# IP AND STRATEGIC COMPETITION WITH CHINA: PART IV—PATENTS, STANDARDS, AND LAWFARE

## 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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# C O N T E N T S

WEDNESDAY, DECEMBER 18, 2024

## OPENING STATEMENTS



## WITNESSES



## LETTERS, STATEMENTS, ETC. SUBMITTED FOR THE HEARING

Page



QUESTIONS AND RESPONSES FOR THE RECORD

# IP AND STRATEGIC COMPETITION WITH CHINA: PART IV—PATENTS, STANDARDS, AND LAWFARE

**Wednesday, December 18, 2024**

HOUSE OF REPRESENTATIVES

SUBCOMMITTEE ON COURTS, INTELLECTUAL PROPERTY, AND THE INTERNET

COMMITTEE ON THE JUDICIARY

*Washington, DC*

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

*Members present:* Representatives Issa, Massie, Fitzgerald, Cline, Kiley, Johnson, Nadler, Ross, Lofgren, Dean, and Ivey.

Mr. ISSA. The Subcommittee will come to order. Without objection, the Chair is authorized to declare a recess at any time.

Today, we welcome everyone here for this hearing on intellectual property and strategic competition with China. Before I recognize myself, I want to thank everyone for being here for what is clearly an investment hearing.

I will now officially recognize myself probably for the same statement by my staff.

Good morning. I welcome everyone to the hearing today. This hearing marks the fourth in a series of hearings focused on strategic competition with China. As this Committee has documented, the People's Republic of China has been leveraging the international IP system to serve their strategic interest.

Our first hearing on the topic delivered China's—recognition of China's intellectual property theft and the rise of national champions such as Huawei and ZTE. We looked at China's emergence as the largest filer of international patents and subsequent use of U.S. patents in litigations against American companies all with significant national security concerns.

The second hearing examined how actions under the Biden Administration allowed greater foreign access to U.S. advanced technology by waiving IP protections under the TRIPS waiver provision. This failure threatened to harm U.S. innovation and jeopardize investments in life saving medical advancements.

The third hearing analyzed the artificial intelligence arms race between the U.S. and China. We explored how Chinese AI develop-

ment threatens a wide range of industries including our own cyber security.

Today, we will address China's Standard 2035 strategy, a sophisticated and dangerous plan aimed at dominating critical global technologies by shaping international standards. This hearing will explore the PRC's manipulation of global standards setting organizations through overwhelming and coordinated participation in State-backed entities. I want to emphasize it is their leaning into organizations that often the U.S. does not fully staff to the level we could and, in fact, are often requested to, and that leaves a void, and China has happily not only filled the void but lobbied for more slots.

China's unified effort to stack the deck at SSOs allows them to dominate the discussion and embed PRC technology into global standards such as 5G, AI, and the Internet of Things. In particular, we will investigate how the PRC exploits licensing and rate setting mechanisms for standard-essential patents in favor of Chinese companies. This behavior includes leveraging Chinese courts lacking independence or impartiality to set global licensing terms and undermine foreign competitors, particularly those in the United States. It includes suing competitors in the United States in the European Union by leveraging patents essential to important technology standards like 5G and others.

Finally, this hearing will highlight the broader implications of the PRC's efforts including the erosion of U.S. technological leadership and the entrenchment of the PRC's dominant technologies into global infrastructure. Let us be clear. This Committee is not the Committee that will keep us from losing our lead. This is simply the canary in the coal mines. We cannot let the PRC dominate global standards and yet, as we speak, they have made significant advancements in the previous eight years, six years, four years, and two years, and as we speak.

I want to thank our witnesses for their time today and as I said before the opening, this is the last hearing of this Congress, but a down payment on what we must do in the next Congress.

It is now my pleasure to recognize the Ranking Member, Mr. Johnson, for his opening statement.

Mr. JOHNSON. Thank you, Mr. Chair. Each of us has a cell phone, more than likely. Many of us look at that cell phone as just one single entity to itself. It is amazing that this same phone is held up by people across the world, looking at the coverage on Syria last week. You see folks holding up their phones recording the moment. These phones and other products we can't see inside, but there is not just one patent or one product in these phones or in many devices. It is made up of over a thousand patents, this phone. Some are owned by the cell phone manufacturer. Some are licensed by the owner. A few are known as standard-essential patents, or SEPs. These patents are designated SEPs by standards-setting, organizations meaning that they are necessary to make a cell phone work to global standards.

The phones in our pockets are the very same as those in the pockets of people across the world because it is the same on the inside because they need to be interoperable so that people in Syria, China, and wherever else they are, can use them. I can call some-

one in Iran, and I guess maybe get them on the phone, same phone we are using.

Mr. ISSA. The Chinese will listen as you call.

Mr. JOHNSON. That is true. Standard-essential patents guarantee worldwide interoperability of our technology. By requiring a universal set of patents for a device, global standards ensure that as technology advances, our machines are interoperable with the world around them. That is a good thing. These standards hinge on inventors being fairly compensated for their inventions so long as they agree to license their products on fair, reasonable, and nondiscriminatory terms known in the trade as FRAND.

We are here today to examine the question of what happens when a country refuses to abide by the international process to which every other country adheres. Over the last decade, Chinese courts have advanced its government's technology-dominance goals through legal decisions that put China out of step with the rest of the world. The Courts in China have set royalty rates artificially low for U.S. companies. They ruled in favor of antisuit injunctions that prevent litigants from bringing patent suits to other countries' courts, and otherwise prevented SEP owners from being paid fairly for their inventions.

Transparency in litigation is another problem. Chinese court proceedings are infrequently published, making it difficult for litigants, international courts, and SEP owners to interpret rulings or to have any semblance of a rule of law. This absence of clarity has created a complicated system where the deck is stacked against American companies, one that is hard to navigate and where litigants struggle to receive a fair trial.

I am looking forward to hearing from our witnesses about how we should approach this problem. We cannot expect, much less demand that the United States always come ahead. Similarly, it would be unwise to lower ourselves to the lowest common denominator, making our system similarly unfair to litigants who use systems other than the United States, or making the system unfair to patent holders would not even the score. Imitating China will not make the U.S. more American. It will take a worldwide effort to overcome China's overreach on SEPs. International institutions like the World Trade Organization should seriously consider whether Nations are meeting their obligations under the TRIPS agreement. We should be able to turn to international forums for fair adjudication of disputes, including the use of antisuit injunctions by Chinese courts.

By working cooperatively through diplomacy and dialog, Nations disadvantaged by China's unfair decisions can demand a system that provides transparency and due process at a global level. America also has an obligation to lead the way. We should invest in making our patent courts faster, make sure we get more judges on the bench who are steeped in patent law, and attract litigation by having a better process in America for adjudicating disputes.

Other countries will not follow the U.S. blindly. We need to prove we have a better process to incentivize litigation here at home.

I thank my colleagues across the aisle. Chair Issa, I thank you for holding this hearing and working with me on a bipartisan basis over the last two years on all that we have worked on together. I

thank Ranking Member Nadler for his support and for his friendship. I thank the witnesses for being here today. With that, I yield back the balance of my time, but not before wishing everyone happy holidays.

Mr. ISSA. Without objection, all other opening statements will be included in the record.

It is now my pleasure to introduce our witnesses.

First, we have Professor Thomas Cotter. Mr. Cotter is a Professor of Law at the University of Minnesota Law School. His research focuses on domestic and international intellectual property law, antitrust law, and economics. He is the author of seven books including several on intellectual property law.

Next, we have Mr. Kent Baker. Mr. Baker is head of IP Strategy, Litigation, and Licensing of Intellectual Property and Standards for u-blox America which provides wireless semiconductor chips, modules, and other technological components. He is a patent attorney by trade and has more than 30 years of experience in engineering and practice of law and academia on topics of intellectual property, standards policy, and regulatory policy. Welcome.

Mr. Mark Cohen. Mr. Cohen is the Senior Fellow at George Mason University, Antonin Scalia School of Law, and a Senior Technology Fellow at the Asia Society of Northern California. He previously served as Senior Counsel to the Patent and Trademark Office.

Dr. Walter Copan is the Vice President for Research and Technology Transfer at the Colorado School of Mines. He previously served as the Under Secretary of Commerce for Standards and Technology as the Director of the National Institute of Standards and Technology. Dr. Copan has served in a number of other positions in public and private life including as the Principal Licensing Executive for Technology Transfers at the Department of Energy's National Renewable Energy Laboratory.

We welcome all our witnesses. We thank you for appearing here today. As is the rule of this Committee, would you please rise to take the oath? Raise your right hand.

Do you solemnly swear or affirm under penalty of perjury that your testimony you are about to give will be true and correct to the best of knowledge and information and belief, so help you God?

Thank you. Please sit down. Let the record reflect that all witnesses did answer in the affirmative.

To all our witnesses here today, some of you have been here before. All of you have seen this on C-SPAN. We would like you to summarize what might be much more extensive comments to about five minutes. We won't cut you off mid-sentence, but we would appreciate getting to questions as quickly as possible. Your entire opening statements, plus additional information you may choose to give us afterwards will be included in the record, so you will be much more complete with the studious staff than you are to the public here today. With that, Mr. Cohen.

**STATEMENT OF MARK A. COHEN**

Mr. COHEN. Thank you very much, Chair Issa, Ranking Member Johnson, Members of the Subcommittee, and staff for inviting me back to testify today. My comments focus on three SEP lawfare re-

lated issues, transparency, intervention in the markets of subsidies, and global rate setting. I echo Ranking Member Johnson's comments on the Chinese environment. My comments are directed to helping ensure that the U.S. system remains the leading system for adjudicating SEP disputes to support our innovative companies without compromising our values.

Regarding transparency of the Chinese courts, I am generally referring to placing final court decisions online on the official Chinese judicial data base. During the last decade, this minimal type of judicial transparency has been decreasing significantly. In the past, only about 50 percent of patent cases were published. That number has since decreased, and I can't give you the exact amount. The number of published civil cases has declined by as much as two thirds. Chinese SEP cases today have been withdrawn from publication, anonymized, delayed, or not published at all. This curated, or perhaps censored approach, makes it impossible to answer basic questions about China's IP system such as China's compliance with international agreements including the Phase One agreement. The Phase One agreement, in fact, did nothing to advance transparency of judicial decisions.

If there are to be any negotiations with China on IP, and I encourage them, a focus on transparency to better evaluate China's adherence to any commercial law commitment is essential.

The next issue is intervention of the markets. China distorts its markets involving SEPs through subsidies for patent filings and grants and for subsidies for attending standards-setting bodies and even through awards. Patent subsidies have even been obtained by prisoners to mitigate their sentences.

Some current subsidies, in Pudong, Shanghai, the subsidy is about $3,000 per patent grant. If a company wishes to establish a set patent pool, there is a one-time subsidy of about $160,000. In Shenzhen, there is a reward for high value SEP patents with corresponding PCT applications of about $160,000. Subsidies have often exceeded the cost of the patent application.

Patent subsidies distort markets and burden overseas patent offices with low-quality patents. They may lead Chinese courts to unduly focus on quantitative, rather than qualitative basis for royalty calculations. They are leveraged to lower royalty rates. They burden companies with the additional expense of evaluating patent thickets of low-quality patents before they do business. Subsidies are also granted to firms for each proposal they submit to international standards bodies. These subsidies have led to a flood of low-quality proposals. We need to ask China to address the problem of IP and standardization subsidies and to ensure that it renews its efforts to focus on patent quality.

Global royalty rates. China's long-standing efforts to set global royalties have taken various forms. The basic goal of Chinese courts is to set lower rates for FRAND royalties for implementation in China, thereby giving Chinese companies a competitive advantage over other markets. One of those efforts involves interference of the adjudication of SEP disputes by other countries. The Chinese courts deem the filing of a U.S. Section 337 action against Huawei as an abuse of dominance under its antitrust law about 10 years ago.

Chinese courts have also issued antisuit injunctions to control actions by litigants in foreign courts. Such efforts are accompanied by extra territorial civil jurisdiction, exclusive use of China law for determining disputes, lower rate determinations for licensing to China, unique approaches to translating and applying FRAND, and efforts to regulate nonresident patent pools. These efforts that I have only named a few, low transparency, extra territorial jurisdiction of patent subsidies, threaten the global territorially based patent system and the global standardization system by extending China's reach, providing preferential treatment to China-based companies, and disregarding the integrity of other countries' legal systems, including our own.

Thank you once again, and I look forward to your comments.

[The prepared statement of Mr. Cohen follows:]

Statement of Mark A. Cohen

Senior Fellow, George Mason University, Antonin Scalia School of Law

And

Senior Technology Fellow, Asia Society of Northern California

*Chinese SEP Litigation and US SEP Strategies*

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

**IP and Strategic Competition with China:**
**Part IV – Patents, Standards, and Lawfare**

December 18, 2024

Chairman Issa, Ranking Committee Member Johnson, distinguished members of this Subcommittee, it is a pleasure to appear before you again today on the important issues confronting the US government in addressing intellectual property protection arising from China. I am particularly honored to have been invited back since I appeared at the first hearing on these important topics in March of 2023.

I testified last year on "Optimizing USG engagement on China IP and Tech Issues". Most of my recommendations from that testimony on organization of the US government and bilateral priorities remain relevant today. I will refer to my most relevant suggestions for today's topics in this testimony. I am speaking to you on my personal behalf and not on behalf of any third party.

I have been asked by staff to address litigation over standards essential patents ("SEPs") in China and the global "lawfare" that has been taking place in setting royalty rates for SEPs. My

focus here is on how the United States might improve its litigation environment and commercial diplomacy to address China's more challenging practices which may undermine US companies' legitimate expectations, the value of American intellectual property, judicial comity, and other principles. I have also focused on suggestions for the in-coming Trump administration.

*Introduction*

Chinese courts have become an increasingly important venue for adjudication of FRAND royalty disputes for standardized technology. FRAND is an acronym which requires licensing by patent holders on "Fair, Reasonable And Non-Discriminatory" terms for technology that has been accepted into a standard managed by a standards development organization (SDO) or standards setting organization (SSO) (hereinafter, together "SDO"). FRAND licensing has helped create a global, open ecosystem for cell phones, telecommunications infrastructure, smart cars, the Internet, and a range of other technologies and devices. The patents which read on a technical specification accepted by an SDO for inclusion into a standard are called "Standards Essential Patents" or "SEPs." Under the open terms of the SDO, anyone who wishes to manufacture a product (often called an "implementor") in accordance with the standard may need to secure a license from the SEP holder ("patentee"). The patentee has a parallel commitment in exchange for the incorporation of its technology into the standard to "be prepared to grant" a license to its SEPs to the implementor on FRAND terms.[1] When negotiations between a patentee and an implementor fail to achieve their goal of a global

[1] European Telecommunications Standards Institute, Intellectual Property Rights Policy, Rule 6.1, https://www.etsi.org/images/files/IPR/etsi-ipr-policy.pdf.

license agreement, litigation and counter-litigation tactics over SEPs may occur in China, or with China in the United States or other countries.

*Policy Complexity of SEP Litigation*

For countries such as China which have a socialist legal tradition, SEP litigation poses may internal contradictions.

One of these contradictions is shared with developed market economies. It involves the conflict between the territoriality of IP rights and globalized standard setting, including the desire of patentees to obtain a global license for their technologies. While the telecommunications industry is global in nature and SDOs set global standards for new products that will interoperate internationally, patents themselves remain territorial and are subject to local laws regarding their validity, interpretation, infringement and licensing. Thus, SEP policies involve an inherent conflict between a territorially based patent system and a global standardization system with global licensing practices.

A second contradiction is between the private rights orientation of the global IP system and the management of IP rights as part of state industrial plans or national policies. This issue was addressed in part by the TRIPS Agreement with its focus on private civil remedies. The preamble to TRIPS, in language introduced by the Hong Kong delegation, also recognizes that "intellectual property rights are private rights". Nonetheless, IP rights have historically been used by different economies, including autocratic and communist economies, to advance state power and industrial policy interests. For example, IP has been used with varying success to advance the industrial policy interests of the Soviet Union and China. North Korea, like the

United States, has a patent clause in its constitution. Nazi Germany also experimented with IP policies. Countries, such as China, with strong interests in state intervention in their economies, not only wish to enhance their national interests through an appropriately managed IP system, but they may also today have related interests in driving international standardization processes and supporting tech champions (such as Huawei). SEP litigation in China or with Chinese litigants can therefore often appear as a kind of "lawfare".

When the litigation takes place in China, these national interests can manifest themselves by a court's desire to exert greater "judicial sovereignty" by seeking to settle global disputes in favor of local litigants. Among the tools that may be used by a court to achieve this goal are: global rate setting, extraterritorial jurisdiction, choice of local law to govern a dispute, issuing of antisuit injunctions (ASIs), differential treatment for local companies, aggressive and intrusive use of antitrust law to further extend jurisdiction over conduct and regulate negotiating behavior, and extension of jurisdiction over both patentees and patent pools. Many of these practices are not unique to China and have been borrowed from the West. Often, however, China differs from Western economies in the extent and/or manner of their implementation.

Although I support efforts to reduce transaction costs for patentees and implementors, I do not believe that the answer to this type of lawfare lies in the United States seeking aggressive cross border jurisdiction for global rate setting determinations, or intervention in private markets. I do not think that the answer to the China challenge in SEPs is for the United States to become more like China, or to follow European proposals to intrude further into the SEP markets. As a country we need to remain steadfast to certain core concepts such as protecting IP, market-based principles for calculation of royalties, and providing adequate incentives for innovation.

Prof. Justus Baron at Northwestern University, in his report to the European Commission on its proposals for more efficient and transparent European FRAND rate setting through essentiality checks, establishing aggregate royalties, and development of a European competence center at the European trademark office, has similarly noted that the EU should "adopt a more incremental approach" to FRAND royalty rate setting.[2] The United States-based Information Technology and Innovation Foundation ("ITIF") has also noted with respect to 5G technologies that United States policies should "double down on what has been shown to work: strong support for our research universities and institutions; a strong intellectual property (IP) protection system and support of the business models needed for the entities bringing research breakthroughs to market; and encouragement of fair voting and healthy institutional practices at standards-setting bodies."[3] With respect to the important role of AI in standardized technology, Prof. Jeffrey Ding at George Washington University has also noted in testimony last year before the U.S. Senate that the United States should "keep calm and avoid overhyping China's AI capabilities ... the U.S.'s lead in AI capabilities over China should endure. In emerging technologies such as AI, a continued focus on incremental improvements in our approaches may make the most sense."[4]

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[2] Justus Baron, "The Commission's Draft SEP Regulation – Focus on Proposed Mechanisms for the Determination of 'Reasonable Aggregate Royalties'" (August 10, 2023). Available at SSRN: https://ssrn.com/abstract=4537591 , see also Justus Baron et al, "Contribution to the Debate on SEPs, Report of the Expert Group of the European Commission on Licensing and Valuation of Standard Essential Patents (SEPS)" (March 15, 2021), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3778166.

[3] Doug Brake, "A U.S. National Strategy for 5G and Future Wireless Innovation", ITIF (April 27, 2020), https://itif.org/publications/2020/04/27/us-national-strategy-5g-and-future-wireless-innovation/. See also Alexandra Bruer and Doug Brake, "Mapping the International 5g Standards Landscape and How It Impacts U.S. Strategy and Policy", ITIF (Nov. 8, 2021), https://itif.org/publications/2021/11/08/mapping-international-5g-standards-landscape-and-how-it-impacts-us-strategy/.

[4] Jeffrey Ding, "National Security and Economic Implications of AI", TESTIMONY BEFORE THE SENATE COMMITTEE ON INTELLIGENCE, HEARING ON ADVANCING INTELLIGENCE IN THE ERA OF ARTIFICIAL INTELLIGENCE: ADDRESSING THE NATIONAL SECURITY

Of course, I do not believe that these suggestions require complacency on the part of the United States. Even if these incremental approaches were adopted, the United States should remain vigilant in apprehending the legal challenges inherent in China's capacity for technological catchup with appropriate institutions and resources to monitor China's accomplishments and challenges.

*Transparency, Countering Unfair Judicial and Antitrust Practices, Translations and the Role of Commercial Diplomacy and the WTO*

I will focus now on four areas that I believe deserve this Committee's attention: transparency, countering unfair judicial and antitrust practices, China's approach to translating FRAND, and the potential role of the WTO.

Transparency

In my view, the single greatest challenge facing our understanding of how China handles IP litigation has been the decline in transparency of judicial decision making in China over the last several years. Since WTO accession, China's judicial system, including its corps of IP judges and courts, has become highly specialized and well-trained. Many aspects of China's system, such as China's specialized IP courts and its integrated patent and trademark office, are loosely modeled on the US system. Nonetheless, one area where the Chinese judiciary has retreated has been in transparency, particularly regarding case publication. In recent years, China has

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IMPLICATIONS OF AI (Sept. 19, 2023), at p. 7, https://www.intelligence.senate.gov/sites/default/files/documents/os-jding-091923.pdf.

rolled back the numbers of cases it has published, withdrawn previously published cases, and anonymized or curated the cases that it has made available.

Regrettably, the Phase One Agreement did not address judicial transparency in any of its IP chapters. In the absence of full transparency, it is impossible to determine how China is protecting SEPs, as well as how much China is implementing many other international commitments.

China's lack of judicial transparency in intellectual property cases is not new. It has long been a concern to the US government. It affects the commercial rule of law and IP as well as SEP adjudication. The United States attempted during the Bush administration to institute a WTO case to require China to publish its cases.[5] However, we ultimately declined to pursue that request to a final resolution when we filed a parallel WTO dispute (DS/362).[6]

Issues involving judicial transparency reappeared in the SEP context on February 22, 2022, when the European Union filed a request for consultations with China regarding China's refusals to publish certain SEP cases and China's granting of ASIs which prohibit parties in Chinese lawsuits from filing suit in other countries. Nineteen countries, including the United States and many of our allies, have reserved their rights to as third parties to the case. A decision on this case, DS/611 – China – Enforcement of Intellectual Property Rights, is now pending.[7]

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[5] Letter of Amb. Peter F. Allgeier to Amb. Sun Zhenyu (Jan. 20, 2006), https://www.ip-watch.org/files/US%20ltr%20on%20China.pdf?b9ea70.
[6] USTR, Measures Affecting the Protection and Enforcement of Intellectual Property Rights, https://ustr.gov/issue-areas/enforcement/dispute-settlement-proceedings/wto-dispute-settlement/measures-affecting-pr.
[7] DS 611: China - Enforcement of Intellectual Property Rights, https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds611_e.htm.

The EU had requested publication of Chinese ASI policies and case decisions. The EU has argued that these case decisions also unduly interfered in EU court proceedings involving enforcement of EU rights by EU companies under EU law. In its only public filing to date, the United States has opposed the EU position at the WTO regarding China being required to publish its underlying policies and cases involving ASIs, by citing China's position that the EU position is "completely fictitious". USTR declined to acknowledge China's declining transparency, past U.S. efforts at encouraging transparency, the lack of legal support for issuing antisuit injunctions under China's Civil Procedure Law, [8] or other changes in Chinese SEP litigation policy, which suggest that China has developed polices to expand its global reach though ASIs and other mechanisms.

These suggestions on addressing perceived unfair acts should be considered in conjunction with the suggestions made in my prior testimony before this Committee. As was true of the Biden Administration, the incoming Trump administration should rapidly fill IP-related positions including the PTO Director, the Chief Intellectual Property and Innovation Negotiator at USTR, and the White House IP Enforcement Coordinator. It is especially important that the candidates for the USPTO Director and other related IP positions should not only have "a professional background and experience in patent or trademark law", but also are committed to that system, and have experience in the competitive environment that the United States faces. [9] I also believe that, considering the involvement of the USPTO in overseas IP issues and

[8] Mark A. Cohen, Australia, US and EU Submissions at the WTO on China and Anti-Suit Injunctions (Jan. 4, 2024), https://chinaipr.com/2024/01/04/australia-us-and-eu-submissions-at-the-wto-on-china-and-anti-suit-injunctions/, USTR, China-Enforcement of Intellectual Property Rights (DS611), Third Party Submission of the United States (Aug. 31, 2023), https://ustr.gov/sites/default/files/enforcement/DS/DS611/US.3dPty.Sub.fin.pdf .
[9] 35 U.S.C. Sec. 3.

the expansion of its global IP Attaché positions, the Director's office should also be expanded to include a Deputy Director for International Affairs who can represent the USPTO at an appropriate diplomatic level in international organizations. In addition to filling these positions, the U.S. government should rapidly improve its understanding of China's capacity for technological catch-up, such as by reinstituting institutions as the Office of Technology Assessment in Congress. These positions should be staffed with people with the STEM competence to better evaluate emerging technological challenges.

I hope that the Trump Administration seriously considers supporting multilateral or WTO efforts at improved transparency in the future, and/or negotiating a "Phase 2" type agreement with China which would include transparency commitments. Otherwise, U.S. government officials, rightsholders, and academics will remain seriously handicapped in their understanding of China's implementation and enforcement of its IP laws.[10]

Countering Unfair Judicial and Antitrust Practices

The United States can address other unfair practices in two ways: by strengthening our own system and by putting reciprocal pressure on foreign countries that may utilize unfair practices without otherwise jeopardizing the overall fairness of our system. In my previous testimony, I have also suggested other reforms to the US system that can help rebalance the United States as a critical forum for resolution of SEP disputes. These include expedited "rocket -docket" type approaches to SEP litigation that could help in closing the gaps with fast-tracked Chinese court

[10] Mark A. Cohen, www.chinaipr.com, "Patent Litigation – Local Protectionism and Empiricism, Data Sources and Data Critiques (March 10, 2016), https://chinaipr.com/2016/03/10/patent-litigation-local-protectionism-and-empiricism-data-sources-and-data-critiques/

cases; Congress directing the USPTO to require any 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 itself; disclosing litigation finance from foreign states in sensitive technological sectors that could affect national security;[11] and that the USDOJ Solicitor General exercise a more active role in US domestic litigation that involves Chinese patent assertions, particularly in issues that implicate the jurisdiction of our courts (such as ASIs)[12] or the fairness of a foreign legal system when issues involving deference to a foreign proceeding arise.[13] 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.[14]

A second separate set of issues has also arisen with respect to SEPs and antitrust law. Recently released guidelines from the State Administration for Market Regulation ("SAMR") seek to further extend China's influence through a variety of mechanisms. One of these is to focus on using patent counts, rather than qualitative indicia, to determine royalty rates. This is an approach that will naturally favor Chinese applicants who benefit from subsidies and incentives to obtain patents and declare patents as SEPs. Another requirement is that a patentee must license its SEPs at the lowest rate previously granted to another implementor regardless of the

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[11] 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/.

[12] Mark A. Cohen, "China's Practice of Anti-Suit Injunctions in SEP Litigation: Transplant or False Friend?", in Jonathan Barnett, ed, INTELLECTUAL PROPERTY AND INNOVATION POLICY FOR 5G AND IOT (2023).

[13] See Mark Jia, "Illiberal Law in American Courts", 168 U. PA. L. REV. 1685 (2020).

[14] See Minning Yu, "Benefit of the Doubt: Obstacles to Discovery in Claims Against Chinese Counterfeiters", 81 FORDHAM L. REV. 2987 (2013).

nature of the circumstances (such as licensing in advance of litigation). This is consistent with China's undue focus on "equal" treatment of licensees in FRAND civil litigation. In addition, China also seeks to prohibit restricting a licensee's choice of dispute resolution as a potential antitrust violation of the patentee, thereby mandating continued use of Chinese courts or SAMR to resolve disputes.[15] I believe that these issues should initially be clarified and/or addressed through increased diplomatic engagement by our antitrust, IP, and trade agencies. There has been very little such engagement by the Biden administration.

WTO Issues – Retaining Our Focus on Core Principles

China's managed approach to IP is inimical to fundamental concepts that the United States advanced in the TRIPS agreement, thereby posing a pressing ideological challenge to the global IP system itself. The WTO remains a viable option for airing our concerns and bringing multilateral attention to areas where China has departed from international practice. I have already discussed transparency in China's ASI decisions as an on-going WTO concern. Three other significant issues involve differential royalty rates, per se approaches to antitrust cases, and China's translation of FRAND by its courts.

Chinese courts determine differential royalty rates based on the country or economy "where the royalty base originates."[16] The rates they establish for China are typically lower than those awarded to companies for other developed countries or the United States. Equality of

[15] See Mark A. Cohen, www.chinaipr.com, "Some Observations on SAMR's New Antimonpoly Guidelines for SEPs" (Nov. 20, 2024), https://chinaipr.com/2024/11/20/some-observations-on-samrs-new-antimonopoly-guidelines-for-seps/

[16] This concern of mine was criticized in an editorial by Prof. John Gong, "Ruling in Oppo v Nokia Addresses Patent Royalties Row" published by the Chinese government's English language Newspaper, CHINA DAILY (Jan. 8, 2024), https://www.chinadaily.com.cn/a/202401/08/WS659b4f4aa3105f21a507b035.html

treatment in commercialization of IP is a TRIPS obligation. [17] Whether nationality-based royalties for SEPs are consistent with requirements of national treatment and most favored national treatment under the WTO agreements has not yet been litigated at the WTO. Nonetheless, considering China's robust manufacturing capacity and its leadership in standards setting and patenting in SEPs, it is difficult for me to believe that China qualifies for any exception for a SEP royalty rate based on it being a developing country.

Another concern of mine is consistency with the TRIPS Agreement, Article 40(2), which permits members to specify in their legislation licensing practices or conditions that may "in particular cases" constitute "an abuse of intellectual property rights having an adverse effect on competition in the relevant market." This is the only provision in the WTO agreements that addresses the relationship between intellectual property and competition law. It also mandates that unfair practices specified in competition law involving IP must have an anticompetitive effect. Any Chinese practice of regulating FRAND licensing practices, domestically and extraterritorially, based on per se violations, such as requiring that licensing terms be the same for all parties or that agreeing to an arbitration clause in advance with a licensor is a competition law violation, may extend beyond the limits of what TRIPS authorizes, absent a finding that the practice is necessarily anticompetitive. This provision is also yet untested by WTO jurisprudence.

Another concern of mine has been how Chinese courts apply and translate the admittedly vague concept of "FRAND" licensing for SEPs. I have calculated over 100 potential variants in

[17] TRIPS Agreement, fn. 3.

translations of FRAND based on combinations of current terms that are being inconsistently used to translate FRAND and their recombination in various forms.

Many of the translations significantly change the meaning of FRAND. For example, non-discrimination has been translated as "mutual benefit" ( 互利), or "equal benevolence" （一视同仁）(an expression originating with the essayist and philosopher Han Yu 韓愈, 768 – 825 A.D.), while at the same time Chinese courts have avoided translating non-discrimination with less incendiary and more practical terms such as "differential treatment" (wu chabie 无差别). Perhaps the most significant mistranslation is that Chinese courts have also retranslated FRAND by leaving out the specification of an "and' , thereby creating a concept that might better be abbreviated as FRND (公平、合理、无歧视). This disaggregates FRAND into potentially meaning "fair and/or reasonable and/or non-discriminatory".[18] The result has been that Chinese courts apply what UK courts have characterized as "hard-edged non-discrimination", which also inconsistently disaggregates FRAND into various combinations of mistranslated component terms, such as "fair and reasonable", "fair" only, "reasonable and non-discriminatory," etc. [19]

These translations are also different from the translations into Chinese characters adopted by the WTO, ITU, relevant legal organs in Japan, Korea and Taiwan, and by the judicial authorities of many WTO members. I believe that such inconsistent translations, as well as their

[18] See Mark A. Cohen, "China's Diverse Frand Translations Severely Impacting Court Decisions at Home and Abroad, INTELLECTUAL ASSET MAGAZINE (Jan. 31, 2024).
[19] U.K. Supreme Court, Unwired Planet International Ltd and another (Respondents) v Huawei Technologies (UK) Co Ltd and another (Appellants), UKSC/2018/0214, p. 113, https://www.supremecourt.uk/watch/uksc-2019-0041/judgment.html

inconsistent application, may create a non-tariff barrier to the licensing of IP by patentees under the Agreement on Technical Barriers to Trade (TBT). The use of IP as a TBT violation has been proposed in the past by the Chinese delegation to the WTO.[20] These issues should initially be addressed through high level diplomatic engagement.

China's translation of FRAND has also facilitated its transplantation into other sectors of Chinse law and politics. ETSI mandates that interpretations of FRAND are governed by French law. However, FRAND decisions in China are often based on China's civil law, including its newly enacted Civil Code (2020). These civil law concepts could therefor logically be easily extended to other types of Chinese civil transactions, not merely those in which there has been a SEP declaration. FRAND has accordingly been extended to such areas as collective management organization copyright licensing,[21] antitrust behavioral remedies,[22] compulsory licensing by the

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[20] Committee on Technical Barriers to Trade, Intellectual Property Rights Issues in Standardization, Communication from the People's Republic of China, WTO Doc. G/TBT/W/251 (May 25, 2005), Document 05-2126; see also addendum Background Paper for Chinese Submission to WTO on Intellectual Property Right Issues in Standardization (WTO Doc. G/TBT/W/251/Add.1 (Nov. 9, 2006), Document 06-5389).

[21] See the following cases, all decided on March 28, 2022 by the SPC, Civil IPR Division: 江门市新会区欢唱餐饮娱乐有限公司 v 中国音像著作权集体管理协会 (Jiangmen Xinhui District Huanchang Catering and Entertainment Co., Ltd. v. China Audio-Video Copyright Collective Management Association)（2021）最高法知民终 7 号 (SPC, Civil IP Division, No. 7), 广州市乐麦迪娱乐有限公司 v. 中国音像著作权集体管理协会(Guangzhou Lemaidi Entertainment Co., Ltd. v. China Audio-Video Copyright Collective Management Association)（2020）最高法知民终 1448 号(SPC Civil IP Division, Final No. 1448); 广州市南沙区南沙加洲红酒吧 v. 中国音像著作权集体管理协会 (Guangzhou Nansha District Nansha Jiazhou Wine Bar v. China Audio-Video Copyright Collective Management Association)（2020）最高法知民终 1452 号(SPC Civil IP Division, No. 1452) ; 梅州市梅县区华侨城家乐迪酒店有限公司 v. 中国音像著作权集体管理协会 (Meizhou Meixian District OCT Jialedi Hotel Co., Ltd. v. China Audio-Video Copyright Collective Management Association)（2020）最高法知民终 1458 号(SPC Civil IP Division Final No. 1458; 梅州市家乐迪酒店有限公司 v. 中国音像著作权集体管理协会, (Meizhou Jialedi Hotel Co., Ltd. v. China Audio-Video Copyright Collective Management Association)（2020）最高法知民终 1459 号(SPC IP Division Final No. 1459) ; 广州市金碧大世界饮食娱乐有限公司 v. 中国音像著作权集体管理协会 (Guangzhou Jinbi World Catering and Entertainment Co., Ltd. v. China Audio-Video Copyright Collective Management Association) (2020）最高法知民终 1519 (SPC Civil IP Division Final No. 1519).

[22] See, e.g., SAMR, 市场监管总局关于附加限制性条件批准上海机场（集团）有限公司与东方航空物流股份有限公司新设合营企业案反垄断审查决定的公告 (SAMR Announcement on the Antimonopoly Review Decision on Approving the Establishment of a Joint Venture between Shanghai Airport (Group) Co., Ltd. and China Eastern Airlines Logistics Co., Ltd. with Additional Restrictive Conditions). (Sept. 14, 2022). The relevant remedy is found at

Chinese patent office of pharmaceuticals,[23] access to medicines during pandemics,[24] and in Chinese export control policies.[25] These expansions of FRAND concepts leave one wondering whether FRAND is no longer only behaving as a legal concept but also as a political slogan that is typically applied when Chinese policy favors more public access to private property rights. [26]

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

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Art. 5: "(V) The Airport Group, China Eastern Airlines Logistics and the joint venture shall provide airport cargo terminal services at Pudong Airport in accordance with principle of fair、 reasonable、non-discrimination[FRND]. They shall not discriminate against downstream customers under the same conditions, in terms of price, quantity and other transaction conditions, shall not impose unreasonably high prices, and shall not unreasonably limit the total amount of Pudong Airport cargo terminal services provided." {（五）机场集团、东航物流与合营企业应按照公平、合理、无歧视的原则，提供在浦东机场的机场货站服务。在同等条件下，不得就价格、数量等交易条件对下游客户实施差别待遇，不得实施不合理高价，不得不合理地限制浦东机场货站服务提供总量。} https://www.samr.gov.cn/fldes/tzgg/ftj/art/2023/art_b22512c79afb44a8b6e5674d6d89983b.html . A copy of these and other SAMR non-SEP behavioral remedy conditions for merger approval are available from the author.

[23]See the National Standards for Management of Patents (Provision) (2013), Art. 15. "Patents involved in mandatory standards can also refer to the principle of "fairness, reasonableness and non-discrimination" 《国家标准涉及专利的管理规定（暂行）》第十五条规定，强制性标准涉及的专利，也可以参照适用"公平、合理、无歧视"原则. Text and machine translation available at https://www.wipo.int/wipolex/en/text/337261.

[24] H.E. Xi Jinping, Adhere to Sustainable Development and Build an Asia-Pacific Community with a Shared Future, Keynote Address Before the APEC Summit (Full Text) Nov. 11, 2021), 习近平在亚太经合组织工商领导人峰会上的主旨演讲（全文）, "坚持可持续发展 共建亚太命运共同体", https://www.gov.cn/xinwen/2021-11/11/content_5650227.htm, translation is available here: Full Text: Remarks by Xi at 28th APEC Economic Leaders' Meeting, https://www.chinadaily.com.cn/a/202111/12/WS618e6f7ba310cdd39bc75167.html. Xi Jinping's views that access to medicines should be made on a FRAND basis were also held by others, see Kaat Van Delm, *FRAND Terms for Pandemic-essential Intellectual Property Rights*, Dec. 7, 2021), https://blog.petrieflom.law.harvard.edu/2021/12/07/frand-terms-for-pandemic-essential-intellectual-property-rights/.

[25] See, e.g., The State Council Information Office PRC, China Issues First White Paper on Export Controls (Dec. 29, 2021) ("Fair, reasonable, and non-discriminatory export control measures are increasingly important..."), http://english.scio.gov.cn/whitepapers/2021-12/29/content_77959040.htm; State Council White Paper on China's Export Controls (First ed. 2021), Art. I, http://english.scio.gov.cn/whitepapers/2021-12/29/content_77959040.htm, China "actively promotes the implementation of fair, reasonable and non-discriminatory international export controls." See the White Paper at https://www.gov.cn/zhengce/2021-12/29/content_5665104.htm.

[26] Falk Hartig, *Political Slogans as Instruments of International Government Communication – The Case of China*, 24 J. OF INT'L COMMC'N (March 3, 2018) 115 (Chinese leaders put forward vague foreign policy concepts which should be viewed as slogans rather than concrete strategies to mobilize domestic and international actors);
Jianlin Song and James Paul Gee, *Slogans with Chinese Characteristics: The Political Functions of a Discourse Form*, 31 DISCOURSE & SOC'Y, 487 (2020) (slogans in China are an important way to teach people to see themselves as 'co-citizens' in the state. At the same, this function also and always links to important ideological goals and intersects with the state as a source of coercive power).

Mr. ISSA. Thank you. Mr. Baker.

**STATEMENT OF KENT D. BAKER**

Mr. BAKER. Mr. Chair, and distinguished Members of the Committee, thank you for allowing me to speak today. I come from the trenches of IT warfare. u-blox is a small to medium size innovation company that provides wireless semiconductor chips, modules, and services that power the Internet of Things to reliably track, locate, and data connect everything. It is not voice-enabled. It is a data connection. To participate in standards organizations and associations such as Save Our Standards, which represents companies in agriculture, healthcare, energy, automotive, artificial intelligence, and several other industries. The u-blox modules allow devices to talk to each other with or without human intervention. We innovate and design fundamental wireless connectivity, components that can be used in any IoT machine or product that needs a wireless connection.

You are going to find our modules in smart cities, water and gas meters, used with sensors for crop monitoring, robotics, after-market car alarms, industry floors, and much more. Even tracking adolescents or children for security purposes, that is how small these modules can be.

I thought it would be useful to show you one. That is a module, a little light box you see here. This is a test board, certainly not that big in the product, but if I were to put power into this port with this switch, this will connect to any network. It will connect to your bay stations and cellular network. Don't be confused. This is the fundamental wireless connectivity that goes in every product, although granted, it will be miniaturized.

There is a data port here, a serial type port. Anything you connect to it, car, laptop, whatever need you have, put your data in here, and this device is going to send it on to the network.

As you see, the modules are very small, and they are easily overlooked. Issues regarding module security threats and the emerging Chinese dominance in the U.S. and IoT global markets I think has gone unnoticed.

My intent is to bring to the Committee's attention four things.

(1) There is a very real threat presented by Chinese IoT module manufacturers, U.S. communications systems, and Western manufacturers of IoT wireless modules. These may be companies you either never heard about or rarely read about. You may recall similar security issues arising recently with Huawei and ZTE cellular bay station products and handsets. Now, I am not sure why, but IoT modules were not part of that discussion. They certainly should have been. They present an equal or greater security risk than the mobile handsets did.

Now, appreciate that these modules can talk to each other. They don't need a bay station. That is part of the reason that security risks can be even higher. When you have machines talking to machines without human intervention, that is a concern.

(2) The eventual collapse of Western wireless module manufacturers such as u-blox and the loss of the $5 million global market due to Chinese companies having access to subsidies and centralized funding as Mark just commented on, and for us, it is specifi-

cally the CCP 13th and 14th Five Year Plans where these subsidies and additional funds are being called out specifically as part of an overall strategy.

As discussed in my written testimony, Chinese company market share and revenue growth now dwarfs Western companies. At u-blox, we closely studied supply chain data, what does it take to actually build this module? We find Chinese companies selling the module at a profit for as low as $7.50 whereas a Western company can't build it for under $9 sans profit. A good question about how that happens without subsidies.

Currently, Chinese companies are worried about the growing concerns in Western companies about the security and subsidies issues, so they are opening U.S. corporation storefronts to go ahead and sell their modules, and they appear to be Western sourced.

(3) There is an understanding of how increasing participation at international standards organizations, a company can manipulate the system. If you send enough engineers into a work group, as we have seen happen with Chinese companies over the years, you will generate more patents, more invention disclosures, and it will put you in a dominant position to then manipulate the entire FRAND promise.

(4) I suggest the U.S. take a leadership role that it has lost in patents and in the SEP–FRAND licensing debate. That will bring predictability and stability through IoT standardization for small and medium enterprises. SEP–FRAND is currently the Wild West. There are inspirational guidelines that we follow, but we know how well those guidelines work when there is money to be made. They simply don't. SEP–FRAND needs to be addressed and it needs to be defined.

In closing, I think it is imperative that the U.S. protect national security and wireless IoT services and reject SEP licensing misconduct by any company. The U.S. must take down the artificial fence that has been erected between SEP holders and SEP users. Standards were created to proliferate technology and protect patent holders. It is time to stop the SEP–FRAND damage.

[The prepared statement of Mr. Baker follows:]

**U.S. HOUSE OF REPRESENTATIVES (118th CONGRESS)**

**COMMITTEE ON THE JUDICIARY**
**SUBCOMMITTEE ON COURTS, INTELLECTUAL PROPERTY, AND THE INTERNET**

# IP and Strategic Competition with China: Part IV – Patents, Standards, and Lawfare

**Kent D. Baker**
Head of IP Strategy, Litigation, Standards & Licensing
u-blox America, Inc., Intellectual Property & Standards

Written Testimony

December 18, 2024

Mr. Chairman and distinguished members of the Committee, my name is Kent Baker, and I am the Head of IP Strategy, Litigation, Standards and Licensing at u-blox America, Inc. (ublox). ublox, founded in 1997, provides wireless semiconductor chips, modules[1], and Internet-of-Things (IoT) services that reliably locate and connect everything-to-everything. We build components, not end products, and do not sell our chipsets to third parties. The component technologies include satellite, cellular, WiFi, Bluetooth, and other wireless tech. ublox cutting-edge solutions drive innovation for the car of the future and IoT connectivity while employing over 1000 experts who enable our customers to build wireless solutions for a precise, smart, and sustainable future. Our customers manufacture products used in Smart Cities, gas and water meters, medical devices, robotics, security systems, tracking devices such as shipping containers, dog collars and industrial equipment, and even

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[1] Generally, there is a semiconductor chipset inside a module and the module is integrated into a modem. A module may be used for a wireless connection or embedded with modem features.

The **chipset** conducts several basic wireless connection functions. It negotiates the lowest levels of connection with the wireless network. Basically, it controls all the super nerdy radio-frequency (RF) stuff that is required to connect and communicate data, text, or voice over the wireless connection. It cannot connect to the internet or any other wireless network without other supporting things like antennas, filters, etc. For an end product manufacturer, this is very complicated to build and not cost effective to design. Specialty design companies such as Qualcomm provide chipsets.

The **module** will typically have the chipset, a small processor, some memory, and some voltage regulation stuff. Cellular alone or some additional wireless functionality such as GPS/GNSS systems may be included. A module board is a most basic way to connect an IoT device to the Internet via a wireless connection and is used extensively in IoT devices. This is the thing that "talks" to the cellular base station or other wireless network such as a satellite, router, etc.

The **modem** implements the module, which in turn contains the chipset. The modem offers a simpler overall hardware setup that's easier with which to work and may integrate other features for more complex product uses, for example, sensors of various types.

"driverless" lawn mowers, to name a few. Since the modules are physically small and embedded inside larger devices, the module presence goes unnoticed and overlooked as do issues regarding the emerging Chinese module dominance and security concerns. For 2024, ublox revenue is expected to reach approximately $240 million. ublox maintains a small but essential patent portfolio and is a patent licensee (user).

The ublox experience with standard essential patents (SEPs) and Chinese competitors comes from practical experience moored in market realities as a small/medium sized company. The experience springs from "in-the-trenches" business and license dealings involving SEPs and the SEP valuation principle of fair, reasonable, and non-discriminatory (FRAND) to which every standards member agrees to abide.

Prior to joining ublox in 2017, I started my career as a prosecutor which I left to join an established patent and trademark law firm. This time was followed by many years at Qualcomm, Inc., as Vice President-Division IP Counsel, and at the Palo Alto Research Center (PARC) Xerox, a prolific and storied innovation hub spanning numerous technology sectors and leading to the creation of startup companies.[2] I am a named inventor on one patent, a registered patent attorney, and have degrees in engineering, material science, law, and business.

[2] The ethernet and numerous other life-changing technologies, as well as Apple and other companies, were built off the back of PARC technical innovations, an amazing innovation hub dating to the 1970s. "Dealers of Lightening: XEROX PARC and the Dawn of the Computer Age," Michael Hiltzik (1999), ISBN 0-88730-891-0

Throughout my career and as wireless technology grew from infancy, I have been intimately involved in global standardization policy issues concerning wireless connectivity and video/audio coding. In this role, I have discussed IP policy with government officials including the European Union, China, Brazil, Vietnam, India, and others. I conjointly worked on the International Telecommunication Union (ITU)[3] TSB Director's Ad Hoc Group's "*IPR Intellectual Property Policy and Guidelines*", the ETSI[4] "*Guide on Intellectual Property Rights (IPRs)*", and the ABA "*Standards Development Patent Policy Manual*"[5], the American National Standards Institute (ANSI) Intellectual Property Rights Policy Advisory Group, and the Telecommunications Industry Association's "*TIA Intellectual Property Rights Policy,* " and to the extent possible, at the China Communications Standards Association (CCSA).[6] My work has also included theoretical and practical studies on SEP patent identification and economic valuation principles, and I have authored a paper on the fallacies of comparable license valuation for SEPs. I thank you for the opportunity to testify before you today.

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[3] *ITU* is a specialized agency of the United Nations. See, https://www.itu.int/en/ITU-T/ipr/Pages/adhoc.aspx .

[2] *European Telecommunications Standards Institute* (ETSI) is an independent, not-for-profit, standardization organization operating in the field of information and communications. ETSI supports the development and testing of global technical standards.

[5] *American Bar Association*; Committee on Technical Standardization, Section of Science & Technology Law (2007), ISBN-978-1-59031-928-4.

[6] CCSA is a Chinese professional standards organization with the responsibility for developing communications technology standards for the People's Republic of China (PRC).

**Module Security**

Many nations including the United States are slowly appreciating the threat posed by Chinese company involvement in their telecommunications networks and to the importance of maintaining the lead in semiconductors and wireless IoT modules.[7] *However, the Huawei and ZTE security concerns in wireless communication networks and mobile devices were the tip of the iceberg.* There is much less awareness of the risks incurred by using Chinese cellular IoT modules and technology in existing cellular and other wireless networks. In the short and longer term, the risk posed by the pervasive and fast-growing presence of Chinese cellular IoT modules in U.S. networks poses a greater threat than did relying upon Chinese companies to supply 5G base stations and mobile devices.[8] As Chinese manufacturers dominate the global supply of wireless modules, specifically cellular IoT modules, the module industry recognized the threat and sounded alarms about what the potential threat could pose for all nations.[9] The problem can be framed as a Chinese cellular module having the embedded capability to remotely receive firmware updates without the end-user knowing, thereby allowing settings to be

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[7] The US-China Economic and Security Review Commission's 2018 report to Congress claimed that significant state support for these wireless technologies have helped China to achieve dominance in the manufacturing of "global network equipment, information technology, and IoT devices."

[8] Federal Communications Commission bans equipment authorizations for Chinese telecommunications and video surveillance equipment deemed to pose a threat to national security pursuant to the Secure Equipment Act of 2021. *https://docs.fcc.gov/public/attachments/DOC-389524A1.pdf*

[9] Gokhale, Nitin A. (March 2024). https://stratnewsglobal.com/the-gist/india-well-aware-of-the-cellular-iot-module-threats/

manipulated.[10] A fast-growing concern, firmware updates are known to contain malware which can enable a supplier to remotely control a device, access the network, steal unlimited amounts of data to track users and user behavior, or even shut the device or network down entirely.[11] Similar to base stations and mobile devices, the module presents a network security vulnerability. It has further been reported that the Chinese Communist Party (CCP) supports its domestic companies in global sales by providing subsidies worth hundreds of millions of dollars with the aim of controlling the market.

Module companies based in the West see major national security threats from a Chinese monopoly over cellular modules as emerging in three ways. One, the monopoly will allow CCP to pressure dependent countries to modify their policies according to CCP interests or risk module supplies being cut off. Two, through malware designed as module firmware updates, CCP can sabotage large-scale critical infrastructures like power grids, water systems, supply chains, robotics and production lines plus more. And last, modules can be used as gateways to hack into large amounts of private data. The data

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[10] It should be noted that the House Select Committee on the Chinese Communist Party has already raised concerns over the close links between the top cellular module manufacturer Quectel and the Chinese military-industrial complex. The Committee wrote to the Federal Communications Commission (FCC), warning of security risks posed by Chinese-made modules such as those made by Quectel, especially in IoT devices used by law enforcement or in vital industries such as electricity generation or water and sewage. Waterman, Shaun and Tatlow, Didi. (January 2024). *Lawmakers to Biden Administration: Sanction Chinese Internet Device Company.*
Also see, *Newsweek*, (April 2024), https://www.newsweek.com/china-sanctions-iot-modules-manufacturer-quectel-gallagher-defense-treasury-1858324

[11] Altavilla, Dave. (September 2023). *Securing The IoT From The Threat China Poses To US Infrastructure. Forbes.* https://www.forbes.com/sites/davealtavilla/2023/09/03/securing-the-iot-from-the-threat-china-poses-to-us-infrastructure/?sh=6d2a8c812c0b .

collected from devices can be effectively used for many nefarious tasks, such as threatening key individuals or businesses, and also studying the behavior and location of U.S. citizens, both individually and in bulk.

Further, US and Western industry positions unintentionally shield the nature of the threat arising out of the growing Chinese monopoly over wireless modules. While there is a growing awareness regarding the nature of the threat, there is also a reluctance from module implementors and industry players to recognize the issue due to questionable and uninformed fears that addressing the issue may lead to short-term disruption in the supply of low-cost modules and thereby impact profits.[12] Many reputed Western companies are known to use Chinese-manufactured modules.[13]

**So, what should be done?**

- Spread awareness among private and government users regarding the nature of the threat posed by Chinese-manufactured modules.
- Encourage procurement of wireless modules only through trusted channels, and compile a list of untrustworthy Chinese suppliers, and ban the supply of such modules into the United States.

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[12] Parton, Charles. (March 2024). *Chinese cellular (IoT) modules: Countering the threat.* Council on Geostrategy. https://www.geostrategy.org.uk/research/chinese-cellular-iot-modules-countering-the-threat/

[13] Drew, Alexi. (August 2022). Chinese technology in the 'Internet of Things' poses a new threat to the west. *Financial Times.* https://www.ft.com/content/cd81e231-a8d3-4bc0-820a-13f525a76117 .

- Pass legislation or implement administrative measures to prevent the purchase of new Chinese IoT modules for domestic products and services with a deadline for compliance.
- Any Chinese-manufactured modules should be prohibited by end 2025 or as soon as possible thereafter from being used in critical sectors like security, health, food supply, water, power, and energy sectors.
- Indigenous production of wireless modules – not just chipsets - should be encouraged and incentivized.
- Collaborate with like-minded nations to address similar concerns and explore joint solutions to reduce dependency on Chinese-origin components.
- Conduct an audit of Chinese modules embedded in government devices, properties and services, and in critical national infrastructure, in order to measure the extent of potential risk and to prioritize areas of greatest risk.
- Require government departments to produce plans to mitigate the risks identified in their agencies.

**Chinese Companies Are Winning the Module Market Competition**

Three Chinese companies already own over 50% of the international market for cellular IoT modules and exceed 60% for the U.S. market. This international market percentage includes the large Chinese domestic market which is

mostly unavailable to Western suppliers. Chinese Communist Party policy documents show the strategic importance of IoT technology to the CCP.[14] In line with CCP industrial policy to promote global champions in new industries, Chinese IoT companies have benefited from the creation of a domestic market which excludes meaningful international competition by Western companies, sets preferential pricing regimes for Chinese manufactured products, and provides access to subsidies and centralized funding to Chinese companies. The risk is that as Chinese companies continue to increase global market share to edge out foreign companies, coupled to Chinese policy structured to exclude in-China market competition, China is the largest benefactor of the cellular IoT module market while presenting security risks to democratic countries. Given the immense importance of these modules to modern industry and life, this would also make other countries highly vulnerable to the Chinese module threat.

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[14] In 2009, the Chinese government initially designated IoT as a strategic sector for development and followed with significant financial support toward the sectors' development. In 2012 the Ministry of Industry and Information Technology (MIIT) referred to the IoT as a "strategic high ground". In the 13th Five Year Plan, which covered 2016-20, the section on digital and telecoms development included direct efforts aimed at boosting IoT chip design and manufacturing. This was also in support of "information flow" along the Belt and Road Initiative (BRI). This continued in the 14th Five Year Plan. The development of the IoT was intended to support a range of industries including agriculture, city infrastructure, customs and border posts, and manufacturing. See: https://www.uscc.gov/sites/default/files/Research/SOSi_China's%20Internet%20of%20Things.pdf; https://merics.org/en/report/connection-everything-china-and-internet-things. The IoT also appears frequently in the 13th Five Year Plan. In special column 9, it talks of '2. Expansion of the internet of things: We will establish infrastructure for application of the internet of things and service platforms, and promote the creation of important demonstration projects for the application of the internet of things. We will broadly develop the integrated application of the internet of things as well as development of innovative models, and enrich services related to the internet of things.' *See also*, Patton, Charles (2024) "Cellular IoT modules – Supply Chain Security," s*ignificant technical expertise has been provided by Dr. Samantha Hoffman.*

In 2020, Chinese cellular IoT modules were beginning to dominate global markets. (Figure 1.) Combined, Chinese cellular IoT companies represented approximately 50% of the market with the remaining 50% being Western suppliers. A closer look shows Quectel dominance with another Chinese module supplier, Sunsea, moving into second position with an increase in its market share following a 29% Quarter-over-Quarter growth.[15] Fibocom, another fast-growing Chinese vendor, became the third-largest IoT module supplier in Q2 2020 in terms of shipments, surpassing the incumbents Thales, Sierra Wireless and Telit. Fibocom also acquired Western module supplier Sierra Wireless's automotive embedded module business in 2020 with the expectation it would further boost its market share.

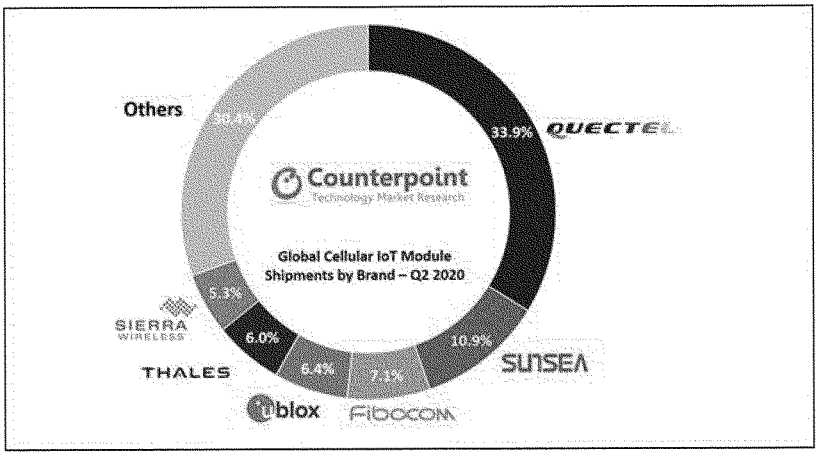



Figure 1

[15] During this time period, it is believed Sunsea group reduced prices to capture additional market share.

Turning to 2024, four years later it is clear the Chinese cellular IoT module market share growth effort was successful. (Figure 2.) Quectel increased its total market share to 36.5% with U.S. market share exceeding 50% as Western suppliers struggle due to unexplainable price reductions.[16] Fibocom market share grew to 7.5% as other Chinese cellular IoT module manufacturers also grew their shares representing in Q2 2024 approximately 65% of the global market. Not one Western cellular IoT module manufacturer made the top five in total global cellular module shipments, and market share in Western countries is also falling at an alarming rate.

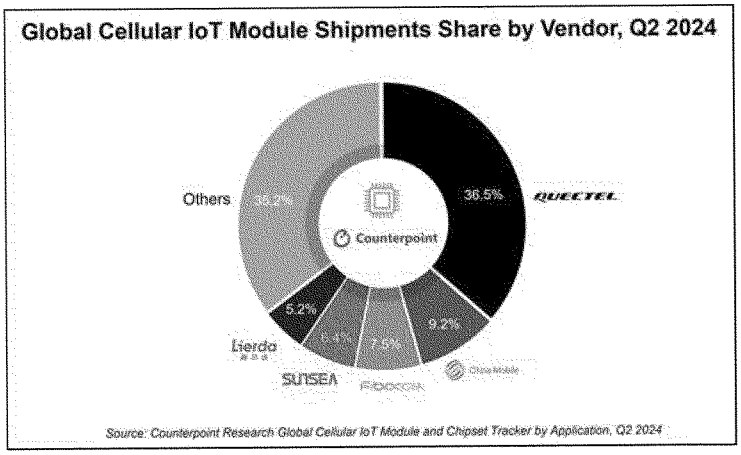
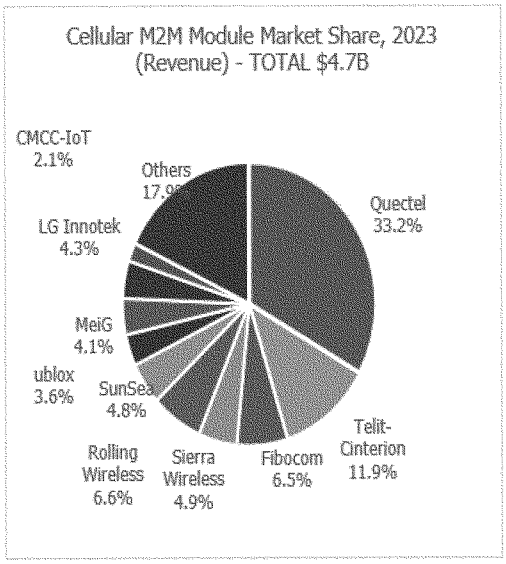



Figure 2

[16] Materials cost for manufacturing a cellular module are commoditized in normal markets. When a comparable cellular IoT module is offered by ublox at $10/unit and a Chinese supplier offers a substantially similar product for $7.50/unit, the cost difference is not reasonably attributable to variables in COGs for manufacture.

Focusing on revenues in one of the fastest growing market segments of the cellular IoT market, Machine-to-Machine (M2M)[17], it is readily apparent that Chinese cellular IoT companies are reaping an increased benefit as Western cellular IoT module manufacturers lose sales. (Figure 3). The total market revenue for M2M IoT uses was $4.7 billion dollars with Western cellular M2M module manufacturers capturing approximately a 30% share of the total market. While the 2023 revenue share for M2M alone is of great concern, the year-over-year volume and revenue growth attributable to Chinese cellular IoT module manufacturers *in toto* far exceeds the revenues generated by higher security, Western designed and supplied module manufacturers. Looking to




[17] M2M refers to direct communications between devices without human intervention. M2M IoT provides quicker and easier connectivity while using less power.[5] to increasingly realize the value of connecting geographically dispersed people, devices, sensors and machines. M2M includes smart cities/municipalities,, smart homes, remote medicine, fleet management, industrial automation, sensors or meters transmitting data to adjust industrial processes, fault detection for industrial robots in dynamic operating conditions such as medical and automotive, personal appliance connectivity, oil and gas system real-time operational data, precision agriculture, military, government, manufacturing, and many, many others. These networks also allow new business opportunities for consumers and suppliers. *How Machine-to-Machine Communication Works*, (2008), https://computer.howstuffworks.com/m2m-communication.htm .

Figure 4, it shows the 2019-2023 volumes in millions of units and revenues in millions of dollars for the three largest Chinese cellular IoT module vendors. Market share percentages reflect the potential to generate revues in the fast growing IoT market, however, revenue growth should be examined when it is understood that module prices tend to decline each year. In 4 years, the top Chinese manufacturer, Quectel, increased revenues from this IoT module segment by 230% which was also reflected in a large increase for Quectel in U.S. market share. Western manufacturers continue to experience year-over-year revenue decreases with no end in sight.[18] The main takeaway is that Chinese module manufacturers

| | | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|
| **Quectel** | **Volume** | **71.5** | **106.2** | **160.0** | **175.3** | **164.0** |
| | **Revenue** | **536.7** | **762.7** | **1,582.5** | **1,797.5** | **1,570.0** |
| **SunSea** | **Volume** | **32.0** | **27.5** | **36.0** | **27.5** | **30.0** |
| **(SIMCom/Longsung)** | **Revenue** | **209.5** | **177.7** | **289.1** | **215.0** | **228.0** |
| **Fibocom** | **Volume** | **11.9** | **21.0** | **27.9** | **21.9** | **28.0** |
| | **Revenue** | **141.8** | **207.6** | **234.4** | **271.2** | **307.0** |

Figure 4

[18] It is generally understood that avoidance of intellectual property costs is a widespread practice with regard to many participants in the M2M module market. This places a Western manufacturer such as ublox that respects patent rights and pays patent royalties at a significant competitive disadvantage, a result never desired by standards patent policies applicable to SEP use.

aggressively are taking market share at the expense of Western competitors Telit, Thales, ublox, and Sierra Wireless.[19] Note that Telit and Thales had a combined 20.7% market share in 2020 and that is down to 11.9% in 2023 with Sierra Wireless falling from 6.4% to 4.9% share.

The security and competition issues alone should be of great concern to this committee. But even more concerning is the ever increasing participation of Chinese companies at standards organizations' engineering work groups[20], and the current abuses of SEP licensing practices, making it impossible for a Western component manufacturer like ublox to guarantee its customers enjoy patent protection for their essential wireless connectivity needs while also assuring that a patent holder receives FRAND-based compensation for the use of its SEPs by all ublox customers.[21]

[19] Thales and Telit module groups combined to form a new company, Telit-Cinterion based in Irvine, California, and the Sierra Wireless non-automotive module group was acquired by Semtech based in Camarillo, California.

[20] While not perfectly linear, there is strong correlation between the number of company engineers/technicians participating at a standard organization's technical workgroup and patents filed/received based upon that work. This is discussed, *infra*.

[21] Companies participating at standards organizations generally are required to make a minimum commitment to negotiate a license for SEPs it owns with any company that requests a license. (See, ETSI, *Guide on Intellectual Property Rights (IPRs)* and ETSI Intellectual Rights Policy, RULES OF PROCEDURE, 29-30 November 2022, https://www.etsi.org/images/files/IPR/etsi-ipr-policy.pdf

**Chinese Company Standards Participation**

It should be no surprise that as Chinese companies entered the global markets, it was learned that participation and leadership at various standards bodies was essential to achieving the CCP industrial policy to promote global champions in new industries such as IoT.[22] Over the past twenty years, Chinese companies such as ZTE have deployed patents in more than 55 countries by the end of 2020, the company had filed over 80,000 global patent applications, had about 36,000 granted patents worldwide, with over 4,270 patents being chipset/module patent applications.[23] Huawei numbers follow similar trends as do other Chinese tech companies.

In addition, Chinese companies are major contributors and participants in technology research and standard development in the global 5G arena, pairing Chinese leadership with Western leadership. Chinese companies have achieved breakthroughs in leadership positions at 3GPP, the most important communications standard organization in the world, using a "dual chairmanship" configuration. Chinese companies are commonly members of more than 70 international standardization organizations including ITU, 3GPP, ETSI, IEEE, NGMN and CCSA, and Chinese companies also serve as board members in GSA, ETSI and other standards organizations. To date, numerous Chinese experts serve as chairpersons and rapporteurs in major international

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[22] "We will broadly develop the integrated application of the internet of things as well as development of innovative models, and enrich services related to the internet of things." (*See*, fn. 13, *supra*.)

[23] *ZTE ranks global top 3 for sustainable leadership in 5G declared Standard-Essential Patents to ETSI*, https://www.zte.com.cn/global/about/news/20210302e1.html. *See also*, "Who is leading the 5G patent race?" published on February 16, 2021, by IPlytics, a market intelligence company analyzing technology trends, market developments and a company's competitive position.

standardization organizations across the globe. The Chinese companies have submitted since year 2000 in excess of 100,000 research papers and standardization proposals. These research papers and proposals form the invention disclosures that are the backbone of securing a patent for a technical submission. Placing this in relative terms, whereas in 2000 a standards engineering work group – the group that does the heavy lifting of technical advancement that generates patents - would have perhaps one or two engineers from Chinese companies. Currently, engineers from Chinese companies participating at standards work and policy groups has grown significantly.

Understanding the growing participation of Chinese companies at global standards organizations helps to understand how Chinese companies couple ever-growing standards participation to fuel patent filings and build massive SEP patent portfolios that are then not offered on FRAND terms and conditions.

**The ublox Attempt at SEP Fairness**

ublox hired me to set up an in-bound licensing program where the modules we sell to our customers would fairly compensate patent holders for the use of the SEPs our modules implement. This basic principle of balancing fairness to our customers and fairness to patent holders is proving to be unrealistic due to an utter lack of transparency and oversight when a small or medium enterprise (SME) like ublox asks for a license from a Non-Participating Enterprise (NPE) or large patent holder that monetizes its SEPs. The current SEP licensing system is defeating for SMEs and, when coupled to actual standards body practices and no-IP license positions by Chinese companies

and others, the system is unbalanced with no level playing field for competing. Manipulation is defeating the FRAND principle and federal court oversight is no solution for many companies[24] and, depending upon a jurisdiction's injunctive practices, may actually exacerbate the SEP/FRAND imbalance.

**So, What Should Be Done?**

The United States needs to regain leadership in the SEP/FRAND licensing process to make sure SEP holders receive fair compensation for the use of its actual SEPs by all SEP implementers. Currently, both China and the European Union have proposed regulatory oversight to remove the "cloak and veil" from SEP/FRAND licensing, provide guidance, and level the licensing playing field between SEP holders and SEP implementors. This leveling will also benefit module manufacturers in assuring when competing against another module manufacturer, the horizontal competition field is likewise leveled with Chinese module manufacturers paying for SEP use just like a Western module manufacturer.

There are three basic steps that would be a start to leveling both vertical and horizontal competition issues regarding SEPs. A required first step must be **Meaningful Transparency** to identify *actual* SEPs as opposed to making patent implementers rely upon the "believed-SEP" declarations currently

[24] In 2023, ublox filed Federal court litigation against Interdigital, Inc, (IDC) a prominent U.S. SEP holder and ETSI participant. IDC had licensed ublox for over 10 years to its SEPs but then refused to renew the license. IDC had filed hundreds of declarations at ETSI claiming to have cellular SEPs and ublox modules are ETSI standard compliant. The Federal court dismissed the case with IDC stating it neither accused u-blox of infringing its patents nor asked u-blox to take a license, explaining that in earlier negotiations and litigation IDC only asserted infringement in response to ublox's demands for a license. IDC stated, "[it] has no plans to assert its patents against u-blox," regardless of its ETSI SEP licensing commits. (Federal Court, Southern District California, San Diego, Case No. 23CV002 BEN DEB.)

being filed at standards organizations. [25,26] These "believed-SEP" declarations often do not even suggest the section of the standard to which the "believed-SEP" applies. A second basic step would be to define the component or product upon which a royalty may be charged – this is commonly known as the **Royalty Base** – to assure a SEP implementer is not over-charged for SEP usage based upon other technology in the end product and the SEP holder receives a FRAND compensation for actual SEP use.[27] And third, understanding and establishing the **Reasonable Aggregate Value**[28] for a given

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[25] I refer to the declarations filed as "believed-SEP" declarations because at the time of filing a declaration at a standards body that references the underlying technical submission made at a work group, it is unknown whether or not the standard will adopt the technical submission as stated by the company or if it will be modified by the work group. Common company practice is to submit a patent application at a patent office concurrent to making the technical submission into the standards work group, meaning the patent application is not connected to the technical submission and may not reflect what actually made it (was accepted) into the standard – analytical data shows most patents generated in this manner are most likely not a SEPs. Yet, patent holders will assert these questionable SEPs during licensing negotiations without ever verifying the actual SEP-ness of the patent to the standard.

[26] Based upon my standards experience since 1995, SEP-declarations required to be filed by standards organizations were never intended to be used in any way for licensing purposes. The intent was to make sure member-companies agreed any patents they held that were SEPs actually included in a standard would be available to proliferate the dispersion of the standard technology and drive technical uniformity to benefit of markets and the general public while driving safe practices. (Example – make sure all 120V electrical plugs in U.S. are three pronged.)

[27] A growing problem in SEP licensing is SEP holders are abandoning their standards licensing commitments in order to boost profits. The easiest way to accomplish this "profit boost" is to refuse to use the royalty base set at the component where the standard technology is actually executed. For example, the wireless module/modem level which, as will be shown by my demonstration, is where the wireless connection to a network occurs. Instead, SEP holders are increasing using the end product as the royalty base, ignoring the fact that the end product tends to include many other technologies and other issues unrelated to the standardized technology.

[28] "Reasonable Aggregate Value" is generically referred to in the industry as Aggregate Royalty Rate or Aggregate FRAND Royalty Rate for the SEP patents used. It is understood that for SEPs, an individual SEP's value cannot be considered in isolation. The parties on

technology used in product verticals wherein the impacts of multiple variables can be weighed and considered. Often forgotten is that the end product user is the one who pays the price for inflated SEP royalties. Non-FRAND royalties paid at any level are passed through to the end user. For SEP-enabled products that support delivery of basic needs such as water, electricity, and transportation, many of the end users are average people who struggle to afford *any* increase in costs.

**CONCLUSION**

Countering the above competition threats and bringing U.S. leadership in the form of transparency and predictability to the SEP licensing quagmire will empower the domestic IoT industry in the U.S. and Western allies to deliver a secure supply chain which enables growth and innovation. It will greatly empower innovation and SMEs to participate in the markets without fear. The fostering of a strong, globally competitive market for IoT companies will serve to drive industry and innovation in a manner which avoids the risks inherent in any supply chain dominated by CCP controlled companies.

For now, there remains a number of American, European, and Asian players still in the IoT module market, however, this may not be the case for long given the rapid market capture by Chinese module companies.[29] The U.S. and other

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both sides of the license need to take into account a reasonable aggregate royalty rate for all SEPs in the standard to thereby proliferate the standard's use and discourage proprietary solutions in return for a SEP receiving monopolistic positioning in the final standard. In reality, this requires assessing the value of all SEPs used by the technology. One solution is a neutral entity to determine and make public the total standardized value for SEPs supporting a standardized technology in a market vertical.

[29] It should be pointed out that when the U.S. concerns were raised regarding Huawei and ZTE sales into U.S. markets, the only other supply options were Erikson and Nokia.

nations took action in the areas of 5G and semiconductors when a security threat by Chinese companies was identified and market capture issues arose.[30] This same situation is exactly what is happening now with IoT modules and is gaining speed.

The U.S. urgently needs to act in the field of IoT, to preserve the future of IoT manufacturers based in the U.S. and other countries, and to uphold national security, economic prosperity, privacy and values. The longer the delay in limiting Chinese cellular IoT modules and taking over SEP licensing leadership, the more difficult, expensive, and painful to the markets it will become. The time to act is now.

I thank you again for the opportunity to share these thoughts with you today.

[30] Two smart city deals with local authorities in the United Kingdom were cancelled at the very last minute after intervention by the U.K National Cyber Security Centre and Government Communications Headquarters. (Financial Times). https://www.ft.com/content/46d35d62-0307-41d8-96a8-de9b52bf0ec3 .

Mr. ISSA. Thank you. Professor Cotter.

**STATEMENT OF THOMAS F. COTTER**

Mr. COTTER. Chair Issa, Ranking Member Johnson, and distinguished Members of the Subcommittee, I would like to provide a brief overview of litigation involving FRAND-committed SEPs in what I view as the four leading jurisdictions, the United States, the United Kingdom, Germany, and of course, China.

So, a little context. As you have already heard, some patents are essential to the practice of standards established by standard-setting organizations such as the European Telecommunications Standard Institute. SSOs typically have policies, encouraging or requiring members to license any such SEPs on fair, reasonable, and nondiscriminatory FRAND terms, but they do not define what FRAND means.

So, one other thing to note is that patents are traditionally viewed as territorial rights, so a company may own a U.S. patent covering a particular feature, and also a portfolio of non-U.S. patents covering the same feature. So, as a result, when parties fail to reach agreement on the terms of the FRAND license, they could wind up litigating in any country in which products incorporating the SEPs at issue are sold.

In the U.S., FRAND disputes make their ways to the courts by different paths.

First, U.S. courts have concluded that FRAND commitments can create third party beneficiary rights, so an implementer may be able to assert that an offer to license on above FRAND terms is a breach of contract. Relatedly, sometimes either a SEP owner or an implementer may request a court to enter a declaratory judgment that the owner's offer is or is not FRAND. Another possibility is that a SEP owner will file a suit for patent infringement and the judge or jury will decide what a FRAND royalty is or the patents in suit. However, U.S. courts have not seen fit to award injunctive relief in these cases under the Supreme Court's eBay decision. One possible workaround for SEP owners may be to seek an inclusion order from the International Trade Commission, but in a 2013 case involving FRAND-committed SEPs, the U.S. Trade Representative vetoed on public interest grounds an order that would have precluded Apple from importing certain devices into the U.S.

Finally, U.S. antitrust law so far has not played a major role in these cases largely because Section 2 of the Sherman Act is understood to forbid the willful acquisition on maintenance of monopoly power, but not its mere exercise or exploitation.

Second, leading jurisdiction is the United Kingdom. In the U.K., these issues are typically litigated as patent infringement actions and over the past few years, the U.K. courts have developed a procedure whereby if a SEP owner succeeds in proving that the defendant is infringing one or more valid FRAND-committed SEPs, the court will offer the infringer a choice, either be enjoined from practicing the technology in the U.K., or agree to be bound by the terms of a global FRAND license to be determined by the court. We have seen that happen in a few cases.

The third leading jurisdiction is Germany. In Germany and other civil law countries, injunctive relief is often viewed as being a mat-

ter of right, rather than equitable discretion. However, in the 2015 decision of *Huawei* v. *ZTE*, the Court of Justice for the European Union held that EU antitrust law constrains the owner of a FRAND-committed SEP from seeking injunctive relief unless certain conditions are met, one of them being that the implementer fails to express its willingness to license. German courts have interpreted this decision to mean that the implementers (willingness must be ongoing, and the end result is that in most cases, German courts find the implementer to have been unwilling and therefore have entered injunctive relief for the infringement of FRAND-committed SEPs. The German courts said that you had to actually establish the terms of a FRAND license.

Finally, China, since 2013, Chinese courts have presided over cases involving FRAND-committed SEPs sometimes in the context of patent infringement actions or anti-trust actions or sometimes, as I understand it, as a sort of stand-alone cause of action. In recent years, Chinese courts also had expressed a willingness to determine the terms of global FRAND licenses where they believe there is a sufficiently close connection to China, and we had the first such determination of a global FRAND royalty just about a year ago in *Nokia* v. *Apple*.

Last thing briefly, antisuit injunctions, these have actually been around for a long time in the U.K. and the U.S. The application of them to SEP cases actually began in the U.S. with the *Microsoft* v. *Motorola* case in 2013. More controversially in 2020, Chinese courts entered ASIs in five SEP cases forbidding parties litigating parallel actions sometimes anywhere else in the world. That seems to have gone away to some degree. Now, we don't think we have had any since 2020 for a variety of reasons, but of course that could always be resurrected.

[The prepared statement of Mr. Cotter follows:]

**Hearing Before the United States House of Representatives Subcommittee on Courts, Intellectual Property, and the Internet of the Committee on the Judiciary: "IP and Strategic Competition with China: Part IV — Patents, Standards, and Lawfare**

Dec. 18, 2024

Testimony of Thomas F. Cotter

Chairman Issa, Ranking Member Johnson, and Distinguished Members of the Subcommittee: I am pleased to present the following testimony in connection with the Subcommittee's December 18, 2024 hearing on IP and Strategic Competition with China. I am the Taft, Stettinius & Hollister Professor of Law at the University of Minnesota Law School. I specialize in the law of intellectual property, with a particular emphasis on remedies for the infringement of intellectual property rights. My scholarship often considers these issues from a comparative angle—focusing on how the United States and other major jurisdictions handle common issues—and from a law-and-economics perspective. Further information about my scholarship can be found in my curriculum vitae, which you have; and some of the testimony below is drawn from my single- or coauthored publications, or pending writings, on the relevant topics.[1] I am appearing in my personal capacity, and not as a representative of the University of Minnesota.

Some patents are essential to implementers' practice of industrial standards. Many of these standards are established by standard-setting organizations (SSOs) such as the European Telecommunications Standards Institute (ETSI) and the Institute of Electrical and Electronics Engineers (IEEE). These organizations, comprised of participants in the relevant fields of technology (e.g., telecommunications), often promulgate standards (e.g., relating to 5G wireless cellular technology) that enable products to interoperate and to achieve certain minimum performance expectations. SSO policies also often encourage or require their members to declare any active or pending patents that may be relevant to a standard under consideration, and to commit to license any such standard-essential patents (SEPs) on "fair, reasonable, and nondiscriminatory" (FRAND) terms. In principle, such commitments limit the owners' market power and ensure widespread availability of commercially essential technology; but except for the minority of SSOs that require royalty-free licensing, the SSOs themselves do not define the term "FRAND" or the methodology to be used in determining the terms of a FRAND license. Moreover, since patents are territorial, a company may own a U.S. patent covering, say, some feature of smartphone

[1] These include FRAND: GERMAN CASE LAW AND GLOBAL PERSPECTIVES (Peter Georg Picht, Thomas Cotter & Erik Habich eds., Edward Elgar Publishing 2024), including my essay published therein, *Like Ships That Pass in the Night: U.S. and German Approaches to FRAND Disputes* (a version of which is available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4160170); some of the chapters in PATENT REMEDIES AND COMPLEX PRODUCTS: TOWARDS A GLOBAL CONSENSUS (Jorge Contreras et al. eds., Cambridge University Press 2019) [hereinafter COMPLEX PRODUCTS]; *Is Global FRAND Litigation Spinning Out of Control*, 2021 PATENTLY-O L.J. 1; *Judicially Determined FRAND Royalties*, *in* 1 CAMBRIDGE HANDBOOK OF TECHNICAL STANDARDIZATION LAW 365 (Jorge L. Contreras ed., Cambridge University Press 2017) (coauthored with Norman V. Siebrasse); *The Comparative Law and Economics of Standard-Essential Patents and FRAND Royalties*, 22 TEX. INTELL. PROP. L.J. 311 (2014); and the manuscript for a pending book project, titled REMEDIES IN INTELLECTUAL PROPERTY LAW, under contract with Edward Elgar Publishing.

technology, as well as corresponding patents in many other countries. Thus, when parties fail to reach agreement on the terms of a FRAND license, in principle they could wind up litigating in virtually any country or countries in which the implementer sells products incorporating the SEPs at issue. Among the venues for SEP litigation over the past ten years or so have been the United States, the United Kingdom, Germany, the Netherlands, France, the Unified Patent Court,[2] China, Japan, South Korea, India, Brazil, and Colombia. In the paragraphs below, I provide a brief overview of how courts in the United States, the United Kingdom, Germany, and China—the four nations that I would describe as, so far, the leading jurisdictions for FRAND litigation—have addressed common issues that arise in these cases, including the use of anti- (or anti-anti)suit injunctions in some of these cases.

***The United States***

In the United States, disputes involving FRAND-committed SEPs can make their way to the courts through a few different routes. In *Microsoft Corp. v. Motorola, Inc.*,[3] for example, Microsoft alleged that it was a third-party beneficiary of what amounted to contractual commitments on the part of Motorola to license on FRAND terms patents essential to two standards, and that Motorola had breached those obligations by offering above-FRAND terms. The district court agreed that Microsoft was a third-party beneficiary under the law of the State of Washington,[4] and conducted a bench trial to determine a global FRAND rate and FRAND range for the SEP portfolios at issue. The court concluded that the actual FRAND rate and range were far below the rates offered by Motorola. The case then proceeded to a jury trial to determine if Motorola had breached its duties of good faith and fair dealing, which resulted in a jury award of damages to Microsoft. The Ninth Circuit affirmed.[5] Other U.S. courts have entertained actions for declaratory judgments that the SEP owner did (or did not) breach its commitment to license its SEPs to an implementer.[6] Such actions may result, as in *Microsoft*, in the court actually determining what an appropriate FRAND royalty would be, as in *TCL Commc'n Tech. Holdings,*

[2] The Unified Patent Court (UPC) is a tribunal that has authority to hear patent disputes involving European Patents that are enforceable in any of the (so far) eighteen European Union (EU) member states that have ratified the Unified Patent Court Agreement (UPCA). EU members Croatia, Poland, and Spain have chosen to remain outside the UPC system.

[3] No. C10–1823JLR, 2013 WL 2111217 (W.D. Wash. Apr. 25, 2013), *aff'd*, 795 F.3d 1024 (9th Cir. 2015).

[4] *See* Microsoft Corp. v. Motorola, Inc., 864 F. Supp. 2d 1023, 1032-33 (W.D. Wash. 2012) (applying Washington law). In another early FRAND case, a court held that Apple was a third-party beneficiary of Motorola's commitments under Wisconsin and French law. *See* Apple, Inc. v. Motorola Mobility, Inc., 886 F. Supp. 2d 1061, 1081-82 (W.D. Wis. 2012). Other authorities similarly have concluded that FRAND commitments made to ETSI, which are governed by French law, create third-party beneficiary rights (*stipulations pour autrui*, under French law).

[5] *See* Microsoft Corp. v. Motorola, Inc., 795 F.3d 1094 (9th Cir. 2015).

[6] To be more precise, the implementer may initiate the action for a declaratory judgment that the owner has breached its FRAND obligation, or the owner may initiate the action for a declaratory judgment that it hasn't breached its obligation. Either way, the counterparty may respond with a corresponding counterclaim for a declaratory judgment, and the SEP owner may also assert claims for patent infringement.

*Ltd. v. Telefonaktiebolaget LM Ericsson*.[7] Alternatively, in *HTC Corp. v. Telefonaktiebolaget LM Ericsson*, the Fifth Circuit affirmed a judgment that Ericsson did not breach its FRAND obligation, and concluded that the district court had not committed reversible error by instructing the jury that there was "no fixed or required methodology for setting or calculating the terms of a FRAND license."[8] At other times, U.S. courts have determined FRAND royalties within the context of patent infringement litigation, either in bench or jury trials.[9]

To date, however, U.S. courts have not awarded injunctive relief for the infringement of FRAND-committed SEPs. Under the U.S. Supreme Court's 2006 decision in *eBay Inc. v. MercExchange, L.L.C.*,[10] courts are required to consider four factors—including whether the patent owner faces irreparable harm, and whether remedies at law would be inadequate—before awarding the prevailing patent owner an injunction.[11] Thus, although Judge Reyna's 2014 opinion in *Apple Inc. v. Motorola Inc.*[12] cautioned that there is no bright-line rule forbidding courts from awarding SEP owners injunctive relief, he proceeded to note that under *eBay* "[a] patentee subject to FRAND commitments may have difficulty establishing irreparable harm."[13] Further, although in cases in which it has jurisdiction the United States International Trade Commission (ITC) can enter exclusion orders, which are similar in effect to injunctions, against the entry of infringing

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[7] *See* TCL Commc'n Tech. Holdings, Ltd. v. Telefonaktiebolaget LM Ericsson, No. SACV 14-341 JVS (DFMx), 2018 WL 4488286 (C.D. Cal. Sept. 14, 2018), *vacated in part, rev'd in part, and remanded on other grounds*, 943 F.3d 1360 (Fed Cir. 2019). On appeal, however, the Federal Circuit held that the determination of FRAND royalties for past uses was subject to the constitutional right to trial by jury under U.S. law, because it implicates the law of patent damages.

[8] *See* HTC Corp. v. Telefonaktiebolaget LM Ericsson, 12 F.4th 476 (5th Cir. 2021).

[9] *See, e.g.*, Commonwealth Sci. & Indus. Rsch. Org. v. Cisco Sys., Inc., 809 F.3d 1295 (Fed. Cir. 2015) (bench); Ericsson, Inc. v. D-Link Systems, Inc., 773 F.3d 1201 (Fed. Cir. 2014) (jury); In re Innovatio IP Ventures, LLC Pat. Litig., No. 11 C 9308, 2013 WL 5593609 (N.D. Ill. Oct. 3, 2013) (bench).

[10] 547 U.S. 388 (2006).

[11] *See id.* at 391 (stating that "well-established principles of equity, a plaintiff seeking a permanent injunction must satisfy a four-factor test before a court may grant such relief. A plaintiff must demonstrate: (1) that it has suffered an irreparable injury; (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury; (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) that the public interest would not be disserved by a permanent injunction").

[12] 757 F.3d 1286, 1331-32 (Fed. Cir. 2014), *overruled in irrelevant part*, Williamson v. Citrix Online, LLC, 792 F.3d 1339 (Fed. Cir. 2015) (en banc).

[13] *Id.* at 1332 (also stating, however, that "an injunction may be justified where an infringer unilaterally refuses a FRAND royalty or unreasonably delays negotiations to the same effect," although "this does not mean that an alleged infringer's refusal to accept any license offer necessarily justifies issuing an injunction"). *See also id.* (Rader, C.J., dissenting in part) (dissenting on the question of injunctive relief, on the ground that "the record contains sufficient evidence to create a genuine dispute of material fact on Apple's posture as an unwilling licensee"); *id.* at 1342-43 (Prost, J., concurring in part and dissenting in part) (expressing the view that "if a trial court believes that an infringer previously engaged in bad faith negotiations, it is entitled to increase the damages to account for any harm to the patentee as a result of that behavior," but that "monetary damages are likely adequate to compensate for a FRAND patentee's injuries" and that "pre-litigation conduct in license negotiations should [not] affect the availability of injunctive relief").

goods into the United States, in 2013 the United States Trade Representative cited a (subsequently withdrawn) 2013 Policy Statement of the United States Department of Justice and the United States Patent and Trademark Office in his decision to override, on public interest grounds, an exclusion order that would have prevented Apple from importing into the United States certain devices that the ITC had concluded infringed a FRAND-committed SEP owned by Samsung.[14]

U.S. courts also for the most part have not seen fit to apply antitrust law to constrain SEP owners. One reason is that, as a matter of legal doctrine, U.S. antitrust law condemns the willful acquisition or maintenance of monopoly power,[15] but does not recognize a more general "abuse of dominant position" doctrine as many other countries do. Thus, for example, in *Rambus Inc. v. FTC*,[16] the FTC alleged that Rambus had engaged in unlawful monopolization by deceiving an SSO into believing that Rambus had no patents or pending patent applications relevant to standards the SSO was developing, and then (having exited the SSO and disclosed that it did, in fact, own relevant SEPs) demanding above-FRAND royalties from implementers. The D.C. Circuit held, however, that absent evidence that the SSO would have chosen a non-proprietary standard had it known about Rambus' patents in advance, the agency had not proven an antitrust violation.[17] More recently, the Ninth Circuit held that the FTC failed to prove that Qualcomm had unlawfully maintained its monopoly power in the market for smartphone chips, by refusing to license its SEPs to component manufacturers or to sell chips to original equipment manufacturers who declined Qualcomm's licensing offers.[18] Some other recent decisions similarly have rejected claims alleging violations of U.S. antitrust law premised on defendants' alleged breaches of their FRAND commitments.[19]

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[14] *See* Letter from Michael B.G. Froman, Exec. Office of the President of the U.S. Trade Rep., to Hon. Irving A. Williamson, Chairman, U.S. Int'l Trade Comm'n (Aug. 3, 2013), *available at* https://ustr.gov/sites/default/files/08032013%20Letter_1.PDF. For discussion of the 2013 and (also subsequently withdrawn) 2019 Policy Statement addressing these issues, see my paper *Like Ships That Pass in the Night*, *supra* note 1, at 219-21.

[15] *See* United States v. Grinnell Corp., 384 U.S. 563, 570-71 (1966).

[16] 522 F.3d 456 (D.C. Cir. 2008).

[17] *See id.* at 461-67. *Cf.* Broadcom Corp. v. Qualcomm Inc., 501 F.3d 297, 304 (3d Cir. 2007) (holding that "that (1) in a consensus-oriented private standard-setting environment, (2) a patent holder's intentionally false promise to license essential proprietary technology on FRAND terms, (3) coupled with an SDO's reliance on that promise when including the technology in a standard, and (4) the patent holder's subsequent breach of that promise, is actionable anticompetitive conduct").

[18] *See* FTC v. Qualcomm Inc., 969 F.3d 974 (9th Cir. 2020).

[19] *See* Cont'l Auto. Sys., Inc. v. Avanci, LLC, No. 20-11032, 2022 WL 2205469 (5th Cir. June 21, 2022) (per curiam) (nonprecedential opinion), *aff'g* 485 F. Supp. 3d 712 (N.D. Tex. 2020) (holding that defendant patent pool did not violate Sherman Act § 1 by refusing to license at the component level, and disavowing *Broadcom*'s holding that deceptive conduct before an SSO can violate Sherman Act § 2). *Cf.* Decision and Order, In the Matter of Motorola Mobility LLC and Google, Inc., ¶¶ 1, 2527, 3132 (FTC Jan. 3, 2013) (consent order obligating Google not to seek injunctive relief for the infringement of FRAND-committed SEPs, subject to some exceptions); Decision and Order (Redacted Public Version), In the Matter of Robert Bosch GmbH, Docket No. C4377, (FTC Apr. 24, 2013) (similar). For discussion of these two FTC actions, see my paper *The Comparative Law and Economics of Standard-Essential Patents*, *supra* note 1.

***The United Kingdom***

Another leading jurisdiction for the litigation of disputes involving FRAND-committed SEPs is the United Kingdom. In the U.K., these cases generally arise as patent infringement actions;[20] and, as in the United States, courts in the U.K. sometimes take upon themselves the responsibility of establishing the terms of FRAND licenses. In this regard, the U.K. Supreme Court in 2020 affirmed the lower courts' determination in the joined cases of *Unwired Planet International Ltd. v. Huawei Technologies (UK) Co. Ltd.*; *Huawei Technologies Co. Ltd. v. Conversant Wireless Licensing SÀRL*; and *ZTE Corp. v. Conversant Wireless Licensing SÀRL*,[21] that English courts have authority to establish the terms of *global* FRAND licenses, as an incident to resolving disputes over the infringement of domestic SEP rights.[22] The underlying logic of this approach is, first, that if a freely negotiated FRAND license would be global in scope, then a willing licensee would agree to a global FRAND license; second, once it is established that the defendant has infringed one or more of the plaintiff's valid (domestic) SEPs, the court may enjoin the defendant from practicing the patented technology, if the defendant is an unwilling licensee; and third, on the basis of the forgoing principles, the court may offer the infringer the choice of either agreeing to the court's determination of the terms of a global FRAND license (one that a willing licensee would accept), or (as an unwilling licensee) being enjoined from the U.K. market.[23] Since *Unwired Planet*, courts in the U.K. have established the terms of FRAND licenses in two other cases, *Optis Cellular Tech. LLC v. Apple Retail UK Ltd.*[24] and *InterDigital Tech. Corp. v. Lenovo Group Ltd.*[25] Although some observers expressed concern that, in the wake of *Unwired Planet*, SEP owners would forum-shop by filing suit in the U.K. for the determination of global licenses on favorable terms, in the last two cases in particular the rates awarded were considerably lower than those sought by the SEP owners; and the courts in all three of the aforementioned cases published thorough, detailed decisions explaining how they established their rates. In this regard, it may be relevant that there are no jury trials in patent actions in the U.K., as there are in many U.S. cases, and the Patents Court judges are specialists in IP matters; as in the United States, however, the litigants in the U.K. actions make ample use of expert testimony, and are able to obtain to some measure of discovery. Also as in the United States, the use of antitrust law to regulate SEPs has played only a limited role so far—although prior to the U.K.'s exit from the

[20] In the U.K., almost all patent infringement cases originate in the Patents Courts for England Wales, from which the losing party may seek to appeal to the Court of Appeal for England and Wales, and from there to the Supreme Court of the United Kingdom.

[21] Unwired Planet Int'l Ltd. v. Huawei Techs. (UK) Co. Ltd. [2020] UKSC 37 (appeal taken from Eng.).

[22] *See id.* at [95].

[23] *See id.* at [20], [27]–[29], [60], [165].

[24] [2023] EWHC 1095 (Pat.) (Eng.).

[25] [2023] EWHC 539 (Pat.) (Eng.), *modified*, [2024] EWCA Civ. 743.

European Union the courts were bound by the rules established in *Huawei v. ZTE*, discussed below, and did address some aspects of them in the *Unwired Planet* decision.[26]

***The European Union***

Unlike in the United States and the United Kingdom, where injunctive relief is considered to be, to a greater or lesser degree, discretionary, the mostly civil-law jurisdictions of the member states of the European Union have tended to view the prevailing patent owner as being entitled to injunctive relief as a matter of right. As a consequence, courts within these nations tend to understand themselves as being authorized to deny or stay injunctive relief only under limited circumstances, even in SEP cases; and so far, the primary means for doing so in SEP cases has been antitrust law.[27] In its 2016 decision in *Huawei Techs. Co. Ltd. v. ZTE Corp.*,[28] the Court of Justice for the European Union (CJEU) specified that when a SEP owner requests an injunction for the infringement of a FRAND-committed SEP, it must follow a series of steps—the failure to comply with which can result in the owner being deemed to have committed an abuse of its dominant position in violation of article 102 of the Treaty on the Functioning of the European Union (TFEU),[29] and thus forfeiting its right to injunctive relief. In relevant part, the operative portion of the judgment reads as follows:

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[26] *See Unwired Planet*, [2020] UKSC [128] – [158]. Another common-law jurisdiction where courts have heard several matters involving FRAND-committed SEPs is India. Cases in India often can take many years to proceed all the way to final judgment, but in some FRAND cases Indian courts have granted preliminary injunctions subject to a stay on condition that the implementer pay an interim royalty; and in one recent decision, the Delhi High Court did enter a final judgment awarding Ericsson a global FRAND royalty. *See* Lava Int'l Ltd. v. Telefonaktiebolaget LM Ericsson, CS(COMM) 65/2016 (Delhi High Ct. 2024). At least one Indian decision also is relevant to the topic of antisuit injunctions, discussed below.

[27] Given that French law recognizes something similar to a contract for the benefit of third parties, *see supra* note 4, perhaps it is possible that a French court at some point will be asked, and will agree, to establish a global FRAND license under a contract-law theory. A second possible option for avoiding injunctive relief in FRAND cases, under appropriate circumstances, might be the civil law doctrine of "abuse of right," for brief discussion of which see Norman V. Siebrasse et al., *Injunctive Relief*, and *The Effect of FRAND Commitments on Patent Remedies*, *in* COMPLEX PRODUCTS, *supra* note 1, at 115, 141-42. (Japan's Intellectual Property High Court applied that doctrine to deny injunctive relief in a 2014 decision between Apple and Samsung. *See* Judgment of May 16, 2014, 2013 (Ne) 10043 (IP High Court, Grand Panel) (Japan), *translated at* http://www.ip.courts.go.jp/eng/vcms_lf/25ne10043full.pdf). A third possibility might be to invoke the doctrine of "proportionality," under either E.U. or domestic law, but despite a 2021 statutory amendment expressly conferring authority upon German courts to stay injunctive relief on proportionality grounds, to my knowledge the German courts have not embraced this theory as providing an alternative ground in SEP cases (or for that matter, applied the amendment in favor of the patent infringer in any non-SEP cases, either).

[28] Case C-170/13, ECLI:EU:C:2015:477 (CJEU 2015).

[29] This article reads:

> Any abuse by one or more undertakings of a dominant position within the internal market or in a substantial part of it shall be prohibited as incompatible with the internal market in so far as it may affect trade between Member States.
>
> Such abuse may, in particular, consist in:
>
> (a) directly or indirectly imposing unfair purchase or selling prices or other unfair trading conditions;

> Article 102 TFEU must be interpreted as meaning that the proprietor of a patent essential to a standard established by a standardisation body, which has given an irrevocable undertaking to that body to grant a licence to third parties on fair, reasonable and non-discriminatory ('FRAND') terms, does not abuse its dominant position, within the meaning of that article, by bringing an action for infringement seeking an injunction prohibiting the infringement of its patent or seeking the recall of products for the manufacture of which that patent has been used, as long as:
>
> prior to bringing that action, the proprietor has, first, alerted the alleged infringer of the infringement complained about by designating that patent and specifying the way in which it has been infringed, and, secondly, after the alleged infringer has expressed its willingness to conclude a licensing agreement on FRAND terms, presented to that infringer a specific, written offer for a licence on such terms, specifying, in particular, the royalty and the way in which it is to be calculated, and where the alleged infringer continues to use the patent in question, the alleged infringer has not diligently responded to that offer, in accordance with recognised commercial practices in the field and in good faith, this being a matter which must be established on the basis of objective factors and which implies, in particular, that there are no delaying tactics.[30]

Since 2015, much of the national case law applying the *Huawei v. ZTE* competition-law defense has come from Germany. For the most part, these courts have concluded, *inter alia*, that the implementer's expression of willingness to license (step 2, following the initial notification by the SEP owner) is not merely a formal requirement, but must be manifested throughout the course of negotiations,[31] and that the owner's initial offer need only avoid being "evidently non-FRAND."[32] Relatively few German decisions post-*Huawei v. ZTE* have found the SEP owner's conduct to be an abuse of dominant position resulting in the loss of the right to injunctive relief.

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> (b) limiting production, markets or technical development to the prejudice of consumers;
>
> (c) applying dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage;
>
> (d) making the conclusion of contracts subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of such contracts.

[30] *Id.* (operative portion). *See also* paragraphs 60-69 of the judgment.

[31] *See, e.g.*, Erik Habich, *Willingness to License on FRAND Terms*, *in* FRAND: GERMAN CASE LAW AND GLOBAL PERSPECTIVES, *supra* note 1, at 2, 4-11 (discussing the German Federal Supreme Court's decisions to this effect in the Judgment of May 5, 2020, KZR 36/17–*FRAND-Einwand I*, and the Judgment of Nov. 24, 2020, KZR 35/17– *FRAND-Einwand II*).

[32] See Erik Habich, Peter Georg Picht & Thomas F. Cotter, *FRAND Offer*, *in* FRAND: GERMAN CASE LAW AND GLOBAL PERSPECTIVES, *supra* note 1, at 62, 65-98 (discussing cases).

It is possible, however, that matters could change in the months or years to come, for a few reasons. First, in one recent case involving the alleged infringement of a FRAND-committed SEP, the European Commission (EC) filed an amicus brief arguing, *inter alia*, that *Huawei v. ZTE* obligates German courts to follow the steps laid out in that decision sequentially, rather than to consider the implementer's overall course of conduct to determine if the implementer has adequately expressed its willingness to license.[33] The court in the case in which the brief was filed appears to have accepted the EC's position to some degree,[34] though I understand that at least one other, not yet publicly available, trial court decision has largely disagreed with the Commission's approach; and a very recent decision of the Unified Patent Court also rejects the EC's view that the implementer needs only to formally express its willingness to license before the court moves on the next step of evaluating the SEP owner's offer.[35] Where matters eventually will settle remains to be seen, though some observers believe that the end result may be that German courts will give greater scrutiny to the SEP owner's offer than they have in some past decisions, while adhering to the principle that court should assess the licensee's willingness in view of its overall course of conduct. Perhaps the German Federal Supreme Court,[36] or the CJEU, will weigh in on these matters again at some point. A second point of uncertainty is whether the European Union will move forward with a regulation, a draft of which the Commission proposed last year, that would among other things require mandatory but nonbinding determinations in FRAND disputes.[37] The proposal has garnered praise from some quarters and substantial criticism from others; whether it is enacted at all, and if so when and subject to what revisions, remains very much an open question. It is fair to state, however, that to date the German approach has been to guide the parties to work matters out for themselves.[38] German courts also make less use of expert

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[33] *See* Brief of the European Commission as Amicus Curiae, Munich Higher Regional Court, 6 U 3824/22, *HMD Global Oy v. VoiceAge EVS GmbH & Co KG* (filed Apr. 15, 2024), *available at* https://competition-policy.ec.europa.eu/document/download/66e0bd63-36da-4b27-9ecf-70602a8c7be2_en?filename=2024_Amicus_Curiae_6U3824_22Kart_de.pdf.

[34] *See* Florian Mueller, *Munich appeals court rejects German approach to standard-essential patents, tends to pave way for next ECJ ruling on FRAND*, IP FRAY, Oct. 31, 2024, https://ipfray.com/munich-appeals-court-rejects-german-approach-to-standard-essential-patents-tends-to-pave-way-to-next-ecj-ruling-on-frand/ (reporting on an October 31, 2024 hearing of the Munich Higher Regional Court, in 6 U 3824/22—*HMD Global Oy v. VoiceAge EVS GmbH & Co KG*)).

[35] *See* Panasonic Holdings Corp. v. Guangdong OPPO Mobile Telecommunications Corp., UPC_CFI_ 210/2023, (Mannheim Local Division, Nov. 22, 2024)

[36] I understand, however, that in Germany's civil law system, although courts generally follow decisions of higher courts, they are not legally obligated to do so. Also, Germany, like some other countries including China, has a "bifurcated" system, meaning that the court hearing the patent infringement claim does not rule on the patent's validity. In Germany, as a result, infringement actions often are resolved in just a year or so, while challenges to the validity of the patent claims in suit are made in a separate court, the German Patent Court (or in case of a timely-filed opposition to a European Patent, the European Patent Office). These validity proceedings traditionally have taken longer to resolve than infringement actions; as a consequence, it sometimes happens that the claims of a patent found to be infringed are subsequently found to be invalid.

[37] *See* COM (2023)232 - Proposal for a regulation of the European Parliament and of the Council on standard essential patents and amending Regulation (EU) 2017/1001.

[38] The European Parliament's February 2024 markup can be found at https://www.europarl.europa.eu/RegData/seance_pleniere/textes_adoptes/definitif/2024/02-

witnesses than do courts in the U.S. or U.K.; Picht and Habich, moreover, observe that the German approach to FRAND determinations is largely conduct- or process-oriented, rather than content-oriented.[39]

***China***

I begin this section of my testimony by noting that, as I understand it, a few different causes of action may be relevant to Chinese SEP cases. First, according to Professor Guangliang Zhang, "[a]lthough Art. 522 of the Contract Part of the Civil Code of the PRC, which came into force in 2021, provides for the contracts for the benefit of third parties (also known as 'performance to third parties contracts'), whether the FRAND commitment made by the patent holder to the standardization organization complies with the constituent elements of the contracts for the benefit of third parties under the Civil Code and whether the standard implementer can request the court to order the patent holder to perform the obligations under the contract on this basis still needs further discussion."[40] Second, SEP owners may initiate patent infringement actions requesting injunctive relief and compensation, as in the 2017 decision in *Sony Mobile Communications (China) Co. v. China IWNCOMM Co.*[41]—though as Siebrasse and I had previously noted, that case did not involve "a final determination of a FRAND royalty as such, but rather just a damages award" consisting of a royalty rate of 1 RMB per unit trebled.[42] Third, Zhang notes that China's Anti-Monopoly Law may be applicable where SEP owners engage in "abuse of market dominance such as excessive pricing and 'patent holdup,'" citing as examples the *Huawei v. InterDigital* case noted below and a 2015 investigation by China's National Development and Reform Commission that fined Qualcomm RMB 6.088 billion. Nevertheless, he states that an anti-monopoly lawsuit "itself cannot resolve the issue of royalty rate determinations."[43] Fourth, Zhang writes that "[i]n

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28/0100/P9_TA(2024)0100_EN.pdf, though as the text above states it's unclear at this point what if anything will happen next. *See* Florian Mueller, *Member of European Parliament says EU SEP Regulation is stuck in Council, could be for ten years*, IP FRAY, Dec. 5, 2024, https://ipfray.com/member-of-european-parliament-says-eu-sep-regulation-is-stuck-in-council-could-be-for-ten-years/.

[39] *See* Peter Georg Picht & Erik Habich, Sisvel v. Haier II: *Further insights on German judiciary's FRAND approach*, IPKat, (Feb. 25, 2021), https://ipkitten.blogspot.com/2021/02/sisvel-v-haier-ii-further-insights-on.html.

[40] Guangliang Zhang, *Determination of the Global Royalty Rate of Standard Essential Patents: Judicial Jurisdiction and Determination Method from Chinese Law Perspective*, *in* FRAND: GERMAN CASE LAW AND GLOBAL PERSPECTIVES, *supra* note 1, at 234, 237.

[41] Jing Min Zhong No. 454 (Beijing Hihg People's Ct. 2017).

[42] Siebrasse & Cotter, *supra* note 1, at 366 n.2 (citing sources). I understand that the standard at issue in this case was a national standard used only in China. *See* Tristan Sherliker, *A telecoms Blockbuster: Beijing High Court upholds patent injunction in* IWNCOMM v Sony, BIRD & BIRD (Apr. 16, 2018), https://www.twobirds.com/en/insights/2018/global/a-telecoms-blockbuster-beijing-high-court-upholds-patent-injunction-in-iwncomm-v-sony. As of December 13, 2024, the exchange rate between the RMB and the U.S. dollar is 1 RMB = $ 0.14.

[43] *Id.* at 237-38. Also of potential relevance from an antitrust standpoint is article 19 of the State Administration for Market Regulation's *Provisions Prohibiting Abuse of Intellectual Property Rights to Exclude and Restrict Competition* (Aug. 1, 2023), translated and quoted in Aaron Wininger, *China's State Administration for Market Regulation Releases "Provisions Prohibiting Abuse of Intellectual Property Rights to Exclude and Restrict Competition"*, CHINA IP LAW UPDATE, June 29, 2023, https://www.chinaiplawupdate.com/2023/06/chinas-state-administration-for-market-

recent years, when settling a jurisdictional dispute over SEP licensing, Chinese courts have tended to identify it as a special type of dispute independent of traditional frameworks such as contract or infringement"; and that the Supreme People's Court's (SPC's) 2020 amendments to the *Provisions on the Causes of Action for Civil Cases* "added the cause of action of 'SEP royalty dispute,'" classifying it as "the third-level cause of action under 'patent ownership and infringement disputes' . . . for which the connection point shall be selected in accordance with the provisions of Art. 272 of the Civil Procedure Law of the PRC."[44] Under this article,[45] the "connection points" that a

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regulation-releases-provisions-prohibiting-abuse-of-intellectual-property-rights-to-exclude-and-restrict-competition/:

> Operators with a dominant market position shall not engage in the following acts in the process of formulating and implementing standards to exclude or restrict competition:
>
> (1) During the process of participating in the standard formulation, failing to timely and fully disclose its rights information in accordance with the regulations of the standard setting organization, or explicitly waiving its rights, but claiming the patent right to the standard implementer after the standard involves the patent;
>
> (2) After its patent becomes a standard essential patent, it violates the principle of fairness, reasonableness and non-discrimination, licenses at an unfairly high price, refuses to license without justified reasons, sells goods in tying or imposes other unreasonable transaction conditions, implements differential treatment, etc.;
>
> (3) In the process of licensing standard essential patents, in violation of the principles of fairness, reasonableness, and non-discrimination, and without good faith negotiations, request the court or other relevant departments to make judgments, rulings, or decisions prohibiting the use of relevant intellectual property rights, forcing the licensee to accept unjustly high prices or other unreasonable trading conditions;
>
> (4) Other acts of abusing market dominance as determined by the State Administration for Market Regulation.
>
> The standard-essential patents mentioned in these regulations refer to the patents that are indispensable for the implementation of the standard.

*See also* MA Butian & Pyeng Liu, *China Seps and FRAND—litigation, policy and latest developments*, IAM, Oct. 27, 2023, https://www.iam-media.com/hub/sepfrand-hub/2023/article/china-seps-and-frand-litigation-policy-and-latest-developments (discussing the above Provisions and other relevant Guidelines issued by Chinese agencies or courts).

[44] Zhang, *supra* note 40, at 238-39. For discussion of the classification of causes of action in Chinese courts, *see* CHENYANG ZHANG, WIN IN CHINESE COURTS, PRACTICE GUIDE TO CIVIL LITIGATION IN CHINA, § 1.4 (June 22, 2023), *available at* https://link.springer.com/chapter/10.1007/978-981-99-3342-6_1.

[45] I am not a scholar of Chinese law, but I believe this article was amended last year and, as amended, is now article 276. *See* Ruixue Ran, Sheng Huang & Thomas Garten, *Impacts of Amended Civil Procedure Law on Foreign-Related Litigations in China*, Covington Alert, Sept. 25, 2023, https://www.cov.com/en/news-and-insights/insights/2023/09/impacts-of-amended-civil-procedure-law-on-foreign-related-litigations-in-china (describing the 2023 amendment as "broaden[ing] jurisdiction considerably, allowing Chinese courts to oversee all civil disputes involving foreign defendants if there are 'appropriate connections' with China, except for cases concerning personal relationships," and stating that "[t]hese 'connections may be based on, e.g., the location of contract formation, contract execution, subject matter of the litigation, assets available for attachment, tort committed, or the place of residence of the defendant's representative office").

Chinese court may analyze in determining whether it has jurisdiction regarding "a foreign-related contract dispute or property right dispute includes the place where the contract is signed, the place where the contract is performed, the place where the subject matter of the lawsuit is located, the location of the property available for seizure, the place of infringement or the domicile of representative office."[46] Zhang also discusses at some length the SPC's 2021 "milestone" decision in *Sharp Corp. v. Guangdong OPPO Mobile Telecomm'cns Corp.*,[47] which clarifies the conditions under which Chinese courts have "jurisdiction to determine the global royalty rate for SEPs" under the principle of "closer connection," and states that Chinese courts have accepted several such cases, although "settlement is usually the final solution."[48]

Some SEP cases have been litigated through to final judgment, however. To my knowledge, the first of these that involved patents essential to an international telecommunications standard[49] was the 2013 decision by the Shenzhen Intermediate People's Court (affirmed by the Guangdong High Court) in *Huawei Tech. Ltd. v. InterDigital Tech. Corp.*[50] In that case, Huawei filed two complaints against SEP owner InterDigital, one alleging that InterDigital's offer to license its FRAND-committed SEPs violated Chinese antitrust law, and the other asking the court to determine the appropriate FRAND royalty. The courts ultimately held that InterDigital's offer to license its portfolio of 3G SEPs was not FRAND, because the offered rate substantially exceeded the rates at which InterDigital licensed its SEPs to Apple and to Samsung, and determined that in view of these licenses a FRAND rate for the Chinese patents at issue would be 0.019 percent (to be multiplied by the prices of Huawei end products). About one year ago, moreover, a Chinese court for the first time established a global FRAND royalty in *Nokia Techs. v. OPPO*,[51] with a

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[46] Zhang, *supra* note 40, at 239.

[47] Zui Gao Fa Zhi Min Xia Zhong No. 517 (SPC 2021) (China).

[48] Zhang, *supra* note 40, at 239-43.

[49] An article I recently came across by two Chinese scholars discusses the development of Chinese jurisprudence relating to injunctive relief for SEPs, but if I understand correctly much of the discussion therein relates to national standards issued by, e.g., government agencies, and thus may be of limited relevance here. *See* Ying Du & Chengyue Zhang, *Navigating the new approach and evolving theory: a study of injunctive relief for SEPs in China*, ASIA PAC. L. REV. (2024).

[50] Yue Gao Fa Min San Zhong Zi No. 306 (Guangdong High Ct. 2013) (China). For more detailed discussion, *see, e.g.*, Jorge L. Contreras et al., *The Effect of FRAND Commitments on Patent Remedies*, *in* COMPLEX PRODUCTS, *supra* note 1, at 160; Siebrasse & Cotter, *Judicially Determined FRAND Royalties*, *supra* note 1, at 385-86; and Guangliang Zhang, *Determination of the Global Royalty Rate of Standard Essential Patents: Judicial Jurisdiction and Determination Method from Chinese Law Perspective*, *in* FRAND; GERMAN CASE LAW AND GLOBAL PERSPECTIVES, *supra* note 1, at 234, 245-46.

[51] Case No. (2021) Yu Min Chu 1232 (Chongqing Intermed. People's Ct. Dec. 13, 2023). For discussion, see Enrico Bonadio & Dyuti Pandya, *Global FRAND rates in China*, KLUWER PATENT BLOG, Dec. 21, 2023, https://patentblog.kluweriplaw.com/2023/12/21/global-frand-rates-in-china/; Donald Chan, *The Chongqing Nokia v. OPPO global FRAND rate determination*, SISVEL, Jan. 30, 2024, https://www.sisvel.com/insights/the-chongqing-nokia-v-oppo-global-frand-rate-determination/; Aaron Wininger, *Chongqing No. 1 Intermediate People's Court Sets Global FRAND Rate for 5G SPEs at $0.707 in Nokia/OPPO Case*, CHINA IP LAW UPDATE, Dec. 16, 2023, https://www.chinaiplawupdate.com/2023/12/chongqing-no-1-intermediate-peoples-court-sets-global-frand-rate-for-5g-seps-at-0-707-unit-in-nokia-oppo-case/;

higher rate for regions with per capita GDP above $20,000, and a lower rate for China and other countries (a practice that has been observed in some previous non-Chinese cases as well).[52] During roughly the same time period, the Supreme People's Court affirmed awards of China-only royalties, amounting to approximately $2 million each against each of the two defendants, in cases brought by Advanced Codec Technologies (ACT) against OPPO and Vivo involving six patents. According to reports, the court set forth factors to be considered in deciding whether another license is comparable; found that a license offered to another Chinese company was the most comparable, because its scope was limited to China; and considered both parties' relative degrees of fault.[53]

As for injunctive relief, courts in China apply a fault-based framework, somewhat similar to that set forth in the CJEU's *Huawei v. ZTE* decision, albeit one that is not necessarily grounded in competition law and therefore does not require a finding of abuse of dominant position. Under the 2018 Guangdong High People's Court Trial Adjudication Guidance for Standard Essential Patent Dispute Cases, for example, courts should deny injunctive relief if the SEP owner breached its FRAND commitment and the implementer acted in good faith, if neither party was at fault and the implementer deposits with the court the royalty it has offered, or if both parties are at fault but the SEP owner's fault is greater.[54]

***Antisuit injunctions***

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[52] *See Unwired Planet*, [2017] EWHC (Pat) 711 (Eng.) (similar); *TCL*, 2018 WL 4488286 (different rates for the U.S., Europe, and the rest of the world).

[53] For discussion, *see* Enrico Bonadio & Dyuti Pandya, *China's Supreme People Court decides FRAND dispute in ACT v Oppo*, KLUWER PATENT BLOG, May 20, 2024, https://patentblog.kluweriplaw.com/2024/03/20/chinas-supreme-people-court-decides-frand-dispute-in-act-v-oppo/; MA Butian, *Second-instance judgment in ACT v Oppo sheds light on comparable agreements and how to find fault in SEP licensing negotiations*, GLOBAL COMP. REV., Feb. 1, 2024, https://globalcompetitionreview.com/hub/sepfrand-hub/2023/article/second-instance-judgment-in-act-v-oppo-sheds-light-comparable-agreements-and-how-find-fault-in-sep-licensing-negotiations; AFD China Intellectual Property Law Office, *SPC Awards ACT over 15.39 Million Yuan in OPPO Patent Dispute, Rejecting its 342 Million Yuan Claim*, CHINA IP MAGAZINE, Feb. 21, 2024, https://www.lexology.com/library/detail.aspx?g=ab250a54-8144-4d5b-887f-cc95d038f630; Dragon Wang, Bing Wu, Yannan Li & Xiaolin Wang, *Chinese Standard Essential Patents (SEPs) Licensing Negotiations and Dispute Resolution Practice – A Review of the ACT Lawsuit Against OPPO for Standard Essential Patent Infringement*, SITAO INSIGHT, Feb. 1, 2024; https://sitaoip.com/sitao-insight-i-chinese-standard-essential-patents-seps-licensing-negotiations-and-dispute-resolution-practice-a-review-of-the-act-lawsuit-against-oppo-for-standard-essential-patent-infringement/; Aaron Wininger, *China's Supreme People's Court Sets Lows FRAND Rate in Another OPPO Case*, CHINA IP LAW UPDATE, Jan. 15, 2024, https://www.chinaiplawupdate.com/2024/01/chinas-supreme-peoples-court-sets-low-frand-rate-in-another-oppo-case/ (linking to a redacted copy of the decision in Chinese); Christine You, Emma Ren & Yang Li, *China's SEP case update - ACT v OPPO, Vivo*, BIRD & BIRD, Feb. 27, 2024. https://www.twobirds.com/en/patenthub/shared/insights/2024/china/sep-case-update-act-v-oppo-vivo.

[54] Detailed discussions of the Guidelines can be found in Yabing Cui, *Across the Fault Lines: Chinese Judicial Approaches to Injunctions and SEP's*, CHINA IPR BLOG, June 5, 2018, https://chinaipr.com/2018/06/05/across-the-fault-lines-chinese-judicial-approaches-to-injunctions-and-seps/, and Jie Gao, *Development of the FRAND Jurisprudence in China*, 21 COLUM. SCI. & TECH. L. REV. 446 (2020).

Because patent rights are territorial, it is possible for disputes involving corresponding national or regional patents to be filed, more or less simultaneously, in multiple jurisdictions. And because the relevant bodies of law applicable to SEP disputes, and the way courts apply these rules, can differ from one jurisdiction to another, both SEP owners and implementers sometimes have an incentive to forum-shop by filing suit in the country and court of their choice.[55]

One way to try to preserve one's own ability to forum-shop, while preventing the other party from doing so, is to obtain an "antisuit" injunction (ASI) prohibiting the other party from litigating or enforcing a judgment in another jurisdiction. According to British commentator Thomas Raphael, in England ASIs are

> predominantly granted in two main situations: first, 'contractual' injunctions, where foreign proceedings are in breach of a contractual forum clause; and second, 'alternative forum' cases, where foreign proceedings overlap with matters that are being or can be litigated in England, and should be injuncted, in particular where they are considered vexatious or oppressive.[56]

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[55] In addition to the differences already noted in the text above—and in addition to other, sometimes more fundamental, differences from one country to another, including the availability or not of jury trials, extensive third-party discovery, fee-shifting, and judicial specialization—there may be other actual or possible points of differentiation, including (1) the preferred methodology for calculating FRAND royalties (e.g., by reference to comparable licenses, or alternatively a "top-down" approach that attempts to apportion the SEP owner's share of the aggregate royalty burden per unit, *compare, e.g.*, *TCL Commc'n Tech. Holdings, Ltd. v. Telefonaktiebolaget LM Ericsson*, No. SACV 14-341 JVS (DFMx), 2018 WL 4488286 (C.D. Cal. Sept. 14, 2018) (primarily using top-down, with comparables as a "check,"), *with* Unwired Planet Int'l Ltd. v. Huawei Techs. Co. Ltd. [2017] EWHC (Pat) 711, [806] (Eng.) (primarily using comparables, with top-down as a check); (2) whether FRAND royalties should be determined using largely the same methodology used for calculating reasonable royalties, *cf. Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1229-32 (Fed. Cir. 2014) (cautioning, however, that not all of the *Georgia-Pacific* factors used to determine reasonable royalties in U.S. cases are likely to be relevant in a FRAND case); (3) relatedly, whether damages for past use of FRAND-committed SEPs are limited to FRAND (or reasonable) royalties, *see Panasonic Holdings Corp. v. Guangdong OPPO Mobile Telecommunications Corp.*, UPC_CFI_210/2023, ¶ 178 (Mannheim Local Division, Nov. 22, 2024) (arguably suggesting, consistent with some German authority, that the Unified Patent Court would not so limit them), and whether the statute of limitations applies to the recovery of past royalties, *see, e.g.*, *InterDigital Tech. Corp. v. Lenovo Group Ltd.*, [2024] EWCA Civ. 743, [186] (no, because a FRAND license would include full compensation for past infringement, including acts that otherwise would be outside the statute of limitations); (4) whether the FRAND rate should reflect any of the value derived from standardization itself, *compare Ericsson v. D-Link*, 773 F.3d at 1232 (no), *with Unwired Planet*, [2017] EWHC (Pat) at [97] (suggesting that, in theory, it should); (5) the role the "nondiscriminatory" aspect of FRAND licensing plays in determining an appropriate rate, *see* my paper *Like Ships Passing in the Night*, *supra* note 1, at nn. 25, 97, and my paper *Is Global FRAND Litigation*, *supra* note 1, at nn. 47, 49 (noting different perspectives among and within national courts); and (6) whether the royalty base should be the value of the end product or a component (such as the "smallest salable patent-practicing unit"), if the latter what exceptions might excuse compliance with this principle, and perhaps relatedly whether a FRAND license should be available to any implementer who requests one, or only to whichever entity within the supply chain the SEP owner chooses.

[56] THOMAS RAPHAEL, THE ANTI-SUIT INJUNCTION 8 (2d ed. 2019) at 3.

Courts in other common-law countries apply similar principles, but civil-law jurisdictions traditionally rejected the remedy.[57] In the United States, the conditions for granting ASIs can vary a bit from one circuit to another, though in a recent case noted below the Federal Circuit noted the Ninth Circuit's framework as applied in *Microsoft v. Motorola*:

> First, we determine "whether or not the parties and the issues are the same" in both the domestic and foreign actions, "and whether or not the first action is dispositive of the action to be enjoined." Second, we determine whether at least one of the so-called "*Unterweser* factors" applies. Finally, we assess whether the injunction's "impact on comity is tolerable."[58]

In the *Microsoft* case itself, while that action was pending Motorola sought and obtained an injunction in Germany for Microsoft's infringement of Motorola's German SEPs.[59] The U.S. court thereafter enjoined Motorola from enforcing the injunction in Germany, on the grounds that (1) "the pending *contract* action before it would be dispositive of the German *patent* action"; (2) "the German action raised 'concerns against inconsistent judgments,'" and of "forum shopping and duplicative and vexatious litigation," thus potentially frustrating the court's "ability to adjudicate issues properly before it"; and (3) "the injunction's 'impact on comity would be tolerable'" because the U.S. action was filed first, the injunction was limited in scope, and the court had a "strong interest" in adjudicating claims between two U.S. corporations.[60] The Court of Appeals affirmed.[61] More recently—indeed, just a few weeks ago—the Federal Circuit vacated an order denying Lenovo's motion for an ASI against Ericsson's enforcement of preliminary relief in Colombia and Brazil, and remanded for further consideration of the second and third elements of the relevant legal standard as set out in the *Microsoft* decision.[62] Similarly, the Patents Court in both *Unwired Planet* and *Conversant* indicated that it *would* have enjoined the defendants from proceeding with parallel litigation in China, had the parties themselves not reached a compromise on the matter.[63] And in another very recent decision, the Court of Appeal for England and Wales

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[57] *See id.* at 5, 8. This perspective is reflected in the Brussels Regulation (Recast), which is generally understood as forbidding courts within the E.U. from entering antisuit injunctions directed against litigation in another E.U. member. For discussion, *see id.* at 260–68.

[58] Microsoft Corp. v. Motorola, Inc., 696 F.3d 872, 881 (9th Cir. 2012) (citations omitted). The *Unterweser* factors include "[whether the] foreign litigation . . . would (1) frustrate a policy of the forum issuing the injunction; (2) be vexatious or oppressive; (3) threaten the issuing court's in rem or quasi in rem jurisdiction; or (4) where the proceedings prejudice other equitable considerations." *Id.* (citations omitted).

[59] *See id.* at 879.

[60] *Id.* at 880–81 (quoting *Microsoft*, 871 F. Supp. 2d at 1100–01).

[61] *See id.* at 889. Similarly, in *Huawei Techs. Co. v. Samsung Elecs. Co.*, No. 3:16-cv-02787-WHO, 2018 WL 1784065 (N.D. Cal. Apr. 13, 2018), the district court temporarily enjoined Huawei from enforcing a judgment entered in a parallel proceeding in China, on the grounds, among others, that enforcement would undermine the court's ability to determine if injunctive relief was an appropriate remedy in the U.S. action. The matter settled pending appeal.

[62] Telefonaktiebolaget LM Ericsson v. Lenovo (United States), Inc., 120 F.4th 864 (Fed. Cir. 2024).

[63] *See* Conversant Wireless Licensing S.A.R.L v Huawei Techs. Co. Ltd. [2018] EWHC (Pat) 2549, [24] (Eng.); Unwired Planet Int'l Ltd. v. Huawei Techs. Co. [2017] EWHC (Pat) 2831, [1], [10] (Eng.).

held in *Panasonic Holdings Corp. v. Xiaomi Tech. UK Ltd.* that—in view of the fact that both parties had previously agreed to abide by the terms of a global FRAND license to be determined by the U.K. courts, but Panasonic then appeared to undermine this by proceeding with litigation in Germany—a willing licensor in the position of Panasonic "would agree to, and would enter into, an interim license of" Panasonic's portfolio of 3G and 4G SEPs, "pending the determination by the Patents Court of what terms for a final license" are FRAND.[64] Although the court (by a 2-1 majority) did not see fit to enter an ASI, the effect of the type of order granted could be similar to an ASI, if it induces the discontinuance of litigation in another forum.

Despite the civil law countries' general disinclination to grant ASIs, in 2020 courts in China granted ASIs in at least five cases.[65] It is reported that some of these were initially entered without notice to all parties, and in addition that some of them forbade the respondents from asserting claims relating to the subject SEPs anywhere else in the world.[66] In response to three of these decisions, however, courts in Germany, India, and the United States enter AASIs,[67] and in 2022 the European Union initiated proceedings in the WTO arguing that Chinese courts' issuance of ASIs violates articles 1, 41, and 63 of the TRIPS Agreement.[68] German courts also have taken the position that defendants who apply for ASIs are unwilling prospective licensees.[69] Perhaps one or more of these developments have contributed to the apparent pause in Chinese courts granting ASIs since the 2020 spurt.

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[64] *See* Panasonic Holdings Corp. v. Xiaomi Tech. UK Ltd., [2024] EWCA Civ 1143 (Eng.).

[65] Huawei v. Conversant, (2019) Zui Gao Fa Zhi Min Zhong 732, 733 and 734 No. 1 (SPC Aug. 20, 2020); Xiaomi Commc'n Tech. Co., Ltd. v. InterDigital, Inc., E 01 Zhi Min Chu No. 169 (Wuhan Intermediate People's Ct. Sept. 23, 2020); ZTE Corp. v. Conversant Wireless Licensing Co., (2018) Yue 03 Min Chu No. 335-1 (Shenzhen Intermediate People's Ct. Sept. 28, 2020); Guangdong OPPO Mobile Telecomm. Corp., Ltd. v. Sharp Corp., Yue 03 Min Chu No. 689 (Shenzhen Intermediate People's Ct. Oct. 16, 2020); Samsung Elecs. Co., Ltd. v. Telefonaktiebolaget LM Ericsson (Wuhan Intermediate People's Ct. Dec. 25, 2020).

[66] For a recently-published paper discussing these cases, *see* Alexandr Svetlicinii & Fali Xie, *The anti-suit injunctions in patent litigation in China: what role for judicial restraint?*, 19 J. INTELL. PROP. L. & PRAC. 734 (2024). *See also* Richard Arnold, *Arbitration of FRAND Disputes*, *in* FRAND: GERMAN CASE LAW AND GLOBAL PERSPECTIVES, *supra* note 1, at 332, 341; Yang Yu & Jorge L. Contreras, *Will China's New Anti-Suit Injunctions Shift the Balance of Global FRAND Litigation?*, PATENTLY-O BLOG, Oct. 22, 2020, https://patentlyo.com/patent/2020/10/contreras-injunctions-litigation.html.

[67] *See* Arnold, *supra* note 66, at 341 n.30 (citing InterDigital, Inc. v. Xiaomi Commc'n Tech. Co., Ltd., Delhi High Court, IA 8772/2020, (Delhi High Ct. Oct. 9, 2020), and Ericsson, Inc. v. Samsung Elecs. Co., No. 2:20-CV-00380-JRG, 2021 WL 89980 (E.D. Tex. Jan. 11, 2021)); Svetlicinii & Xie, *supra* note 66, at 738-39 (also referring to German AASIs, and suggesting that "[d]espite the broad scope of Chinese ASIs in SEP disputes, the practice also reveals a relatively low level of compliance by the parties concerned"). In other cases, European courts have ordered litigants to withdraw motions for ASIs that they had filed in the United States. For discussion and citations, see my paper *Is Global FRAND Litigation*, *supra* note 1, nn. 71-72, 74.

[68] *See* WT/DS611—China—Enforcement of Intellectual Property Rights, https://policy.trade.ec.europa.eu/enforcement-and-protection/dispute-settlement/wto-dispute-settlement/wto-disputes-cases-involving-eu/wtds611-china-enforcement-intellectual-property-rights_en.

[69] *See* Peter Georg Picht, *Anti-Antisuit Injunctions*, *in* FRAND: GERMAN CASE LAW AND GLOBAL PERSPECTIVES, *supra* note 1, at 200, 206-10 (citing decisions of the Munich and Düsseldorf courts).

Mr. ISSA. Thank you. Dr. Copan.

**STATEMENT OF WALTER G. COPAN**

Mr. COPAN. Chair Issa, Ranking Member Johnson, Members of the Committee, and distinguished participants, it's a privilege to testify on critical issues for U.S. innovation leadership, global economic competitiveness, and national security.

It's my honor currently to lead research and technology transfer at Colorado School of Mines, a top tier U.S. research university rated in the top three engineering programs in America.

I recently served our Nation as Director of the National Institute of Standards and Technology and prior with two of the U.S. Department of Energy National Labs.

From my leadership experience in public and private sectors as a corporate executive, entrepreneur and investor, the requirements have clear, enforceable intellectual property rights and the right to exclude others is foundational to innovation success.

Investors must confirm that an organization's IPRs will secure a protectable market position and provide pathways to achieve returns on investment as part of the justification to take on substantial investment risks.

Strong IPRs enable innovators to advance technology leadership, incentivize investment, and create value, including from inventions essential to global standards.

The United States is at a critical juncture regarding the future of American innovation leadership for the world. Our economic security and national security are closely intertwined with the reliability of the protections afforded by our IP and innovation system.

The foundational strength of U.S. IPRs as established by the framers of the Constitution must continue with the enforceability of the rights of inventors in the U.S. and abroad together with the rule of law and respect for private contracts.

The U.S. must once again lead the world by example through the development of IPR policies that support innovation at home and across jurisdictions.

Reliable IP rights and contracts that are respected globally include the key role of standard-essential patents and the U.S. must demonstrate leadership in foreign markets including with the EU and China.

This includes restoring the ability of rights holders to obtain injunctive relief and to avoid willful infringement and documented holdout by parties unwilling to enter license agreements with rights holders under FRAND terms.

When such negotiations fail in a free market economy, Knowledgeable American courts can provide resolution with expertise and wisdom. All are essential for rebuilding and maintaining U.S. leadership and globally relevant standards today.

The U.S. leads the world in key standards and, consequently, is a net exporter of innovation. Reliable IP rights, license to development, and manufacturing partners enable trusted global supply chains and value creation for consumers and for shareholders alike.

The mobile telecommunications sector contributes an estimated total economic value of more than $4.8 trillion to the global innovation economy.

Technology innovators, including holders of SEPs, gain returns on their investments in R&D and standards engagement through licenses and royalty payment in addition to products and services sales.

The revenue flows from commerce in intellectual assets contribute positively to the U.S. trade balance with Chinese companies contributing over $70 billion in net IP payments to U.S. entities in 2020.

However, there is widespread unlicensed technology use in China of innovations and IP assets owned by U.S. entities. Further, China's government has weaponized its legal system with a wide range of patent and competition law tools, price controls on international entities, forced technology transfers, and by providing selective legal protections and incentives seeking to advantage Chinese companies.

There is a concerning movement away from market-based negotiations and valuation to government-controlled price regulation for standardized technologies.

The EU has proposed a massive new regulatory regime toward government control of SEP prices. The Chinese Communist Party has followed suit, issuing guidelines that would apply its antitrust laws to SEP licenses to benefit Chinese entities.

Supported by the Chinese government incentives and legal actions, Chinese technologies companies are gaining ground. As we look to rebuild America's advanced manufacturing base with a trained domestic workforce and trusted, resilient supply chains the U.S. must build on the strengths of our free-market economy and a reliable intellectual property and innovation system that continues to lead the world.

I'm encouraged by some of the legislation proposed to strengthen the U.S. innovation system including the bipartisan Patent Eligibility and Restoration Act, the Promoting and Respecting Economically Vital American Innovation Leadership Act, and the Realizing Engineering Science and Technology Opportunities by Restoring Exclusive Patent Rights Act of 2024.

Thank you to this Subcommittee for your important work toward securing the technology and innovation leadership for U.S. economic and national security.

I look forward to answering any questions you may have.

[The prepared statement of Mr. Copan follows:]

**Testimony of Dr. Walter G. Copan**
**Vice President for Research and Technology Transfer,**
**Colorado School of Mines**

**Before the House Judiciary Committee**
**Subcommittee on Courts, Intellectual Property, and the Internet**

**"IP and Strategic Competition with China: Part IV – Patents, Standards, and Lawfare"**

**December 18, 2024**

**Oral Testimony Summary**

Chairman Issa, Ranking Member Johnson, members of the Committee and distinguished participants. It is a privilege to testify on critical issues for U.S. innovation leadership, global economic competitiveness and national security. It is my honor currently to lead research and technology transfer at Colorado School of Mines, affectionately known as "Mines" a top tier U.S. research university and rated in the top 3 engineering programs in the nation.

I recently served our Nation as Director of the National Institute of Standards and Technology and prior, with two of the U.S. Department of Energy national laboratories. From my leadership experience in public and private sectors—as corporate executive, entrepreneur and investor—the requirement to have clear, enforceable intellectual property rights (IPRs) and the right to exclude others is foundational to innovation success. Investors must confirm that an organization's IPRs will secure a protectable market position and provide pathways to achieve returns on investment as part of their justification to take on substantial investment risk. Strong IPRs enable innovators to advance technology leadership, incentivize investment, and create value from inventions essential to global standards.

The United States is at a crucial juncture regarding the future of American innovation leadership for the world, and our economic security and national security are closely intertwined with the reliability and protections afforded by our IP and innovation system. The foundational strength of U.S. IPRs, as established by the framers of the Constitution, must continue with the enforceability of the rights of inventors in the U.S. and abroad, together with the rule of law and respect for private contracts.

The U.S must once again lead the world by example, through the development of IPR policies that support innovation at home and across jurisdictions. Reliable IP rights and contracts that are respected globally include the key role of standard essential patents (SEPs), and the U.S. must demonstrate leadership in foreign markets, including with the EU and China. This includes restoring the ability of rights holders to obtain injunctive relief,[1] and to avoid willful infringement and documented holdout[2] by parties unwilling to enter license agreements with SEP rights holders under Fair Reasonable and Non-Discriminatory (FRAND) terms.

[1] https://www.justice.gov/atr/page/file/1228016/dl
[2] https://btlj.org/wp-content/uploads/2023/11/0010-38-Haas-Gupta.pdf

Where such negotiations fail in a free-market economy, knowledgeable American courts can provide resolution with expertise and wisdom. All are essential for rebuilding and maintaining U.S. leadership in globally relevant standards today.

The U.S. leads the world in key standards and, consequently, is a net exporter of innovation. Reliable IP rights licensed to development and manufacturing partners enable trusted global supply chains and value creation for consumers and shareholders alike. The mobile telecommunications sector contributes an estimated total economic value of more than $4.8 trillion to the global innovation economy.[3] Technology innovators, including holders of SEPs, gain returns on their investments in R&D and standards engagement through licenses and royalty payments, in addition to product and services sales. The revenue flows from commerce in intellectual assets contribute positively to the U.S. trade balance, with Chinese companies contributing over $70 Billion in net IP payments to U.S. entities in 2020. Most of the royalties for standardized technologies are paid to western corporations by companies based in Asia, and principally by China's companies. However, there is widespread unlicensed technology use in China of innovations and IP assets owned by U.S. entities, that deliver little or no return to U.S. innovators nor to the U.S. economy. Further, China's government has weaponized its legal system with a wide range of patent and competition law tools, price controls on international entities, forced technology transfers, and by providing selective legal protections to its own companies together with incentives seeking to advantage Chinese entities.[4]

There is a concerning movement from market-based negotiations and valuation to government-controlled price regulation for standardized technologies. The EU has proposed a massive new regulatory regime[5] that would put government in control of SEP prices, followed by the Chinese Communist Party's guidelines that would apply its antitrust laws to SEP licenses to benefit Chinese entities.[6] Supported by the Chinese government with incentives, and with legal actions by their provincial and national courts, China's technology companies are gaining ground.[7]

As we look to rebuild America's advanced manufacturing base, with a trained domestic workforce and trusted, resilient supply chains, the U.S must build upon the strengths of our free market economy, and a reliable intellectual property and innovation system that continues to lead the world.

I'm encouraged by some of the legislation proposed to a strengthen the U.S innovation system, including the bipartisan Patent Eligibility and Restoration Act (PERA) of 2023, the Promoting and Respecting Economically Vital American Innovation Leadership (PREVAIL) Act, and the Realizing Engineering, Science, and Technology Opportunities by Restoring Exclusive (RESTORE) Patent Rights Act of 2024.

Thanks to this subcommittee for your important work toward securing the technology and innovation leadership for U.S. economic and national security. I look forward to answering questions you may have.

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[3] https://s3.amazonaws.com/media.hudson.org/The+Western+Innovators+of+the+Mobile+Revolution_+The+Data+on+Global+Royalty+Flows+to+U.S.+and+Europe+and+Why+It+Matters+-+Jan+2024.pdf

[4] DOI: https://doi.org/10.15779/Z38XP6V46N

[5] https://single-market-economy.ec.europa.eu/publications/com2023232-proposal-regulation-standard-essential-patents_en

[6] https://www.allenovery.com/en-gb/global/news-and-insights/publications/china-draft-sep-antitrust-guideline-released-by-samr-for-public-comment

[7] https://www.telegraph.co.uk/business/2024/04/30/huawei-profits-surge-steal-market-share-apple-china/

Mr. ISSA. Thank you. I thank all our witnesses.

We'll now go into five minutes per side of questioning, beginning with the gentleman from Kentucky, Mr. Massie.

Mr. MASSIE. Thank you, Mr. Chair.

I think it's important as we kick this off to talk about what SEPs are, or SEPs—standard-essential patents.

Mr. Cohen, are these government creations or are these—were these created by private industry, this nomenclature and this grouping of patents?

Mr. COHEN. They're predominantly created by private standards development organizations which have private sector participants, although there are government standards, particularly in China, but also in the U.S.

Mr. MASSIE. OK. Thank you very much.

Dr. Copan, you joined several former administration officials—the former I say—to send a 2023 letter to the European Commission opposing the EU's draft of SEP regulation that would cap royalties for licenses of standard-essential patents and create separate centralized proceedings at the EU IP Office.

Do you continue to have concerns about the efforts of foreign competitors to regulate our IP?

Mr. COPAN. I do, Congressman. Those concerns that I also included in my oral testimony are with respect to the overreach of governments to regulate free trade, fair commerce, and standard-essential patents and I stand by that joint letter.

Mr. MASSIE. Aren't a lot of the patents created by U.S. entities and isn't it sort of insane to let countries not just China—we're here ostensibly about China but the EU is talking about doing the same thing.

Because these patents are so important to things like national defense or our own competitiveness in the world economy isn't crazy to go along with this scheme in the European Union that would let them effectively nationalize our IP by setting the rate that could be charged globally for it?

Mr. COPAN. It is a huge concern. The United States' sovereignty over its intellectual property rights and the value that U.S. innovators create in global markets is something that needs to be part of a free-market economy and we know that sophisticated companies, developers, and implementers of technology have the guidance in fair, reasonable royalties that are nondiscriminatory and enabling the practice of commerce across borders without government interference.

Mr. MASSIE. Well, I've heard some arguments that SEP—standard-essential patents—are so important that you shouldn't be able to get injunctive relief—that the owners of the IP shouldn't be able to get injunctive relief.

Do you agree with that argument?

Mr. COPAN. No, sir. The intellectual properties that are standard-essential patents are patents and deserve the same protections as the intellectual property rights of innovators in the United States and, indeed, protections in jurisdictions elsewhere, where intellectual property parallel protections exist.

Mr. MASSIE. Let me ask, you mentioned some legislation that you were a fan of. What could we do in our own country with our

own IP laws to improve American competitiveness and improve our national security?

Mr. COPAN. Definitely the improvement of clarity with regard to patentable subject matter as an important feature. Creating greater certainty in our courts on the basis which decisions are made in particular with respect to standard-essential patents.

I also believe it's very, very important for the United States to continue to lead by example, as I had indicated in my remarks, that the United States has a fair and reasoned process for adjudicating issues in our courts that enable rights holders around the world to trust the U.S. judicial system and that they know that the United States sets the highest standard globally for fairness in intellectual property matters.

Mr. MASSIE. Mr. Cohen, I want to give you a chance to answer the same question. What do you think we could do here to—with our own IP laws to improve the signal that we send to other countries that we're the best country for developing IP in?

Mr. COHEN. Well, I certainly agree with Dr. Copan's perspective on strengthening the domestic legal system in terms of patentable subject matter and availability of injunctive relief.

There's another aspect in terms of the competition globally for a jurisdiction over FRAND disputes and parallel disputes that arise.

So, we could find that even if we have the best system in the world, China can fast track its litigation so that a case will be resolved on appeal from beginning to appeal within nine months, according to the Chinese civil procedural law.

At that nine-month stage we haven't even finished discovery in a U.S. District Court. So, having expedited procedures, perhaps, specialized tribunals, although I'm not a big fan of that, but at least slimming things down so that people can get a quick relief and having better assessment of the foreign competitive challenges.

Now, I'd like to see our solicitor general from time to time appear in SEP cases to say whether a particular jurisdiction is fair or the potential disadvantages.

I know one case in California where the judge was quite clear that by the time he renders a judgment in that case China will already have exhausted this appeal.

We have to make our system more attractive in the global competition for litigation on SEP matters.

Mr. MASSIE. Thank you both very much. I agree with you on injunctive relief here domestically. I yield back to the Chair.

Mr. ISSA. Briefly, Mr. Baker, did you have something else to add? You took copious notes.

Mr. BAKER. Yes. If you don't use injunctions correctly FRAND is absolutely meaningless. Injunctions were used because of a characterization called holdout where a company like u-blox might not take a license.

Unfortunately, if you look at especially foreign injunctions in Germany and over in China what you'll find is there's no FRAND analysis.

It's the fact that, all right, here's something. We're going to assume it's FRAND. If you don't take that license we will issue an injunction. You can throw FRAND out the window with that.

Also, with standard-essential patents the problem that you come up with is what it used to mean—and I was there in the work groups and I worked with DG GROW on why the entire competition SEP regulations coming out—it used to mean technical essentiality.

Take it off the board. It doesn't work. Take the patent out of the module. It doesn't work. That's changed and it's been manipulated. That's the manipulation we're talking about.

What we need is clarity in both what FRAND is and what a standard-essential patent definition means. Now, you're trying to control both.

Mr. ISSA. I have to keep it too brief. We'll continue.

Mr. Johnson?

Mr. JOHNSON. Thank you, Mr. Chair.

Dr. Copan, could you enlighten us on how SEPs ensure worldwide interoperability?

Mr. COPAN. Thank you so much, Ranking Member Johnson.

The technical committees working on international standards bring together science and engineering experts to consider the broad dimensions of a standard, for example, in advanced communications.

The organizations participating in those standards processes provide data, provide insight to the rest of the Committee with respect to the technical operations and, ultimately, intellectual properties that underpin those features that are important to interoperability on a global basis as you had indicated in your comments as well enable the inventor—the rights holder—to participate in the standard-setting process and then also through providing access to those intellectual properties on fair, reasonable, and nondiscriminatory terms, enables the actual practice then of an interoperable standard.

Mr. JOHNSON. Thank you. How do international standards-setting organizations go about designating SEPs and why is that process important?

Mr. COPAN. It is, indeed, a very important consideration. It is an analysis that's carried out by the committees on contributions to the standard itself and to the merits that are delivered by the intellectual property, by the invention, to the standard on a relative basis.

So, there is a technical evaluation that's done of essentiality by the technical committee itself.

Mr. JOHNSON. Thank you.

Mr. Cohen, in your written testimony you told us that you believe that the WTO remains a viable option for airing our concerns and bringing multilateral attention to areas where China has departed from international practice.

What SEP disputes do you expect to see at the WTO over the next five years?

Mr. COHEN. That's a bit of a crystal ball exercise. Certainly, there's been a lot of frustration about the levels of the royalty rates that Chinese courts determine.

I tend to think that Chinese practice of giving a preferential rate to a China-based company violates national treatment or most fa-

vored nation treatment obligations which are, of course, critical to the WTO generally.

So, that would be one issue that I think is extremely important. There continue to be serious concerns about transparency, and I think those need to be clarified with China either diplomatically or at the WTO.

The extra territorial nature of China's SEP litigation practice is being raised by the European Union at the WTO. The global rate setting is another level which deprives countries of their own sovereign courts to adjudicate their own sovereign patents, and I think that raises another level of concern about SEP litigation and kind of an over national focus by China to extend its reach globally.

Mr. JOHNSON. Thank you.

Professor Cotter, how does the absence of transparency in Chinese courts impact FRAND rate setting in other jurisdictions?

Mr. COTTER. I think Mr. Cohen is correct that it is more difficult to find the Chinese cases than it is to find cases in other major jurisdictions such as certainly the U.S., but also the U.K. and to a great extent the European countries as well.

So, it would be very helpful if those cases were more readily available and if they were available in some format where they could be translated either officially or at least at some high level so that others can actually understand what they say.

I don't speak or read Chinese so I am always reliant on translations or reports of these cases, and so I think it would be advantageous if the cases were more readily available to the community generally.

Mr. JOHNSON. Thank you.

Mr. Chair, I'll yield back my three seconds.

Mr. ISSA. Thank you very much.

With that, we'll go to Mr. Fitzgerald for five minutes.

Mr. FITZGERALD. Thank you, Mr. Chair.

Mr. Baker, Congress was just recently briefed about Salt iPhones and very concerning issues related to just how far that the CCP has kind of penetrated into the U.S. cellular networks.

Do you have concerns regarding security and the vulnerabilities of Chinese technology? Obviously, there's an overall concern but specifically in our cellular, the modules that we use here in the States?

Mr. BAKER. Yes. There's an overall security concern not just in cellular but also there's a hybrid coming along which merges cellular with satellite and the two together there is a security concern about the information that you can actually take.

I appreciate that these modules can talk to each other, which means you can bypass a base station. If you park your security software in the base station, you're probably not going to know that the machines are being corrupted.

Mr. FITZGERALD. What could we do to protect the companies that we have all become very familiar with—the big cellular phone corporations?

Mr. BAKER. I think the corporations are capable of protecting themselves, especially those that came from—Qualcomm was where I spent many, many years and we're perfectly capable of taking care of that given the opportunity to do so.

Mr. FITZGERALD. Very good.

Dr. Copan, this is more of a general question, and I know we have already had kind of a couple of others that dug down into this. The SEP portfolio is owned by Chinese-owned companies like Huawei.

So, what are the risks associated with amassing such a portfolio of patents that also include the U.S. patents as well?

Mr. COPAN. Thank you, Congressman.

The risk that we have seen in the application in particular in the courts in China is to take a numbers only approach, and regardless of the actual contribution of the intellectual property to the practice of the standard, by flooding the intellectual property system in particular in China and providing a massive stack of patent documents we have seen the Chinese courts actually favoring that type of approach rather than what we have seen in the U.K. courts or in the U.S. courts that take a much more detailed approach toward understanding the actual contribution of the intellectual property to the practice of the standards.

Mr. FITZGERALD. Very good.

Professor Cotter, can you please describe how the injunctions against the American companies sought by foreign companies in foreign courts hurt the U.S. economy? How can we draw that line?

Mr. COTTER. Well, there are a variety of approaches, a variety of perspectives on whether injunctive relief should be granted generally for SEPs and the German courts and probably also the Unified Patent Court within the European Union take the view that injunctive relief is more a matter of right and so you usually get an injunction in those places.

The UPC has just started up but in Germany, certainly, usually get an injunction. That puts tremendous pressure on the implementer to then reach a settlement, and maybe that is appropriate if the implementer is holding out is delaying the resolution of the case for strategic advantage.

It also means that in many cases, I believe, the SEP owners are using the threat of injunctive relief potentially to extract an above FRAND license.

So, part of this goes to why these FRAND commitments are required in the first place and that is to constrain SEP owners from exercising undue market power, raising prices, and ultimately harming consumers.

So, the IP system has to be about balance, and I think that some degree of flexibility in awarding injunctive relief is appropriate. That's what we have in the U.S.

It's also what we have in the U.K., and I would encourage other countries to follow that path rather than to make—rather than to making injunctive relief for SEP cases mandatory.

Mr. FITZGERALD. Well, in bringing up the U.K. so is there an articulated or a specific type of framework in the FRAND determinations?

What are your thoughts on that framework, and do you believe there's a concern that it's probably going to lead to greater instances of venue shopping in the U.K., right?

Mr. COTTER. Well, I think the U.K. went to a place where I didn't expect. Let me rephrase that. In 2017, the U.K. became the first

country, I believe, to set global FRAND royalties without consent of both parties. That was the Unwired Planet case.

Many people and I was critical of that because it seemed like a bit of overreach. On the other hand, the last couple of times they've done that the rates that they have set have actually been relatively favorable to the implementers.

So, if anything, they might be more attractive to implementers now than to SEP owners. I will say that I think the U.K. judges do a very decent job. They're very thorough, very detailed, very well respected.

So, in some ways the U.K. model has proven to be quite a good one. Doctrinally the idea is you'll either be enjoined or you let us set a global FRAND rate.

One predictable consequence of that was that other countries such as China would then follow suit and do the same thing.

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

Mr. ISSA. I thank the gentleman.

We now go to the Ranking Member of the Full Committee, the gentleman from New York Mr. Nadler.

Mr. NADLER. Thank you, Mr. Chair.

Dr. Copan, American companies' ability to invest in R&D ensures that our patents 10 years from now are competitive with Chinese companies.

How can investments in American R&D affect our national security over time?

Mr. COPAN. Thank you so much for that question, Congressman.

The ability of the U.S. to invest from the private sector and to see value creation in the global marketplace is an essential part of the workings of a global economy.

These connections, however, between national security and economic security are very, very clear and direct at this time, and so the health of the U.S. corporations that have a global play and also the ability to license under FRAND terms in ways that truly provide returns on investment for U.S. industry to continue to drive forward research and innovation and lead the world is essential also for national security.

Mr. NADLER. Thank you.

Mr. Cohen, we have seen the Chinese government use antisuit injunctions in the past in a manner that I have characterized as bullying, but then seemingly move on after being challenged on the global stage.

Moving on does not mean they have stopped abusing the legal system, right?

Mr. COHEN. Moving on for China in this case means, I believe, that the EU WTO case forced China to at least put a pause on antisuit injunctions, not to stop them entirely, and what we have seen is the evolution of judicial practice toward global rate setting and greater extraterritorial reach of the courts.

So, we're hardly beyond the problem of China setting rates for SEPs outside of its territorial jurisdiction.

Mr. NADLER. Let me ask you a question that you may have partially answered just now. Can you describe some of the new tactics the Chinese government has adopted to reach the same ends? Given that the Chinese government is clearly skilled at taking ad-

vantage of different legal regimes as needs arise, what would be an appropriate response from the U.S. Government in conjunction with our allies?

Mr. COHEN. Well, let me begin by—the second part of that question. I think the appropriate response if possible is to be as multilateral as possible. I think that could mean using the United Nations or negotiating through vehicles like the IP5 or the U.S. PTO with the other four largest patent offices or engaging our antitrust authorities also to engage with the Chinese counterparts.

The issue is the continuing—in Chinese there's a saying, "you have a policy; I have a counter-policy." What we've seen in China is the continual evolution of counter-policies that rarely get to the bottom line. That's part of our problem with the WTO itself because you can't really amend your complaints with the WTO. You have to file another complaint. So, that's a limitation. We really need the focus of all our trading partners on this industrialized—this industrial policy approach to FRAND and separate—

Mr. NADLER. Should we try to get the WTO to allow the modification of complaints that you just said?

Mr. COHEN. Yes, I think that would help, frankly, because otherwise we're filing disputes on yesterday's issues.

Mr. NADLER. Thank you. Mr. Cohen, I understand that the Chinese Government's approach to dominating standards has included subsidies for patent applications for technology related to standards. Can you elaborate on this practice and describe its implications for what kind and how many patents Chinese companies might get?

Mr. COHEN. That's a great question. The numbers are in the thousands, if not tens of thousands. It's not limited to SEPs, but at least in the SEP area there's a bigger focus of litigation. It's resulted in overall a lower quality for Chinese patents. It imposes a burden on patent offices because, as any skilled bureaucrat knows, they have to use end-of-year money. If they have subsidies at the end of the year, then everybody wants to file them to get those subsidies.

We've seen lower quality Chinese patents the last quarter, in the fall. In fact, I joke sometimes that if China wants to improve its innovative ecosystem, they just have to ban autumn. So, what we've seen is China using that quantitative advantage to achieve an advantage in the courts, because courts and sometimes antitrust agencies frequently rely on patent counts, and they don't want to go through the more laborious task of qualitative analysis.

Mr. NADLER. Thank you. Finally, how does this practice affect global rate setting and what is the best way to ensure that rates reflect patent quality rather than quantity as you just said?

Mr. COHEN. Yes, I've already partially addressed that. It clearly addresses rate setting, particularly by agencies that rely on counts. I think the more we bring new information to the table—PTO did a great report I think about four years ago on the quality of Founding SEP patents. They also did it on trademarks. They pointed out the pernicious effect of patents, of subsidies on that. I think we need to do more of that, bringing it out into the open air because it's not discussed enough.

Mr. NADLER. Thank you, and I yield back.

Mr. ISSA. I thank the gentleman.

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

Mr. KILEY. Good morning. Mr. Baker, if I could start with you, I think you made a comment about how we need more of a leadership role for the United States when it comes to standard-setting organizations. I wanted to ask you just what are the ways that we could do that? There are examples of standard-setting organizations that have managed to keep the Chinese influence at bay through appropriate governance measures, so maybe that is one route. Maybe in other cases where China is gaining influence legitimately, how could we step up our involvement in these organizations, provide incentives for participation to match their influence?

Mr. BAKER. That's an excellent question because one of the things that happens with U.S. corporations that are not subsidized, when your budget goes down and your returns go down, you reduce your staffing at standards organizations. Doesn't occur with Chinese companies. When they're subsidized, they increase the number of individuals.

As far as participation, remember it's a technical standard. The idea of more engineers is a good thing. I will disagree with one thing. The standard essentiality of something that's put into a standard is not addressed by a work group. I've been in the work groups and that is specifically excluded. The technical elegance is what's included in the standard and you sort out the SEP-ness. The pProblem is nobody's sorting out that SEP-ness. It's a big question mark.

So, as far as participation, a great start would be having an initial threshold as far as the number of participants that could represent a company at a standard, changing voting rights so that the voting rights are reflected based on an individual company gets one vote and other such procedural methods. Some standards have implemented them; many others have not.

Mr. KILEY. So, how could we sort of have more of a voice in setting those rules of governance?

Mr. BAKER. That's a difficult question because the whole idea of the standardization setup is to have it privatized under the Western philosophy. In China it's slightly different.

Mark, you know more about that than I do.

As far as the government being able to regulate it, there are certain programs where there is a role for government to play in trying to be figuring out the staffing levels for particular standards.

Mr. KILEY. Let me revisit this question of sorting out the SEP-ness, as you put it, which refers to whether the patent is truly standard-essential. You made a comment earlier about how true essentiality was a matter of whether the device needs to have that technology to work. That seems maybe not quite technically the case. Isn't it a matter of whether you need to practice the patent to achieve compliance with the standard, in which case having a standards-essential patent is kind of like a tautology because once it is in the standard you have to use that technology to achieve interoperability? So, which is it?

Mr. BAKER. Congressman, it's actually—you're describing it correctly, but the technical essentiality is part of the interoperability

of the standard. If you take out that technical essentiality, it's not going to be interoperable.

Mr. KILEY. Right. So, there is the question of whether technology is necessary for a device to work and then there is the question of whether it is essential to achieve interoperability. The latter question is just a matter of the choice that was made in the standard-setting process, right? Different choices could have been made to use different technologies to achieve the same level of interoperability.

Is it your argument that this essentially renders it not a SEP patent or does that go to the setting of FRAND rates because there exist viable alternatives, not to practicing that particular standard, but rather to achieving some level of technical interoperability?

Mr. BAKER. You're actually hitting on a very good point because there are different parts of a standard. There can be the main part of the standard and there can also be appendices to the standard. So, if you're talking about what is the most technically elegant way to achieve something given all the engineering parameters around what that standard seeks to achieve, that would be what's technically essential. That doesn't mean a different way of doing it in a different part of the standard would not yield standard-essential patents if you implement that part of that standard.

Mr. KILEY. All right. Interesting. Yes, it seems like an area worth exploring. I guess part of the issue is that there is just such a mess in terms of what the standard is—probably a bad word to use standard again, but what the framework is for setting FRAND rates that has created all this confusion and uncertainty.

But, Dr. Copan, I wanted to also give you an opportunity here because I was glad you mentioned the PERA, which I have introduced, a piece of bipartisan legislation bicameral, which would go a long way toward clarifying subject matter eligibility, creating more certainty for those who are looking to innovate.

Could you talk a little bit more about how that is particularly relevant to the general theme of today's hearing, which is the ways in which China has come to use dominance of intellectual property as a major tool against the United States?

Mr. COPAN. Thank you so much, Congressman Kiley, and grateful for your leadership in PERA.

The opportunity to provide greater clarity on patentable subject matter is absolutely important in the United States with respect to the enforceability of IP rights, as well as to understand how they read on the practice of a standard. That clarity benefits not only the United States practitioners, but companies from other Nations as well seeking to access the United States market.

Mr. KILEY. Thank you. I yield back.

Mr. ISSA. Thank you. I now ask unanimous consent that three letters to the Committee in support of today's hearing be placed in the record. The first is from the Coalition Against Socialized Medicine. The second is from the organization, the Council on Innovation, C4IP. The third one is from the App Association.

Without objection, all three will be placed in the record.

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

Ms. ROSS. Thank you, Mr. Chair.

Thank you to all the witnesses for joining us today on this very important topic.

I represent North Carolina's Research Triangle, so I know firsthand that our Nation's leadership in technology and innovation depends on strong intellectual property protections. Among the most critical tools in this regard are standard-essential patents, SEPs. The backbone of technologies like 5G, Wi–Fi, and advanced video compression allow companies to build interoperable products globally.

The American innovators, as we have all discussed, then license these patented technologies to Chinese and other foreign implementers. The royalties from these licensing agreements account for a significant share of the U.S. innovators' R&D and positive trade balance.

As we have heard, China is actively undermining U.S. leadership by devaluing these patents directly harming American innovators and weakening their ability to compete globally. There are also national security threats in this situation. These tactics threaten innovation and risk ceding U.S. leadership for emerging technologies to China at a time when the State Department report shows that the U.S. already lags behind China in 37 of 44 key tech sectors from AI to biotechnology.

We need to defend the ability of American innovators to license their patents under fair, reasonable, and nondiscriminatory terms, FRAND, as we have been discussing, and push back against foreign efforts to impose artificial royalty limits.

Further, we must condemn China's abusive practices, including judicial overreach, that harms our IP holders and the integrity of international agreements like TRIPS. By doing so we can preserve the incentives that fuel technological breakthroughs and maintain our edge in global standard setting. As we face competition from China defending intellectual property rights is both an economic and a national security imperative.

Dr. Copan, in a 2022 comment you co-signed for the Renewing American Innovation Project on multiagency SEP policy you noted how devaluing U.S. patents is akin to subsidizing tech transfer to China. How should Congress, the Administration, and the private sector ensure that companies play a leadership role in R&D and standard setting for the next generation's critical technologies? For example, does the U.S. need to increase its leadership in standard-setting bodies and voluntary standard development organizations?

Mr. COPAN. Thank you so much for that important question, Congresswoman Ross. It is absolutely essential for the private sector-led process in standardization to be well understood as a national security imperative of the Nation. The conversations here today have discussed the importance of encouraging U.S. industry to maintain their presence and to contribute actively, also in partnership with the U.S. Government, with organizations such as the National Institute of Standards and Technology at the table with a role as partner and supporter to the private sector.

The opportunity is absolutely essential for the Nation to continue to have enforceability of intellectual property rights on a global basis to work with trade organizations and also with WTO to ensure that the United States' position is supported and that the ero-

sion that we have seen of intellectual property value by the actions taken by the Chinese courts is condemned by the United States and like-minded Nations.

Ms. ROSS. Thank you.

Then, Professor Cotter, I know we only have a few seconds left so I will make my question short. You talked about what goes on in courts around the world, but when it comes to setting countries' royalty rates would you agree that it is more efficient and fairer to let IP innovators and implementers negotiate a rate at arm's length as opposed to having outside intervention?

Mr. COTTER. I would say that ideally negotiations are best, but it is often the case, particularly in this particular sector, that the negotiations cannot take place before the implementers are locked into particular technological choices. So, when that happens, I think there is a necessary fallback for the courts to make decisions in appropriate cases when negotiations fail.

Ms. ROSS. Yes. Correct. Thank you so much.

Mr. ISSA. I thank the gentlelady.

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

Mr. CLINE. Thank you, Mr. Chair.

Mr. Baker, I am looking at your testimony about what should be done and how to regain leadership in the SEP–FRAND licensing process to make sure all SEP holders receive fair compensation for the use of its actual SEPs by all SEP implementers. It is your testimony that both China and the EU have proposed oversight to remove the cloak and veil from SEP–FRAND licensing, provide guidance and level the licensing playing field between SEP holders and SEP implementers.

How does that give the Chinese a strategic advantage to remove that cloak and veil?

Mr. BAKER. I don't necessarily agree with the process by either of those entities are approaching the subject matter, but at least they're making an attempt to address how you identify a standard-essential patent and also FRAND. Remember that this FRAND commitment—and Mr. Copan I think said about honoring contractual rights—when a patent holder, a SEP patent holder makes an agreement into a—participate in a standard, they get a quasi-monopoly which proliferates not only the standard, but also the use of their patent, which means they're addressing a much broader market.

The ability to actually define what is a SEP and also give some parameters, some guard rails around what FRAND means, I think those are advantages.

Mr. CLINE. Your company manufactures modules for standard-compliant communication devices. Does your company pay licensing fees for SEPs as a result?

Mr. BAKER. Yes, we're a proactive licenser and one of the biggest frustrations we have is trying to license from China companies such as Huawei and ZTE.

Mr. CLINE. Do your Chinese-based competitors pay these licensing fees?

Mr. BAKER. Ha-ha. Nobody really knows, but I would say no based on the fact that they're selling a module, as I stated, that we can't even make it at, and they're making huge profits.

Mr. CLINE. Obviously, that has a significant impact on your business when they are making these profits?

Mr. BAKER. I would say that it's probably driving Western module manufacturers out of business. If you want to have only Chinese providers of modules, that's the path you're on.

Mr. CLINE. When we consider what has happened recently with Chinese essentially intervention in the cell phone technologies and, for lack of a better term, hacking into the cell systems of American companies, the pushing out of every other kind of manufacturer—this is getting worse, not better, correct?

Mr. BAKER. Correct. I should add exponentially worse. It's an ever-evolving rate.

Mr. CLINE. So, your company is an SME that implements a number of technical standards and you have firsthand experience in licensing of SEPs. You walked us through the process of licensing SEPs for an SME. How do you assess the value of a particular SEP during licensing negotiations?

Mr. BAKER. Now, appreciate for our method may not be one that's followed by every company, and the reason for that being a small/medium-sized company. We don't have a deep pocket to do a tremendous amount of analysis, but what we do is a statistically significant analysis. So, when presented with a portfolio of 1,000 patents, we'll take 100 of them. We will independently look at those to determine, both internally and through external experts, whether or not they truly read on the standard.

The declaration that's filed by a patent holder, a SEP holder into a standards association has zero relevance to its actual SEP-ness. So, we actually undertake that burden to do that. That's unique in the industry. We do it as an—it's an overhead cost. That's the only way we can have an idea, first, we are actually using the patent in our product; and second, what would be a reasonable valuation because are the patents you hold incremental improvements or are they something truly monumental and early technology like millimeter wavelength coming out of 5G? That's brand-new stuff. That's going to be pricey.

Mr. CLINE. Is there a way that you envision that we can improve the efficiency of the system or—

Mr. BAKER. If there was an ability to actually have a determination of whether or not—close the loophole. You have a declaration put into a standards group where I believe it's going to be standards essential. You've got a patent over here in another dynamic system going through the patent evaluation system at the U.S. PTO. The two never come together to determine SEP-ness. So, you don't even know if that originally filed belief declaration has anything to do with the actual technology in the patent issued.

One thing that would be good would be to harmonize the issued patent with that original declaration and see if that technology actually made it into the standard.

Mr. CLINE. Thank you. Yield back.

Mr. ISSA. I thank the gentleman.

We now go to the gentlelady from Pennsylvania, Ms. Dean.

Ms. DEAN. Thank you, Chair Issa, Ranking Member Johnson, and, of course, to all our witnesses today, thank you for your expertise and for sharing this information.

I would like to go back. In a former life I was a professor of writing at La Salle University, and I really emphasized to my students the value of plain—English. I can't even say it. Plain English. For the nontechnical IP and technology folks out there, can we go back and tell me, tell us what is SEP? I am laughing because you talked about SEP-ness. I never even heard such a word. Excuse me for my ignorance. But could we go back? For everyday Americans, what is a SEP? What are standard-essential patents and what are the criteria to become one? Maybe Mr. Copan? Dr. Copan?

Mr. COPAN. Thank you so much for that question. I appreciate the focus on clarity in writing, communication, and thank you for raising that.

Patents provide innovators with the ability to practice their invention in the marketplace and the ability to exclude others. In the case of SEPs the inventor agrees to make that invention available to everyone who wants to practice a standard that would also be available then on fair reasonable and nondiscriminatory terms. So, it really is a commitment to make an invention broadly available to those interested in practicing.

Ms. DEAN. Thank you. I appreciate that.

Mr. BAKER. Ms. Dean, if—

Ms. DEAN. Oh, I am sorry. Yes, thank you, Mr. Baker.

Mr. BAKER. I'm going to make this very simple. If you have a car and you take the tires off it, it doesn't work. Those tires are standards-essential to the operation of the car. It's that simple. It's not a long definition. I was there when we wrote the policy guidelines. The language was simple, and it's currently being totally manipulated on what the original intent was by other people taking that simple language and trying to tell us what it means. I wrote the darn guidelines. I can tell you what it means.

Ms. DEAN. That is very helpful. Anecdotes like that are very helpful to me.

Mr. Cohen, we have heard arguments today, and I am following up really on what Mr. Massie was talking about, that SEPs are so important to certain technologies that SEP holders should not be able to obtain injunctions or exclusion orders, but doesn't that run the risk of devaluing U.S. IP rights? Why shouldn't SEP holders have the same rights as other patent holders to enforce their IP in court?

Mr. COHEN. Yes, I think Professor Cotter's given a brief explanation of why there's a different kind of balance with regard to SEPs; that is, that a SEP could be abused to exhort an exorbitant monopoly rate when it should be made available on fair, reasonable, and nondiscriminatory terms.

In theory, if you violate that obligation and negotiation, maybe you should be deprived of the right to an injunction, but you should still be entitled to a robust royalty, whatever the appropriate royalty is. That's kind of the tradeoff for inclusion of the SEP in what is more or less a public good, which is standard.

Now, having said that calculation, which was first expressed in a case in Europe called *Huawei* v. *ZTE*, can easily be abused. What

constitutes good-faith negotiations? How much do I have to disclose? What if the implementer delays and delays for years and years? In a world such as China where they insist in equality in rates, shouldn't I disadvantage the party who has delayed and delayed in coming to the table and negotiating? It shouldn't only be one-sided on the side of the inventor or the patent owner. You have to also look at the behavior of the implementer.

Mr. DEAN. Do you have any comments on a bill that I am a part of with Representative Moran, the RESTORE Act, which I think was talked about before I came into the hearing. I apologize for missing that. It would provide patent owners who have proved infringement in court the rebuttable presumption that they are entitled to an injunction to protect the patent. I believe in strong patent rights and strong IP rights. They are essential. Do you have an opinion on RESTORE?

Mr. COHEN. Well, I can say that it severely disadvantages U.S. courts in the competitive battle to assert jurisdiction over FRAND disputes to rarely have an injunction available when there is infringement, including when there is delay. It particularly disadvantages those companies that may not be implementing that may simply be engaged in licensing the patents.

We should keep in mind that the U.S. is the largest licensor of technology in the world by a long shot, and a large part of those licensing agreements, particularly in markets like China, are unrelated parties, so it's not General Electric to its subsidiary. It's a Qualcomm to an OPO, or whatever the case may be. This is really important for the innovative capacity of U.S. companies to derive the appropriate amount of revenue.

I believe that I support this proposal to go back or have a presumption of availability of injunctive relief.

Ms. DEAN. I appreciate that.

Mr. Chair, thank you. I yield back.

Mr. ISSA. I thank the gentlelady.

We now go to the gentleman from Maryland. As long as he promises not to mention the Army-Navy game, I will grant him five minutes.

Mr. IVEY. Thank you, Mr. Chair. I have ribbed my Governor enough about that game, so I will leave it at that.

Just to followup on what Ms. Dean just asked—I think it is Dr. Copan—you mentioned the RESTORE Act in your written testimony, I believe in your oral testimony as well. I was curious about your answer to Ms. Dean's question about the view about that bill.

Mr. COPAN. Yes, thank you so much. Indeed, I did mention that in my testimony, the important step forward that represents for U.S. innovators.

I do believe that it is important to provide that kind of position of strength for the United States innovators to know that they have the ability to take action in support of their invention and to deal with bad behavior in the marketplace those who are holding out, and indeed to have clarity also in the courts of the ability to move forward with injunctive action when other remedies fail.

Mr. IVEY. Thank you. Mr. Baker, I want to go back to your testimony. You said—let me just—I will phrase it as a question. How do we keep Western module makings in business, because I think

your testimony was the way things are moving; they will be forced out of business in relatively short order?

Mr. BAKER. Leveling the playing field. We're a component manufacturer. We do not operate at the end-product level. Leveling the playing field with predictability within the marketplace so that we know that when we are making a component we not only have access, direct access to patent rights which allows us to innovate—because when you have this module that's standard-essential and you're using it, you then have to take this module and you have to integrate it into whatever the device is, whether it's a car alarm, whether it's a tracking device. So, we are innovators also. We need direct patent rights, which means a direct patent.

If you go ahead and you do just end-product licensing, what you make as a commoditized producer and manufacturer of these products, that only serves the Chinese purposes even more so because of the way that they actually do business. Leveling the playing field and requiring everyone who is participating and using those patents to have predictability in how much we will need to pay for the patents in an aggregate form and also what is the true value of the collective standard-essential patents used by that product, that would go a long way to keeping us in business.

Mr. IVEY. Let me generalize on your answer there, because I think there have been a number of comments in the testimony about how to deal with the activities of the Chinese and how to sort of address some of the misconduct. We are going to make efforts, we are going to pressure them, we are going to join different organizations and exert additional influence. Not to be cynical, but I don't know that they are always responsive to those sorts of things.

What actual sorts of legal and economic leverage do we have that we can assert to force more egalitarian behavior or more—a level playing field of behavior, so to speak, with respect to the way China's handling these issues?

I will start with Mr. Cohen, I guess.

Mr. COHEN. Yes, it's a great question. It's one that I think of constantly. Obviously, one response is tariffs. So, that's something that I think President Trump is probably going to look at.

Mr. IVEY. That is timely, yes.

Mr. COHEN. So, that—

Mr. IVEY. Elaborate on that a little bit. What is your take there?

Mr. COHEN. Well, the problem I have with tariffs is that if you start imposing tariffs for an IP-related issue, it's going to invite retaliation by China perhaps on our own IP rights in China. So, I'm concerned about China's capacity to cross-retaliate.

We have an IP system that to this day basically treats every part appearing in a U.S. court, foreign, national, or local equally. We begin to erode that system. We have to really think of the global consequences of eroding that system. That concerns me because we're seeing the erosion of MFN concepts in tariffs. Is IP next? What are the consequences for that? That's something to think about.

Mr. IVEY. Let me go to Mr. Baker.

Mr. BAKER. Look, I have to agree with the tariffs also. Although we are not strong supports of subsidies, if we're going to level that playing field, you have to look at all options.

Mr. IVEY. Mr. Cotter?

Mr. COTTER. I think the options—it's very difficult to figure out what the options are for compelling China or any other nation to do what we want them to do with regard to intellectual property. Most of it I think is going to have to be carried on through diplomacy, where possible through the WTO, but that is something that is something that takes a lot of time and has its defects.

Mr. IVEY. Doctor? Still looking for the cudgel here.

Mr. COPAN. Yes, I think that this is a challenge that also can involve stopping importation of goods into other Nations that are very clearly infringing. As China seeks to access global markets, working with other Nations to ensure that they're not accessing them with infringing products is an important step to consider.

Mr. IVEY. Thank you for your comments. I know that you had additional things that you wanted to say. My time is expired. I yield back. Thank you for your testimony.

Mr. ISSA. It was a good use of your time.

Last and probably least, I am going to wrap this up with a group of questions.

First, I would like to let you know that we had four pages of questions with followups and we didn't get to them all. So, we will be sending those to each of you and asking you to respond for the record, but there are a number of things that I think in summary that I would like to touch on.

Second, although this hearing was very much put out as relative to China, I think it is fair—and an acknowledgment from all of you that there is no question at all that although China is the most unfair player, there are deep concerns on this panel about Britain, Germany, and the EU, in general, and their desire to lower their cost of SEP licensing. Is that fair to say?

Mr. COTTER. If I may, I'm not sure that I would characterize it that way exactly. I don't think honestly that the courts in these countries necessarily have an agenda. They have very different perspectives. So, the U.K. courts, probably the most similar to our own, take a fairly balanced approach to these issues. The German courts, as I've mentioned, see injunctive relief as a matter of right, and so that tends actually to give the SEP owners the advantage in those cases.

That may change. As I mention in my written testimony the European Commission may have other views on that but remains to be seen.

Mr. ISSA. Mr. Baker, that last point, if the whole world decided that SEP is great but injunctive relief is essentially the default, how would that affect your ability to go to market?

Mr. BAKER. It would effectively shut us down. The injunctions without first an analysis of whether or not an offer is FRAND, you can't determine if there's a holdout. If you can't determine if there's a holdout, why would you issue the injunction?

Mr. ISSA. The comment of diplomacy was used. I appreciate that, serving on the Foreign Affairs Committee, but let me characterize a question for a moment. The most valuable diplomacy the United

States has is probably immersed over in the Department of Commerce, not the Department of State. Is it fair to say that China's unfair activities that have been outlined today and Britain and others' desire to have their courts make global decisions, and this idea that you can be banned hypothetically from seeking any relief elsewhere—all those would be offset by U.S. diplomacy that simply said, you want access to our market; those rules are not acceptable. Is that a fair approach for the new administration to look at, that access to our market is so valuable that all these activities that we see as unfair should be negotiated in light of access to our economy?

Anyone disagree with that? Dr. Copan?

Mr. COPAN. Yes, let me comment. I think these are very, very important points that you're raising. I do believe that the process that the U.K. courts have utilized to be very thoughtful in their analysis actually provide a really positive example for the United States with the United Kingdom as a close ally and partner. So, I think rather than—

Mr. ISSA. Hold on a second. You are saying that a Federal judge, otherwise known as somebody who thinks he is God, should simply say we are going to make a decision for the whole world even though the Constitution gives him no such power, and that this would be good if we mirrored what Britain has done, on at least a few occasions?

Mr. COPAN. I'm talking about the thoughtful approach of coming to judgment.

Mr. ISSA. My Article III judges are thoughtful. The question is more a matter of jurisdiction and sovereignty. So, Mr. Baker, you have operated in all these areas. I know it is frustrating to have 200 countries, each of which asserts its own sovereignty, but is it fair to say that something between we will make a decision for the world and then penalize you if you try to go to another country and seek remedy different there and the idea that there is only standard? That is really what global negotiations is about, is to try to cooperatively find it, not find it based on the decision of one judge, no matter how thoughtful.

Mr. BAKER. Patents have regional boundaries. There's no doubt about that. A U.S. patent is valid in the U.S., and no place else. If there's going to be an exception to that rule relative to licensing, it either comes from the parties that say we agree to a global license coming out of a U.S. court, or it can be by the U.S. Government, or through diplomacy striking a negotiation where you find a broader than the regional application for a patent.

Mr. ISSA. Now, there was one point brought up early on, and it was the fact that if I am facing this—I love holding up my Chinese patent. It is small and worthless. If I am in a Chinese court, in nine months I am going to be through my entire appeal process.

Is that not true, Mr. Cohen? If I am in a Chinese court, but I am an American patent holder, do I get done in nine months or is that a one-way street currently?

Mr. COHEN. By law it's a one-way street, which is to say that the mandatory timeframes for civil litigation including the appeal in China do not apply if it's a foreign-related case. What is a foreign-related case is an undefined term, but I think your appearance

from the United States in a Chinese court would clearly be a foreign-related case.

Cases will get drawn out frequently because they're afraid of the diplomatic context, the political context, or perhaps for other reasons, but they do get drawn out for foreigners.

Mr. ISSA. So, in closing, and there will be a lot more questions that you have kindly said you will answer for the record, if there was one thing in our dealing with China's access and China's implementation of their patents that you would want us to look at for next year would be—I guess it is two things. One is to find a way to match that nine months as best we can in the U.S. to bring some level of parity, if at all possible.

Then, first—and I know the ITC was mentioned; we will leave that where it was for now. Second, deal with the lack of reciprocity in that—you have said it very well, Mr. Cohen, in the U.S. we do not look at the country of origin in an Article III court case, or even at the PTO. China does. If that continues then we will never really—will get justice between the two. It would be like the old days with the Russian judges at the Olympics.

Anyone see that as not one of the key areas that we have to work to change?

Any last closing remarks from any of the panelists before I send you off with your homework in writing? With that—Yes?

Mr. BAKER. I would just add that my comments today were for small-and medium-sized companies that represent 90 percent of the companies that are building out IoT. They're not large companies. Much as you started with your technology and then it grew into a larger entity, that's the type of customer that we have. If you license us and there is a SEP–FRAND relationship that can be struck, you're licensing 2,000 people—or 2,000 companies at a time that will never pay royalties to a major patent holder if you don't license through us. If you want to go to the end product, the money won't be there in a U.S. court to sue them and you're leaving that money on the table.

Mr. COPAN. If I may add something?

Mr. ISSA. Yes.

Mr. BAKER. It's not fair.

Mr. ISSA. Please.

Mr. BAKER. I really appreciate the opportunity to join you today. The important focus on small- and medium-sized enterprises as well, because these intellectual property enforceability issues are existential for these companies, the ability to continue to operate profitably on a global basis where we see an uneven playing field.

The United States as a free market economy also has great benefits to lead the world by example and to take an approach that is not regulatory-forward but enables the free market to really work, and then to work diplomatically and, to the point that was raised earlier, with economic force to ensure that China does pay attention.

Mr. ISSA. Thank you. Yes?

Mr. COTTER. Just briefly, I would just urge the Subcommittee to be mindful that whatever measures Congress may see fit to pass to strengthen patent rights—they may see that as a desirable thing to do to respond to China or to increase incentives for innovators,

but be mindful that those—some of those provisions, some of those actions could potentially backfire against other U.S. companies that need access to technology that should not be excluded from the market, that should not be threatened by patent assertion entities wrongly. I think there needs to be a balance.

Mr. ISSA. Thank you. As we conclude, I would like to yield to the Ranking Member if he has any end-of-year comments, particularly if they are related to the Ranking Member of the Full Committee who has appeared for the last time in that particular role here today.

Mr. JOHNSON. Well, the gentleman is being quite judicious today and I shall adopt that same stance toward Ranking Member Jerrold Nadler, who has been Ranking Member or Chair of this Committee I believe for 15 years. He is stepping down from that position as of the 119th Congress. He will become just a singular valued Member of our Committee and Jamie Raskin will assume the Ranking Membership responsibilities.

So, at this time on behalf of all the Members of the Judiciary Committee on this side of the aisle I want to thank Jerry for his service, recognize the great service that he has rendered, wish him the best as we all move forward together.

I thank once again the Chair of this Subcommittee, my friend and partner Darrell Issa, for the value that he has brought to the Committee at large and his leadership of this Subcommittee.

Once again, happy holidays to everyone and thank you all for your very great testimony today. Thank you.

Mr. ISSA. Thank you.

Mr. JOHNSON. I see a Member, a former Member of Congress, Ed Perlmutter, who is in the House today. I want to shout him out, recognize him.

Mr. ISSA. With his Christmas tie on.

Mr. JOHNSON. Yes, that is right. I see Jamie Simpson who is here, former lead staffer on the Committee. Also, David Lachmann, a former Committee staffer is here as well. So good to see you all.

Mr. ISSA. Thank you. I will note for the record that Ranking Member Nadler has expressed that he will continue to be on this Subcommittee and has been both Chair and Ranking Member of this Subcommittee additionally over the years.

This concludes today's hearing, and I want to thank all our witnesses for what they have done for us here today and what they have agreed to do in the next five days to come.

Without objection, all Members will have five legislative days in which to submit additional written questions for the witnesses and additional materials for the record.

Without objection, for the year we stand adjourned.

[Whereupon, at 11:42 a.m., the Subcommittee was adjourned.]

All materials submitted for the record by Members of the Subcommittee on Courts, Intellectual Property, and the Internet can be found at: *https://docs.house.gov/Committee/Calendar/ByEvent.aspx?EventID=117764*.

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