Standard Essential Patents at the PTAB: Are SEPs Faring any Differently than Non-SEPs?

Impacts and Analysis[1]

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Standard Essential Patents are on the Rise, as is Litigation

Standard-essential patents (SEPs) are on the rise. A key factor undergirding that rise is the desire for device connectivity in all things, and the fact that reliable and robust connectivity is impossible without using key standards that are almost always subject to SEPs. For example, it is estimated that by 2025, more than 26 billion home and workplace devices will be connected to the Internet and have sensors, processors, and embedded software for facilitating connectivity.[2]

The economic impact of these connected devices is estimated to be approximately $10 trillion per year by 2025.[3] It is no surprise then that, in the last several years, the number of issued SEPs impacting connectivity has increased dramatically. Just looking at one of the more recent standards—5G cellular communications—the number of declared 5G patent families has increased tenfold between 2017 and 2023, reaching over 60,000.[4] In fact, the number of declared 5G patent families is almost 2.5 times more than the number of patent families declared essential to the previous 4G cellular communication standard. In addition to a surge in quantity, the relevance of SEPs has broadened—wireless and telecom standard technology have become prevalent in everything from biotech and automotive products to home appliances. Consequently, the impact of patents covering standard essential technology is felt, and will continue to be felt, across all major industries.

Predictably, the number of SEPs involved in litigation follows the progression of the technology. With the increased adoption of 4G technology, there was a corresponding rise in litigation of SEPs; the more products that were 4G compliant meant more potential infringers, which led to increased SEP litigation.[5] A similar rise has taken place with the more recent release and increasingly widespread adoption of 5G technology. Unsurprisingly, then, the 4G and 5G standards generally account for more 70% of all SEP litigation.[6]

The Threat of Injunctive Relief

As the widespread adoption of standardized technologies continues to rapidly increase, the number of technology implementers that find themselves entangled in SEP disputes will also increase. Technology implementers therefore must be aware of the potential risks involved with SEP litigation. This includes understanding who the SEP holders are, their relative business objectives, and their SEP litigation history. But regardless of the existing SEP landscape, the biggest risk to potential infringers will always be the threat of an injunction.

SEP-based injunctions have not always been viewed as a viable option. SEPs are generally FRAND-encumbered, meaning that the SEP holder has made a promise to license its SEPs on fair reasonable and non-discriminatory terms, which has been viewed by many courts as an admission that monetary damages are adequate compensation.[7] But in 2019, the US Patent and Trademark Office (USPTO), US Department of Justice (DOJ), and National Institute of Standards and Technology (NIST) issued a joint statement to clarify their collective view that SEPs should be eligible for injunctive relief.[8] The statement provided that, as with all other patents, infringement of SEPs should be analyzed for potential injunctive relief under the *eBay* framework.[9] Then, in June 2022, the DOJ, USPTO, and NIST announced the withdrawal of the 2019 joint statement, and chose not to institute a new SEP policy in its place. This has left the industry without any formal government-sanctioned guidelines for SEP licensing and enforcement. Meanwhile, a number of SEP disputes were brought before the US International Trade Commission (ITC), which led to a string of decisions essentially indicating that SEP-based injunctions (in the form of exclusion orders and/or cease and desist orders) are available at the ITC.[10]

With injunctions now a clear possibility, and with the SEP landscape being thrown into a state of flux with both the rollout of the Unitary Patent Court and the European Unions' Proposed European Commission Regulation For Standard Essential Patents published in April of this year, *inter partes* reviews (IPRs) offer a strategic option for defendants. A pending or already-instituted IPR decreases a patentee's chances of obtaining an injunction against a defendant in district court[11], and increases the likelihood of obtaining a stay of the district court proceedings. Thus, filing an IPR petition early in the course of SEP litigation can be a critical component of the technology implementer's defense. Moreover, US Patent Trial and Appeal Board (PTAB) judges are generally more receptive to invalidity arguments relating to highly complex technology (which is often the case with SEPs), more so than district court judges and juries, thereby making the PTAB an attractive forum for technology implementers seeking to defend against SEP litigation.[12]

For the SEP holder, mitigating the effect of an IPR on a request for injunctive relief should be a primary focus. To this end, SEP holders should research available forums and select an injunction-friendly court if possible (including the, for example, the ITC). SEP holders should also lay out specific details in the complaint to paint the technology implementer as an unwilling licensee (an important factor in determining the availability of injunctive relief involving SEPs), and should seek expedited discovery under FRCP 26(d), which could factor into whether the PTAB decides to use its discretion to deny institution of the IPR.

Petitioners are successfully challenging SEPs at the PTAB

Unsurprisingly, the number of IPRs filed against SEPs has also followed the progression of the technology, and the widespread adoption of agreed-upon standards. As illustrated in Figure 1 below, IPR filings against SEPs saw a spike in 2013-2014, growing to a peak in 2017, before falling to a low in 2019. Then IPR filings against SEPs saw another rise in 2020-2021. These spikes followed the rollouts of 4G and 5G, respectively. The annualized number of SEP IPRs is expected to fall again (as publication), but the rollout and mass incorporation of new connectivity standards (e.g., WiFi 6) will likely cause another spike in SEP litigation and IPRs in the coming months and years.

Petitioners challenging SEPs have had similar success at the PTAB as those challenging non-SEP patents, dispelling any notion that SEPs are necessarily higher quality. As shown in Figure 2 on page 32, IPRs involving electronics-based SEPs have similar institution rates as proceedings involving non-SEP electronics patents.[13] The outlier year, 2020, which saw significantly lower institution rates for IPRs involving electronics-based SEPs coincided with the rollout of the new 5G standard. These lower institution rates are likely due to the unsettled nature of the technology and available universe of prior art.

Additionally, Figure 3 on page 32 shows that IPRs involving electronics-based SEPs have similar claim cancellation rates as proceedings involving non-SEP electronics patents, and actually have higher chances of having all claims cancelled.

One important factor behind the high claim cancellation rates for IPRs involving SEPs—which generally cover highly complex technology with only incremental improvements over existing technology—is the choice of prior art. Seventy-six percent of all IPRs filed against SEPs used non-patent literature (NPLs) as prior art, and 61% of these proceedings specifically used NPLs that were produced explicitly for the purpose of developing and refining standards (SEP NPLs). These include, for example, technical specifications/reports or working group documents produced under the auspices of a standard-setting organization. While the use of NPLs, and specifically SEP NPLs, has led to high claim cancellation rates (76% and 85%, respectively), such references come with their own set of challenges. It can be difficult to prove that these references are printed publications that were publicly accessible sufficiently early, which—despite their compelling substance—has led to relatively low institution rates (51% for NPLs and 57% for SEP NPLs). It is important for petitioners seeking to file SEP IPRs to select counsel familiar with these unique challenges since it is very difficult to cure defective IPR petitions before the PTAB.

Figure 1: IPRs Filed Against SEPs

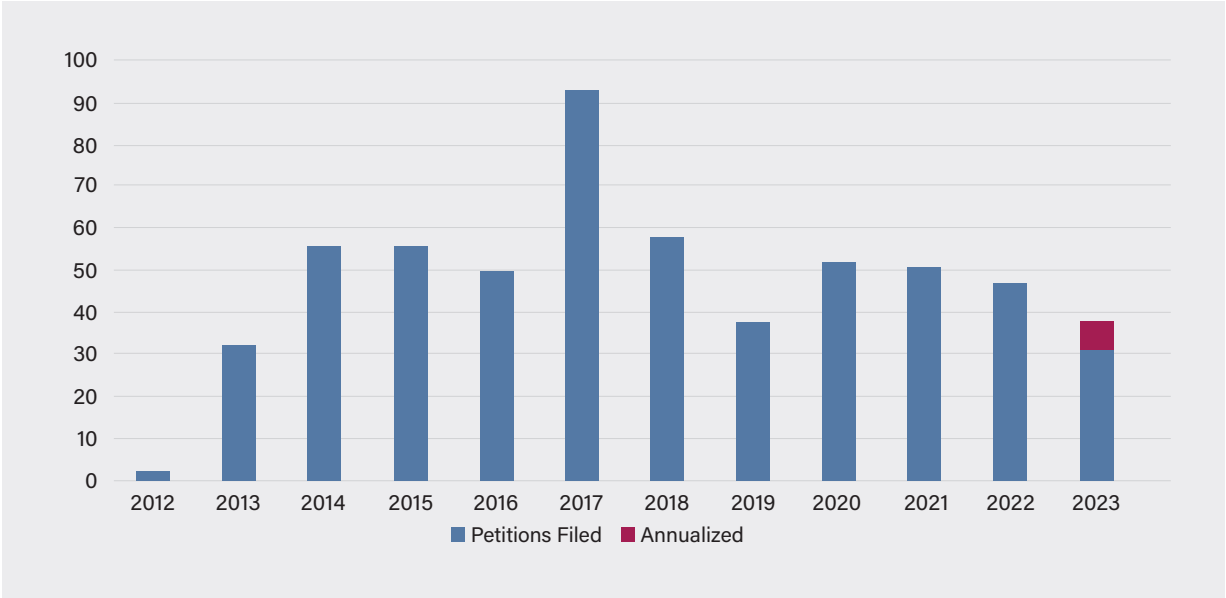
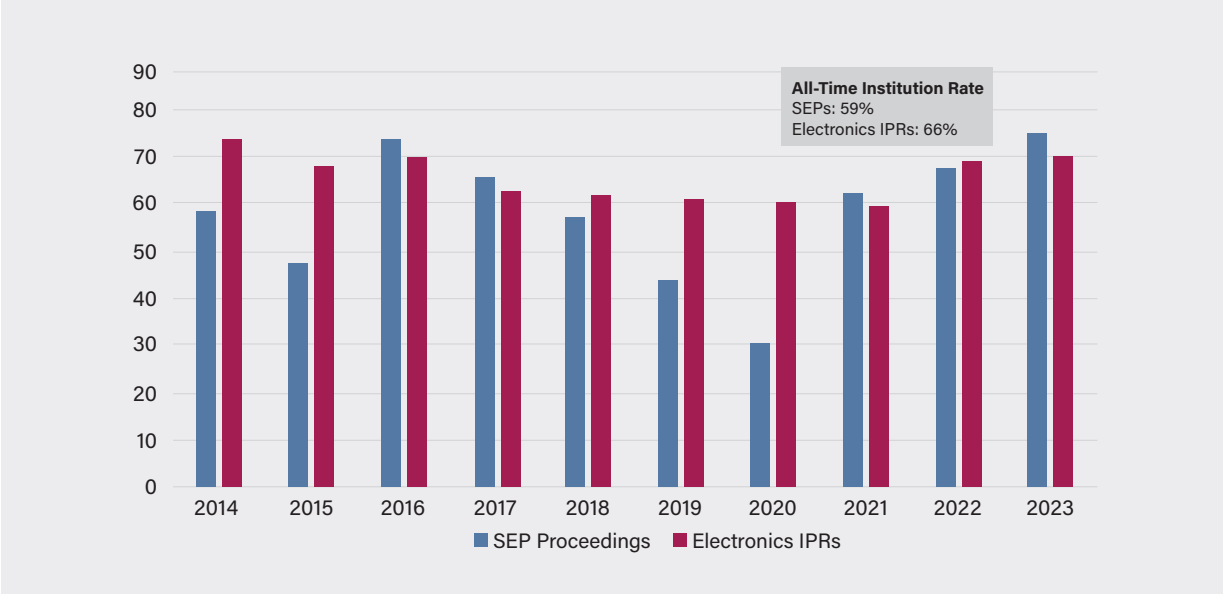


Figure 2: Proceeding Institution Rate (Electronics IPRs)



Considerations for Petitioners and Patent Owners

In light of the difficulty in proving that SEP NPL qualifies as prior art, petitioners should consider presenting both a set of patent-based grounds *and* a set of non-patent-based grounds in a single IPR petition (if possible) challenging an SEP. Doing so may allow petitioners to both avoid the lower institutions rates and take advantage of the higher claim cancellation rates associated with using NPLs as prior art. If it is not possible to fit both sets of grounds in a single petition, then petitioners should consider filing two petitions and highlighting the potential for a public accessibility challenge to the set of non-patent-based grounds as justification for instituting both petitions. At the very least, this approach will increase the likelihood that the SEP holder will raise any public accessibility challenge prior to institution, and may in turn increase the chances that the PTAB will address or resolve these issues at institution.

Additionally, petitioners should engage experts to authenticate these NPL references, and help draw clear lines of correlation between the NPLs and the challenged SEP, which were each drafted for and by different individuals. These experts would preferably have personal experience with the relevant standard setting organizations (SSOs) that produced the SEP NPLs being considered for prior art. This may mean that the petitioner engages multiple experts: one to authenticate and give context to the NPLs and another to speak to patentability, including factors relevant to obviousness and reasons to combine the prior art.

Petitioners should also be aware of possible priority date issues that can impact the available pool of prior art. SEP holders tend to file applications as early as possible as they compete to get their proposed technology adopted as the standard. The earlier the application, the more likely that continuation or divisional applications were filed in an attempt to have these later-filed claim sets read on the final version of the standard. This means that if the SEP being challenged claims priority to an earlier filed application, the claims of the challenged SEP may not be supported by the earlier application(s). This could prevent the patent owner from getting an earlier priority date, thereby increasing the available pool of prior art by a couple months or even years. This can make all the difference when dealing with SEPs that are generally in highly congested technology spaces and may cover only incremental changes.

On the other side, patentees' strategies should include challenging the public availability of the asserted references at the institution stage. This may include engaging multiple experts as well, where one is specifically tasked with rebutting the documentation and distribution practices of the relevant SSOs. Patentees should also contact the named inventor(s) to get the

Figure 3: Claim Cancellation Outcomes at FWD (Electronics IPRs)[14]

	All Claims Cancelled	Some Claims Cancelled	No Claims Cancelled	n
SEP Proceedings	73%	8%	18%	142
Electronics IPRs	67%	16%	16%	2,271

complete invention story, including facts relevant to objective indicia evidence. As technology implementers will often argue that SEPs only cover incremental changes to previous versions of a standard, being able to tell a compelling story of why those changes would not in fact have been obvious will be important. Finally, in light of the highly congested technology spaces that SEPs generally cover, patentees should also fully understand art cited and applied during prosecution of the entire SEP family. Additionally, patentees should consider developing a fulsome record during prosecution of the SEPs, including citing all relevant references in an IDS. Patentees should then seek to leverage past precedential decisions to show that art or arguments applied in the IPR are redundant of art or arguments presented during prosecution.[14] Indeed, the PTAB has demonstrated "a commitment to defer to previous Office evaluations of the evidence of record unless material error is shown."[15]

SEPs Moving Forward

IPRs will continue to play a critical role in SEP assertion efforts. The PTAB has become well-versed in dealing with SEP challenges, and in comparison to district court judges and juries, PTAB judges are generally more receptive to complex technical positions and unpatentability arguments. Thus, stakeholders will benefit from incorporating PTAB strategy into their overall SEP assertion strategy.

1. A similar article was published in Sterne Kessler's PTAB Year in Review 2021. This article has been updated to include new statistics and developments.
2. Ménière Yann, Ilja Rudyk & Javier Valdes, *Patents and the Fourth Industrial Revolution: The Inventions Behind Digital Transformation* 10 (Eur. Pat. Off. ed., 2017).
3. *Communication from the Commission to the European Parliament, the Council and the European Economic and Social Committee Setting Out the EU Approach to Standard Essential Patents*, at 1, COM (2017) 712 final (Nov. 29, 2017)(noting the potential is up to EUR 9 trillion per year in developed countries).
4. Tim Pohlmann, Magnus Buggenhagen, & Marco Richter, *Who is Leading the 5G Patent Race?* (LexisNexis® IPLytics ed., 2023).
5. Report: Litigation Landscape of Standard-Essential Patents 2 (Darts-IP ed., 2019).
6. Tim Pohlmann, *How to Navigate Risk Webinar Part 1: The Role of SEPs & Standards in the Auto Industry* (IPLytics GmbH ed., 2021).
7. *Realtek Semiconductor Corporation v. LSI Corporation and Agere Systems LLC*, 946 F. Supp. 2d 998 (N.D. Cal. 2013).
8. U.S. Pat. & Trademark Off., U.S. Dep't of Just. & Nat'l Inst. of Standards & Tech., Policy Statement on Remedies for Standards-Essential Patents Subject to Voluntary F/RAND Commitments, at 4-5 (Dec. 19, 2019).
9. *Id.* at 6.
10. *See, e.g., Certain Memory Modules and Components Thereof* (Inv. No. 337-TA-1089), *Certain LTE- and 3G-Compliant Cellular Communications Devices* (Inv. No. 337-TA-1138), *Certain UMTS and LTE Cellular Communication Modules and Products Containing the Same* (Inv. No. 337-TA-1240).
11. *See, e.g., DNA Genotek Inc. v. Spectrum Sols. L.L.C.*, Case No.: 16-CV-1544 JLS (NLS) (S.D. Cal. Aug. 11, 2016) (denying a preliminary injunction for patent infringement based on an IPR filed against the asserted patent); *Sciele Pharma Inc. v. Lupin Ltd.*, 684 F.3d 1253, 1263 (Fed. Cir. 2012) (vacating a preliminary injunction because "the district court incorrectly concluded that [Defendant] failed to raise a substantial question of validity regarding the asserted claims of the [] patent").
12. Importantly, courts have held that an implementer cannot be criticized for challenging the validity of an SEP, and doing so does not render the implementer an unwilling licensee (a label that in some jurisdictions can increase the likelihood of an injunction). *See, e.g., Motorola Mobility LLC*, 156 F.T.C. 147, 205-06 (2013).
13. A Docket Navigator search of motion success indicated petitions against non-SEP electronics patents have a 66% institution rate and petitions against electronics-based SEPs have a 59% institution rate.
14. *See, e.g. Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH*, IPR2019-01469 (PTAB Feb. 13, 2020); *Oticon Med. AB v. Cochlear Ltd.*, IPR2019-00975 (PTAB Oct. 16, 2019); *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586 (P.T.A.B. Dec. 15, 2017).
15. *Advanced Bionics.*