# Association of Competitive Telecom Operators (ACTO)



# Inputs on National Telecom Policy (NTP-2018)

## Telecom Regulatory Authority of India

### November 23, 2017 | New Delhi

# Agenda

- **Quick recap – Earlier Telecom Policies (1994, 1999, 2012)**
- **Current Trends**
- **Changes in the ICT Eco-System**
- **The issue at hand with existing policies**
- **Capturing key challenges with licensing**
- **Reform of licensing framework**
- **The Road Ahead**
- **Expectation from new policy**

# Previous Telecom Policies – An Overview

**NTP 1994 – Key Highlights**

- Laid special emphasis on affordability and access

- Allowed 49% FDI in telecom services

- Opened fixed line and cellular sector to private investment

- Recognised the importance of "fair competition"

**NTP 1999 – Key Highlights**

- Abolished duopoly in mobile sector

- Moved to revenue share from license fee. Extended term.

- Focused on rural telephony. USO Fund established.

- Announced opening of NLD & ILD in near future

# Previous Telecom Policies – An Overview *(cont..)*

**NTP 2012 – Key Highlights**

- Recognised the importance of convergence

- Unified licensing emphasized including resale of telecom services

- Separated licensing from spectrum

- Introduced new technologies – Cloud, IPv6, M2M

- Recognised the emergence of enterprise data sector – called for specific policies for its growth

# Current Trend

- Almost every sector (including telecom) is witnessing a wave of digital and technological transformation.

- Past 10 years have witnessed more technological advancements than ever. In the next five years, we'll be witnessing more technological advancements.

- Presently nearly 43% of the world is connected to the internet, enabling it to communicate and conduct business halfway across the globe.

- Today the internet and technology is integrated into every aspect of our lives. Now emerging technologies have started drastically altering the landscape in which we live.

- Widening gap between policy and pace of technological innovation would raise question as to how policy makers will manage or adapt to the explosion of technological innovations.

# Changes in the ICT Ecosystem

**THEN**                                    **NOW**

- Voice Centric                    ➡    Broadband / Data

- Fixed Line                       ➡    Wireless

- Universal Service                ➡    Internet Penetration

- Minimal Internet                 ➡    Internet Dominated

- No e-Commerce                    ➡    e-Commerce linked ecosystem

- No Apps                          ➡    Millions of Apps

- No Social Media                  ➡    Social Media prevalence

- Burdensome regulation            ➡    Permissionless innovation

# The issue at hand

- Current regulatory policies are largely written with a focus on consumer/retail markets and do not necessarily serve the needs of enterprise customer networks and services very well especially data.

- Evolving enterprise networks are becoming very flexible on the use of available access types –blurring lines between internet and private networks, even being able to use wireless access as needed.

- Technology and services are evolving at a rapid pace and service providers are going to be forced to move to a cloud based SDN architecture to remain competitive.

- The inevitable move to SDN/NFV will make the concept of deploying physical assets in a brick and mortar location obsolete as everything becomes part of a Cloud.

- Consequently, the idea of managing these assets from a physical location, hitherto always designated as a NOC, will also become impossible to achieve.

# The issue at hand...contd

- Management of such advanced virtual network infrastructure should not be tied to a physical NOC location - in a building with fixed IP addresses or country boundaries. RA policy will need to be reviewed to keep pace with the emerging technological requirements.

- The deployment of these SDN/NFV enabled advanced networks will require flexibility on deployment of a distributed or virtual NOC architecture that have automated remote management systems not tied to a physical location.

- Regulations with end goal, rather than technology / protocol specific regulations would allow service providers to comply without being burdened/forced to use a specific solution.

- The need is to promote  light touch regulatory framework with no onerous Licensing requirements being imposed  on  providers to help the services grow.

# Capturing Key Challenges with Licensing

- Prime objective:  Affordable universal service

- Rooted in voice telephony and infrastructure building

- Obsolete sections and license structure

- Costs associated with licensing - a drag on telcos

- Blurring of boundaries – scope of service redundant

- Technology neutral vs. Service specific conundrum

- Restricts network and service innovation

- Legal contract - difficult to unshackle

# Enterprise Data Services Market in India

- The Indian enterprise data services market is on a growth trajectory and is set to see a CAGR of about 11% between 2015 and 2021( As per various industry estimates).

- The enterprise data services market is a major contributor to the growth of the telecom with its innovative and technology centric service offerings bringing about digital transformation.

- Enterprise data services are a key enabler for the overall growth of the telecom sector in India including the digital India.

- Urgent need for robust policy framework and policy thrust from Government of India for bringing next generation telecom revolution in the form of data for the growth of the Indian economy.

# Changes – Technologies and Trends

- **IoT, IoE and smart home technology - self managing devices**

- **Fibre everywhere (Bharat Broadband)**

- **Augmented Reality and Virtual Reality**

- **Increased automation**

- **Emergence of Cognitive Networks and Humanized Big Data**

- **Networks transitioning to IPv6**

- **Emergence of "Everything-on-Demand"**

- **Intelligence throughout the Cloud**

- **Move to SDN Networks – software instead of hardware**

- **Weaving security and privacy into ICTs**

- **Green communications on the rise**

- **Smarter smart phones, connected sensors**

# Specific reforms in the NTP 2018

- **<u>Promote Sharing of Full Fledge infrastructure amongst various licensees.</u>**
  - In last few of years, DoT has allowed sharing of passive and some of active (limited) infrastructure
  - Still there are restrictions on the sharing of infrastructure between various telecom operators and infrastructure providers resulted in unnecessary duplication of infrastructure.
  - Policy must allow sharing the telecom infrastructure for optimum usage subjected to mutual agreement between TSPs.
- **<u>Removal of multiple levies of License Fee as it prevents services to be more affordable to the end users.</u>**
  - Current definition of AGR have multistage levy of License fees in particular to data services where input bandwidth cost is not allowed as deduction and resulting in double levy of license fees.
  - The recent rollout of Goods and Service Tax (GST) with input tax credit (ITC) benefit indicates government's intention to avoid cascading of taxes that is 'tax on tax' or levy on levy be it from center or state government.

# Software Defined Network (SDN) / Network Function Virtualization(NFV)

- Globally, an increasing rate of transition is being noticed from traditional specialty (brick and mortar) hardware based networks to Software Defined based Network and, Network Functions Virtualization techniques (SDN/NFV) and Cloud based platforms.

- NTP-2018 should emphasis early and substantial support for technological innovation.

- Pro-investment approach that reflects in the revised telecommunications regulatory framework can be considered a driver for SDN and NFV deployment.

- SDN/NFV technology is in its nascent stages and governing standards are still in flux.  Policy makers should avoid regulations which could stifle the natural growth of these new technologies.

- Beyond the traditional telecommunications landscape, SDN and NFV are likely to be instrumental in the development and roll-out of innovative services, applications, and products.

- Deployment of SDN/NFV will open the competition for more actors such as equipment manufacturers, software companies, application service providers

# Emergence of Unified Communication Systems(UCS)

- One of the benefits of collaborative enterprise, which goes a long way in reaping the benefits of innovation is brought in by converged architecture in the form of unified communications (UC) architecture being widely deployed by other economies.

- UC is the integration of real-time enterprise communication services such as instant messaging, presence information, voice, mobility features audio, web & video conferencing, fixed-mobile convergence (FMC), desktop sharing, data sharing, call control and speech recognition with non-real-time communication services such as unified messaging.

- Need to rework with policy framework to realize the full benefits of the innovative products such as UC services. Need not localize remote management to specific physical locations.  In a virtualized world, providers need freedom to move management capabilities to sites with available capacity to deal with congestion and equipment failures.

# Specific reforms expected in NTP 2018

- **Consider Policy vs. Regulatory/Compliance cost**
  - The Policy should focus to significantly reduce the compliance costs as these are to some extent regressive in nature- the burden is relatively most heavy for small businesses.
  - It should be data-driven, encourage permission less innovation. Any specific prohibition should based on empirical evidence of a specific harm.
  - The policy framework should envisage mechanism to measure the effectiveness of change in policy/regulation against it's cost of implementation

- **Seamless interconnection and full convergence**
  - NTP-2012 had mentioned for convergence of services, networks and devices but emphasis on seamless interconnection was missed out and resulted in creating bottleneck for more affordable, efficient and new services to customers.
  - The new Telecom Policy should address the needs to further aid the digital transformation and avoid fragmentation

# Specific reforms expected in NTP 2018

- **<u>Address the Regulatory Imbalance</u>**
  - Regulatory imbalance exists not only between TSPs and OTTs but also between TSPs.

- **<u>Need to Broad base the scope of services in the license</u>**
  - Need to rework with policy framework to realize the full benefits of the innovative products in the era of convergence such as Unified Communication Services.
  - Under current licenses technology follows services.
  - Need is to create a framework under which services follow technology

# Reform of licensing framework

- **Reform Other Service Provider (OSP) Registration Framework**
  - OSPs were formally recognised as an important constituent of the New Policy Framework for the telecom service sector under the NTP-1999.
  - Current OSP registration comes with a host of compliances. The regulatory requirements are often inflexible, stringent and also open to different interpretations that meeting compliance of the OSP registration becomes a challenge of its own.
  - The current regulatory system needs to be reviewed for moving towards self regulation.
  - Need to come out with simplified OSP policy, thereby encouraging further investment in this sector, which is slowly moving to countries like Philippines and Indonesia.

# The Road Ahead

- Both developed and developing world face different types of changes and possess different resources to address.

- In order to be a relevant and critical player in the future, policy makers need to rethink their design, strategy, operations, and processes in fundamental ways to ensure significant technological developments.

- The challenge is to seize the opportunity and respond in the form of a policy framework which embraces technological innovation for overall growth.

- Rapid innovation, in terms of technology and business models, together with the growing importance of economies of scale and scope, is blurring the boundaries between once-distinct markets and policy regimes.

- This fast pace of change means policies can quickly become obsolete or irrelevant.

- Move from brick and mortar networks to virtualization and software defined is inevitable.

- Migration from voice telephony and mandatory infrastructure creation to virtualization and cloud platforms.

# In summary: Broad Expectations

- Policy framework needs to be flexible to accommodate rapid changes in technologies.

- In doing so, policy framework should consider following principles:

  – Policy should achieve its objective in the most efficient way regardless of the technologies, industry structures or legacy regimes.

  – Leave scope for industry consultation to quickly adapt to market realities

  – Policy model needs to be realistic based on market conditions to support technological innovation rather than a prescriptive set of rules oblivious to market dynamics.

- Policy and regulatory environment to be flexible for embracing technological innovation and deployments of diverse and emerging technologies.

- Robust policy framework and policy thrust in the form of big ticket policy reforms from Government of India for bringing next generation telecom revolution in the form of data for the growth of the Indian economy.

- Policy framework implements reforms to enhance competition and protect consumer interest without impeding social and economic progress.

Thank you !!

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