Tech® REG CHRONICLE

STANDARD ESSENTIAL PATENTS: TRENDS & STRATEGIES

MARCH 2025

CPI COMPETITION POLICY® INTERNATIONAL

Competition Policy International, a What's Next Media and Analytics Company

LETTER FROM THE EDITOR

Dear Readers,

This edition of the CPI TechREG Chronicle explores the interplay between intellectual property, standard-essential patents ("SEPs"), and licensing, competition, and global leadership in innovation. The authors offer in-depth analyses of contemporary legal and policy challenges, highlighting key developments worldwide.

Earl Nied opens with a historical and forward-looking perspective on America's role in standards development, emphasizing the importance of maintaining global leadership in this arena. He explores how U.S. companies have historically driven innovation through standardization but warns of emerging threats, including policy shifts, litigation strategies, and geopolitical challenges. Nied argues that upholding FRAND principles and ensuring robust enforcement mechanisms are essential to preserving the integrity of the standardization system and fostering continued technological progress.

Michael A. Carrier & **David Katz** turn their attention to the role of standard-setting organizations (SDOs) in addressing FRAND evasion. Their article highlights the growing concerns surrounding patent pools like Avanci and the ways in which SDOs can reinforce FRAND commitments to prevent anti-competitive behavior. Drawing from historical precedent and recent legal developments, they advocate for increased accountability measures within SDOs to mitigate SEP holdup and ensure a fair licensing environment for implementers.

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Enrico Bonadio & **Arjun Solanki** examine the role of interim FRAND licenses in disputes involving standard-essential patents. They explore how courts have attempted to strike a balance between the rights of patent holders and implementers, particularly through recent UK case law. Their article discusses landmark cases such as *Panasonic v. Xiaomi* and *Lenovo v. Ericsson*, which demonstrate the increasing judicial willingness to impose interim licensing agreements to ensure business continuity while final FRAND terms are adjudicated. This emerging approach underscores the complexities of multi-jurisdictional SEP disputes and the role of judicial intervention in mitigating strategic hold-up tactics.

Jim Beveridge delves into the rising significance of video codec SEPs in an era of data-driven technology. With the exponential growth of video content and the increasing reliance on AI-driven applications, video codec patents have become critical assets. Beveridge's analysis highlights the intricate licensing structures, the role of patent pools, and the ongoing litigation trends that shape this evolving market. He also examines the tension between open-source initiatives like AV1 and proprietary codec standards, underscoring the challenges of balancing innovation with broad accessibility to essential technologies.

Finally, **Michael A. Carrier**, **Brian Scarpelli** & **Priya Nair** critically assess the Avanci patent pool, questioning its purported procompetitive effects. Through a detailed examination of recent litigation and public admissions by Avanci, they reveal concerns regarding collusive licensing practices, litigation incentives, and the circumvention of FRAND obligations. Their analysis suggests that Avanci's structure may prioritize revenue maximization over fair and nondiscriminatory licensing, raising broader antitrust implications for SEP-based patent pools.

As the articles in this edition illustrate, the legal landscape surrounding SEPs, FRAND obligations, and patent pools is more complex than ever. Courts, regulators, and industry stakeholders continue to grapple with the balance between incentivizing innovation and ensuring fair access to essential technologies. These issues will only become more pressing as AI, telecommunications, and video technologies continue to evolve. We hope this TechREG Chronicle provides a valuable resource for understanding these critical developments and sparks further discussion on the future of patent licensing and competition law.

As always, many thanks to our great panel of authors.

Sincerely,

CPI Team

CPI thanks ACT | The App Association for their sponsorship of this issue of the Antitrust Chronicle. Sponsoring an issue of the Chronicle entails the suggestion of a specific topic or theme for discussion in a given publication. CPI determines whether the suggestion merits a dedicated conversation, as is the case with the current issue of the Chronicle. As always, CPI takes steps to ensure that the viewpoints relevant to a balanced debate are invited to participate and that the quality of our content maintains our high standards.

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

By Earl Nied

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.

STANDARDS ORGANIZATIONS: THE MISSING LINK IN FIXING FRAND EVASION

By Michael A. Carrier & David Katz

Standards, common platforms that allow products to work together, offer benefits to society. But standards typically involve patents. And the owner of a patent gains power after its technology is incorporated into the standard, power that it can use to "hold up" an industry that is locked into that standard. Essential to addressing this problem is a patentee's promise to license on fair, reasonable, and nondiscriminatory ("FRAND") terms. Such a promise is pivotal in fostering broad use of the standard. Recent developments, however, have revealed how some licensors are seeking to evade their FRAND promise through patent pools. As an example of this behavior, we highlight Avanci, a "patent pool" that licenses a collection of FRAND-encumbered patents on behalf of dozens of members. Many of these members are participants in the standard development organization ("SDO") known as ETSI. But even though ETSI promulgated a FRAND policy, Avanci purports not to be bound by its members' FRAND promises. In this essay, we show how Avanci is seeking to bypass ETSI's safeguards. More generally, we propose that SDOs could face antitrust liability if they fail to clarify that FRAND evasion via patent pools is inconsistent with the patent holder's FRAND obligations.

FRAND INTERIM LICENSES IN STANDARD ESSENTIAL PATENTS DISPUTES

By Enrico Bonadio & Arjun Solanki

This short paper examines the rise of FRAND interim licenses in standard essential patent ("SEP") disputes, particularly within the context of 4G/5G technologies. It highlights the ambiguity in determining fair, reasonable, and non-discriminatory ("FRAND") terms, leading to frequent litigation. Recent UK case law, especially *Panasonic v. Xiaomi, Nokia v. Amazon, and Lenovo v. Ericsson*, has established a trend of courts ordering interim licenses to ensure good-faith negotiation. This note also contrasts the UK approach with those in Germany, the U.S., and China, where interim licenses are less common. It concludes that interim licenses represent a relevant step in balancing the interests of SEP holders and implementers, though international harmonization remains a challenge.

THE RISING IMPORTANCE OF VIDEO CODEC SEPS IN A DATA-DRIVEN WORLD

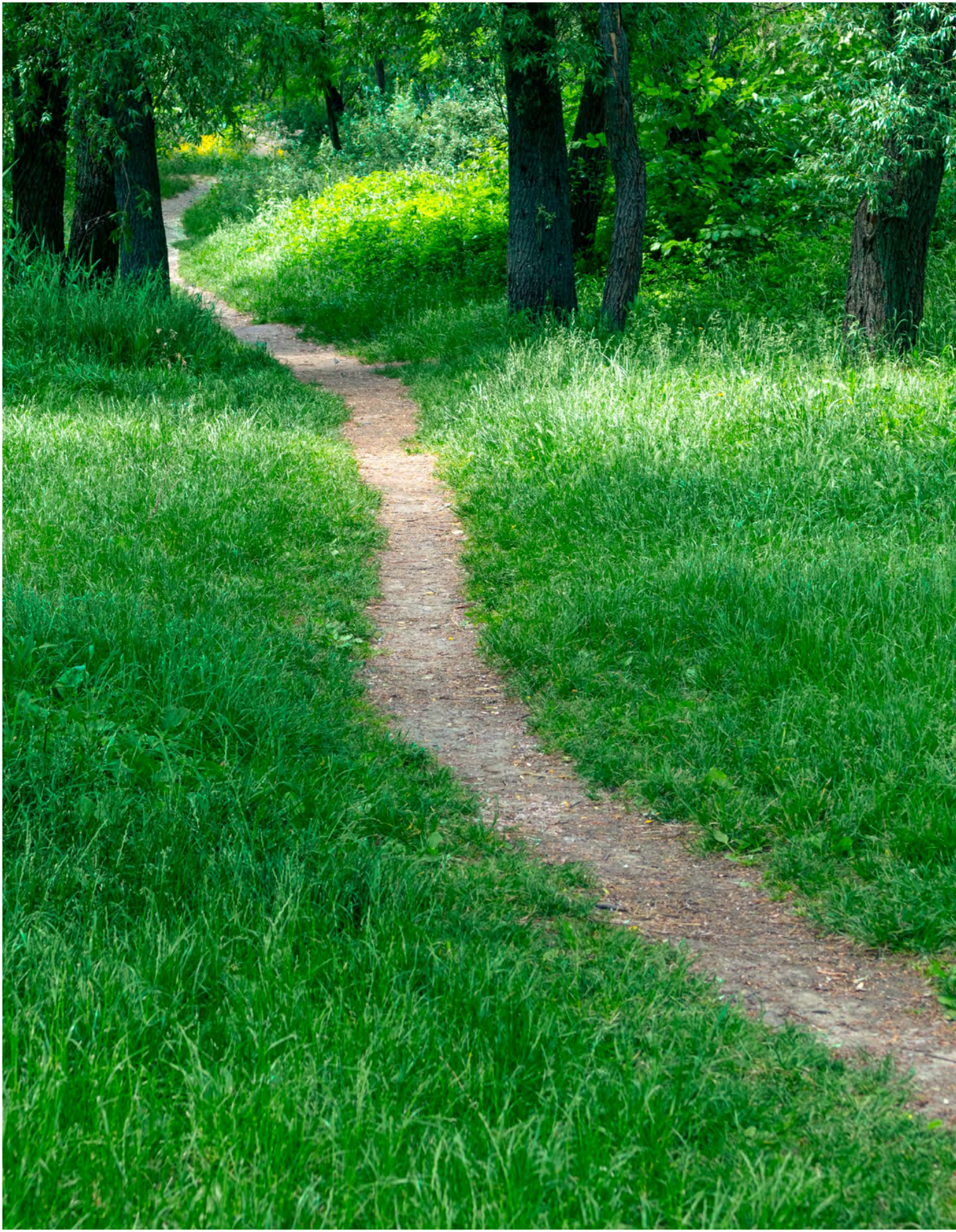
By Jim Beveridge

This paper examines the growing significance of Standard Essential Patents ("SEPs") for video codecs in an increasingly data-driven world. From enabling the low data rate dancing postage stamp on a computer screen to today's UHD 4k streaming video, the video codec has been the unsung hero of digitization. As video streaming, artificial intelligence ("AI"), and the Internet of Things ("IoT") converge, the demand for efficient video compression escalates, highlighting the importance of video codec SEPs. We explore the complexities of licensing these SEPs, including the evolution of licensing models and the role of patent pools. The intricacies of FRAND obligations, and the emergence of new licensing platforms are discussed. The paper also considers AI's potential to disrupt video codec technology, presenting both opportunities and challenges for IP stakeholders. We argue that a balanced strategy is crucial to ensure fair compensation for innovators while promoting competition and access to essential technologies. By analyzing the interplay of technology, law, and market dynamics, this paper seeks to provide insights into the strategic importance of video codec technologies in our data-driven future.

AVANCI'S ADMISSIONS CAST DOUBT ON POOL'S PROCOMPETITIVE EFFECTS

By Michael A. Carrier, Brian Scarpelli & Priya Nair

Patent pools have historically been viewed as procompetitive. And the latest pool receiving widespread attention, the Avanci pool, has gained support for this reason as well. But testimony in a recent case casts doubt on some of Avanci's claims of procompetitive conduct. Avanci and one of its members were recently sued in the United Kingdom. The court (while finding the result to be "odd") held that determining what constitutes licensing on "fair, reasonable, and nondiscriminatory" ("FRAND") terms for the entire pool lay outside its jurisdiction. But the hearing provided a wealth of admissions illustrating the anticompetitive nature of the pool. Patent pools have historically received the benefit of the doubt because of the efficiencies they offer. But as we discuss below, the Avanci pool is unique: it reimburses litigation costs, maximizes royalties, discourages bilateral licenses, and, in avoiding FRAND commitments, puts licensees in an impossible position. These anticompetitive characteristics were on full display in the UK hearing. And given the importance of the Avanci pool, a fuller consideration of these characteristics deserves attention.



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

BY EARL NIED

The author, Earl Nied, is the founder of Veracity IP Consulting, LLC and has held various position at Intel Corporation including the Global Director of IP Policy for Standards, chaired the American Nation Standards Association's (ANSI's) IPR Policy Committee, and has served on the ANSI Board and in other capacities. See www.veracity-ip-consulting.com, http://www.veracity-ip-consulting.com/ for more information.

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

Standards[2] 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.

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.

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.

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

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 holders 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.

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.

> ***Going forward, we must recognize the importance of independent, private-sector standards-setting***

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 antitrust 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 claims[4] 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 case[6] 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 Court[8] 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.

In conclusion:

- Injunctive abuse distorts fair competition and harms consumers.
- American companies are vulnerable to foreign enti-

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

ties 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 study[10] 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") director[11] 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, ensuring that subsequent parties cannot evade these essential commitments.

10 *Disclosure rules and declared essential patents,* Research Policy, Vol. 52, Issue 1' Rudi Bekkers and others, (2023), https://www.sciencedirect.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).

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.

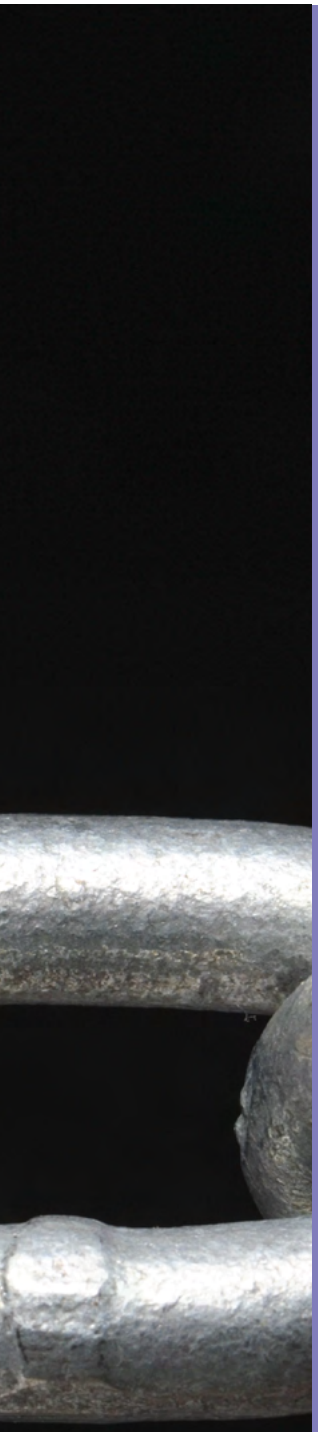
If licensing occurs downstream, it is essential to ensure proportionality and proper apportionment to prevent compensation from being inflated by the value of others' inventions.

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. ■



STANDARDS ORGANIZATIONS: THE MISSING LINK IN FIXING FRAND EVASION

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01 INTRODUCTION

Standards, common platforms that allow products to work together, offer benefits to society.

But standards typically involve patents. And the owner of a patent gains power after its technology is incorporated into the standard, power that it can use to "hold up" an industry that is locked into that standard. Essential to addressing this problem is a patentee's promise to license on fair, reasonable, and nondiscriminatory ("FRAND") terms.

Such a promise is pivotal in fostering broad use of the standard. Recent developments, however, have revealed how some licensors are seeking to evade their FRAND promise through patent pools.

As an example of this behavior, we highlight Avanci, a "patent pool" that licenses a collection of FRAND-encumbered patents on behalf of dozens of members. Many of these members are participants in the standard development organization ("SDO") known as ETSI.[2] But even though ETSI promulgated a FRAND policy, Avanci purports not to be bound by its members' FRAND promises.

In this essay, we show how Avanci is seeking to bypass ETSI's safeguards. More generally, we propose that SDOs could face antitrust liability if they fail to clarify that FRAND evasion via patent pools is inconsistent with the patent holder's FRAND obligations.

02
STANDARDS AND THE FRAND COMMITMENT

Interoperability standards — such as 5G, Wi-Fi, Bluetooth, audio/video codecs, and electric chargers — are ubiquitous in modern life. The proliferation of connected devices through the internet-of-things (IoT) has appeared in a wide range of products, including crop sensors, medical devices, vehicles, logistics and inventory trackers, smart energy grids, home appliances, and industrial manufacturing equipment.

A. Standards Development, Intellectual Property, and Patent Holdup

Broad adoption of standards is generally seen as procompetitive. Interoperability standards remove switching barriers for consumers, allowing them to select a standard-implementing product that best fits their needs. For example, the standardization of cellular networks has allowed consumers not only to be able to select the smartphone that best fits their needs but also to take their phone to any carrier that offers better price and performance. While standardization may eliminate upstream competition between competing platforms, it spurs significant downstream investment and competition.[3]

Standards are typically developed by SDOs, which tend to consist primarily of representatives from private industry. During the standardization process, these participants select technical solutions to standardize, almost always from an array of alternative technologies. The technical solutions often require technologies that are covered by "standard essential patents" ("SEPs"). And while a SDO can choose from an array of alternative technologies before a standard's adoption, afterwards the owner of the selected technology may gain significant power over manufacturers that have designed, tested, and produced goods that conform to the standard and cannot easily migrate to a different technology.

The process of standardization thus expands the scope of practical protection granted to essential patents beyond the four corners of what was actually claimed to include the ex-ante alternative technologies that existed before the technology was standardized. The result of this expansion, as the Department of Justice's Antitrust Division ("DOJ" or "Division") has explained, is that "the owner of a technology incorporated in a final standard may be able to negotiate licensing terms more favorable to itself than it could have negotiated before the standard was set when competitive alternatives may have been available without 'the expense and delay of developing a new standard around a different technology.'"[4] This power leads to the phenomenon known as "patent holdup."[5]

Patent holdup is particularly concerning for small businesses. As FTC Commissioner Rebecca Kelly Slaughter has explained, these entities "have serious concerns about unchecked SEP licensing abuses that result in cost uncertainty and delays in bringing products and new technology to the market."[6] The reason is that small firms "often lack the resources for technical legal advice to counter holdup"

2 ETSI refers to the European Telecommunications Standards Institute.

3 Raphael De Coninck et al., *SEP Royalties, Investment Incentives and Total Welfare* at 3-4, prepared for Fair Standards Alliance by Charles River Associates (Mar. 11, 2022), https://fair-standards.org/wp-content/uploads/2023/04/SEP-Royalties-Investment-Incentives-and-Total-Welfare.pdf.

4 Letter from Thomas O. Barnett to Michael A. Lindsay (Apr. 3, 2007) [IEEE 2007 letter], at 9, https://www.justice.gov/sites/default/files/atr/legacy/2007/04/30/222978.pdf.

5 E.g. U.S. Dep't of Justice & Fed. Trade Comm'n, Antitrust Enforcement and Intellectual Property Rights: Promoting Innovation and Competition 35-36 (2007), https://www.justice.gov/file/614651/dl?inline.

6 FTC Commissioner Rebecca Kelly Slaughter, *SEPs, Antitrust, and the FTC*, at 3 (Oct. 29, 2021).

and thus "are more likely to cave to supra-FRAND rates out of fear of exclusion."[7] Slaughter concludes that "all of this uncertainty and risk has a chilling effect that may push firms out of the market[,] extinguish good ideas in the cradle," or "deter innovation investment in these firms in the first place."[8]

B. FRAND Policies and SDO Competition Liability

To avoid patent holdup, many SDOs ask patent holders who want their proprietary technology included in the standard to commit to license their SEPs on FRAND terms.[9] While FRAND commitments are not mandatory,[10] they are irrevocable once made. FRAND commitments encourage the adoption of standards by protecting manufacturers from unreasonable royalties after they have adopted the standard.[11] They also accelerate the standardization process by removing rent-seeking incentives that would cause SDO participants to "jockey for the inclusion of their patented technologies in the industry standards" to extract monopolistic royalties.[12]

SDO competition liability for failing to establish intellectual property rights ("IPR") policies prohibiting SEP abuse was clearly demonstrated in the Supreme Court's 1982 decision in *American Society of Mechanical Engineers v. Hydrolevel Corp*.[13] The Court in that case recognized, outside the IPR context, that in the absence of meaningful safeguards, an SDO could be liable for member-driven anticompetitive conduct.[14] The Court warned that SDOs "can be rife with opportunities for anticompetitive activity."[15] And it explained that "[m]any [SDO] officials are associated with members of the industries regulated by [the SDO]" and that "[a]lthough undoubtedly most serve . . . without concern for the interests of their corporate employers, some may well view their positions . . . as an opportunity to benefit their employers."[16]

The Court observed that "imposing liability on [the SDO's] agents themselves will have some deterrent effect, because they will know that if they violate the antitrust laws through their participation in [the SDO], they risk the consequences of personal civil liability."[17] But "if, in addition, [the SDO] is civilly liable for the antitrust violations of its agents acting with apparent authority, it is much more likely that similar antitrust violations will not occur in the future."[18] The reason is that "[p]ressure [will be] brought on [the organization] to see to it that [its] agents abide by the law."[19]

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7 *Ibid.*

8 *Ibid.*

9 Others, such as Bluetooth, have sought to mitigate this risk by adopting a royalty-free approach.

10 As a general rule, we note that patent holders that decline to make a FRAND commitment must give timely notice of this decision and identify which patents they do not intend to license on FRAND terms in order to allow the technical committees to find an alternative solution. See, e.g. European Telecommunications Standards Inst., *Rules of Procedure Annex 6: ETSI Intellectual Property Rights Policy* § 8 (Nov. 29-30, 2022).

11 See FTC, Complaint, *In re Motorola Mobility LLC*, FTC Dkt. No. C-4410, at ¶ 28(c) (July 23, 2013), https://www.ftc.gov/sites/default/files/documents/cases/2013/07/130724googlemotorolacmpt.pdf.

12 A. Douglas Melamed & Carl Shapiro, *How Antitrust Law Can Make FRAND Commitments More Effective*, 127 Yale L.J. 2110, 2116 (2018); see *id.* (noting the "distort[ion of] the standards-development process away from optimal technical solutions in ways that further the interests of rent seekers").

13 456 U.S. 556 (1982). The case addressed a code governing the flow of fuel to water boilers when the water level fell excessively low, with the firm dominating the market benefiting as its vice president, in his capacity as vice chairman of the relevant SDO subcommittee, interpreted the code so its rival's product was deemed unsafe. *Ibid.* at 559-62.

14 *Ibid.* at 572.

15 *Ibid.* at 571.

16 *Ibid.* The Court did not need to "delineate . . . the outer boundaries of the antitrust liability of standard-setting organizations for the actions of their agents committed with apparent authority" because it found "no doubt" that the official "acted within his apparent authority" to speak on behalf of the subcommittee. *Ibid.* at 577. While the case addressed questions of agency liability on the SDO, inherent to agency liability is that the principal is held liable as if it had acted in place of its agent. In the case of an SDO, statements and positions made by a subcommittee are imputed onto the entire organization for liability purposes. See *id.* at 566–67 ("As with the April 29 letter issued by the Boiler and Pressure Vessel Subcommittee, the injurious statements are effective, in part at least, because of the personality of the one publishing it. In other words, one who appears to have authority to make statements for the principal gives to his statements the weight of the principal's reputation" (internal citations omitted) (cleaned up)).

17 *Ibid.* at 572.

18 *Ibid.*

19 *Ibid.*

The Court found that only the SDO "can take systematic steps to make improper conduct on the part of all its agents unlikely," with "the possibility of civil liability . . . inevitably be[ing] a powerful incentive for [the SDO] to take those steps."[20] The Court thus established that "a rule that imposes liability on the standard-setting organization — which is best situated to prevent antitrust violations through the abuse of its reputation — is most faithful to the congressional intent that the private right of action deter antitrust violations."[21]

The *Hydrolevel* case underscored the need for proactive measures to safeguard against abuse. Six years later, in *Allied Tube & Conduit Corp. v. Indian Head, Inc.*, the Supreme Court — relying on *Hydrolevel* — reiterated the importance of "procedures that prevent the standard-setting process from being biased by members with economic interests in stifling product competition" so as to deliver procompetitive benefits and receive deferential antitrust analysis.[22]

> ***The Hydrolevel case underscored the need for proactive measures to safeguard against abuse***

Before *Hydrolevel*, the Supreme Court had already established that competitors that pooled proprietary technologies to develop a standard violate antitrust laws if they use their IPR to disadvantage competitors outside the group.[23] *Hydrolevel* thus extended to SDOs that failed to establish IPR policies prohibiting such anticompetitive conduct. Indeed, SDOs saw this as risk. After the *Hydrolevel* and *Allied Tube* decisions, "many SDOs implemented rules that strictly forbid all activities" (including anticompetitive intellectual property licensing practices) that could potentially result in antitrust liability."[24]

In order to mitigate SDO concerns regarding competition liability stemming from IPR practices that could chill standardization efforts, U.S. and European antitrust enforcers have provided a range of guidance to SDOs regarding IPR policies. Central to this guidance has been ensuring FRAND licensing to prevent SEP holders from abusing unwarranted market power obtained through the process of standardization.

The Antitrust Division has issued business review letters ("BRLs") in response to inquiries from multiple SDOs regarding revisions to their IPR policies. These letters indicate whether the proposed policy (or policies) would likely lead to an enforcement action based on the Division's current position. The letters are public, thereby providing guidance on best practices to all SDOs.

In 2006, the Division issued a BRL regarding a request from the SDO VMEbus International Trade Association ("VITA") regarding a proposed change to its IPR policy that would require standardization participants to disclose their maximum royalty and most restrictive licensing terms during a standard's development.[25] In its review, the Division recognized that the risk of patent holdup could undermine the standard setting process and considered VITA's proposed solution as a means of satisfying the FRAND commitment.[26] The following year, the Division issued a BRL regarding a similar IPR policy revision at the IEEE Standards Association ("IEEE-SA"). The Division recognized that the changes were aimed at "alleviat[ing] concern[s] that commitments by patent holders to license on RAND terms are not sufficient to avoid disputes over licensing terms or litigation that may delay the implementation of IEEE-SA's future standards."[27]

Central to these reviews was the importance of preventing SEP holders from exploiting their unwarranted market power to extract unreasonable royalties. The Division approved of rules that preserved standardization's procompetitive benefits. Implicit in the analysis was the recognition that a standard setting body that fails to include some mechanism to prevent SEP abuse may run the risk of failing

20 *Ibid.*

21 *Ibid.* at 572–73. The Court also rejected the SDO's argument that "it should not be held liable unless it ratified the actions of its agents" since such a rule would allow the SDO to "avoid liability by ensuring that it remained ignorant of its agents' conduct," which would result in antitrust law "encourag[ing] [the SDO] to do as little as possible to oversee its agents." *Ibid.* at 573.

22 486 U.S. 492, 501 (1988).

23 *Hartford-Empire Co. v. United States*, 324 U.S. 570, 573–74 (1945).

24 Letter from Thomas O. Bamett, Assistant Attorney Gen., U.S. Dep't of Justice, to Robert A. Skitol, Esq., Drinker, Biddle & Reath, LLP, at 9 (VITA BRL) (Oct. 30, 2006), https://www.justice.gov/atr/response-vmebus-international-trade-association-vitas-request-business-review-letter.

25 *Ibid.* at 6.

26 See *id.* at 8-9.

27 IEEE 2007 letter, *supra* note 4, at 11-12.

to produce adequate procompetitive benefits to justify the harm to competition from industry rivals discussing sensitive information such as price.[28]

The European Commission has likewise offered guidance to SDOs through its Horizontal Guidelines. While the Horizontal Guidelines broadly recognize that standardization has many procompetitive benefits, they also recognize that standardization can lead to market power if the standard is broadly adopted and used to exclude rivals or extract unreasonable royalties.[29] SDOs that fail to follow policies limiting such conduct can be held liable for violating EU competition law and subject to enforcement actions.

> ***The European Commission has likewise offered guidance to SDOs through its Horizontal Guidelines***

The Horizontal Guidelines include IPR practices that, if enacted, offer a presumptive safe harbor from enforcement.[30] A cornerstone of these guidelines is ensuring that SDOs establish rules that "ensure effective access to the standard on FRAND terms."[31] In order to do this, the guidelines make clear that participants who wish to have their proprietary technology included in the standard must "provide an irrevocable commitment in writing to offer to license their essential IPR to all third parties on FRAND terms.[32] And to "ensure the effectiveness of the FRAND commitment," SDOs seeking protection under the safe harbor must require FRAND-committing SEP holders "to ensure that any undertaking to which the IPR owner transfers its IPR (including the right to license that IPR) is bound by that commitment."[33]

C. SDO Responsiveness to Enforcement Actions and Policy Guidance

SDOs have shown a high level of sensitivity to competition liability arising from their IPR policies. The institution of these IPR reforms demonstrates how seriously SDOs view the competition risks. SDO IPR reform attempts generally face significant institutional inertia. The divergent interests between companies that primarily monetize standards through licensing patents and those that develop and market products that include standardized features make it difficult for SDOs to institute IPR reforms.[34] Despite this political dynamic, SDO IPR policies have been developed and revised in response to the possibility of competition liability.[35] Under *Hydrolevel*, an SDO that failed to establish policies limiting such conduct (and its members engaging in it) could be found liable for antitrust violations.

The European Telecommunications Standards Institute ("ETSI") offers a prominent example of an SDO changing its IP policies in response to competition concerns. In 1992, the European Commission ("EC") issued a "Communication from the Commission: Intellectual Property Rights and Standardization."[36] In the Communication, the EC contrasted ETSI's IPR approach with those of other standards organizations that had "simple[r]" approaches than a draft policy that would have required advance promises to license "as a condition to ETSI membership."[37] The Commission "concluded that it would have 'a preference for a system based

28 See *Hartford-Empire Co. v. United States*, 324 U.S. 570, 573–74 (1945); Michael A. Carrier, Innovation for the 21st Century: Harnessing the Power of Intellectual Property and Antitrust Law 324 (2009).

29 Guidelines on the Applicability of Article 101 of the Treaty on the Functioning of the European Union to Horizontal Co-Operation Agreements ¶ 443, C(2023) 3445 final (June 1, 2023), https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52023XC0721(01).

30 *Ibid.* ¶ 449.

31 *Ibid.* ¶ 454.

32 *Ibid.* ¶ 456.

33 *Ibid.*

34 Stanley M. Besen, *Looking for FRAND: Patent Owners, Standard-Setting Organizations, and the Courts*, 25 Tul. J. Tech. & Intell. Prop. 213, 256 (2023).

35 Anne Layne-Farrar, *Proactive or Reactive? An Empirical Assessment of IPR Policy Revisions in the Wake of Antitrust Actions*, 59 Antitrust Bulletin 373 (2014).

36 Robert Pocknell & David Djavaherian, *The History of the ETSI IPR Policy: Using the Historical Record to Inform Application of the ETSI FRAND Obligation*, 75 Rutgers Univ. L. Rev. 977, 992 (2023).

37 *Ibid.* at 994.

on tried and proven principles.'"[38] In addition, "after receiving a complaint from one party about ETSI's proposed 'license by default' approach," the Commission "sent an even more pointed letter to ETSI questioning whether the mandatory in-advance commitment to license might itself create competition law problems."[39] Writing in 2023, Robert Pocknell and David Djavaherian explained that "the fundamental features and language of the IPR Policy — requiring that ETSI members declare their essential or potentially essential patents, and either agree or not to license those patents on FRAND terms — have remained identical to the text that was approved in 1994."[40]

SDOs have also been particularly responsive to enforcement actions. After the FTC announced its first investigation into and settlement regarding SEP abuse in 1995, SDOs have shown a willingness to engage in reforms. These actions have led to policy revisions requiring more robust patent disclosure, more FRAND-compliant rates and terms, and the transfer of the FRAND obligation to future licensees. An empirical study of IPR policy updates found that between 1995 and 2014, competition enforcement actions led to 16 IPR reforms.[41]

In 1995, for example, the FTC announced that it had been investigating Dell for "patent ambush" involving a patent essential to the Video Electronics Standards Association's (VESA) Local Bus (VL-Bus) standard.[42] During the standardization process, Dell had failed to disclose that the standard relied on its proprietary technology and had certified that it did not infringe any of its patents. After the standard was adopted, however, Dell began asserting its patent rights over the VL-Bus standard. The FTC investigated this conduct and expressed concerns that it could "unreasonably restrain[] competition" by discouraging and delaying the use of the VL-Bus standard, and also by deterring broader participation in standard-setting efforts.[43] In 2002, the FTC brought an administrative complaint against Rambus for engaging in patent ambush and, in 2005, announced a settlement with Unocal for similar conduct.[44]

Following the Dell settlement and during the Rambus litigation, many SDOs — including IEEE (1995), TIA (2001), JEDEC (2001), CEN/CENELEC (2001), IETF (2004), OASIS (2005), and VITA (2007)[45] — revised their IPR policies to more effectively address and prevent patent ambush.[46] The Executive Director of VITA explained that the objectives of the SDO's IPR update was to "eliminate patent ambush" in terms that tracked the FTC's concerns regarding Dell's conduct. He explained that "VSO working groups are expected to make sound technical business decisions" and that "[p]atent ambush can delay or undermine the acceptance of new standards."[47]

The sensitivity to antitrust concerns is so great that even prepared remarks by enforcers can motivate reform. In 2012, telecommunications company Nortel, as part of its bankruptcy proceedings, sold its portfolio of roughly 6,000 patents and patent applications.[48] The portfolio was acquired by a consortium called Rockstar, made up of Micro-

38 *Ibid.* The authors explain that the 1992 Communication required FRAND licenses to any implementer seeking a license, the use of FRAND to supplement competition principles, a reduction of royalties based on standardization, and nondiscrimination principles. *Ibid.* at 1010.

39 *Ibid.* at 994.

40 *Ibid.* at 992.

41 Layne-Farrar, *supra* note 35.

42 Press Release, *FTC, Dell Computer Settles FTC Charges*.

43 FTC Complaint, *In re Dell*, 121 F.T.C. 616, 618 (1996).

44 For a history of all filings, see http://www.ftc.gov/os/adjpro/d9302/index.shtm. In 2007, the European Commission initiated a similar complaint. "Commission Decision of 9.12.2009 relating to a proceeding under Article 102 of the Treaty on the Function of the European Union and Article 54 of the EEA Agreement," Case COMP/38.636-Rambus (Dec. 9, 2009), *available at* https://ec.europa.eu/competition/antitrust/cases/dec_docs/38636/38636_1203_1.pdf.

45 In addition to already-introduced IEEE and VITA, the SDOs are the Telecommunications Industry Association (TIA), JEDEC [Joint Electron Device Engineering Council] Solid State Technology Association (JEDEC), the European Committee for Standardization (CEN), the European Committee for Electrotechnical Standardization (CENELEC), the Internet Engineering Task Force (IETF), and the Organization for the Advancement of Structured Information Standards (OASIS).

46 Layne-Farrar, *supra* note 35.

47 *Disclosure and Licensing of Patents in Standards*, VITA, https://www.vita.com/Disclosure/vita-patent-policy-section-10-draft.pdf (last visited Dec. 27, 2024).

48 Elysium Digital, *Patent Portfolio Report: Rockstar*, July 31, 2014, https://www.elys.com/blog/patent-portfolio-report-rockstar.

soft, Research in Motion (RIM), Sony, Apple, and Ericsson.[49] The DOJ approved the transaction. Central to its approval were the commitments made by some consortium members "to license SEPs on fair, reasonable and non-discriminatory terms" and "not to seek injunctions in disputes involving SEPs."[50] Shortly after the deal was approved, however, the Rockstar CEO publicly stated that the consortium "isn't bound by the promises that its member companies made" since "[w]e are separate" and the promises "do[] not apply to us."[51]

Later that year, at the International Telecommunication Union ("ITU") Patent Roundtable, Deputy Assistant Attorney General for the Antitrust Division Renata Hesse gave prepared remarks entitled "Six 'Small' Proposals for S[D]Os Before Lunch."[52] One of her points addressed the Rockstar issue and called on SDOs to "[m]ake it clear that licensing commitments made to the standards body are intended to bind both the current patent holder and subsequent purchasers of the patents and that these commitments extend to all implementers of the standard, whether or not they are a member of the standards body."[53]

In response to Hesse's speech, ITU, ETSI, and IEEE all initiated review and reforms of their IPR policies.[54] ETSI in particular updated its IPR policy to make clear that the FRAND obligation "shall be interpreted as encumbrances that bind all successors-in-interest."[55]

03

CIRCUMVENTING THE FRAND COMMITMENT THROUGH PATENT POOLS

One common means of SEP licensing involves patent pools.[56] In theory, patent pools can offer significant efficiencies by providing a "one stop shop" for a licensee to obtain a SEP license while reducing negotiation and litigation costs. For that reason, competition agencies have recognized that patent pools can be procompetitive. But the pools are becoming increasingly aggressive and escalating litigation,[57] which may be causing anticompetitive effects that outweigh procompetitive benefits.

A. Patent Pools' IPR Practices and Competition Law

Patent pools introduce competition risks given that that "the stronger the market position of the pool the greater the risk of anti-competitive effects."[58] As one court explained: "Anticompetitive effects may arise from patent pooling arrangements that require payment for a pool of rights without a realistic opportunity as a practical matter to obtain individual licenses from individual owners as opposed to a single license from the pool."[59] This can cause competitive

49 *Ibid.*

50 DOJ, *Statement of the Department of Justice's Antitrust Division on Its Decision to Close Its Investigations . . .*, Feb. 13, 2012, https://www.justice.gov/opa/pr/statement-department-justice-s-antitrust-division-its-decision-close-its-investigations.

51 Robert McMillan, *How Apple and Microsoft Armed 4,000 Patent Warheads*, Wired.com, May 21, 2012, https://www.wired.com/2012/05/rockstar/.

52 Renata Hesse, Deputy Assistant Attorney General, Antitrust Division, U.S. Department of Justice, *Six "Small" Proposals for SSOs Before Lunch*, Remarks as Prepared for the ITU-T Patent Roundtable, Geneva, Switzerland (Oct. 10, 2012), https://www.justice.gov/d9/atr/speeches/attachments/2015/06/25/287855.pdf.

53 *Ibid.* at 9.

54 Bruce Kraemer, David Law, & Michael Lindsay, *Tutorial for 802 on 2015 IEEE-SA Patent Policy Update*, IEEE Standards Association at 11-13 (July 13, 2015), https://www.ieee802.org/802_tutorials/2015-07/802_Patent_Policy_Tutorial_Slides_13_July_2014.pdf.

55 Layne-Farrar, *supra* note 35, at 399-408 (quoting ETSI's 2013 updated IPR policy).

56 See, e.g. Angela Morris, *Access Advance Launches New Video Codec Pool for Streamers*, IAM (Jan. 16, 2025) https://www.iam-media.com/article/breaking-access-advance-launches-new-video-codec-pool-streamers; Angela Morris, *VIA LA Expands Video Codec Pool to HEVC and VVC*, IAM (Apr. 3, 2024), https://www.iam-media.com/article/la-expands-video-codec-pool-hevc-and-vvc.

57 See Nisha Shetty, *Surge of Recent Lawsuits Filed by SEP Licensors Connected to Patent Pools*, IAM (Sept. 27, 2024), https://www.iam-media.com/article/surge-of-recent-lawsuits-filed-sep-licensors-connected-patent-pools (noting three lawsuits filed by a founding licensor of Sisvel's Wi-Fi 6 pool one week after the same company "filed a flurry of lawsuits against the same companies in the same court involving different Wi-Fi 6 patents").

58 Guidelines on the Application of Article 101 of the Treaty on the Functioning of the European Union to Technology Transfer Agreements ¶ 267(a), 2014/C 89/03 (Mar. 28, 2014), C(2023) 3445 final (June 1, 2023), https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014XC0328(01)&from=EN.

59 *Samsung Electronics Co. v. Panasonic Corp.*, No. C 10-3098, 2015 WL 10890655 at *5 (N.D. Cal., Sept. 30, 2015).

harm when supracompetitive royalties foreclose innovation in relevant markets.[60]

Competition authorities' guidance to patent pools thus has focused on ensuring FRAND licensing. The DOJ has supported patent pools that have ensured transparent and nondiscriminatory licensing practices.[61] The agency has upheld pools that promoted competition by including only essential patents, which "by definition have no substitutes" and typically are complementary to each other, possessing a greater value if the licensee can use other essential patents.[62] This was the case for pools relating to MPEG-2, a video compression technology underlying the transmission, storage, and display of digitized moving images and sound tracks and DVD-ROM and DVD-video formats describing "the physical and technical parameters for DVDs for read-only-memory and video applications."[63] For example, the MPEG-2 pool's limitation to essential patents signified that "there is no technical alternative to any of the Portfolio patents with the standard" and each patent "is useful for MPEG-2 products only in conjunction with the others."[64]

In contrast, substitute patents are not necessary for the use of a technology in the pool, but present alternative ways of creating certain products that otherwise would be used in competition with each other. The FTC filed a complaint against a pool including lasers used in photorefractive keratectomy (PRK), a form of eye surgery used to correct vision disorders.[65] It alleged that absent the arrangement, Summit and VISX "would have competed with one another . . . by using their respective patents, licensing them, or both."[66] In addition, the companies gave up "the right to unilaterally license"[67] any patent contributed to the pool, and each party had "the unilateral right and power" to prevent the pool from licensing any of the patents to others that manufactured PRK equipment.[68]

Competition authorities' guidance to patent pools thus has focused on ensuring FRAND licensing

A key element in the DOJ approvals was the existence of licensing on nondiscriminatory terms. In the DVD pool, for example, the Division found that the pool would not likely impede competition as "the proposed program should enhance rather than limit access to the Licensors' 'essential' patents."[69] The reason was that "Philips must license on a non-discriminatory basis to all interested parties," which meant that it could not "impose disadvantageous terms on competitors, let alone refuse to license them altogether."[70] In addition, if the "agreed pool royalty prove[s] economically unrealistic, each Licensor's ability to grant licenses on its own to users of the Standard Specifications provides a backstop."[71]

60 *Ibid.* at *7.

61 See generally Michael A. Carrier, *Resolving the Patent-Antitrust Paradox Through Tripartite Innovation*, 56 Vand. L. Rev. 1047, 1093 (2003).

62 Letter from Joel L. Klein to Gerrard R. Beeney (Dec. 16, 1998) [DVD letter], at 10, https://www.justice.gov/sites/default/files/atr/legacy/2006/04/27/2121.pdf.

63 *Ibid.* at 1.

64 Letter from Joel L. Klein to Gerrard R. Beeney (June 26, 1997), at 9-10, https://www.justice.gov/sites/default/files/atr/legacy/2006/10/17/215742.pdf. For a similar example, see Thomas O. Barnett letter to William F. Dolan & Geoffrey Oliver, at 11-12 (Oct. 21, 2008), https://www.justice.gov/sites/default/files/atr/legacy/2008/10/21/238429.pdf (concluding that pool "appears reasonably likely to yield efficiencies" and "includes safeguards reasonably tailored to minimize the risk of harm to competition . . . and to minimize the risk of dampening innovation incentives").

65 Complaint ¶ 8, *In the Matter of Summit Tech., Inc.*, FTC Dkt. No. 9286, https://www.ftc.gov/sites/default/files/documents/cases/1998/03/summit.cmp_.htm.

66 *Ibid.*

67 *Ibid.* ¶ 9.

68 *Ibid.* ¶ 10.

69 DVD letter, *supra* note 62, at 13.

70 *Ibid.*

71 *Ibid.*

The European Commission has likewise issued guidance for patent pools through its Technology Transfer Guidelines.[72] Like the Horizontal Guidelines, the Technology Transfer Guidelines offer a safe harbor in the context of FRAND licensing. In order to benefit from it, the pool must ensure that "the pooled technologies are licensed out to all potential licensees on FRAND terms."[73]

B. Avanci Statements on Pools and the FRAND Commitment

Avanci is a patent pool[74] that offers cellular SEP license bundles directed to specific end uses. Its largest program is its automotive licensing program, which purportedly offers a license covering about 90 percent of patents that have been declared essential to the 5G standard on behalf of more than 65 SEP holders.[75]

The Avanci pool offers an example of how pools are being used to circumvent FRAND obligations and the anticompetitive consequences of these practices.[76] To grow its platform (and even today), Avanci has promised to license on FRAND terms. As of the date of this article, Avanci's website poses the question: "Is Avanci licensing on FRAND terms?"[77] And it answers unequivocally: "Absolutely. Avanci shares a commitment with the IoT ecosystem to make the latest technology available in a way that is . . . FRAND[]."[78] In case there were any doubt, it continues: "This well-established industry principle ensures that those using the technology in their IoT [Internet of Things] products have access at terms that are well-aligned with their needs and those creating wireless technology receive a fair return on their investment."[79]

After licensees agreed to use the platform, Avanci changed its tune. Avanci now claims it never formally agreed to be bound by FRAND obligations. Despite serving as a licensing agent for SEP holders obligated to license on FRAND terms, Avanci remarkably asserted in hearings in a recent proceeding in the United Kingdom that it "does not have any ETSI/FRAND obligation" because "[i]t owns no SEPs," "has declared no SEPs to ETSI or any other standardisation body[,] and . . . has not given any associated promise to ETSI or to anyone else to license on strict ETSI/FRAND terms."[80] It even asserts that there is "nothing anywhere in the agreements between the SEP holders and Avanci by which Avanci agrees to administer or otherwise satisfy any SEP holder's FRAND obligation."[81]

Avanci may claim that it "believes its licences are . . . FRAND in the descriptive sense," but "whether or to what extent offering an Avanci platform licence satisfies a particular SEP holder's ETSI/FRAND obligation in respect of a specific implementer is not something which Avanci can ever ensure."[82] Avanci thus concludes that "it sits entirely outside of the ETSI/FRAND system,"[83] which allows it to take the position that it offers FRAND-ish terms "in the descrip-

72 Guidelines on the Application of Article 101 of the Treaty on the Functioning of the European Union to Technology Transfer Agreements, 2014/C 89/03 (Mar. 28, 2014), C(2023) 3445 final (June 1, 2023), https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014XC0328(01)&from=EN.

73 *Ibid.* ¶ 261(e). The Guidelines refer to the Horizontal Guidelines for "details on FRAND." *Ibid.* ¶ 261(e) n.97. And they impose additional requirements that include: safeguards ensuring that only essential technologies are included; the licensing of the pooled technologies on a non-exclusive basis; and licensees being able to challenge patent validity and essentiality. *Ibid.* ¶ 261(b, d, f).

74 Avanci describes itself as a licensing platform and has argued that it is structurally distinct from a pool. But as the U.S. Department of Justice noted, from a competition perspective it is equivalent. Makan Delrahim letter to Mark H. Hamer, at 1 n.1 (July 28, 2020), https://www.justice.gov/atr/page/file/1298626/dl?inline=.

75 *Tesla Inc. v. Idac Holdings, Inc.*, Claim No. HP-2023-0042 [2024] EWHC Pat (oral arg., May 20-22, 2024) ("*Tesla trial transcript*") at 39:6, 375:13, 392:5.

76 See generally Michael A. Carrier, Brian Scarpelli, & Priya Nair, *Avanci's Admissions Cast Doubt on Pool's Procompetitive Effects*, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4945572.

77 *Is Avanci licensing on FRAND terms?*, Avanci, https://www.avanci.com/vehicle/ (last visited Nov. 20, 2024).

78 *Ibid.*

79 *Ibid.*

80 *Tesla trial transcript*, *supra* note 75, at 133:17-22.

81 *Tesla, Inc. v. Idac Holdings, Inc.*, Appeal No. CA-2024-001749, [2024] EWCA Civ (oral arg., Dec. 2-3, 2024) ("*Tesla appellate transcript*") at 277:7-10.

82 *Tesla trial transcript*, *supra* note 75, at 134:17-22.

83 *Ibid.* at 140:2-3.

tive sense" without being bound to actually comply with the FRAND obligation.[84]

Further raising concern, InterDigital, one of Avanci's members, likewise disclaims any FRAND obligation stemming from Avanci's licensing of its patents. It argues that even if "licence obligations under FRAND feed . . . into the pool, it is the collective, at most, that underpins that licence" as "[t]here is no discrete bit of the Avanci pool which is supported by an InterDigital licence."[85] InterDigital also disclaims responsibility on the grounds that it lacks agency over Avanci because "even if InterDigital's obligation does somehow affect platform licensing, it remains the case that there is no obligation on InterDigital . . . [because] [o]nly Avanci can do it" and it "simply cannot and is not in any way obliged to license or offer licences as to patents of others."[86] As InterDigital succinctly explained: "InterDigital does not accept that platform licensing has to be FRAND."[87]

C. FRAND Evasion and IPR Policies

The logic of the arguments made by Avanci and InterDigital that Avanci is not subject to a FRAND obligation applies broadly. They argue that there is no FRAND obligation on the pooled portfolio because the FRAND undertaking "does not apply in any way to other members of the pool."[88]

The positions taken by Avanci and InterDigital would mean that SEP pools can be used as a tool to evade FRAND licensing. Clearly Avanci and InterDigital do not believe Avanci has any obligation to offer a license on FRAND terms. And even if bilateral licensing with pool members is theoretically available, it may not be viable given that nonpracticing entities "c[an] sue and push people into a pool license."[89]

The logic of the arguments made by Avanci and InterDigital that Avanci is not subject to a FRAND obligation applies broadly

This is inconsistent with the patent pool guidance issued by competition authorities on both sides of the Atlantic. Avanci seemingly attempts to use ETSI's IPR policy to justify its practices. It claims that while "the ETSI IPR Policy . . . allows the court to address the question as to whether or not a licence" between a SEP holder and licensee is FRAND, "there is no sensible way to interpret the ETSI obligation . . . to convert it into what is effectively the Avanci licence."[90] But this interpretation of the ETSI IPR obligations does nothing to protect Avanci's conduct given that an SDO "cannot validate the anticompetitive activities of its members simply by adopting rules that fail to provide such safeguards."[91]

Instead, Avanci's interpretation — if accepted — puts ETSI out of compliance with the EC safe harbor and the Antitrust Division's guidance for SDOs in at least two ways. First, as a general matter, it means that ETSI has failed to ensure that SEP licensing is available on FRAND terms. Second, ETSI's IPR policy failed to prevent participants from transferring or granting licensing authority without ensuring that the FRAND obligations move with it. Avanci's defense thus serves as an indictment of the sufficiency of ETSI's IPR policy.

84 *Ibid.* at 134: 17-19.

85 *Ibid.* at 39:5-9.

86 *Ibid.* at 344:3-8. For a discussion of how the Avanci platform discourages bilateral licenses, see Carrier et al., *supra* note 76, at 7 ("Although the ETSI obligation requires SEP holders to give licenses on FRAND terms, Avanci, by not including such an obligation in its member agreement, is able to avoid any responsibility or legal repercussions for members that refuse to offer bilateral licenses to licensees seeking them."). See also *id.* ("Avanci's largest members" are able to "obtain the high royalty rates that could normally only be extracted via aggressive campaigns pursuing injunctive relief without actually engaging in litigation themselves" because they "rely on smaller SEP holders to engage in aggressive litigation campaigns.").

87 *Tesla appellate transcript*, *supra* note 81, at 143:17-18.

88 *Ibid.* at 144:8-14 (statements by InterDigital); see also *id.* at 293:22-24 (statements by Avanci) ("How do I . . . impose an obligation on InterDigital to grant a licence to everyone else's patents?").

89 Richard Lloyd, *Spate of Patent Litigation Dismissals Involving Tesla Points to Possible Avanci Deal*, IAM (Mar. 17, 2021), https://www.iam-media.com/article/spate-of-litigation-dismissals-tesla-points-possible-avanci-deal-pioneering-oem.

90 *Tesla appellate transcript*, *supra* note 81, at 292:14-21; 293:25-294:6.

91 Allied Tube & Conduit Corp. v. Indian Head, Inc., 486 U.S. 492, 509 (1988).

This should not be the case. While the ETSI IPR policy and guidelines are silent as to patent pools,[92] the overarching purpose and intent of the policy was to ensure compliance with competition obligations and prevent the FRAND commitment from being circumvented.[93] Indeed, for decades, SDOs have proactively worked to reduce SEP abuse to mitigate the risk of antitrust liability against the SDOs under *Hydrolevel*. This work has preempted the need for enforcement by competition authorities. Avanci's interpretation of the ETSI IPR policy, however, has put the SDO in a bind. Avanci has now publicly argued that the ETSI IPR policy does not adequately secure FRAND licensing of SEPs.

There appears to be no limiting principle to restrict the application of this interpretation to Avanci and no idiosyncrasy in the ETSI IPR policy to limit it to ETSI standards. The only reason that this interpretation came to light in this context was due to ongoing litigation. The problem may well be widespread.

SDOs could ameliorate this problem, for instance, by providing updated guidance clarifying that the FRAND obligation attaches to any grant of licensing authority to pools or other agents (e.g. that pools are indeed successors-in-interest to the patent licensing obligations). If, however, SDOs are unable to rebuke this interpretation, that could signal that the prospect of competition liability is no longer effective to overcome the profit interests of SDO members financially benefiting from the status quo.[94] Inaction could put SDOs in unnecessary legal risk that would put the organizations at risk of severe monetary penalties and other serious sanctions. The risk is heightened if SDOs' inability to address pool-based FRAND circumvention is due to pool members blocking clarifying guidance or technical reforms. Left unaddressed, this could place ETSI in legal jeopardy in light of *Hydrolevel* and the EU's Horizontal Guidelines.

04
CONCLUSION

Standards serve a vital function in today's interconnected world by enabling interoperability and innovation. Yet they can also pose anticompetitive risks when SEP owners gain excessive leverage after a standard is adopted, which can lead to patent holdup. The voluntary FRAND commitment has long served as a safeguard against these risks, but some SEP holders now claim they can sidestep that commitment by delegating licensing authority to patent pools.

With Avanci moving beyond the automotive sector into IoT and the proliferation of similar pools licensing other standards on the rise, this circumvention strategy threatens to become even more widespread. Such practices not only reintroduce the risk of holdup but also undermine established SDO policies designed to secure FRAND licensing. This jeopardizes individual standards and the entire standardization process worldwide.

Fortunately, the solution is straightforward: SDOs need only clarify in their IPR guidance that pool licensing is subject to FRAND obligations. By acting decisively now, SDOs can preserve the integrity of standardization, foster robust innovation, and avoid the antitrust pitfalls that otherwise loom on the horizon.

An SDO's lack of action should not be interpreted to mean that its IPR policy does not prohibit these tactics. Indeed, the majority of cases and competition guidance makes clear that FRAND obligations cannot be easily evaded. Instead, a failure to confront this problem may signal that SDO members profiting from FRAND evasion wield sufficient power to block such measures and further expose SDOs to antitrust liability in the United States and Europe. ■

92 See generally European Telecommunications Standards Inst., *Rules of Procedure Annex 6: ETSI Intellectual Property Rights Policy* (Nov. 29-30, 2022), https://www.etsi.org/images/files/IPR/etsi-ipr-policy.pdf; European Telecommunications Standards Inst., *Guide on Intellectual Property Rights (IPRs)* (June 10, 2021), https://www.etsi.org/images/files/IPR/etsi-guide-on-ipr.pdf.

93 Pocknell & Djavaherian, *supra* note 36, at 988-99.

94 Layne-Farrar, *supra* note 35, at 428 ("If SSOs are indeed generally responding appropriately to antitrust risks as they become known, we should expect to see SSO policy changes . . . .").

FRAND INTERIM LICENSES IN STANDARD ESSENTIAL PATENTS DISPUTES

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01 INTRODUCTION

Standard essential patents ("SEPs") protect technologies which are indispensable for implementing industry standards - they are especially crucial in the field of 4G/5G communication. To prevent SEP holders from abusing the monopoly power conferred by standardization, patentees are typically required to license SEPs on fair, reasonable, and non-discriminatory ("FRAND") terms. This FRAND commitment is usually made to standard-setting organizations ("SSOs") like

ETSI or IEEE, and is often enforceable as a contractual obligation owed to implementers.[2] However, in practice, determining what constitutes "fair" and "reasonable" terms is notoriously challenging and is often the subject of heavy litigation worldwide.[3] This ambiguity in FRAND terms often leads to dispute between SEP holders and implementers.

A FRAND pledge amounts to a balancing act – i.e. patent holders receive reasonable and guaranteed royalties, while standards' users obtain reasonable licences in order to access the standard and build their technology. Such commitment therefore aims at minimising the risk of "hold up," i.e. the opportunistic licencing of a SEP where the patent owner demands higher licencing costs due to the fact that the patent is essential to the standard.4 While some commentators have highlighted that SEPs litigation may also create "hold-out" scenarios (with some standards' users being accused of being unwilling licensees and taking advantage of constraints on patent rights to avoid paying adequate licensing fees), the evidence of such scenarios being common is actually lacking.[5]

Courts and policymakers worldwide strive to strike a balance between these twin concerns. For example, in 2015 the Court of Justice of the European Union ("CJEU") in *Huawei v. ZTE* famously established a negotiation protocol requiring the SEP owner and implementer to exchange FRAND offers and counteroffers in good faith, and for the implementer to provide security for royalties if negotiations fail.[6] Despite such attempts, multi-jurisdictional SEPs disputes have become increasingly common due to forum shopping.

SEPs holders may sue in patent-friendly venues, such as Germany or at the U.S. International Trade Commission ("ITC"), to quickly obtain injunctions or exclusion orders, while implementers may file actions in jurisdictions perceived as more implementer-friendly, such as China in recent years, seeking declaratory judgments of FRAND terms or anti-suit injunctions. This international "race to the courthouse"[7] has led to cases of conflicting court orders, anti-suit injunction, and even anti-anti-suit injunctions.

02
INTERIM FRAND LICENSES

In such situations, interim licenses, established by court order or agreement, have been proposed as an equitable solution allowing business continuity while a single court works out the final FRAND terms. This interim arrangement "holds the ring" until a final license is set.[8] Typically, such licenses require the implementer to pay royalties at a rate the court deems reasonable on a preliminary basis, often with an adjustment clause: the court later sets the final FRAND terms, and the interim payments can be adjusted up or down to match the final rate.[9] This ensures neither party is significantly prejudiced by the interim arrangement.

2 Yann Méniére, *Fair, Reasonable and Non-Discriminatory (FRAND) Licensing Terms: Research Analysis of a Controversial Concept*, EUR 27333, at 9 (Publications Off. of the Eur. Union 2015).

3 Michael A. Carrier, *Why Is FRAND Hard?*, 2023 U. L. Rev. 931, 948-51 (2023).

4 On "hold-up," as far as the U.S. scenario is concerned, see Carl Shapiro & Mark Lemley, *The Role of Antitrust in Preventing Patent Holdup*, 168 U. Pa. L. Rev. 2019 (2020).; Joe Kattan & Chris Wood, *Standard-Essential Patents and the Problem of Hold-Up* (Dec. 19, 2013), https://papers.ssrn.com/abstract=2370113 (last visited Mar. 9, 2025).; Joseph Farrell et al., *Standard Setting, Patents, and Hold-Up*, 74 Antitrust L.J. 603 (2007); G.E. Evans, *Negotiating FRAND-Encumbered Patent Licences*, 16 J. Intell. Prop. L. & Prac. 1091 (2021); Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 Tex. L. Rev. 1991 (2007); Alexander Galetovic & Stephen Haber, *The Fallacies of Patent-Hold-Up Theory*, 13 J. Competition L. & Econ. 1 (2017).\\uc0\\u8216{}Standard Setting, Patents, and Hold-Up\\uc0\\u8217{} (2007

5 As far as the U.S. landscape is concerned, see: (discussing an empirical analysis conducted by evaluating data related to hold-out from the dockets of U.S. district court filings dated 2010-2019; while the authors found some evidence of an association between hold-out and both SEP portfolio size and enforcement uncertainty, they did not find evidence associating pre- or in-litigation hold-out with the international breadth of SEP rights). For an opposite view, see *Nicolas Petit & Bowman Heiden, Patent "Trespass" and the Royalty Gap: Exploring the Nature and Impact of Patent Holdout*, 34 Santa Clara High Tech. L.J. 179 (2018).

6 *Huawei Techs. Co. v. ZTE Corp*., Case C-170/13, ECLI:EU:C:2015:477 (CJEU July 16, 2015). This decision aimed to harmonize differing approaches in Europe and created a safe harbor for "willing licensees" against injunctions.

7 See Jorge Contreras, *Anti-Suit Injunctions and Jurisdictional Competition in Global FRAND Litigation: The Case for Judicial Restraint*, 11 N.Y.U. J. Intell. Prop. & Ent. L. 171 (2021).

8 *Alcatel Lucent SAS v. Amazon Dig. UK Ltd. & Ors*., [2025] EWCA Civ 43, § 75.

9 *Idem*.

Interim licenses have gained prominence largely through UK case law in recent years, with courts characterizing FRAND as not just an outcome, but a process of good faith negotiation. The seminal development came with a trio of recent Court of Appeal decisions: *Panasonic v. Xiaomi* (October 2024),[10] *Nokia (Alcatel-Lucent) v. Amazon* (January 2025),[11] and most prominently and recently *Lenovo v. Ericsson* (February 2025).[12] These cases build on the UK's broader FRAND jurisprudence, including *Unwired Planet v. Huawei* (2020),[13] where the UK Supreme Court confirmed that English courts may determine global FRAND license terms and condition injunctive relief on an implementer's acceptance of those terms.

The concept of a court-ordered interim license was squarely addressed in *Panasonic v. Xiaomi*. In that case, Xiaomi, the implementer, sought a declaration that it was entitled to a short-term license on FRAND terms while the parties continued to litigate over the final license. Arnold LJ allowed Xiaomi's appeal and granted the interim license.[14] Several factors made this a relatively "easy case." Both Panasonic (the SEP holder) and Xiaomi had already given undertakings to the Court to accept whatever license terms the Court would ultimately determine as FRAND.[15] Despite that, Panasonic was simultaneously pursuing injunctions in other jurisdictions and before the Unified Patent Court in Europe, to pressure Xiaomi.[16] The Court of Appeal found Panasonic's conduct "indefensible" and inconsistent with its FRAND obligations as it had committed to the court's process and therefore it should not have threatened Xiaomi with foreign injunctions to gain leverage.[17] The interim license was therefore warranted to hold the parties to their FRAND commitment and prevent coercion. Notably, after the decision, Panasonic and Xiaomi did enter into an interim licensing agreement, validating the utility of the court's declaration.

> ***In such situations, interim licenses, established by court order or agreement, have been proposed as an equitable solution allowing business continuity while a single court works out the final FRAND terms***

Shortly thereafter, in *Nokia (Alcatel-Lucent) v. Amazon*, the Court of Appeal again indicated support for interim licenses. Amazon, facing SEP assertions from Nokia, sought to amend its defense to include a request for an interim license.[18] Arnold LJ granted permission for this amendment, noting Amazon had a real prospect of success for such license.[19] The Court rejected Nokia's attempts to distinguish *Panasonic v. Xiaomi*, even though Nokia (unlike Panasonic) had not itself started the UK action and had not given any undertakings to the Court.[20] The core principle remained that pursuing injunctions abroad to pressure an implementer could violate the SEP holder's duty of good faith under the ETSI FRAND commitment.

The culmination of this trend is highlighted by the very recent *Lenovo v. Ericsson* case. This dispute, ongoing across multiple jurisdictions, saw Lenovo (a Chinese im-

10 *Panasonic Holdings Corp. v. Xiaomi*, [2024] EWCA Civ 1143 (hereinafter *Panasonic Holdings Corp. v. Xiaomi*). The *Panasonic v. Xiaomi* decision, coming just a few months before *Lenovo v. Ericsson*, signaled the English courts' willingness to proactively prevent hold-up by SEP owners during the litigation by ensuring implementers can continue using the technology for now in return for FRAND royalties.

11 *Alcatel Lucent SAS v. Amazon Digital UK Limited & Ors*, [2025] EWCA Civ 43 (hereinafter Alcatel Lucent SAS v. Amazon Digital UK Limited & Ors).

12 *Lenovo Group Limited & Ors v. Telefonaktiebolaget LM Ericsson & Anor*, [2025] EWCA Civ 182 (hereinafter *Lenovo Group Ltd & Ors v. Telefonaktiebolaget LM Ericsson*).

13 *Unwired Planet Int'l Ltd. v. Huawei Techs. Co.,* [2020] UKSC 37.

14 See *Panasonic Holdings Corp. v. Xiaomi*, *supra* note 9, §1.

15 See *Panasonic Holdings Corp. v. Xiaomi*, *supra* note 9, § 26.

16 See *Panasonic Holdings Corp. v. Xiaomi*, *supra* note 9, §§ 55-59.

17 See *Panasonic Holdings Corp. v. Xiaomi*, *supra* note 9, § 86.

18 See *Alcatel Lucent SAS v. Amazon Digital UK Limited & Ors*, *supra* note 10, § 1.

19 See *Alcatel Lucent SAS v. Amazon Digital UK Limited & Ors*, *supra* note 10, § 64.

20 See *Alcatel Lucent SAS v. Amazon Digital UK Limited & Ors*, *supra* note 10, § 70.

plementer) proactively suing in the UK for a FRAND determination of a cross-license with Ericsson, and seeking an interim license declaration. At first instance, Richards J refused to grant such declaration, expressing reservations.[21] The Court of Appeal then issued an important decision in interim license jurisprudence. Arnold LJ here again delivered the ruling allowing Lenovo's appeal and granting the interim license.[22] The Court of Appeal analyzed four key issues:

(i) Good Faith. The Court examined whether Ericsson's conduct in pursuing aggressive litigation worldwide was consistent with its obligation to negotiate in good faith under the ETSI IPR Policy, governed by French law.[23] Clause 6.1 of that policy binds SEP holders to licensing on FRAND terms and by implication to negotiate in good faith. Lenovo had undertaken in the UK action to accept a license on whatever terms the English court ultimately found FRAND and also expressed willingness to accept the U.S. court's FRAND determination, provided Ericsson ceased seeking injunctions. Despite this, Ericsson was still pressing for injunctive relief at the U.S. ITC and in Brazil/Colombia.[24] The Court of Appeal found that Ericsson's conduct, while perhaps not as egregious as Panasonic's in the earlier case, was aimed at coercing Lenovo into settling on Ericsson's preferred terms.[25] This was deemed incompatible with the FRAND good faith obligation, as FRAND licensing is supposed to be a fair, free from hold-up.[26] Thus, the good faith factor favored granting relief to curb Ericsson's pressure tactics.

(ii) FRAND Terms of the Interim License. The Court of Appeal addressed whether it could determine that Lenovo's proposed interim license terms were themselves FRAND. Importantly, Arnold LJ drew a distinction between setting terms for a final license versus a short-term interim license. For the interim license, a broad brush approach suffices; the court need not conduct the exhaustive analysis required for a final global FRAND determination at this stage.[27] Instead, the Court looked at the range of offers on the table and picked a reasonable interim point; and endorsed using the midpoint between Lenovo's offer and Ericsson's last offer as the interim royalty rate.[28] This midpoint amounted to a very large payment to Ericsson, but one that both incentivizes the patent holder and protects the implementer.

(iii) Useful Purpose. Ericsson argued that granting an interim license declaration would serve no useful purpose, especially since Ericsson claimed it would refuse to actually sign an interim license even if declared.[29] The Court disagreed and held that an interim license would serve a useful purpose because it would put significant pressure on Ericsson to reconsider its position.[30] The Court noted that while it cannot force Ericsson to sign a license, an interim license effectively brands Ericsson as an unwilling SEP holder if it refuses to follow what a "willing" licensor would do. Thus, the interim license remedy has a practical tooth: it is not merely hypothetical or declaratory in the abstract, but shifts leverage in negotiations.

(iv) Comity. Given the multinational nature of the dispute, the Court of Appeal carefully

21 See *Lenovo Group Ltd & Ors v. Telefonaktiebolaget LM Ericsson*, [2024] EWHC 1734 (Pat).

22 See *Lenovo Group Ltd & Ors v. Telefonaktiebolaget LM Ericsson, supra* note 11, § 157.

23 See *Lenovo Group Ltd & Ors v. Telefonaktiebolaget LM Ericsson*, *supra* note 11, §§ 105-131.

24 See *Lenovo Group Ltd & Ors v. Telefonaktiebolaget LM Ericsson*, *supra* note 11, §§ 63-68, 75-76.

25 See *Lenovo Group Ltd & Ors v. Telefonaktiebolaget LM Ericsson*, *supra* note 11, §§ 126-128.

26 See *Lenovo Group Ltd & Ors v. Telefonaktiebolaget LM Ericsson*, *supra* note 11, § 129.

27 See *Lenovo Group Ltd & Ors v. Telefonaktiebolaget LM Ericsson*, *supra* note 11, §§ 132-138.

28 See *Lenovo Group Ltd & Ors v. Telefonaktiebolaget LM Ericsson*, *supra* note 11, § 156.

29 See *Lenovo Group Ltd & Ors v. Telefonaktiebolaget LM Ericsson*, *supra* note 11, § 140.

30 See *Lenovo Group Ltd & Ors v. Telefonaktiebolaget LM Ericsson*, *supra* note 11, § 142.

considered whether issuing an interim global license declaration would offend principles of international comity.[31] Comity concerns had been one reason the first instance judge hesitated to grant the interim license. Arnold LJ acknowledged that courts should avoid "jurisdictional imperialism" and not unduly interfere with other countries' legal processes.[32] However, he observed that in FRAND disputes a degree of jurisdictional overlap is inevitable. Notably, the English courts' assertion of authority to set global FRAND terms in *Unwired Planet*[33] already pushes boundaries, yet it was upheld as lawful. By comparison, a mere interim license declaration is "less intrusive" than a full adjudication of global terms. Furthermore, in *Lenovo v. Ericsson*, England had a strong nexus: an English court had exclusive jurisdiction to interpret a prior Ericsson-Motorola license that could materially affect the FRAND terms. This made England something of a necessary forum for part of the dispute. The Court also noted that Ericsson's own behavior showed it was not genuinely preferring the U.S. forum suggesting Ericsson was simply forum-shopping for delay or leverage, rather than seeking one authoritative decision.[34] Weighing these factors, the Court of Appeal concluded that comity did not bar the interim license relief. It also pointed out the symmetry: if implementers suing in the UK amounts to forum shopping, SEPs owners rushing to injunction-friendly venues is equally so, and neither can claim high moral ground on that issue.

The net result in *Lenovo v. Ericsson* is a powerful statement that an English court will intervene to facilitate a FRAND interim solution when one party's tactics threaten to undermine the FRAND process. The declaration granted confirmed that a willing licensor in Ericsson's position would offer an interim license pending final adjudication, and the Court specified the royalty computation for that interim period. It signals that implementers can seek refuge in the UK not only for a final global FRAND determination, but also for interim protection against worldwide injunction threats. SEP holders, on the other hand, face a warning that engaging in "hold-up" strategies can backfire under the lens of the FRAND contract and good faith obligation.

03
COMPARATIVE APPROACHES IN KEY JURISDICTIONS

As SEP disputes often span multiple jurisdictions, understanding how different courts handle FRAND licensing illuminates both potential conflicts and the possibility of harmonized solutions. Outside the UK, courts have generally been reluctant to impose interim licensing terms prior to a full adjudication of FRAND obligations.

Germany have not embraced any notion of an interim license. Under German law, an implementer seeking to avoid an injunction for patent infringement must declare its willingness to conclude a license on FRAND terms, submit a FRAND counter-offer, and provide security.[35] While meeting these conditions can thwart an injunction, the German remedy is essentially a stay or a defense against injunction, rather than a court-imposed licensing arrangement.[36] There is no mechanism in German law for a court to declare the parties temporarily "licensed" to one another.

In the U.S., SEP holders are constrained by policy statements discouraging injunctive relief when a patent is sub-

31 See *Lenovo Group Ltd & Ors v. Telefonaktiebolaget LM Ericsson*, *supra* note 11, §§ 145-155.

32 See *Lenovo Group Ltd & Ors v. Telefonaktiebolaget LM Ericsson*, *supra* note 11, § 155.

33 *Unwired Planet Int'l Ltd. v. Huawei Techs. (UK) Co*. [2020] UKSC 37, 26 August 2020, on appeals from: [2018] EWCA Civ 2344, [2019] EWCA Civ 38; [2017] EWHC 711 (Pat).

34 See *Lenovo Group Ltd & Ors v. Telefonaktiebolaget LM Ericsson*, *supra* note 11, § 154.

35 *Sisvel v. Haier, LG Düsseldorf*, 4a O 144/14 (UMTS) & 4a O 93/14 (GPRS) (Nov. 3, 2015) (Ger.).

36 Justus Baron, Santiago Bergallo & Eric Sergheraert, *Empirical Analysis of the German Caselaw on SEP Injunctions after Huawei v. ZTE*, Northwestern Law & Econ Research Paper No. 24-07 (May 14, 2024), https://ssrn.com/abstract=4834210 (last visited Mar. 9, 2025).

ject to a FRAND commitment.[37] Typically, an implementer in U.S. litigation can avoid an injunction by arguing that monetary damages are adequate and by pointing to its willingness to take a license.[38] However, U.S. courts have not gone so far as to force a patent owner to grant a license before final judgment. If liability is established, courts may determine a FRAND royalty for past and future use, as in *Microsoft v. Motorola*, where a U.S. court set a FRAND rate as a damages measure.[39] In the case of *Netgear v. Huawei*, Netgear, an implementer, faced SEP suits in the new Unified Patent Court and Germany, and sought an anti-suit injunction in the U.S. to halt those cases, or alternatively an interim license as a fallback, the first-ever such request before a U.S. court. The ruling is still pending.[40] Overall, while FRAND commitments are enforced in the U.S., remedies tend to involve *post hoc* damages or court-determined royalties rather than proactive interim licenses.

Chinese courts likewise have not issued interim licenses, though they have shown a willingness to set global FRAND rates and to grant anti-suit injunctions in order to safeguard their jurisdiction.[41]

By contrast, the UK's interim license approach has drawn significant debate. On the one hand, it offers a pragmatic solution to hold-up concerns, keeping FRAND disputes focused on substance rather than brinkmanship. On the other, some jurisdictions might retaliate if they perceive their authority being undermined. This tension raises a broader question: should SEP disputes be resolved in a single global forum to prevent inconsistent rulings, or should national courts retain full control, even at the cost of overlapping and contradictory outcomes? While academic scholarships continue to evolve, the concept of interim licensing has undoubtedly injected a new dimension into the ongoing discussion.

This tension raises a broader question: should SEP disputes be resolved in a single global forum to prevent inconsistent rulings, or should national courts retain full control, even at the cost of overlapping and contradictory outcomes?

37 U.S. Dep't of Just., Draft Policy Statement on Licensing Negotiations and Remedies for Standards-Essential Patents Subject to Voluntary F/Rand Commitments (Dec. 6, 2021), https://www.justice.gov/atr/page/file/1453471/dl?inline= (last visited Mar. 9, 2025).

38 Jorge L. Contreras, *Injunctive Relief in U.S. Patent Cases*, in *Patent Law Injunctions (*Rafal Sikorski ed., Wolters Kluwer, 2019).

39 *Microsoft Corp. v. Motorola, Inc*., 696 F.3d 872 (9th Cir. 2012).

40 Memorandum of Points and Authorities in Support of Its Motion for Anti-Enforcement Injunction or, Alternatively, Entry of Interim License, *Netgear, Inc. v. Huawei Techs. Co., Ltd.*, No. 2:24-cv-00824-AB-AJR (C.D. Cal. Dec. 4, 2024).

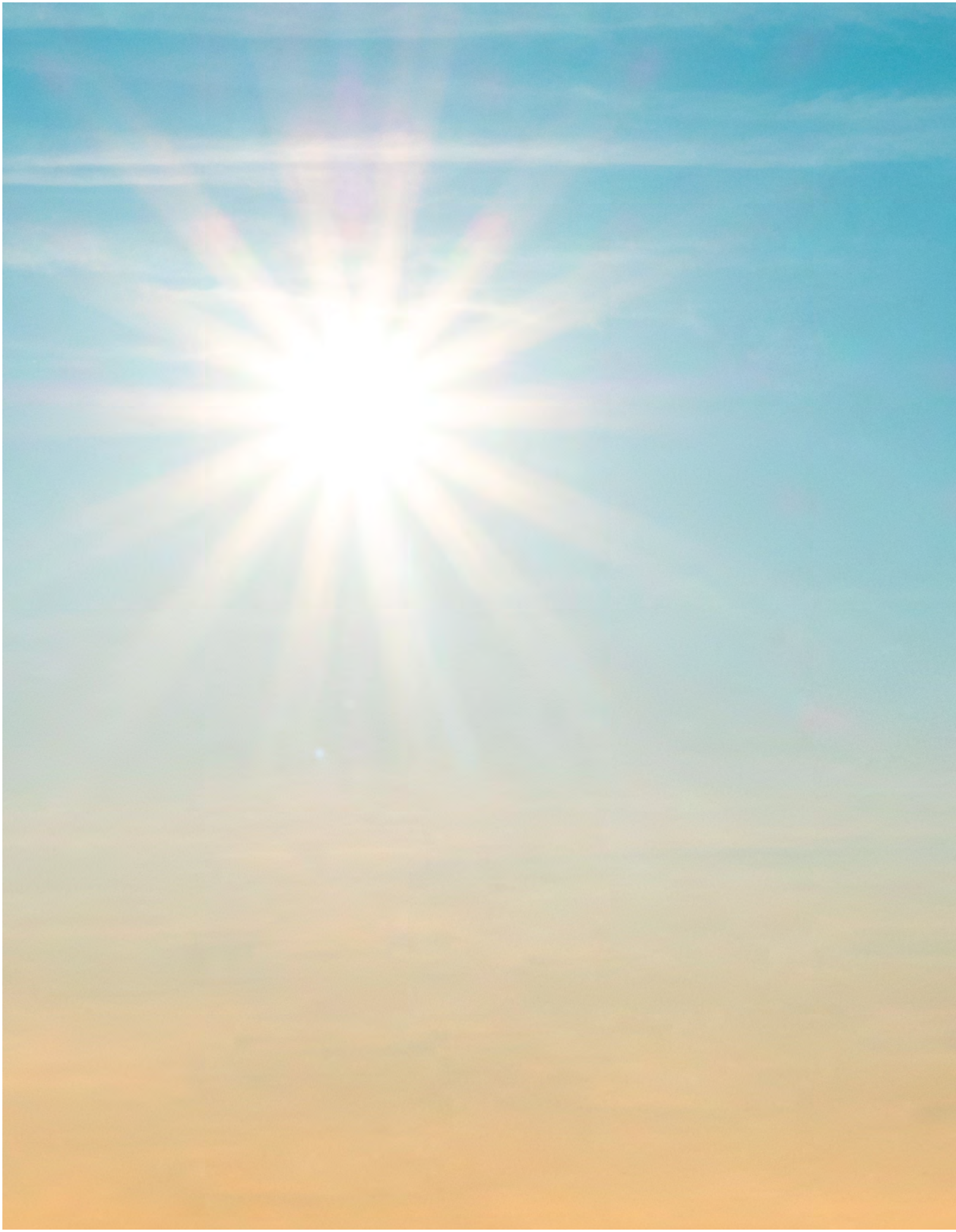
41 Jorge L. Contreras & Yang Yu, *Will China's New Anti-Suit Injunctions Shift the Balance of Global FRAND Litigation?* (Oct. 22, 2020), Univ. of Utah Coll. of Law Research Paper No. 403, https://dc.law.utah.edu/cgi/viewcontent.cgi?article=1245&context=scholarship (last visited Mar. 9, 2025).

04
CONCLUSION

The development of FRAND interim licenses represents an important development in addressing the inherent imbalance in SEP disputes. The recent case law from the UK notably signals an important shift toward proactive judicial intervention in global FRAND disputes, potentially shaping future SEP litigation strategies worldwide. Going forward, achieving greater international harmonization or coordination remains desirable yet challenging.

After all, we should welcome judicial and regulatory interventions that reduce the threat of injunctive holdup, such as the *Huawei v. ZTE* framework developed by the CJEU, the denial of injunctions for willing licensees, and now the availability of interim licenses in the UK. We should indeed never forget that modern products, including smartphones, cars, IoT devices, incorporate hundreds or thousands of SEPs from many owners. If each SEP owner could injunct products, the cumulative risk would be intolerable; thus, mechanisms such as interim FRAND licenses that channel disputes into adjudicating fair royalties are always essential and should be welcome.

“The development of FRAND interim licenses represents an important development in addressing the inherent imbalance in SEP disputes



THE RISING IMPORTANCE OF VIDEO CODEC SEPS IN A DATA-DRIVEN WORLD

BY JIM BEVERIDGE

Fellow of the Innovators Network Foundation.

01 INTRODUCTION

The digital revolution has ushered in an era of unprecedented data generation and consumption, transforming the way we create, communicate, and experience the world. At the heart of this transformation lies video, a medium that has become ubiquitous in everything from entertainment and social media to surveillance and scientific research.

This explosion in video content, further amplified by the rise of Artificial Intelligence ("AI")

and its increasing reliance on visual data,[2] has placed immense pressure on existing infrastructure. AI's growing appetite for video data, used for training models, real-time analysis, and decision-making, demands efficient methods for compressing, storing, and transmitting vast amounts of visual information. Video codecs, the unsung heroes of this data deluge, have emerged as critical technologies, enabling the seamless delivery of high-quality video across a multitude of platforms and devices, and playing a crucial role in unlocking the full potential of AI. Market Research company Lucintel[3] estimates market size in 2030 of $7.9 billion, with an annual growth forecast of 22.1 percent.

However, the increasing reliance on video codecs has brought to the forefront a complex interplay of technological innovation, intellectual property rights, and market dynamics. The development and implementation of these essential compression technologies are heavily reliant on robust intellectual property protection, particularly patents. Standard Essential Patents ("SEPs"), which protect the core technologies incorporated into standardised video codecs, have become increasingly valuable assets in this data-driven world.

The intricate licensing landscape surrounding these SEPs[4] presents both opportunities and challenges for stakeholders across the video ecosystem. Effectively balancing the rights of patent holders with the need for broad access to these crucial technologies to fuel the next generation of innovation is a central concern.

This paper delves into the rising importance of video codec SEPs in this context, examining the delicate balance between incentivising innovation and ensuring fair access to essential technologies. The evolution of video codec licensing models, from the early days of MPEG-2[5] to the latest advancements in VVC[6] and AV1,[7] reflects the ongoing struggle to reconcile the interests of patent holders and implementers.

The emergence of patent pools, bilateral licensing agreements, and open-source initiatives highlights the diverse approaches taken to navigate this complex terrain.

Furthermore, the growing prevalence of litigation related to video codec SEPs underscores the challenges of defining and enforcing FRAND (Fair, Reasonable, and Non-Discriminatory) obligations.

Disputes over royalty rates, licensing terms, and alleged patent infringement have become increasingly common, raising questions about the effectiveness of existing legal frameworks. The rise of new video content licensing platforms, such as Avanci, adds another layer of complexity to this landscape, potentially reshaping the dynamics of patent aggregation and enforcement.

This paper explores these critical issues, analysing the trends in codec licensing and litigation, examining the implications for innovation, competition, and access to the technology by a new generation of innovators.

02
VIDEO CODEC STANDARDS

In the realm of digital video, the seamless streaming, storage, and playback of high-quality content rely heavily on the intricate workings of video codecs. These sophisticated algorithms are the unsung heroes behind our digital media watching habits, enabling the efficient compression and decompression of video data. Uncompressed a digital movie would take days to download at today's internet speeds, this can be downloaded in minutes using modern video codecs. However, the journey from raw visual information to a viewable image on our screens is not solely a technical feat; it is deeply intertwined with the complex world of intellectual property rights, specifically SEPs.

Video codecs, in their quest for optimal compression, incorporate technologies protected by patents. When these patented technologies become indispensable to the implementation of a standardized video codec, they are deemed "essential" and the patents covering them become SEPs. This is a critical juncture where technology and law inter-

2 Article by Dashveenjit Kaur, AINEWS January 15, 2025. https://www.artificialintelligence-news.com/news/ai-giants-pay-thousands-for-creators-unused-footage-to-train-models/.

3 Next Generation Video Codec Market Report, Lucintel. https://www.lucintel.com/next-generation-video-codec-market.aspx.

4 Tim Pohlman, Versatile Video Coding Landscape. https://www.lexisnexisip.com/versatile-video-coding-landscape/.

5 History of MPEG. https://en.wikipedia.org/wiki/Moving_Picture_Experts_Group.

6 Overview of Versatile Video Codec. https://en.wikipedia.org/wiki/Versatile_Video_Coding.

7 Overview of AOMedia Video Codec 1 https://en.wikipedia.org/wiki/AV1.

sect. Standardization bodies, in this case, the International Telecommunication Union ("ITU")[8] and the ISO/IEC, Moving Picture Experts Group ("MPEG"),[9] play a crucial role in selecting and standardizing video compression techniques. However, this standardization process creates powerful patent positions, as anyone wishing to implement the standard *must* use the patented technology.

Several video coding standards have risen to prominence over the years, each with its own set of essential patents and associated legal challenges.

MPEG-2, while now largely superseded, was a foundational standard back in 1994 making possible DVD discs and Digital Broadcasting. Its use brought to the fore the complexities of SEP licensing and ushered the arrival of the first Video Codec Patent Pool MPEG LA[10].

H.264/AVC[11] (Advanced Video Coding) became a dominant standard for web video and high-definition content around 2010. It was followed by the more efficient H.265/HEVC[12] (High Efficiency Video Coding). The more recent H.266/VVC[13] (Versatile Video Coding) and the royalty-free AV1 codec represent the latest iterations in the ongoing quest for better compression. Each of these standards, with the notable exception of AV1, involves a complex patent landscape, with numerous companies holding SEPs crucial to their implementation. This patent landscape creates a complex web of licensing obligations for innovators seeking to implement these standards, as they must track down the various patent holders and their respective licensing terms. AV1, in contrast, was designed and released with a focus on avoiding patent encumbrances. Developed by the Alliance for Open Media[14] ("AOM"), a consortium of companies led by Google, AV1 aims to provide a high-performance, royalty-free video codec. AOM's approach involves incorporating technologies that are either unpatented or licensed under royalty-free terms, thereby eliminating the licensing complexities. This royalty free position is being challenged by several SEP patent holders, notably Sisvel.[15]

The inherent power bestowed upon SEP holders necessitate careful consideration of licensing practices. Unfettered by regulatory oversight, SEP holders have the power to leverage their SEPs, demand exorbitant royalties, stifle competition and hinder widespread adoption of the standard. This is where the concept of FRAND (Fair, Reasonable, and Non-Discriminatory) licensing comes into play. FRAND commitments, popularized by ETSI in the 1990s,[16] obligate SEP holders to license their essential patents on terms that are fair to both the patent holder and the implementer. This principle aims to strike a balance: ensuring that innovators are rewarded for their contributions while also guaranteeing that essential technologies are accessible on reasonable terms, fostering a competitive market and promoting innovation.

> ***H.264/AVC (Advanced Video Coding) became a dominant standard for web video and high-definition content around 2010***

However, the interpretation and application of FRAND principles have been a source of much debate and litigation. Determining what constitutes "fair," "reasonable," and "non-discriminatory" is a complex undertaking, often requiring careful consideration of industry norms, the value of the patented technology, and the specific circumstances of the licensing negotiations. As video becomes an ever-more critical component of the data-driven world, the interplay between video codecs, SEPs, and FRAND principles will continue to shape the future of digital media and the broader technology ecosystem.

8 ITU Video Codec activities. https://www.itu.int/en/ITU-T/studygroups/2022-2024/16/video/Pages/jvet.aspx.

9 Moving Picture Experts Group. https://www.mpeg.org.

10 MPEG LA patent pool. https://en.wikipedia.org/wiki/MPEG_LA.

11 H.264 Codec. https://en.wikipedia.org/wiki/Advanced_Video_Coding.

12 H.265 Codec. https://en.wikipedia.org/wiki/High_Efficiency_Video_Coding.

13 H.266 Codec. https://en.wikipedia.org/wiki/Versatile_Video_Coding.

14 Alliance for Open Media. https://aomedia.org.

15 Sisvel and AV1. https://www.sisvel.com/insights/aoms-av1-patents-arent-free-youre-just-not-paying-directly-for-them/.

16 The History of the ETSI IPR Policy: Setting the Records Straight. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4939301.

03
PATENT POOLS

Since the early days of MPEG-2, codec licensing complexity has increased dramatically with the emergence of new codecs.

Codec patent pools were created to address the challenges posed by patent thickets. The goal was to make it more efficient and less costly to license the essential intellectual property needed to implement standardized video codecs. They aimed to strike a balance between rewarding innovation and promoting the widespread adoption of valuable technologies. This approximate timeline illustrates the evolution and complexity of codec patent pools.[17]

- 1997: MPEG LA formed, and MPEG 2 licensed for a royalty fee.
- Early 2000s: MPEG LA's H.264 pool (now VIA-LA)[18] emerges, introducing royalties for internet content (up to $100K for subscriptions or per-title fees).
- 2010 (Approx.): MPEG LA ceases royalties for free internet video.
- 2014: MPEG LA launches its HEVC pool without content royalties.
- 2015: HEVC Advance (now Access Advance)[19] launches with a 0.05 percent royalty, then eliminates it but adds royalties for subscription, pay-per-view, and physical media. The Alliance for Open Media launches royalty-free AV1.
- 2018: HEVC Advance drops subscription/pay-per-view royalties, keeping only physical media royalties.
- 2020s: VIA-LA and Access Advance launch VVC pools, mirroring HEVC policies (no content royalties from VIA-LA, physical media only from Access Advance).
- 2023: Avanci launches its Video licensing pool.

Crucially, patent pools aren't the only source of patent claims. Non-affiliated patent owners also exist, complicating royalty stacking for implementers.

This makes it difficult for implementers to gauge the complete royalty stack they must pay. Some large video codec patent owners, like Qualcomm, haven't joined a pool and license directly with large implementors.

04
LITIGATION

Research by industry analyst IPlytics into the number of SEPs being litigated around the globe in the past 10 years demonstrates the popularity of Codecs for litigation. Ranking just behind cellular SEPs the top three Video Codecs occupy places 5.6 and 9 in their Top 10 of litigated SEPs.

Litigation of video codecs is occurring in multiple jurisdictions around the world, most notably USA, UK, and Germany, now spreading to other jurisdictions. In a 2024 blog entitled "SEPs Injunctions with a Tropical Flavour: the Brazilian Scenario"[20] a group of researchers (Bonadio, Tinoco & Leopoldino) highlighted a number of past and current litigated cases involving the licensing of Video Codecs in Brazil.

Notable disputes are *Ericsson v. TCT* (2012-2014)[21] and *Vringo v. ZTE* (2014),[22] (2024) *Nokia v. Amazon* [23] [(H.264/AVC standard*), Mitsubishi Electric v. SEMP TCL L* [24] (H.265/HEVC standard), and *NEC v. SEMP TCL I* [25] (HEVC standard) plus the ongoing *DivX v. Netflix* [26] (2023-2024), currently being appealed.

17 Streamingmediaglobal article.https://www.streamingmediaglobal.com/Articles/Editorial/Featured-Articles/Decoding-the-Landscape-Recent-Developments-in-Video-Codec-Licensing-164043.aspx.

18 Via LA. https://www.via-la.com.

19 Access Advance. https://accessadvance.com.

20 Kluwer Patent Blog https://patentblog.kluweriplaw.com/2024/10/08/seps-injunctions-with-a-tropical-flavour-the-brazilian-scenario/.

21 Patent Blog https://www.essentialpatentblog.com/wp-content/uploads/sites/64/2017/12/2015.06.29-279-1-Order-on-Anti-suit-injunction.pdf.

22 IPO Whitepaper https://ipo.org/wp-content/uploads/2023/04/ASI-whitepaper-final.pdf.

23 Case Link Amazon V. Nokia Brazil

24 Case Link Mitsubishi Electric v. SEMP TCL L

25 Case Link NEC v. SEMP TCL I

26 IAM Media article. https://www.iam-media.com/article/netflix-handed-brazils-first-ever-permanent-patent-injunction-in-the-ict-field.

The blog makes the point that one reason that so many cases end up being litigated in Brazil is that Brazilian Courts have a reputation for being "plaintiff-friendly" thus becoming a go to destination for SEP Patent owners. UK and German courts are also popular venues for litigation.

In July 2024, the UK High Court issued a judgement[27] upholding the English courts' jurisdiction and ordering an expedited RAND trial in a significant dispute between Nokia and Amazon concerning H.264 and H.265 video codec patents.

The High Court ruled that it has jurisdiction over Amazon's claim against Nokia, and that England is the appropriate forum for the dispute.

The court ordered early disclosure of Nokia's existing licence agreements and emphasised the importance of resolving the RAND dispute as soon as possible. The court acknowledged the urgency of the case and set a trial date for October 2025.

At the start 2025, InterDigital[28] has initiated global litigation proceedings against Walt Disney Company for allegedly infringing its SEPs.

InterDigital has filed suits at the United States Federal District Court in the Central District of California (case ID: 2:2025cv00895),[29] Rio de Janeiro State Court in Brazil, at Munich Regional Court in Germany, and at the Unified Patent Court's local divisions in Mannheim and Düsseldorf.

05

AI AND VIDEO CODECS A SYNERGISTIC RELATIONSHIP

The advent of AI and its use of codec technologies creates a perfect storm for increased litigation. The complex patent landscape, the involvement of new players, data-driven disputes, the lack of clear guidelines, and the high economic stakes all contribute to a greater likelihood of legal battles in this space.

In the article "Intellectual Property meets Artificial intelligence,"[30] Kirti Gupta highlighted the challenges posed by AI generated and AI assisted inventions and creations. Highlighting that traditionally patent law has been designed to protect the rights of human inventors and them moving to how the growing use of AI in chemical, biological, pharmaceutical and semiconductor industries has reignited the debate as to what is patentable. Industry roundtables on the topic receiving broad consensus that AI-enabled inventions should ultimately receive patent protection.

In the same way that Copyright Law is being challenged by the advent of AI, so the convergence of AI and video codecs isn't just a technological story; it's deeply intertwined with the associated intellectual property rights held by SEPs.

As AI increasingly relies on video data, the SEPs embedded within video codec standards become even more critical, creating both opportunities and challenges for the IP industry.

Before covering the specific ways AI enhances the efficiency of video coding, it is essential to understand the growing reliance of AI machines on compressed video data.

Training AI models, particularly in domains like computer vision, constitutes a significant growth area and a major consumer of video data. These models often rely on massive video datasets, which, for practical reasons of storage and transmission, will inevitably be encoded using video standards incorporating SEPs.

A new field for codecs and AI working together is the field of Data Augmentation. One example of this is around the area of autonomous driving for self-drive vehicles. Developers have found that running multiple video simulations of road driving can produce just as good results as real-world driving data. Again, generating or modifying video data for AI training will involve using tools that rely on patented codec technologies. This creates a potential minefield of SEP issues, especially if the augmented data is then used in commercial applications.

AI developers must navigate the licensing landscape to use this data legally. Dr. Gupta's concerns about copyright infringement during training become even more complex when SEPs are involved, as using patented technology for

27 2024 EWHC 1921(Pat). https://assets.caselaw.nationalarchives.gov.uk/ewhc/pat/2024/1921/ewhc_pat_2024_1921.pdf.

28 Interdigital versus Disney press release. https://ir.interdigital.com/news-events/press-releases/news-details/2025/InterDigital-enforces-patents-against-Disney/default.aspx.

29 Interdigital v. Disney. https://dockets.justia.com/docket/california/cacdce/2:2025cv00895/956174.

30 "Intellectual Property meets Artificial intelligence." Dr. Kirti Gupta. https://www.cornerstone.com/insights/articles/intellectual-property-meets-artificial-intelligence/.

data preparation or feature extraction could trigger infringement claims even before the AI model is deployed.

The proliferation of AI's ingesting compressed video data exposes a critical dependency: these intelligent systems are not just consumers of data; they are also ingesting the licensing restrictions attached to the underlying technologies.

The journey of this data from ingestion to analysis, by AI in the cloud, is fraught with IP considerations. Whether traversing 4G or 5G networks, the wireless pipes through which this video content flows are themselves subject to a separate set of SEP-related licensing restrictions. This dual layer of SEP encumbrances – at the video codec level and at the wireless communication level – effectively grants SEP holders a controlling influence over the digital pipeline through which AI systems access and process visual information.

They effectively hold the keys to both the content and the conduit, wielding significant power over the flow of data that fuels artificial intelligence. This control extends beyond mere financial considerations; it shapes the very landscape of innovation, potentially hindering the development and deployment of AI applications if licensing terms are not reasonable and accessible.

The implications for competition and market dynamics are profound, demanding careful attention to ensure that the pursuit of intellectual property rights does not inadvertently stifle the transformative potential of AI.

As noted above, AI is not merely a consumer of video data; it is increasingly becoming the very engine of video compression itself. AI's ability to discern patterns, optimize algorithms, and adapt to content characteristics in real-time has the potential to revolutionize video coding.

While traditional advancements like the next generation of codec, H.267[31] promise impressive bit rate reductions and efficiency gains, a significant risk looms they could be leapfrogged by entirely different classes of AI-driven codecs.

AI is being leveraged to enhance compression efficiency through techniques like content-aware encoding, where the codec intelligently adjusts its parameters based on the specific content being compressed. This can lead to significant bit rate reductions without sacrificing perceptual quality, unlocking new levels of efficiency.

Companies pioneering AI-driven advancements are not only pushing the boundaries of compression technology but are also strategically positioning themselves to shape the future of the codec landscape. The patents emerging from these innovations could very well become the next generation of SEPs, dramatically reshaping the power dynamics within the codec licensing arena.

06 LICENSING

The dramatic surge in revenues generated by streaming media companies in recent years, coupled with the burgeoning potential of AI-driven and IoT-based streaming applications, has not escaped the notice of video codec licensors. These patent holders and licensing entities perceive the rapid growth of the video codec market as an opportunity and are actively seeking to secure a share of the expanding revenue pie. They frame their efforts as playing an enabling role in the market's expansion, arguing that their patented technologies are essential to the efficient delivery and high-quality experience that define modern streaming. However, this perspective is not universally shared, and the imposition of licensing fees on streaming content, as opposed to individual devices, remains a point of contention, raising questions about fairness, innovation, and the future of video distribution in the digital age.

Avanci's emergence as a video codec licensing platform adds complexity to the IP landscape, particularly given its automotive sector experience licensing cellular SEPs.

While Avanci's expansion into video codecs raises concerns amongst implementors, its model also offers potential benefits. Proponents argue that its platform streamlines licensing for complex technologies, simplifying access to essential patents. This could be particularly advantageous in sectors like IoT, where numerous devices may incorporate video codec technology and navigating individual licensing agreements could be prohibitively complex. However, critics argue consolidated licensing power will diminish competition, and prior coordinated litigation by Avanci members against implementers (e.g. targeting Daimler, Tesla, and Ford) raises questions about strategic manoeuvres and the potential for supra-FRAND returns. It remains to be seen how Avanci's approach will balance the interests of patent holders and implementers in the video codec space.

31 H.267: A Codec for (One Possible) Future, February 4, 2025, By Jan Ozer https://www.streamingmedia.com/Articles/ReadArticle.aspx?ArticleID=167889.

07
CONCLUSION

In conclusion, the landscape of video compression technology is undergoing a dramatic transformation, driven by what at times seems to be an insatiable global demand for data-rich video content. As I have described, video codec SEPs play a pivotal role in this evolution, acting as both enablers of technological progress and potential battlegrounds for intellectual property disputes.

The growth of streaming services, driving the transition from satellite and terrestrial broadcast technologies to high definition 4/8 K streaming, places unprecedented pressure on bandwidth and storage capacity. Improvements in the efficiency of video codecs reduces the costs of bandwidth and data storage allowing the streaming services to reduce costs and improve the customer experience. This surge in demand is in turn, accelerating the development and deployment of more efficient video codecs, making SEPs associated with these codecs increasingly valuable.

Beyond streaming, the proliferation of Internet of Things ("IoT") devices has emerged as another significant growth driver for video codec technology. The integration of AI into IoT applications is further compounding this trend driving the digitisation of traditional vertical markets across the globe. From smart security systems and autonomous vehicles to industrial monitoring and remote healthcare, AI-powered IoT devices are increasingly reliant on efficient video compression to capture, analyse, and transmit visual data. These applications often demand real-time processing and low-latency communication, pushing the boundaries of existing codec capabilities and creating new opportunities for innovation in, machine oriented, video compression.

AI algorithms, in turn, are being developed and leveraged to optimise codec performance, improve compression ratios, and enhance the quality of video streams in resource-constrained IoT environments. This synergistic relationship between AI and video codecs within the IoT ecosystem will lead to further codec standardisation.

The delicate balance between fostering innovation and ensuring fair access to essential technologies remains a central challenge. While SEPs incentivise investment in research and development, concerns about ongoing abusive licensing practices necessitate scrutiny. The complexities surrounding FRAND obligations and increasing litigation underscore the need for the legal and regulatory frameworks to keep up with the technologies being standardised.

Moving forward, the video codec legal ecosystem must prioritise transparency of licensing restrictions and royalty costs, ensuring that implementers have a clear understanding of the costs associated with utilizing essential video codec technologies. Furthermore, the availability of bilateral licensing options should be safeguarded, providing all implementers with the ability to negotiate directly with patent holders and avoid being locked into potentially unfavourable terms dictated by a consolidated licensing platform.

Can the collaborative spirit demonstrated by the video codec technical community in forums like JVET be mirrored in the legal and regulatory arena? Case law[32] in the SEPs area often amounts to one step forward and two steps back on the path towards a clear legal framework.

The challenge is for policymakers, legal experts, and industry leaders to keep up with their engineering counterparts in Geneva, engage in a constructive stakeholder dialogue to create a future framework that fosters innovation, ensures fair competition, and protects the interests of all stakeholders in the exciting world of next-generation video codecs. ■

"Beyond streaming, the proliferation of Internet of Things ("IoT") devices has emerged as another significant growth driver for video codec technology

32 Priya Nair, One Step Forward and Two Steps Back.
https://actonline.org/2024/08/02/one-step-forward-and-two-steps-back-the-uks-approach-to-seps-dismisses-sme-innovators/.

AVANCI'S ADMISSIONS CAST DOUBT ON POOL'S PROCOMPETITIVE EFFECTS

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Patent pools have historically been viewed as procompetitive. And the latest pool receiving widespread attention, the Avanci pool, has gained support for this reason as well. But testimony in a recent case casts doubt on some of Avanci's claims of procompetitive conduct. Avanci and one of its members were recently sued in the United Kingdom.

The court (while finding the result to be "odd") held that determining what constitutes licensing on "fair, reasonable, and nondiscriminatory" ("FRAND") terms for the entire pool lay outside its jurisdiction.[2] But the hearing provided a wealth of admissions illustrating the anticompetitive nature of the pool. Patent pools have historically received the benefit of the doubt because of the efficiencies they offer. But as we discuss below, the Avanci pool is unique: it reimburses litigation costs, maximizes royalties, discourages bilateral licenses, and, in avoiding FRAND commitments, puts licensees in an impossible position. These anticompetitive characteristics were on full display in the UK hearing. And given the importance of the Avanci pool, a fuller consideration of these characteristics deserves attention.

01

STANDARD-ESSENTIAL PATENTS AND THE FRAND COMMITMENT

The cellular patents that Avanci licenses have been declared standard-essential patents (SEPs), meaning that they are essential to cellular standards like 4G and 5G. Technological standards, like cellular and Wi-Fi, are developed through voluntary standardization processes at standards development organizations ("SDOs").

Given that the standardization process results in the exclusion of alternative technologies, competition authorities have recognized that SEP holders could obtain significant market power that can harm competition and discourage the adoption of standards.[3] In order to prevent this patent "hold-up," SDOs have developed policies that require SEP holders to commit to licensing their patents on FRAND terms.[4]

02

THE AVANCI PATENT PLATFORM AND COMPETITION LAW

Avanci is a self-described licensing "platform" that licenses patents essential for cellular technology to automotive and internet of things ("IoT") manufacturers on behalf of more than 65 patent holders, including some of the largest licensors in the world. As a result, Avanci has authority to license 80 to 83 percent of the worldwide declared 2G to 5G claimed essential patents.[5]

In 2020, Avanci received a Business Review Letter in which the U.S. Department of Justice (DOJ) Antitrust Division indicated that it was not "presently inclined to initiate an antitrust enforcement action."[6] Since the time of the letter, commentators have raised concerns that Avanci's conduct is anticompetitive.[7] Recently, China's competition authority

2 Approved Judgment, *Tesla v. IDAC et al.*, [2024] EWHC 1815 (Ch) ¶ 123 (5 July 2024) ("It may seem odd that a claim which Tesla has a legitimate interest in pursuing and which would in principle serve a proper purpose cannot be pursued here. The conclusion that it cannot has given me some concern."), *available at* https://www.bailii.org/ew/cases/EWHC/Ch/2024/1815.html.

3 See, e.g. EC, *Antitrust decisions on standard essential patents (SEPs) - Motorola Mobility and Samsung Electronics – Frequently asked questions*, EC MEMO/14/322 (29 Apr. 2014), https://ec.europa.eu/commission/presscorner/detail/en/MEMO_14_322; see also A. Douglas Melamed and Carl Shapiro, *How Antitrust Law Can Make FRAND Commitments More Effective*, 127 Yale L.J. 2110, 2119-20 (2018), https://law.stanford.edu/wp-content/uploads/2018/05/How-Antitrust-Law-Can-Make-FRAND-Commitments-More-Effective.pdf.

4 Robert Pocknell & David Djavaherian, *The History of the ETSI IPR Policy: Using the Historical Record to Inform Application of the ETSI FRAND Obligation,* 75 Rutgers L.J. 977, 1006 (2022), https://ssrn.com/abstract=4231645.

5 Tim Pohlmann, *Avanci's New 5G Vehicle Program – A One Stop Shop?,* IPWatchdog (Aug. 16, 2023), https://ipwatchdog.com/2023/08/16/avancis-new-5g-vehicle-program-one-stop-shop/id=165274/.

6 Letter from Makan Delrahim, Assistant Att'y Gen., Antitrust Div., U.S. Dep't of Justice, to Mark H. Hamer, Partner, Baker & McKenzie, at 22 (July 28, 2022) [hereinafter "BRL"]. For criticism of this letter, see Alex H. Moss & Michael Carrier letter to Ass't Att'y Gen'l Jonathan Kanter (Oct. 17, 2022), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4250512 (explaining that the letter undermines standard-setting consensus, relies on questionable positions, presents concerns corroborated by real-world events, compounds supply-chain issues, and threatens even more foreboding future harms).

7 E.g. Jay Jurata & Emily Luken, *DOJ Needs to Reconsider Prior Administration's Avanci Letter*, Law360 (Dec. 21, 2022), https://www.law360.com/articles/1560298/doj-needs-to-reconsider-prior-administration-s-avanci-letter.

announced that it was opening an investigation into Avanci's practices.[8]

One of the competition-based criticisms leveled against Avanci is based on its apparent support of collusive pack-hunting tactics that promote litigation. Avanci members appear to engage in coordinated litigation in which multiple members target manufacturers in unison with the apparent goal of forcing them to take an Avanci license.[9] These litigation campaigns center on efforts to obtain injunctive relief, which significantly increases the pressure on manufacturers to take a license on any terms.[10] This tactic has allowed Avanci to obtain royalties from automotive manufacturers for cellular licenses that are more than five times the rates that courts have found to be FRAND for handsets and tablets.[11]

> ***One of the competition-based criticisms leveled against Avanci is based on its apparent support of collusive pack-hunting tactics that promote litigation***

Avanci facilitates this practice by reimbursing its members' litigation costs for participating in lawsuits that result in manufacturers taking an Avanci license.[12] This reimbursement, however, applies only for certain purposes. The licensor forfeits litigation support and reimbursement "if it enters into a bilateral license that does not increase licensing revenue for the Platform."[13]

For example, in 2019, three Avanci members targeted Daimler; in 2020, five Avanci members targeted Tesla; and in 2022, seven Avanci members targeted Ford.[14] These efforts appear to be coordinated. In some cases, the litigation is terminated as a result of the manufacturer publicly taking a license.[15] And even when the licenses are not publicly announced, the timing of the dismissals is indicative of a pooled license. These coordinated and parallel lawsuits create significant pressure on manufacturers in terms of legal resources. In addition, being forced to litigate against multiple licensors at once can make it difficult for manufacturers to persuade courts that they are willing licensees.[16]

Despite these questionable tactics resulting in licensing agreements with almost all major automobile manufacturers, information about Avanci — including how it operates and what exact patents it licenses — is hard to come by.

Last year, Tesla initiated litigation against Avanci. One of Avanci's members, InterDigital, asked a UK court to engage in a rate setting process regarding the patents it licenses. During a June hearing on whether the United Kingdom is an appropriate forum, the attorneys for InterDigital and Avanci made several admissions that support the claims that Avanci's practices are harmful to competition.

8 See Zhong Chun, *A deep dive into China's three-letters-one-notice system as compliance challenges emerge for patent pools*, GCR (Aug. 22, 2024), https://globalcompetitionreview.com/hub/sepfrand-hub/2023/article/deep-dive-chinas-three-letters-one-notice-system-compliance-challenges-emerge-patent-pools.

9 Moss & Carrier, *supra* note 6.

10 John Hayes & Assaf Zimring, *Injunctions in Litigation Involving SEPs*, GRUR Patent 240, 242-43 (June 20, 2024), https://media.crai.com/wp-content/uploads/2024/07/02154935/Hayes-Zimring_GRUR-Patent-2024-240-245_.pdf.

11 Avanci requires automakers to pay $32 per vehicle for a license compared to $0.225 per unit that the UK Court of Appeal ordered Lenovo to pay InterDigital for a bilateral license. See *Avanci 5G Vehicle*, Avanci, https://www.avanci.com/vehicle/5gvehicle/ (last visited Aug. 26, 2024); see *InterDigital Technology Corp. et al. v. Lenovo Group Ltd. et al.,* [2024] EWCA Civ 743 ¶ 284 (12 July 2024), https://assets.caselaw.nationalarchives.gov.uk/ewca/civ/2024/743/ewca_civ_2024_743.pdf.

12 Delrahim letter to Hamer, *supra* note 6, at 6.

13 *Ibid.* at 11 n.75; see also *ibid.* at 6 ("licensors that sue for patent infringement of an essential patent may request reimbursement of costs if the litigation results in a Platform license").

14 Moss & Carrier, *supra* note 6, at 4.

15 See *supra* note 5.

16 *Dutch Network Operator KPN Becomes 7th Avanci Licensor to Sue Ford Motor Company over 4G Standard-Essential Patents,* Foss Patents (May 17, 2022), http://www.fosspatents.com/2022/05/dutch-network-operator-kpn-becomes-7th.html.

03

POOLS vs. THE AVANCI PLATFORM

Avanci distinguishes itself as a patent platform, as opposed to a pool. Avanci argued during the hearing that patent pools are "usually formed by the patent-owners themselves" and thus are "potentially problematic because they can give rise to cartel behaviour."[17] In addition, they are "rather pro-patentee, because they leave the licensees stuck with whatever the patent-owners, operating in unison themselves, have decided to offer as the pool licence" and "[y]ou have to take all of it and we have decided what the price is."[18]

The DOJ Antitrust Division noted when it conducted a review of Avanci's practices that there does not appear to be a material difference between a patent pool and a platform.[19] That, however, is not entirely accurate. In attempting to show the benefits of its structure, Avanci and InterDigital point to the difference between a pool and a platform, but that does not immunize anticompetitive behavior.

04

AVANCI'S HUB AND SPOKE ORGANIZATION IS INCENTIVIZED TO MAXIMIZE ROYALTIES

Avanci differentiates itself from a patent pool by asserting that it "does not own a single SEP" and that it "negotiates with the industry as a whole, spoking to both SEP-owners and SEP implementers to broker a one-size fits-all license . . . ."[20] Avanci thus purports to negotiate the license as an "independent third party."[21] This, however, matters only to the extent that Avanci's interests are actually independent from licensors seeking to maximize royalties. Avanci operates on the basis of a commission, which means it is incentivized to generate licensing revenue for its members.[22] This incentivizes the platform to act in a manner that maximizes royalty revenue.

At best, this means that Avanci's interests are aligned with patent holders to engage in conduct that maximizes revenue, which would nullify the supposed distinction between a platform and a pool from a competition perspective. But even this best-case scenario is only true to the extent that patent holders' interests are aligned. There can be dramatic differences in interests between licensors that, as InterDigital colorfully explained, can lead them to act like "cats in a sack."[23]

As Avanci explained, for example, the interests of licensors are not actually aligned to maximize royalties. Some SEP holders "only hold a portfolio they do not themselves implement" and thus "are very interested in seeing high rates."[24] Other SEP holders, in contrast, are also implementers, are "interested in licensing in and licensing out," and "may well have a different view as to licence rates."[25] As Inter-

17 Hr'g Tr. 128:15-18.

18 See *supra* note 17, at 128:18-22.

19 Delrahim letter to Hamer, *supra* note 6, at 1 n.1.

20 See *supra* note 17, at 129:2-5.

21 See *supra* note 17, at 131:24-132:3.

22 See Skeleton Argument on behalf of The First, Second, and Third Defendants at 7, *Tesla, Inc. et al. v. IDAC Holdings, Inc. et al.,* (2024) EWHC 1815 (Ch).

23 See *supra* note 17, at 58:14-17.

24 See *supra* note 17, at 136:12-14.

25 See *supra* note 17, at 136:15-17.

Digital noted, licensors "are competing for a share of the overall patent stack" and thus "have different interests as to rates."[26]

> ***At best, this means that Avanci's interests are aligned with patent holders to engage in conduct that maximizes revenue, which would nullify the supposed distinction between a platform and a pool from a competition perspective***

Avanci is arranged in a manner that gives it significant control and suppresses these differences. While Avanci claims that it sets its rate as a result of discussion with stakeholders on both sides, it ultimately makes the final determination, with the rate "put to [licensors] on a take it or leave it basis by Avanci before agreeing to join up."[27] Avanci initiates changes to the rate[28] by approval of a supermajority voting share of Avanci's 65 members, which InterDigital claimed could be met by itself plus "four of the other licensors."[29]

The Avanci platform, in other words, is (as InterDigital explained) "a spoke relationship with Avanci at the hub."[30] In an ordinary pool, these differences would play out by requiring members to compromise. But given the way that Avanci is set up, with the platform controlling the decision-making process, competing interests regarding royalty methodologies and share maximization of the stack are suppressed. Since Avanci determines changes to the rate, with the changes approved by a minority — five out of 65 — of its members, its practice does not suggest a best-case scenario in which a broad range of participants contributes to the determination. Instead, Avanci's reimbursement program strategically incentivizes a handful of members to collectively agree to license within the platform.

05
STRUCTURING AWAY THE FRAND COMMITMENT

This problematic structure is compounded by the fact that Avanci and (at least some of) its members offer contradictory assessments when it comes to the vital issue of whether they are constrained by the FRAND commitment.

To grow its platform (and even today), Avanci has promised to follow FRAND obligations. As of the date of this article, Avanci's website poses the question: "Is Avanci licensing on FRAND terms?"[31] And it answers unequivocally: "Absolutely." Avanci shares a commitment with the IoT ecosystem to make the latest technology available in a way that is FRAND."[32] In case there were any doubt, it continues: "This well-established industry principle ensures that those using the technology in their IoT products have access at terms that are well-aligned with their needs and those creating wireless technology receive a fair return on their investment."[33]

Once licensees agreed to use the platform, however, Avanci changed its tune. Avanci, despite serving as a licensing agent for SEP holders obligated to license on FRAND terms, remarkably admitted in the hearings that it "does not have any ETSI/FRAND obligation" because "[i]t owns no SEPs" and "has declared no SEPs to ETSI or any other standardisation body and . . . has not given any associated promise to ETSI or to anyone else to license on strict ETSI/FRAND terms."[34] While Avanci claims that it "believes its licences are . . . FRAND in the descriptive

26 See *supra* note 17, at 56:23-25.

27 See *supra* note 17, at 41:2-3.

28 See *supra* note 17, at 44:8-10.

29 See *supra* note 17, at 42:16-17; 44:13.

30 See *supra* note 17, at 40:7.

31 *Is Avanci licensing on FRAND terms?*, Avanci, https://www.avanci.com/vehicle/ (last visited Aug. 24, 2024).

32 See *supra* note 31.

33 See *supra* note 31.

34 See *supra* note 17, at 133:17-22.

sense . . . whether or to what extent offering an Avanci platform licence satisfies a particular SEP holder's ETSI/FRAND obligation in respect of a specific implementer is not something which Avanci can ever ensure."[35] Avanci thus concludes that "it sits entirely outside of the ETSI/FRAND system,"[36] allowing it to take the position that it offers "FRAND-ish" terms without being bound to actually comply with the FRAND obligation.[37]

InterDigital likewise disclaims any FRAND obligation stemming from Avanci's licensing of its patents. It argued that even if "licence obligations under FRAND feed . . . into the pool, it is the collective, at most, that underpins that licence" as "[t]here is no discrete bit of the Avanci pool which is supported by an InterDigital licence."[38] InterDigital further disclaims responsibility on the grounds that it lacks agency over Avanci because "even if InterDigital's obligation does somehow affect platform licensing, it remains the case that there is no obligation on InterDigital . . . [because] [o]nly Avanci can do it" and it "simply cannot and is not in any way obliged to license or offer licences as to patents of others."[39]

06

UNAVAILABILITY OF BILATERAL LICENSING

The proceedings also revealed that Avanci does not require its members to offer bilateral licenses to potential licensees.[40] This revelation was a surprise to not only outsiders, but also Avanci's counsel during oral arguments.

On the first day of proceedings, Avanci's barrister confirmed that "the Avanci terms actually require . . . each licensor to offer a bilateral FRAND license."[41] He explained that this requirement was "mandatory" and "part of the reasoning the US Department of Justice [said] the system was not anti-competitive."[42] He continued that an:

> implementer can take the [Avanci] license if they like, but if, for whatever reason, the implementer thinks that they would be better arranging bilateral licenses for some or all of the SEP-holders, they are free and they are able to do so, including, if necessary, by enforcing individual SEP-holders['] . . . ETSI/FRAND obligation in the courts. . . . That is why we say it is important that a platform is different [from] a pool.[43]

The next day, Tesla challenged this fact, noting that members have the right, but not obligation, to enter into a bilateral license.[44] Avanci then backtracked, clarifying that it "does not impose any new contractual obligation upon SEP-holders in the Avanci 5G platform" and that any requirement to engage in bilateral licensing would arise out of their obligation to the standard setting body.[45]

Although the ETSI obligation requires SEP holders to give licenses on FRAND terms, Avanci, by not including such an obligation in its member agreement, is able to avoid any responsibility or legal repercussions for members that refuse to offer bilateral licenses to licensees seeking them.

The concession also undermines Avanci's claim that licensees can pursue a bilateral FRAND determination. Courts in jurisdictions like the United States are precluded from engaging in rate setting unless the SEP holder ac-

35 See *supra* note 17, at 134:17-22.

36 See *supra* note 17, at 140:2-3.

37 See *supra* note 17, at 206: 9-11.

38 See *supra* note 17, at 39:5-9.

39 See *supra* note 17, at 344:3-8.

40 For a discussion of how the Avanci platform discourages bilateral licenses, see Delrahim letter to Hamer, *supra* note 6, at 2.

41 See *supra* note 17, at 131:7-9.

42 See *supra* note 17, at 131:10-14.

43 See *supra* note 17, at 131:16-24.

44 See *supra* note 17, at 210:19-211:12.

45 See *supra* note 17, at 314:19-315:15.

tually makes a royalty demand.[46] If, however, Avanci had obligated members to offer bilateral licenses, putative licensees would have a colorable claim as third party beneficiaries when an Avanci member approached them to take a license.

Licensees, in short, are in an impossible position. They cannot pursue a FRAND determination against Avanci, which purports not to be bound by FRAND. But at the same time, they may not be able to sue individual licensors, who dictate if and where jurisdiction may be established. The court here recognized this, stating that "the rate set by Avanci may not be capable of effective challenge in a FRAND determination."[47]

07
AVANCI'S WIN-WIN STRATEGY

The strategy outlined at the end of the last section appears to be InterDigital's approach in this case (facilitated by Avanci's structure): protesting this action on the grounds that it has not demanded royalties from Tesla. The strategy allows Avanci's largest members to obtain the high royalty rates that could normally only be extracted via aggressive campaigns pursuing injunctive relief without actually engaging in litigation themselves. This offers significant undeserved benefits to large portfolio holders by removing the risk of being subjected to a public rate determination well below what they publicly demand.

Instead, these companies can rely on smaller SEP holders to engage in aggressive litigation campaigns. These smaller licensors receive litigation funding from Avanci allowing them to expend resources well above the actual value of their portfolio.[48] Moreover, their relatively small portfolios compared to the cost of litigation make them effectively immune to rate setting proceedings since parties that require an Avanci license would not risk disproportionate legal costs to receive a discount on a minor portion of the license. As InterDigital noted, the cost of a FRAND rate determination in the United Kingdom costs "[t]ens and tens of millions."[49] Given that five of the 65 members constitute a supermajority share of the patents, the portfolio value of the smaller Avanci members, even for the largest licensees, is only a fraction of this cost. And while the United Kingdom is a "loser pays" jurisdiction, many of these companies are likely judgment proof [50] and would simply dissolve in the face of an adverse determination.[51] Moreover, because these companies only represent a small fraction of the overall Avanci "portfolio," a low determination by way of expensive court proceedings would not save costs for a licensee on the overall Avanci rate.

The coordinated litigation against Ford seems to be an example of this strategy. Even though Ford is one of the largest automobile manufacturers in the world and the Avanci license is estimated to be worth $66 million per year, the Avanci members that targeted it were not its largest SEP holders. Instead, the seven SEP holders that asserted claims in the litigation campaign against Ford were Optis (alongside PanOptis and Unwired Planet), Sol IP, KPN, Mi-

46 In a modified opinion, the U.S. Court of Appeals for the Fifth Circuit affirmed the dismissal of Continental Automotive Systems' antitrust claims under Sections 1 and 2 of the Sherman Act, while not addressing the lower court's holding that Continental did not suffer antitrust injury. See *Continental Automotive Systems v. Avanci, LLC*, No. 20-11032, 2022 WL 2205469, at *1 (5th Cir. June 21, 2022).

47 Approved Judgment, *Tesla v. IDAC et al.*, [2024] EWHC 1815 (Ch) ¶ 97 (5 July 2024), *available at* https://www.bailii.org/ew/cases/EWHC/Ch/2024/1815.html.

48 For a discussion of how the BRL recognized that Avanci's reimbursement of litigation costs could encourage lawsuits, see Delrahim letter to Hamer, *supra* note 6, at 2 (quoting BRL's concession that the pool could "incentivize more licensors to sue" and that they could "assert their essential patents when they otherwise would not have done so (perhaps due to the questionable strength of their declared SEPs")).

49 See *supra* note 17, at 48:15-16.

50 At least one case at the Unified Patent Court shows that the court did not issue security for legal costs on a small patent assertion entity (PAE) plaintiff even though "the financial position of the [p]laintiff" would make "enforcement of a cost reimbursement order . . . fail materially, since the Plaintiff d[id] not have adequate financial means to cover the legal expenses that it [could have] be[en] liable for . . . [or] any physical assets . . . that could be used to satisfy a claim for reimbursement of costs." See UPC CFI No. 513/2023 Order of Local Division in Munich, issued on April 23, 2024), at 3, https://www.unified-patent-court.org/sites/default/files/files/api_order/D0F7EF0BB793B7C4EB0C-B604967C62B9_en.pdf.

51 Avanci's practice consists of using PAEs to coerce licensees into an Avanci license. See Moss & Carrier, *supra* note 6, at 5-6.

iCS, Sisvel, IP Bridge, and L2 Mobile Technologies (a Longhorn IP subsidiary).[52] By share of the patent stack, none of these are in the top 30 SEP holders.[53]

08

THE COMPETITION AND MARKET AUTHORITY'S IMPORTANT ROLE

On July 26, 2024, the UK Competition and Markets Authority (CMA) published its consultation to review its Assimilated Technology Transfer Block Exemption Regulation (Assimilated TTBER) retained from EU law after the UK's exit.[54] The Assimilated TTBER outlines certain technology transfer agreements[55] that are automatically exempt from the Competition Act 1988, Chapter 1 prohibition against agreements between businesses that restrict competition. This consultation will inform the CMA's recommendations to replace the regulation or allow it to continue after its April 30, 2026 expiration date.

The CMA has a critical opportunity in its recommendations to account for agreements between patent holders and their respective licensing agents. While some patent pools can theoretically provide patent holders with an efficient way to facilitate licensing transactions, Avanci's model reduces competition by bypassing its members' obligations.[56] Evading FRAND commitments while facilitating a litigation campaign to lock the industry into the only game in town directly harms downstream developers. And it violates the most fundamental competition-based tenets through refusals to license willing licensees and forcing standards users to take a supra-FRAND license under threat of an injunction. Small businesses are especially harmed since they cannot afford the expense of litigation and are unlikely to receive investment because of the legal uncertainties.

> ***The CMA has a critical opportunity in its recommendations to account for agreements between patent holders and their respective licensing agents***

52 Florian Mueller, *Dutch network operator KPN becomes 7th Avanci licensor to sue Ford Motor Company over 4G standard-essential patents*, FOSS Patents (May 17, 2022), http://www.fosspatents.com/2022/05/dutch-network-operator-kpn-becomes-7th.html.

53 Tim Pohlmann, *Who leads the 5G patent race as 2021 draws to the end?*, IAM (Nov. 3, 2021) https://www.iam-media.com/article/who-leads-the-5g-patent-race-2021-draws-the-end.

54 Technology Transfer Block Exemption, Competition & Markets Authority (Jul. 26, 2024), https://connect.cma.gov.uk/technology-transfer-block-exemption-regulation.

55 *Technology Transfer Block Exemption Regulation: Call for inputs* 5, Competition and Markets Authority (Jul. 26, 2024), https://ehq-production-europe.s3.eu-west-1.amazonaws.com/c7701d3b4508d05beb0dcb13fe3a87248bef2f73/original/1721985214/a3d8237113e1f3bdc9c51d3d5ba7c9e2_Call_for_inputs.pdf. ("A 'technology transfer agreement' for the purpose of the Assimilated TTBER is an agreement in which one party (the licensor) assigns or licences the use of industrial property rights (such as patents, design rights, software copyrights and know-how) to another party (licensee) for the production of goods or services.").

56 Many of Avanci's licensing practices do not fall within the safe harbor for patent pools outlined in the EU's TTBER Guidelines, assimilated by the UK. Communication for the Commission, art. 4.4, 2014 O.J. (L.89) 3-50 ¶ 261 (b), (d), (e), available at https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.C_.2014.089.01.0003.01.ENG; see John "Jay" Jurata, Jr. & Emily N. Luken, *Glory Days: Do the Anticompetitive Risks of Standard-Essential Patent Pools Outweigh Their Procompetitive Benefits?*, 58 San Diego L. Rev. 417, 428-30, 438-46 (2021), *available at* https://digital.sandiego.edu/sdlr/vol58/iss2/4/ (explaining how Avanci pool differs from pools that the DOJ had previously considered to be procompetitive).

09
CONCLUSION

The deference the Avanci patent pool has received for being procompetitive should be reassessed given revelations made in the recent UK hearing. The admissions made by Avanci and InterDigital highlight behaviors that are undermining the FRAND commitment. These practices, if left unchecked, could distort the competitive landscape and stifle innovation in IoT and beyond.[57] The platform boasts that it has "licensed its 2G/3G/4G portfolio to . . . several of the largest Vehicle manufacturers" and that it "expects continued growth in its existing platform . . . as the 2G, 3G, and 4G standards continue to be popular for IoT devices."[58] Given the fast-approaching ubiquity of IoT and the multi-pronged strategy to thwart competition, Avanci's practices should not remain above scrutiny. Just because an arrangement is a patent pool doesn't mean it's good for consumers and the economy. ■

"The deference the Avanci patent pool has received for being procompetitive should be reassessed given revelations made in the recent UK hearing

57 See Angela Morris, *Career and negotiation tips from Avanci's vice president for IoT licensing*, IAM (Sept. 4, 2024), https://www.iam-media.com/article/career-and-negotiation-tips-avancis-vice-president-iot-licensing (stating that "[i]n December 2023, Avanci launched a licensing programme for EV chargers" and by September 2024, "it ha[d] 45 patent owners and three licensees" and quoting senior Avanci official: "There are endless opportunities out there, so we have to find that sweet spot where both licensees and licensors are interested and there's a momentum there – whether that's in retail, smart agriculture or smart cities.'").

58 Letter from Mark H. Hamer, Partner, Baker & McKenzie, to Makan Delrahim, Assistant Att'y Gen., Antitrust Div., U.S. Dep't of Justice, at 2 (Nov. 21, 2019).

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For April 2025, we will feature a TechREG Chronicle focused on issues related to Digital Platform Governance.

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