Intellectual Property and Standardisation: Key Aspects for an Innovative India

Begoña Glez Otero¹, Sheetal Chopra²

¹EU Business School Group, Munich, Germany
²Ericsson, Gurgaon, India

Email address:
b.oter@euruni.edu (B. G. Otero), sheetal.chopra@ericsson.com (S. Chopra)

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Abstract: The telecom sector has been a pivotal force behind India’s digital transformation. Surge in data consumption and rapid adoption of new technologies continue to redefine connectivity and engagement dynamics in India. As the largest data consumer and the second largest smartphone market, India is carving out a new digital identity globally. At the same time such a digital transformation has been brought by innovative companies who wish to be compensated for their efforts, often via licensing. The first part of this paper will explain the impact of standardization on the Indian market. The second part will focus on the key role of an effective patent enforcement system in balancing standardisation contributors and implementers’ interests. On this regard, the paper analyses the changing patent landscape in India. It follows a brief review of the Indian jurisprudence relating to patents essential to a technical standard. Third, the paper will identify some of the main strengths and obstacles of the patent litigation system in this particular field, including some concrete proposals or suggestions for improvement in the latter. Finally, the paper will sketch some general conclusions.

Keywords: Standards, Standard Essential Patent, Patent Litigation, FRAND Licensing

1. Introduction

Globally, there are 7.8 billion mobile subscribers. Nearly 15% of the mobile subscribers are from India. In 2018, 45% of the 300 million net additions have been Indians [1]. The telecom sector has been a pivotal force behind India’s digital transformation. Surge in data consumption and rapid adoption of new technologies continue to redefine connectivity and engagement dynamics in India. As the largest data consumer and the second largest smartphone market, India is carving out a new digital identity globally [2].

As of June 2018, India has the second largest telecom network in the world, with around 1.2 billion subscribers by December 2018 [3]. Reasons for such a paramount revolution are, among others, the increasing broadband and internet penetration, exponential data uptake, the Government’s focus on digitalization and the increasing trend of technology adoption across industries [4].

Four main factors that make India different from already established markets are:

1. India has the lowest call charges in the world, and the largest growth of subscribers, due to the diligence of the telecom operators on the one hand and the lowest mobile termination charges (MTC) rates [5] coupled with the calling party pays (CPP) regime [6]. Both were introduced by the Telecom Regulatory Authority of India (TRAI) [7].
2. India’s digital profile and footprint is one of the fastest growing in the world, and the data economy and digital technologies and services are no longer the prerogative of the privileged few; over 200 million Indians regularly used social media in 2017. And over 200 million Indians took to mobile banking and digital payments. At the current pace of digitization and digitalization, it is estimated that India’s digital economy has the potential to reach one trillion USD by 2025 [8].
3. Along with strong consumer demand, are the liberal and reformist policies of the Government of India. The government has enabled easy market access to telecom equipment and a fair and proactive regulatory
framework that has ensured availability of telecom services to consumer at affordable prices. The deregulation of Foreign Direct Investment (FDI) norms has made the sector one of the fastest growing and a top five employment opportunity generator in the country [9].

4. The Indian Government released the National Digital Communication Policy in 2018 that encourages developing patents essential to the standards in the field of digital telecommunication technologies [10], besides creating a high level 5G committee.

2. The Impact of Standardisation on the Indian Market

Technological innovation and broadband connectivity are considered as a major stimulus for economic growth [11]. Thus, the Indian telecommunications revolution would be likely to generate new growth avenues, boost industrial productivity and have the potential to transform the socio-economic fabric of the country. To achieve this revolution, during the latest Celebration of 50 Years of World Telecommunication and Information Society Day (WTISD-19), in May 2019, the Indian DoT, Ministry of Communications encouraged companies to invest their time and resources to develop standards for the industry for its overall growth and expansion [12]. This is because standardisation has played and will play a central role in this regard, same as it has for enabling 5G adoption. For instance, at a global level, a study in 2014 showed that the mobile value chain, thanks to standardisation, had a return of over USD 3 trillion and generated 11 million jobs [13].

Standards set out norms or guidelines that enable devices from different manufacturers to interoperate with each other, that is to communicate and share information with each other while assuring high performance. Cellular standards are created by different companies that cooperate in Standard Developing Organisations (SDOs). The role of SDOs is to coordinate and facilitate a standard setting and development process with the involvement of various stakeholders. The absence of standardisation bodies in India was strongly felt in the telecom sector. With the launch of the Telecom Standards Development Society (TSDSI) on November 7, 2013, operating as of January 2014, Indian companies were given the opportunity to contribute to the development of global telecommunications standards, becoming innovators instead of purely implementers [14].

The standardisation process at SDOs takes place via multiple candidate technologies proposed and contributed by companies (service providers, manufacturers) and other stakeholders (academia, industry associations, test labs, start-ups, governmental departments). This diverse membership implies that participants have different interests and business models [15]. Then, within the standardisation process, the best contributions, selected by consensus and based on their technical merits, are incorporated into the standard. The cutting-edge technology contributed to the standardisation process, often resulting from large R&D investments, is normally protected by patents [16]. As a result, these patents could end up becoming standard essential patents (SEP). This means that to implement a standard, it will be necessary to use that patented technological feature in order to sell a product or provide a service which complies with the standard.

It is not new to say that patents, as exclusive property rights, confer the right to exclude others. However, in light of incorporation of their patented technologies into the standards, SDOs encourage the patent owners to offer access to these standard essential patents on Fair, Reasonable and Non-discriminatory (FRAND) [17] terms and conditions in return of a guarantee that the Intellectual Property Right (IPR) holders are adequately and fairly rewarded for the use of their IPRs in the implementation of the technical specifications [18].

The precise terms of the licensing are left to the parties to agree upon, in good faith, and in accordance with prevalent industry practice [19].

The working balance of interests and incentives is what makes collaborative standardisation as a process of superior efficiency if compared to de facto standardisation. FRAND licensing is vital for maintaining a predictable and rewarding structure of returns that provides powerful incentives for contribution of technologies and implementation of standards. On the one hand, licensing revenue from FRAND royalties, by ensuring that patent holders reap a fair reward for their contributions, provides strong incentives for leading innovators to contribute the best available technologies to the standardisation process [20]. On the other hand, the FRAND commitment ensures that standards will remain accessible to all.

Additionally, standardisation brings important and perceptible benefits to consumer welfare, by providing not only interoperable products, but greater product choice with high performance products at increasingly lower prices. Indeed, 4G technology can transfer data 12,000 times faster than 2G technology, the average mobile subscriber cost per megabyte decreased 99% between 2005 and 2013, and smartphones are now available for around $40 [21].

All in all, there is substantial evidence that SDOs in mobile telecommunications have performed well. The performance of telecommunication networks has increased dramatically in all important respects: in capacity, data rates, reliability, latency and security. The upcoming 5G will be key for autonomous vehicles, remote surgery, factory workflow automation, and billions of connected devices [22]. Added to that, empirical evidence suggests that patents declared as potentially standard essential at SDOs are of higher quality and receive roughly three times more citations than their non-SEP counterparts [23]. All these factors are particularly important for countries such as India or China, where the consumer-reported value of mobile exceeds 40% of average income [24].
3. The Key Role of an Effective Patent Enforcement in Balancing Standardisation Interests

Patent protection drives innovation by incentivising investment in R&D [25]. The protection of the exclusive patent right also allows for the disclosure of the invention, fostering further innovation [26]. However, patent law as an incentive for innovation, and in interaction with competition law, as a means to promote follow-on research, have to be coordinated and balanced with the interests of the parties involved in licensing, namely those contributing to the standard and those using it. Efficient licensing of intellectual property rights (IPR) requires a successful balancing of the incentives to invest in innovation against the benefits for the economy at large of a wide diffusion of knowledge. The licensing of SEPs is however prone to market failures such as free-riding, i.e. when implementers incorporate the SEP holder’s innovative technology in their products or services without compensating him [27]. The various forms of market failure can result in barriers obstructing the efficient licensing of SEPs and can thus hinder the realization of the economic and societal benefits of the affected standards [28].

Although in the case of standard essential patents, both patent litigation and competition law procedures are key for understanding this complex sector, this paper will focus only on patent litigation. The main reasons for this are space limitation, the shortage of Indian literature analysing the role of an effective patent enforcement system to balance interests amid standardisation contributors and implementers, and the fact that the applicability of the Competition Act 2002 to FRAND disputes is presently under judicial scrutiny [29]. To start this exploration, the paper will analyse the changing patent landscape in India. It will continue with a brief review of the Indian jurisprudence on SEP related cases. Then, it will identify the obstacles and strengths of the patent litigation system in this particular field; including a number of proposals for improving the aforementioned balanced.

3.1. The Changing Patent Landscape in India

Since 2005 the Indian courts have witnessed an increase in patent litigation. Kumar and Sawhney argue this was an obvious consequence of putting a product patents regime for pharmaceuticals and agrochemicals in place. Another fact that may have contributed to the rise of patent litigation is that during 2005 India made the necessary amendments to its patent law to comply with TRIPs Agreement [30]. Kumar and Sawhney also point out, as indicated in figure 1, that while pharmaceutical cases have lessened, there has been a recent increase in patent litigation in the fields of electronics and information and communications technology [31].

In the past few years, India has also made positive efforts to position itself as an attractive market for investments. In 2016, the Indian government adopted an ambitious national intellectual property rights policy. India has also put in place several new initiatives such as “Make in India”, aimed at transforming India into a global design and manufacturing hub. The “Startup India” program, another initiative by the Indian government, incentivizes and supports domestic startups. There have also been efforts to improve the country’s ranking in the Global Innovation Index. With regard to the “ease of doing business” India’s position has witnessed an impressive jump of 53 places in the past 2 years. According to the World Bank’s 2019 report, India is now ranked on the 77th out of 190 countries [32].

3.2. Brief Review of Standard Essential Patent Related Cases in India

India has become one of the world’s largest mobile markets, as the result of embracing standardisation [33].
Since the standardised technologies are often the result of massive R&D investments, SDOs guarantee that innovative companies, providers of such technology, will be fairly compensated for their efforts, often via licensing.

When SEP holders first approached smartphone companies in India, these companies were not all familiar with the value of intellectual property and FRAND licensing for SEPs. Indian companies have undergone a steep learning curve, jumping from the distribution business to the mobile business. Thus, India has seen a related rise in standard essential patent licensing and litigation.

The first SEP litigation cases in India were initiated by Philips in 2009, when they sued two local companies for selling assembled DVD players, which contained chipsets allegedly infringing a Philips Indian patent covering a “decoding device for converting a modulated signal to a series of m-bit information words”. Both suits were consolidated by the Delhi High Court [34]. The patent expired in 2015. Due to the lengthy process and the expiration of the patent, an injunction was no longer possible.

Moreover, the fact that, in SEP cases such as in Philips’ case, alleged infringers may raise an antitrust complaint causing an overlap between the jurisdictions of the civil court authorities and the competition authorities, led to further delay in the process.

The Philips matter was finally decided, after a long wait of 9 years, leading to India’s first judgment on SEP litigation, on July 12, 2018. Although the decision was well-reasoned, this example shows the extraordinary length of time SEP cases take to progress through the Indian court system.

Starting in 2013, Ericsson became involved in some cases against several companies before the Delhi High Court. What these and the other above mentioned cases had in common are the requests by the patent holder for interim relief on its FRAND-assured SEPs, seeking damages and the upholding of the company’s practices of licensing under its FRAND commitment [35].

Also, in November 2013, Vringo Infrastructure Inc., which had acquired over 120 patent families relating to telecommunications and infrastructure from Nokia, filed two suits against ZTE and its Indian subsidiary ZTE Telecom India [36]. One of those suits was for infringement of SEPs Vringo had acquired from Nokia. Yet, the novelty of this case is that for the first time since litigation over SEPs started in India, the Delhi High Court agreed to appoint a “scientific advisor” from a list of experts to advise the court about the technical and scientific evidence placed on record [37].

3.3. An Analysis Based on FRAND Case law

Based on the existing jurisprudence, there are some lessons to be taken from the current practices of the Delhi High Court, that could serve as a lesson for other Indian courts that may need to deal with this kind of patent infringement case and from which certain improvements towards a more efficient litigation system could be driven.

3.3.1. Well-reasoned Decisions

Although SEP litigation is quite new for Indian courts, the Delhi High Court has showed a high level of skill and reasoning in the substantiation of its decisions, including addressing controversial topics such as injunctions.

In forming its decisions, the Court has sometimes looked to other jurisdictions that have more experience dealing with these issues, such as the U.S. and the European Union.

An example of a case where the Indian courts have referenced foreign jurisprudence is the 2009 Philips case, resolved in 2018. When the Court had to assess damages for patent infringement, applied the US Court of Appeals for the Federal Circuit’s methodology in Commonwealth Scientific and Industrial Research Organization (CSIRO) vs. CISCO Systems, Inc., relying on informal negotiations between the parties to set a rate.

Also, as noted earlier, the Court has incorporated a well-known practice around the globe: to bring experts to provide testimony in complex SEP litigation matters. Even more, in one of Ericsson’s cases [38], the Court used the so-called hot tub method. That is, the allowance of expert witnesses to offer their opinions in the form of a discussion.

Moreover, the Court has been concordant with current judicial and regulatory trends across the world, by granting injunctions against unwilling licensees, by using the value of a downstream product as a royalty base and by relying on comparable license to derive the FRAND royalty rate [39].

Lastly, on the question of jurisdictional overlapping, the Delhi High Court was asked to decide on the jurisdiction of the Competition Commission of India (CCI) when a patent infringement case under civil litigation was pending [40]. The central question here was whether complaining on grounds of abuse of dominant position to the CCI, while the patent infringement case was prior filed and ongoing [41], could be seen as strategy to further delay the litigation process. The Court suggested that the Patent Act ousts the jurisdiction of the CCI and hence both the acts have parallel application.

3.3.2. The Importance of Injunctions Against Unwilling Licensees

An important element in the decisions related to injunctions in FRAND cases has been the (un)willingness of licensees to negotiate FRAND terms.

In 2016, the Department of Industrial Policy and Promotion (DIPP) published a discussion paper on SEPs and their availability on FRAND terms, in order to solicit public opinion on a suitable policy framework [42]. The policy document included a section on the judicial approach towards SEPs and their availability on FRAND terms, both before the CCI and the Delhi High Court. It also included a series of questions on key issues for resolution, inviting views from all concerned stakeholders. In the particular matter of SEPs and injunctions, the question was if given the commitment to grant a FRAND license, should injunctive relief be generally available or restricted. The topic might be new to India, but it has been broadly discussed in many other jurisdictions,
irrespective of its maturity. For instance, in the US, injunctions for patent infringement have been reduced drastically following the Supreme Court case eBay v. MercExchange [43]. This has led to an imbalance in favour of implementers which has been heavily criticized by the Department of Justice [44]. In Europe, there is more certainty, since the Court of Justice of the European Court in the landmark case Huawei v. ZTE [45] clarified that in order for the SEP holder and the implementer to obtain or avoid an injunction respectively, the parties should follow certain steps provided by the Court [46].

In the case of India, Section 108 (1) of the Patent Act of 1970 provides remedies against unauthorized use of patents in general through injunctions [47]. The framework designed by the Indian patent regime allows the court to decide whether an injunction is appropriate in view of any applicable FRAND commitment and provides an important check on the ability of SEP holders to obtain injunctions. The provision does not confer any special category to SEP by the Indian patent regime allows the court to decide

the litigation.

In India, there are no specialised courts for patent infringement actions; therefore, there are no specialised patent judges as such. Additionally, there is a surprisingly high number of changes of roster of judges which could significantly and unnecessarily extend the length of the procedures [53].

On top of that, given that courts in India have millions of pending case [54] with judicial vacancies waiting to be filled, it is no surprise that patent cases in India take years to resolve.

Therefore, for improvement of time efficiency the timelines set by the court need to be strictly adhered to and litigation subterfuges of granting adjournments must be summarily rejected. On this regard, it could serve as an example the US case management conference system in patent cases, where the judge, in agreement with the parties, sets a timeline with strict deadlines that are enforced by the courts. This gives certainty and predictability to the parties and helps in both, the efficiency and the time management of the overall process, even if the judge would be replaced [55].

One other proposal could be to look at one of the most efficient patent litigation systems in the world: Germany. Germany has a bifurcated system, with different courts for the infringement and validity sides of litigation. In most cases the first-instance infringement decision is issued within eight to fifteen months, while on the validity side the average timeframe is twenty-five months. If an infringement court is convinced that the patent in suit will highly likely be nullified in the parallel invalidity proceedings, it will stay its proceedings until the validity decision has been rendered. Even non-final infringement decisions are usually immediately enforceable if the requisite security is provided. Once the court has confirmed infringement, the period leading up to the validity ruling is often the best time to negotiate a settlement.
India could become a global competitor in technology innovation if adopting strategies to increase IP awareness, support the inventors and foster standardisation. There is already a huge pool of Indian engineers and universities that can be part of it. The Internet of Things and 5G, also imply plenty of opportunities for new use cases and technologies evolving. India should thus continue to respect global practice followed related to licensing of SEPs as it is proven that FRAND is in general pro-competitive and courts are well positioned to address the specific circumstances of each individual case. FRAND licensing in India has enabled entry of new businesses, increased manufacturing, larger consumer demand for standardised products, falling product prices, economies of scale, etc.

At the patent litigation level, it is crucial to encourage the parties to engage in good-faith negotiations and induce them to reach mutually agreeable terms in an expedient manner. The Indian courts have already taken steps in this direction, but more can be done toward a more effective enforcement of IP rights to provide more legal certainty. This in turn would increase the ease of doing business and play a key role in attracting more foreign direct investment.

In order to achieve these goals some recommendations have been provided in this paper. For instance, India could consider establishing specialised IP courts. Also, the country would benefit from the shortening of the litigation process, e.g. by setting and respecting an order schedule, like the U.S. practice shows.

Today, effective and timely enforcement of standard essential patents is still one of the major challenges facing the Indian telecom revolution. Still, the potential from Indian industry to become contributors instead of purely implementers is enormous. The sky is the limit.

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References


[6] "Calling party pays" or CPP is a payment model in cellular markets, that states that the total cost of a call is borne by the caller and not the receiver.


[14] TSDSI is public-private partnership entity run by participation of all the stakeholders together, the government, service providers, manufacturers, researchers and vendors. See https://tsdsi.in/about/; last accessed May 23, 2019.


[17] RAND is also used as synonymous of FRAND in the US.

[18] TSDSI IPR Policy, clause 1.3, available at https://members.tsdsi.in/index.php/s/6rxhutadeGUA VKd#pdfviewer


[24] Ibid. at 4.


In the last 10 years some SDOs have emerged in India in various sectors. There are five key SDOs, namely the Telecom Standard Development Society of India (TSDSI), Telecommunication Engineering Centre (TEC), Bureau of Indian Standards (BIS), the Global ICT Standardisation for Telecommunications in India (DOSTI).

Koniklijke Philips N. V. vs Bhagirathi Electronics & others CS (OS) 1082/2009; Koninklijke Philips N. V. vs Rajasthan Bansal (Mangalam Technology) (CS (COMM) 24/2016) Delhi High Court.


Vringo Infrastructure Inc and Anr. vs. Xu Dejun and Ors. (2013) Delhi High Court, CS (OS) 2168/2013.


[47] Section 108 (1): The reliefs which a court may grant in any suit for infringement include an injunction (subject to such terms, if any, as the court thinks fit) and, at the option of the plaintiff, either damages or an account of profits.


[50] In particular, the injunctions sought against Micromax, Intex, Xiaomi and Lava.

[51] In the context of patent licensing, to hold-up refers to a situation where a patent holder seeks increased licensing fees because the patent is essential to a standard. For further information on hold-up see, among others: A. Galetovic, S. Haber, R. Levine, “An Empirical Examination of Patent Holdup” (2015) Journal of Competition Law and Economics, OUP, vol. 11 (3), 549-578.

[52] In the context of patent licensing, to reverse hold-up or hold-out refers to a situation where a patent holder instead of being over-compensated, is in fact under-compensated by being forced to accept royalties that are lower than the value of the contribution of their technologies to a standard. For a detailed study of this and other situations arising in standard patent licensing see: V. Angwenyi, “Hold-up, Hold-out and FRAND: The quest for balance” (2017) JIPLP vol. 12, issue 12, 1012-1023.

[53] There could be several factors behind the transfer of judges reflected in the “Memorandum Showing The Procedure For Appointment And Transfer Of Chief Justices And Judges Of High Courts”, mainly to avoid any kind of potential unfair treatment. For instance, a transfer to another High Court occurs when a judge is appointed as Chief Justice. Also, when a lawyer from the bar is appointed as judge or when a judge is promoted to a High Court. In the event of a complaint of corruption which does not lead automatically to impeachment, the judge accused is also transferred to another High Court.


