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The Interplay between IPRs and Standardisation in the Open Innovation Ecosystem

[OpenForum Europe](#) (OFE) is a not-for-profit, independent European based organisation which focuses on openness within the IT sector. OFE also hosts a think tank, focussed around our global network of OpenForum Academy Fellows, each contributing significant innovative thought leadership on core topics. For us at OFE, openness is not a label or tool used by certain organisations seeking a little 'pixie dust' to bolster their digital transformation credentials; instead, openness is an all-encompassing approach which is defined by using a set of five OFE-[developed](#) principles, namely: user-centricity, competition, flexibility, sustainability and an open and transparent community.

The European Union has many tools for becoming a champion of open innovation, given the success of Linux, one of Europe's greatest IT innovations, which is no. 1 in Data Centres and which runs 98% of high-performance computing (HPC). This has a huge opportunity for the European Union, because Open Source technologies play an important role in the market place, e.g. around Cloud, big data, and mobile, which constitute other key ingredients of a thriving DSM. Therefore, Open Source technologies can play a major role for the success of the DSM. However, for this to become a reality, there are some issues that need to be considered.

OFE's response ([10 May 2016](#)) to the European Commission's ICT standardisation Communication ([19 April 2016](#)) flagged an important barrier for the development of Open Source in the European Union, namely, "Open Source needs Open Standards; and standards that are encumbered with patents and thus require complex licensing agreements cannot easily be implemented in open source and are not easily compatible with open source license models – if at all".

Europe's Open Source community felt that some progress was made at the EC workshop ([25 January 2017](#)) to understand and recognise the extensive and important role of Royalty Free licensing with regards to Open Source Software implementations. Indeed, we welcomed the recent acknowledgement at the MSP (23 March 2017) that "integration between open source based solutions and interoperability standards is a win-win situation"¹, We would, however, question that Royalty-Free (i.e. unencumbered) is being incorrectly promoted as a subset of FRAND.

¹ Michael Konig (2017). A balanced framework for the licensing of Standard Essential Patents. EU's Multi-Stakeholder Platform meeting of 23 March 2017 (Brussels)

High quality standards depend on the availability of relevant innovative, state-of-the-art technologies. Often such technology elements have been patented, which has led to SDOs setting up IPR policies to govern the process for the declaration of claims regarding so-called standards essential patents (SEPs), and the rules for ensuring the availability of declared SEPs to those who implement the respective standards.

Perhaps the greatest level of controversy relates to the issue of perceived compatibility of standards which depend on one or more SEPs with open source based developments. Indeed, this is an issue which requires adequate resolution within the upcoming European Commission Communication (expected in June/July 2017) so as to further enable the full potential of European innovators in the context of the digital transformation - thereby contributing to economic growth, jobs and global competitiveness.

1. Patent policy approaches: FRAND and RF

On a simplified view, we can identify two approaches in relation to patent policies: FRAND and RF (whether Royalty-free or Restriction Free).

FRAND is a promise. A patent-holder which contributes an SEP to a standard under FRAND terms and conditions makes the promise that the licences to exploit the patent will be available to implementers of the standard under, as the acronym puts it, fair, reasonable and non-discriminatory terms and conditions. The specific terms and conditions of the licence, in particular the royalty fee aspects, are subject to bi-lateral negotiation with the associated need for agreement to be reached between the patent-holder and the would-be licensee.

RF is a guarantee to implementers of the standard that SEPs will be available for licensing without royalties or restrictions on use being imposed. A significant number of global SDOs active in IT standardisation opt for an RF policy (or a more blanket non-assert policy) whereby no claims will be made and no licensing is required.

For Open Source projects, unless the licensing agreement includes, for instance, a non-assert clause or similar provisions, SEPs are a problem in that they create an implied threat, resulting in the risk that every open source based project participant will fear the future actions of the current and potential future owners of the relevant patents, in particular that those owners could be in a position to exert influence without making any other contribution to the project. In the context of Open Source projects SEPs are problematic also in that they require that each patent holder will need to establish private relationships with community participants, which is simply not practicable and conflicts with community based open innovation and collaboration approaches.

With some degree of simplification, it could be claimed that the more standardisation involves research-intensive and base technology, such as hardware or radio transmission, the more likely, and

important, it is that a FRAND policy will have been selected to govern availability of SEPs. On the other hand, the more standardisation is located higher up in the technology stack and the more standards are focussing on interoperability and APIs, for example, the more likely, and important, it is to find an RF policy. To some extent, this relates to innovation: where the innovation is in the base technology that is included in a standard, the innovator wishes to obtain some reward for all its R&D efforts, and so it is important to enable (or allow) an incentive for innovators to contribute SEPs to standardisation. Therefore, in such cases FRAND is the dominant licensing model.

However, where the innovation is more in the implementation and value-add “on top of” the standard, the prime interest is to get broad adoption of the technology, and thus RF is the dominant licensing model. As explained above, the availability of RF licensing is highly advantageous when it comes to the relation of standardisation and Open Source projects. So FRAND terms are often seen as incompatible with the terms and conditions of Open Source licenses, hence the fact that Royalty-free policies allowing unencumbered implementation of open standards in Open Source were established in the market in a number of leading global SDOs². Another dimension to consider is where innovation happens. The software industry has eagerly embraced Open Source, and for many organizations, Open source has become one of the main places where they innovate, moving from sole in-house innovation, and away from innovating in the standards bodies themselves. In these cases, where open collaborative innovation happens before standardisation, RF is the only sensible choice for software standards development.

2. Issues with the patent policy approaches

Essentially, each of the two licensing approaches work well in their own market sector – but this does not mean that there are no issues. There are disputes and court cases about validity of essential claims, about what FRAND is, and about whether an offer made is really FRAND or is excessive. In fact, the evolution of new market players in the telecommunications sector, the move towards 5G and, more generally, digitisation have led to disruptions in the market and have triggered discussions around the interplay between IPR and standardisation. There have been debates as to whether there should be precise definitions of what FRAND means, and whether for a patent holder to seek (and to enforce) an injunction against an unwilling licensee is a valid instrument in the case of SEPs. The problem with defining 'FRAND' is that conceptually it is not consistent with a strict or narrow definition; it is a promise, which enables technical work to progress and separates the business aspects from that technology development, assuming willingness and fair-play between the patent holder and the implementer of the standard. Further, any resulting disputes tend usually to get resolved in court or, if mutually agreed, by some other form of adjudication. On the other hand, trying to define FRAND more closely will tend to result in a situation where the different parties each try to embed their favourite formula(e) for calculating royalty rates as part of the definition. No

² The issue whether to pay royalties or not is not the sole issue for implementing standards in Open Source. More generally, whenever it is required that a license is agreed and taken there are possible conflicts with the working practice of Open Source communities. Therefore, the term “Restriction-free” is sometimes used for illustrating the need for unencumbered use of standards in Open Source implementations.

universal definition of FRAND will probably ever exist, and trying to define the term in any formulaic manner seems likely to prove as futile as trying to square the circle.

A further issue that has hit standardisation recently concerns claims from third parties which are not members of the respective SDOs, and therefore not subject to the associated IPR rules. There have been instances where SEPs were acquired by businesses which are not in the respective business at all but still seek to impose significant royalties. Such businesses are sometimes referred to as “non-producing entities” (NPEs) or (less politely) as “patent trolls”. Such situations pose a threat to standardisation when commitments (be they to FRAND or to RF licensing) are broken, and higher license fees are demanded. Some SDOs are reacting against these threats within their control by, for example, laying down that commitments made by a patent holder must remain valid in case of any subsequent assignment (sale) of the patent(s), and by contractually obliging the assignor to include respective obligations in its agreements with the assignee, and likewise for future successors in title.

The interplay of patents and standards is complex. We can see challenges emerging from innovation, as well as from new players entering markets, e.g. in the context of technology convergence and digitisation. Traditional IPR models are challenged, improvements are sought for and sometimes even battles are fought amongst market players with the aim of gaining advantages for respective business approaches.

3. Recommended Policy Actions

The global standardisation ecosystem has long adapted to the need for different models to support open innovation and respond to respective needs and requirements. It is well balanced, in so far as there are global SDOs (aka fora/consortia) where the members distinctively decided to implement IPR policies or respective options with a policy for allowing implementation of their standards in open source. At the same time there are other areas where what is of prime importance is to have access to technology inventions, and therefore the need to provide incentives for inventors to contribute their technologies to standardisation and get some fair compensation for their R&D efforts in return.

The European Commission is also looking at the interplay of standardisation and IPRs. For instance, this topic is addressed in the Commission Communication on “ICT Standardisation Priorities for the Digital Single Market”³ where the Commission tips the ‘balance’ heavily towards FRAND only (at p. 13): “ICT standardisation requires a balanced IPR policy, based on FRAND licensing terms. [...] A balanced policy should take into account a variety of needs: fair return on investment to incentivise R&D and innovation, a sustainable standardisation process, wide availability of technologies in an open and competitive market, and the difficulty for SMEs to participate”.

The interplay between standardisation and IPRs will continue to be critical, given the challenges of

³ COM(2016)176

technology convergence, innovation and digitisation. The following considerations are of the utmost importance, for maintaining and improving such balance:

1. Both FRAND and Royalty-Free have their distinctive roles to play. The question in the marketplace is not a binary one (either/or), the reality is that both are of relevance and both support models of innovation. At a policy level, it is important that the significance of Royalty-Free is well recognised for the implementation of Open Standards in Open Source, and to recognise that FRAND is basically incompatible with true Open Source.

2. A thorough understanding of the relation between innovation and standardisation will be essential for a balanced approach and for further improving the balance of interests between patent holders and implementers. Any such balanced approach needs to recognise the need for support of standardisation to be attractive in the case of innovative, state-of-the-art technology players, as well as for standards to be available and widely adopted in the marketplace where innovation takes place at the level of the implementation of the standard(s).

3. Based on such a thorough understanding, in the case of standards for software interoperability, the availability of Royalty-Free licensing terms should be encouraged, so as to ensure the possibility of Open Source implementations which can more fairly compete with proprietary offerings in the marketplace on a level playing field, and to encourage new standards to be derived from Open source

4. As SDOs adapt to changes in the marketplace, it is important that whilst they operate within their respective legal framework, at the same time they and their members should strive for consensus on what patent licensing approach is most appropriate for the respective organisation in order to provide high-quality standards for the total marketplace.

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About OpenForum Europe

OpenForum Europe (OFE) is a not-for-profit, independent European based think tank which focuses on openness within the IT sector. We draw our support not only from some of the most influential global industry players, but most importantly from across European SMEs and consumer organisations and the open community. OFE also hosts a global network of OpenForum Academy Fellows, each contributing significant innovative thought leadership on core topics. Views expressed by OFE do not necessarily reflect those held by all its supporters.

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