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The Proposed EU Regulation for Standard Essential Patents: Chronicle of a Death Foretold

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EXECUTIVE SUMMARY

This policy brief critically assesses the European Commission's withdrawn proposal that would have overhauled the system of licensing and enforcing Standard Essential Patents (SEPs) in the EU. It was a proposal that, had it gone ahead, could have seriously undermined innovation in Europe's digital economy and reduced the powerful role of Europe in developing key telecom standards. It would have caused legal confusion and unpredictability, which is why important courts and judicial institutions poured cold water on the proposal. Remarkably, it would have reduced European economic interest at a time when technology features prominently in geopolitical rivalry.

SEPs, particularly those that underpin standards for advanced mobile communication, are the invisible infrastructure behind today's digital world. They form the backbone of technical standards such as 5G and are increasingly used across sectors, from mobile networks to cars and household appliances.

The Commission's 2023 proposal aimed to tackle perceived shortcomings in SEP licensing, such as limited transparency, royalty stacking, and disputes over FRAND (Fair, Reasonable and Non-Discriminatory) terms. But instead of building on existing solutions, it introduced heavy-handed measures that risked destabilising a functioning system, potentially doing more harm than good, particularly for Europe's competitiveness and technological leadership.

The solutions offered in the SEP proposal are built on a framework that seeks to address issues by establishing a SEP registry, mandating a conciliation process, and introducing royalty benchmarking, all under the authority of the European Union Intellectual Property Office (EUIPO), the body responsible for managing EU trademarks and designs which would represent an institutional overreach. The policy brief highlights three key problems arising from the proposed SEP regulation.

- **Heavy Administrative Burden:** the proposed regulation would have required innovators to register their patents with the EUIPO, with lack of compliance potentially undermining their ability to enforce their rights. Despite imposing a substantial administrative burden, the registry would have only offered minimal practical value in resolving licensing disputes.

- **Denial of Access to Justice:** the regulation proposed a mandatory pre-litigation process for royalty disputes, effectively introducing a top-down pricing mechanism. This approach would have disrupted the balance between patent holders and implementers, delay access to judicial remedies, and marginalise the role of the Unified Patent Court (UPC), undermining its purpose in adjudicating complex patent disputes.

- **Flawed Agency Price Setting:** the proposal envisioned the EUIPO, an agency lacking patent expertise recommending royalty caps for all patents within a given standard. This raised concerns about the agency's qualifications to make such determinations and the risk of artificially suppressing prices, potentially harming leading European innovators and deepening the EU's reliance on foreign technologies.

At its core, the proposal reflected a broader misjudgement: heavy-handed regulation is ill-suited to the fast-moving, globally integrated SEP ecosystem. First, the pace of technological innovation far outstrips the speed of regulation. Second, technologies like 5G operate across borders, and any attempt to impose a standalone European framework not only risks fragmenting international licensing practices but also triggering a regulatory race among countries – each seeking to advance its own industrial policy objectives through divergent approaches. Third, regulation overlooked one of Europe's key strengths: its role as a net exporter of innovation in key sectors such as advanced mobile communication. Fourth, regulation ignores how much progress has already been made through self-correcting mechanisms such as market-based negotiations, flexible licensing, and case law.

1. A RADICAL PROPOSAL BY THE EUROPEAN COMMISSION

Standard Essential Patents (SEPs) are a cornerstone of the modern digital economy. They safeguard the innovations behind technical standards such as 3G, 4G, 5G, Wi-Fi, USB, and Bluetooth. Their importance will continue to grow as current and future networks allow for much wider technical and economic use. Moreover, the Internet of Things (IoT) brings ICT-related technologies into sectors such as defence, automotive, utilities, and healthcare, as well as into emerging fields like quantum technology.[1]

The evolution of the European approach to SEPs can be traced through four stylised phases.[2] The first phase, spanning the 1980s to 2010, was marked by minimal government intervention but breakthrough innovation and widespread adoption of cellular technology. The EU policy favoured open and industry led standardisation as a way to strengthen the EU's ICT sector and encourage market competition.[3] This process culminated in 2010, when the European Commission released the second version of the European Interoperability Framework. Under the new guidelines, royalty-free licensing was no longer required; standards could now qualify as open if essential patents were licensed on FRAND (fair, reasonable, and non-discriminatory) terms[4].

The second phase, from 2010 to 2014, saw a shift towards greater government involvement, with competition authorities examining FRAND licensing practices with the ambition of reducing market friction. The antitrust focus was not endogenous; it was shaped in part by parallel interventions in the US which influenced the Commission's approach to SEP licencing processes. For instance, in Motorola Mobility LLC and Google Inc. case, the Federal Trade Commission (FTC) found that Google's acquisition of Motorola Mobility harmed competition by reneging on Motorola's commitment to license its standard-essential patents (SEPs) on FRAND terms, specifically by seeking or threatening injunctions against companies willing to accept FRAND-compliant licenses.[5] These developments were seen to be mirrored in Europe as well, notably in Case COMP/38.636 Rambus, where the Commission investigated the company for allegedly withholding information about its SEPs during the standard-setting process, thereby gaining an unfair advantage once the standard was adopted.[6] In 2012, further investigations were opened against Samsung and Motorola Mobility amid the so-called "smartphone patent wars," examining whether seeking injunctive relief for FRAND-encumbered SEPs amounted to an abuse of dominant position, particularly where the alleged infringer (Apple) was considered a willing licensee.[7]

The third phase, from 2014 until now, has been largely defined by the escalation of SEP disputes to the courts, including the Court of Justice of the European Union (CJEU) and national courts. In

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[1] See Meyer, P. et al. (2023).

[2] See Barazza (2023).

[3] Updegrove, A. (2010, February 25). If IT policy is your thing, keep an eye on Europe. Consortium Info.org. http://www.consortiuminfo.org/standardsblog/articles/if-it-policy-your-thing-keep-eye-europe

[4] European Commission 2010, p 26; also see: von Ingersleben-Seip, N. (2025).

[5] Motorola Mobility LLC & Google Inc., F.T.C. File No. 121-0120 (2013)

[6] Commission Decision of 9 December 2009

[7] Case AT.39939 Samsung—Enforcement of UMTS standard essential patents; Case AT.39985 Motorola—Enforcement of GPRS standard essential patents.

its landmark Huawei v ZTE decision, the CJEU established a procedural framework for how SEP holders and users should approach injunctive relief. Specifically, SEP holders who have committed to licensing their patents on FRAND terms cannot seek an injunction against a willing licensee unless they first meet certain conditions, most notably, making an initial FRAND-compliant offer. After this ruling, EU antitrust authorities appeared to retreat from active enforcement in the SEP/FRAND space, with disputes increasingly handled by national courts rather than through competition law.

Importantly, litigation in this area has declined: since 2018, there have been an average of just 28 FRAND-related disputes globally per year, with only three in 2021. This mirrors the broader pattern in Europe, where SEP litigation also remains limited, around 60 cases annually, compared to approximately 330 non-SEP patent cases.[8] At the same time, there has been a growing use of alternative dispute resolution (ADR) mechanisms to establish FRAND. The European Commission notes that parties, particularly SMEs, increasingly rely on the World Intellectual Property Organization (WIPO)'s ADR services to resolve SEP disputes. Since 2021, WIPO has reported 65 SEP-related mediation cases, over 60 percent involving EU-based participants. As of January 2023, most remained pending, while in many others, the mediation process spurred renewed licensing negotiations, often resulting in settlement outside formal proceedings.[9]

Finally, a fourth phase could have been opened if the European Commission's radical proposal for SEP regulation[10] would not have been withdrawn from the Commission's work programme.[11]

The initial motivation for the European Commission to reform the SEP system had already come in the late 2000s, on the heels of the previously mentioned "smartphone patent wars", which triggered concerns that both holders and implementers were clogging the arteries of technology diffusion. This prompted a series of guidelines,[12] consultations,[13] policy documents,[14] and studies[15] – all of which worked with the grain of the SEP system. However, in 2023, the European Commission favoured a radical overhaul the SEP system through a regulation aimed

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8 J. Baron et al., (2023); also see: IP Europe. (2023).

9 EU SEPs Proposal Impact Assessment, footnote 159, P 36

10 See European Commission (2023b).

11 See European Commission (2025).

12 In 2011, the European Commission issued revised Guidelines on the application of Article 101 TFEU to horizontal cooperation agreements, including a section on standardisation. The Guidelines took a balanced approach, acknowledging the role of SEPs and FRAND commitments in fostering innovation and interoperability, while guarding against anti-competitive risks such as patent hold-up and exclusionary licensing. See European Commission (2011); Emanuelson (2012).

13 In 2015, the Commission also recognised the need to provide a global level playing field and sought to ensure that "EU standardisation remains at the forefront of international technology standardisation." (European Commission, 2015b), Following the consultation, the Commission's 2017 SEP Roadmap identified three key challenges in standards development and implementation: (1) lack of transparency due to the rising number of declared SEPs, making it difficult for licensees to know which were essential, (2) unclear valuation methods for determining royalties, FRAND rates, and non-monetary terms; and (3) weak enforcement, with fragmented licensing frameworks leading to legal uncertainty, costly disputes. See European Commission (2017a).

14 A 2017 European Commission study highlighted the need for clear principles to create a balanced SEP framework that encourages innovation, fair returns and supports broad access to standardised technologies on fair terms. See European Commission (2017b); Bekkers (2020); Baron, et al. (2019).

15 In 2013, a policy paper by Kai-Uwe Kühn, then Chief Economist at DG Competition, and U.S.-based economists urged SDOs to play a more active role in addressing anti-competitive SEP licensing. Recommendations included binding FRAND commitments on future patent holders, prioritising arbitration over litigation, requiring disclosure of cash licensing terms, and mandating dispute resolution steps prior to injunctions. See Kühn, et al. (2013). In 2021, the Commission appointed fifteen experts to provide insights into industry practices to inform future policy on SEPs. Their mandate covered issues such as assessing essentiality, determining the appropriate licensing level in the value chain, identifying approaches to calculate FRAND rates, enhancing transparency, reducing delays, improving FRAND offer evaluations, and promoting the use of patent pools. See European Commission (2021).

at tackling concerns around licensing transparency, royalty stacking, and FRAND terms (see Annex 1: Key Concepts for a full description of these terms).

Yet, by the time the Commission proposed the SEP Regulation, the smartphone patent wars had long since subsided, and fears of a similar conflict in the automotive sector had largely failed to materialise. In fact, most major car manufacturers had already entered into licensing agreements, particularly through platforms like Avanci, well before the proposal emerged. This contributed to the controversy surrounding the Regulation: the market was moving toward a natural equilibrium, and there was no pressing development that would justify regulatory intervention. Given that the Commission said the SEP proposal was withdrawn 'due to no foreseeable agreement,' it's reasonable to interpret that they sought to avoid challenges down the line, in other words, to address a potential future problem.[16] Critically, the Commission did not demonstrate that current SEP licensing is inefficient or that shifting the balance in favour of implementers would improve price outcomes. It did not provide evidence that SEP owners earn excessive profits, nor did it show that the pricing structure of licensing platforms such as Avanci reflects any inefficiency.[17]

The proposal drew strong criticism from a wide range of stakeholders including the European Patent Office (EPO), the Unified Patent Court (UPC), European Telecommunications Standards Institute (ETSI), judges, national security experts, current and former government officials, academics and other expert observers.[18] It was clear the policy would have had a very strong impact on companies like Ericsson and Nokia, two large network innovators whose strategic importance for Europe has risen sharply. Amid growing criticism and the realisation that the

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[16] IP Helpdesk. (2025, February 21). European Commission Withdraws Proposals for Standard Essential Patents Regulation. Available at: https://intellectual-property-helpdesk.ec.europa.eu/news-events/news/european-commission-withdraws-proposals-standard-essential-patents-regulation-2025-02-21_en

[17] On the contrary, competition authorities in other jurisdictions have recognised the potential efficiencies of such platforms. For instance, in its review of the proposed Avanci 5G platform, U.S. Assistant Attorney General Delrahim concluded that it was unlikely to harm competition and noted that it could reduce transaction costs and streamline licensing, allowing both SEP holders and manufacturers to focus resources on innovation and the development of 5G technologies. See: US Department of Justice Antitrust Division (2020)

[18] See: Neill O, R. (2023, May 30). Breaking: UPC chief urges EU to rethink SEP plan. Managing IP. Available at: https://www.managingip.com/article/2bqbfr0uyrki1fniy9ou8/breaking-upc-chief-urges-eu-to-rethink-sep-plan; Foss Patents. (2023, April 17). ETSI asks European Commission to reconsider SEP regulation -- Apple protests as it stands to benefit from SEP enforcement complications more than any European company. Foss Patents. Available at: http://www.fosspatents.com/2023/04/etsi-asks-european-commission-to.html; Cenelec. (2023). CEN and CENELEC response to the European Commission proposal for a Regulation on SEPs August 2023. Available at: https://www.cencenelec.eu/media/response-to-the-draft-regulation-on-standard-essential-patents.pdf; WTR. (2023, October 23). Ex-EUIPO head suggests SEP role should not go to agency "with no experience in the field of patents". Available at: https://www.worldtrademarkreview.com/article/ex-euipo-head-suggests-seps-role-should-not-go-agency-no-experience-in-patents; Rijksoversheid. Fiche 2 Verordening inzake standaard essentiële octrooien. Available at: https://www.rijksoverheid.nl/documenten/publicaties/2023/04/27/fiche-2-verordening-inzake-standaard-essentiele-octrooien; Eduskunta Riksdagen. Valtioneuvoston U-kirjelmä U 52/2023 vp. Available at: https://www.eduskunta.fi/FI/vaski/Kirjelma/Sivut/U_52+2023.aspx; Verschuur, M., A et al. (2024, February 27). A Critical Analysis of the EC Proposal for SEP Regulation. Kluwer Patent Blog. Available at: https://legalblogs.wolterskluwer.com/patent-blog/a-critical-analysis-of-the-ec-proposal-for-sep-regulation/?; Jacob, R. and Nikolic, I. (2023). Comments Regarding the Draft EU Regulation on Standard Essential Patents. ICLE. Available at: https://laweconcenter.org/resources/comments-regarding-the-draft-eu-regulation-on-standard-essential-patents/?; Kersten, A. (2022). How Moves to Weaken Standard-Essential Patents (SEPs) Threaten U.S. National Security. CSIS. Available at: https://www.csis.org/analysis/how-moves-weaken-standard-essential-patents-seps-threaten-us-national-security?; European Parliament. Standard essential patents regulation. Available at: https://www.europarl.europa.eu/RegData/etudes/BRIE/2023/754578/EPRS_BRI%282023%29754578_EN.pdf?

proposed regulation needed significant rethink,[19] the European Commission ultimately decided to withdraw it. Unfortunately, China already took inspiration from the proposal to increase the political control over cellular technology disputes – a development that, ironically, prompted the EU to file a WTO complaint.

This Policy Brief reviews some fundamental aspects of the SEP proposal. The purpose is to deepen the understanding of why the European Commission was right to pull the proposal. Chapter 2 points to the specific weaknesses of individual provisions in the proposal: an unnecessary SEP Registry; a conciliation process that adds complexity without value; quasi price regulation for aggregated royalty rats; and centralisation of responsibilities on an EU institution with no SEP experience. Chapter 3 underlines the broader flaws in the Commission's overall approach to SEP regulation.

2. THE FOUR SINS OF THE SEP PROPOSAL

2.1 The SEP Registry: A Solution in Search of a Problem

A central element of the SEP regulation was a centralised registry for SEPs. This registry was intended to serve as the main platform for SEP holders in the EU to identify which of their patents were essential to a particular standard. To complete the registry, SEP holders had to submit detailed information about their EU-protected essential patents, along with evidence of their commitment to FRAND licensing practices. If they failed to do so, they would not have been allowed to seek injunctions or claim royalties for any use of the SEP before registration. The EUIPO was appointed as the body in charge of managing the registry and carrying out essentiality checks.

The motivation behind the registry was the European Commission's view that the current system, where companies declare the essentiality of their patents to Standards Development Organisations (SDOs), was flawed due to two related concerns: a lack of transparency, and the excessive number of SEPs declared, many of which may not be essential.

In relation to the first argument, SEP implementers argue that current SEP registries – maintained by SDOs – lack transparency, which they claim hinders product development. However, the claim that a new registry would have addressed this significantly misrepresents how most companies actually approach product development. In practice, firms prioritise product development and typically engage in licensing discussions at a later stage. For product development, producers need to have access to a wide portfolio of patents given how difficult it is to determine at each stage which licenses will be necessary for the final product. Moreover, disputes between SEP holders and implementers rarely centre on whether a patent is essential or a licence is needed. Instead, they typically focus on the terms of FRAND licensing and the appropriate royalty rates.

[19] An early ECIPE study on SEPs helped establish the groundwork for a balanced and credible framework to support innovation, highlighting the ongoing role of SEPs in advancing the ICT sector. See Erixon and Bauer (2017). Other ECIPE studies warned that the Commission's proposal posed major risks, arguing that shifting core responsibilities from ETSI and the courts could discourage industry participation and weaken the global appeal of European standards. Moreover, these studies pointed out that the proposal represented a sharp departure from established norms and the Commission's own prior positions. While goals like greater transparency may be valid, placing these roles in a new EU body could undermine trust and incentives in the innovation ecosystem. See Erixon, and Guinea (2023); as the debate over the proposal evolved throughout the year, the current study's authors continued to publish analyses highlighting its flaws and associated risks. See: Erixon, (2023a); Erixon (2023b); Guinea (2023); Pandya, (2023); Erixon (2023c); Pandya, (2024).

In relation to the second argument, implementers have expressed concerns about the true "essentiality" of many declared patents. They argue that too many patents are declared essential, making the SEP landscape opaque and difficult to navigate. However, what may appear to be "over-declaration" is often a reflection of the fact that a patent may be essential for some implementers but not for others. Moreover, the large number of declared SEPs reflects the intensity of innovation in telecoms and cellular technologies. Technical standards attract participation from a wide range of innovators, including specialised R&D firms and SMEs, which naturally leads to a high volume of declared patents.[20] In this light, a high number of SEPs is not a flaw but a feature of a dynamic, decentralised innovation ecosystem that encourages specialisation and drives technological progress.

Therefore, the rationale for creating a new SEP registry under the EUIPO is difficult to find. Moreover, there are no empirical evidence to suggest the existence of systematic problems that would justify such a regulatory overhaul. In fact, the registry can be described as a textbook example of red-tape – a heavy-handed regulatory solution with limited, if any, practical benefit – precisely the kind of administrative burden the European Commission has otherwise pledged to eliminate to improve EU's competitiveness.

For example, ETSI's Director General warned that duplicating ETSI's existing essentiality declaration system would create unnecessary complexity and operational challenges. Likewise, CEN and CENELEC argued that an additional disclosure layer would impose new administrative burdens on stakeholders and risk discouraging innovation by making participation in standardisation more cumbersome, particularly for SMEs. They also noted that having multiple, overlapping SEP databases could lead to market confusion, as implementers may rely on inconsistent or incomplete information.[21]

Moreover, regardless of the quality of current SEP registries, the proposed EUIPO SEP registry would have been an unnecessary and costly attempt to address a problem that market participants have largely already resolved. It would have been unnecessary because SEP registries are often underused precisely due to the existence of alternative, more market-efficient arrangements between SEP holders and implementers. These alternatives include direct agreements between SEP holders and implementers – and, importantly, patent pools. Patent pools, such as Avanci, have addressed transparency concerns by grouping essential patents and setting a de facto overall royalty rate for a given standard. It would also have been costly, as assigning responsibility to the EUIPO – a trademark office with no relevant expertise in patents, standards, or SEPs – to assess essentiality and manage a registry of this scale (measured in thousands of entries) would have required significant time and resources, while also introducing legal risk.

[20] Bauer, et al. (2023).

[21] CENELEC. CEN and CENELEC (2023)

Finally, removing patents from the registry based on essentiality checks would have then created uncertainty for both the market and judicial proceedings.[22] SEP holders whose patents were deemed non-essential by the EUIPO could still pursue enforcement in court, regardless of the EUIPO's decision. This could have led to situations where courts interpret a patent as essential, directly contradicting the EUIPO's assessment.

2.2 The Conciliation Process: Adding Complexity without Adding Value

The Commission's proposal assumed that licensing fees were too high and that a conciliation process hosted by the EUIPO could bring them down.[23]

Although the European Commission frequently framed the SEP Regulation as a response to transparency and legal uncertainty, rather than an attempt to regulate royalty levels, this distinction was not consistently upheld. At the press conference unveiling the SEP Regulation, former European Commissioner Breton cited concerns over excessive royalties, implying that licensing costs were, at least implicitly, a motivating factor.[24] The alleged market dysfunction – claimed without any empirical analysis – was supposed to be fixed in the conciliation process. This conciliation process marked a sharp break with existing EU policies[25] and a departure from the framework set by the CJEU.[26]

The proposed conciliation procedure, while not inherently flawed as a concept, raised significant concerns due to its mandatory nature. By requiring parties to go through the process before accessing the courts, the SEP regulation risked introducing opportunities for strategic abuse. For example, implementers could exploit the mechanism to delay negotiations and defer royalty payments without any genuine intent to reach agreement. Moreover, doubts were raised about the quality and credibility of the conciliation process itself, given the EUIPO's limited expertise (as pointed in 2.1) in complex SEP and FRAND matters.

A more constructive approach may be the Patent Mediation and Arbitration Centre (PMAC) of the UPC, a voluntary, high-quality forum for resolving FRAND disputes. Unlike mandatory procedures that risk distorting negotiation dynamics or undermining enforcement rights, PMAC encourages participation through its neutrality and expertise. The Huawei ruling already supports arbitration in FRAND cases, and some have suggested PMAC could serve as a means for implementers

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[22] Baron, J. (2023)

[23] SEP implementers would gain access to relevant information about SEP holders, registrations, and their essentiality from the SEP Registry. A mandatory pre-trial conciliation process would then begin to help parties agree on FRAND terms. A conciliator, chosen by the parties or appointed by EUIPO, would propose licensing conditions, including royalty rates. Both sides could accept or reject the proposal. If negotiations failed, a mandatory but non-binding ADR process, overseen by EUIPO, would follow.

[24] IP2Innovate (2023).

[25] The Commission Communication emphasised good faith negotiation as the preferred approach to FRAND licensing: "best placed to arrive at a common understanding of what are fair licensing conditions and fair rates, through good faith negotiations", acknowledging the sector-specific and evolving nature of fair and reasonable rates "there is no one-size-fits-all solution to what FRAND is". See European Commission (2017, P. 6); Colangelo (2023).

[26] In Huawei v ZTE, the CJEU aimed to balance the interests of SEP holders and implementers by imposing mutual obligations to negotiate in good faith, thereby curbing patent hold-up. It outlined a sequence of steps to be followed in FRAND negotiations to ensure compliance with competition law. This framework seeks to protect patent rights while maintaining fairness in markets reliant on standardised technologies. (Case C-170/13, paras 40, 42).

to access information on comparable licensing terms, while benefiting from an independent assessment of a fair royalty.[27] This, in turn, can help implementers justify agreements internally. Mediation and arbitration are already used in practice, as seen in the 2024 binding arbitration between InterDigital and Lenovo.[28]

In reality, despite the European Commission's focus on reducing SEP litigation, the vast majority of disputes are settled through direct agreements between SEP holders and implementers, without involving the courts. These agreements often include a range of terms beyond just royalty rates, which can have a major impact on the final royalty determination.[29] For example, many companies both hold and implement SEPs in their own products, resulting in cross-licensing arrangements that shape the broader royalty structure.[30]

Moreover, the Commission's proposal overlooked that SEP holders may offer different royalty rates depending on the end-use application, even if the underlying technology remains the same. This argument is based on the idea that the value of an SEP is not fixed, but depends on its specific use. In fact, this approach could encourage lower royalty rates for applications that make limited use of the patented technology.

In contrast to current practice, the conciliation process outlined in the proposed regulation could have led to serious economic drawbacks. The SEP system relies on a careful balance between patent holders and implementers. If that balance is disrupted, both innovation and product development will suffer. Fewer patents may be declared essential, pushing implementers to negotiate outside the SEP framework. Licensees often sign agreements covering both SEPs and non-SEPs, typically paying to access a broader portfolio of patents. For non-SEP patents, FRAND commitments do not apply. As a result, licensees would likely need to access more non-SEPs, potentially facing higher costs without the protections FRAND offers.

In addition, the proposed conciliation process would have raised two further concerns: the previously mentioned delayed access to the courts[31] and the potential displacement of the EU from its central role in technology standards development. As explained, SEP holders and implementers would not have been able to assert their rights in EU courts until the EUIPO had issued its non-binding royalty rate recommendation. However, this restriction would not have applied to courts outside the EU. This could have prompted parties to initiate litigation in jurisdictions with more established case laws on global FRAND rate-setting, such as the UK or China.[32] Furthermore, once the nine-month conciliation period ended, parties could have challenged the EUIPO's recommendation in EU courts.[33] This would have created a risk of multiple jurisdictions both within and outside the EU competing to define global FRAND rates,

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[27] Hunt, M. (2025).

[28] InterDigital (2024)

[29] See American Intellectual Property Law Association (2023).

[30] See Huawei (2023).

[31] The proposed regulations prohibited any court in an EU member state from proceeding with a claim until it had received either a notice of termination or a notification indicating that one of the parties declined to accept the FRAND determination. However, the regulations did not specify deadlines for delivering these notices, nor did they impose a timeframe for national courts to act upon them, potentially resulting in further delays.

[32] See Pinsent Masons, (2023); Wininger (2022); EPO (2025).

[33] See Abbott, et al. (2023).

potentially leading to inconsistent decisions (e.g. overturning the EUIPO's recommendation) and increasing uncertainty around how FRAND rates are determined.

Such circumstances would have weakened the EU's leading role for ICT standards development. European authorities and courts have historically played a key role in shaping the global framework for technical standards. However, the Commission's attempt to exert control over technical standards and SEPs through the proposed conciliation process would have jeopardised a fundamental EU strength: its respect for the rule of law, institutional independence, and the separation of powers.

In fact, if the Commission's main objective was to ease the burden of SEP litigation, a more effective approach would have been to prioritise the UPC. This specialised court, set up by a large number of EU member states, represents a major step forward in resolving patent disputes. However, assigning SEP-related powers to the EUIPO, an EU agency without patent expertise, would have undermined the very role of the UPC in handling such cases.[34]

2.3 Maximum Aggregate Royalty Rates: Chasing Shadows in SEP Licencing

In addition to setting a FRAND royalty rate for the specific dispute, the proposed SEP regulation would have also authorised the EUIPO to issue a non-binding recommendation on an aggregate royalty rate. The main rationale behind this was to help "overcome problems of royalty stacking"[35] that is, the accumulation of multiple royalty demands that, when combined, may become excessive for implementers.

Royalty stacking becomes a serious concern when it discourages companies from adopting the standard, thereby putting its success at risk. Yet in practice, this fear is largely misplaced. In today's volume-driven technology market, SEP holders are already incentivised to set royalty rates that support broad uptake of their patented technologies. Their interest in ensuring that their inventions are adopted as widely as possible acts as a natural check on excessive royalty demands, helping to mitigate the risk of royalty stacking. This is because the wider the adoption of SEP-protected inventions, the greater the returns for SEP holders.

In contrast, the Commission provides no empirical evidence that royalty stacking poses a significant real-world issue.[36] Remarkably, the Impact Assessment itself concedes: "In any case, no matter if the problem of royalty stacking is weak or serious, an explicit aggregate royalty should

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[34] UPC President Klaus Grabinski expressed concerns that the proposed SEP regulation may not comply with the EU Charter of Fundamental Rights, particularly because SEP holders would be required to register their patents with the EUIPO before initiating infringement proceedings at the UPC. See Klos (2023).

[35] See European Commission (2023c, P. 118).

[36] The Commission data cited in support of royalty stacking concerns remain unconvincing. For instance, a 2010 study referenced in the Impact Assessment found that published maximum expected royalty rates for SEP portfolios (representing around 60 percent of declared SEPs) added up to 14.8 percent of the product sales price (p. 45). However, no evidence is provided to show that implementers actually paid these rates in practice. In fact, the report offers no conclusive data demonstrating that royalty burdens in aggregate are excessive, nor that they regularly "stack" to problematic levels. Claims of royalty stacking in the literature similarly lack empirical backing, relying on theoretical concerns rather than observed licensing behaviour.

help to mitigate it"[37]. This speculative rationale hardly provides a sound basis for such a sweeping regulatory reform, particularly in light of the Commission's own Better Regulation Framework, which calls for transparency, evidence-based policymaking, and regulatory restraint.

However, lack of specific data should have not stopped the European Commission from looking at the bigger picture. The adoption of advanced mobile communication standards such as 4G and 5G has outpaced even basic infrastructure like electricity or running water. Such rapid and widespread diffusion would be unlikely if royalty stacking were a genuine economic barrier. Furthermore, quality-adjusted prices for mobile devices have steadily declined over the years, providing additional evidence that SEP licensing costs have not inflated consumer prices or stifled innovation.[38]

Shortage of evidence makes the European Commission's preference for a top-down methodology for determining FRAND royalties even more glaring. This model has been rejected by courts across multiple jurisdictions. For example, in Unwired Planet v. Huawei, Judge Birss acknowledged the challenges of setting a global FRAND rate and emphasised the limitations of the top-down method.[39] Moreover, the legal decisions the Commission cites as illustrations of royalty stacking are mischaracterised. In Microsoft Corp. v. Motorola, Inc. (2012), the U.S. District Court did not use aggregate royalties to set the FRAND rate, but rather applied a comparable licenses approach. Aggregate royalty concerns were mentioned only as a cross-check. Similarly, in Unwired Planet v. Huawei, aggregate rates were used for secondary validation, not as the core method, and were later overturned in TCL v. Ericsson and dismissed in InterDigital v. Lenovo. Courts have consistently held that disclosure of comparable licenses is the primary means of establishing the FRAND nature of a licensing offer, as reaffirmed in Ericsson v. D-Link.

Ironically, the Commission itself acknowledges the serious methodological difficulties involved in calculating aggregate royalties. It notes that ex-post assessments are unreliable, as products may be developed before FRAND royalties are considered, while ex-ante assessments are highly speculative, given the difficulty of valuing a standard before its technical development or commercial success.[40]

Moreover, the European Commission's proposal for aggregate royalty rates relied on the assumption that all implementers would pay royalties. In reality, however, under-licensing is common,[41] which makes it difficult to calculate an accurate and reliable aggregate rate. This structural gap in the market complicates any attempt to estimate a total royalty burden. Despite acknowledging the challenges of determining such a rate,[42] the proposed regulation still

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37 See European Commission (2023c, P. 119).

38 Hartline, D., & Barblan, M. (2016).

39 Unwired Planet International v. Huawei Technologies. Case No: HP-2014-000005

40 See European Commission (2023c, P. 90 and 119).

41 See Baron, et al. (2023, P. 157-163).

42 The Commission's Impact Assessment acknowledges these difficulties "[e]x-post aggregate royalty determination is difficult also because the implementing products began using the standard without knowing or taking into account the need to pay FRAND royalties" also acknowledging the inherent complexity of ex-ante aggregate royalty determinations, "[i]t is however very difficult to establish a fair value for a standard before it is even developed, and to predict the success, nature and scope of implementations." See European Commission (2023c, P. 90 and 119).

introduced a rigid timeframe of 90 or 150 days.[43] Yet at such an early stage in the lifecycle of a standard, the market typically lacks the maturity and data needed to produce a meaningful aggregate royalty estimate.

Critically, the proposal to allow the EUIPO to recommend an aggregate royalty rate would, in effect, have introduced a form of price regulation for SEPs. Implicit in the European Commission's justification for this authority is the assumption that SEP royalties are too high, and that a centralised process can bring them down to a level deemed "reasonable." This would have effectively positioned the EUIPO as a price regulator, despite the institution lacking the expertise to perform such a contentious role. As mentioned, even courts with considerable expertise have been reluctant to set top-down royalty rates.[44] Attempting to administratively fix SEP prices would have caused market distortions. As with any form of price control, setting rates below market value would have resulted in scarcity, reduced incentives to innovation, misallocation of resources, regulatory arbitrage and legal uncertainty. In the context of SEPs, this would have resulted in fewer patents declared essential, forcing implementers to negotiate higher prices for non-SEPs, paradoxically resulting in less transparency, more discrimination, and reduced fairness in the very market the regulation aimed to improve.

2.4 EUIPO: a Giant Leap into Uncharted Waters

The proposal assigned responsibility for managing the new system to the EUIPO,[45] an institution primarily focused on trademarks and with no prior experience in patents, let alone SEPs.[46] Despite the lack of experience, the proposed SEP regulation tasked the EUIPO with a wide range of complex and controversial responsibilities, including, as noted earlier, assessing essentiality, maintaining a SEP registry, proposing royalty rates, requiring public disclosure of licensing agreements, and potentially limiting the licensing or litigation of unregistered SEPs. Annex 2 includes a diagram showing the current licensing system, highlighted in green, and the additional requirements proposed in the withdrawn regulation, shown in grey. The diagram shows the almost impossible burden that the regulation put on the EUIPO. Carrying out these complex tasks would not only have been highly demanding, but also likely to spark controversy, as EUIPO decisions would almost certainly have been challenged in both EU and non-EU courts.

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[43] This timeframe was calculated from either the date the standard was published or the point at which new SEP-protected products entered the EU market.

[44] Unwired Planet Int'l Ltd. v. Huawei Tech. Co. Ltd., [2017] EWHC 2988, at [268]-[269] (Pat) ("the main conceptual difficulty I have with the using a total stack in a top-down approach as opposed to using it as a cross-check is in the selection of the total royalty burden T to start with. In my judgment the statements set out above have little value in arriving at a benchmark rate today for a number of reasons. The claims are obviously self-serving. The statements about aggregate royalties in particular are statements about other people's money on the footing that the person making the statement says at the same time that the cake is quite small but they are entitled to a large piece of it").

[45] These responsibilities included: (1) establishing and maintaining an electronic register and database for SEPs; (2) developing and managing rosters of evaluators and conciliators; (3) implementing and administering a system for assessing the essentiality of SEPs; (4) setting up and administering the FRAND determination process; (5) providing training for evaluators and conciliators; and (6) administering a process for aggregate royalty calculation.

[46] Remarks from Executive Director of the EUIPO, Christian Archambeau, "Of course, we will never have the competency in patents"; See Houldsworth (2023).

3. DON'T REGULATE, INNOVATE!

The proposal had clear shortcomings which not only failed to improve the system, but also introduced new problems that risked undermining the industry-led, market-driven standardisation process that has delivered technological progress at remarkable speed. The European Commission's good intentions to improve the SEP system inadvertently resulted in a proposal that could have significantly weakened it. As the saying goes, "when you have a hammer, every problem looks like a nail."

In any case, however, the proposed Commission regulation was not the right tool, and there are four clear reasons why.

Reason 1: regulation can't keep up with innovation

The fundamental issue lies in the mismatch between the fast pace of technological development and the slower processes of regulatory frameworks. Technologies often evolve organically, and overly detailed regulatory frameworks may unintentionally stifle the innovation that fuels industries. More importantly, codifying rigid rules risks regulatory overreach, where authorities attempt to control aspects of SEP licensing, such as pricing, market dynamics, and negotiations that are often better handled by the parties themselves.

In contrast to regulation, a market-based approach offers greater adaptability. For example, the FRAND principle provides a general framework for fair, reasonable, and non-discriminatory licensing, but leaves the specific royalty rates and terms to be determined through negotiation, reflecting market conditions. This flexibility is essential, as technologies evolve quickly and licensing terms that were appropriate for 4G may not suit the needs of 5G or 6G. This model avoids rigid definitions of fairness, focusing instead on preserving fairness over time amid a rapidly changing technological landscape.

Reason 2: one-region regulation can't govern a global market

Companies that develop and use SEPs are global, and the technologies they rely on function across borders. However, the proposed SEP regulation was framed as though the EU were isolated – legally, politically and technologically. This could not be further from the truth. Standardisation and SEP development are inherently global activities. For example, technology standards like 5G are global, not limited to any one region. It is therefore unrealistic to believe that a single jurisdiction can impose a standalone regulatory framework without facing significant repercussions.

Consequently, for any SEP policy to succeed, it must take a global perspective that reflects the reality of international technological development. Otherwise, it would create challenges for both SEP holders and implementers. For example, as previously noted, the SEP proposal required firms to either wait for the conciliation process to conclude before being able to access EU court. However, SEP holders could choose to enforce their patents in other jurisdictions.

The success of international standards depends on their ability to create large, interoperable markets and allow firms to scale globally. Introducing a distinctively European regulatory regime would have caused fragmentation, increased legal uncertainty, and raised transaction costs for internationally operating firms. Instead of promoting innovation, the proposed regulation could have discouraged participation in European standards and undermined the EU's position within the global innovation ecosystem.

Reason 3: Europe's edge is innovation, not regulation

The EU's narrow focus on its own market revealed another major flaw in its approach to regulating SEPs. The proposed regulation was driven by a desire to shift revenues from SEP holders to implementers, based on the assumption that, since Europe has more implementers than holders, the changes would bring net economic gains for the EU. However, this logic falls apart when viewed in the context of global markets. The EU is a world leader in telecommunication R&D[47] for many SEP-protected technologies, while most of the goods using these technologies are produced outside Europe. As a result, the EU acts as a net exporter of innovation and benefits from licensing revenues generated by SEP-protected technologies.

For instance, the vast majority of smartphone sales (by far the largest SEP-implementing products) come from companies headquartered in the Asia-Pacific region. Moreover, major implementers carry out very little production or assembly within the EU. In the case of IoT devices, only 14 percent of modules are produced by companies based in Europe, while 54 percent of shipments come from companies headquartered in China. A similar pattern exists in the automotive sector. While car production in Europe remains significant, it accounts for just 28 percent of global car shipments, compared to 59 percent produced in the Asia-Pacific region.[48]

Reasons 4: a self-correcting system doesn't need heavy-handed rules

Another key criticism of the SEP regulation was that it failed to reflect how the licensing landscape has evolved, particularly through the growing role of courts and competition authorities in addressing major concerns.

The relationship between SEP implementers and holders has often been complex. Implementers see licensing fees as a business cost and naturally aim to minimise their royalty payments. Conversely, SEP holders depend on licensing revenues and other intellectual property rights as a key source of income. As a result, SEP holders and implementers often have differing views on what constitutes FRAND licensing terms. This tension was evident during the smartphone patent wars, which saw many leading tech firms involved in lengthy legal battles over SEP use.

However, as pointed earlier in Chapter 1, the wave of litigation linked to the smartphone patent wars eventually subsided. After peaking in 2014, data from 2021, the available data shows that

[47] See Erixon, et al. (2025).

[48] Erixon and Guinea (2024).

disputes over FRAND terms dropped to their lowest level.[49] Moreover, court decisions have helped establish a more balanced SEP framework, addressing many of the same issues that the proposed regulation sought to resolve. This suggests that institutions like the EPO and the UPC are well-positioned to address ongoing concerns regarding transparency in patent ownership, essentiality determinations, and licensing rates.[50] Additionally, the EPO and UPC could play a key role in improving existing dispute resolution mechanisms. By the end of 2024, about 23 SEP related disputes have already been filed in the UPC, pointing it to be a key forum for these disputes.[51] This is evident in recent UPC rulings, including Philips v Belkin, Panasonic v Oppo, and Huawei v NETGEAR, which draw on established precedents from cases such as Sisvel v Haier and Huawei v ZTE.[52]

4. CONCLUSION

The European Commission made the right call to pull the proposal to radically overhaul the SEP system. The actual mechanics of the proposal were misdirected and badly designed: they failed to reflect how the SEP licensing market actually works. Fundamentally, it risked undermining the factors that have made the SEP system such a great success – a system that many other technology-intense sectors envy. The irony is that many of the faults that critics of SEPs point to are the result of the system's success. SEPs have helped to incentivise a huge increase in innovation and product development, broadening access to the market for many more developers and encouraging greater specialisation among patent contributors. In any market with this character, the number of new patents naturally expands as the economic value of the market grows. Inevitably, the system will have a degree of complexity. This is natural – and it has largely been addressed by market operators who have simplified contracting and licensing arrangements such as patent pools.

As technological development is now a strong feature of geopolitical rivalry, the SEP proposal could have knocked Europe from the pedestal of telecom, cellular technology and standards development. Europe's whole ecology of technology developers, SDOs and judicial institutions is a strategic asset. Yet rather than strengthening these assets, the proposal would have caused uncertainty and falling revenues for Europe's leading companies. The proposed regulation was based on the flawed premise that companies like Ericsson and Nokia earn excessive revenues from SEPs, which should be reallocated downstream to users. But the whole premise was plainly wrong: these companies have struggled mightily in the past years and are just not earning much from SEP licenses – and certainly not from EU implementers. Remarkably, it was a proposal that would have undermined Europe's strategic interests and competitiveness.

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[49] European Commission (2023a).

[50] See Pinsent Masons (2025).

[51] EPO (2025).

[52] UPC_CFI_390/2023, UPC ORD_7587/2024, UPC ORD_13028/2024; 4a O 144/14 und 4a O 93/14; 15 U 65/15 and 15 U 66/15, Case C-170/13.

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ANNEX 1: KEY CONCEPTS

Royalty Stacking: it occurs when a standard is covered by a large number of SEPs, resulting in excessive cumulative licensing fees for implementers. This issue is exacerbated by patent holdup, where implementers face individually excessive licensing rates. However, royalty stacking can also occur without holdup due to the sheer number of licenses required. In contrast to patent holdup, which focuses on individual pricing by SEP holder, royalty stacking concerns the overall burden of licensing fees.

Patent Holdup: it occurs when a patent holder of a technology incorporated into an industry standard demands excessive licensing fees from implementers who are locked in and cannot easily switch to alternative technologies. This situation arises because Standards Development Organisations (SDO) select one technology over others, increasing the market power of the patent holder. The high licensing fees can lead to higher prices for consumers and discourage innovation.

Patents Holdout: it occurs when standard implementers avoid paying royalties to SEP holders in hopes of securing lower rates or avoiding payment altogether. This strategy is more feasible when patent holders lack the ability to immediately halt unlicensed use of their technology and must instead seek legal recourse through lengthy court proceedings. Systematic holdout can have detrimental consequences for SEP holders, leading to under-compensation for their inventions and discouraging investment in future innovation.

FRAND: a FRAND commitment is a voluntary promise made by a patent holder to license its patents that are essential to a standard (SEPs) on fair, reasonable, and non-discriminatory (FRAND) terms. This commitment is typically made by submitting a written statement to the relevant SDO. In general, patent holders have the exclusive right to use and prevent others from using their patented inventions. They also have the freedom to decide whether to license their patents or not, and if they do, they can set their own licensing terms. However, a FRAND commitment restricts this freedom by obligating the patent holder to license its SEPs to standard implementers on FRAND terms. This ensures that implementers have access to the essential patents they need to make their products compliant with the standard, and that patent holders are fairly compensated for their inventions.

A FRAND commitment does not automatically create a licensing agreement between the SEP holder and the implementer. Instead, a separate licensing agreement must be negotiated and concluded. The FRAND commitment, however, serves as a binding contract between the SEP holder and the SDO, obligating the SEP holder to offer FRAND licenses to standard implementers.

Standards Development Organisations (SDO): sometimes also known as a Standard Setting Organisation (SSO) is responsible for developing, maintaining, and promoting technical standards. These organisations play a central role in setting the rules and specifications that ensure compatibility, interoperability, and quality across technologies and industries. Many SDOs operate through open, consensus-based processes and often require participants to disclose patents that may be essential to implementing a standard. In such cases, participants are generally required to license these SEPs on FRAND terms.

ANNEX 2: ORIGINAL SEP LICENCING PROCESS AND EUROPEAN COMMISSION ADDITIONS IN THE PROPOSED REGULATION