



STANDARDS: AMERICA'S PATH TO GLOBAL LEADERSHIP (AGAIN)



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For decades, America has led global technological innovation, with industry standards like the World Wide Web, Wi-Fi, and USB driving economic growth. However, shifts in policy and practice now threaten this leadership. Policies that impose participation controls and weaken patent quality directly undermine the ability of American companies to compete globally. Meanwhile, deliberate abuses of FRAND (Fair, Reasonable, and Non-Discriminatory) commitments for licensing standard-essential patents ("SEPs") stifle innovation and limit our access to emerging markets. This article examines the role of patents in standards development, the importance of fair licensing, and the challenges posed by over-declaration, injunction abuse, and restrictive licensing models. Policy missteps and aggressive litigation strategies undermine the integrity of SEP licensing and harm the ability of American companies to compete. The article calls for stronger enforcement of FRAND principles, balanced patent policies, and greater industry involvement to restore and maintain leadership in global standardization. Decisive action from both government and industry will keep standards driving American interests in innovation, competition, and economic growth.

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When I first became involved in standards in the 1990s at Intel, I noticed how American businesses set the direction for massive economic growth through innovation and leadership. Examples include the World Wide Web, wireless technology, personal computers, smartphones, satellite navigation, and more. Each of these transformative advancements relied on standards — and in this, too, the United States led the way.

Over time, however, I witnessed troubling trends threatening the glue holding this system together. If left unchecked, these shifts could stifle innovation, fragment global markets, and weaken U.S. technological leadership.

This article examines how businesses use patents and why ensuring broad licensing commitments is essential. It then explores how these commitments are undermined, discuss potential solutions, and conclude with a call to action to restore the system’s integrity.

01

BACKGROUND ON STANDARDS

Standards² establish a widely accepted set of requirements for specific industries. For instance, USB standards define the physical dimensions, electrical characteristics, and communication protocols that enable modern computers, phones, and other devices to receive power and connect seamlessly with one another. The primary purpose of standards is to ensure consistency, quality, and interoperability across devices made by different manufacturers — such as USB flash drives connecting effortlessly to many devices.

Standards are typically developed through collaboration among independent companies, often direct competitors, that voluntarily unite to define these requirements. This process requires significant contributions, including manpower and technology, that is often protected by intellectual property rights. Standards development is not altruistic. It benefits contributing companies by expanding the market for their products and services. Such collaboration relies on assurances that no participant will unfairly disadvantage others, such as by using its control over essential intellectual property rights to exclude others.

² In this article, the term “Standards” refers to those developed by standard-setting organizations, including international bodies like ISO, IEC, and ITU; regional groups such as ETSI, CEN, and CENELEC; incorporated entities like IEEE, DVB, and ANSI standards-developing organization members; and industry groups like the USB-IF and the USB Developers Forum.

02

HOW COMPANIES USE PATENTS

A. Background on Patents

A patent is a statutory right granted by a government (typically a nation-state) that provides the patent holder with the exclusive right to exclude others from making, using, selling, offering for sale, or importing the patented invention within that jurisdiction for a limited period, subject to certain conditions. The patent holder can generally prevent anyone from practicing the patented invention without permission. This exclusivity allows the patent holder to protect the invention for its own use or commercial advantage.

A patent holder may choose to license certain rights to other parties in exchange for agreed-upon consideration. Examples of such consideration include cross-licensing with other intellectual property rights, granting access to specific technology or products, monetary compensation, or a combination of these. The patent holder has full discretion over whether to assert its patent against infringing products or to refrain from enforcement.

B. Standards-Essential Patents

Standards often incorporate patented technologies, known as standard-essential patents (“SEPs”), which are likely to be practiced when implementing the standard. Because patents give their owners the power to exclude others from using their technologies, any SEP holder can potentially obstruct the adoption of a standard. For this reason, standards-setting organizations (“SSOs”) typically seek assurances from holders of potential SEPs, particularly those involved in developing the standard, to mitigate this risk.

A SEP holder may voluntarily take one or more of the following approaches:

- *Exclude its patent from the standard* by refusing to license it, keeping the patented technology proprietary for its own business interests.
- *State that it does not own any SEPs that read on the standard* and waive the right to assert a patent that later turns out to be essential.
- *License its SEPs* to standard implementers, typically under fair, reasonable, and non-discriminatory

(“FRAND”)³ terms or another agreed-upon framework.

This framework helps balance the interests of patent holders and implementers (who may also be patent holders), ensuring broad adoption of the standard while maintaining incentives for innovation.

C. In Summary

For standards to succeed, SSOs must proactively identify and address SEPs that could obstruct implementation. If a blocking patent is suspected and no assurance is available, SSOs may attempt to redesign the standard to work around it or, in extreme cases, revoke the standard to avoid infringement risks.

While some patent holders may waive their rights in favor of widespread adoption — particularly when the standard aligns with their business interests — this is uncommon. More frequently, SEP holders support standards by committing to license their patents under FRAND terms, sometimes even royalty-free. This licensing framework ensures fair competition, encourages broad industry participation, and incentivizes continued innovation if honored.

The integrity of this system depends on firm commitments and enforcement mechanisms. When SEP holders undermine these commitments — whether through excessive royalty demands, exclusionary practices, or opportunistic litigation — it threatens the very foundation of industry standards. To maintain global leadership and ensure U.S. companies remain competitive, the United States must uphold FRAND principles, promoting fair licensing while protecting incentives for innovation.

D. Why FRAND? Understanding the Breadth of Business Strategies

As we have seen, companies view standards as a way to expand markets for their products and services. For this reason, participants in standards development often voluntarily contribute their technologies to standards in exchange for defined benefits — rather than excluding others from using their patented inventions. These companies’ licensing strategies often fall under one of the following three approaches:

- *Defensive Licensing Approach:* Most companies adopt a defensive strategy, prioritizing market growth through the standard’s adoption. As long as others do not assert patents against them, they typically forgo formal licenses but reserve the right to require reciprocal SEP licenses or royalties if faced with claims from another SEP holder. As a result, most SEP hold-

ers do not actively seek royalties unless prompted by defensive needs or market conditions. For example, during my time with the PCI SIG (a hardware standard for computer buses), over 700 members agreed to a FRAND commitment, yet only one regularly pursued royalties.

- *Royalty-Driven Strategy:* Some companies, especially in telecommunications, treat SEPs as a primary revenue source. Notable examples include Qualcomm, Nokia, Ericsson, InterDigital, and Huawei, all of which maintain extensive SEP portfolios. Additionally, some entities, known as non-practicing entities (“NPEs”), do not manufacture products but focus solely on generating royalty revenue from their SEPs.
- *Royalty-Free but Otherwise FRAND Strategy:* Some standards require widespread adoption, which often depends on a clear commitment from most, if not all, developers to offer licenses without royalties. For example, USB, Bluetooth, and others. The World Wide Web and its associated internet protocols likely would not have achieved mass adoption without SSO policies strongly mandating royalty-free licensing, provided the other party reciprocated. This RF-RAND commitment played a crucial role in enabling the internet’s explosive growth, fostering a thriving ecosystem of proprietary solutions and applications.

The form and scope of negotiated licenses can vary widely. Large companies may engage in broad cross-licensing agreements covering extensive patent portfolios, while others may negotiate licenses exclusively for SEPs. Smaller companies and startups often adopt a mix of strategies tailored to their specific goals — whether to protect innovations, generate revenue, or strengthen market position.

Since nearly every negotiation is unique, the FRAND commitment offers the flexibility needed to accommodate the ever evolving combinations of business strategies. However, this flexibility can also create ambiguity. SSOs lack both the expertise and legal authority to adjudicate disputes between members. Moreover, as organizations composed of direct competitors, SSOs could face significant antitrust risks and potential liability if they attempt to intervene. Therefore, if disputes around the meaning or scope of FRAND arise, they are often resolved through litigation or mutually agreed arbitration.

³ In this article, the terms *Fair, Reasonable, and Nondiscriminatory* (“FRAND”) and *Reasonable and Nondiscriminatory* (“RAND”) are used interchangeably and have the same meaning.

03

HOW THE ADVANCEMENT OF AMERICAN COMPANIES IS BEING UNDERMINED

A. Government-Mandated Participation Controls

As noted at the beginning of this article, American companies have long led the world in standards development. However, in May 2019, the U.S. Commerce Department placed Huawei on its Entity List — restricting American companies from engaging with Huawei. This notification created widespread confusion over whether American companies could participate in standards development efforts involving Huawei, including those organized by international bodies such as ETSI, CEN, CENELEC (Europe), ITU, ISO, and IEC. These standards were fundamental to the global economy and did not involve sensitive or controlled technologies.

The impact on American interests was severe, and clarifying statements took considerable time. Critical standards development work was delayed and, in some cases, progressed without U.S. input. Since many SSO leadership roles had been held by American personnel, their forced absence led to many of those positions being quickly filled by others, including Chinese personnel. This replacement of personnel in leadership positions weakened American influence in global standards-setting, making it significantly harder for American participants to regain leadership roles in the future.

Moreover, American companies lost visibility into drafting key standards, putting them at a competitive disadvantage compared to other participants who could align their manufacturing strategies with emerging standards. Additionally, this action provided an excuse for other countries, including China, to exclude American companies from participating in their local standards efforts, further marginalizing American influence.

Going forward, we must recognize the importance of independent, private-sector standards-setting. The standards body should determine participation and generally remain open to all materially interested parties. While concerns over technology transfer must be carefully evaluated, restrictions should be considered on a case-by-case basis rather than through broad, sweeping exclusions that risk harming American competitiveness.

B. Efforts to Undermine American Injunction Criteria

When correctly applied, a patent holder's right to exclude others from practicing a patented invention is essential for

protecting proprietary technology intended for exclusive use. However, by voluntarily making a FRAND commitment, the patent holder acknowledges that:

1. Monetary compensation is sufficient to remedy SEP infringement.
2. Legal remedies are available, typically through U.S. District Courts.
3. Standardization serves the public interest, promoting innovation and market growth.

The U.S. Supreme Court's 2006 decision in *eBay v. MercExchange* reinforces this principle, supporting American standardization efforts and FRAND commitments by allowing courts to determine appropriate monetary damages in patent licensing disputes rather than defaulting to exclusionary injunctions.

Absent proper cause, seeking an exclusionary SEP injunction contradicts the core elements of a FRAND commitment. A patent holder who voluntarily agreed to license its SEPs on fair, reasonable, and non-discriminatory terms cannot later bypass this obligation to demand excessive royalties and egregious terms. Using SEP injunctions to gain leverage in licensing negotiations effectively sets the license cost based on the threat of market exclusion rather than the intrinsic value of the SEPs, vastly inflating the price.

Negotiations under the threat of injunction not only distorts the value of intellectual property but also allows SEP holders to unfairly profit from the contributions of others — such as their R&D, capital expenditures, and labor — essentially taxing the entire innovation process rather than being compensated solely for their own invention.

In summary, the *eBay* decision upholds the public interest in standardization. Efforts to exploit SEPs for personal gain or to unfairly profit from the innovations of others must not undermine the FRAND commitment. In global litigation, courts must weigh public interest factors, proper royalty apportionment, proportionality, and compliance with anti-trust laws while adhering to established legal frameworks. In the EU, this behavior should include rulings such as the Court of Justice of the European Union (“CJEU”) decision in *Huawei v. ZTE*, which sets procedural safeguards for SEP enforcement.

D. Encouraging Weak Patents Undermines Economic Progress

A draft bill currently before Congress, known as the PREVAIL Act, proposes several measures that would make it significantly more difficult to challenge patents at the USPTO Patent Trial and Appeal Board (“PTAB”). Proponents argue that these changes would strengthen patent enforcement by making asserting a broader range of patents easier.

However, the U.S. patent system thrives on promoting genuine innovation, which drives economic growth. Restricting the ability to challenge weak patents weakens the value of true innovation and encourages other nations to flood their systems with low-quality patents, harming the ability of American companies to compete in their markets.

This issue is particularly concerning for SEPs, where the sheer number of potential infringement claims⁴ makes the ability to challenge weak patents even more critical. If low-quality SEPs become harder to contest, American companies will face increased litigation risks and excessive licensing demands, undermining the very purpose of FRAND commitments and fair competition.

In conclusion, the PREVAIL Act and similar legislative proposals threaten the economic benefits of truly innovative patents. Moreover, American companies could face significant harm if other jurisdictions adopt similar measures. Future legislation should prioritize maintaining rigorous oversight to ensure that only valid, high-quality patents receive protection, safeguarding both innovation and American economic interests.

E. SEP Injunction Abuse

As discussed above, exclusionary injunctions are a potent tool that should only be invoked in exceptional circumstances, particularly in the context of SEPs. However, some entities exploit the threat of injunctions to extract excessive royalties far beyond the intrinsic value of their patents, harming both competition and consumers.

A notable example affecting an American company is the 2022 case of *IP Bridge v. Ford* in Germany.⁵ In this case, IP Bridge, a non-practicing entity, asserted a single wireless patent — acquired from a third party — against Ford Motor Company. This patent was one among thousands of SEPs self-declared as potentially essential to the 4G cellular standard. Yet, the German court ordered Ford to recall and destroy all vehicles infringing on IP Bridge's asserted single 4G patent. A recent analysis of the case⁶ noted that Ford's annual exposure in Germany amounted to

\$1.4 billion (€1.28 billion), including lost vehicle sales and the recall/destruction of existing vehicles. Compare that to the estimated \$66.5 million (€60.8 million) in *global* royalties for an Avanci *portfolio* license. While Avanci's pricing may not reflect the intrinsic value of its patent portfolio, the stark 21-fold gap between licensing costs and business risk remains significant. The financial impact of this injunction was grossly disproportionate to the value of a single patent.

The sheer scale of financial disruption from an exclusionary injunction undermines any realistic notion of fulfilling a FRAND commitment. Such cases also create a chilling effect on other companies implementing the standard. SMEs often lack the financial, legal, and technical resources needed to challenge improper injunction threats. This disproportionate burden on SMEs, including American small businesses, is particularly concerning in emerging markets, such as the Internet of Things ("IoT"), where SMEs play a critical role in innovation and market growth.⁷

In conclusion, the PREVAIL Act and similar legislative proposals threaten the economic benefits of truly innovative patents

This issue poses a serious challenge for American companies of all sizes. A striking example is the 2012-2013 litigation in which the non-practicing entity *Innovatio LLC* sued over 350 American retail, lodging, fast food, grocery, and other businesses in U.S. District Court⁸ over alleged Wi-Fi SEP infringements.

These concerns remain highly relevant today, as demonstrated in a recent Joint Letter to the Administration,⁹ underscoring the ongoing risks that excessive SEP assertions pose to U.S. businesses and consumers alike.

4 As of the date of this article the ETSI Patent Database reports Patent Licensing Statements self-declaring essentiality of over 108,000 patent families, <https://ipr.etsi.org/>.

5 See *Specialist chapter: How to identify and prevent patent injunction abuse in high-stakes litigation*, IAM Patent Litigation Review, Earl Nied (January 2025), <https://www.iam-media.com/review/the-patent-litigation-review/2025/article/specialist-chapter-how-identify-and-prevent-patent-injunction-abuse-in-high-stakes-litigation> for more details on this case and injunction abuse.

6 'Injunctions in litigation involving SEPs', Charles River Associates, John Hays and others, (July 2024), <https://www.crai.com/insights-events/publications/injunctions-in-litigation-involving-seps/>.

7 See *Licensing Standard-Essential Patents in the IoT – A Value Chain Perspective on the Markets for Technology*, SSRN, Joachim Henkel, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4050472 for further information.

8 11-9308 - *Innovatio IP Ventures, LLC, Patent Litigation*, https://www.govinfo.gov/app/details/USCOURTS-ilnd-1_11-cv-09308/summary.

9 *Joint letter between the National Retail Federation and 11 other trade associations to the President and his administration*, (January 17, 2025), <https://www.saveourstandards.com/wp-content/uploads/2025/01/Joint-letter-to-Trump-administration.pdf>.

In conclusion:

- Injunctive abuse distorts fair competition and harms consumers.
- American companies are vulnerable to foreign entities misusing exclusionary injunctions to demand excessive royalties.

Solutions:

- U.S. courts must uphold the *eBay* decision to prevent injunction abuse in SEP disputes.
- When considering injunctive relief, the U.S. International Trade Commission (“ITC”) and foreign jurisdictions should carefully weigh the public interest, proportionality, and competition concerns.
- Follow the apportionment principles and adhere to established antitrust guidelines, particularly those outlined in *Huawei v. ZTE* (“CJEU ruling”), to ensure fair licensing practices.

F. Over Declaration

A 2023 research study¹⁰ funded by the European Commission found that only 20 to 40 percent of patents declared to the European Telecommunications Standards Institute (“ETSI”) are likely to be truly essential. Additionally, a recent analysis by a former European Patent Office (“EPO”) director¹¹ revealed that the EPO revoked 46 percent of patents that faced opposition challenges on average. As a result, licensees may find themselves negotiating licenses where up to 89 percent of self-declared SEPs are potentially invalid or not infringed by the standard.

Over-declaration allows SEP holders to artificially inflate the perceived value of their patent portfolios, making it significantly harder to assess the actual intrinsic value of legitimate SEPs. The sheer volume of declared patents distorts fair licensing negotiations, undermining FRAND commitments and driving up costs far beyond what the actual essential patents justify.

To address this issue, damages assessments and royalty negotiations must account for over-declaration distortions when determining fair compensation. Additionally, the *European Commission’s Draft Proposal on SEPs*¹² aims to increase transparency and clarify the SEP landscape, potentially easing the burden on manufacturers — especially SMEs — and streamlining the licensing process.

G. Avoiding the FRAND Commitment

Several years ago, IPR policy committees at most major SSOs recognized the risks associated with patent transfers in the context of FRAND commitments. Specifically, they saw the potential for a standards developer to commit to FRAND, only to later sell or transfer the patent to another entity, which might then attempt to deny any obligation to uphold the original FRAND commitment. This concern was amplified by the possibility of patents changing hands multiple times, further distancing them from the original commitment.

To address this, almost all SSOs incorporated strict by-laws and IPR policies requiring that FRAND commitments apply to all successors in interest. However, despite these safeguards, some entities making FRAND commitments have transferred or otherwise ceded control of patents to recipients who later claim the original FRAND obligations do not apply to them.

A notable example is the Avanci Patent Pool, which asserts that, despite all patents in its pool originating from its ETSI members (including Qualcomm, Ericsson, Nokia, Huawei, Interdigital, and others), Avanci itself is not bound by ETSI’s FRAND commitments.¹³ This issue has yet to be thoroughly tested in court, but Avanci’s explicit claim that it has no obligations to the ETSI commitments made by its members for 4G and 5G SEPs is concerning and contradicts the spirit of FRAND commitments made by all other developers.

“To address this issue, damages assessments and royalty negotiations must account for over-declaration distortions when determining fair compensation

The courts will ultimately decide this issue, but I firmly believe that once a party makes a FRAND commitment, it should remain bound by that commitment. Moreover, to the greatest extent possible, the spirit and intent of the FRAND obligation should carry forward to all successors in interest,

10 *Disclosure rules and declared essential patents*, Research Policy, Vol. 52, Issue 1’ Rudi Bekkers and others, (2023), <https://www.science-direct.com/science/article/pii/S004873332200141X#bbb0085>.

11 *EPO defends appeals record amid quality criticism*, Rory O’Neill (2023), <https://www.managingip.com/article/2crl9845l25riskccstfk/epo-defends-appeals-record-amid-quality-criticism>.

12 *European Commission’s Draft Proposal on Standard Essential Patents (SEPs)*, (April 27, 2023), https://single-market-economy.ec.europa.eu/system/files/2023-04/COM_2023_232_1_EN_ACT_part1_v13.pdf.

13 *Tesla Inc. v. Idac Holdings, Inc.*, Claim No. HP-2023-0042 [2024] EWHC Pat (oral arg., May 20-22, 2024).

ensuring that subsequent parties cannot evade these essential commitments.

H. Refusal to License

Some SEP holders restrict licensing to end-use device manufacturers, bypassing upstream suppliers who play a crucial role in standards development and often hold innovative SEPs themselves.

This downstream-only licensing model shifts the burden of negotiation and compliance onto device manufacturers, adding to their operational complexities and production costs. Since device manufacturers may not have participated in the development of the standard, the related technology, or the innovations contributed by upstream suppliers, they often struggle to assess the true value of a SEP license in comparison to the technological contributions of their upstream suppliers.

Meanwhile, suppliers — who invest in R&D and contribute many essential innovations — face significant risks as their components/modules remain exposed to infringement claims. This inability to negotiate for themselves creates an environment of uncertainty, where costs become unpredictable and difficult to manage for suppliers and their customers.

My preferred solution is to conduct licensing negotiations at the earliest point in the supply chain where infringement occurs. This approach ensures that discussions focus on the specific technology at issue, preventing the misattribution of value from other inventions and avoiding redundant negotiations. Additionally, since there are typically fewer upstream suppliers than downstream manufacturers, this method streamlines the process, reducing complexity and improving efficiency.

If licensing occurs downstream, it is essential to ensure proportionality and proper apportionment to prevent compensation from being inflated by the value of others' inventions.

05

CONCLUSIONS

The future of American leadership in standards depends on preserving fair, transparent, and innovation-driven policies that uphold the core principles of FRAND. As demonstrated throughout this article, challenges such as abusive SEP injunctions, over-declaration, anti-competitive licensing practices, and the erosion of FRAND commitments threaten not only market competition but also the technological and economic strength of the United States.

To safeguard America's role in global standardization, it is essential to ensure clear and enforceable FRAND commitments, prevent abuse that distorts licensing negotiations, and strengthen oversight to protect against anti-competitive behaviors. Courts, policymakers, and industry leaders must work together to create a balanced patent and standards ecosystem that encourages innovation, promotes global competitiveness, and ensures that standards remain a force for economic growth, not an avenue for exploitation.

To maintain American leadership in global standards, policymakers must reinforce FRAND commitments, prevent patent abuse, and support transparent licensing practices. Failure to act risks ceding influence to foreign entities that may prioritize their national interests over open and fair standardization. Industry leaders and policymakers must act now to protect the system's integrity and ensure that standards continue to drive innovation and economic growth in American interests. ■

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