

**TEPC's Counter Comments to select responses from other Stakeholders on TRAI's
Consultation Paper on Promoting Local Telecom Equipment Manufacturing**

<u>S.No</u>	<u>Issue Raised</u>	<u>Counter Comments</u>
<u>1.</u>	Telecom equipment manufacturing in India never really took off. Even when the Indian telecom services market began to show huge potential, and thereafter witnessed exponential growth, manufacturing was not regarded as India's forte.	We do not agree with these statements. On the contrary, in the late '80s and early '90s the level of indigenization in telecom manufacturing was as high as 85-90%. The domestic industry in telecom manufacturing was handicapped after India signed the ITA-1 agreement in mid-'90s which led to a progressive reduction in customs duties on telecom equipment imports making it cheaper to import from MNCs than manufacture products locally. In addition, easy availability of low-interest, long-term credit from foreign manufacturers and dilution of PSU tender norms to permit trading (as opposed to local manufacturing) further damaged the domestic eco-system in telecom equipment manufacturing.
<u>2.</u>	Manufacturing for Enterprise / Service Provider products can be characterized as high complexity and low volume. It is imperative for companies to establish manufacturing at global locations that can cater to as large a market as possible to achieve economies of scale by maximizing volumes. India's domestic demand for electronic goods was \$64 billion but the world market in 2014 was \$2 trillion.	We do not agree with these statements as these are based on old figures which paint an incorrect picture of India's fast-growing digital economy. India is already the second largest and the fastest growing telecom market in the world today. As per recent ELCINA report, India's electronics industry is worth \$140 billion in 2017 and is projected to grow to \$400 billion by 2022. As per DoT, India's Internet Economy alone was worth \$100 billion in 2015-16 and forecasted to rise to \$500 billion in a short period of time. India's digital economy is around \$350 billion today and expected to touch \$1 trillion on the back of aggressive Digital India initiatives by Government of India. High-capacity telecom networks built using Enterprise/Service Provider products will form the backbone of Digital India fuelling massive demand for these products in the next few years.
<u>3</u>	Existing mechanisms for telecom standardization, certification and testing are adequate to support local manufacturing	It would be foolhardy not to have a country-specific security standardization and in-country testing for security in place while importing equipment from foreign manufacturers. The current mechanisms for telecom equipment certification are not adequate. Government of India should implement stringent pre-market testing and security certification of imported telecom products from foreign manufacturers and use these as non-tariff barriers to promote Indian product companies. Countries like

		<p>China and Brazil require local certification of foreign products at affiliate test agencies before they can be offered for sale in the local markets. The certification process is very expensive, extremely stringent and takes a long time to complete. Only suppliers with certified products are permitted to participate in local RFPs.</p> <p>A similar system should be established in India as well. TEC can be the central testing and certification agency for the telecom sector and all products procured by government agencies, public sector operators and government-licensed private operators should strictly comply to TEC specifications.</p>
<p><u>4</u></p>	<p>~5% cost of disability on domestic manufacturers due to infrastructure handicaps and absence of a strong domestic component supplier ecosystem.</p>	<p>The fiscal disability faced by domestic product companies in India compared to their global peers is significantly higher than ~5%. A detailed study carried out by IESA/E&Y found that Indian telecom R&D firms doing making value-addition telecom equipment face up to 29% fiscal disability compared to their MNC counterparts. While we agree that incentivizing telecom equipment buyers to purchase domestically manufactured products would be beneficial, this by itself will not be sufficient to promote local telecom manufacturing.</p> <p>The current fiscal incentives for domestic R&D and manufacturing under existing policies should be enhanced as follows:</p> <ol style="list-style-type: none"> a. Prior to 2015, all DSIR certified R&D organizations were given a 200% weighted R&D deduction for tax purposes. This incentive has been reduced to 150% and is expected to go down further to 100% by 2020. Considering the strategic importance of domestic R&D in the telecom sector, the incentive should be restored to 200% R&D for the next 5 years. b. In order to promote design-led manufacturing, DSIR certified Indian telecom product companies should be reimbursed up to 25% of their total R&D expenses (including manpower costs) every year limited to a maximum of Rs 100 crores per company. c. Indian telecom product companies should be extended a post-performance incentive of up to 10% of their domestic sales in the form of GST credits.
<p><u>5</u></p>	<p>ITA promotes innovation, accelerates productivity, creates new jobs, lowers consumer prices and provides unfettered access to best-of-breed</p>	<p>We believe that signing ITA-1 was a mistake since it virtually destroyed our fledgling local industry in telecom manufacturing and we should not repeat that mistake by signing ITA-2 and expanding the scope of coverage. As a signatory to ITA-1 in 1996, India has been permitting blanket zero-duty imports of several categories of high-value telecom equipment under the HS code 8517.</p>

	<p>technology. However, with recent amendments most of the goods have been made eligible for BCD of ~10% increasing cost to purchaser.</p>	<p>Due to rapid technology advancements, product evolution and convergence of multiple technologies, the products covered under ITA-1 are now obsolete. It was therefore correct on the part of Government of India to declare next-generation optical networking equipment, wireless equipment (4G/5G), packet switches/routers as non-ITA1 and impose ~10% BCD on their imports.</p> <p>In fact, since the fiscal disability faced by the domestic industry in high value-addition telecom products is 29%, we suggest that Government of India should increase the BCD to a blanket rate of 30% on all telecom product imports if a domestic product is available in that category.</p>
<u>6</u>	<p>One of the main themes of Telecom PMA Policy is the focus on high value-addition norms (50%+) calculated in terms of Bill of Material percentages. Without local IC fabrication not more than 15-20% value-addition is possible in India over the next 3-4 years.</p>	<p>The stated position that India cannot manufacture high value-added, high complexity products is extremely objectionable. It is a well-documented fact that a significant number of high-technology start-ups and many iconic firms in the Silicon Valley, USA have been established by Indian entrepreneurs. With the emergence of “software-defined hardware”, the intelligence and differentiation lies increasingly in software. India can leverage its large technical talent pool to focus on fabless-chip design and maximize value-addition within the country. The abundance of programmable silicon devices (FPGA) also allows us to “print” our own chips, without requiring local IC fabrication facilities. By having system design and fabless-design we can increase domestic value-addition and can also own the critical technology and IPR, which is essential for security and self-reliance in a digital world. In the coming years, we should strive to emerge as an R&D powerhouse in telecom and PMA is a key enabler for this.</p>
<u>7</u>	<p>Local manufacturing does not necessarily have any correlation with security.</p>	<p>We agree that local manufacturing per se does not guarantee security if the product design, R&D and IPR creation are done elsewhere. The best approach is to use trusted domestic products that are fully designed and developed in India for all security-sensitive installations so that the “control”, “know-how” and “know-why” remains fully within India. Today’s telecom equipment are highly sophisticated systems that use complex silicon chips having several million logic elements along with software code running into millions of lines. In such systems, any post-facto security testing/screening/audit is highly ineffective, since it is very easy to implant Spyware/Malware in hardware and/or software, which is impossible to detect but which can easily intercept sensitive information or cause catastrophic damage to critical equipment. In addition, it is possible (and required) to download a new version of software and firmware (even remotely), which</p>

		renders the security screening in the labs as useless, since the entire system of the hardware (via firmware and FPGA) and software can be changed any time in future. All major countries such as USA, Japan, China permit only domestic or trusted suppliers in their security sensitive networks.
<u>8</u>	Applying PMA to private sector procurements constitutes an unprecedented interference and significant disruption in the global telecommunications marketplace.	<p>The list of telecom products listed under PMA form critical pieces of national telecom infrastructure. These products are known to be especially vulnerable to malicious attacks at the chip level, hardware, embedded software or from the NMS. Also, most of these products have also been broadly identified as telecom products with security risks in independent studies such as the U.S-China Security and Economic Review Commission report on the telecom sector published in January 2011.</p> <p>Also, it may be appreciated that telecom networks globally, irrespective of whether they are owned by the private sector or government entities, intersect at some point and communicate with each other. Hence the ownership aspects are immaterial since the basic issues remain the same. This is the reason why countries like U.S have been persuading large private telecommunication companies including AT&T Inc. and Verizon Communications Inc. (VZ) to stop using products from certain countries perceived to be threats to national security. Therefore, the proposed extension of PMA to private sector due to security considerations is extremely important and PMA should be applied consistently to both public sector companies and government licensees.</p>
<u>9</u>	PMA raises significant questions about India's commitment to rules-based trading system established under WTO.	DoT's PMA mandate is fully consistent with India's WTO commitments as it gives a fair chance to any company, whether domestic or foreign, to compete and win business in the Indian telecom sector. It defines a telecom product to be "domestically manufactured" if it meets a certain minimum value addition threshold that is explicitly specified for each product category. A product is not deemed to be foreign or domestic on the basis of its point of origin or assembly alone. Thus the PMA policy does not discriminate against imported products or undermine the ability of multinational companies to compete fairly in India. The fact is that multiple countries e.g. US, EU as well as China are already practising much stricter procurement norms for foreign equipment with security and strategic implications and are clearly supporting companies which are doing domestic product development and manufacturing in this sector.
<u>10</u>	High value-added by itself is not a virtue if	We do not agree with this argument. Electronics products are one of the Top-2 items of our imports contributing to a large

	<p>the product is not competitive in the world markets. It will not get produced on a large enough scale to make a dent in employment.</p>	<p>portion of the country's trade deficit each year. If we adopt low value-addition manufacturing, the import bill will only decrease marginally since we will still be importing 90% of the product as SKD/CKD. This "factory model" of manufacturing, which is currently dominated by China, has largely failed to deliver dividends for most countries, since without the product IPR and high value-addition, manufacturing keeps looking for even lower cost destinations. It is always better to innovate and fabricate, than just fabricate ("Design-and-Make in India").</p> <p>From a strategic angle too, with the advent of cyber-attacks, secure and critical communication infrastructure is the backbone of our defence and any developed nation must have the know-how and know-why of all critical technologies it deploys. Not having critical design or IPR in our control will continue to expose us and make our country vulnerable to external threats.</p>
<u>11</u>	<p>Provide a framework for allowing hi-tech companies to sell under PMA based on total volume manufactured in Indian factories both domestic and exports (DDM)...the global hi-tech OEM can use the \$ for \$ DDM credits to qualify for PMA</p>	<p>We do not agree with this suggestion since it is detrimental to our country's interests, will aggravate our trade deficit in the telecom sector and further heighten our security risks. It will significantly weaken the value-addition norms of PMA and encourage large global OEMs to freely import their equipment in SKD/CKD form without doing any domestic value-addition. In fact, India's PMA-G is far more fair to foreign companies compared to similar policies in USA or Brazil, which have even more stringent local content requirements and they also give higher price preference to their local companies.</p> <p>Indian companies have the requisite capability and capacity to manufacture all telecom products listed in the PMA policy, hence there is no necessity to amend this in any way to accommodate the interests of foreign OEMs. In any case, India has enough R&D and technology talent who can develop any new products in 18 months, and we have adequate EMS/manufacturing eco-system that can manufacture any designed-in-India product. This has been amply demonstrated and proven in recent times through the BharatNet project which is being completely implemented using Indian products that have been customised and ruggedized for Indian rural conditions.</p>
<u>12</u>	<p>It needs to be ensured that Indian TSPs have the flexibility to procure equipment from vendors around the world.</p>	<p>PMA should be extended to any private telecom operator that is licensed by Government of India through a change in license conditions. However, in order to encourage greater participation from the private TSPs, we propose that:</p> <ol style="list-style-type: none"> a. Private TSPs who spend 50% or more of their telecom equipment capex on domestic products can be

		<p>incentivized by providing up to 20% rebate on their annual license fee.</p> <p>b. Private TSPs who procure less than 50% of their telecom equipment capex from domestic product companies (where such a product is available) may compensate by paying an additional 10% as telecom R&D cess to Government of India, which can then be used to stimulate the domestic telecom product ecosystem in the country.</p> <p>c.</p>
<u>13.</u>	<p>It would not be appropriate to prescribe any form of mandate to purchase domestically manufactured equipment so as to ensure that the rate of advancement of telecom services sector does not become dependent on rate of development in domestic manufacturing</p>	<p>The supposition is that India’s PMA policy is protectionist in nature and favors domestic ESDM products even if they are technologically inferior. India’s PMA policy is driven by domestic value addition and any company irrespective of origin, whether Indian or foreign, that meets the requisite value addition thresholds specified by DeitY are eligible for procurement preference under PMA. Moreover, all companies have to meet the commercial (L1 price) and technical requirements of the procurement tender.</p> <p>Several leading Indian ESDM companies especially in telecom are already competing and winning against global competitors in both domestic and foreign markets. ESDM products designed and manufactured by many Indian companies are being supplied to leading global vendors through OEM relationships because of their world-class quality and affordability.</p>
<u>14</u>	<p>Government of India to allow industry players/ patent holders to provide licenses to standards implementers on fair, reasonable and non-discriminatory (“FRAND”) terms and conditions</p>	<p>Government of India should facilitate compulsory licensing of global patents esp. SEPs (Standard Essential Patents) on FRAND terms to all technology implementers in India.</p> <p>Government of India should set up a committee to negotiate on behalf of all Indian equipment vendors to get “reasonable” patent pricing for SEPs approved by TSDSI.</p> <p>TSDSI should become the nodal agency for informing all the SEPs for any telecom standard (e.g., 5G) being deployed in India. A committee consisting of academia, DoT and domestic industry should vet and approve all SEP patents and any licensing charges to be paid.</p>
<u>15</u>	<p>We’d suggest that the system is left open to ensure that India does not go the Institute of Electronics and Electrical Engineers (IEEE) route - In March 2015, the IEEE made significant</p>	<p>IEEE policy of restricting IPRs based on the ASIC cost and not based on the final product price and to prevent injunctions need to be incorporated by India. This will ensure innovation can happen and IPR does not act like an unreasonable "global tax" on any product sold anywhere in the world.</p>

<p>modifications to its patent policies, which, among other things, prevented patent holders from receiving proper value for their patented inventions, prevented patent holders from enforcing their patent rights, and required licensing to take place at the smallest saleable patent practicing unit levels, instead of the most appropriate device level.</p>	
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