent Rights Act of 2025, are also important steps in strengthening our competitiveness with China. PERA should help in restoring the United States to a position of global leadership in key areas of technology, such as medical diagnostics, biotechnology, personalized medicine, artificial intelligence, 5G, and blockchain by restoring patent eligibility to inventions in those areas. The PREVAIL Act improves PTAB rules to protect inventors from costly and unnecessary litigation and eliminates fee diversion. The RESTORE Act would restore patent owners' rights to a rebuttable presumption that a court will issue an injunction upon a finding of patent infringement.

These important legislative steps will hopefully accomplish two important international objectives. First, they will place the United States on a more equal footing with China's patent system in key areas of concern. For example, granting injunctive relief in the Chinese courts upon a finding of patent infringement is nearly automatic. Current US practice of denying injunctive relief diminishes the attractiveness, importance and influence of US courts when global IP litigation takes place in countries that routinely grant injunctions such as China. In addition, patent eligibility restrictions have been progressively lifted in Chinese legislation and regulations in matters such as the eligibility of software inventions, making China a more attractive destination for certain kinds of innovation.[3]

[3] See, e.g., Kevin Madigan and Adam Mossoff, "Turning Gold to Lead: How Patent Eligibility Doctrine is Undermining U.S. Leadership in Innovation", 24 George Mason Law Review 2017, pp. 939-960, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2943431; Qiang Lin, Xiaobin Zong and Jian Li, "Specialist Chapter: Software Patent Eligibility Challenges in China and How to Overcome Them", Intellectual Asset Management (Sept 23, 2024), https://www.iam-media.com/review/the-patent-prosecution-review/2025/article/specialist-chapter-software-patent-eligibility-challenges-in-china-and-how-overcome-them.

To maintain our global leadership, the United States should strengthen and stabilize the incentives provided by intellectual property in our economy. Our greatest strengths are in the rule of law and market mechanisms that we rely upon, including: the predictability that our system affords; the transparency and fairness of our procedures; the availability of private capital to exploit IP; and the ability to exclude others that IP affords as a private property right.

An Overview of China's IP System

Based on available data, China has surpassed the United States as the world's most active IP system. The China National IP Administration (CNIPA) China has the largest number of patent and trademark filings in the world. This IP system is also among the most litigious in the world, with approximately 500,000 cases per year.[4] There are also typically five to ten thousand criminal IP cases and tens of thousands of administrative cases. The Chinese IP system also has an extensive set of specialized institutions: specialized courts and judges, specialized prosecutors, specialized journalists, specialized university programs, etc.

Based on available data, foreigners play a small role in China's IP system. Foreign-related cases may make up as little as 1-2% of all civil IP cases. Foreign-related patents constitute about 10-15% of the patent grants.[5] While foreigners may make up a minor portion of court cases in China, they have a high success rate in IP civil litigation.[6] Although damages have traditionally been low, it is also a very fast civil system with first instance cases decided in six months and second instance cases decided in three months. A basic defect of the system, however, is the lack of transparency. It is for this reason that I have stated that my analysis is "based on available" data. In many cases, it is impossible to verify the quantity and quality of China's IP-related institutions.

The extent of any bias against foreigners or foreign-owned rights in China's IP system is difficult to calculate, due in part to low and declining levels of transparency.[7] The low

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[4] See, e.g., Aaron Wininger, "China's Supreme People's Court Work Report – Number of Punitive Damages Awards Up 44%" (March 9, 2025) (reporting on 494,000 intellectual property cases being concluded. https://natlawreview.com/article/chinas-supreme-peoples-court-work-report-number-punitive-damages-awards-44.

[5] CNIPA, "Patent Grants Jan-12 2024, Foreign vs. Domestic," https://www.cnipa.gov.cn/col/col61/index.html.

[6] Renjun Bian, "Many Things You Know About Patent Infringement Litigation in China Are Wrong" (2017), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3063566, noting with respect to case publication prior to 2014 that "it is possible that reliance on pure texts and scattered cases resulted in misleading impressions and guesses."

[7] See Responses of Mark A. Cohen to Questions for the Record, Hearing on "IP and Strategic Competition with China: Part IV – Patents, Standards and Lawfare" (118th Cong. 2nd Session, House Judiciary Committee) (Dec. 18, 2024) ("House Lawfare Hearing"), https://www.congress.gov/118/meeting/house/117764/documents/HHRG-118-JU03-20241218-QFR009-U9.pdf.

utilization by foreigners of aspects of China's enforcement system also makes it especially difficult to empirically prove how foreigners are treated in the courts. If foreign cases are a minority of the docket, the non-publication of foreign cases when the foreigner loses a dispute with a Chinese entity could significantly skew statistical observations. There are, however, some useful observation posts that are not found in the judicial databases. For example, offshore parallel cases are often published and offer opportunities to compare the advantages of different legal systems, including observing the incidence of low damage awards in China compared to other countries. Officially published statistics on civil IP case incidence also offer a basis to compare with official publication rates. There are also non-official sources of Chinese IP cases, including database publishers and bloggers. The yearbooks of China's vast administrative enforcement system have also shown in the past that this system rarely benefits foreigners in copyright and trade secrets matters, but it has actively addressed trademark infringement of foreign-owned rights.[8]

Transparency is a critical area where sustained and coordinated multilateral pressure needs to be placed upon China. An important provision of the TRIPS Agreement is Article 63, which requires that final court decisions and administrative rulings of "general application" shall be published. However, Article 63 may not capture all cases that China, a civil law country with courts that adhere to party guidance on specific cases, has decided. China's refusal to publish all relevant cases has also made it impossible to analyze implementation of the US-China Phase 1 Trade Agreement, or to validate China's implementation of many other bilateral or multilateral IP commitments, or for industry to make fact-based and comprehensive IP enforcement strategies in China.[9]

China not only does not publish all its cases, but it has also cut back on publishing new cases and begun to anonymize both new cases and previously published cases. Often, cases are reported on or published in non-official channels, which can lead one to question their accuracy and authenticity. China also lacks a PACER type system for publication of briefs or interim court decisions. Despite earlier efforts by the State Council, administrative enforcement transparency is generally weaker than the courts.[10] The United

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[8] See generally, Mark A. Cohen, "Foreign Competitive Threats to American Innovation and Economic Leadership – Engaging and Anticipating China on IP and Innovation", (testimony before the Senate Committee on the Judiciary, Subcommittee on Intellectual Property, April 18, 2023), https://www.judiciary.senate.gov/imo/media/doc/2023-04-18%20PM%20-%20Cohen%20-%20Testimony.pdf.

[9] Victoria Huang, "US-China Intellectual Property Issues in a Post-Phase-One Era, Interview with Mark Cohen" (Jan. 29, 2022), https://www.nbr.org/publication/u-s-china-intellectual-property-issues-in-a-post-phase-one-era/.

[10] Mark A. Cohen, "Through a Glass Less Darkly: China's March to Administrative Enforcement Transparency", www.chinaipr.com (Nov. 24, 2013), https://chinaipr.com/2013/11/24/through-a-glass-less-darkly-chinas-march-to-administrative-enforcement-transparency/.

States has also not been consistent in urging greater transparency by China's enforcement agencies. The Biden administration did not fully support the European Union in its recent dispute with China over Standards Essential Patents (DS611), which held that China did not need to publish of certain internal IP-related judicial policies that had affected foreign litigants and foreign courts.[11] As transparency is critical to understanding China's IP environment, I hope that such a mistake will not be repeated.

As a result of DS611, China is not obligated under WTO rules to publish all its significant cases. Therefore, multilateral engagement at the WTO and WIPO, as well as bilateral negotiations and engagement with China on transparency are critical to verifying that China lives up to all of its IP-related commitments.

The WTO Context: National Treatment and Private Rights

It is difficult at this stage to anticipate how the Trump administration will utilize WTO dispute settlement procedures to address long standing concerns about such issues as intellectual property, transparency, the treatment of US enterprises and rights holders in the Chinese market, and the fairness of the WTO appellate body process and outcomes. While the WTO has numerous flaws, it does retain strategic value as a forum to raise long-standing concerns that the United States harbors about China's IP system. Abandoning the WTO at this point will also support China's plans to extend its soft power, including its increasing influence over IP policy within the developing world and its efforts to become a "powerful country" in IP and, ultimately, the world's IP leader.[12]

As a starting point in seeking to balance our IP relations with China, it is useful to catalogue and possibly reconsider non-reciprocal aspects of China's IP relations with the United States which offer China advantages in the United States that United States companies do not enjoy in China. I intentionally use the term "reciprocity" here, rather than "national treatment." The tariffs launched by the Trump Administration are a striking example of a decline in faith in "national treatment" in tariffs, and their replacement by "reciprocal" tariff

[11] Mark A. Cohen, "Australia, US and EU Submissions at the WTO on China and Anti-Suit Injunctions", www.chinaipr.com (Jan. 4, 2024), https://chinaipr.com/2024/01/04/australia-us-and-eu-submissions-at-the-wto-on-china-and-anti-suit-injunctions/.

[12] See, e.g., WIPO "Executive Training Program on IP Asset Commercialization and Management Concludes in China" (Dec. 23, 2024), https://www.wipo.int/en/web/wipo-academy/w/news/2024/executive-training-program-on-ip-asset-commercialization-and-management-concludes-in-china, as well as the program of IP Watchdog Live, "Will China Replace the EU and the US as the World's IP Leader" (Sept. 30, 2024), https://ipwatchdog.com/sessions/will-china-replace-eu-us-worlds-ip-leader/, Mark A. Cohen, Speech at Asia Society of Northern California, 'Fact or Fiction in the US-China IP Trade War'" (Oct. 8, 2020) ("The issue today isn't whether China is committed to IP but whether Chian is over-committed…"), https://asiasociety.org/sites/default/files/2020-10/Mark%20Cohen%20Speech.pdf.

proposals. Historically, the global IP system is based on national treatment and most favored nation treatment -- not reciprocity.

The first Trump administration successfully prosecuted a WTO case involving China's forced technology transfer regime, which resulted in a change in China's Administration of Technology Import/Export Regulations ("TIER") (2001). The TIER mandated that China exclusively owned any improvements to technology transferred to China. President Trump was the first President to pay attention to this issue and to file a WTO dispute on it in 2018,[13] which his administration subsequently won.[14] The TIER involved an obligation that was exclusively imposed on foreigners transferring technology to China. The US imposed no similar obligations on China. The TIER violated national treatment obligations, was inherently non-reciprocal and was also inconsistent with China's obligations in its bilateral science and technology agreements with the United States as well as other countries. The delays in bringing the WTO case cannot, however, be blamed on the WTO. The United States waited 17 years to bring a WTO case involving a WTO on the TIER, despite the TIER itself being written in violation of WTO national treatment obligations in 2001.

There are other claims that could be made against China involving lack of national treatment, lack of reciprocity, or inherent unfairness/discrimination. Evidence suggests that discriminatory treatment may be occurring in specific sectors of patent prosecution, possibly influenced by Chinese industrial policy guiding the actions of the patent office. Such a violation would be cognizable under TRIPS Art. 3 (national treatment) and Article 7 (non-discrimination against technologies). Discriminatory treatment in damage awards have manifested themselves in enforcement of Standards Essential Patents (SEPS), where China has established global royalty rates lower than other jurisdictions. These cases often also involve opposition by the foreign party to the jurisdiction of the Chinese courts. Moreover, China has declined to apply French law in these cases, which should otherwise apply to SEPs governed by the European Technology Standards Institute. Another example of discrimination might also be found in the public enforcement of certain IP rights. For example, administrative enforcement of copyright and trade secrets on behalf of foreigners has historically been extremely low. There are other national treatment claims that could

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[13] Mark A. Cohen, "The Revised US-China Science and Technology Agreement – A Narrow Bridge to Drive Further Cooperation", www.chinaipr.com (April 21, 2025) https://chinaipr.com/2025/04/21/the-revised-us-china-science-and-technology-agreement-a-narrow-bridge-to-drive-further-cooperation/ ("The Narrow Bridge Blog"), see the reference to a GAO report, which noted that "The U.S. Patent and Trademark Office has identified a potential discrepancy between Chinese law [the TIER] and the bilateral U.S.-China Science and Technology Agreement…according to U.S. Patent and Trademark Office officials. These officials stated that the potential discrepancy is related to ownership of any improvements made to IP licensed between U.S. and Chinese entities."

[14] Mark A. Cohen, "The TIER Is Revised…" www.chinaipr.com (March 18, 2019), https://chinaipr.com/2019/03/18/the-tier-is-revised/.

be made against China, including the availability of subsidies for patent filings, domestic technical standards that require purchasing domestically innovative products, etc.

The most ambitious WTO claim that could be asserted against China involves the preamble to the TRIPS Agreement which "recogniz[es] that intellectual property rights are private rights." An empirically-driven and fact-based WTO case directed towards China's treatment of IP as a public right could implicate all the above claims, as well as other policies such as China's aggressive public enforcement of antitrust laws involving foreign or privately held IP rights, dominance of public enforcement (administrative or criminal) over private enforcement (civil), the non-independent civil system, the incorporation of IP into five-year plans and state planning, state planning metrics that affect foreign rights holders in China or foreign IP offices handling Chinese patent and trademark applications, and the role of other state IP policies and metrics that inappropriately intervene in market-oriented approaches to China's IP system.

Insisting on Reciprocity and Removing Preferences in IP Relations

The US and China have long had a bilateral US-China Patent Prosecution Highway ("PPH"). The PPH is a pilot program intended to reduce burdens of cross-border patent prosecution through work-sharing arrangements. The USPTO currently provides substantial deference to Chinese patent allowances that allow for expedited review and issuance of Chinese inventions in the United States. Professor Dennis Crouch identified China-issued PPH patents as "some of the fastest issued US patents. Patents moved from filing to issuance in less than four months."[15] By comparison, current pendency in the United States for a patent filed by an American inventor is 26.2 months.[16]

The United States also allows another means of obtaining priority examination through "bypass continuations" by which a Chinse applicant may file a US national application, which would also entail speedier examination via track one prioritized examination.[17] One Chinese lawyer described the bypass process as follows:

> [T]he Bypass route to enter the US national phase can not only enjoy the 30-month consideration period of PCT applications but also get rid of the constraints of the PCT framework after entering the US national phase and enter the United States as a pure US application. Under the US patent examination system, the modification of patent application texts can be more convenient and flexible, the examination

[15] Dennis Crouch, "Fast Track: Chinese Origin Patents Racing Through USPTO via PPH" (Jan. 20, 2025), https://patentlyo.com/patent/2025/01/chinese-patents-through.html.
[16] USPTO, Patents Pendency Data March 2025, https://www.uspto.gov/dashboard/patents/pendency.html .
[17] IPIKI.Cn, "Ways to Enter the US under the PCT: Route 371 and Route 111 Bypass" (discussing non-PCT routes for bypass applications from China), http://www.ipwiki.cn/application/912.html.

> progress can be accelerated, and the procedural convenience is not necessarily inferior to the PCT nationalization procedure route.[18]

PPH and Bypass are not the only non-reciprocal advantages given to Chinese rights holders. China's utility model system permits accelerated grants of patents in both China and the United States (as a priority patent application). As one scholar noted:

> USPTO patents with Chinese utility model priority are more likely to be filed and granted faster compared to USPTO patents with Chinese invention patent, suggesting applicants' preference for fast patent grant. USPTO patents with Chinese utility model priority are also less likely to be renewed after grant, indicating a shorter value horizon of the inventions.[19]

These fast-track procedures are not available to US companies filing from the United States to China. In the first instance, they are not available because China will only grant fast track review if the patent is filed through the Patent Cooperation Treaty. In addition, the United States lacks a utility model patent system which would facilitate a faster patent grant and continuous coverage.

In addition to these non-reciprocal procedural advantages that Chinese companies enjoy in the United States, additional concerns could also include consideration of whether fast track procedures are being made available in the United States to Chinese national champions, including companies involved in dual use technologies (civil/military), state owned enterprises or enterprises benefitting from industrial policy targeted subsidies, companies listed on other export control or procurement restrictions or other companies presenting possible strategic risks to the United States or its allies. Leading Chinese companies such as Huawei, ZTE, BOE, and Contemporary Amperex Technology Limited (CATL) have used both PPH and Track One to expedite their US patent filings.[20] The Chinese

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[18] METIS IP, "Bypass or 371? Using PCT to Submit a Patent to USPTO Requires What Avenue for the Application?" https://zhuanlan.zhihu.com/p/65138326 [machine translation].

[19] Siwei Cao, Patent System, Firm Patenting Strategy and Technology Progress (PhD dissertation, Agricultural and Resource Economics, University of California at Berkeley, Spring 2015), https://escholarship.org/content/qt1d38n1qh/qt1d38n1qh_noSplash_23d17f02330699e8fccf87daabb2df63.pdf.

[20] See Robert Schmid, "Musk and Major Banks Entangled with Chinese Battery Manufacturer Under Scrutiny from Feds", Washington Examiner (May 7, 2025), "CATL has aggressively ramped up its submission of patent applications in recent years, according to a review of business records conducted by the intellectual property research firm Pellegrino and Associates and obtained by the *Washington Examiner*. This figure is suspect, according to the analysis, given that 66% of CATL's total patents were granted between 2022 and 2024, with the firm's top twenty-five inventors accounting for roughly 40% of its patents in 2023. One inventor was listed on almost 1,400 patents granted in 2023, which would require nearly four inventions per day. If accurate, it would make CATL's researchers among 'the most prolific in human history.'"

EV battery manufacturer CATL, for example, uses both PPH and Track One expedited filings in over 60% of its US patent filings.[21] This has allowed them to build up a significantly sized US portfolio in less than three years at a time when many US companies had still not received a first office action. The chart below looks at CNIPA PPH filings for the last fifteen years for China-based companies receiving one hundred patents or more.

Country Group	Applicant Organization (100+ Acceleration Requests)	Total Accelerated Since 2005
CN	Boe Technology Group Co., Ltd.	1009
CN	Huawei Technologies Co., Ltd.	803
CN	Beijing Bytedance Network Technology Co., Ltd.	582
CN	Guangdong Oppo Mobile Telecommunications Corp., Lt	491
CN	Bytedance Inc.	352
CN	Contemporary Amperex Technology Co., Limited	327
CN	Tencent Technology (Shenzhen) Company Limited	291
CN	Alipay (Hangzhou) Information Technology Co., Ltd.	234
CN	Beijing Boe Optoelectronics Technology Co., Ltd.	206
CN	Zte Corporation	172
CN	International Business Machines Corporation	144
CN	Southwest Petroleum University	116
CN	China University Of Mining And Technology	111
CN	Beijing Didi Infinity Technology And Development C	110
CN	Zhejiang University	109
CN	Tsinghua University	106
CN	Institute Of Geology And Geophysics, Chinese Acade	102
CN	Beijing Dajia Internet Information Technology Co.,	101

The yellow highlights are companies on the Department of Defense 1260H list. Companies in blue highlights are on the Treasury sanctions lists. The former list bans procurement from Chinese military companies operating in the United States that may be deemed Military-Civil fusion contributors.

In addition to the information that may be provided by a listing on a US government sanctions list, imposition of a foreign government subsidies disclosure requirement for the

https://www.washingtonexaminer.com/news/investigations/3401641/jp-morgan-bofa-elon-musk-entangled-catl-china/.

[21] Edgar Baum, "Avasta Independent Briefng on CATL Secondary IPO" (April 21, 2025), https://www.avasta.co/avasta-catl-brief (PW: CATLbrief).

patent application would also assist in determining if the patent applications are being guided by industrial policy goals.

Non-Compete Agreements: California and the Handicapping US Companies Overseas

One area where the United States has crated obstacles for itself concerns noncompete agreements. Non-compete agreements are enforceable in China.[22] However, they are not enforceable in certain jurisdictions in the United States, including California. United States courts have held that when a US employee works for a California company, the non-compete agreement not only becomes invalid in the United States but also in the place where the employee works, which can include an overseas location. California's SB-699 (California Business and Professions Code section 16600.5) extends California's restriction on non-compete agreements to those contracts not signed in California and for employment that occurred outside of California. This "washing away" of non-compete agreements by working for a California employer has consequences for American international technological competitiveness. Today, technically skilled works can seek employment in China after being hired by a California company and be free of their non-compete obligations.[23] The effect of this non-compete "bath" is that the former employer is now left only with claims in trade secret misappropriation in China. Such claims are much harder to prove than violation of a non-compete agreement. As I noted in my submission to the Federal Trade Commission on this topic:

> Chinese data also 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 approximately 66%, while success rates were 32.4% for trade secret misappropriation cases in first instance cases and 44.3% of the cases decided by appellate courts.[24]

Congress might consider legislating that non-competes are valid and enforceable when they involve employees of US companies working overseas pursuant to non-compete

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[22] Mark A. Cohen, "The Proposed FTC Rule on Non-Compete Agreements and China", www.chinaipr.com (March 19, 2023), https://chinaipr.com/2023/03/19/the-proposed-ftc-rule-on-non-compete-agreements-and-china/.

[23] See Mark A. Cohen, "Semiconductors Patent Litigation Part 2: Nationalism, Transparency and Rule of Law", www.chinaipr.com https://chinaipr.com/2018/07/04/semiconductor-patent-litigation-part-2-nationalism-transparency-and-rule-of-law/.

[24] Mark A. Cohen, "The Proposed FTC Rule on Non-Compete Agreements and China" (March 19,2023), www.chinaipr.com (July 4, 2018), https://chinaipr.com/2023/03/19/the-proposed-ftc-rule-on-non-compete-agreements-and-china/.

agreements that are valid in that country. This was the position that I had proposed in my comments to the FTC, and that the FTC ultimately adopted in its revised rule on banning non-compete agreements in the United States. The FTC noted that "the final rule's application to work or starting a business [applies] only in the US."[25] Invalidation of non-compete agreements by employees located outside of California but within the United States is less of a problem due to effective federal and state trade secret laws, the availability of discovery procedures to ferret out evidence, and the full faith and credit given to out-of-state civil judgments. This limitation on the FTC's proposed ban should be considered for adoption in national legislation. It would thereby help California tech companies address theft of US technology by former employees by permitting the application of local foreign laws to govern local non-compete agreements.

Minimizing Cross Retaliation

An emphasis on reciprocity in handling of IP matters by the Trump administration could reduce the flexibility of governments to adjust their IP systems in light of their own national needs, and ultimately might lead to a Balkanization of the IP environment with different countries subject to different levels of treatment by different IP offices, in a similar manner to the Trump administration imposing differing tariffs on differing countries. Such a reciprocal approach to intellectual property could spell the end to the national treatment-based system that has been a hallmark of IP since the Paris Convention for the Protection of Intellectual Property (1883) (Art. 2).

Today, the United States also risks cross-retaliation for higher tariffs in IP from China and other countries. As an example, China is set to ban Hollywood movies because of the Trump tariffs.[26] Another example occurred on the day after the announcement of the Trump tariffs, when China also announced that Google was the subject of an antitrust investigation. [27]

Cross-retaliation against IP to a certain extent is "hard-wired" in the WTO agreements, including the TRIPS Agreement, because of the various trade disciplines that the WTO encompasses, the dispute settlement system, and the history of negotiating across various disciplines. It has been included as a remedy by the WTO in the past, including in the

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[25] FTC, Non-Compete Clause Rule, 89 FR 38342 (May 7, 2024) https://www.federalregister.gov/documents/2024/05/07/2024-09171/non-compete-clause-rule.

[26] Meg James, "China to Reduce the Number of Hollywood Films Allowed Amid Trade War," Los Angeles Times (April 10, 2025), https://www.latimes.com/entertainment-arts/business/story/2025-04-10/china-to-reduce-the-number-of-hollywood-films-allowed-amid-trade-war.

[27] Zen Soo, "China Launches an Antitrust Probe Into Google" AP (Feb. 4, 2025) , https://apnews.com/article/google-china-antitrust-investigation-tariffs-ab02b906733666cb0d348d2b416b7fa5/.

Antigua Gambling dispute (DS285) which authorized Antigua to suspend certain IP-related obligations under the TRIPS Agreement up to $21 million in compensation for the US ban against on-line gambling market access.[28]

History has demonstrated that IP rights can be adversely affected by conflict. The Havana Club dispute at the WTO derived from ownership conflicts of the Havana Club brand between Cuban and Puerto Rican interests. Further back in history, US blocking of foreign IP rights also occurred during World War I as an outgrowth of hostilities with Germany. Due to events in the Ukraine, the USPTO also terminated the PPH with Russia in 2022.[29]

China has also recently enacted a regulation which elevates the possibility of IP-focused retaliatory trade measures when Chinese IP rights are being discriminated against, including when foreign countries use discriminatory procedures involving intellectual property as an "excuse" to "contain or suppress China" (Art. 15).[30]

Among the areas of the US economy exposed to due to cross-retaliation is the licensing of intellectual property. The United States has long enjoyed a trade surplus of well over one hundred billion dollars per year in IP licensing.[31] Licensing of IP also ultimately contributes to high paying jobs in local economies and enhances US technological leadership which could be forfeited by foreign market barriers, taxation and other measures.

Implications of Military-Civil Fusion: Disclosure of Government Interests

I believe that Congress should direct the USPTO to require all applicants for patents to disclose if they are receiving foreign government subsidies or grants for the underlying R&D for the patent or the application. These observations do not mandate that we should have more extensive regulations on Chinese applications in the United States. Rather, all foreign

[28] WTO, United States – Measures Affecting the Cross Border Supply of Gambling Betting Services, Recourse to Arbitration by the United States under Article 22.6 of the DSU, Decision of the Arbitrator, WT/DS285/ARB (Dec. 21, 2007).
[29] USPTO, "USPTO Statement on Engagement with Russia, the Eurasian Patent Organization and Belarus" (March 22, 2022), https://www.uspto.gov/about-us/news-updates/uspto-statement-engagement-russia-and-eurasian-patent-organization.
[30] Mark A. Cohen, "Navigation the New Chinese Regulations on Foreign IP Disputes" www.chinaipr.com (March 23, 2025), https://chinaipr.com/2025/03/23/navigating-the-new-chinese-regulations-on-foreign-ip-disputes/ .
[31] See, e.g., Bureau of Economic Analysis, "Intellectual Property" (April 30, 2025), https://www.bea.gov/data/special-topics/intellectual-property; USPTO and Center for the Protection of Intellectual Property, George Mason University School of Law, "The Economic Contribution of Technology Licensing" (June 8, 2016), https://sls.gmu.edu/cpip/wp-content/uploads/sites/31/2016/07/USPTO-CPIP-Tech-Licensing-Conference-Slides.pdf.

companies should make the same disclosures that US companies make when there is US government financing of R&D or patent applications.[32]

Implications of Military-Civil Fusion: Updating Foreign Filing License Requirements

The United States, China and other countries have procedures in place for restricting the filing of patents related to national security overseas.[33] These patent export control regimes vary from country to country, contributing a general sense of uncertainty over how best to sequence a multinational patent application involving foreign inventors. After several months of discussing the Foreign Filing License ("FFL") practices involving China with counsel to US companies in different sectors, I had found no consistent approach towards sequencing US and Chinese FFLs, based on existing regulations.[34]

US FFLs are typically issued shortly after the application by USPTO and include licenses for accompanying data. The United States will grant licenses retroactively when an application has been filed abroad through error and the application does not disclose an invention that would otherwise be prohibited from filing overseas.[35] Under US law a patent application sent overseas for signature by a foreign co-inventor within six months of the filing of a U.S. application does not of itself require an export license.[36]

The USPTO and/or Congress should consider drafting new FFL rules or laws which encourage a first filing in the United States.

Balancing Windows and Walls in Science Cooperation

One of the distinguishing aspects of technology today is the close relationship between civil technology and its military application. "Military-Civil Fusion" is a term which first evolved in China to as a policy of the Chinese Communist Party with the goal of developing a world-class military. It is a priority for the Xi Jinping administration.

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[32] See Testimony of Mark A. Cohen, "Optimizing US Government Engagement on Chinese IP and Tech Issues," Subcommittee on Courts, Intellectual Property and the Internet of the Judiciary Committee of the House of Representatives (March 8, 2023), https://judiciary.house.gov/sites/evo-subsites/republicans-judiciary.house.gov/files/evo-media-document/cohen-testimony.pdf.

[33] WIPO, "International Applications and National Security Considerations" https://www.wipo.int/pct/en/texts/nat_sec.html.

[34] Mark A. Cohen, Licensing Intellectual Property in a Changing Trade Environment" (Intellectual Asset Management, August 2019), available at https://chinaipr.com/wp-content/uploads/2019/11/iam97_cfius-and-ip.pdf.

[35] MPEP Sec. 140 "Foreign Filing Licenses", https://www.uspto.gov/web/offices/pac/mpep/s140.html.

[36] EAR Sec. 734.10: "A patent application when sent to a foreign country before or within six months after the filing of a United States patent application for the purpose of obtaining the signature of an inventor who was in the United States when the invention was made or who is a co-inventor with a person residing in the United States" is not subject to the EAR.

Military-Civil fusion has been observed in the past in the patents filed by different countries. Nazi Germany's enigma cryptography machine, or its predecessors, had been disclosed in German, US, UK, and other foreign patents. A high-tech balloon with surveillance capabilities was recently shot down over the United States. Certain aspects of the balloon were disclosed in a 2020 patent filed by the Chinese Academy of Sciences, Aerospace Research Information Institute.[37] Also in 2020, a team of engineers at Lishui University in Zhejiang Province, developed a patent on a "dragging type submarine cable cutting device" which had been used to sever fiber optic cables.[38] An example of a positive engagement window with the Soviet Union from the past is the 1962 English language paper of the Soviet Scientist Pyotr Ufimstev, *Method of Edge Waves in the Physical Theory of Diffraction*, which is generally credited with the introduction of stealth military technology to the United States.[39]

I believe that the United States should continue to tactically engage with China in all useful and verifiable science and technology areas, including, where appropriate, on dual-use technologies. We should continue to engage if only to better understand China's motives and accomplishments. As China's science ecosystem has developed, China now also affords more opportunities for the US to benefit from collaborating with it.

Our engagement should be based on well-drafted agreements with China which must be capable of being periodically evaluated and monitored, including using patent and scientific publication data. We should also continue to use scientific collaboration to explore pathways for protecting intellectual property and to further develop expertise in our government on China's emerging technological challenges, as well as to address global challenges such as anticipating pandemics.

In my view, proposals to close the State Department offices involved in scientific collaboration are misguided.[40] Closing the door does not eliminate risks. We should

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[37] CN111547224B - A high-altitude balloon safety control and positioning recovery device and method - Google Patents", https://patents.google.com/patent/CN111547224B/en#:~:text=The%20embodiment%20of%20the%20invention%20provides%20a%20high-altitude,positioning%20information%20acquisition%20unit%20and%20a%20control%20unit.

[38] CN111203499A - A towed submarine cable cutting device and its cable cutting method - Google Patents, https://patents.google.com/patent/CN111547224B/en#:~:text=The%20embodiment%20of%20the%20invention%20provides%20a%20high-altitude,positioning%20information%20acquisition%20unit%20and%20a%20control%20unit.

[39] Contemporary Research on Emerging Sciences and Technology, P. Ya. Ufimstev, Theory of Edge Diffraction in Electromagnetics (2004), Tech Science Press (available through https://eng-web77-v02.ocio.monash.edu/intranet/proceedings/icces2004/pdf/edem.pdf).

[40] Lindsay McKenzie, "State Department Poised to Close S&T Cooperation Office", (American Institute of Physics, May 7, 2025), https://ww2.aip.org/fyi/state-department-poised-to-close-s-t-cooperation-office.

instead use scientific collaboration to develop expertise in understanding China's technological emergence to better anticipate threats, as well as to compete and appropriately collaborate.

Using Patent Data to Estimate and Guide American Competitiveness

In recent years, various think tanks have examined the technological competitiveness of the United States. One of the notable efforts include the Australian Strategic Policy Institute (ASPI). ASPI's conclusion was that China's global lead extends to thirty-seven out of forty-four technologies in a range of crucial fields, including defense, space, robots, energy, environment biotechnology, AI, advanced materials, and key quantum technology areas. ASPI recommended twenty-three different policy changes for individual and collaborative action by partners and allies.[41] A US-based organization, the Information Technology and Innovation Foundation (ITIF), prepared a report on China's innovation capabilities that relied on patent data throughout (2023). According to ITIF, "China appears ahead in nuclear power; on par in electric vehicles and batteries; near the lead in robotics, displays, artificial intelligence, and quantum; and lagging in chemicals, machine tools, semiconductors, and biotechnology. Apart from semiconductors, where progress has been somewhat frustrated by export controls on equipment, and quantum, China's rate of progress is striking."[42]

The importance of innovation and scientific data to developing appropriate future-oriented technology assessments was underscored in an article that preceded both these studies, "Innovation Warfare" (2020).[43] This article outlines how the United States should seize control of the technological future, through a four-step approach that includes "future-oriented technology intelligence", "strategic technology development", "secur[ing] technology control positions" and "organiz[ing] to win."[44] Of these outcomes, advanced "future-oriented technology analysis" (FTAs) have become increasingly critical. At the time of that article's publication, FTAs had already been bolstered by an "explosion" of quantitative methods which can anticipate next generation technologies. The toolsets include technology data mining, road mapping, competitive technology analysis, bibliographic analyses, scientometric indicators, blogs, trademarks, corporate security filings, etc. Since that time, additional improvements are being made through the

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[41] Jennifer Wong, "ASPI's Critical Technology Tracker" (March 1, 2023), https://www.aspi.org.au/report/critical-technology-tracker/.
[42] ITIF, "China is Rapidly Becoming a Leading Innovator in Advanced Industries" (Sept 16, 2024), https://itif.org/publications/2024/09/16/china-rapidly-becoming-leading-innovator-in-advanced-industries-new-report-finds/,
[43] Jeanne Suchodolski, Suzanne Harrison and Bowman Heiden, "Innovation Warfare," North Carolina Journal of Law & Technology (Dec. 2020).
[44] Id at p. 215.

application of large language models, such as by using artificial intelligence to compute measures of similarity or distinctiveness in patent applications. Such measures can be especially helpful in weeding out the highly innovative patents in China from those patents that can claim only a small incremental improvement over the prior art.[45] The authors' conclusion about the importance of FTAs to the technological future of the United States is stark:

> Innovation Warfare distilled down to its most basic truth is a footrace to control the technological future. FTA capabilities are thus vital not just to winning, but also to defining the mileposts along the racecourse. Future investments in FTA capabilities will be critical to overtake the lead others have built in this field. One cannot influence the attainment of a future one cannot see, or which others can see well in advance. In a world where others have advanced FTA capabilities, it will be difficult to optimize research into new technologies with equivalent speed and insightfulness absent those investments.[46]

There are, of course, numerous factors other than patents or scientific papers that are useful in assessing China's competitiveness. Prof. Jeffrey Ding of George Washington University and Kurt Campbell of the Asia Group together with Rush Doshi of the Council on Foreign Relations, have pointed to "diffusion" of general purpose technologies (such as AI) and "scalability" of technologies, respectively, as important factors in great power competition races.[47] These non-traditional economic factors, which leverage the importance of market size and market adoption of new technology, are also very helpful in developing more advanced measurements of the competitive advantages of the United States when compared to other economies. They also underscore the importance of collaborating with allies to achieve the advantages of scale and diffusion.

The United States needs to energetically re-engage in empirically driven analyses that address our technological competitiveness. The United States was once a leader in FTAs at the time of the Office of Technology Assessment (OTA) in Congress (1974-1995). OTA also served to incubate technology management talent. Its alumni served in senior leadership

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[45] See, e.g., Philipp Boeing, Loren Brandt, Ruochen Dai, Kevin Lim, and Bettina Peters, "The Anatomy of Chinese Innovation: Insights on Patent Quality and Ownership" (Mar 2024), concluding that "Chinese and foreign patenting have become more similar in technological composition, but differences persist within technology classes as revealed by abstract similarities." https://brandt.economics.utoronto.ca/wp-content/uploads/2024/09/Boeing-Brandt-Dai-Lim-and-Peters_The-Anatomy-of-Chinese-Innovation_2024.pdf.

[46] Id at p. 257.

[47] Jeffrey Ding, *Technology and the Rise of Great Powers; How Diffusion Shapes Economic Competition* (2024); Kurt M. Campbell and Rush Doshi "Underestimating China: Why America Needs a New Strategy of Allied Scale to Offset Beijing's Enduring Advantages" (Foreign Affairs, May/June 2025).

capacities for decades thereafter. At the time of Innovation Warfare's writing (2020), Asia was already leading in the application of machine learning to conduct FTAs using patent data. The United States ranked fourth in FTA research, with only about eight percent of the research contributions to the FTA field. By comparison to the limited uptake to FTAs in the United States, the Chinese National Science Library alone offers several categories of FTA services for Chinese policy makers, research institutions and companies. We need to recommit to developing these capacities.

Securities Risks

In late 2011, the SEC released guidance regarding Intellectual Property and Technology Risks Associated with International Business Operations.[48] This guidance discussed disclosure of IP-related risks, including:

- patent license agreements pursuant to which a foreign licensee retains rights to improvements on the relevant technology, including the ability to sever such improvements and receive a separate patent, and the right to continued use of technology or intellectual property after the patent or license term of use expires;
- foreign ownership restrictions, such as joint venture requirements and foreign investment restrictions that potentially compromise control over a company's technology and proprietary information[.]

Regarding the assessment of those risks, the SEC asked the following questions:

- Do you operate in an industry or foreign jurisdiction that has caused, or may cause, you to be particularly susceptible to the theft of technology or intellectual property or the forced transfer of technology? Do you believe that your products have been, or may be, subject to counterfeit and sale, including through e-commerce?
- Have you directly or indirectly transferred or licensed technology or intellectual property to a foreign entity or government, such as through the creation of a joint venture with a foreign entity? Do you store technology or intellectual property locally in a foreign jurisdiction? Are you required to use equipment and services provided by a state actor, including equipment or services that could result in a reduction in protections?

[48] U.S. Securities and Exchange Commission, Intellectual Property and Technology Risks Associated with International Business Operations, CFC Disclosure Guidance: Topic No. 8 (Dec. 19, 2019), https://www.sec.gov/rules-regulations/staff-guidance/disclosure-guidance/risks-technology-intellectual-property.

In addition to this important SEC notice, President Trump released a National Security Presidential Memorandum (the "Memorandum") on February 21, 2025, regarding an America First Investment Policy. This Memorandum stablishes new rules to curb the exploitation of capital, technology and knowledge to foreign adversaries, and new or expanded restrictions on US outbound investment to China in sensitive technologies, including "stop[ping] American funds from supporting China's Military-Civil Fusion strategy."[49] Combined together the SEC policy and the Memorandum provide support for the US prohibiting US capital flows and assistance to companies that engage in IP theft or advance military-civil fusion.

The United States should actualize these policies especially when there is IP misappropriation affecting our national security interests.

Government restructuring

The United States government has direct control over is the way it engages and coordinates internationally on intellectual property. The US government has numerous IP-related offices and coordinators for international IP, including: the PTO Director; the Chief Intellectual Property and Innovation Negotiator at USTR; and the White House IP Enforcement Coordinator. or "IP Czar" at the Office of Management and Budget. The DOJ/FBI and DHS also coordinate on international IP enforcement through the National Intellectual Property Rights Coordination Center. In addition, agencies such as the State Department, International Trade Administration, USPTO, and the Copyright Office have teams that work on international IP issues. The U.S. International Trade Commission also has a significant role in IP policies through its economic analyses and its international IP enforcement authority. Over the years, the USPTO has also increased its involvement in international IP policy, including through the presence of 13 IP Attachés throughout the world and the involvement of its Office of the Chief Economist in analytic international IP studies. Today, USPTO has the largest expert team in USG devoted to international IP policy.

To improve coordination, USPTO should be authorized to appoint a Deputy Director for International Affairs to represent the office and USG diplomatically in international organizations. At the same time, the multiple redundant staffing of IP expertise in different agencies should also be addressed as it contributes to a wasteful duplication of efforts. These redundancies are best addressed by deepening the expertise of these agencies through training, work sharing arrangements, and/or merger/colocation in light of their

[49] The White House, "Fact Sheet: President Donald J. Trump Encourages Foreign Investment While Protecting National Security" (Feb. 21, 2025), https://www.whitehouse.gov/fact-sheets/2025/02/fact-sheet-president-donald-j-trump-encourages-foreign-investment-while-protecting-national-security/.

respective expertise as well as a renewed focus on emerging threats and strategic opportunities.

In addition to filling these positions, the US government should also rapidly improve its understanding of China's capacity for technological catch-up/peer competition, such as by reinstituting institutions as the OTA in Congress. Ultimately, positions should also be staffed by people with social science, STEM and foreign law/foreign language competence to better evaluate emerging technological challenges from China.

I hope that the Trump Administration seriously considers supporting bilateral, multilateral and/or WTO efforts at improved transparency from China in the future, including negotiating a "Phase 2" type agreement with China that would include strong transparency commitments. Otherwise, US government officials, rightsholders, and academics will remain seriously handicapped in their understanding of China's implementation and enforcement of its IP laws.[50]

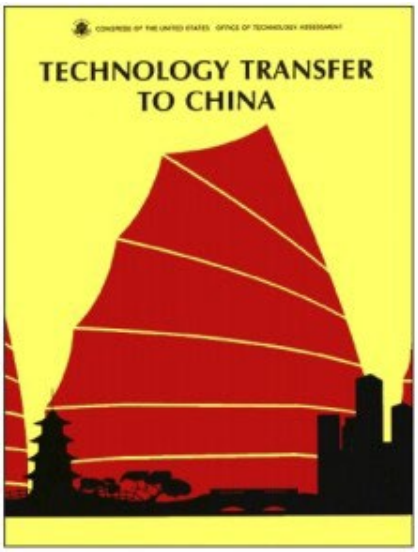
As IP is a private right, it is also important that the private sector is also engaged with China on its IP policies and practices. A good place to begin would be additional government support for Track II-type engagement with China on IP issues. The US Chamber of Commerce previously supported such efforts, which engaged in a broad range of policy initiatives, including bilateral discussions, amicus briefs to Chinese courts and position papers on areas that needed legal reform, many of which helped resolve long-standing bilateral issues.[51]

Conclusion

In its July 1987 Report on Technology Transfer to China, OTA noted the following:

> [W]hen modernized, China will also be more capable, and thus more of a potential security threat to the countries of the region and to U.S. interests. If China succeeds in its modernization, it will have the economic and military capabilities to be a major disruptive force in the region if it so desires.

[50] See Testimony of Mark A. Cohen at House Lawfare Hearing, supra.
[51] Mark A. Cohen, "The Phase 1 Agreement and the Prospects for Piloting a New IP Dialogue" www.chinaipr.com, (Jan 31, 2021), https://chinaipr.com/2021/01/31/the-phase-1-agreement-and-the-prospects-for-piloting-a-new-ip-dialogue/.



OTA's prediction regarding China's development has proven to be accurate. China has since established itself as a major economic and military force. At that time, an appropriate strategy, OTA noted, was to "to retard Chinese modernization -- for instance by denying access to technology, capital, and markets -- out of fear of potential hostility." Many of these recommendations are being discussed again.

As I have outlined here, the answers are not simple. As a first step, Congress needs to ensure that the administration and Congress itself has the necessary resources, legal tools, and oversight capacity to respond to these profound IP and technological challenges in a strategic manner.[52]

[52] OTA, Technology Transfer to China (1987) at p. 193.