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RE: Comments of ACT | The App Association Regarding the Telecom Regulatory Authority of India's *Consultation Paper on Inputs for Formulation of National Telecom Policy - 2018*

I. Introduction & Statement of Interest

ACT | The App Association (App Association) submits the following recommendations to the Telecom Regulatory Authority of India (TRAI) in response to its request for comment on the *Consultation Paper on Inputs for Formulation of National Telecom Policy - 2018* (Consultation).¹

The App Association represents more than 5,000 small- and medium-sized app development companies and technology firms around the world, including Indian startups like Gujarat-based iCoderz Solutions Pvt. Ltd. and Exousia Tech in Chandigarh. Largely driven by the ingenuity of startups and small businesses, the USD \$143 billion app ecosystem has been a catalyst for the rise of smartphones and an ever-increasing number of internet-enabled devices. The dynamic, hyper-competitive app ecosystem continues to produce innovative solutions that drive the global digital economy and augment consumer interactions and experiences.

TRAI's consultation lists its proposed policy framework and presents the following requests:

Q.1 – Stakeholders are requested to give their comments on structure and contents of the proposed inputs for National Telecom Policy, 2018, clearly outlining the specifics along with justification.

Q.2 – Stakeholders may also suggest any other issue related to Policy Framework which stakeholders feel is important for growth of telecom sector, along with justification.

¹ http://www.trai.gov.in/sites/default/files/CP_on_NTP_03012018.pdf.

The App Association appreciates TRAI's request for public comment on this matter, and the comments below provide answers to both of the requests.

I. General Views of the App Association on TRAI's *Formulation of a National Telecom Policy*

While there is no universal definition for a "fifth generation" (5G) mobile network, the term encompasses the future wave of interoperable mobile networks. 5G networks are expected to utilize a wide range of spectrum bands, both licensed and unlicensed, through new and innovative spectrum efficiencies and spectrum sharing arrangements. Standards bodies such as the 3rd Generation Partnership Project (3GPP) and the IEEE, among many others, continue to develop the network requirements.² Alongside the growth of 5G networks, the number of internet of things (IoT)-connected devices—those that use the internet to communicate data collected through sensors³—will also grow. IoT is already providing greater efficiencies in agriculture, retail, and healthcare industries, and it is expected to improve efficiencies in processes, products, and services across sectors. These benefits will continue, particularly as machine-to-machine devices are projected to account for more than half of connected devices by 2021⁴.

² See 3GPP, *The Mobile Broadband Standard, Tentative 3GPP Timeline for 5G* (Mar. 17, 2015), at http://www.3gpp.org/news-events/3gpp-news/1674-timeline_5g; see also IEEE Standards Association, Internet of Things, at <http://standards.ieee.org/innovate/iot/>.

³ See, e.g., U.S. Department of Commerce Internet Policy Task Force and Digital Leadership Team, *Fostering the Advancement of the Internet of Things* (Jan. 2017), available at https://www.ntia.doc.gov/files/ntia/publications/iot_green_paper_01122017.pdf.

⁴ Stephanie Condon, *Report: IoT to Dominate Connected Device Landscape by 2021*, (June 8, 2017, 12:00 am) available at http://www.zdnet.com/article/report-iot-devices-to-dominate-connected-device-landscape-by-2021/?mkt_tok=eyJpIjoiWkrBek5USmhNV1ZpTXpreilsInQiOiJpOFV0Y214VHdGdmU5K2UrSmdhSXA0dUJCXC9laEFsMUpYUmx0ZkxHUEZkM2RURzdFOTFRRmYxbDRTR1REaVpldWtvMTFLeGFDTDJaYUx0TnlRWjV6Y3JBc09kQ25vejczazBaRzVOD01JS1dndjB6dnYzY1pjMdBuNVdiUDVPQVEifQ%3D%3D.

If their potential is realized, future 5G networks will revolutionize Indian society across regions and industries. In our *State of the App Economy* report⁵, we explore how companies, even those unaffiliated with the information and communication technology sector, are affected by the ever-evolving, wireless dependent IoT ecosystem. For instance, Swisslog—a company specializing in integrated automation solutions—developed SmartLIFT technology, which creates an indoor, localized GPS network to aggregate data from sensors on forklifts and directional barcodes placed around the warehouse.⁶ This technology allows warehouse managers to access analytics through tablets or mobile phones to optimize productivity and receive real-time, near-perfect inventory reports. Bobcat deployed Swisslog’s technology in its warehouse and experienced a 30 percent increase in pallets loaded per hour “with no inventory errors.”⁷ This innovation would have been impossible without the ability for highly-integrated and interoperable technologies to access wireless networks.

Separately, the healthcare sector provides several examples of how a robust 5G wireless infrastructure can serve the public interest. The connected health products and services available today, like telehealth, remote monitoring of patient generated health data (PGHD), and telemonitoring, offer the ability to save countless Indian lives while lowering costs. The critical nature of the healthcare sector confirms the need for improvements be made to India’s infrastructure. This includes broadband infrastructure and measures to give healthcare providers the ability to use connected health products and services throughout the continuum of care.

For these reasons, the App Association generally supports TRAI’s efforts to develop a National Telecom Policy to enable access to wireless broadband services, reduce barriers to new infrastructure, and support efficacious ways to use wireless spectrum through licensing agreements and advanced sharing arrangements. The growth of the app economy depends on the availability of high-speed wireless broadband; an inadequate development of infrastructure and spectrum resources will harm the economy and its consumers. Driven by new investments from telecom operators, 5G networks and small cell deployments are expected to create millions of new jobs. The App Association applauds TRAI’s proposed steps to remove regulatory barriers to more 5G deployment, including TRAI’s proposed priority effort dedicated to the “restructuring of legal, licensing and regulatory frameworks for reaping the benefits of convergence.”⁸ The App Association is committed to supporting TRAI’s efforts to close the digital divide.

⁵ ACT | The App Association, *State of the App Economy, Fifth Edition* (Apr. 2017), available at <http://actonline.org/2017/04/20/state-of-the-app-economy-report-outlines-growth-dynamism-of-the-app-ecosystem/>.

⁶ Swisslog, *Big Data Meets Forklifts: Smart Inventory, Labor, and Forklift Tracking*, Found here: file:///Users/joelthayer/Downloads/SmartLIFT_Brohure.pdf.

⁷ See *id.*

⁸ Consultation at 12.

We also note that the success of the National Telecom Policy will be best realized through the application of a light-touch regulatory approach to transit policies, both in operation and in scope. The National Telecom Policy should focus on providing wireline and wireless broadband capacity to enable the growth of the internet of things/machine-to-machine (IoT/M2M) industries, but should not extend regulation or licensing to the network edge, where IoT/M2M innovations take place. The regulations the Indian government dedicates to protecting consumers should be based on an established evidence base supported by reliable data. The National Telecom Policy should also prevent the Indian government from intervening in the digital industries that reside on the network edge.

II. App Association Recommendations on TRAI's *Formulation of a National Telecom Policy*

The App Association provides the following views and recommendations for TRAI's consultation paper proposals:

- The App Association supports the wireless spectrum principles proposed by TRAI. The principles will help India raise its ranks amongst the top-50 nations in terms of network readiness and communications systems, attract USD \$100 billion in investment for the telecommunication sector, and attain an average speed of 20 Mbps and 50 Mbps for wireless and wireline connectivity, respectively.⁹ TRAI should ensure that India leverages licensed and unlicensed spectrum approaches to take advantage of the latest wireless communications technologies. For example, the use of unused, unlicensed television white space (TVWS) spectrum bands will augment access to mobile broadband for American rural markets, helping to bridge the digital divide and facilitate greater IoT capabilities for consumers and enterprises in the 5G ecosystem.¹⁰

⁹ Consultation at pp. 12-13.

¹⁰ For more information on TVWS, we urge TRAI to visit the App Association's microsite for TVWS information and developments, accessible at <http://actonline.org/TVWS/>.

- In the Consultation, TRAI proposes to “enable access for connecting to 10 billion IoT/M2M sensors/devices” by “prescribing licensing and regulatory framework[s] for IoT/M2M service providers.”¹¹ The App Association strongly opposes India’s creation of a licensing regime for companies that provide products and/or services that may be categorized as “IoT,” “M2M,” “over-the-top,” etc. This kind of licensing regime would effectively represent the creation of a new layer of licensing and regulation for companies that do business over the internet and introduce barriers to entry that harm small business innovators. Exposing IoT and M2M edge services to telecom-style licensing and regulation would cause great damage to these nascent market segments. The App Association recommends that the National Telecom Policy commits to refrain from regulating the network edge.
- The App Association appreciates TRAI’s proposed policy priority to establish India as a global hub for data communication systems and services.¹² However, we caution against the adoption of National Telecom Policy provisions that would inhibit the free flow of data across borders, or require the localization of data within India. As the global digital economy grows, the free flow of data across borders is crucial. Laws and regulations that inhibit the free flow of data, or promote data localization policies, harm Indian companies’ ability to do business internationally and defeat the policy goals of the National Telecom Policy. In addition, economic analysis by the European Centre For International Political Economy has shown that data localization laws would single-handedly reduce India’s gross domestic product by 0.8 percent.¹³
- Under TRAI’s work to establish India as a global hub for data communication systems and services,¹⁴ the establishment of “data privacy, protection, and security laws,” as well as “net neutrality laws,” are proposed priorities. The App Association filed detailed comments with TRAI on the possibility of new data privacy and security laws in India on September 8, 2017,¹⁵ and we incorporate those comments into our comments in this document.

¹¹ Consultation *at* p. 14.

¹² Consultation *at* p. 15.

¹³ http://www.ecipe.org/app/uploads/2014/12/ECIPE_bulletin814_dataoloc_india.pdf.

¹⁴ Consultation *at* p. 15.

¹⁵ http://traai.gov.in/sites/default/files/ACT_App_Assn_07112017_0.pdf.

- Within the Consultation, the App Association appreciates TRAI's acknowledgement of the central role of standards and standard-essential patents (SEPs) in the advancement of technology and communication. Through our All Things FRAND initiative¹⁶, the App Association serves as the leading SME advocate on SEP licensing policies and legal debates. We urge TRAI to review the extensive comments we have submitted to the Indian Department of Industrial Policy and Promotion on April 22, 2016,¹⁷ as well as the comments we submitted to TRAI in response to its public consultation on localizing telecommunications equipment manufacturing on September 8, 2017.¹⁸

TRAI proposes “providing financial incentives for the development of Standard Essential Patents (SEPs) in the field of telecommunication services and systems.”¹⁹ We are unsure of the practical meaning of “providing financial incentives” for SEP development, therefore we strongly urge TRAI to clarify and develop the meaning of this proposal. We also encourage TRAI to consult with affected stakeholders, including the App Association, before undertaking any SEP-related activities.

- TRAI also proposes a priority to “incentivis[e] local manufacturing of network equipment and devices.”²⁰ Given the intertwined relationship between smartphones, apps, and IoT-enabled connected devices, we strongly encourage TRAI to enact clear and predictable policies that will help secure the global competitiveness of the Indian market and will not create barriers for Indian innovators to share their products and services with global customers. Mandates to localize manufacturing processes make it difficult, if not impossible, to access and leverage global hardware and software development chains, putting Indian manufacturers and Indian consumers at a significant disadvantage. These types of mandates lead to a lack of market choice, reduce the number of ways innovators can provide new efficiencies to end users, and increase prices for consumers. The App Association commits to work with TRAI to help shape policies that promote IoT growth across all sectors of the Indian economy.

¹⁶ See <https://allthingsfrand.com/>.

¹⁷ <http://actonline.org/wp-content/uploads/ACT-Comments-re-DIPP-SEP-Discussion-Paper-042216.pdf>.

¹⁸ http://traigov.in/sites/default/files/ACT_App_Assn_07112017_0.pdf.

¹⁹ Consultation at p. 15.

²⁰ *Id.* at pg. 16.

III. Conclusion

The App Association requests TRAI's careful consideration of the viewpoints shared within. We urge TRAI to contact the undersigned with any questions and comments.

Sincerely,



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