

# Challenges in 5G deployment: The role of IP licensing

## Columns



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The upcoming 5G mobile phone technology will catalyse a wide spectrum of innovations whose impact will be spread across many sectors like healthcare, life

sciences, manufacturing, agriculture, automobiles etc. The full potential of 5G and 5G centric eco-system can be experienced only if one can understand the various technological and licensing barriers surrounding 5G technologies.

Businesses around the globe should spend sufficient time and efforts to comprehend and navigate the complex landscape of Intellectual Property (IP) licensing if they want to fully realise the potential of 5G. The cellular wireless industry for a long period has relied extensively on the IP licensing model whenever a new generation of mobile phone technology evolved.

This licensing model has played a lead role to incentivize innovators to invest large amounts in future technology and also for financing the development of each new standard. Since 5G technology extends the model even further to sectors like automotive and manufacturing there has been greater involvement in the development of 5G standards by a larger set of companies than seen in previous generations.

Globally it is accepted that discussions and negotiations with respect to IP licensing shall be based on Fair Reasonable and Non-Discriminatory (FRAND) principles. Placing proper reliance on benchmarks which can be replicated across various sectors will go a long way in promoting amicable negotiations that will eventually lead to the licensing of IP on FRAND terms and also avoid costly litigations.

Litigations around IP licensing can be very expensive and unpredictable and the best example is the legal dispute between Apple and Qualcomm where Qualcomm had successfully sued Apple for patent infringement which eventually led to some countries like Germany and China restraining Apple to sell certain iPhone models in the respective territories in 2018. Since 5G has strong interface with many of the sectors like manufacturing and healthcare the broad principles of IP licensing should be understood by companies from these sectors also.

With the advent of 5G technologies, many new sectors will become part of the communications and technology industry and thus all of them need to be familiar with the nuances of IP licensing if they were to exploit the full potential of 5G. This is because of the fundamental difference with regard to the capabilities of 5G, while earlier communications standards like 4G gave emphasis to connect mobile devices to the Internet and to each other, 5G is a completely revolutionary technology which has the potential of unlocking substantial opportunities in many other sectors like manufacturing or automotives.

This simply means that some of the major automobile manufacturers should be cognizant of the functions and features of every chipset which might form part of their connected car and also have proper strategies in place to negotiate and become a licensee with regard to the appropriate IP involved. Failure to frame proper IP licensing strategies could stall product launches or end up in costly litigation.

The 3rd Generation Partnership Project (3GPP) is the industry body that is involved in the development of mobile telephone standards. The members of 3GPP work closely to develop a series of new standards that are known as releases. Companies who are members of 3GPP will submit proposals dealing with new technologies to be

considered for future releases. These proposals if selected after evaluation are further developed through working groups and thereafter compared with similar proposals for possible incorporation in future releases.

The entire process of development of a standard includes disclosure of patents by companies to the European Telecommunications Standards Institute (ETSI) as Standard Essential Patents (SEPs). SEPs are patents which are essential to implement a particular industry standard.

SEPs have played a major role in the mobile phone litigations which we have witnessed in the last few years. The prominent SEP litigations involve those between TCL and Ericsson as well as Apple and Qualcomm. With the advent of 5G standards many companies are keen to exploit SEPs as a marketing tool. A company that has made maximum contributions to the 5G standards or own the highest number of SEPs may very well try to project it as a leader in 5G technologies.

SEPs differ widely when it comes to valuation. Even those patents that are focused on the same technology may not have the same technical and economic value. Furthermore, there is no formal evaluation procedure to certify which patents are SEPs. Each company discloses the patents owned by them as SEPs to ETSI and if the documentation is in order the patent becomes part of the SEP database.

This policy might have resulted in over-estimating the number of SEPs without any real contribution to the standard. Ultimately market value and leadership will be determined by the quality of the invention and the actual contribution it makes to the standard.

India, which has the second-largest mobile phone subscriber base is also in the race to launch 5G technology and the Indian government has announced that it will be holding auction for 5G spectrum in the year 2019 itself. The rollout of 5G may result in a lot of legal challenges involving allocation of spectrum, IP licensing, patent challenges, competition issues, privacy, cybersecurity etc.

With the widespread deployment of 5G in the next few years many Indian companies belonging to sectors like manufacturing or automotive would be compelled to deal with completely new scenarios where they will have to work closely on IP licensing with the technology majors like Qualcomm, Huawei or Samsung. The SEP litigation which India has experienced in the past few years involving companies like Ericsson and Micromax raises a lot of interesting questions regarding the IP licensing landscape and its accompanying legal issues.

Deployment of 5G will complicate this further. The transition to the 5G world is much more complicated than the transitions to earlier generations of mobile phone technology and this transition can be a much smoother one if one has the right IP licensing strategies in place.

*VK Unni is a guest contributor. Views expressed are personal.*

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