



POLICY BRIEF



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RESPONSE TO UKIPO OPEN CONSULTATION ON STANDARD ESSENTIAL PATENTS

Authors:

Bowman Heiden and Ruud Peters



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Bowman J. Heiden¹ and Ruud Peters²

Center for Intellectual Property (CIP)
University of Gothenburg

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Below is our brief response to the UKIPO open consultation on standard essential patents (SEPs). We have summarized several key insights from our SEP research, industry licensing efforts, and policy experience as part of the EC SEP Expert Group, which form the foundation for our understanding of the markets for SEP-enabled standards and SEP policymaking.³

1. Evidence of Success, Not Failure, of SEP-enabled Open Standards

To facilitate innovation for both standards developers and implementers, it is essential to adopt an empirical, rather than rhetorical, perspective on the impact of FRAND-based licensing. Currently, the mobile economy exceeds \$6.5 trillion, and in 2016, the number of cellular subscriptions surpassed the global population.⁴ The average cumulative SEP royalty yield of firms since 2009 has remained relatively stable between 3% and 3.5% of mobile phone sales,⁵

¹ Bowman Heiden is currently the Co-Director of the Center for Intellectual Property (CIP) at the University of Gothenburg, and the Executive Director of the Tusher Strategic Initiative for Technology Leadership at the University of California, Berkeley. He has worked with intellectual property management and technology-based business in academia and industry more than for 25 years, focusing on open innovation, standards, and IP. He has published numerous articles on SEP/FRAND licensing and was recently a member of the SEP Expert Group at the European Commission and co-director of the 5G Transparency Project.

² Ruud Peters is currently the Co-Director of the Center for Intellectual Property (CIP) at the University of Gothenburg, and the CEO of Peters IP Consultancy. Before that, he served as Chief Intellectual Property Officer at Philips Intellectual Property and Standards for 15 years, where he developed one of the most successful industrial IP departments in the world, generating significant value from IP and standards for Philips' businesses. He was a member of the ETSI IPR Committee that formulated the ETSI IPR Policy. He was involved in the establishment of several patent pools, including MPEG-2 Video, CD, DVD, and One-Blue. He was a member of the SEP Expert Group at the European Commission.

³ Our comments focus on connectivity standards, in general, and cellular standards, in particular.

⁴ <https://www.gsma.com/solutions-and-impact/connectivity-for-good/mobile-economy/wp-content/uploads/2025/04/030325-The-Mobile-Economy-2025.pdf>. See Heiden, B. (2020). The value of cellular connectivity—from mobile devices to the Internet-of-Things (IoT). Available at SSRN: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3670222.

⁵ Galetovic A., Haber S., and Zaretski L. (2023). Cellular SEP Royalties and 5G: What Should Competition Policy Be? In: Barnett JM, O'Connor SM, eds. *5G and Beyond: Intellectual Property and Competition Policy in the Internet of Things* (eds. Jonathan M. Barnett and Sean M. O'Connor). Cambridge University Press.

which approximately equates to less than 0.25% of the total mobile economy.⁶ While imperfect, FRAND agreements have proven resilient in governing large-scale, multi-stakeholder, global technology standard developments, whose success in the face of great complexity cannot be credibly explained in terms of market failure.⁷ There is currently no empirical evidence to support strong government regulatory intervention, as determined in the recent impact assessment of SEP licensing commissioned by the European Commission.⁸ The number of disputes, while highly visible, is not representative of the success of SEP-enabled standards as measured by the important socioeconomic indicators of access and economic growth.⁹

2. Why Are SEP-Enabled Open Standards So Successful?

SEP-enabled open standards—such as cellular—succeed because of layered, collective private action on a global scale.¹⁰ Firms invest billions in R&D and then compete to have their solutions adopted through open, consensus-driven SDOs that demand millions of person-hours across hundreds of companies. Technology contributors, in turn, commit to license standard-essential patents on FRAND terms, both compensating innovators and enabling broad downstream implementation. Collective rights mechanisms, such as patent pools, further streamline multi-party licensing, while new tools—ranging from licensing negotiation group (LNG) models to improved transparency and information sources — continue to raise efficiency.¹¹ Examples include the Avanci 4G/5G Automotive Platform,¹² the Sisvel WiFi 6 and MIOTY licensing platforms,¹³ and the LINGA LNG model, among others.¹⁴ Taken together, these elements create remarkable ecosystems where collaboration and competition reinforce each other worldwide, with patents providing the essential incentive and coordination infrastructure.

⁶ For a more detailed discussion on value of SEP licensing in the mobile economy, see Heiden, B., Padilla, J., & Peters, R. (2021). The value of standard essential patents and the level of licensing. *AIPLA QJ*, 49, 1.

⁷ See Heiden, *supra* note 4. For a framework to determine the economic impact of market inefficiency in the context of SEP licensing, see Heiden, B., & Petit, N. (2017). Patent "trespass" and the royalty gap: Exploring the nature and impact of patent holdout. *Santa Clara High Tech. LJ*, 34, 179.

⁸ See Baron, J., Arque-Castells, P., Leonard, A., Pohlmann, T., Sergheraert, E. (2023). Empirical Assessment of Potential Challenges in SEP Licensing, European Commission, DG GROW.

⁹ See Heiden, *supra* note 4.

¹⁰ Heiden, B., & Baron, J. (2021). A policy governance framework for SEP licensing: assessing private versus public market interventions. Available at SSRN: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3872493.

¹¹ Data and analytics to improve transparency is being developed publicly by the EPO Observatory as well as by numerous private service providers (e.g. IPlytics, PA Consulting, Frandly, FRAND Avenue, LOT 5G Transparency Project etc.).

¹² <https://www.avanci.com>.

¹³ <https://www.sisvel.com/licensing-programmes/Wi-Fi/wifi-6/> and <https://www.sisvel.com/insights/sisvel-announces-the-launch-of-its-mioty-lpwan-licensing-program/>.

¹⁴ LINGA is developed to address the collective action problem that hinders widespread licensing in the IoT space. See Peters, R., Nikolic, I., and Heiden, B. (2022). Designing SEP Licensing Negotiation Groups to Reduce Patent Holdout in 5G/IoT Markets (March 1, 2022). *5G and Beyond: Intellectual Property and Competition Policy in the Internet of Things* (eds. Jonathan M. Barnett and Sean M. O'Connor) Cambridge University Press.

Moving from voluntary, private solutions to mandatory, public regulations changes everything, as without the discipline of the market, public policy has a high risk of becoming de facto price regulation driven by regulatory capture. Thus, voluntary market solutions, such as those listed above, which support commercial actors in developing market solutions, are preferable to regulatory mandates, however well-intentioned.

3. Irrelevant or Potentially Harmful to SMEs

While one clear goal of the proposed measures is to help SMEs, the proposal may actually have the opposite effect. There is no empirical evidence of systemic economic harm to SMEs arising from SEP licensing. This is due to the simple reason that nearly all SMEs implementing connectivity standards do not pay SEP licenses because of their low revenue (i.e., SMEs benefit from an implicit “indemnification effect” due to their size).¹⁵ Thus, creating greater transparency for SMEs could mean that they will now need to pay a license where they were “indemnified” previously due to transaction costs. UK SMEs will then pay licenses that SMEs in the EU, US, and other parts of the world won’t, reducing their competitiveness and growth. Lastly, it is essential to recognize that technology-based SMEs that incorporate connectivity standards into their products tend to grow rapidly or fail. The SMEs discussed in the SEP context will not remain SMEs for long.

4. Minimal Impact on a Global Market

Most SEP licensees are larger multinational firms that operate globally and seek global SEP licensing agreements, where the UK is only one relatively small market.¹⁶ These companies possess all the necessary resources to manage SEP licensing globally, which is where the game is primarily played. A significant amount of effort will be required to launch and operate the proposed organization, which will only provide a national, governmental solution to a global market challenge, competing with all other national jurisdictions and the existing global private solutions (e.g., patent pools and other worldwide licensing programs). It will also incentivize support for other national and regional regulations in response. In the case of China, similar regulations may appear the same on the surface but won't be founded in the rule of law or an independent judiciary. Nonetheless, they will be justified based on this proposal, which will, in turn, impact UK competitiveness and security. Because SEP licensing is part of an adaptive geopolitical strategy, the UK SEP policy could generate a response from large global actors that

¹⁵ Heiden, B., & Baron, J. (2025). The economic impact of patent holdout. *Harvard Journal of Law & Technology*, 38(3), 638–669.

¹⁶ If the RTD would set global rates, it would basically become a venue for mandatory arbitration, which would likely set off similar competition efforts across the world.

could produce a much greater negative impact than the potential gains from the current local proposal.

5. Lack of balance between SEP holders and implementers

When a government introduces binding RTD (whether or not embedded in the court system) as what appears to be an industry policy instrument, it raises serious concerns about whether the balance between the interests of licensors and implementers will be properly maintained. The fact that the considerations for introducing RTD seem to be based on well-known implementer arguments from SEP holders, forcing implementers to accept supra-FRAND royalties under the threat of litigation, illustrates that this balance is at risk. The questionnaire document mentions supra-FRAND royalties (i.e., hold-up) on five occasions. In contrast, the document remains silent about hold-out forcing SEP licensors to accept sub-FRAND royalties or initiate costly and lengthy litigation. It is generally accepted that hold-up is mostly a hypothetical concern, whereas hold-out is a real and serious issue.

A lack of policy balance has historically led to the failure of the 2015 SEP policy at the IEEE, resulting in its removal in 2023,¹⁷ and the recent withdrawal of the EU SEP Regulation in 2025.¹⁸ Important insights can be gained from these two synonymous processes.

¹⁷ <https://standards.ieee.org/news/ieee-announces-decision-on-its-standards-related-patent-policy/>

¹⁸ <https://ec.europa.eu/newsroom/eisma/items/871191/en>

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