UKIPO SEP consultation: setting and apportioning aggregate rates based on patent counts will hinder FRAND licensing

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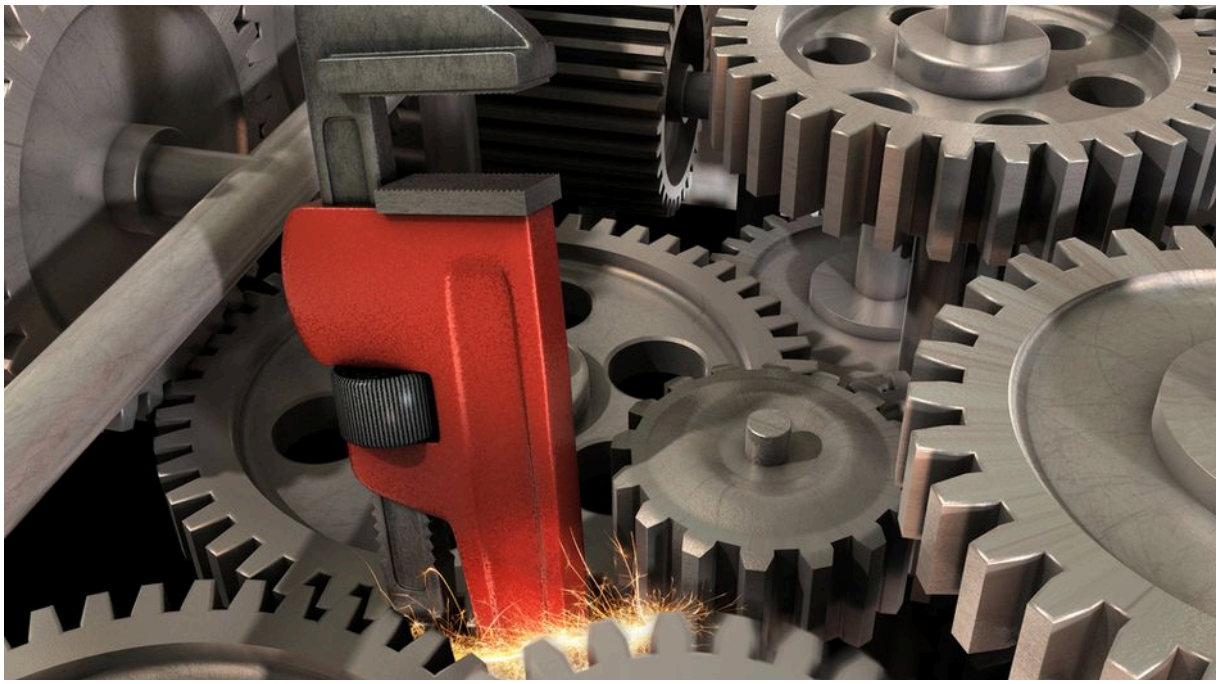

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The UK Intellectual Property Office's **2025 consultation on standard essential patents** proposes measures to improve licensing transparency and efficiency. These include searchable SEP databases, essentiality checking services, and mechanisms for aggregate rate setting to facilitate top-down approach Fair, Reasonable and Non-Discriminatory (FRAND) licensing rate apportionments. While these initiatives aim to support UK innovation – particularly for SMEs – they risk undermining a licensing system that has successfully evolved through decades of commercial practice and judicial developments.

The UK's Prime Minister and Chancellor have **recently pledged promote economic growth by slashing red tape and taking out regulators**. The IPO's proposals fly in the face of that.

In my **response submission to the IPO's consultation,** I focus on interventions that could do more harm than good: essentiality checking and essentiality rate

estimating, aggregate royalty setting and top-down rate apportionment. My concerns are similar to those previously raised in response to the EU SEP consultation in **2023** and **2024**.

My submission is substantially based on: my empirical research on essentiality checking and patent counting studies with some hitherto unpublished updates; some insights on comparable licence "unpacking"; and analysis of aggregate royalties and top-down approach rate setting from my 2024 research paper "**Discovering or Setting Royalties and FRAND Rates for SEP Portfolios**", as cited in the consultation's companion report entitled "Rate-setting for Standard-Essential Patents".

Checking essentiality – along with infringement and validity – are important and are economically achieved on handfuls of patents to reliably establish that licensing is required. Comparable licences are then the generally preferred method of determining FRAND rates. Where these do not yet exist or are unavailable, parties are best placed to determine rates through discussion and negotiation.

Estimating essentiality rates of entire patent portfolios and for all patents reading on a standard is a far more demanding and costly endeavour, even when only random samples of patents are checked. Results are inaccurate and unreliable.

Setting aggregate royalties and then apportioning them based on counts of declared essential or checked essential patents is also very problematic.

Essentiality checking and patent counting

The IPO suggests that essentiality checking could improve transparency and reduce information asymmetry between SEP holders and implementers. It seems to favour the use of patent counting studies – including the possibility of making its own – that check essentiality of many declared patents and estimate essentiality rates for companies' declared patent portfolios. However, my research on 4G and 5G SEP studies that check essentiality and count patents shows that results from attempts to check enough patents – even with sampling – are inconsistent among different assessors and studies.

Essentiality checking is resource-intensive. It requires deep technical expertise and interpretive judgment. Cursory checks taking as little as 30 minutes are inadequate. More thorough checks taking a day or more and including those that rely on claim charts are very costly when these checks are on the thousands of patents required to moderate random sampling errors.

Even experienced engineers and patent attorneys often disagree on determinations. Automated tools are limited in scope and accuracy. Centralised checking – whether government-run or privately supplied – risks political capture and commercial conflicts of interest in making these highly subjective assessments.

Estimated essentiality rates vary dramatically, for example, from as low as 8% to over 50% for declared 5G SEPs overall. This more than sixfold difference across studies highlights the massive bias in essentiality rate estimates.

Bias arises in various ways including extreme leniency (eg, giving the benefit of the doubt) by some assessors or extreme conservatism by others in their essentiality determinations. Some bias is passive: it simply arises systematically from an assessor's inability to determine essentiality accurately when true essentiality rates are below 50%.

Bias can arise from outright favouritism for a client or clients. More subtle is bias arising from more diligent attention studies will give to their clients, versus non-clients, in selecting and counting their patents in the first place, as well as in checking their patents for essentiality.

This variability with bias and random error in essentiality rates and patent counts undermines the utility and reliability of in using patent counts for rate apportionment, as described below.

In short, essentiality checking and patent counting may offer superficial transparency but lack the objectivity, consistency and reliability required to justify mandating their use, including valuation techniques that depend upon them.

Top-down determinations: misunderstood and misused

The IPO also contemplates mechanisms for rate determination, including use of the top-down approach. This is generally regarded as requiring the setting of an aggregate royalty for a standard and then apportioning it among SEP holders based on patent counts or another proxy metric for portfolio strength.

The top-down approach is rarely used as a primary method for rate determination. Where it is employed in litigation, the formula is typically applied upside down – as a cross-check against rates derived from unpacked comparable licences. This distinction is crucial because this use of the top-down approach formula infers an aggregate royalty rather than requiring the setting of it *a priori*. When used as a cross-check of another valuation method, such as comparable licences, top-down is a sanity check, not a price setting mechanism.

Embedding the top-down approach formally into mandatory rate-setting risks distorting outcomes and undervaluing SEP portfolios.

In summary, there are several problems with using the top-down approach including patent counts as a primary method:

- **Aggregate royalty rates and caps are speculative** and may be disconnected from commercial reality. Touted rates are commonly not based on actual licensing data or negotiated terms.

- **Patent counting is inconsistent and unreliable**, especially given the wide variance in essentiality estimates. Over-declaration inflates some portfolios and penalises others. There are even major differences in counts of declared patents between different studies.
- **Qualitative differences among patents are ignored**. Some SEPs are foundational; others are marginal or might not be implemented in particular products. Many patents would be found invalid if challenged. Valuation must consider technical contribution to the standards, how this is usefully implemented in products and licensing history —not just patent quantity.

Aggregate rate setting and top-down approach apportionment could lead to systematic undervaluation and reduced incentives for SEP investment. It will also encourage yet more over-declaration and gaming the system of patent essentiality metrics.

Policy recommendations

Rather than institutionalise essentiality checking or top-down rate setting, the IPO should:

- Recognise the limitations of essentiality checking, especially its inaccuracies and high cost.
- Avoid embedding top-down valuation as a primary method and be cautious of its use, even as a secondary cross-check.
- Support valuation based on comparable licences, which reflect actual market practice and judicial precedent.
- Promote transparency through voluntary disclosures and licensing platforms, not mandatory audits or speculative rate caps.
- Preserve the UK's leadership in SEP jurisprudence, reinforcing its role as a fair and predictable venue for licensing and enforcement.
- Seek global solutions in collaboration with other nations. Encourage international arbitration to resolve disputes. SEP licensing is generally required on a global basis.

The IPO's consultation raises important questions about SEP licensing and transparency. However, the proposed interventions around essentiality checking and top-down valuation risk introducing instability rather than clarity and predictability in licensing. My research shows that studies' estimates of essentiality rates and patent counts vary wildly and unreliably. Apportionment of dubious aggregate rates based on these will also be defective. Findings thus suggest that intervention in these areas could distort licensing outcomes, discourage innovation, and undermine the UK's leadership in SEP policy.

The UK should build on its existing strengths – legal stability, commercial practice, and global credibility – rather than introduce mechanisms that rest on technically

and statistically unstable foundations.

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