

Dear Shri Agarwal,

At the outset I would like to thank TRAI for providing me an opportunity to participate in the discussions on NTP-2018 on 17th January. I apologize for delayed response. My comments on some of the issues are as below:

**1. Structure and Implementation of policy:**

- 1.1 Success of a policy lies in its proper articulation and implementation. Current structure of the policy under various headings creates disconnect between the objectives and delivery. This has been the experience with NTP-2012. As a result even the implementors of policy had difficulty in understanding the intent and deliverable leading to a situation wherein lot many objectives have remained underachieved or unachieved.
- 1.2 Majority of telecommunication activities are undertaken by the private sector. Government is involved primarily in schemes under USO fund. Rest of it is policy and regulatory function. Therefore it is more desirable that the government sets a vision for the telecom sector and creates an enabling environment for ensuring delivery towards the vision. Therefore, restructuring of the policy document is suggested.
- 1.3 While making the policy, the existing and expected hurdles in implementation of various items of vision should be identified and possible solutions well articulated. The hurdles may be procedural or structural. There will be many such hurdles which cut across number of domains. Resolution of these should be prioritized and stated in the policy so that implementation of a group of objectives is not held up.

**2. Spectrum management:**

- 2.1 Demand for spectrum in additional frequency bands for IMT and other terrestrial services is growing internationally. Lot of work is required to be done in India towards spectrum studies as well as in management of spectrum right from identification to earmarking, allocation and licensing.
- 2.2 Spectrum in the same bands is also required for R&D purposes to promote Indian IPRs and manufacturing in the country.
- 2.3 Procedure for grant of licenses for import of wireless equipment need simplification which will greatly help in ease of doing business.
- 2.4 The current state of spectrum management needs review and restructuring.

**3. Licensing:**

- 3.1 New IMT technology will have cloud based access nodes. Secondly, networks will gradually be based on SDN and NFV. Current licensing framework will need a proactive review so that no difficulties are faced when the TSPs start using these technologies. In fact, cloud based implementation may also open the possibility of separation of provision of network from provision of service which was envisaged in NTP-2012.
- 3.2 With IMT advanced and then with 5G, there will be a great deal of increase in small cell deployment with E/V band backhaul. There will be need to take care of RoW issues in advance.

**4. Standards, Research, IPRs and manufacturing in India:**

- 4.1 It is noted that Meity and DST provide grants to various entities for research which includes many projects in the field of telecommunication or having potential for use in telecommunication. Many of such projects, if properly oriented, can lead to creation of Indian IPRs and can be used for creation of India specific telecom standards as well as for contribution to international standards. There is a need to bring all grants for telecommunications related research under one umbrella i.e. DoT so that scattered efforts of various entities can be properly directed towards a common goal.
- 4.2 If some research entities have the potential to contribute to standardization, expenses towards TSDSI membership should be made part of their research grant. This will enable lot of agencies to come to a common platform to provide momentum to development of indigenous technologies and promotion of manufacturing as well.
- 4.3 It is noted that a major part of the electronics import consists of telecom products. Manufacturing and market for telecom products has different dynamics than general electronics products. Telecom products are standard based, need inter-operability, need thorough testing and certification, have large contribution of IPR costs in the total cost etc. Security of foreign made equipment has always been a concern in India. If we can replace this import by indigenous manufacturing, it will not only save huge amount of foreign exchange, it will also have all the attendant benefits which are envisioned under Make in India. Therefore, a mechanism should be created for handling policy and its implementation in respect of telecom equipment manufacturing in the country which should be separate from electronics manufacturing policy.

Regards,

A.K.Mittal

On Thu, Jan 18, 2018 at 5:59 PM, V K Agarwal <vk.agarwal@traf.gov.in> wrote:

Dear Sir,

We are thankful for the valuable inputs provided by you during the meeting held on 17 January 2018 at TRAI.

You may further provide your written comments, if any, latest by 22 January 2018 which will guide us in finalising inputs for formulation of NTP-2018.

Best regards,

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