Overview Of SEPs, FRAND Licensing And Patent Pools

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Abstract

An SEP is a patent, necessarily infringed when implementing a technical standard adopted by a standards development organization (SDO), for example, IEEE, ISO/IEC MPEG or DVB. In order to eliminate the risk of hold-up by an SEP owner, SDOs generally include in their IPR policies a requirement that members declare whether they are prepared to offer licences to their SEPs on terms that are fair, reasonable and non-discriminatory (FRAND). A second obligation that selected SDOs implement is to require notification of patents that are or may become essential. If SEP owners identify a patent and say that they will not offer licences on FRAND terms, the SDO may remove the technology from the standard.

SEP ownership, together with the FRAND promise, is treated by courts within a framework based on anti-trust rules or contract law. These IPR policies work well for the SDOs, ensuring reward for the technology contributors and access to SEPs, and therefore to the standard, for implementers. But bilateral licensing negotiation between the SEP holder and the implementer has become drawn out, subject to delaying tactics and other gamesmanship by implementers. Costly litigation is often the result. Patent pools are an alternative, efficient and pro-competitive mechanism for licensing, bringing together in a licensing program SEPs owned by multiple owners. The pool offers a one-stop shop, a lower aggregate royalty and transparency in the offered SEPs and in the licensing terms, and evaluations of essentiality performed by independent third party experts. One SDO, DVB, actively encourages pools of DVB-essential standards by fostering their formation in a pre-commercial process. Pools reduce the overall number of litigations, thanks to aggregation. Further, over the past decade judicial decisions, such as Sisvel v Haier, *have been useful in identifying the steps in good-faith negotiation, the elements of a FRAND offer, and the conditions under which the SEP holder can enforce its rights through injunctions. This judicial framework, together with pooling, can be applied to increase transactional efficiency, especially at a time of growing complexity through convergence of new industries, benefitting not only large market players but also small and medium-sized enterprises.*

1. A Standard Essential Patent, When Subject to a FRAND Commitment, Does Not Create a Dominant Position

A patent is essential to a standard if it is necessarily infringed by a product implementing the standard. In respect of standard-essential patents (SEPs), two complementary legal consequences can be drawn:

- The SEP owner could be considered to be in a dominant position under competition or antitrust law (under article 102 of the Treaty of the Functioning of the European Union and equivalent legislation in the UK and elsewhere) through its ownership of the patent. Competition law concludes that if the SEP holder is dominant, then it must grant licences to that SEP at a fair price and it cannot discriminate between similarly situated licensees.
- If the SEP holder is a member of a standard development organization (SDO), it has generally made com-

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1. Compare *Huawei Technologies Co Ltd v ZTE Deutschland GmbH* Case C-170/13 (16 July 2015) para 53 (("a refusal by the proprietor of the SEP to grant a licence on [FRAND] terms [pursuant to its undertaking to ETSI] may, in principle, constitute an abuse within the meaning of Article 102 TFEU") with *In re Innovation IP Ventures, LLC Patent Litigation*, 956 F. Supp. 2d 925, 933 (N.D. Ill. 2013) ("letters [of FRAND assurance]…to the IEEE constitute binding contractual commitments").

mitments under that SDO's IPR policy, including a statement that it is prepared to offer licences to its SEPs on terms fair, reasonable and non-discriminatory (FRAND). This obligation takes effect as a contract.

One view is that if the SEP holder has committed to offer licences to the patent on FRAND terms under the SDO's IPR policy, it has contracted away any dominance that it may have possessed through ownership of the patent. Courts differ on whether a SEP patent holders licensing practice should be assessed under the competition law/dominance approach (German courts) or the contract approach (UK/U.S. courts).[1] Under either approach, it is argued that once a SEP holder has announced that it is willing to license the patent on FRAND terms, it can no longer be treated as being in a dominant position. It can no longer unilaterally set the price for licensing the patent, nor act in a way independent of competition, because if it tries, the SEP holder will find that the patent is difficult to enforce (because it cannot obtain an injunction against an infringer), or a court is likely to set the price—the FRAND royalty rate—for the patent. In other words, the SEP holder making the FRAND commitment no longer meets the tests for dominance through its ownership of the patent.

2. The IPR Policy of the SDO (Together with the SEP Holder's Declaration) Establishes the FRAND Obligation

Participant contributions are often the result of their companies' research and development efforts and protected by patents (or patent applications). Under certain SDO rules, individual patent declarations are required as a commitment to its IPR Policy, *e.g.*, in ETSI. For ETSI standards, therefore, if a technical contribution is adopted into the specification and a corresponding patent (or patent application) is assessed by the contributor that it may be (or may become) essential, then the contributor needs to declare such patent and has thereby promised that it will be available for licence on FRAND terms.

Such a process typically calls for making declarations of patents potentially essential to the specification under development. Sometimes the declaration could be made before the specification is finalised. That is, before it is certain that the element within the specification to which the patent relates will be included in the final specification. Also, the declaration may cover a patent application for which patents when issued may not include all the claim elements in the initially filed application. For this reason, the SDO calls for declaration in respect of patents (and patent applications) potentially essential to the standard under development.[2]

The FRAND declaration process offers multiple benefits to standards development:

- It encourages broad participation, incentivising organisations that can contribute the best technology into standards development;
- Participants will be more certain that their standard, once adopted, will be available for implementation; they can focus on the technical aspects of the standard and not on licensing;
- Innovation creators will be adequately rewarded and have incentives for participating in the SDO; and
- Implementers will have the assurance that the specification and the underlying patents are available, and that there is less risk of a blocking position.

The market ultimately decides whether a standard or a proprietary (non-standardised) solution is successful. But standardisation has proven to be successful when there is open participation, broad collaboration and the contributions are on a high technical level. This is the case for 3GPP, setting mobile standards including 5G, reducing fragmentation previously caused by rival mobile telephony solutions and fostering a trillion-dollar ecosystem. The rewards are widely shared among those innovators who contributed technology and invested in the development (including small companies, universities and research centres) and implementing manufacturers. The process guarantees competition in the development of the standard and thereafter fierce competition in its downstream implementation.

3. Licensing of Standard Essential Patents Can Be Subjected to Drawn-out Negotiation, Gamesmanship, and Litigation

The negotiating environment for standard-essential patents has changed in the last decades. In the past, bilateral licensing was largely undertaken by companies

2. For reasons of transparency (and of prudence), the member company may notify more patents than are ultimately found to be essential. Those notified but not essential are not covered by the FRAND promise. The SDO's IPR policy does not cover the SEPs held by non-participants. These SEPs may not be available on FRAND terms.

In addition, an SDO participant may refuse to give a FRAND assurance, for example if the owner cannot offer a licence because it has granted an exclusive licence to its SEP to a third party. Also a participant may refuse to grant a FRAND licence because it objects to the definition of "FRAND" adopted by the SDO. This was recently the case within IEEE. On a further development on IEEE's IPR policy and its treatment of "FRAND," see IEEE, "IEEE Announces Decision on its Standards-related Patent Policy" (press release, 30 Sept 2022) available at *https://standards.ieee.org/news/ieee-announces-decision-on-its-standards-related-patent-policy/* and linked documents.

holding patent portfolios but also engaged in manufacturing. There was a match in the negotiating positions.

With the enormous success of the 3GPP technologies, an ecosystem with increasing specialisation has emerged, with smartphone vendors, infrastructure vendors, chipset vendors and pure innovation specialists, etc. Today there is therefore often a large asymmetry in positions. Also, companies left the market. For example, Bosch left the mobile telephone market and sold its portfolio to IPCom. IPCom's business activity is focused on licensing its SEPs. As a non-implementer, in negotiations it doesn't look for a licence back. In this way the negotiation becomes one-way where the patent owner seeks only royalty payments, and the implementer has no counter-assertion possibility. The greater the asymmetry, the more a licensee is likely to disagree on price in negotiations.

Further, some 15 years ago attacks on the legal interpretation of FRAND began in courts and with regulators, leading to a period of legal uncertainty regarding the FRAND system. This resulted in increased delay tactics of implementers, and ultimately a situation where hold-out became common practice in SEP negotiations.

The increased legal uncertainties, especially regarding the availability of injunctions, led implementers to assume that the worst consequence of litigation would be that they had to pay no more than the last FRAND offer anyway. Delay of negotiations became a strategy to increase pressure on SEP holders to push down the royalty rate or face a delay in getting a fair compensation for years.

A typical scenario in negotiations could be: a SEP holder aims to establish, as quickly as possible, that it has at least a reasonable number of SEPs in its portfolio for which it is entitled to a royalty payment. Here the SEP holder works to advance the economic discussion as fast as possible, while an implementer, engaged in hold-out, would instead seek to delay negotiations arguing a separate lower valuation, a different royalty base, commercial disadvantages versus their competitors if they alone need to pay for the license or other positions which would prohibit conclusion of a license, while all the time continuing to infringe.

Luckily, the recent jurisprudence, as discussed below, has created more clarity, recognizing the harm from strategic hold-out and clarifying that SEP injunctions are available against "unwilling licensees."

4. Licensing of SEPs Through a Patent Pool Offers Significant Procompetitive Efficiencies

Patent pooling creates substantial transactional efficiencies to help implementers take a licence to a substantial portion of the SEP portfolio relating to a specific standardized technology. Patent pools are useful in complex technologies bringing together a number of patent owners who have contributed their patented technology to interoperability standards. Thanks to the standards process, only the very best solutions available in that market are used to build the standard. The SEP landscape is a by-product of this collaborative approach: patent holdings are split over many companies. For lawful use of the standard, the implementer would be called upon to take licences from dozens of patent holders, a time-consuming, resource intensive process. Here patent pools can be very useful.

The formation of a patent pool is facilitated by pool administrators like Sisvel and others in the market. In facilitation, the administrator encourages all the patent owners to join the pooling effort. Patent owners, for instance owners with large SEP portfolios and commercial presence in the licensed market, may find it more efficient to license on a bilateral basis instead of joining a pool. When this is the case, a pool will still increase efficiency when it attracts a sufficient number of licensors to the pool. Once the pool is formed, a licensee can take a single licence covering the pooled patents, often a substantial portion of the patent stack.

Pool licensing is always an alternative to bilateral licensing,[3] and pool participants may decide to license bilaterally in certain circumstances, or the implementer may decide to take bilateral licenses from the pool members rather than the pool license.

The single pool licence represents important economies of scale and provides transparency (both on the licensing terms and on the licensed patents). Compared to bilateral licensing with multiple holders, the pool offers an alternative, more efficient way to obtain a licence covering patents essential to a standard.

However, not all pools are successful. It can depend on whether the technology is broadly adopted and whether there is commercial success. Often pool administrators develop pools for technologies that fail or are not competitive in the market despite the significant investment for pool facilitation and administration. But in selected cases the pool can be extremely successful, and these have helped in a faster adoption of technology because of the certainty that implementers have on the terms of SEP licensing, terms which, generally, are publicly available on the administrator's website and applied across all licensees.

Some pool administrators, like Sisvel who has created Sisvel Technology, the R&D branch of the group, have the expertise to provide technical assistance on IP matters and can therefore, if the patent holder agrees and if the administrator deems it efficient for the licensing discussion, respond to the need for technical discus-

3. In conformity with antitrust rules, each pool licensor also offers its own patents for bilateral licence.

sions with implementers on standard essential patents. In some markets, implementers have less understanding on the technologies included in their products and it may be useful to provide some explanation of how their product infringes the SEPs and why they must take a licence. It is however important to note that jurisprudence, in particular in Germany, has been clear in confirming that it is the duty of the implementer, not the licensor, to invest resources to understand how the patents are implemented in their products: any investment made in this sense by the licensors is a voluntary effort, aimed at making transactions more efficient and at reducing friction in the market.

There are a number of special cases in the markets for pooled patents. A pool is not useful for some standardised technologies; a pool may cover a fraction of SEPs (but is still efficient); and at times, there can be multiple pools addressing a market. Pools are not necessarily needed in all markets; if a market is already in balance, a pooling alternative should not disrupt that market. Pools are attractive if they offer economies of scale and other efficiencies. Indeed, this efficiency can be found even when the pool represents five patent owners where the landscape has dozens of SEP holders (or holders of larger SEP portfolios may pursue a different bilateral licensing strategy). While in some cases the pool offers an overwhelming share of SEPs (for example, Sisvel's DVB-T2 pool covering 100 percent of declared patents), there are efficiencies in pools covering a smaller proportion of SEPs.

Patents essential to a single standard may be offered by more than one pool. For example, in mobile communications, for years there were many companies having bilateral licensing programmes and in addition there were two patent pools: Sisvel and Via Licensing. In negotiation, the existence of two pools was exploited by potential licensees in bad faith. In discussions with both, the implementer could claim to be in positive discussions with the other pool and that it would resume discussions with the first pool only when a conclusion would be reached with the other pool, to avoid inconsistencies in the licenses concluded, but this excuse was often used with both pools at the same time and was merely a delaying tactic. Here each pool did nevertheless represent substantial transactional efficiencies. Last year, Via Licensing decided to end its licensing program.[4] Sisvel offers now a new pool for this mobile communications technology and has welcomed many licensors previously exclusively with Via Licensing. If two pools presented efficiencies in this market, the expectation is that the benefits will increase with a single pool.

5. SDOs Recognise the Value of Pools Covering Their Standards: the Experience of DVB

The DVB Project requires its members to offer licences to their DVB-essential patents on FRAND terms. In addition to this unsurprising requirement, DVB's IPR policy also calls for fostering the formation of pools covering these patents. Here DVB convenes companies—DVB members and others—each of which holds a well-founded belief that it holds one or more patents essential to a recently adopted DVB standard. This is a pre-commercial process, before formal pool facilitation undertaken by a pool administrator. The goal is for the companies in the fostering process to select an administrator.

DVB fosters pool formation soon after adoption of a DVB standard because it counts on the momentum or enthusiasm among DVB members who have completed the standard to complete licensing arrangements. DVB undertakes this activity because pooling clarifies the licensing environment, reduces market uncertainty, offers a one-stop shop for licensing and results in lower aggregate royalty rates.[5]

6. Over Time, Courts Have Clarified the Scope of Good Faith Negotiations; the Nature of FRAND Royalty Promise; the Availability of Enforcement

A patent right is not self-enforcing, so at times the only means to bring an unwilling implementer to negotiation (or to move a negotiation forward with an implementer negotiating in bad faith) is by starting litigation and/or seeking an injunction. Indeed, over time they have become a natural part of any negotiation!

The FRAND construct/FRAND assurance is from the SDO point of view a brilliant concept because it allows standardisation to advance while commercial discussions are handled by the market participants. At the time of commercialisation, the FRAND framework is an incomplete contract. In commercial disputes the stakes are high and litigation may well be the right way to bridge the differences between parties. The incentives to participate in standardisation are discussed above. Less clear are the penalties for engaging in behaviours that frustrate speedy licensing, such as delay tactics, bad faith in negotiation, etc. The market distortions caused by hold-out are evident: the early SEP licensee is disadvantaged if, through its diligence in speedily

4. Additional information on Via Licensing ending its wireless patent pool are available at the following link: *https://www.iam-media.com/article/licensing-ending-wireless-patent-pool-double-down-audio-codec-programmes.*

5. DVB's experience in pool fostering is summarised in its liaison note, DVB, "DVB's Fostering of early Formation of Patent Pools" (2018) available at *https://dvb.org/wp-content/uploads/2019/12/dvb_liaison_note_patent_pools.pdf.*

taking a licence, it pays nevertheless the same FRAND rate as, years later, the implementer that has challenged unsuccessfully the SEP holder in extensive litigation. The early licensee has borne royalty costs for years to its competitive disadvantage when compared with the hold-out implementer. In particular, if the hold-out implementer is dominating in the product market, then the delay may mean that a significant part of a patent owner's overall revenue is delayed, impacting its financial situation. This is particularly true if a final judgment vindicating a patent holder requires three levels of judicial decisions and if the patent is time bound by its limited life of 20 years. For these reasons, the monetary penalties are not sufficient. Rather, the exclusive right associated with patents, the ability to obtain an injunction against the infringer, becomes a crucial tool to set a level playing field between an implementer and a SEP holder.

Litigation should not be a surprise. Historically technological breakthroughs are correlated with an increased rate of litigation because commercial licensing discussions break down. This is true from colour TV and the transistor back to the sewing machine. Each of these breakthroughs involved a high degree of innovation, patent infringement, licensing discussions, and litigation. While commercial licensing disputes should be resolved without litigation, in reality SEP holders and infringers often meet on the courthouse steps.

In *Sisvel v Haier*,[6] the German Federal Court of Justice validated the practices adopted in licensing by Sisvel and others. First, for SEPs the licensor may offer global licences covering its SEP portfolio. In other words, the notion of FRAND does not compel the SEP holder to offer licences on a per patent or per territory basis, a process that would be unworkable. The court also treated the non-discriminatory prong of FRAND, finding that it did not mean that there would be a single royalty rate across all licensees. Rather, FRAND is a range; the dynamic of negotiations may result in different outcomes, as long as similarly situated licensees are treated similarly. And importantly the *Sisvel v Haier* decision made clear that in SEP licensing both parties have duties, and that hold-out tactics could be unjustified, such as untimely requests for further information, dilatory challenges to royalty rate calculations or questioning the SEP holder's decision to require a licence from the targeted level of the value chain. There needs to be a good-faith engagement on both sides.[7]

Sisvel v Haier is a key decision in a territory that is important for SEP enforcement. It provided an important clarification of the decision of the European Court of Justice in *Huawei v ZTE*.[8] This greater clarity sets out the rules of the game for licensing negotiation, reducing gamesmanship opportunities, and will result in greater consensual licensing.

Further, in the UK court, in *Unwired Planet v Huawei*, the court concluded that injunctions are available against an unwilling licensee, if the licensee refuses to take a FRAND licence on terms that are determined by the court. We can add that litigation is not a sign of failure but rather a mechanism to prevent market failure. From Orange Book to *Huawei v ZTE* and now in *Sisvel v Haier*, the understanding of FRAND has evolved through case law. Courts have helped notably in the progressive narrowing of FRAND negotiation and provided better predictability in dispute resolution.

7. This Framework Applies Even at a Time of Growing Complexity Through Convergence of New Industries.

The IoT industry is predicted to grow tremendously over the coming years, bringing to market a huge number of new applications and ecosystems, all benefitting from the cellular technology developed over many decades. This has led to a significant increase in the complexity of how rights to the standardized technology are licensed.

To address this complexity and to increase efficiency in IoT licensing, Sisvel has recently launched a patent pool[9] announcing a royalty rate that endorses early take-up of the technology. Knowing the costs for implementation will be an important element of market certainty for the launch of IoT devices. The efficiencies from pooling in IoT are immense. Thanks to the efficiencies there will be success notably through pools bringing together dozens of SEP holders, reaching out to several thousands of implementers, licensing billions of devices. If, in the absence of pool licensing, each bilateral negotiation costs (as a low estimate) €10,000 in management time and disbursements, then bilateral licensing would be prohibitively expensive (hundreds of millions in transaction costs across the industry). Hence, in this case, the industry views a pool solution as the far more efficient business model.

Pooling is an industry-led solution that has proven to work. It is a solution in the automotive industry with the introduction of pooling through the Avanci licensing platform. As new verticals are introduced, SEP holders and pool administrators have come together to

6. *Sisvel v Haier*, Urteil des Kartellsenats vom 24.11.2020 - KZR 35/17.

7. This is also stated in some IPR policies, for example ETSI's, that require all members—innovators and implementers—to negotiate in good faith in order to comply with contractual obligations and to be the beneficiary of the contract between the patent owner and the SDO.

8. *Huawei Technologies Co Ltd v ZTE Deutschland GmbH* Case C-170/13 (16 July 2015).

9. Information on Sisvel C-IoT licensing program is available at the following link: *https://www.sisvel.com/news-events/news-events/news/sisvel-launches-its-cellular-iot-patent-pool.*

find a solution, like with the recent launch of the IoT pool described above. This is clear evidence that industry is capable of resolving its needs and that further regulation is not needed.

In particular, in many of the IoT verticals, small and medium sized enterprises (SMEs) will play a significant role. Standardisation lowers the barriers to entry, enabling SMEs to introduce devices implementing IoT standards. The IoT market, with its numerous verticals, can be fragmented (because responding to different commercial needs), a structure that could be favourable to SMEs. In this case, they could well also be participants in standards development. Indeed, SDOs will gain greatly from the broadest participation, including SMEs. But innovative SMEs, developing their own SEPs, will find it expensive to run their own separate licensing programs. Patent pooling could offer extensive benefits to them. SME involvement in the IoT industry will also allow SMEs to participate in the further development of standards and a return on this investment as pool licensors. ■

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Each of the participants contributed to the preparation of this article.

The webinar was the first of a series of sessions on SEP and part of the Thought Leadership Program, organized by LES International to lead and inform conversations related to intellectual property policy and the tactical use of IP assets.

The video of the webinar is available at the following link: *LESI Thought Leadership Program—Track 1: "SEPs Licensing"*—Zoom. A later article in *les Nouvelles* will report on further sessions of this track on Standard-Essential Patents, presenting SEP licensing for mobile communications, wi-fi, and digital video broadcasting.

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