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April 21, 2016

Re: Department of Industrial Policy and Promotion's Discussion Paper on Standard Essential Patents and Their Availability on FRAND Terms

Dear Mr. Kapoor:

Thank you for the invitation to provide feedback regarding Standard Essential Patents and FRAND terms. Having recently participated in the ASSOCHAM conference in New Delhi directed to competition, intellectual property (IP), and mobile telecommunications and having had the pleasure of hearing from Mr. Ashok Chawla, then Chairman of the Competition Commission of India, on the topic of the interface between IP and competition law, I was delighted to witness firsthand the level of serious consideration this topic has generated in India. I am pleased to see that the Department of Industrial Policy and Promotion (the "Department") continues to consider this crucial matter.

Throughout the world, and especially in India, rapid innovation paired with progressive standard setting is providing unprecedented access to cutting-edge technology. Given the tremendous potential for continued growth to positively impact India's business and consumer landscape, I write in response to your invitation for views and suggestions. While this letter is organized to group important legal and technological concepts together, I have provided cross-references to Section XI of the Department's Discussion Paper at applicable locations in the letter to aid the Department in correlating the points raised herein with the relevant Issues for Resolution (as well as a complete Index of Cross-References on Page 7). My hope is that the Department will continue its thoughtful consideration of the intersection of competition and IP generally—and SEPs, SSOs and FRAND specifically—with facts and data firmly in mind.

As technological progress has become increasingly dependent on standardization, SSOs have developed robust and effective FRAND and IPR policies. The result is that innovation is accelerating, competition is thriving, and consumers are the beneficiaries. For example, over just the last eight years, the Indian smartphone market has changed markedly thanks to its highly competitive landscape. In 2008, Nokia was the leading handset manufacturer in India by far—with a market share approaching 60%. Today, Samsung holds the top spot while relative newcomer Indian manufacturers Micromax, Intex and Lava and Chinese multinational Lenovo round out the top five spots. Nokia (since acquired by Microsoft) has fallen to below 10% market share.

The data not only reveal a highly competitive landscape overall, but demonstrate how fleeting apparent market supremacy is in a field so dependent on innovation. As the market has evolved, Indian consumers have enjoyed enormous benefits from advances in the mobile industry. Smartphone prices in India have plummeted. The average sales price for a smartphone in India in 2014 was around 9,100 INR—a 44% drop from 2010—and is forecasted to fall another 25% to around 6,775 INR by 2018. At the entry level, today's Indian consumer can purchase a basic smartphone for under USD \$10.4 This, while per capita incomes have grown steadily during the same period, further driving affordability. 5

Smartphones are by far the most technologically sophisticated consumer devices ever developed, and yet they are among the most affordable. The benefit to the Indian consumer tracks that to consumers worldwide across the mobile industry, with a dramatic 99% decrease worldwide in the average cost per megabyte of cellular data between 2005 and 2013, and 4G network speeds reaching 12,000 times those available on 2G networks. A recent study reports that consumers place a value on access to mobile technologies that far exceeds their cost, with mobile technologies creating an annual consumer surplus—the value that consumers receive, over and above what they pay for devices, apps, services, and Internet access—of USD \$6.4 trillion.⁷

It is vital that the Department keep in mind that the backdrop against which all this growth has taken place is marked by strong IP protection and effective standard setting, providing innovators with the confidence necessary to invest in technology improvements. Innovation is an extraordinarily risky undertaking. Estimates peg worldwide investment in mobile infrastructure and R&D at greater than USD \$1.8 trillion from 2009 to 2013. Without the potential for a return on investment promised by strong IP protection and reliable enforcement of licenses, there is no reason to expect the sort of risk-taking that is prerequisite to India realizing the breakthrough technologies of tomorrow.

Given the progress that India has experienced and continues to experience, there is no need to intercede in how SSOs are operating or how FRAND is negotiated and enforced. The urgent calls for such intercession originate from competitors who stand to benefit from cheap or free access to others' innovative creations, and seek to do so by incorrectly casting standard setting as inherently anti-competitive. Relying on theories of what standard setting organizations *might* do in various hypothetical circumstances, opportunists press for intellectual property and competition law intercession in a vacuum, isolated from what SSOs are *actually* doing and have done throughout their near hundred-year history: ensure that every industry participant has fair and reasonable access to vital technology, while respecting the incentives provided by strong IP to ensure there are more great innovations in the future. In actuality, no new legislation or regulation is needed at this time. (Discussion Paper Issues for Resolution (a) and (c).)

One of the "might-happen" scenarios erroneously invoked as an existential threat is known as "royalty-stacking." The notion is that the proliferation of SEPs will necessarily mean the royalties sought by each SEP holder will "stack" on top of one another. The purported result is that products embodying those patents will come at such a high cumulative cost that their manufacture would be commercially untenable. Adherents to royalty-stacking theory once declared that SEPs implicated by the 3G wireless protocol would bring about a cumulative royalty rate of 130%.

As the failure of that prediction and others has demonstrated, royalty-stacking theory is nonsense. A recent report examined royalty-stacking theory in light of mobile industry data from 1994-2013, reporting findings across the board that directly contradict the predictions of the theory: (i) the average selling price of a mobile device fell 8.1% per year on average, (ii) the number of devices sold rose 20.1% per year on average, (iii) the number of device manufacturers grew from one (Ericsson) to forty-three and (iv) all the while, the average gross margin of SEP holders remained constant.¹⁰

Nor is there even a single instance of royalty-stacking in India's mobile industry. The existence of extremely low-cost smartphones is telling—even the most basic smartphones necessarily embody a plethora of SEPs, yet they are remarkably, and increasingly, affordable. Cumulative royalties hover around 5% globally, which is a very small price for access to innovative technology of an industry investing so heavily in R&D. Royalty-stacking theory has been so thoroughly disproven that it cannot sensibly be used to drive policy. It would be imprudent to implement policies based on this fallacy, such as the imposition of a royalty cap. (Discussion Paper Issue for Resolution (f).)

The other "might-happen" scenario regularly touted is the imagined threat of patent "hold-up." The theory is that owners of SEPs, left to determine what constitutes FRAND terms without intercession from government authorities, will demand excessive royalties that impede new market entrants and may even prevent commercialization of patented technology altogether. Like royalty stacking, the theory of patent hold-up is unreservedly without evidentiary support. The mobile industry is cited as particularly vulnerable to patent hold-up, due to the shear number of SEPs implicated by mobile products, and yet there is not a single documented occurrence of patent hold-up in the history of the mobile industry. An administrative law judge for the United States International Trade Commission recently recognized only the "hypothetical risk of hold-up" and declared it of no threat to the mobile industry.¹²

Nor is there any reason to believe India is different, or would likely be different, from the rest of the world regarding patent hold-up. All the same competitive pressures apply as elsewhere. Negotiations take place the same way in India as they do elsewhere, with opposite parties making offers and counter-offers, taking positions, bargaining, and compromising to reach acceptable outcomes. To be sure, India's industry participants are every bit as sophisticated and equipped as others anywhere to successfully pursue their interests in the marketplace of license negotiations and do not require a central authority to prescribe royalty guidelines. (Discussion Paper Issue for Resolution (d).)

Recently, opponents of SEPs have cited as evidence of hold-up several U.S. cases¹³ in which holders of SEPs made initial offers to license at rates that were higher than those ultimately assessed by courts. Omitted from their contention, however, is that the commitment to FRAND licensing was invoked in each of these cases and used by the courts in determining the appropriate rate, obviating the need for any regulatory intervention. In other words, the FRAND commitment operated precisely as intended: by preempting in practice the risk of hold-up, which exists only in theory.

While there is no history of patent hold-up in India, vital industries are actually being impacted by a behavior described alternately as "reverse hold-up" or "hold-out." Companies today have access to off-the-shelf components and development kits that allow rapid entry into the market with minimal investment. Implementers with no investment of their own in innovation have an incentive to delay, deny and refuse royalty payments to the innovators who took the risks and invested in creating key technological breakthroughs. Each of the Court of Justice of the European Union, the U.S. Court of Appeals for the Federal Circuit and the U.S. International Trade Commission has recognized the existence of hold-out. 14

The necessary counter-weight to hold-out is to provide patent holders access to injunctive relief, as the threat of an injunction is the only tool that can bring an unwilling implementer to the table. Otherwise, as is occurring in practice, free-riders recognize that they ultimately will pay no more by forcing litigation, even if they lose at trial. For example, Ericsson reported attempts for more than three years to engage Chinese handset manufacturer Xiaomi in good faith licensing negotiations—it was not until after New Delhi's high court recently issued an interim injunction preventing Xiaomi from importing and selling some of its smartphones in India that Xiaomi began working with Ericsson to amicably resolve the dispute.¹⁵

Without the perceived threat of injunction, the significant delay between filing suit and payment of a damages award emboldens free-riders to refuse licenses. The delay means infringing implementers usually get a discount for past royalties due as a consequence of the time value of money, and have even greater upside since they ultimately only rarely pay the full price (if at all) for past infringement. Unchecked, such free-riding provides unlawful implementers an unfair competitive advantage not only against companies that invest in innovation, but also those companies paying for lawful access to innovators' creations. Hold-out imposes an anticompetitive drag on innovation, depriving consumers of new functions and features that will become available only through further investments in innovation, not through free-riding.

The Court of Justice of the European Union ("ECJ") established a strict but balanced practical framework to govern SEP disputes concerning FRAND licenses in *Huawei Technologies v. ZTE Corporation*. The ECJ's framework neither favors nor eliminates automatic injunctions. Instead, the *Huawei* ruling requires both the SEP owner and the alleged infringer to behave in an objectively reasonable fashion. The ECJ requires market-dominant SEP owners attempting to enforce patents against competitors to first alert the alleged infringer as to which patents are implicated and how they are infringed. Next, the SEP owner must provide a written offer for a license on FRAND terms. The alleged infringer must then respond in good faith and in a timely fashion, either accepting the SEP owner's offer or promptly submitting a written FRAND-compliant counteroffer. Finally, if the SEP owner rejects the counteroffer, the alleged infringer must provide security for the payment of royalties and accounts of usage of the SEP in question. The second provide is a strict but balanced in the second provide security for the payment of royalties and accounts of usage of the SEP in question.

The German court system has since demonstrated both the willingness and the ability to apply the ECJ's Huawei framework. In Sisvel v. Haier, the first German case to apply the ECJ's framework, a Düsseldorf district court validated that Sisvel, the SEP owner, both adequately informed Haier of its alleged infringement and also offered Haier a license before rejecting the alleged infringer's counteroffer in good faith. The trial court granted Sisvel an injunction after finding that Haier did not provide adequate accounting for its use of the SEPs and security for the payment of royalties within one month of the rejection of its counteroffer. 18 Though the injunction was staved on appeal because the lower court had not verified that Sisvel's license offer was FRAND compliant, the appellate court upheld the trial court's infringement and likelihood of validity holdings. Notably, the Düsseldorf Court of Appeal had no reluctance to support the District Court's view that the infringer's actions demonstrated a lack of good faith in negotiating and no hesitance to embrace the ECJ's framework. 19 The Düsseldorf court recently interpreted the ECJ's framework again in Saint Lawrence Communications v. Vodafone (& HTC as Intervenor). In this case, the court issued an injunction in favor of the SEP holder after ruling that the SEP holder's global license offer met FRAND requirements and that the implementer did not sufficiently respond in good faith to the SEP holder's FRAND license offer.²⁰ It is clear that courts are fully capable and well-equipped to settle SEP and FRAND-related disputes—there is no need to establish an additional body to determine FRAND terms for SEPs. (Discussion Paper Issues for Resolution (h) and (1).)

Calls for competition law intervention ignore that ample protections are already in place to ensure the continued vitality of today's competitive landscape. One proposed measure that is wholly unnecessary, and worse yet harmful, is to require the public disclosure of license terms. The call for forced disclosure is based on the incorrect view that SSO requirements of FRAND access to patented technology translates to equivalent terms for all licensees. But license terms should and do vary depending on the parties involved, and if licensees believe terms are not FRAND-compliant they already have the means to challenge such agreements in court. Requiring disclosure would merely force the exposure of sensitive information, compromising the interests of innovators and licensees alike, and opening up the risk of competitive abuses known to occur when competitors have access to one another's pricing and other information. Were India to require such disclosure, it would be significantly out of step

with the rest of the world's treatment of contracting private parties; licensing parties could be expected to avoid India in order to maintain confidentiality, long a hallmark of agreements between arms-length contracting parties everywhere. (Discussion Paper Issue for Resolution (g).)

Another misguided call for intercession involves enforcement of a component-level licensing regime. Component-level licensing intentionally devalues innovation incentives in favor of implementer business models. Rather than benefit consumers, it would merely raise transaction costs by forcing innovators to negotiate license agreements at various levels of the supply chain, giving rise to more disputes. The current practice of licensing at the handset level has long been the norm because it corresponds with the actual value generated by wireless communications technology. For example, the additional value generated by adding a cellular modem to an iPod Touch (transforming the product into an iPhone) far exceeds the mere cost of the electronics added; the price of the device sold on the open market is not based on a rote summation of component costs, but on the value customers place on the utility created by the technology. No government intercession is needed to tell the supplier of a smartphone product that it is constrained to price its product by merely summing up the cost of each component. Nor is government intercession needed to dictate pricing for the innovation embodied in smartphone products. (Discussion Paper Issue for Resolution (e).)

It would be impossible for negotiating parties to map every patent in a portfolio to a single SSPPU. Large portfolios typically include hundreds or thousands of patents with many patents covering whole devices or assemblies of multiple components. For this reason, licenses are typically issued on entire patent portfolios, with royalties calculated based on whole devices leading to efficiency and simple practicality in the approach. Device-level portfolio licensing is used because it is a fair and efficient way for licensees to obtain freedom to operate while allowing licensors and licensees both to enjoy ease of administration.²¹

The practices of patent pooling and cross-licensing are related elements of a balanced portfolio licensing approach favored by innovators and implementers alike—to achieve optimal efficiency and value creation. Many operating companies with strong patent portfolios enter into cross-licenses that govern substantial bidirectional value streams. Similarly, when inventors pool their patent rights and issue cross-licenses to other members of a patent pool on a portfolio rather than an individual basis, the patent pool enables tremendous value creation through cross-pollination and broad freedom to operate. Pools can even bring litigation against third parties to efficiently enforce members' rights. Patent Pooling and Cross-Licensing do not unduly complicate or obscure the calculation of royalty rates and are not dangerous complications that need to be reined in—rather, they are natural and efficient practices that should not be imprudently restricted. (Discussion Paper Issues for Resolution (i) and (j).)

The foregoing points are made all the more critical by the global nature of SSOs and standards development efforts. Any undertaking by the Department to regulate SEPs and SEP holders must be viewed through a global lens, since the applicable standards, products, and patent portfolios are all inherently global in nature. The adoption of any Indian regulations or laws that attempt to control the procedures and policies of SSOs would risk negatively impacting standards development and innovation in India by hindering Indian SSOs' ability to cooperate with SSOs outside of India. Furthermore, most SEP holders possess and license SEPs across many countries and negotiate global license agreements—all of which are governed by the laws of other nations. Any attempt to intercede in the terms upon which non-Indian patents are enforced or licensed raises serious extra-territoriality and jurisdictional concerns. Deep consideration must be given to issues of comity and global innovation incentives. India has enjoyed the fruits of global innovation in the standards-reliant smartphone industry by remaining in step with global norms, not by stepping outside of them—especially not in ways that threaten to affect the functioning of global industries and the sovereignty of other nations.

The Department must look past the rhetoric that dominates the debate over the role of competition authorities in regulating standard setting and licensing processes. Calls that the Department is hearing for intercession are motivated by specific players seeking to advantage a business model that benefits from cheap access to patented technology—technology that was the product of significant investment by innovators. It is impossible to ignore the profound success of India's mobile industry, as measured by any metric—success that was driven by SSO policies and innovation incentives imparted by the FRAND licensing bargain. Technology industries that rely on standardization, despite the cries of the opportunists, have continuously increased in competitive diversity and produced remarkable consumer surplus, all against the backdrop of standards setting processes operating on free market principles. I urge the Department to demand actual evidence of damage to competition in India, and resist pressure from those who seek to use the Department to advantage one business model over another through untimely, unnecessary interference in SSO and FRAND policies and operations.

Very truly yours,

David J. Kappes

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Index of Cross-References to the Department Discussion Paper Section XI: Issues for Resolution

	Discussion Paper Issues for Resolution	Addressed on Page:
a)	Whether the existing provisions in the various IPR related legislations, especially the Patents Act, 1970 and Anti-Trust legislations, are adequate to address the issues related to SEPs and their availability on FRAND terms? If not, then can these issues be addressed through appropriate amendments to such IPR related legislations? If so, what changes should be affected.	2
b)	What should be the IPR policy of Indian Standard Setting Organizations in developing Standards for Telecommunication sector and other sectors in India where Standard Essential Patents are used?	*
c)	Whether there is a need for prescribing guidelines on working and operation of Standard Setting Organizations by Government of India? If so, what all areas of working of SSOs should they cover?	2
d)	Whether there is a need for prescribing guidelines on setting or fixing the royalties in respect of Standard Essential Patents and defining FRAND terms by Government of India? If not, which would be appropriate authority to issue the guidelines and what could be the possible FRAND terms?	3
e)	On what basis should the royalty rates in SEPs be decided? Should it be based on Smallest Saleable Patent Practicing Component (SSPPC), or on the net price of the Downstream Product, or some other criterion?	5
f)	Whether total payment of royalty in case of various SEPs used in one product should be capped? If so, then should this limit be fixed by Government of India or some other statutory body or left to be decided among the parties?	3
g)	Whether the practice of Non-Disclosure Agreements (NDA) leads to misuse of dominant position and is against the FRAND terms?	5
h)	What should be the appropriate mode and remedy for settlement of disputes in matters related to SEPs, especially while deciding FRAND terms? Whether Injunctions are a suitable remedy in cases pertaining to SEPs and their availability on FRAND terms?	4
i)	What steps can be taken to make the practice of Cross-Licensing transparent so that royalty rates are fair & reasonable?	5
j)	What steps can be taken to make the practice of Patent Pooling transparent so that royalty rates are fair & reasonable?	5
k)	How should it be determined whether a patent declared as SEP is actually an Essential Patent, particularly when bouquets of patents are used in one device?	**
1)	Whether there is a need of setting up of an independent expert body to determine FRAND terms for SEPs and devising methodology for such purpose?	4
m)	If certain Standards can be met without infringing any particular SEP, for instance by use of some alternative technology or because the patent is no longer in force, what should be the process to declassify such a SEP?	***

Supplemental Responses

- * Indian SSOs should model their IPR policies after ETSI's IPR policy, as have many members of notable international standards group 3GPP.
- ** It is rarely necessary to determine whether a particular SEP is actually essential; however, courts are entirely capable of performing this analysis when required—and can call upon experts as necessary.
- *** There is generally no need to declassify SEPs—portfolio licenses are designed to account for the flow of individual patents in and out of the licensed bundle, as new patents issue and old patents expire.

ENDNOTES

- ¹ Malini Goyal & Kamya Jaiswal, *How Nokia Fell from Dominance and Got Pinned Down by Competitors*. The Economic Times (March 27, 2011), *available at* http://articles.economictimes.indiatimes.com/2011-03-27/news/29194836_1_nokia-india-ceo-stephen-elop-nokia-c7; *Rural Calling: Can Nokia Sustain Its First-mover Advantage?*, The Wall Street Journal (May 4, 2010) *available at* http://www.wsj.com/articles/SB127296947929886511.
- ² Sean McLain, *India's Booming Smartphone Market*. The Wall Street Journal, India Realtime blog (August 12, 2015), available at http://blogs.wsj.com/indiarealtime/2015/08/12/indias-smartphone-market-is-booming-especially-at-the-low-end/; Danieal Van Boom, *Getting Nokia's Groove Back: Microsoft Prepares New Windows 10 Phones for India*. CNet (September 6, 2015), available at http://www.cnet.com/news/microsoft-preparing-new-windows-10-phones-for-india/; Jungah Lee and Bianca Vázquez Toness, *Samsung Loses Top Spot in China, India as Locals Ascend*. Bloomberg (August 5, 2014), available at http://www.bloomberg.com/news/articles/2014-08-05/xiaomi-passes-samsung-in-china-to-lead-biggest-market; Moulishree Srivastava, *Samsung widens market share in India, remains No1 smartphone vendor: IDC*. Mint (February 17, 2016), available at http://www.livemint.com/Consumer/jZCn6LceSNfuXAFj4vKhuL/Samsung-widens-market-share-in-India-remains-No1-smartphone.html.
- ³ Sophie Curtis, Smartphone Makers Stuck in 'Race to the Bottom' on Price. The Telegraph (December 10, 2014), available at http://www.telegraph.co.uk/technology/mobile-phones/11267209/Smartphone-makers-stuck-in-race-to-the-bottom-on-price.html; Rajiv Rao, Samsung's Slippery Slope in India. ZDNet, New Tech for Old India blog (September 23, 2014), available at http://www.zdnet.com/article/samsungs-slippery-slope-in-india/. Note: conversions from USD to INR based on current exchange rate.
- ⁴ Glyn Moody, World's cheapest Android smartphone goes on sale for just \$3.67: Incredibly low price, OK specs, available in India only. Ars Technica UK (February 17, 2016), available at http://arstechnica.com/gadgets/2016/02/worlds-cheapest-android-smartphone-goes-on-sale-yours-for-just-2-50-no-really/.
- ⁵ Adjusted for inflation, GDP per capita income rose from about 92,200 INR in 2010 to about 105,000 INR in 2014 (http://data.worldbank.org/indicator/NY.GDP.PCAP.CD). Note: conversions from USD to INR based on current exchange rate.
- ⁶ Boston Consulting Group, The Mobile Revolution: How Mobile Technologies Drive a Trillion-Dollar Impact (January 2015), available at https://www.bcgperspectives.com/content/articles/telecommunications_technology_business_transformation_mobilerevolution/.

⁷ *Id*.

⁸ *Id*.

¹⁰ Id.

⁹ Alexander Galetovic and Kirti Gupta, Royalty Stacking and Standard Essential Patents: Theory and Evidence from the World Mobile Wireless Industry (May 2015), available at http://hooverip2.org/working-paper/wp15012/.

¹¹ Keith Mallison, Cumulative Mobile-SEP Royalty Payments No More than Around 5% of Mobile Handset Revenues. IP Finance blog (August 19, 2015), available at http://ipfinance.blogspot.com/2015/08/cumulative-mobile-sep-royalty-payments.html.

¹² In the Matter of Certain Wireless Devices With 3G and/or 4G Capabilities, Inv. No. 337-TA-868, at 123 (June 13, 2014).

¹³ In re Innovatio IP Ventures, LLC Patent Litigation., No. 11 C 9308, 2013 WL 5593609, at *3 (N.D. Ill. Oct. 3, 2013); Ericsson, Inc. v. D-Link Sys., Inc., 773 F.3d 1201 (Fed. Cir. 2014); Microsoft Corp. v. Motorola, Inc., 795 F.3d 1024 (9th Cir. 2015).

¹⁴ Huawei Technologies Co. Ltd v. ZTE Corp., ZTE Deutschland GmbH (Case C-170/13), European Court of Justice (16 July 2015); Apple Inc. v. Motorola, Inc., 757 F.3d 1286, 1333 (Fed. Cir. 2014) (Rader, J., dissenting in part); In re Certain Electronic Devices, Inv. No. 337-TA-794 (July 5, 2013).

¹⁵ Jon Russel, Xiaomi Ready to Talk Patents with Ericsson After Sales Ban in India. TechCrunch (December 10, 2014), available at http://techcrunch.com/2014/12/10/xiaomi-sales-ban-india-ericsson/.

¹⁶ Huawei Technologies Co. Ltd v. ZTE Corp., ZTE Deutschland GmbH (Case C-170/13), European Court of Justice (July 16, 2015).

¹⁷ First German ruling since Huawei judgment against infringer of standard-essential patents. De Brauw Blackstone Westbroek (December 9, 2015), available at http://www.debrauw.com/newsletter/first-german-ruling-since-huawei-judgment-infringer-standard-essential-patents/#.

¹⁸ *Id*.

¹⁹ Sisvel: Düsseldorf Court of Appeal Hands Down First Decision on FRAND. Business Wire (22 Jan. 2016), available at http://www.businesswire.com/news/home/20160122005397/en/Sisvel-D%C3%BCsseldorf-Court-Appeal-Hands-Decision-FRAND.

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