

Inputs on National Telecom Policy 2018

The document has been divided into three parts.

I. Why do we need to think differently in terms of National Telecom Policy 2018?

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III. NTP 2018 objectives as laid down in the consultation paper released by TRAI with respect to the achievement till end-2017

Having seen what we have achieved in the last 23 years, its time we should look at something different in terms of telecom policy as India needs to leapfrog and this can only happen if we start thinking differently while framing our National Telecom Policy 2018 or NTP 2018 and then working on it to get the desired result in a time bound manner.

I. Why do we need to think differently in terms of National Telecom Policy 2018?

We need to think differently as lot of convergence is happening and lot many sectors say education, healthcare, financial services, citizen services and agriculture are going digital and it cannot be ignored if India wants to leapfrog. Not only this India will benefit a lot from digital strategies in these sectors and also world will benefit from it in a big way as this will not only help in cost reduction, improving quality of service when imparted to citizens by government and also lot of savings for the government, service providers and enterprises.

1. Lot of Convergence - There is lot of convergence in services as well as devices and today it is difficult to clearly demarcate telecom, IT, Internet, software and broadcast services. And in all these services, India has an edge vis-a-vis other countries. If India needs to leapfrog, the policy needs to have a mix of everything so that we can choose the best quality service, at the lowest price for a given set of solutions.

2. Future is Digital - Digital is the future for any industry be it service providers, government or enterprises and policy makers cannot ignore digital. Digital is also the fulcrum for many sectors in India as we have shortage in each and every field.

For e.g. Education - Digital education is the need of the hour as we have shortage of teachers; Healthcare - Digital healthcare is the need of the hour as we have shortage of doctors in each discipline; Financial Services - Digital financial services is the need of the hour as we cannot open banks in each and nook and corner of the country;

Citizen Services - Digital citizen services is the need of the hour to cater to our large population as we do not have large number of government offices and employees due to large population and large geography; and Agriculture - Digital agriculture is the need of the hour as we need to increase our yield even in the changing climatic condition due to global warming.

3. India can be Torchbearer - If India works on digital modelling for different sectors say healthcare, education, citizen services, agriculture and financial services we will definitely improve our global ranking, IPR numbers will increase considerably, innovations will be far too many and collaborations between academia, government and industry will increase without fail as it will help all sectors to work in a united way to achieve goals of the country as well as UN Sustainable Development Goals (SDG) for the world. All this is beneficial for everybody in the long run as India can be torchbearer for many nations who are looking at digital in big way.

4. Umbrella policy for government projects - The National Telecom Policy 2018 should cater to all government projects say Digital India, Startup India, Make in India, Standup India, Smart Cities Mission, Pradhan Mantri Jan Dhan Yojana (PMJDY), Swachh Bharat, Beti Bachao Beti Padhao, Skill India and others. And digital is the only connection for all these government policies to flourish in future.

So, instead of framing National Telecom Policy 2018, the government should make an about turn and look at Digital Convergence Policy 2018 as this will have a long term impact on India's digital economy and will act as catalyst to help India leapfrog to \$10 trillion economy by 2030.

II. Consultation paper on New Telecom Policy 2018 is different but needs to add few more objectives

The TRAI's consultation paper on New Telecom Policy 2018 (NTP 2018) and it rests on four pillars – convergence of broadband and broadcast networks, building IoT (Internet of Things)/M2M (Machine to Machine) infrastructure for both India as well as global requirement, providing digital services to rural and urban areas and aiming for self sufficiency in telecom equipment manufacturing.

Convergence of Broadband and Broadcast Network: With telecom networks in 4G era extensively being used to provide video services, TRAI feels it is necessary to provide converged broadband, broadcast and cloud infrastructure for Video on Demand (VoD) services as this will help in efficient utilisation of broadband, broadcast and cloud infrastructure. This would be a great step as presently these are driven by different ministries are not aligned with the goals of New Telecom Policy 2012.

Building IoT/M2M Infrastructure for India and Global: Both India and global will witness large scale deployment of IoT/M2M in a big way. According to Ericsson

Mobility Report, by 2023 over 30 billion connected devices are forecast, of which around 20 billion will be related to the IoT (Internet of Things). Connected IoT devices include connected cars, machines, meters, sensors, point-of-sale terminals, consumer electronics and wearables.

The Industry 4.0 is being built around IoT/M2M infrastructure and services for which the availability of global and digital communications, low cost processing and high density data storage and increasingly connected population of active users of digital technologies are prerequisite. To keep pace with these developments, NTP 2018 should be formulated so that it encourages developments of networks especially suited for IoT, datacenter and associated services, data analytics cloud computing and home grown digital platforms and applications. The policy should help in remote delivery of services so that India can become global hub for IoT/M2M services.

Providing Digital Services to Rural and Urban Areas: The average speed of Internet is still much lower than the global average so NTP 2018 should focus in such a way that benefits of health, education, agriculture, citizen services and e-governance services reaches larger population of both rural and urban areas. This will definitely help the government to achieve the UN Sustainable Development Goals (SDGs).

Self Sufficiency in Telecom Equipment Manufacturing: India has not achieved expected success in making India a global hub for domestic manufacturing so the New Telecom Policy 2018 should focus on developing home grown digital platforms and services for meeting the specific needs of the country and also helping the country to become self sufficient in telecom equipment manufacturing.

If the focus is on Digital Convergence Policy 2018, everything has to be seen from the prism of digital and convergence. The policy should see convergence of Internet, Telecom, Software and Broadcast services and digital should be at the top of all objectives as India plans to be digital superpower.

The objectives of NTP 2018 should also include:

1. Application Framework - The government should create a framework so that education, healthcare, citizen services, financial services and agriculture applications can be deployed across both central and state government departments.

2. Innovation Framework - Digital is the new buzzword, government should promote digital technologies in a big way by identifying technologies of national importance say 5G, IoT/M2M, Convergence, FTTH, Artificial Intelligence (AI), Virtual Reality (VR), Augmented Reality (AR), Blockchain, drone, Analytics, VoLTE and others.

3. Startup Framework - Startup needs to be given technologies based on which they can come with products or services which can then be deployed by service providers, government and enterprises in a big way.

4. Security Framework - Digital will only prosper when the security framework is sturdy and is updated regularly. We need to create world class hackers who can provide us the input before the system is hacked so that we can take proactive protective measures in future.

5. Manufacturing Framework - Should also include After Market Services for both India as well as global as it will create lot of employment opportunities. And in manufacturing the focus should be on digital technologies as this is the future.

6. Right of Way Framework - States are not notifying their policies in line with DoT RoW (Right of Way) Rules framed in November 2016. A year has passed and till date and only nine states – Rajasthan, Odisha, Jharkhand, Assam, Kerala, Tamil Nadu, Haryana, Andhra Pradesh and Telangana have notified their policies in line with DoT RoW Rules whereas three states – Uttar Pradesh, Punjab and Uttarakhand are soon planning to notify in due course of time. Without implementation of proper RoW Policy we cannot improve telecom services or broadband services so it has to be strictly implemented in the new policy.

7. Data Protection and Data Privacy Framework - The framework will help in use of data keeping in view data protection and data privacy framework.

8. Cloud Framework - Since the focus is on digital, cloud framework will play an important role to take India to be a No. 1 nation in digital. MeitY talks about MeghRaj Policy but it needs to be mentioned also in the National Telecom Policy 2018

9. Digital Framework Ministry - The ministries of space, telecom and IT needs to be converged to make digital ministry so that decisions can be taken in one go and all hindrances related to India becoming superpower in digital can be taken care.

III. NTP 2018 objectives as laid down in the consultation paper released by TRAI with respect to the achievement till end-2017

1. To increase rural tele-density to 100%

As per TRAI's India's Telecom Subscriber Numbers for Quarter Ended September 2017, the urban tele-density stands at 173.15 whereas rural tele-density stands at a mere 56.71.

2. To provide data connectivity of at least 1 Gbps speed to all gram panchayats

Presently, the data connectivity at connected gram panchayats is not consistent and even the downtime is very high which puts a big question mark on providing data connectivity of at least 1 Gbps speed to all gram panchayats.

3. To enable access for wireline broadband services to 50% households in the country

Presently, there is no data on total wireline broadband services to households in India. There are only two data in the public domain – Total wireline subscribers is 23.67 million and total wired Internet subscribers is 21.35 million so we do not know from what base household numbers are starting.

TRAI should also specify both rural and urban households percentage rather than just mentioning households. In India as per Census 2011, there are 192 million households of which 138 million are rural households and 54 million are urban households so on computation, TRAI number talks about 69 million rural and 27 million urban households which is not an easy task.

4. To enable access for high-quality wireless broadband services at affordable prices to 90% population

Presently, wireless Internet services is available to 80-85% population but getting consistent and high quality wireless broadband services i.e. 2 Mbps service is still a distant dream for metro subscribers so you can well imagine the state of affairs for rural subscribers.

5. To achieve 900 million broadband connections at a minimum download speed of 2 Mbps out of that at least 150 million broadband connections at a minimum download speed of 20 Mbps

Presently, India has achieved Internet connections of 429.23 million and broadband connections are to the tune of 325 million but only 20 per cent of this subscriber gets minimum download speed of 2 Mbps. The other point is 150 million broadband connections at a minimum download speed of 20 Mbps will be either through fiber or 5G technology so India has to allocate 5G technology at the earliest so that the industry can achieve download speeds of 20 Mbps.

6. To develop 10 million public Wi-Fi hotspots in the country

Presently, India has around 45,000 public Wi-Fi hotspots as on March 31, 2017 and taking the number to 10 million public Wi-Fi hotspots would be a humongous task. TRAI has to come out with an unique model which will help achieve 10 million public Wi-Fi hotspots.

7. To attain average speed of 20 Mbps for wireless and 50 Mbps for wireline Internet connectivity

Presently, TRAI does not tabulate average wireless and wireline speed as per circle or on an all India basis so there is no benchmark on average speed for both wireless and wireline Internet connectivity. Attaining average speed of 20 Mbps for wireless and 50 Mbps for wireline Internet connectivity would not be an easy task for the industry.

8. To leapfrog India amongst Top-50 nations in international rankings in terms of network readiness, communications systems and services

In 2016, India was ranked 91 out of 139 economies on the Networked Readiness Index, a key component of the World Economic Forum's Global Information Technology Report 2016. To leapfrog to Top 50 nations by 2022 would not be an easy task and the focus should be on the following ten parameters.

- a) Political and regulatory environment – Effectiveness of law-making bodies, laws relating to ICTs, judicial independence in your country, efficiency of legal framework in settling disputes, efficiency of legal framework in challenging regulations, intellectual property protection, software piracy rate, unlicensed software units as a percentage of total software units installed, number of procedures to enforce a contract and time required to enforce a contract.
- b) Business and innovation environment – Availability of latest technologies, venture capital availability, total tax rate, time required to start a business, number of procedures required to start a business, intensity of local competition, tertiary education enrolment rate, quality of management schools and government procurement of advanced technology products.
- c) Infrastructure – Electricity production, mobile network coverage rate, international Internet bandwidth and secure Internet servers,
- d) Affordability – Prepaid mobile cellular tariffs patterns, fixed broadband Internet tariffs and Internet and telephony sectors competition index.
- e) Skills – Quality of education system, quality of math and science education, secondary education enrolment rate, adult literacy rate and individual usage.
- f) Mobile telephone subscriptions – Mobile telephone subscriptions (post-paid and pre-paid) per 100 population, Internet users, households with a personal computer, households with Internet access, fixed broadband Internet subscriptions, mobile broadband Internet subscriptions and use of virtual social networks and business usage.
- g) Firm-level technology absorption – In your country, to what extent do businesses adopt new technology, capacity for innovation, PCT patents applications, ICT use for

business-to-business transactions, business-to-consumer Internet use and extent of staff training.

h) Government usage – Importance of ICTs to government vision, government online service index, government success in ICT promotion, economic impacts, ICT PCT patent applications per million population, impact of ICTs on organisational models and knowledge intensive jobs.

i) Social impacts – Impact of ICTs on access to basic services, Internet access in schools, ICT use and government efficiency and E-Participation Index

9. To enable access for connecting to 10 billion IoT/M2M sensors/devices

Presently, there are no specific numbers for IoT/M2M sensors/devices and to achieve this would be an herculean task. According to Ericsson Mobility report by 2023, over 30 billion connected devices are forecast, of which around 20 billion will be related to the IoT. Connected IoT devices include connected cars, machines, meters, sensors, point-of-sale terminals, consumer electronics and wearables. So, catering to 50 per cent of global numbers would not be an easy task from India perspective.

10. To attract an investment equivalent to \$100 billion in communication sector

The Department of Industrial Policy and Promotion (DIPP), has revealed that the total FDI equity inflow in telecom sector from FY2014-15 till May 2017 stood at \$9.79 billion of which \$6.08 billion in the first half of the financial year (April to September, 2017).

This will not be an easy task and this investment can only come from the manufacturing sector in a big way and for that the focus is to develop complete manufacturing eco-system in the country at the earliest and the government also need to be an equity partner in some of the manufacturing projects.

11. To become net positive in international trade of communication systems and services

It is not an easy task and would be only possible when we start manufacturing products in large numbers and also increase the localisation factor in all our products. Not only this we will also have to look at manufacturing of these products keeping in view the export market.

It is good to keep 10 billion in IoT, \$100 billion investment in telecom, 10 million public Wi-Fi hotspots and 900 million broadband in the New Telecom Policy 2018 but policy makers should make it a point that those numbers are achieved on or before 2022 when India celebrates 75 years of independence by keeping yearly milestone for each of the objectives so that if we slip on any of those objectives we can catch up in the next year.

All this is good for the country but one has to see the final shape of the policy to see what India will achieve by 2022 when it celebrates its 75th year of Independence.

For any questions or additional info, please contact:

Pravin Prashant
Editor
DigiAnalysys Media
Pravin.prashant@digianalysys.com
+91 9899004608