I. PRELIMINARY

1. This submission presents comments by the Centre for Internet and Society, India ("CIS") on the Consultation Paper on Promoting Local Telecom Equipment Manufacturing dated 18.09.2017, released by the Telecom Regulatory Authority of India (TRAI), under Department of Telecom, Ministry of Communications and Information Technologies ("the TRAI Consultation Paper").

2. We commend TRAI for its efforts at seeking inputs from various stakeholders on this important and timely issue and are thankful for the opportunity to put forth our views.

3. We have addressed questions 3 and 5 of the TRAI Consultation Paper. Question numbers referred to in our submission correspond to those in the TRAI Consultation Paper.

4. Further, the Department of Industrial Planning and Promotion (DIPP) invited comments on SEPs and their availability on FRAND terms on 01. 03. 2016. CIS submitted a detailed response to the consultation, and our present submission will draw significantly from our earlier response, as well as new empirical research concluded in the since the time of the consultation.

II. ABOUT CIS

5. CIS is a non-profit organisation that undertakes interdisciplinary research on internet and digital technologies from policy and academic perspectives. Our areas of focus include IP rights, openness, internet governance, telecommunication reform, free speech, intermediary liability, digital privacy, cyber-security, and accessibility for persons with diverse abilities.

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3www.cis-india.org
6. We strive to maximise public benefit, useful innovation, vibrant competition and consumer welfare. This submission is consistent with our commitment to the domestic goals (as enumerated in Make in India and Digital India), and the protection of India's national interest at the international level.

III. SUBMISSION ON THE ISSUES FOR RESOLUTION

"Q.3 Are the existing patent laws in India sufficient to address the issues of local manufacturers? If No, then suggest the measures to be adopted and amendments that need to be incorporated for supporting the local telecom manufacturing industry."

We submit that amendments to the Patents Act, 1970 may not be preferred, presently. It may be noted that there have been no judgments concluded by Indian courts on disputes relating to licensing of SEPs, yet. Justice Bakhru’s landmark order in Telefonaktiebolaget LM Ericsson (Publ) v. Competition Commission of India (2016) provided valuable clarity on the issue of conflict between remedies under Patents Act, 1970 and Competition Act, 1970. As various other matters are yet to be conclusively decided, and given the complex legal questions involved around the interpretation of Patents Act, 1970 and Competition Act, 2002, and constitutional issues around the jurisdiction of regulators and the power of judicial review of the courts, we believe that it would be prudent to examine the ruling of the courts on these issues in some detail, before considering amendments.

However, there are measures that the Government of India may adopt and implement the following measures to support the local telecom manufacturing industry:

1. Develop Model Guidelines to improve the working of Indian Standard Setting Organisations (SSOs): Given the increasing complexity and time-consuming nature of SEP litigation in India, there is a tangible threat of the abuse of the FRAND process, it might be useful for the government to make suggestions on the working of Indian SSOs. The functioning of Indian SSOs has not been satisfactory and it is suggested that the government develop Model Guidelines that may be adopted by Indian SSOs, taking into account India specific requirements. The India specific requirements include a large and exponentially growing mobile device market which has made it possible for manufacturers, patent owners and implementers alike to achieve financial gains even with a low margin. We believe that this measure will also enable the fulfillment of the objectives of the Make in India and Digital India initiatives.

We recommend that various stakeholders, including IP holders, potential licensees and users of IP, civil society organizations, academics, and, government bodies, including the Indian Patent Office, the Department of Telecommunications, the DIPP, TRAI, and, the CCI be consulted in the creation of these Model Guidelines.

In our opinion, the Model Guidelines may cover (a) the composition of the SSO; (b) the process of admitting members; (c) the process of the determination of a standard or technical
specification; (d) the process of declassification of a standard or technical specification; (e) the IPR Policy; (f) resolution of disputes; (g) applicable law.

2. **Initiate the formation of a patent pool of critical mobile technologies and cap royalty payments:** In light of the observed inadequacies in the IPR policies of various SSOs in India, as well the spate of ongoing patent infringement lawsuits around mobile technologies, we recommend that the government intervene in the setting of royalties and FRAND terms by setting up a patent pool of critical mobile technologies and apply a compulsory license with a five per cent royalty. Further, patent pools should be required to offer FRAND licenses on the same terms to both members and nonmembers of the pool.

Our motivations for this proposal are manifold. In our opinion, it is nearly impossible for potential licensees to avoid inadvertent patent infringement. As a part of our research on technical standards applicable to mobile phones sold in India, we have found nearly 322 standards so far. It is submitted that carrying out patent searches for all the standards would be extremely expensive for potential licensees. Further, even if such searches were to be carried out, different patent owners, SSOs and potential licensees disagree on valuation, essentiality, enforceability, validity, and coverage of patents. In addition, some patent owners are non-practising entities and may not be members of SSOs. The patents held by them are not likely to be disclosed. More importantly, homegrown manufacturers that have no patents to leverage and may be new entrants in the market would be especially disadvantaged by such a scenario. Budget phone manufacturers, standing to incur losses either as a result of heavy licensing fees, or, potential litigation, may close down. Alternatively, they may pass on their losses to consumers, driving the now affordable phones out of their financial reach. With the objectives of Make in India and Digital India in sight, it is essential that Indian consumers continue to have access to devices within their purchasing power.

Further, how did we arrive at a cap of 5 percent? The rationale for this figure is the royalty cap imposed by India in the early 1990s. As part of regulating foreign technology agreements, the (former) Department of Industrial Development (later merged with DIPP) capped royalty rates in the early 1990s. Payment of royalties was capped at either a lump sum payment of $2 million, or, 5 percent on the royalty rates charged for domestic sale, and, 8 percent for export of goods pertaining to “high priority industries”. Royalties higher than 5 percent or 8 percent, as the case may be, required securing approval from the government. While the early 1990s (specifically, 1991) was too early for the mobile device manufacturing industry to be listed among high priority industries, the public announcement by the government covered computer software, consumer electronics, and electrical and electronic appliances for home use. The cap on royalty rates was lifted by the DIPP in 2009. It is submitted in the case of mobile device technology, we are

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6 See Sanjana Govil, Putting a Lid on Royalty Outflows How the RBI Can Help Reduce India’s IP Costs, available
witnessing a situation similar to that of the 1990s. In this sphere, most of the patent holders are multinational corporations which results in large royalty amounts leaving India. At the same time, litigation over patent infringement in India has limited the manufacture and sale of mobile devices of homegrown brands. While SEP litigation in India is indeed comparable to international SEP litigation on broader issues raised, specifically competition law concerns, but differs crucially where the parties are concerned. International SEP litigation is largely between multinational corporations with substantial patent portfolios, capable of engaging in long drawn out litigations, or engaging in other strategies including setting off against each other’s patent portfolios. Dynamics in the Indian market differ – with a larger SEP holder litigating against smaller manufacturers, many of whom are indigenous, homegrown.

In June, 2013, we had recommended to the erstwhile Hon’ble Minister for Human Resource Development that a patent pool of essential technologies be established, with the compulsory licensing mechanism. Subsequently, in February, 2015, we reiterated this request to the Hon’ble Prime Minister. We propose that the Government of India initiate the formation of a patent pool of critical mobile technologies and mandate a five percent compulsory license. As we have stated in our request to the Hon’ble Prime Minister, we believe that such a pool would “possibly avert patent disputes by ensuring that the owners' rights are not infringed on, that budget manufacturers are not put out of business owing to patent feuds, and that consumers continue to get access to inexpensive mobile devices. Several countries including the United States issue compulsory licenses on patents in the pharmaceutical, medical, defence, software, and engineering domains for reasons of public policy, or to thwart or correct anticompetitive practices.” We believe that such a measure will not be in breach of our international obligations under the TRIPS Agreement.

3. Increase transparency in the patent system by making patentees comply with the law:
The Patents Act, 1970 requires patentees and licensees to submit a statement on commercial working of the invention to the Controller every year. Form 27 under section 146(2) of the Act lists the details necessary to be disclosed for compliance of the requirement of “working”. A jurisprudential analysis reveals the rationale and objective behind this mandatory requirement. Undeniably, the scheme of the Indian patent regime makes it amply clear that “working” is a very important requirement, and the public as well as competitors have a right to access this

for a discussion on the introduction of royalty caps in the early 1990s, and its success in reducing the flow of money out of India.

10 Id.
11 Section 146(2) of the Patents Act, 1970.
information in a timely manner, without undue hurdles. Indeed, as the decision\textsuperscript{12} in \textit{NatcoPharma v. Bayer Corporation}\textsuperscript{13} reveals, the disclosures in Form 27 were crucial to determining the imposition of a compulsory license on the patentee. \textbf{Thus, broadly, Form 27 disclosures can critically enable willing licensees to access patent “working” information in a timely manner.}

However, there has been little compliance of this requirement by the patentees, despite the Indian Patent Office (IPO) reiterating the importance of compliance through the issuance of multiple public notices\textsuperscript{14} (suomotu and in response to a public interest litigation filed in 2011\textsuperscript{15}), and, reminding the patentees that noncompliance is punishable with a heavy fine.\textsuperscript{16} Findings of research submitted by one of the parties\textsuperscript{17} in the writ of the 2011 public interest \textit{litigation ShamnadBasheerv. Union of India and others}\textsuperscript{18} reveal as follows. First, a large number of Form 27s are unavailable for download from the website of the IPO. This possibly indicates that the forms have either not been filed by the patentees with the IPO, or have not been uploaded (yet) by the IPO. Second, a large number of filings in the telecom sector remain incomplete.

In 2015, CIS queried the IPO website for Form 27s of mobile device patents to arrive at a similar conclusion. We obtained 4,916 valid Form 27s, corresponding to 3,126 mobile device patents from public online records. These represented only 20.1% of all Forms 27 that should have been filed and corresponded to only 72.5% of all mobile device patents for which Forms 27 should have been filed. Forms 27 were missing for almost all patentees, and even among Forms 27 that were obtained, almost none contained useful information regarding the working of the subject patents or fully complying with the informational requirements of the Indian Patent Rules.\textsuperscript{19}

\begin{itemize}
  \item\textsuperscript{12}SaiVinod, Patent Office Finally Takes Form 27s Seriously, available at \url{http://spicyip.com/2013/02/patentofficefinallytakesform27s.html} (last accessed 13 November, 2017).
  \item\textsuperscript{13}Order No. 45/2013 (Intellectual Property Appellate Board, Chennai), available at \url{http://www.ipab.tn.nic.in/0452013.htm} (last accessed 13 November, 2017).
  \item\textsuperscript{15}Supra note 11.
  \item\textsuperscript{16}Id.
  \item\textsuperscript{17}See research findings available at \url{http://spicyip.com/wpcontent/uploads/2015/05/FORM27WP1Rcopy.pdf} (last accessed 13 November, 2017).
  \item\textsuperscript{18}In the High Court of Delhi, W.P.(C) 5590/2015. This litigation is currently ongoing. See, illustratively, Mathews P.George, \textit{Patent Working in India: Delhi HC issues notice in ShamnadBasheerv. Union of India &Ors. – I}, available at \url{http://spicyip.com/2015/09/patentworkinginindiadelhihczissuesnoticeinshamnadbasheervunionofindiaorsi.html} (last accessed 13 November, 2017).
\end{itemize}
Further, in our study, we observed that patentees adopted drastically different positions regarding the definition of patent working, some arguing that importation of products into India or licensing of Indian suppliers constituted working, while others even went so far as to argue that the granting of a worldwide license to a non-Indian firm constituted working in India. Several significant patentees claimed that they or their patent portfolios were simply too large to enable the provision of information relating to individual patents, and instead provided gross revenue and product sale figures, together with historical anecdotes about their long histories in India.

The Indian government has made little or no effort to monitor or police compliance with Form 27 filings, undoubtedly leading to significant non-compliance. We also propose the alteration of the Form 27 template\textsuperscript{20} to include more disclosures.\textsuperscript{21} Presently, patentees are required to declare number of licensees and sub-licensees. We specifically propose that the format of Form 27 filings be modified to include patent pool licenses, with an explicit declaration of the names of the licensees and not just the number.

4. Require royalty rates to be decided on the basis of the Smallest Saleable Patent Practicing Component: Most modern telecommunication and IT devices are complex with numerous technologies working in tandem. Different studies indicate that the number of patents in the US applicable to smartphones is between 200,000 and 250,000.\textsuperscript{22} A comprehensive patent landscape of mobile device technologies conducted by CIS reveals that nearly 4,000 patents are applicable to mobile phones sold in India.\textsuperscript{23} It is thus extremely difficult to quantify the exact extent of interaction and interdependence between technologies in any device, in such a way that the exact contribution of the patented technology to the entire device can be determined. Thus, we submit that royalty rates for SEPs should be based on the smallest saleable patent practising component, and not on the net price of the downstream product.

\begin{footnotesize}
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\item However, we came across some complaints raised by patentees and industry observers regarding the structure of the Form 27 requirement - namely, patents covering complex, multi-component products that embody dozens of technical standards and thousands of patents are not necessarily amenable to the individual-level data requested by Form 27. See Contreras, Jorge L. and Lakshané, Rohini and Lewis, Paxton, Patent Working Requirements and Complex Products (October 1, 2017). NYU Journal of Intellectual Property & Entertainment Law, Forthcoming. Available at SSRN: https://ssrn.com/abstract=3004283
\item Mark Lemley and Carl Shapiro, Patent Holdup and Royalty Stacking, 85 Tex. L. Rev. at 2015; See also, for e.g., RPX Corporation, Amendment No. 3 to Form SL, 11 Apr. 2011, at 59, available at http://www.sec.gov/Archives/edgar/data/1509432/0001193125111101007/ds1a.htm (last accessed 22 April, 2016), quoting “Based on our research, we believe there are more than 250,000 active patents relevant to today’s smartphones...”; See further Steve Lohr, AppleSamsungCase Shows Smartphone as Legal Magnet, New York Times, 25 Aug. 2012, available at http://www.nytimes.com/2012/08/26/technology/applesamsungcaseshowssmartphoneaslawsuitmagnet.html (last accessed November 13, 2017).
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The net cost of the device is almost always several times that of the chipset that implements the patented technology. Armstrong et al.\textsuperscript{24} have found that the cost of a 4G baseband chip costs up to $20 including royalties in a hypothetical $400 phone sold in the US. One of the litigating parties in the ongoing patent infringement lawsuits in India has stated that one of the reasons for preferring to leverage its patents as downstream as possible in the value chain is that it will earn the company more royalties.\textsuperscript{25} In instances where patent exhaustion occurs much earlier in the value chain, such as in the case of the company’s cross-licenses with Qualcomm (another company that owns patents to chip technologies), the company does not try to obtain royalties from the selling prices of devices for the cross-licensed technologies. It is submitted that such market practices could be detrimental to the government’s objectives such as providing a mobile handset to every Indian by 2020 as a part of the Digital India programme.\textsuperscript{26} It is also worth noting in this context that the mobile device is the first and only medium of access to the Internet and telecom services for a large number of Indians, and, consequently, the only gateway to access to knowledge, information and critical services, including banking.\textsuperscript{27}

“Q.5 Please suggest a dispute resolution mechanism for determination of royalty distribution on FRAND (Fair Reasonable and Non Discriminatory) basis.”

The licensing of SEPs on FRAND terms requires the parties to negotiate “reasonable” royalty rates in good faith, and apply the terms uniformly to all willing licensees. It is our submission that if the parties cannot agree to FRAND terms, they may enter into binding arbitration. Further, if all efforts fail, there exist remedies under the Patents Act and the Competition Act, 2002 to address the issues.

Section 115 of the Patents Act empowers the court to appoint an independent scientific adviser “to assist the court or to inquire and report upon any such question of fact or of opinion (not involving a question of interpretation of law) as it may formulate for the purpose.”\textsuperscript{28} Such an independent adviser may inform the court on the technical nuances of the matter.


\textsuperscript{28}Section 115 of the Patents Act, 1970.
Further, under the Patents Act, pending the decision of infringement proceedings the Court may provide interim relief, if the plaintiff proves first, a prima facie case of infringement; second, that the balance of convenience tilts in plaintiff’s favour; and, third, that if an injunction is not granted the plaintiff shall suffer irreparable damage. However, it is our suggestion that courts adopt a more cautious stance towards granting injunctions in the field of SEP litigation. First, in our opinion, injunctions may prove to be a deterrent to arrive at a FRAND commitment, in particular, egregiously harming the willing licensee. Second, especially in the Indian scenario, where litigating parties operate in vastly different price segments (thereby targeting consumers with different purchasing power), it is difficult to establish that “irreparable damage” has been caused to the patent owner on account of infringement. Third, we note the approach of the European Court of Justice, which prohibited the patent holder from enforcing an injunction provided a willing licensee makes an offer for the price it wishes to pay to use a patent under the condition that it deposited an amount in the bank as a security for the patent holder. Fourth, we also note the approach of the Federal Trade Commission in the USA, which only authorizes patent holders to seek injunctive relief against potential licensees who have either stated that they will not license a patent on any terms, or refuse to enter into a license agreement on terms that have been set in the final ruling of a court or arbitrator. Further, as Contreras (2015) observes, that the precise boundaries of what constitutes as an unwilling licensee remains to be seen. We observe a similar ambiguity in Indian jurisprudence, and accordingly submit that courts should carefully examine the conduct of the licensee to injunct them from the alleged infringement.

IV. CONCLUDING REMARKS

We are thankful to TRAI for the opportunity to make these submissions. It would be our pleasure and privilege to discuss these comments with the TRAI; and, supplement these with further submissions if necessary. We also offer our assistance on other matters aimed at developing a suitable policy framework for SEPs and FRAND in India, and, working towards the sustained innovation, manufacture and availability of mobile technologies in India.

On behalf of the Centre for Internet and Society, 13 November, 2017

Anubha Sinha
anubha@cisindia.org

29 Huawei Technologies Co. Ltd v. ZTE Corp. and ZTE Deutschland, Judgment of the Court (Fifth Chamber) of 16 July 2015 in GmbH C170/13.