

RSM/COAI/007
January 21, 2011

The Telecom Regulatory Authority of India
Mahanagar Doorsanchar Bhawan
Jawahar Lal Nehru Marg (Old Minto Road)
Next to Zakir Hussain College
New Delhi – 110 002

Re: TRAI Consultation Paper on “Encouraging Telecom Equipment Manufacturing in India”

Dear Sirs,

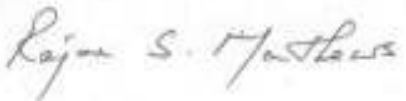
This is with reference to the TRAI Consultation Paper on “Encouraging Telecom Equipment Manufacturing in India”

Our detailed response to the consultation paper is enclosed for your kind perusal.

We hope that our submissions will merit your kind consideration and support.

Kind regards,

Sincerely yours,



R. S Mathews
Director General

Encl: as above

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COAI RESPONSE TO THE TRAI CONSULTATION PAPER ON “ENCOURAGING TELECOM MANUFACTURING IN INDIA”

While the services sector has shown tremendous growth in the recent past, the domestic equipment manufacturing sector has not been able to keep pace with the rapid growth and has been lagging behind. Hence there is a need for an emphasis on the growth of domestic manufacturing in India.

To enable long term sustainable growth of Indian/domestic manufacturing, the focus should be on improving competitiveness of the domestic industry. ‘Protection’ or ‘Preferential Access’ is not the suitable policy tools to enhance long term competitiveness of manufacturing.

While, some empirical studies suggest that restricting competition (grant of ‘Protection’) may work well during the initial stages of development, the Indian telecom sector has come a long way since NTP 99 and India has emerged as the second largest wireless market in the world. And hence ‘Protection’ or ‘Preferential Access’ may not be the ideal policy tools to enhance growth of domestic manufacturing.

We feel that the focus of regulatory and policy initiatives should thus be on enhancing skill development, IPR development, improving competitiveness of domestic manufacturing, overall domestic manufacturing to compete against the international equipment manufacturing, improving component manufacturing etc. Therefore, the endeavor should be to leverage policy tools to overcome some of the barriers which hamper growth and competitiveness of the domestic telecom manufacturing industry.

In this regard we also wish to submit that there is a need to **clearly define what is meant by telecom manufacturing in India. Some boundary conditions need to be laid down so as to ensure that benefits flow to genuine domestic telecom manufacturers.**

Some of the initiatives which can enhance the competitiveness of domestic manufacturing in telecom are as given below:

- 1) Initiatives on investment towards R&D in close cooperation with universities so as to boost the research & development in domestic telecom manufacturing resulting in more Intellectual Property Rights.
- 2) Simplification in customs clearance procedure for components import for manufacturing of telecom equipments in India. Domestic telecom equipment manufacturers should be allowed imports of components at zero customs duty without any prior permission / approval from central excise authorities subject to taxability of final products.
- 3) Improvement in infrastructure sectors such as roads, railways, ports, airports for movement of goods. Creation of capacity in power sector to support growth in manufacturing.

- 4) Promote cluster approach so as to enhance competitiveness of small and medium enterprises
- 5) Reduce paperwork and provide single window clearances in a time bound manner so as to reduce the burden of regulatory and transaction costs
- 6) Amendments /simplification in central excise law & procedures so that trading & repair activities could be catered from manufacturing set up
- 7) Focus on development of skilled manpower to stimulate R&D and support growth in domestic manufacturing.

Further, we would like to categorize Telecom Equipment manufacturing into following:

- a) Carrier Equipment manufacturing eg. Wireless core network etc
- b) Network Equipment manufacturing eg. Switches , routers etc
- c) Telecom Component manufacturing eg. PCB's , cables etc
- d) Application development
- e) Handset Manufacturing

Comments of COAI on this paper do not focus on the handset manufacturing.

Against the above context, our response to various issues raised by the Authority is as follows:

I . Research & Development

3. 1 What should be the objective and focus of the R&D effort for 2020?

- a) We believe that the objective and focus of R&D effort for 2020 should be set based on India's own strengths i.e. in areas where we already have an expertise and areas in which we propose to develop expertise in the coming years. In light of the same some of the potential areas could be software technology and development for future wireless technologies, Internet solutions and applications, cognitive radios, Modulation Technologies ,Compression (data) Technology, Soft Switches etc.
- b) Also, there should be endeavour to have at least 20 Indian universities amongst the top 100 institutes globally in terms of ICT R&D.
- c) Further, there should be continued focus on incentives for development (e.g. tax incentives in line with NASSCOM 2020 vision for R&D)

3. 2 Flowing from the above, what should be the objective and focus of the R&D effort for 2015?

Some of our suggestions with regard to the objective and focus of the R&D effort for 2015 are as given below:

- a) We need a highly functional and buoyant Telecom Standards Development Organisation to ensure that Indian Telecom R&D is aligned to international standards and India specific requirements are reflected therein.
- b) We should establish a Telecom Entrepreneurship Development Centre to provide a conducive environment comprising of necessary technical, financial, infrastructure and mentoring support for early stage telecom start-ups aimed at creating solutions for rural India.
- c) In order to address the security concerns faced by the Telecom industry, we should set up a Telecom Security Council of India as a Self Regulatory body in PPP mode. It should be a single window set up to provide security certification.
- d) We should have at least 5 universities/institutes feature amongst the top 100 institutes globally in terms of telecom and IT R&D.

3.3 What is the level of 'Indian Products' that we should attempt to achieve at the end of 2015 and 2020?

- a) In the short term till 2015 India's telecom sector should focus on local manufacturing of large number of accessories for telecom products, such as battery, power supply, shelter, communication cables and other Indian Products that local Indian manufacturers have a ready capability to manufacture.
- b) According to the 'Rule of Origin' for international trading practices, usually the 'Certificate of Origin' serves as the evidence regarding the country where a product is made. Consistent with goals of the World Trade Organization's work program on harmonization of the rules of origin, the country to be determined as the origin of a particular good is either the country where the good has been wholly obtained or, when more than one country is concerned in the production of the good, the country where the last substantial transformation has been carried out.

3.4 What is the broad level of investment required for this effort?

- a) The broad level of investment required would be roughly 5% of the telecom revenue in telecom R&D. This may be periodically renewed based on the progress achieved bi-annually.
- b) Further, we believe that it would necessary to have subsidy from government as a percentage of the R & D spend.

3.5 Which Institutions, whether in the Public or private sector, are best suited to carry out this effort? And why?

- a) We believe that the government should be responsible for overall planning and should steer various institutions (business organizations, colleges and universities, research units) in the same direction so as to achieve a cohesion in efforts because:

- i) Telecom industry is enabled by a complex value chain, one or just a few companies in private sector cannot cover the entire ecosystem and support such an important policy to encourage domestic telecom equipment manufacturing
 - ii) Referring to relevant practices of other countries, the technology development and direction orientation for industry like telecommunications can only be uniformly planned at a national level, so as to fully leverage all the resources, including Public, private, domestic and foreign invested companies, and mobilize all the related parties to achieve the objectives.
- b) Further, government may involve following organisation /department in its effort i. e TCOE, CDOT, IIT , NIITs etc.

3. 6 What can be the linkages established with Institutions or Indians abroad? Will this reduce time delays?

- a) Presently R&D is limited to individual efforts. Partnerships between academia and industry remain scarce and tenuous. These need to be organized under programs sponsored by the government. There is a need to focus on emerging technologies with a 10-20 years time horizon.
- b) We believe that these linkages should be coupled with some objectives and targets related to India i.e there should be some incentives to invest for eg
 - i) the tax benefits on income generated through this initiative
 - ii) The private sector should get the IPRs for research, which is carried out at Indian institutions and paid by the private sector.
- c) Leverage upon the existing Telecom Centers of Excellence (TCOE) initiative to promote R&D - each TCOE can take up more collaborations with reputed institutes/universities both within and outside India
- d) Incentives be provided for those international universities setting up remote campuses in India to have telecom R&D specific programs.
- e) Existing organization of C-DOT be reviewed to enhance its performance to create a platform to attract individual experts to strengthen the telecom R&D efforts
- f) The above steps would reduce the time delays as Indian researchers will be able to draw on the knowledge and expertise of the foreign institutions and Indian experts.
- g) Further, we believe that in order to reduce time delay the administrative overhead to establish linkages should be minimized.

3. 7 What should be the role of the Government and the Industry in regard to the R&D effort? In particular, what should be the investment, if any, by the Government?

- a) We believe that there should be division of roles for the government and enterprise i.e the enterprises should play the leading role, while the Government should provide assistance and support to the R&D effort of the enterprises.
- b) The Industry or the enterprises are the major forces to translate the R&D effort into productivity gains. The role of the Government is to guide and facilitate, instead of restricting or regulating the fields and directions of the enterprises' R&D effort.
- c) There should be clearly defined roles and responsibilities between the Government and the Industry with regards to the R&D effort. With limited resources, the enterprise can only focus on their R&D investments in the areas that can bring forth apparent benefits to them. That is why the enterprises have to focus on areas of application. However, in the longer term, the competitive edge of an Industry and a country is driven by basic Indian research efforts. The Government has the ability as well as the responsibility to focus on the following areas which the enterprises are unable to focus on:
 - i) Sponsored Research and Development Projects - basic technology research, i.e. to support and sponsor research institutions in Public sector and Private sector to conduct basic research in areas closely related to telecommunications, such as mathematics, physics, information science, material science and energy.
 - ii) GOI should support setting up of Hardware Manufacturing Clusters/ Parks in private sector or public sector or public-private partnership to co-locate the inter dependent units in the same complex. This will help to create virtually integrated units meeting the requirements of each other to the extent possible. This will help the core/mother unit to meet its most input needs from the next door neighbors.
 - iii) Electronics/IT Hardware manufacturing industry is one of "Thrust Areas" of the Government of India. Therefore, this sector needs special attention to address simplification of procedures, self declaration, post audit for import & export facilitation by customs and central excise authorities, infrastructure support, single window clearances mechanism for all state/ municipal approvals, continuous and adequate supply of power and water etc.
 - iv) Telecom R&D and product development requires a lot of up-front investment, which often may or may not result in commercial success. The government should encourage such efforts in the form of grants/soft-loans, so that adequate R&D is done and telecom products and IPR can be created in India.
 - v) Government need to support Indian industry for upgrading their test facilities and hence the product quality.
 - vi) We believe that almost 40-50 % of Software (core or System Software) that is used with most of the critical Telecom Equipment are developed in India (for global needs). However the recognition is not visible. The reason being IT and Telecom are somehow disconnected (Most of the Software deliverables are termed as Software Services and Promoted by NASSCOM). Many companies have substantial Software development and Research Activities operating from India. **We would like the Government. should encourage and support organizations who have similar facilities or infrastructure operating from**

India (a few telecom companies have outsourced it to Software Service providers), which are directly owned.

3.8 Should an R&D fund be set up? If so, how can the fund be managed effectively to meet its objectives?

- a) We believe the government should provide various subsidies for the effort on the R&D done by the Indian manufacturing unit the same would be helpful to smoothly achieve the country's objective of encouraging the development of the telecom industry.
- b) If the Government plans to provide the subsidies, it is suggested to:
 - i) Plan rationally, i.e. incorporate areas supported by the subsidy into the country's overall plan for telecom industry development and pay attention to continuity of the development in the area;
 - ii) Be open, i.e. open to as many entities/individuals as possible without constraint and mobilize global forces to support India's industrial policy;
 - iii) Respect mature rule of the industry, e.g. outputs from the projects supported by the subsidy belong to the persons/entities who have created them.

3.9 What could be the fiscal incentives to be offered by the Government? Should such incentives be linked to any outcome?

Some of the incentive that could be offered by the government are:

- a) Tax holidays should be given to provide impetus to Telecom equipment manufacturing.
- b) Greenfield investment should be promoted; e.g. free land / 10 years free rented land to the manufacturing facility.
- c) Accelerated deductions for R&D expenses should be allowed.
- d) Full refund should be allowed in case of exports of equipments from the local manufacturing bases, on Excise Duty/Sales Tax.
- e) Hardware and embedded software have the same custom duty rate
- f) No royalty TDS on software imported;
- g) Extend Tax benefits on applied research for companies beyond STPI scheme that has been declared to cease at 2011 (other than SEZ).
- h) The Government should consider increasing the R&D credit for income tax purpose to Indian Product companies, who are registered R&D houses. Such companies should not be required to pay MAT. By allowing a larger R&D deduction and

removing MAT payment, the Indian companies will have additional cash flows that can be directed towards R&D.

- i) We believe initiatives on investment towards R&D companies in close cooperation with universities will also boost the research & development in telecom field resulting in more Intellectual Property Rights (IPRs).
- j) In setting up the factory, the expatriates should be given special tax benefit from personal tax prospective and relocation bonus.
- k) Each skilled worker's employment shall be linked with certain amount of tax refund.
- l) Special prize may be given for disabled people's employment in case the factory reaches certain percentage. Incentives be given for participation in the "World Skills" programme/events.
- m) Incentivize scientific and technology innovations. Set up a national high-tech bonus to encourage innovations in telecom sector.

II . Sourcing of Inputs

3. 10 What are the components that can be manufactured in the country with due consideration to commercial viability?

- a) India should adopt Models to support and encourage creation of large-scale Electronic Component Manufacturing Services (EMS) industry in India. India should position itself as a competitive alternate destination to other competing countries for EMS services.
- b) Seeing the investment requirements and potential impact, it is better to focus on few component areas and build economies of scale. Components where we can have a sustainable advantage are:-
 - i) Bare PCBs
 - ii) Mechanical components, chassis, wiring, cables and accessories
 - iii) Electro-mechanicals, transformers
 - iv) Electrical components
 - v) Crystals, oscillators
 - vi) Some IC's (ATMP level)
 - vii)Niche passive components etc
- c) However, India needs to incentivize the high value-add component supply base in India in the following order of priority:
 - i) Semi-conductor wafer fab investment for ASIC and general purpose ICs; in conjunction with its associated assembly, testing, marking, and packaging (ATMP) industry partners
 - ii) Memory wafer fab investment
 - iii) FETs for power supply
 - iv) Inter-connector modules

The above commodities typically represent a significant dollar spend on components for most telecom OEMs

3. 11 What should be the degree of indigenous manufacture of components that we can reasonably achieve a period of 5/10 years?

- a) We suggest that firstly we have to enhance the capability to manufacture accessories and related products and create an industrial environment for higher end telecom manufacturing. When the value chain for the telecom industry has been built with competitive price, India can start PCB assembly and module processing for telecom equipment. **It will take around 5 to 10 years to implement such step-by-step plan.**
- b) The off set clause, as applicable, for manufacturing of defence related telecom equipment will help in enhancing the local industry capability to manufacture in India. Review of PSUs such as BEL, ITI etc need to be done to catalyse them into enhancing their manufacturing capabilities to meet local industry demand.

3. 12 What, do you think, is the feasibility of setting up of commercially viable fabricating units to manufacture chips, ICs?

- a) We believe that so far as the major chips and ICs used in China are imported from US and Taiwan, there would be requirement of huge investment for about 10-15 years' time to develop the capability to manufacture chips and ICs in India.
- b) In light of the above, we suggest that we should focus on **ATMP units alone** in first phase. These units can be set up with a reasonable investment of \$ **100-200 million investment** roughly. **Second phase should be to look at the fabs.**
- c) For having at least one fab with up-to-date technology for manufacturing ICs we suggest that the **Semi Conductor India Ltd (SCL), Mohali may be augmented** to sub micron technology with controlling stake with private investors so that it can swiftly cope up with global technology advances.
- d) Regardless of the feasibility, game-changing incentives need to be introduced to attract the semiconductor heavyweights

3. 13 Is the Duty on components currently being levied high? If so, on what components can the duty be reduced? What are the financial implications and the corresponding benefits?

- a) Nowadays, the Duty on components is almost the same as that on the equipment. If Indian Government wants to encourage local manufacturing, it is suggested to reduce the import duty on the components.
- b) We suggest that the Basic Custom Duty on all components used for manufacturing of Telecom Equipments in India should be at 0%, it will help Indian manufacturers to compete in International Market.

3. 14 Should electronic Manufacturing service companies be incentivised? If so, how?

- a) Yes, India should encourage the establishment of EMS companies and provide preferential tax treatment to such companies.
- b) EMS industry is all about economies of scale, and we should focus in creating the same. Economies of scale in the EMS can be achieved by :
 - i) Duty exemption on components / raw-materials (e.g. Malaysia, Vietnam) along with incentives for processing them into finished goods (FG) or component sub-assemblies.
 - ii) Significant upfront capital investment (or equity infusion) required to incentivize global semiconductor players (TSMC, UMC, Intel) which, in turn, draws the associated assembly, marking, testing, and packaging (AMTP) players.
 - iii) Significant ongoing OPEX subsidy to offset the increased manufacturing costs in India.
 - iv) Attracting large EMS companies to setup operations in India.
 - v) Upgrading the infrastructure of existing EMS capabilities of existing companies to state-of-the-art factories with adequate capex.
 - vi) Setting up world-class infrastructure facilities (ports, power, water, land etc.) that are required for EMS should be provided on a priority basis.

We believe that these policy initiatives will enhance India's manufacturing capability and improve the industrial environment.

III . Manufacturing of equipment

3. 15 Should the concept of mandatory use of Indian products/Indian manufactured products be introduced in the Indian context? If so, can this be introduced immediately or should it be introduced at a later date? If so, by what date?

- a) While the Indian industry would like to use locally manufactured products, it is imperative that in an industry such as telecom with intense competition these products should compare well with those imported both in terms of cost and quality.
- b) Hence , any mandates asking for Indian Manufactured products / components might lead to protectionist implications:
 - i) Delays in technology
 - ii) Even worse, outdated technology
 - iii) Failure to meet India's obligations as a member of the World Trade Organization

- c) This aspect must be borne in mind prior to making it “mandatory” to use the Indian products as a tool to enhance the competitiveness and growth of domestic manufacturing.
- d) Further, the concept of mandatory use of Indian products/Indian manufactured products will need to be cognizant of the need to comply with the relevant international agreements that India is a signatory to, with a view to preclude any apparent breach of the WTO rule of National Treatment and it is one of the trade-related investment measures incompliant with the National Treatment as clearly listed in TRIMs (Agreement on Trade-Related Investment Measures) which states that :
 - i) Requiring the business organizations to purchase or use domestic products or products sourced from domestic channels, no matter such specific requirement is regulating certain products, volume or value of products, or regulating the percentage of volume or value of local products to be purchased or used;
 - ii) Limiting the volume of imported products purchased or used by business organizations, or the linking it with the volume or value of the business organizations’ exportation of local products.
- e) We would further like to highlight that the potential of Telecom Equipment manufacturing in India is currently limited, primarily because of two reasons:
 - i) Insufficient availability of components sourced from Indian OEM
 - ii) Lack of benefits pertaining to manufacturing infrastructure
- f) Further, most of the electronic components that are used in Telecom Equipments are sourced from China (indeed Chinese Govt. is promoting heavily for over one decade) and future requirement is also on a large scale.
- g) To promote ICT manufacturing in India, the following should be considered:
 - i) Government of India should set aside suitable dedicated credit line for Indian-manufactured telecom product companies to promote sales in domestic and international market.
 - ii) Fiscal incentives such as income tax holidays and tax breaks
 - iii) Availability of long-term working capital at globally competitive interest rates

3. 16 What could be the percentage to be stipulated for both these categories?

Not applicable, please refer previous question

3. 17 What should be, if any, the incentives to be given to individual service providers for use of Indian equipment?

Government may think of financial incentives like lowering of license fee, spectrum charges to the operators adopting the Indian manufactured products. However, as highlighted in previous question the use should not be mandated.

3. 18 Likewise, what could be the disincentives, if any, for use of imported equipment? This is compatible with international agreements?

- a) There should not be any disincentives for the service providers. Service providers should be allowed to choose from Indian Manufactured and foreign equipment.
- b) Disincentives for using imported equipment cannot be provided as they would not be compatible with Indian commitment under the Information Technology Agreement (ITA).

3. 19 What could be the duty structure to be imposed on imported goods?

We believe that Duty can be imposed only on those goods that are not covered under the ITA as per Indian commitments for telecom equipment.

IV . Promoting Domestic Manufacture

3. 20 Should a percentage of the Indian market be reserved for the Indian manufacturers? If so, what should be the percentage?

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3. 21 What, if any, could be the implications of such a step?

- a) Reservation for Indian manufacturers is only possible for procurement by government exclusively for government usage since India holds only the observer status in WTO's Government Procurement Agreement (GPA). Any other reservation in this regard would be discriminatory and not in line with the international laws.
- b) We also believe that any type of reservation may go against network expansion and provision of quality service to the customers. Instead, the use of Indian manufactured or Indian products should be incentivised with the value addition criteria
- c) It may be far more appropriate for the Government to focus on creating an environment which is conducive for attracting knowledge and investment for the Indian equipment manufacturers.

V . Setting up of Special Zones or Telecom Clusters

3. 22 What, if any, are the advantages of setting up of clusters for manufacture of Telecom equipment within the country?

- a) The establishment of Special Zones or Telecom Clusters for encouraging local manufacture of telecom products and optimization of telecom industry environment is

very helpful, this can help India to accelerate the process of local manufacturing and R&D;

- b) Following are some of the advantages of having a special zone or a telecom cluster:
 - i) Reduction in the cumulative cycle time on the basis of reduced inter-company transit times
 - ii) Faster “time to market” as co-location of the broad hi-tech mfg ecosystem would allow tighter collaboration & faster decision/issue-resolution cycles
 - iii) The broad base of companies concentrated within cluster(s) is cost-beneficial for the related industries - e.g. logistics providers servicing multiple OEMs; component supply base supplying to multiple EMS providers. Hence, this scale allows bigger investments while yielding higher returns & capacity utilizations for the same.
 - iv) Over a period of time such an ecosystem ensures that the associated aspects of talent, housing, and community development evolve to meet the needs of a thriving industrial ecosystem
- c) Further, in Indian scenario the experiences of STPI can well be utilized in the telecom sector
- d) The Government can provide tax incentives for setting up telecom clusters and promote development of infrastructure (logistics capacity, road construction and electricity provision and so on), which encourages growth of clusters.
- e) We also suggest that a large clusters spreading in 100 sq km, such as Suzhou in China, should be set up.
- f) India can even partner with investor countries like Singapore to setup such large zones and develop the complete ecosystem.
- g) We may evaluate the Japanese model for setting up Research parks such as the Yokosuka Research Park (YRP) is an area in Yokosuka City, Japan, where many of the wireless, mobile communications related companies have set up their research and development centers and joint testing facilities.

3. 23 What is the investment required for setting up of such clusters?

No Comments

3. 24 How can the financing of such clusters be best done, based on international experience?

- a) Government need to invest in the infrastructure. Further, low interest rate financing linked to the performance may be set up wherein the rate of interest be linked to performance

- b) Government may choose to invest in the part of the funding with the balance coming from other investor countries.

3. 25 What would be the lead time required for setting up of such clusters?

- a) Usually it takes 5-10years to build infrastructure and surrounding environment for the establishment of such Special Zones or Telecom Clusters.

3. 26 What are the considerations for the location of such clusters?

- a) So as to enable the spread of clusters on a country-wide basis, at least 5 clusters in different regions of the country (East, West, South, North and Centre) can be set up on immediate basis.
- b) Some of the parameters for selecting the location for clusters may be:
 - i) availability of manpower
 - ii) logistics
 - iii) local commute
 - iv) International connectivity
 - v) infrastructure (Uninterrupted Electrical supply at a reasonable cost)
 - vi) Close location to ports, rail network, etc. for example Chennai

VI . Testing, Standardization and Accreditation

3. 27 What, in your opinion, would be the best agency to set up and manage such a Common facilities?

- a) Developing a standards participation and contribution framework is an important step toward encouraging local manufacturing of telecom equipment. Firstly, any manufacturer developing telecom equipment must ensure conformance to global telecom standards. Whereas most specifications are freely available on the Internet, to understand the context and intricacies and develop competitive products, manufacturers must have some level of participation in the standards setting process. Further, if a manufacturer from India wants to introduce a change in the standards, they need to be a member of the related standards body.
- b) We believe that, India needs a strong presence at the 3rd generation partnership project (3GPP) and the 3rd generation partnership project (3GPP2) to ensure –
 - i) representation of India specific requirements (mobile operators may take the lead here),
 - ii) introduction of technologies and solutions developed to meet those requirements into the standards (Telecom manufacturers in India, Indian engineering talent, and research talent from research and academic institutions might contribute here), and
 - iii) compliance to Indian regulations, in the global consensus framework at those entities.

- c) Further, we suggest that the best way to form an India standard development organisation (SDO) is to form an entity which is recognized by Government of India but operated by the industry, drawing membership from within and outside the country.
- d) It may be best if the ETSI model (“officially recognized by the European Union as a European Standards Organization,” “member organizations drawn from 62 countries across 5 continents world-wide” and “built on openness, discussion, consensus and direct input from members.”) or TIA model of operation is followed.
- e) The goal for the Government may be to facilitate the SDO creation, with telecom operators and manufacturers taking charge of the organization and making it successful in the international scenario.
- f) While the testing and accreditation agency can be combined so as to have a single entity, the standardization agency should be separate.
- g) The agencies should be autonomous, self-sustaining and not for profit organisations maintaining a global standard.

3. 28 What would be the facilities and the level of investment required in such a facility?

- a) The facility of the Telecom Certification Lab (TCL) should be of international standards and the government should put in adequate investment in this regard.
- b) TCL should have facilities such as environmental test labs, radiation test labs along with the associated test and measurement equipments for use by Indian product companies and manufacturers.
- c) In addition, Indian Product companies would also require infrastructural support for validating new technologies they develop in real-life scenarios, once these products have been thoroughly tested in the lab. Hence, a provision may be made for Indian Service Providers to offer live test beds for a limited period where these products can be tested.

3. 29 How will such an investment pay for itself?

- a) The facilities of the TCL may be extended on a chargeable basis to offset the OPEX and expansion plans, which is funded by the government.

VII. Funding/FDI

3. 30 What, in your opinion is the likely requirement of Capital for companies that could take up the manufacture of telecom equipment?

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3. 31 What could be the best manner of facilitating availability of capital to such firms?

- a) To become a competitive enterprise will need continuous and huge amount of fixed asset investments in R & D, production, test equipment and facilities, as well as working capital, for sales financing.
- b) Further in order to encourage telecom equipment manufacturing in India:
 - i) Special incentive schemes for the manufacturer/supplier of components to telecom equipment manufacturer in India.
 - ii) Providing loans at the reduced rates for setting up the manufacturing unit.
 - iii) Simplification in customs clearance procedure for components imports for manufacturing of telecom equipments in India.
 - iv) Telecom equipment & their parts manufacturer should allowed, imports of components at zero customs duty without any prior permission / approval from central excise authorities subject to taxability of final products.

3. 32 Would setting up of Institutions like ITRI be desirable and feasible?

The setting up of the institutes such as the ITRI may be looked into by the government of India.

VIII. Duties and Levies

3. 33 What would you suggest should be the tax structure in respect of imported and indigenous manufacture of telecom equipment, keeping in view the international agreements?

- a) As highlighted by the Authority in its consultation Paper, we should think of similar kind of structure for the Indian Manufactured telecom equipment manufacturing industry (especially for the telecom component manufacturing firms) as given to the software industry i. e income TAX holiday.
- b) This initiative would not only allow the Indian manufacturers to establish the competitive manufacturing firm but will also allow them to compete with the global players.
- c) Some imported telecom equipment is subjected to zero import duty under India's ITA commitment. If the same equipment is manufactured Indian Manufacturedly in India, they can be provided tax breaks to offset any preferential treatment accrued by the imported equipment. This would not violate any international agreements.
- d) Any tax incentive provided for R&D expenses of Indian companies to make equipment of high quality and at par with imported equipment would not violate international agreements.
- e) The percentage of sales tax (CST+ ST+ VAT) charged on locally produced goods in India is much higher and the tax equivalent charged on imported material. Also entry

tax is payable in the States where goods are finally sold for locally produced goods. In the case of imported goods only one incidence of tax or its equivalent is payable in the State of its final destination where the goods are sold. Thus it is recommended that:

- i) The Central Sales Tax is to be made 0% on telecom equipment including entire value chain of raw materials.
- ii) State Governments may be requested to exempt octroi, entry tax, local sales tax etc. on the telecom equipment at least up to 2015. Free movement of the equipment/raw materials should be ensured. Single window clearance for all State Government approvals should be provided.
- iii) Export benefits in India (DEPB) are designed for neutralization of import duties that go into the process of manufacture. At present DEPB takes into account the impact of import duties leviable upon the inputs of the exported products. It does not take into account the other duties, taxes and levies within the domestic tariff area like ST/Octroi/service tax/entry tax etc. India has multiple taxes and neutralization of all must take place before goods are exported. Otherwise, Indian exports from the Indian Manufactured manufactured cannot be competitive. Presently, export earnings are given income tax benefits but DEPB is not classified as export earning. Thus it is worthwhile considering DEPB to be recognized as export earnings as it is seen as a fiscal benefit to motivate trans-national companies to set up base in India.
- iv) Removal of tax barriers on transfer of technology: Withholding tax on fee for transfer of technology and software import should be removed. Tax on payment of royalty should be as low as possible. In order to encourage technology transfer, royalty payment up to 5% on domestic sale and 8% on exports should be exempted from income tax.
- f) Exemption in the MAT should be provided to the indigenous telecom equipment manufacturing industry.
- g) Such incentives should not be linked to any outcome and should be left to market forces as it may negate the competitiveness and quality of products developed by the Indian equipment industry.
