TRAI

Report on
ACTIVITIES

(1st January 2017 to 31st December 2017)

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TELECOM REGULATORY AUTHORITY OF INDIA

Telecom Regulatory Authority of India

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(1st January 2017 to 31st December 2017)

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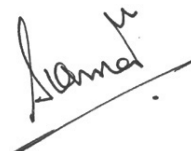Website:http://www.trai.gov.in

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PREFACE

The Telecom Regulatory Authority of India (TRAI) has been working for last 20 years with a mission to ensure that the interests of consumers and service providers are protected. Efforts have been made for creation of conducive environment for the growth of telecommunications, broadcasting & cable services sector and nurture it in a manner to enable India to play a leading role in the emerging global information society. These measures have resulted in overall benefits to the consumer in terms of choice of services, affordable tariff, better quality of services etc, as is evident from the exponential growth in these sectors.

The Authority initiated various measures to promote the growth and development of the telecom and broadcasting sectors during 2017. On the telecom front, TRAI addressed the telecommunication interconnection usage charges (IUC) and the IUC was reduced further for wireless to wireless local and national long distance calls to make the telecom service more accessible to common public. During the period, Recommendations were made to Government on "Ease of doing telecom business", "Net Neutrality", "Regulatory Framework for Internet Telephony", and "Proliferation of Broadband through public WIFI Networks" etc.

For the broadcasting sector, 2017 has been a landmark year as on 3rd March 2017, the Authority notified new & comprehensive regulatory framework for addressable systems. The new framework comprises of: (i) Interconnection Regulations; (ii) Quality of Service Regulation; and (iii) Tariff Order. In March 2017, the country achieved 100% digitization of Cable TV network. This is a stupendous achievement making India as the only large country where 100% digital cable has been achieved through mandatory regulations.

Through its regional offices located in different parts of the country, the Authority strived to increase its field level outreach by holding consumer outreach programmes (CoPs) and workshops for enhancing consumer awareness and soliciting consumer participation. These efforts were made to extend TRAI's consumer interface and address systemic issues quickly. TRAI also focused on effective implementation of its orders, directions and regulations. Close monitoring of adherence to regulatory requirements, imposition of financial disincentives for non-compliance, and institution of prosecution complaints in cases of grave misdemeanor, all resulted in better compliance and regulatory enforcement.

This report presents an abstract of the activities of the Authority during the calendar year 2017. This report is also available in the public domain for information of all stakeholders. The classification of activities has only been done to provide ease of reading. All the recommendations, regulations, orders and directions etc. referred in this report are available on the TRAI website www.trai.gov.in and can be referred to for detailed information. It is hoped that this report gives the stakeholders a broader view and better understanding of the initiatives taken by the Authority to enhance the growth of telecom and broadcasting sectors.

(Sunil Kr. Gupta)
Secretary

REPORT ON ACTIVITIES

I. CONSUMER INTERESTS

Protection of interest of the consumers is one of the important functions of TRAI. The Authority has taken several measures to improve the regulatory mechanism which contributes towards improving consumer satisfaction. TRAI also interacts with consumer organizations to increase their awareness and include their views and concerns in policy making.

Quality of Service

TRAI monitors the performance of service providers through Quarterly Performance Monitoring Reports and Point of Interconnection congestion reports submitted by service providers. For ensuring quality of service, TRAI closely monitors the performance of service providers against the quality of service benchmarks through Performance Monitoring Reports. TRAI also makes regular interactions with service providers for improving quality of service. TRAI has been engaging independent agencies for auditing and assessing quality of service and surveys are being done through independent agency to assess the Customer Perception of Service. The results of the audit and assessment of quality of service and surveys are published for the information of stakeholders. TRAI has also been imposing financial disincentive on service providers for failure to comply with the quality of service benchmarks.

The details of Show Cause Notices and Orders issued to the Telecom Service Providers are as under:

Non compliance of QoS Benchmarks:

During the year, TRAI issued 32 Show Cause Notices to Broadband Service Providers for not meeting the benchmarks of Quality of Service and 10 Show Cause Notices for delay in submission of compliance report for broadband services or for not meeting the Broadband QoS benchmarks, 10 Show Cause Notices were issued to Telecom Service Providers for not meeting the QoS benchmarks for basic services. Similarly, 33 Show Cause Notices were issued to 2G Services and 14 notices for 3G Services.

In response to the above Show cause notices during the year, 50 orders towards non-compliance of QoS Regulations and towards delay in submission of compliance reports of QoS Regulations have been issued, which are as follows:

Services	Total Amount
2G	325.0 lakhs
3G	106.5 lakhs
Broadband	30.35 lakhs
Basic	16.5 lakhs
	478.35 lakhs

Quality of Service on Metering & Billing

(a)   Show Cause Notice dated 8th May 2017 was issued to M/s Bharti Airtel Ltd. for contravention of the provisions of the Quality of Service (Code of Practice for Metering and Billing Accuracy) Regulations, 2006 (5 of 2006) dated 21st March 2006 for the financial year 2015-16.

(b)   Show Cause Notice dated 8th May 2017 was issued to M/s Vodafone for contravention of the provisions of the Quality of Service (Code of Practice for metering and Billing Accuracy) Regulations, 2006 (5 of 2006) dated 21st March 2006.

In response to above show cause notices, one financial disincentive order towards non-compliance of metering and billing regulations was issued and a financial disincentive of Rs. 73.30 lakhs was imposed.

Unsolicited commercial communication

In the month of January 2017, 14 Show Cause Notices were issued against 7 TSPs: AIRCEL, AIRTEL, BSNL, IDEA, RELIANCE, TATA, VODAFONE.

In the month of February 2017, 29 Show Cause Notices issued against 8 TSPs: AIRCEL, AIRTEL, BSNL, IDEA, RELIANCE, TATA, TELENOR, VODAFONE.

In April 2017, 23 Show Cause Notices issued against 8 TSPs: AIRCEL, AIRTEL, BSNL, IDEA, RELIANCE, TATA, TELENOR, VODAFONE.

During June 2017, 35 Show Cause Notices issued against 8 TSPs: AIRCEL, AIRTEL, BSNL, IDEA, RELIANCE, TATA, TELENOR, VODAFONE.

During November 2017, one Show Cause Notice was issued to M/s Quadrant Televentures Ltd. for non-compliance of the provisions of the Telecom Commercial Communications Customer Preference Regulations, 2010 (6 of 2010) dated 1st December 2010.

In response to the above Show Cause Notices, 26 orders of financial disincentive were issued for an amount of Rs. 281.645 lakhs.

Consultation Paper dated 14th September 2017 on "Unsolicited Commercial Communication"

TRAI on 14th September 2017 issued Consultation Paper on "Unsolicited Commercial Communication" for seeking the comments of the stakeholders.

This consultation paper deliberates following issues:

- Regulatory framework for UCC is required to be reviewed for appropriate changes in the framework or for introducing new entities or processes required.

- Analyses of present preference registration system and explores ways and means to make system more effective and efficient.

- Explores options to provide more choices to the customer for preferences.

- Registration System for related entities. It explores the possibility of registration of new entities like Content Providers, Aggregators and Intermediaries.

- Suggests introducing new entities for Header Assignments, consent recording etc.

- Issues related to UCC Complaint handling and suggests to make system more efficient e.g. by reducing time-line.

Mobile App for Monitoring UCC Complaints

TCCCP Regulations being complaint based regulation; there was a need to put in place an additional complaint mechanism which is easy to use by the consumer. Hence, TRAI has developed a improved mobile App (DND Services) for easy registration of UCC Complaints to the service providers. With this App, the consumer can also check the status of his complaint.

TRAI analytics Portal and "Myspeed" App

A new version of the TRAI MySpeed App was launched on 5th June, 2017. This new version of the App will enable TRAI to obtain test data from users in all service areas, without any action by the users. These tests would be brief, very infrequent for a specific device, free to the user and anonymous. The user may also do a test and submit the results, as before.

TRAI had also launched on 5th June, 2017, the "TRAI MyCall App" to measure the call quality through crowd sourcing. TRAI MyCall is an Android application for Crowd sourced Voice Call Quality Monitoring. The Application will help

Mobile phone users rate their experience about voice call quality in real time and help TRAI gather customer experience data along with Network data. The App is available on Google Play Store: https://play.google.com/store/apps/details?id=com.trai.mycall).The app is intuitive and user friendly. A popup requests the user to rate the call after it ends. (The frequency of the popup can be configured by the users). Caller simply selects their rating in the form of stars and indicate if the calls were made in indoor, outdoor or while travelling. Callers can also provide additional details such as noise or audio delay or mark a call – drop, if they believe that's how the call got terminated.

Mobile Number Portability

Contraventions of Mobile Number Portability Regulations

To ensure that the provisions of the MNP Regulations are not violated, TRAI monitors rejections of MNP requests by the service providers through samples collected from time to time or through complaints. If any violations are noticed during this process, financial disincentives are levied on the service provider. During the year 2017, a sum of Rs.42.16 lakhs was levied as financial disincentive on the service providers for violating the provisions of the MNP Regulations, 2009.

➢ **Direction dated 17th February 2017 to M/s Quadrant Televentures Ltd.**

M/s Quadrant Televentures Ltd (M/s QTL) informed about discontinuation of its commercial GSM services in Punjab Licensed Service Area on midnight of the 15thFebruary 2017 and requested the Authority (i) to issue suitable instructions to the MNP service providers to allow port out of customers with AON less than 90 days from QTL network; and (ii) to allow the validity of the UPC codes expiring on midnight of 15th February 2017 for another 60 days.

After detailed examination, TRAI issued direction on 17th February 2017 to M/s QTL, other TSPs and MNPSPs, to facilitate mobile number portability for subscribers of M/s QTL.

➢ **Draft "The Telecommunication Mobile Number Portability Per Port Transaction Charge and Dipping Charge (Amendment) Regulations, 2017"**

The Draft "The Telecommunication Mobile Number Portability Per Port Transaction Charge and Dipping Charge (Amendment) Regulations, 2017" was issued on 18th December, 2017 for public consultation on TRAI's website, inviting comments from the stakeholders by 29th December, 2017.

TRAI notified "The Telecommunication Mobile Number Portability Per Port Transaction Charge and Dipping Charge Regulations, 2009" on 20th November, 2009 wherein, TRAI has fixed Rs. 19/- as 'Per Port Transaction Charge' and through notification of the Telecommunication Tariff Order (Forty-Ninth Amendment) Order, 2009 dated 20th November 2009, the Authority prescribed the Per Port Transaction charge Rs. 19/- as ceiling.

As per Regulation 6(2) of the Telecommunications Mobile Number Portability per Port Transaction Charge and Dipping Charge Regulations 2009, the Authority may review and modify the Per Port Transaction Charge and Dipping Charge.

Considering the upsurge in the volume of porting requests w.e.f. 3rd July, 2015 (when pan India Mobile Number Portability was permitted) and the financial results of both the Mobile Number Portability Service Providers (MNPSPs) for the last two available years, the Authority is of the view that the present ceiling of Rs. 19/- is quite high as compared to cost and volumes of transaction involved. The Authority has, therefore, decided that the upper ceiling for per port transaction charge may be reduced as the costs of operations of MNPSPs have substantially gone down.

Draft "The Telecommunication Mobile Number Portability Per Port Transaction Charge and Dipping Charge (Amendment) Regulations, 2018" was notified on 31st January, 2018.

Consumer Protection and Empowerment

Policy initiatives of TRAI, over the years, have been to protect the interests of the consumers. TRAI recognize the importance of reaching out to the consumers not only to inform them of the measures taken to safeguard their interests, but also to obtain feedback, and to involve them in the decision-making processes of the TRAI.

In consonance with the vision of digital India, TRAI places greater reliance on technology to communicate with consumer base of over 1 billion spread across its vast geography. TRAI has launched couple of Mobile Apps last year with this vision in mind. Encouraged by their success and acceptance by consumers, TRAI has developed more consumer oriented Mobile Applications and also a new Portal and a website. Certain key features of these new technological platforms are as follows:

TRAI MyCall App

TRAI MyCall is an Android & iOS app for Crowd sourced Voice Call Quality Monitoring. The Application will help Mobile phone users rate their experience

about voice call quality in real time and help TRAI gather customer experience data along with Network data.

The app is interactive and user friendly. A pop up requests the user to rate the call after it ends. (The frequency of the popup can be configured by the users.)

Callers simply select their rating in the form of stars and indicate if the calls were made in indoor, outdoor or while travelling. Callers can also provide additional details such as noise or audio delay or mark a call-drop, if they believe that's how the call got terminated.

TRAI <u>MySpeed App [Auto Test]</u>

The MySpeed App is popular App on the Play Store with more than a million downloads. It allows customers to measure 3G/4G cellular data speed and send the results to TRAI. The app does not collect any personal user information.

The new version of TRAI MySpeed App being launched will enable TRAI to obtain test-data form users in all service areas, without any action by the users. These tests would be brief, very infrequent for a specific device, free to the user and anonymous. The user may also do a test and submit the results, as before.

The crowd sourced data so collected can be viewed in aggregated form on the interactive map-based portal (www.myspeed.trai.gov.in).

DND App

DND (Do Not Disturb) Services App enables smart phone users to register their mobile number under DND to avoid Unsolicited Commercial Communication (UCC)/ Telemarketing Calls/SMS. This is based on TRAI, "Telecom Commercial Communication Customer Preference Regulations, 2010". The App is available on Google Play Store.

The new release (built ground up) has the following additional features:

- An intelligent spam detection engine (for SMS only) to assist the subscriber in reporting

- Crowdsourcing of data about offending messages and calls to speed up detection of unregistered telemarketers

- Updates about action taken on complaints within the App

- Easier interface and set up

Service Providers Portal

TRAI also regulates the broadcasting and cable sector, which consists of large number of service providers including broadcasters, DTH operators, HIT operators, multi-system operators and local cable operators. The regulatory framework for broadcasting and cable services prescribed by TRAI stipulates various reporting requirements by these service providers. In order to effectively communicate and educate service providers about the regulatory framework, this Service Providers Portal has been launched. This portal will harness the strength of ICT to create consolidated database of service providers of Broadcasting and Cable Sector.

New TRAI website [www.trai.gov.in]

TRAI periodically update its website in terms of technologies and features. Most importantly, the website enables an effective, public consultation process for the regulatory actions of the TRAI. It also provides authentic information on Policies, Legislations & Statutes, Statistics, Analysis &Trends, etc. relating to Telecom and Broadcasting Sectors in India, to the public, stakeholders, researchers, and other interested parties from within the country and elsewhere. The new website has the following additional features:

- Free on-line subscription of TRAI releases
- Online submission of comments on TRAI consultation papers
- Blog with facility for registered users to comment
- Publishes information about upcoming events
- Online Registration for participating in Open House Discussion

Retail and Wholesale Tariffs

TRAI protects interests of consumers through Tariff Regulation and determines the rates at which telecom and broadcasting services are offered to consumers. Tariff regulation is carried out to ensure clarity and transparency in tariff offers to consumers and fixing of tariff where the market fails to provide competitive tariffs. In view of the intense competition in the telecom sector, the Authority has exercised forbearance vis-à-vis the tariff for most telecom services. The following tariffs related activities were undertaken during the period:

➢ **Telecommunication (Broadcasting and Cable) Services (Eighth) (Addressable Systems) Tariff Order, 2017 dated 3rd March 2017**

TRAI on 3rd March 2017 notified Telecommunication (Broadcasting and Cable) Services (Eighth) (Addressable Systems) Tariff Order, 2017.The salient features of the Tariff Order were:

- Broadcaster to declare maximum retail price (MRP) (excluding taxes), per month, of their a-la-carte pay channels for subscribers.

- A Broadcaster can also offer bouquets for subscribers. However, MRP of such bouquets of pay channels will not be less than 85% of the sum of maximum retail price of the a-la-carte pay channels forming part of that bouquet.

- Separate bouquet for pay channels and free-to-air channels.

- Charges payable by a subscriber for distribution network capacity and channels have been separated.

- The distribution network capacity required for initial one hundred Standard Definition (SD) channels can be availed by a subscriber by paying an amount, not exceeding, Rs. 130/- (excluding taxes) per month to the distributor of TV channels.

- Within the capacity of 100 SD channels, apart from the channels to be mandatorily provided to subscribers as notified by the Central Government, a subscriber will be free to choose any free-to-air channel, pay channel, or bouquet of pay channels offered by the broadcasters or bouquet of pay channels offered by the distributor of television channels or bouquet of free-to-air channels offered by the distributor of television channels or a combination thereof.

- No separate charges, other than the Network Capacity Fee, to be paid by the subscribers for subscribing to free-to-air channels or bouquet of free-to-air channels.

- The additional capacity, beyond initial one hundred channels capacity, can be availed by a subscriber in the slabs of 25 SD channels each, by paying an amount not exceeding Rs. 20/- per such slab, excluding taxes, per month.

- Every distributor of television channels shall offer all channels available on its network to all subscribers on a-la-carte basis.

- Every distributor of television channels shall declare distributor retail price of each pay channel and bouquet of pay channels payable by a subscriber:

- A subscriber can choose a-la-carte channels of its choice.

- Distributors of television channels are permitted to form bouquets from a-la-carte pay channels and bouquet of pay channels shall not be less than 85% of the sum of distributor retails prices of the a-la-carte pay channels and bouquets of pay channels of broadcasters forming part of that bouquet.

- A subscriber has to pay separate charges, other than the Network Capacity fee, for subscribing to pay channels or bouquet of pay channels.

- Distributors of television channels have to offer at least one bouquet, referred to as basic service tier, of 100 free-to-air channels including all the mandatorily channels to be provided to the subscribers as notified by the Central Government. This bouquet will be one of the options available for subscription to customers. It will be the subscriber who will be free to exercise his option.

- Any pay channel having –la-carte MRP of more than Rs 19/- per month (Excluding Taxes) shall not form part of any bouquet either by the broadcaster or by the distributor of television channels.

- Any bouquet formed either by the broadcaster or by the distributor of television channels shall not contain both HD and SD variants of the same channel.

➢ **Telecommunication (Broadcasting and Cable) Services (Eighth) (Addressable Systems) Tariff (Amendment) Order, 2017 dated 30th March 2017**

TRAI on 30th March 2017 notified Telecommunication (Broadcasting and Cable) Services (Eighth) (Addressable Systems) Tariff (Amendment) Order, 2017. TRAI issued the Telecommunication (Broadcasting and Cable) Services (Eighth) (Addressable Systems) Tariff Order, 2017 on 3rd March 2017 to provide the tariff framework applicable to broadcasting services relating to television provided to subscribers, through addressable systems throughout the territory of India. Clause 3 of the Tariff Order was required to be implemented after thirty days from the date of its publication in the Official Gazette.

TRAI received representations from some stakeholders wherein they have requested to the Authority to remove the ambiguity with regard to schedule of declaration of nature and MRP of may channels as per clause 3 of the Telecommunication (Broadcasting and Cable) Services (Eighth) (Addressable Systems) Tariff Order, 2017 and publication of RIO as per

the Telecommunication (Broadcasting and Cable) Services (Addressable Systems) Interconnection Regulations, 2017.

In order to harmonize the provisions relating to implementation of clause 3 of the Tariff Order and regulation 7(1) of the Telecommunication (Broadcasting and Cable) Services (Addressable Systems) Interconnection Regulations, 2017, TRAI has amended the Telecommunication (Broadcasting and Cable) Services (Eighth) (Addressable Systems) Tariff Order, 2017.

Consumer Advocacy and Education

TRAI has undertaken media campaigns on several important issues of consumer interest for creating awareness among the consumers. Taking forward its media campaign, advertisements have been published on issues like 'DND 2.0 App', 'Tower Fraud' and 'Myspeed App' on 14th November 2017, 19th November 2017 and 26th November 2017 respectively in leading newspapers in different languages across the Country. This apart, Radio spots/Jingles on "Mycall App" has been aired on FM Radio in several cities in different regional languages from 21-27, November, 2017.

Consumer Outreach Programmes (CoP)

During the year 2017, TRAI organised/scheduled 79 Consumer Outreach Programmes (CoPs) across the country to enhance Consumer awareness about various initiatives taken by TRAI to safeguard consumer interests. List of CoPs organized/ scheduled by TRAI is annexed at the end of this report.

Two Regional Workshops on capacity building of Consumer Advocacy Groups (CAGs) and consumer education were also organized at Bhopal and Jodhpur on 8th September 2017 and 22nd September 2017 respectively. These workshops are aimed at empowering CAGs with adequate knowledge about major developments happening in the sector and about TRAI's consumer centric initiatives. These workshops also serve as an interface amongst CAGs, Telecom Service providers and TRAI to share and exchange information about the best practices being followed by others towards effective implementation and improving the consumer service delivery. Dedicated sessions on two important issues viz "*E-KYC verification of mobile subscribers*" and "*Digital Payment system*' wer eorganized during these workshops in association with COAI, NPCI and RBI to educate CAGs and other stakeholders on these two matters.

A Seminar on "**Smart City & IoT**" was also organized at Vishakhapatnam on 27th October 2017 to deliberate on various aspects of the subject. Seminar

was attended by participants from reputed PSUs, Navy academic institutions and representatives from various universities etc. Implementers of smart cities (like L&T, Fluent Grid), Government bodies, Utility Departments (Electricity Distribution, water board, civic authorities), major Telecom Service Providers also participated in the program.

The speakers in the seminar shared rich insights to the gathering and deliberated on various issue like parameters for evaluation and selection of smart cities, implementation strategy, key challenges in the execution, protocols of IoT, challenges of security in wireless networks, integrated water management system (IWM), IoT building blocks, IoT enablement stack etc. Issues like key aspects of smart cities, size of IoT in the implementation of 100 smart cities by GOI were also touched upon by the speakers. A panel discussion on "ICT infra for building quality and reliable smart city & IoT" was arranged with all the speakers providing the opportunity to the participants to interact actively with the speakers.

Registration of Consumer Advocacy Groups

Consumer advocacy Groups (CAGs) registered with TRAI co-ordinate and articulate consumer responses to TRAI's activities to assist TRAI in consumer education and to work for protection and propagation of the interests of the consumers. Regional Offices of TRAI are interacting with the CAGs, coordinating their activities and helping them to sort out consumer related issues with the Service Providers. CAGs are actively participating in the CoPs and workshops organized in their respective areas. Six new CAGs have been registered during the period.

Interconnection

Interconnection of various telecommunication networks facilitates the customer of different networks to be connected with each other without subscribing to the different networks. During the report period, the Authority has taken various measures to enhance interconnection mechanisms as detailed below:

➢ **Telecommunication (Broadcasting and Cable) Services Interconnection (Addressable Systems) Regulations, 2017 dated 3rd March 2017**

TRAI, on 3rd March 2017, released the Telecommunication (Broadcasting and Cable) Services Interconnection (Addressable Systems) Regulations, 2017, which will regulate interconnection arrangements for broadcasting services relating to television provided through Addressable Systems. The salient features of these regulations were as follows: -

- A common regulatory framework for all types of TV distribution platforms providing services through Addressable Systems.

- Availability of signals to service providers on non-exclusive and non-discriminatory basis.

- Ensuring access to the distribution networks for re-transmission of TV channels on all types of distribution platforms on non-exclusive and non-discriminatory basis.

- The Broadcasters and Distributors will devise and design their reference interconnection offers (RIOs) for providing signals of TV channels and access to the distribution networks respectively, in conformance with the regulations and the tariff orders notified by the Authority, and declare the same.

- Time bound provisioning of signals of TV channels & access to the network on the basis of transparent RIO framework.

- Interconnection agreements to be signed between broadcasters and distributors on the basis of RIO.

- Prescription of ceiling on maximum discount which can be offered by a broadcaster to a distributor to ensure level playing field and to make sure that non-realistic prices of a-la-carte channels and bouquets are not declared by broadcasters for subscribers.

- Prescription of ceiling on the rate of carriage fee declared by a DPO, with ceiling on maximum discount which can be offered to a broadcaster on the rate of carriage fee to ensure level playing field and to make sure that non-realistic prices of carriage fee are not declared by distributors to broadcasters.

- Prescription of a framework for placement of TV channels in the Electronic Programme Guide (EPG).

- Prescription of a framework for subscription reports & audits.

The Authority was of the view that these regulations are instrumental in improving transparency, efficiency & equity across the value chain. This would also ensure a level playing field for all service providers and would be helpful in lowering the entry barriers for new service providers, bringing in more competition in the sector and thereby more choices to the consumers.

II. RECOMMENDATIONS

Recommendations were made to the Government on diverse subjects including management of scarcer sources such as spectrum, Interconnection Cloud Services, Net Neutrality and Improving Telecom Services. Under this mandate, TRAI took action on the following matters during the period:

TELECOM SECTOR

E-KYC

➢ **Recommendations dated 20th January 2017 on "Permitting outstation Aadhaar Card Holders for e-KYC of Mobile Subscribers" and Recommendations dated 20thJanuary 2017 on "Verification of existing Mobile Subscribers through Aadhaar based e-KYC services"**

TRAI on 6thJanuary 2016 recommended acceptance and adoption of Aadhaar based e-KYC service along with Aadhaar based e-Sign as a valid alternative process. Subsequently, on 16th August 2016, DoT permitted the use of Aadhaar based e-KYC service of Unique Identity Authority of India (UIDAI) for issuing mobile connections to customers. These instructions were applicable only for issue of new SIM cards but excluded the huge existing mobile subscriber base from the ambit of e-KYC. Further, use of e-KYC process was not permitted for outstation customers by DoT.

The existing paper-based KYC process is not robust enough and the possibility of significant number of working SIMs, which may have been acquired on fake/forged identity, cannot be fully ruled out. The Authority has received several cases from State Police (crime branch) wherein it has been found that hundreds of SIM cards have been obtained on fake documents. The existence of such SIM cards poses a real security challenge. It is essential that not only the new subscribers are enrolled through e-KYC process, but the existing subscriber base should also be verified through e-KYC process in a phased manner within a defined timeframe. Further, barring the e-KYC process for outstation customers results in artificial restriction and avoidable inconvenience.

To overcome these challenges, TRAI sent its recommendations to DoT on 20thJanuary 2017. The key recommendations are:

- DoT may work with the TSPs, to evolve a framework to verify the existing mobile subscribers through Aadhaar based e-KYC services in a phased manner and within a defined timeframe. However, this process should

be optional to the service providers as well as mobile subscribers. The subscribers may have to be given some sops in terms of free talk-time or data to encourage them to undergo the e-KYC process.

Aadhaar based e-KYC should be permitted for outstation customers also at any place within the service area.

These recommendations have also been placed on TRAI's website www.trai. gov.in.

➢ **Recommendations dated 16th May, 2017 on "Adoption of e-KYC Service UIDAI for Fixed-line, Internet and Broadband Connections"**

TRAI had come out with its Recommendations on "Adoption of e-KYC Service UADAI for Fixed-line, Internet and Broadband Connections" on 16th May, 2017. DoT has prescribed Customer Application Form (CAF) for verification of new mobile connection using e-KYC services and for re-verification of existing mobile subscribers. So far this requirement has not been prescribed for the customers of Internet, Broadband as well as Fixed line.

As the Aadhar based e-KYC authentication is not only fast and reliable but may also result in substantial savings for the industry, the Authority recommends laying down an appropriate format (CAF) for verification/re-verification of all subscribers (including fixed line) availing Internet and Broadband services and adoption of Aadhar based e-KYC service, similar to mobile connections, for their verification.

In-Building Access

➢ **Recommendations dated 20th January 2017 on "In-Building Access by Telecom Service Providers"**

In order to improve in-building coverage, installation of in-building solutions (IBS) for wireless services and laying of cables such as copper cables, optical fibre cables (OFC), LAN cables etc. is required, execution of which requires permission of the owner of the building. However, it is seen that generally restrictive practices are adopted by building owners and selective TSP only given the access. Such practices not only limit competition, it also leaves no choice to consumers except to avail services from the TSP with whom the contract is done.

In order to deal with the issue, the Authority, suo-motu, brought out its recommendations on "In-Building Access by Telecom Service Providers" on 20thJanuary 2017. In these recommendations, the Authority, inter-alia,

recommended that TSPs/IP-Is should be mandated to share the in-building infrastructure with other TSPs, in large public places, commercial complexes and residential complexes in transparent, fair and non-discriminatory manner. Indulgence into exclusive contract with building owners prohibiting access to other TSPs may be treated as violation of the license agreement/ registration. The Authority also recommended that suitable provisions for the creation of Common Telecom Infrastructure (CTI) inside the building should form part of the Model Building Bye-Laws and that the access to building including CTI facilities be available to the TSPs on a fair, transparent and non-discriminatory manner and minimum three TSPs/IP-Is should have presence in the building.

These recommendations have been placed on TRAI's website www.trai.gov.in.

Spectrum

➢ **Recommendations dated 7th March 2017 on "Spectrum Usage Charges and Presumptive Adjusted Gross Revenue for Internet Service Providers and Commercial Very Small Aperture Terminal Service Providers"**

Department of Telecommunications vide letter dated 25th June, 2014 sought TRAI's recommendations on rates for SUC, percentage of AGR including minimum AGR, allied issues like schedule of payment, charging of interest, penalty and Financial Bank Guarantee (FBG) pertaining to ISP licence. Also, floor level (minimum) AGR based on the amount of spectrum held by commercial VSAT operators.

In this regard, a consultation paper was issued on 19th August 2016 and an Open House Discussion was held on 19th January 2017 with the stakeholders. Based on the analysis of the comments received from the stakeholders, the Authority gave recommendations on "Spectrum Usage Charges and Presumptive Adjusted Gross Revenue for Internet Service Providers and Commercial Very Small Aperture Terminal Service Providers" on 7th March 2017. The salient features of the recommendations are given below:

• The existing system of spectrum assignment on location/link-by-link basis on administrative basis to ISP licensees in the specified bands (viz 2.7 GHz, 3.3 GHz, 5.7 GHz and 10.5 GHz) to continue.

• Minimum presumptive AGR should not be made applicable to ISP licensees.

- SUC should not be levied as percentage of AGR and existing formula based mechanism of charging SUC to continue and also the existing system of payment of SUC charges on annual basis by ISP licensees should continue.

- The interest for delayed payment of SUC by ISP licensees should be 2% above the SBI PLR rate existing on the beginning of the relevant financial year and there should be no requirement of FBG for ISP licensee in respect of formula based SUC payable.

- The minimum presumptive AGR should not be made applicable to commercial VSAT license.

- The SUC should not be more than 1% of AGR irrespective of the data rate.

- DoT may take up with DoS to evolve a system where the VSAT licensees are not made to run from pillar to post to get their services activated. The clock should start from the day the bandwidth is allotted by DoS and DoT should allot frequency within 3 months of allotment of spectrum by DoS. The two departments may also explore the possibility of implementing an on-line application for automating the whole process to bring in transparency.

- DoT should make arrangement to accept online payment of financial levies /dues such as LF, SUC and other fees that are paid by the licensees for obtaining licence/ approval/ clearance/ issue of NOC from DoT.

- DoT should put in place a comprehensive, integrated on-line system that acts as a single window clearance for the allocation/clearances/ issuance for approval/clearance/issue of NOC and other permissions to the licensees.

> **TRAI's response dated 15th December 2017 to DoT's reference seeking TRAI comments on Amendment to Spectrum Trading Guidelines dated 12th October 2015**

DoT, through its letter dated 24th November 2017, requested the Authority to submit its considered opinion on the issue whether the entire amount received from the Spectrum Trading should be part of AGR or only the profit/ gain arising out of Spectrum Trade should be part of AGR for charging the Licence Fee/SUC considering the previous TRAI's recommendations dated 28th January 2014 as well as the response back dated 21st May 2015 and the IMG report dated 31st August 2017.

After examining the issues, TRAI sent its response to the aforementioned DoT's reference on 15th December 2017.

Grievance Redressal

➢ **Recommendations dated 10th March 2017 on "Complaints/Grievance Redressal in Telecom Sector"**

With the objective of improving the existing grievance redressal mechanism so that consumers grievances are handled in a more efficient, transparent and cost effective manner, TRAI suo-moto, started a consultation process on "Complaints/Grievance Redressal in Telecom Sector". A Consultation Paper was issued on 28thJuly, 2016. An Open House Discussions (OHD) was organized on the subject on 26th October 2016.

The Authority after considering the prevailing legal and regulatory framework, the current grievance redressal system and the views/suggestions of the stakeholders issued Recommendations on the matter on 10th March, 2017.

The salient features of the recommendations submitted to Government are as follows:

- There is a need for an independent and appropriately empowered structure to be created for resolution of grievances of telecom consumers. An Office of Telecom Ombudsman needs to be established.

- The Office of Telecom Ombudsman can be established under rules framed by the Central Government, similar to the institution of the insurance ombudsman under the Redress of Public Grievances Rules, 1998 (RPG Rules). Alternatively, the Government can choose to create the ombudsman office through a legislation to be passed by the Parliament.

- A three stage grievance redressal mechanism for telecom sector is proposed as follows:

  ○ Resolution by Telecom Service Providers [TSPs]
  ○ Resolution by Consumer Grievance Redressal Forum [CGRF]
  ○ Determination by Telecom Ombudsman

- The consumer should in the first instance approach TSP to seek a solution. It will be the duty of the TSP to look into the request and address the consumer's concerns within the time frames stipulated by the Authority.

- In case the TSP fails to resolve the complaint in a manner that is satisfactory to the consumer; or does not provide a response; or fails to do so within the prescribed time lines laid down by TRAI, the customer will have the option to seek further redress through the new independent mechanism recommended by the Authority. This will consist of a process of a resolution based on fact finding by CGRF, followed by, if necessitated, determination by the Telecom Ombudsman.

- Only such complaints that relate to clearly identifiable and measurable rights vested with the individual subscriber flowing out of the contract of service with the TSP, Rules/Regulations/Requirements laid down by the Authority or the Licensor, which have a bearing on the relationship between the TSP and the individual consumer may qualify.

- CGRFs are proposed at Licensed Service Areas/State level by leveraging existing field formations of DoT like Public Grievance [PG] Cells, Telecom Enforcement, Resource and Monitoring Cells [TERM] Cells etc that already has a reasonable presence across the country. The CGRF shall be primarily responsible for settling the facts, facilitating mediation and will also offer a solution if the parties themselves cannot arrive at a settlement.

- Depending on the complexity, facts and circumstances of any particular case, CGRF may choose to seek assistance or guidance from other groups or institutions or independent experts who are well placed to represent consumer interests. This may include CAGs empanelled by TRAI, Central/State Government Departments, legal aid centers, National and State Consumer Helpline Centers, premier institutes in the field of law like National School of Law, and various other bodies that may be identified by the Central or the State Governments for this purpose.

- If not satisfied with the process at the level of CGRF, the consumer may choose to proceed for determination by the Ombudsman. Ombudsman will be required to act in accordance with the principles of natural justice. It will have the power to award compensation to the consumer, award costs and issue directions to the TSP for the performance of specific obligations. The decision of the Ombudsman will be final and binding on the parties.

- In order to function as an effective Body, the ombudsman should have the power to levy penalties on the TSPs.

- The ombudsman will have offices at national levels and sub-national levels covering each State.

- The new system should be based on technology-driven solutions that can provide redress remotely to consumers using their phones, Internet etc. TSPs will be required to maintain video calling or similar facilities at their local offices, which can be used by the consumer to interact with the CGRF or Ombudsman's office, in case it is required.

- A centralized web based system to be put in place which will allow flow of information from each level of the grievance redressal mechanism to the Ombudsman, thereby obviating the need for the same information to be provided again at various stages.

- A portion of the existing, not in addition, license fee is recommended as the funding mechanism for the CGRF and Ombudsman. In addition to this fixed fee there will be a variable component payable by each TSP depending on the volume of complaints being filed against it and admitted before the Ombudsman's office.

Broadband

➢ **Recommendations dated 9th March, 2017 on "Proliferation of Broadband through Public Wi-Fi Networks"**

TRAI had come out with its Recommendations on "Proliferation of Broadband through Public Wi-fi Networks on 9th March, 2017. The salient features are as follows:

- DoT may amend the terms of the ISP license to allow for sharing of active infrastructure, in line with the Unified License (UL).

- DoT may re-visit TRAI's recommendations and consider de-licensing spectrum in the 5.725 – 5.825 GHz spectrum band for outdoor usage.

- Subject to the DoT's agreement with the Authority's interpretation, the DoT issue a clarification in respect of Clause (1)(xxii) of the UL VNO Guidelines, specifically clarifying that there is no exclusivity requirement upon UL VNO licensees for internet services.

- Existing requirement of authentication through OTP for each instances of access may be done away with. Authentication through eKYC, eCAF and other electronic modes be allowed for the purposes of KYC obligations. In consultation with the security agencies, DoT may consider authentication by MAC ID of the device or through a mobile APP which stores eKYC data of the subscriber and automatically authenticate the subscriber.

- The import duty applicable upon Wi-Fi access point equipment be revisited in coordination with the Ministry of Commerce. This will reduce cost of providing Wi-Fi service in the country leading to proliferation of broadband services.

- A new framework should be put in place for setting up of Public Data Offices (PDOs). Under this framework, PDOs in agreement with Public Data Offices Aggregators (PDOAs), should be allowed to provide public Wi-Fi services. This will not only increase number of public hotspots but also make internet service more affordable in the country.

- PDOAs may be allowed to provide public Wi-Fi services without obtaining any specific license for the purpose. However, they would be subject to specific registration requirements (prescribed by the DoT) which will include obligations to ensure that e-KYC, authentication and record-keeping requirements (for customers, devices and PDOs enlisted with the PDOAs) are fulfilled by the PDOAs. This will encourage village level entrepreneurship and provide strong employment opportunities, especially in rural areas.

- Authentication through eKYC, eCAF and other electronic modes be allowed for the purposes of KYC obligations cast upon PDOAs. This would enable PDOAs to obtain eKYC information and automatically authenticate the user device based on parameters such as the device's MAC ID or through a mobile APP, which will store data required for authentication of the subscriber. This will further improve user experience.

- PDOAs be allowed to enter into agreements with third party application/ service providers for the purposes of managing authentication and payment processes. Appropriate guidelines may be issued to ensure that customer consent is obtained, and other issues surrounding privacy and protection of sensitive personal information are addressed. This will encourage innovation in authentication and payment processes resulting in ease in access of the Wi-Fi services.

Licensing Agreements

➢ **Authority's response to Department of Telecommunications' reference dated 5th April, 2017 on the Authority's Recommendations dated 21st October 2016 on "Violation of the provisions of License agreements and the Standards of Quality of Service of Basic Telephone Service**

(Wireline) and Cellular Mobile Telephone Service Regulations, 2009 by M/s Bharti Airtel Limited, M/s Vodafone India Limited and M/s Idea Cellular Limited.

The Department of Telecommunication on 5th April, 2017 has referred back the Authority's Recommendations dated 21st October 2016 on "Violation of the provisions of License agreements and the Standards of Quality of Service of Basic Telephone Service (Wireline) and Cellular Mobile Telephone Service Regulations, 2009 by M/s Bharti Airtel Limited, M/s Vodafone India Limited and M/s Idea Cellular Limited to provide its reconsidered opinion in the light of comments/observations of the DoT.

The Authority, after due deliberations has finalized its response and forwarded the same to DoT on 24th May 2017.

➢ **Additional Recommendations dated 14th June 2017 on "Sale/Rent of International Roaming SIM Cards/Global Calling Cards of foreign operators in India"**

The Department of Telecommunication on 10th March, 2017 requested the Authority to intimate, if any, additional recommendations on 'Sale/Rent of International Roaming SIM Cards/Global Calling Cards of foreign operators in India' which was forwarded to DoT on 9th May, 2016, are planned to be submitted.

The Authority, after due deliberations has finalized additional Recommendations on 'Sale/Rent of International Roaming SIM Cards/ Global Calling Cards of foreign operators in India' and forwarded the same to DoT on 14th June 2017.

Net Neutrality

➢ **Recommendations dated 28thNovember 2017 on "Net Neutrality"**

The Authority issued a Consultation Paper on "Net Neutrality" on 4th January 2017 seeking the comments of the stakeholders. In view of the complexity of the subject, two stage-consultation processes were undertaken on Net Neutrality. In the first stage, a pre-consultation was initiated with a view to identify the relevant issues in all the areas on which the Department of Telecommunications (DoT) had sought TRAI's recommendations. In the second stage, TRAI after considering all relevant issues identified during the pre-consultation process issued a comprehensive consultation paper. Based on the feedbacks received and internal analysis of the issues, the Authority forwarded its recommendations to the Government on "Net Neutrality" on

28th November 2017. Some of the main features of recommendations are mentioned below: -

- The licensing terms should be amplified to provide explicit restrictions on any sort of discrimination in Internet access based on the content being accessed, the protocols being used or the user equipment being deployed. Content would include all content, applications, services and any other data, including its end-point information, that can be accessed or transmitted over the Internet.

- The "discriminatory treatment" in the context of treatment of content would include any form of discrimination, restriction or interference in the treatment of content, including practices like blocking, degrading, slowing down or granting preferential speeds or treatment to any content.

- The service providers should be restricted from entering into any arrangement, agreement or contract, by whatever name called, with any person, natural or legal, that has the effect of discriminatory treatment based on content, sender or receiver, protocols or user equipment.

- The scope of the proposed principles on non-discriminatory treatment applies specifically to "Internet Access Services", which are generally available to the public.

- In order to remove any ambiguity, Internet Access Services have been defined.

- Specialised services, i.e. services other than Internet Access Services, which are optimised for specific content, protocols or user equipment, and where the optimisation is necessary in order to meet specific quality of service requirements shall be exempted from the principles of discriminatory treatment.

- DoT may identify specialised services. However, specialised services may be offered by the service provider only if they are not usable (or offered) as a replacement for Internet Access Services; and the provision of such services is not detrimental to the availability and overall quality of Internet Access Services.

- Internet of Things (IoT), as a class of services, are not excluded from the scope of the restrictions on non-discriminatory treatment. However, critical IoT services, which may be identified by DoT, and which satisfy the definition of specialised services, would be automatically excluded.

- Content Delivery Networks (CDNs), which enable a Telecom Service Provider (TSP) to deliver content within its network without going through the public Internet, are exempted from the scope of any restrictions on non-discriminatory treatment.

- The Internet Access Service Providers may take reasonable measurements for traffic management, provided the same are proportionate, transient, and transparent. They may also take reasonable measures to preserve integrity and security of network, for provision of Emergency Services, implementation of an order of the court or direction of the Government, or in pursuance of an international treaty.

- TSPs shall be required to declare their Traffic Management Practices (TMP), as and when deployed and the impact it may have had on the users. The disclosure requirements shall also include information about specialised services, direct or indirect arrangements entered into by them.

- For monitoring and investigation of violations, a collaborative mechanism has been recommended to be established in the form of a multi-stakeholder body comprising members representing different categories of TSPs and ISPs, large and small content providers, representatives from research and academia, civil society organisations and consumer representatives. This body, which would be responsible for developing technical standards pertaining to monitoring of TMPs and enforcement of the principles on non-discriminatory treatment and making appropriate recommendations to the Authority. The Government/ Authority shall reserve the right to seek any information from the committee, investigate its conduct to ensure transparency and fair treatment to all its members, and issue appropriate regulations, directions, orders or guidelines, as and when needed.

- These recommendations are being made without prejudice to the powers and functions conferred upon the Authority as per TRAI Act, 1997.Therefore, pending the consideration of these recommendations, the Authority may regulate the manner in which the current licensing requirement of unrestricted access to all content on the Internet is implemented and enforced. The Authority may also frame regulations or take other measures, as and when deemed necessary.

Captive VSAT CUG POLICY ISSUES

➢ **Recommendations dated 18ᵗʰ July 2017 on "Captive VSAT CUG Policy issues"**

TRAI received a reference from the Department of Telecommunications (DoT) on dated 17th March, 2016. Through the reference DoT had sought the recommendations of TRAI on minimum License Fee in respect of 2nd Hub in Captive VSAT Closed User Group (CUG) network and terms and conditions of Captive VSAT CUG License.

After receiving the reference, the Authority consulted some of the Captive VSAT licensees who raised some additional issues related to applicability of Royalty charges and procedural delay in approvals in augmentation of bandwidth for Captive VSAT. The Authority included these issues also in the consultation, so as to provide comprehensive recommendations on issues concerning Captive VSAT licensees.

The Authority issued a Consultation Paper on "Captive VSAT CUG Policy issues" on 28th October, 2016, seeking comments of the stakeholders.

The Authority has formulated its recommendations on "Captive VSAT CUG Policy issues" and sent to the DoT on 18th July 2017based on inputs received from the stakeholders, views expressed during the OHD and its own internal analysis. The salient features of the recommendations are:

- Levy of separate licence fee for 2nd hub for Captive VSAT should be done away with;

- Present annual license fee at @ Rs. 10,000/- per VSAT terminal as being charged presently for VSAT terminals connected to first Hub shall be maintained for both the first and the second Hub and without levy of any minimum licence fee.

- The Entry Fee for Captive VSAT license may be reduced by 50% i.e. from Rs. 30 Lakh to Rs. 15 Lakh.

- FBG equivalent to License Fee for two quarters may be charged from Captive VSAT licensee.

- Royalty charge for Captive VSAT terminals should be calculated in line with the formula given in DoT circular dated 22nd March 2012. In the formula for calculation of Royalty charge, annual royalty factor needs to be multiplied by bandwidth factor and number of carriers assigned only.

- There is no justification for charging additional 25% amount as reuse factor for number of VSATs more than the number of carriers. These charges should be eliminated for calculation of Royalty

charges. Accordingly, DoT may issue necessary clarification in this regard.

- In case delay in allotment of corresponding ground segment frequency by WPC extend beyond 3 months from the date of allotment of space segment by DoS, the space segment charges payable by licensee to DoS may be borne by DoT till the time allocations/ clearances by WPC/ DoT/ NOCC are completed.

- Procedure for augmentation of bandwidth for Captive VSAT licensee shall be at par with those of Commercial VSAT, NLD, ILD licensees. Augmentation should be cleared at the level of NOCC and WPC only (not at the level of Apex Committee).

- Validity of WOL for Captive VSAT licensee should be for a period of 5 years at a time, instead of annual at present.

- The restriction/Cap of 512Kbps/2Mbps per VSAT as maximum data rates for Captive VSAT should be revised upwardly and accordingly DoT/TEC may revise its specifications.

Machine-to-Machine (M2M) Communications

➢ **Recommendations on "Spectrum, Roaming and QoS related requirements in Machine-to-Machine (M2M) Communications" dated 5th September 2017**

Machine-to-Machine (M2M) communications is the basis for automated information exchange between machines and can impact various industry verticals like Smart City, Smart Grid, Smart Water, Smart Transportation, Smart Health etc. Government of India has recognized the potential of M2M and emphasized the same in the National Telecom Policy 2012.

TRAI received a reference from Department of Telecommunications on 5th January 2016. DoT sought the recommendations of TRAI on three aspects related to M2M communications:

a) M2M Spectrum Requirements
b) M2M Roaming Requirements
c) Quality of Service in M2M Services

After due consultation process, the TRAI on 5th September 2017 issued its recommendations on "Spectrum, Roaming and QoS related requirements in Machine-to-Machine (M2M) communications". The salient features of these recommendations are:

Licensing and Spectrum related aspects:

- All access service providers' viz. CMTS, UASL, UL (AS) and UL holders using licensed access spectrum shall be allowed to provide M2M connectivity within the area of their existing authorizations. Also, all Basic Services licensees and ISP licensees shall be allowed to provide M2M connectivity, including on unlicensed band, within the area of their existing authorizations, barring M2M cellular services. DoT may suitably amend the license conditions in respective licenses.

- All UL (VNO) holders shall also accordingly be allowed to provide M2M connectivity as authorized in their existing authorizations. DoT may suitably amend the license condition of UL (VNO) Connectivity provider using LPWAN technologies operating in unlicensed spectrum should be covered under licensing through a new authorization under UL namely UL (M2M). Such licensees shall be allowed to bid for licensed spectrum to provide exclusively M2M services.

- UL (M2M) authorization shall comprise of three categories i.e. UL (M2M) Category-A-National area, UL (M2M) Category-B -Telecom Circle/Metro area, UL (M2M) Category-C-SSA/District area.

- Amount payable in the form of Entry Fee, PBG, FBG for obtaining authorizations under UL (M2M) Category 'A' for National area, UL (M2M) Category 'B' for Telecom circle/ Metro area and UL (M2M) Category 'C' for SSA area, should be at par with the existing provisions in UL for ISP category.

- Government, through DoT, should identify critical services m M2M sector and these services should be mandated to be provided only by connectivity providers using licensed spectrum.

- Regulatory authorities whose sectors will get impacted by M2M communications like TRAI, Central Drug Standards Control Organization, National Highways Authority of India, Inland Waterways Authority of India, Central Electricity Regulatory Commission, etc. and Ministry of Law & Justice should also be members in M2M apex body formed by DoT.

- M2M Service Providers (MSPs) should register with DoT as M2M service provider. This registration will be exclusive for the MSP and not part of existing OSP registration.

- A National Trust Centre (NTC), under the aegis of TEC, should be created for the certification of M2M devices and applications (hardware and software).

- Spectrum allocation should be technology and service neutral. No separate spectrum band is to be allocated exclusively for M2M services.

- Requirement of additional licensed spectrum for access services to meet the projected influx of connected devices due to M2M communication will be revisited by the Authority after WRC-19.

- In order to facilitate smooth roll out of M2M services utilizing the license exempt spectrum, 1 MHz of spectrum at 868 MHz (867-868) and a chunk of 6 MHz of spectrum at 915-935 MHz is recommended to be delicensed.

- Delicensing the V-band (57-64 GHz) as recommended by the Authority on various occasions may be done on priority.

SIM and Roaming related aspects:

- Devices with pre-fitted embedded Universal Integrated Circuit Card (eUICC) should be allowed to be imported only if it has the ability to get reconfigured 'Over the air' (OTA) with local subscription. GSMA approved guidelines shall be followed for provisioning of new profile remotely with OTA mechanism.

- Devices fitted with eUICC shall be allowed in operation in roaming for maximum three years from the date of activation of roaming in the network of Indian TSP and mandatorily converted into Indian TSPs SIM within the stipulate period or on change of ownership of the device, whichever is earlier.

- International roaming in M2M shall be allowed under the well recognized framework of GSMA 'M2M Annex' to keep uniformity of the parameters and processes.

- In order to boost the M2M IoT manufacturing in India, the government may consider feasibility of allowing extra-terrestrial usage of IMSI ranges with suitable framework on the basis of country specific bilateral agreements.

QoS, Security and Privacy related aspects:

- QoS is in the exclusive domain of TRAI. Therefore, once the M2M sector develops, the authority will put in place comprehensive regulations on QoS parameters in M2M communication, as per service requirements.

- At present stage of deployment of M2M devices and services, a duty cycle of 10% both at device level and network level would suffice to meet the requirements.

- On the issues related to data security and privacy in M2M, the Authority will issue comprehensive recommendations after due deliberation on the issues highlighted through consultation paper "Privacy, Security and ownership of Data in telecom sector" issued on 9th August, 2017.

Approach towards Sustainable Telecommunications

➢ **Recommendations dated 23rd October 2017 on "Approach towards Sustainable Telecommunications"**

TRAI received a reference from the Department of Telecommunications for requisite Recommendations on (i) Methodology of measuring Carbon Emission (ii) Calibration of Directives issued by DoT in 2012 and approach for implementation.

TRAI forwarded its Recommendations DoT on "Approach towards Sustainable Telecommunications" on 23rd October 2017. The salient features of Recommendations are:

- The formula for calculation of Carbon foot print has been revised.

- Only the target for overall Carbon footprint reduction has been recommended and no sub targets for induction of Renewable Energy Targets (RET) has been recommended.

- Directives of DoT dated 4th January 2012 has been calibrated and targets for reduction in Carbon Emission has been tightened as 30% by year 2019-20 and 40% by the year 2022-23 taking base year as 2011-12.

Regulatory framework for Internet Telephony

➢ **Recommendations dated 24th October 2017 on "Regulatory framework for Internet Telephony"**

TRAI has released its Recommendations on "Regulatory framework for Internet Telephony" on 24th October 2017.The salient features of the recommendations are:

- As per Authority's understanding of present Access service licences, Internet Telephony service is un-tethered from the underlying access

Network. In other words, Internet Telephony Service can be provided by Access service provider to its subscriber who may be using Internet of other Access service providers. DoT should issue a clarification to the effect. If DoT has a different understanding, the Authority recommends that the DoT may issue amendment to Access service licences so that Internet Telephony service is un-tethered from the underlying access Network.

- The UL (VNO) licensee with access service authorisation should also be allowed to provide un-tethered Internet Telephony in the designated service area.

- Internet Telephony calls originated by International out roamers from international locations should be handed over at the International gateway of licensed ILDOs and International termination charges should be paid to the terminating access service provider. In case the Access provider is not able to ensure that Internet Telephony call originated outside of the country is coming through ILDO gateway, International out-roaming to Internet Telephony subscribers of the access provider should not be allowed.

- The mobile numbering series should be used for providing Internet Telephony by a service provider. TSPs should be allowed to allocate same number to the subscriber both for Cellular Mobile service and Internet Telephony service.

- The SDCA linked numbering series may also be used for providing Internet Telephony by a service provider. However, in this case, mobility should be limited to consumer premises.

- The access service licensee should use private ENUM in its network for Telephone number mapping from E.164 to SIP/H.323 addresses and vice-versa.

- In case of provision of Internet Telephony by VNO with access service authorisation, the numbering resource allocation should be done by the parent NSO.

- The access service providers providing Internet Telephony service may be encouraged to facilitate access to emergency number calls using location services; however, they may not be mandated to provide such services at present. The subscribers may be informed about the limitations of providing access to emergency services to Internet Telephony subscribers in unambiguous terms.

- QoS on Internet Telephony may be left to the market forces. The service providers must inform QoS parameters supported by them for Internet Telephony so that the subscribers can take an informed decision. The Authority shall review the decision regarding mandating QoS to Internet Telephony service providers at appropriate time.

Ease of Doing Telecom Business

➢ **Recommendations dated 30th November 2017 on "Ease of Doing Telecom Business"**

Promoting "Ease of doing business" is essential for unhindered growth of the telecom sector and is amongst the priorities of the Government. A number of steps have already been taken for ease of doing telecom business by the Government, generally on the recommendations of TRAI. With the change in the policies over a period of time or with the technological development, there could be some processes, which may have become redundant or may be executed in an efficient and transparent way.

In this background, TRAI, *suo motu*, issued a paper on 14th March 2017 requesting the stakeholders to review the existing processes and identify the bottlenecks, obstacles or hindrances that are making it difficult to do telecom business in India and thus, require regulatory intervention. Based on the inputs received from various stakeholders and internal analysis, draft recommendations were framed and uploaded on TRAI website on 19th September 2017, seeking comments of the stakeholders. Based on the comments received from the stakeholders and further analysis, TRAI has finalized its recommendations on "Ease of Doing Telecom Business" on 30th November 2017. Some of the key recommendations are:

a) The entire process of SACFA clearance as well as grant of all licences/ approvals, that are issued by WPC, should be made paper-less and executed end-to-end through online portal.

b) There should be a defined time-line not exceeding 30 days within which an Import Licence should be granted and the same may be declared in the portal as well as in the Citizen's Charter.

c) DoT should spell out a definite timeline, not exceeding 30 days post NCLT approval, for providing written approval to transfer/merger of licences by the Licensor and it should be made a part of the M&A Guidelines.

d) If the merger results in excess spectrum holding beyond permissible spectrum cap, the transferee company/resultant entity should be given an option to either surrender or trade its spectrum holding, within the stipulated period of one year.

e) Spectrum trading should be permitted in all the access spectrum bands which have been put to auction. The permissible block size for trading in a band should be same as specified in the NIA for the latest auction held.

f) The TSPs should be charged for roll-out obligations test fee only for the DHQs/ BHQs/ SDCAs which are actually tested by TERM Cells.

g) Performance Bank Guarantee (PBG) for a particular phase of roll-out obligations should be released after successful certification by TERM Cell. If TERM Cell fails to submit its report within 12 months after the date of offer, PBG should not be held back on account of pendency of testing. Further, DoT should review the process adopted by CCA for the refund of bank guarantee and should ensure that CCA do not take more than 30 days for the release of bank guarantee.

h) DoT should devise a suitable matrix, linking the penalty to the severity of the incident and recurrence of the violation for imposition of financial penalties.

Cloud Services

➢ **Recommendations dated 17th August 2017 on "Cloud Services"**

TRAI on 17th August 2017 issued recommendations on "Cloud Services". Some of the main features of recommendations are: -

- Light touch regulatory approach has been adopted to regulate cloud services.

- DOT shall prescribe a framework for registration of Cloud Service Providers (CSPs) industry bod(y)(ies), which are not for profit. All CSPs above the threshold to be notified by the Government have to become member of one of such industry body.

- Industry body will prescribe Code of Conduct (CoC) for its functioning which have to be followed by their members. In addition to CoC, there will be a governance structure of the Industry body aimed to support effective and transparent implementation, management and evolution

of the CoC. Industry body, not for profit, may charge fee from its members, which is fair, reasonable and non-discriminatory.

- Industry body will also have a disclosure mechanism to promote transparency regarding interoperability, billing, data security and other related matters.

- A Cloud Service Advisory Group (CSAG) to be created to function as oversight body to periodically review the progress of Cloud Services and suggest actions, if any, to the Government.

- Telecommunication Standard Development Society of India (TSDSI) has been tasked to develop standards for ensuring interoperability for cloud services.

- Government may consider enacting an overarching and comprehensive data protection law covering all sectors.

- Government shall draw a robust Mutual Legal Assistance Treaty (MLAT) to address the jurisdictional issues and amend existing MLATs to include lawful interception or access to data on the cloud.

- Government shall continue its policy to promote cloud services through cloud infrastructure projects. Ministry of MSME may also continue to promote adoption of ICT in the sector including providing subsidies as being done at present.

Other Recommendations on Issues related to Telecom

➢ **Recommendations dated 31st July 2017 on "Issues related to Closure of Access Services"**

Due to adoption of market based spectrum management, the continuance of access service is now no longer assured. Recently, there have been cases where due to reasons such as licensee failing to re-acquire its spectrum holding in a band on expiry of its license validity period; change of technology deployed by licensee; sale of entire spectrum holding through spectrum trading; roaming arrangement coming to an end; etc., there has been closure of access services being provided by the licensee. As a result subscribers had to face lot of inconveniences.

In order to ensure that subscribers are not put to undue hardships due to closure of access services, the Authority, *suo-motu,* decided to initiate a consultation process on the issue. Accordingly, a Consultation Paper on "Issues related to closure of Access Services" was released on 30th November 2016 seeking the comments of the stakeholders.

Based on the comments received and further analysis, Recommendations on "Issues related to closure of Access Services" have been issued on 31st July 2017. Some of the main recommendations are:

- A Unified Access Service (UAS) licensee should be permitted to discontinue any of the services, permitted under the scope of licence without the need to surrender the licence.

- If a UAS licensee decides to close down its wireless access services, which were being provided through the administratively assigned spectrum, it must surrender such spectrum immediately upon closure of wireless access services.

- In case of closure of access services through any technology in the entire service area or a part of it, the TSP should be mandated to give a 60 days notice to the Licensor and TRAI and 30 days notice to its effected subscribers, clearly stating the options available to the subscribers, including that of MNP facility.

- The Authority has recommended various time-lines to be followed by DoT/WPC and the Licensee in the spectrum trading process. These timelines will bring greater clarity and certainty in the entire process of spectrum trading. If the entire spectrum in all bands is being sold by a licensee, which will result in discontinuation of services, recommended timelines will remove uncertainties and facilitate the TSPs to given 60 days notice to DoT/TRAI and 30 days notice to its subscribers.

- If a subscriber wants to switch from one technology to other, within the same TSP, the same should not come under the definition Mobile Number Portability.

➢ **Recommendations dated 8th September 2017 on "Introduction of UL (VNO) for Access Service authorization for category B license with districts of a State as a service area"**

Through its reference dated 11th July, 2016, the Department of Telecommunications (DoT) has requested TRAI to issue recommendations for Access Service authorization for category 'B' license with districts of a State as a service area for Virtual Network Operators (VNOs).

In the wireline segment, in order to supplement its efforts of providing telecom facilities to the public, DoT introduced a scheme called Direct

Inward Dialing (DID) in the year 1994 to provide facilities of group Electronic Private Automatic Branch Exchange (EPABX) by private entities as franchisees of DoT.

Pursuant to TRAI recommendation on 'Introduction of Virtual Network Operators in telecom sector' dated 1st May 2015, DoT issued guidelines on 31st May, 2016 for the grant of Unified License (VNO). Further, vide its notification dated 5th July 2016, DoT separately issued guidelines for grant of UL (VNO) for authorization for category 'B' license with districts of a State as a service area for entrepreneurs like Direct Inward Dialing (DID) franchisees.

TRAI issued a Consultation Paper on "Introduction of UL (VNO) for Access Service authorization for category B license with districts of a State as a service area" on 20th March, 2017, seeking the comments / counter comments of the stakeholders.

After analyzing various issues involved and considering the comments received from stakeholders in their written responses and during the OHD, in-house analysis & research, TRAI finalised its recommendations on "Introduction of UL (VNO) for Access Service authorization for category B license with districts of a State as a service area" on 8th September 2017. The salient features of the recommendations are:

- A new category of authorization may be introduced under Unified License (VNO), for Access Service as Category 'B', license with districts as a Service Area on non-exclusive basis. To continue their services, existing DID franchisees should migrate to UL (VNO) Category 'B'.

- New license should not be restricted only to existing DID franchisees and should be open to all entities intending to offer such services.

- Scope of proposed UL (VNO) Cat 'B' license should be to provide only wireline access services within a district. Wireless access services shall not be a part of the scope of UL VNO Cat B.

- Duration of UL (VNO) Cat 'B' license shall remain consistent with UL (VNO) policy.

- Entry Fee of Rs. 1,65,000 for 10 years of duration of license shall be applicable to the UL (VNO) Cat 'B' licensee. Financial Bank Guarantee (FBG) of Rs. 1,00,000 shall be applicable to UL (VNO) Cat 'B' licensee.

- UL (VNO) Cat 'B' licensee shall posses the minimum networth of more than Rs. 5 lakhs per authorization.

- In order to promote fixed line Broadband, DoT should implement TRAI recommendations dated 17th April, 2015 on 'Delivering Broadband

Quickly: What do we need to do?' wherein the license fee on the revenue earned from fixed line Broadband should be exempted for at least 5 years.

- On introduction of VNO regime an issue of double taxation has arisen. DoT may consider review of AGR components and charges paid by VNO licensee to the TSP/NSO for procurement of services should be allowed to be deducted as pass through charges for the purpose of calculating the AGR, similar to other pass through charges permitted under UL like IUC, roaming charges etc. This will be in line with the Input Tax Credit (ITC) feature under Goods and Service Tax regime.

- The amount of maximum penalty on UL (VNO) Category 'B' licensee should be same as provisioned for ISP Cat 'C' in UL (VNO) policy. UL (VNO) Cat 'B' licensee has to comply with obligations arising from Tariff orders/regulations /directions etc. issued by TRAI from time to time.

- In order to meet the requirement of connectivity UL (VNO) Cat 'B' licensees may be allowed to have arrangement for connectivity at different locations with different TSPs/NSOs in its licensed area of operation i.e. within the geography of a district, only in case of provision of wireline access services through EPABX.

- UL (VNO) (Access service) license may be amended to enable the provision of allowing parenting with multiple NSOs by a VNO for wireline network at different locations of the LSA only in case of provision of wireline access services through EPABX.

- The arrangements for allowing connectivity from more than one TSP/ NSO at same EPABX can be allowed only after suitable examination and approval by TEC/DoT with desired specifications. Further continuation of such arrangements shall depend on the outcome of the decision of DoT/TEC.

- The provider TSP/NSO shall mandatorily enter into Service Level Agreement (SLA) with UL (VNO) Cat 'B' licensee.

> **Authority's response to DoT's reference dated 25th September 2017 on TRAI's Recommendations dated 19th December 2016 on "Provisioning of free data"**

DoT, through its letter dated 25th September 2017, had referred back certain Recommendations for reconsideration wherein TRAI had recommended making available 100 MB data per month to rural subscribers for free and funding the cost of implementation out of USOF. DoT had also sought

more clarity on business model of the aggregator and consumer grievance redressal mechanism for aggregator related complaints.

After careful consideration of the contents of the letter dated 25th September 2017, the Authority's response was finalized and submitted to DoT on 29th November 2017.

> **TRAI's Response dated 21stNovember 2017 on the issues relating to Spectrum Cap as follow up of Inter-Ministerial Group report**

The Government recently constituted an Inter-Ministerial Group (IMG) on "Stress in balance sheet in Select Sectors". The IMG, among others, reviewed the spectrum cap applicable for Telecom Service Providers (TSPs). IMG, in its report, stated that the issue of spectrum cap merits detailed examination and variety inputs from sectoral regulators. In light of IMG report, DoT, through its letter dated 29th September 2017, requested TRAI to provide its views on spectrum cap.

As per existing provisions, there is a cap of 25% of the total spectrum assigned in 700/800/900/1800/2100/2300/2500 MHz bands and 50% within a given band in each of the service area.

TRAI sought comments of the telecom service providers and *inter-alia*, took note of the following:

- Overall spectrum cap of 25% was imposed at a time when there were 6-10 TSPs in a LSA. After the ongoing consolidation in the sector, the number of TSPs in a LSA may be much less.

- The spectrum being assigned through auction is a liberalized spectrum. At present, more than 80% of the spectrum held by various service providers is liberalized spectrum wherein they can use any technology of their choice in any band or using multiple bands.

- As LTE device eco system is evolving in each of the spectrum band, there is no real need to put spectrum cap in each spectrum band. In fact, asking a TSP to acquire spectrum in different band to deploy the same technology increase the cost of network with no real gains.

- Sub-1 GHz bands are perceived as the most optimal bands to ensure availability of wireless broadband services over large areas with low population density. Therefore, spectrum in sub-1 GHz range viz. 700 MHz, 800 MHz and 900 MHz should be treated separately and special provisions have to be made to safeguard against creation of monopoly.

In its response to DoT dated 21st November 2017, the TRAI expressed the following views:

- The overall spectrum cap should be revised from the current limit of 25% to 35%.

- The current intra-band cap should be removed. Instead, there should be a cap of 50% on the combined spectrum holding in the sub-1 GHz bands (700 MHz, 800 MHz and 900 MHz bands).

➢ **Recommendations dated 4th December 2017 on "Network Testing Before Launch of Commercial Services"**

The Telecom Service Providers (TSPs) are required to install applicable systems for providing mobile services to the subscribers. A TSP has to ensure that its service meets the Quality of Service (QoS) standards prescribed by the Department of Telecommunications (DoT) and Telecom Regulatory Authority of India (TRAI). Therefore, it is important that all applicable systems are tested before commencement of commercial service.

DoT, through its letter dated 9th September 2016, communicated that at present, network testing is being carried out by licensees on the basis of erstwhile practices followed by DoT/BSNL; and test SIM Cards are issued by such licensees to check the quality of network before the commercial launch of services. The present licences for various services issued by DoT do not prescribe any time period for network testing before commercial launch of services by the licensees. Therefore, DoT requested the Authority to provide its recommendations on testing of network before commercial launch of services including enrolment of customers for testing purposes before commercial launch, duration of testing period etc.

In this regard, a consultation paper was released on 1st May 2017, wherein various issues involved and the possible framework to bring clarity on the matter were discussed and the stakeholders were requested to provide their comments and counter-comments. Based on the comments received and internal analysis, TRAI has finalized its recommendations on "Network Testing Before Launch of Commercial Services" and sent to DoT on 4th December 2017. The key recommendations are:

- A TSP should be allowed to enroll test subscribers in testing phase to carry out the network testing before commercial launch of its services.

- The number of test subscribers that can be enrolled by a TSP in an LSA should be limited to 5% of its installed network capacity for that LSA. The service provider will submit the detailed capacity calculations

of the network to DoT and TRAI at least 15 days before commencing enrolment of test subscribers.

- There should be a limit of 90 days on the test phase involving test subscribers. However, if the TSP fails to conclude network testing due to valid reasons, it may make a representation to the Licensor, seeking additional time for network testing giving detailed justification, which may be decided by the Licensor on case to case basis.

- If a TSP wants to enroll test subscribers, it should give prior intimation to DoT and TRAI at least 15 days before commencing enrolment of test subscribers.

- All licensing provisions related to the security and privacy such as ensuring adequate verification of each and every customer before enrolling him as a subscriber, protection and privacy of communication, maintaining Call Detail Record (CDR)/IP Detail Record (IPDR), Confidentiality of Information, Lawful interception & monitoring etc. must be complied with by the licensee.

- MNP facility should not be extended to network under testing.

- If a TSP wants to enroll test subscribers for the testing of its network, it should transparently give the following information to the test subscribers at the time of their enrolment:

  ○ During test phase, TSP is not mandated to adhere to specified level of QoS. Therefore, there may be sub-optimal level of network performance.

  ○ The scope of services during the test period.

  ○ MNP facility won't be available till the services are commercially launched.

  ○ There won't be any charge (fixed charge or usage based charge) during the test phase.

  ○ Likely date of commercial launch.

Broadcasting Sector

➢ **Recommendations dated 31st January 2017 on "Issues related to Digital Terrestrial Broadcasting in India"**

The Authority on 31st January 2017 forwarded its Recommendations on "Issues related to Digital Terrestrial Broadcasting in India". The salient features of the recommendations were: -

- DTT services may be introduced throughout the country in a time bound manner to provide alternate affordable platform to consumers in accessing TV channels, Mobile TV services and other value added services.

- Private players should be permitted to provide DTT services along with the public service broadcaster (Doordarshan) to ensure plurality and competition in the market. Private participation expected to bring in investment and speed up the digitisation process, thereby benefiting the consumers by providing variety of TV channels and value added services.

- A total of seven DTT transmitters may be allowed in a particular service area for making DTT as a competitive platform for providing rich bouquet of services including SDTV, HDTV channels, Mobile TV services and value added services.

- Maximum number of DTT providers may be capped at five (one public broadcaster and four private broadcasters) at a particular place as per availability of spectrum.

- Ministry of Information and Broadcasting in consultation with Wireless Planning and Coordination Wing of Department of Telecommunications and other technical agency such as Broadcast Engineering Consultants India Limited (BECIL) may carry out comprehensive frequency planning for roll out of DTT services in a time bound manner.

- Digital Terrestrial transmission may be implemented in the country in the following three phases with complete migration and analog switch off by December 2023.

Phases	Timeframe
Phase I (Metro cities)	31st December 2019.
Phase II (cities having more than 10 lakh population as per Census 2011)	31st December, 2021
Phase-III (Rest of India)	31st December, 2023

- A minimum overlap of three months must be provided as simulcast period for migration from Analog to digital platform before analog switch off.

- A Coordination Committee may be set up by the Ministry of Information and Broadcasting to steer implementation of DTT as a mission mode project to ensure creation of a facilitating environment and timely completion for digitisation of terrestrial broadcasting.

➢ **Recommendations dated 29th March 2017 on "Sharing of Infrastructure in Television Broadcasting Distribution Sector"**

TRAI on 29th March 2017 sent its Recommendations on "Sharing of Infrastructure in Television Broadcasting Distribution Sector". The salient features of these recommendations were:

- The Central Government should encourage sharing of infrastructure, wherever technically feasible, in TV broadcasting distribution network services, on voluntary basis.

- On voluntary basis, sharing of head-end used for cable TV services & transport streams transmitting signals of TV channels, among MSOs, should be permitted.

- To enable sharing of head-end used for cable TV services, the MSO registration condition regarding 'having an independent digital head-end of his own and provide digital addressable cable services from his head-end' should be suitably amended so as to allow sharing of head-end.

- The HITS operator and MSOs should be allowed to share the HITS platform, on voluntary basis, in flexible ways, for distribution of TV channels. The sharing of transport streams transmitted by HITS platform, between HITS operators and MSOs, should be permitted.

- To ensure efficient use of scarce satellite resources, the DTH operators, willing to share DTH platform and transport stream of TV channels, on voluntary basis, should be allowed to do so with prior written intimation to MIB and TRAI.

- The distributors of TV channels should be permitted to share the common hardware for their Subscriber Management Systems applications and Conditional Access Systems applications.

- While sharing the infrastructure with another distributor of TV channels, the responsibility of compliance to the relevant Acts/ rules/ regulations/ license/ orders/ directions/ guidelines would continue to be of each distributor of TV channels independently.

III OTHER ISSUES

Regulations

➢ **Telecommunications (Broadcasting and Cable) Services, Standards of Quality of Services and Consumer Protection (Addressable Systems) Regulations 2017 dated 3rd March 2017**

TRAI on 3rd March 2017 released the Telecommunication (Broadcasting and Cable) Services, Standards of Quality of Services and Consumer Protection (Addressable System) Regulations 2017. The salient features of these regulations were:

- It is a common framework for standards of QoS and consumer protection across digital addressable platforms viz DTH, Cable TV, IPTV, HITS.

- Choice of subscription to a-la-carte channels and bouquets of channels by subscribers have been simplified.

- Standardization of dissemination of information related to services offered by DPOs through a customer care programming service.

- Publicity of services across DPOs have been standardized by making a provision of creating a designated link on the website of the DPOs called "Consumer Corner".

- Mandatory offering of all channels and bouquets available on DPO platform on monthly subscription basis.

- Mandatory display of all channels and their MRP, available on the DPO platform in the electronic programme guide for easy navigation and identification by subscribers.

- Simplification of Consumer premises equipment/Set Top Box schemes.

- Simplification of Consumer Application Form (CAF) and encouraging use of electronic CAF.

- Subscribers can get services temporarily suspended for up to three months in a year.

- Mandatory provision for recording the consent of the subscribers for any change in the subscribed packages.

- Protection of consumer interest in case of prolonged and continued disruption in service beyond 72 hrs.

- Use of ICTs for subscription and management of services.

➢ **Telecommunication (Broadcasting and Cable) Services Interconnection (Addressable Systems) Regulations, 2017 dated 3rd March 2017**

TRAI on 3rd March 2017, released the Telecommunication (Broadcasting and Cable) Services Interconnection (Addressable Systems) Regulations, 2017, which will regulate interconnection arrangements for broadcasting services relating to television provided through Addressable Systems. The salient features of these regulations were: -

- A common regulatory framework for all types of TV distribution platforms providing services through Addressable Systems.

- Availability of signals to service providers on non-exclusive and non-discriminatory basis.

- Ensuring access to the distribution networks for re-transmission of TV channels on all types of distribution platforms on non-exclusive and non-discriminatory basis.

- The Broadcasters and Distributors will devise and design their reference interconnection offers (RIOs) for providing signals of TV channels and access to the distribution networks respectively, in conformance with the regulations and the tariff orders notified by the Authority, and declare the same.

- Time bound provisioning of signals of TV channels & access to the network on the basis of transparent RIO framework.

- Interconnection agreements to be signed between broadcasters and distributors on the basis of RIO.

- Prescription of ceiling on maximum discount which can be offered by a broadcaster to a distributor to ensure level playing field and to make sure that non-realistic prices of a-la-carte channels and bouquets are not declared by broadcasters for subscribers.

- Prescription of ceiling on the rate of carriage fee declared by a DPO, with ceiling on maximum discount which can be offered to a broadcaster on the rate of carriage fee to ensure level playing field and to make sure that non-realistic prices of carriage fee are not declared by distributors to broadcasters.

- Prescription of a framework for placement of a TV channels in the Electronic Programme Guide (EPG).

- Prescription of a framework for subscription reports & audits.

The Authority was of the view that these regulations will be instrumental in improving transparency, efficiency & equity across the value chain. This would also ensure a level playing field for all service providers and would be helpful in lowering the entry barriers for new service providers, bringing in more competition in the sector and thereby more choices to the consumers.

➢ **The Standards of Quality of Service of Basic Telephone Service (Wireline) and Cellular Mobile Telephone Service (Fifth Amendment) Regulations, 2017 dated 18th August 2017**

The Telecom Regulatory Authority of India (TRAI) issued "The Standards of Quality of Service of Basic Telephone Service (Wireline) and Cellular Mobile Telephone Service (Fifth Amendment) Regulations, 2017" on 18th August, 2017. The salient features of these regulations are: -

- The performance on call drop are being assessed for the service area as a whole based on average of performance of all cells in the service area for one month.

- The averaging in effect hides poor performance of cells in some areas.

- Although all the service providers are meeting the benchmark on call drop the customers were complaining about poor Quality of Service.

- In this background TRAI reviewed the network parameters for mobile services and issued amendment to the regulations on 18th August 2017.

- Revised methodology for assessment of Drop Call Rate (DCR) will be on percentile basis instead of existing methodology of average of call drop of all BTSs, which will remove the anomaly of averaging.

- Revised approach for DCR will give better insight into the network performance of service provider and will help to identify local areas where Cell(s) have not performed well for many days and also to identify Day(s) on which many cells in the network have not performed well.

- In the amendment regulations the existing two parameters on call drop have been replaced with two new parameters.

- The new parameter DCR spatial distribution measure or DCR Network_Q_{SD}(90,90) (benchmark 2%) implies that at-least 90% of Cells in the network should perform better than specified 2% benchmark on at-least 90% of days.

- Similarly, another new parameter DCR temporal distribution measure or DCR Network_Q_{TD}(97,90) will give confidence that on at-least 90% of Days, network performed better than specified 3% benchmark for at-least 97% of the Cells.

- Graded financial disincentive for failure to comply with the benchmarks for the new parameters on call drop, with maximum financial disincentive capped at Rs.10 lakhs combined for both the parameters.

- Another feature of the amendment regulations is that the network parameters have been made technology neutral and will be applicable for 2G, 3G and 4G network.

The revised regulations come into effect from 1st October, 2017.

➢ **The Telecommunication Interconnection Usage Charges (13th Amendment) Regulations, 2017 dated 19th September 2017**

TRAI issued "The Telecommunication Interconnection Usage Charges (Thirteen Amendment) Regulation, 2017" on 19th September 2017. Through these Regulations, the termination charge for wireless to wireless local and national long distance calls has been reduced from erstwhile 14 paise per minute as follows:

- Re. 0.06 (paise six only) per minute with effect from the 1st October, 2017 to the 31st December, 2019; and

- 0 (Zero) with effect from the 1st January, 2020.

Directions

➢ **Direction dated 25th May 2017 on provision of non-discriminatory tariff and reporting thereof**

A Direction dated 25th May 2017 was issued to all Access Service Providers regarding filling of tariff offers and to ensure that all the tariffs offered to the consumers shall be in accordance with the provisions of Telecommunication Tariff Order, 1999 and shall not be discriminatory between the subscribers of the same class and to ensure that every tariff that is offered to a consumer

is invariably reported to the Authority as per the reporting framework under the forbearance regime unless an express exemption has been provided in the Telecommunication Tariff Order, 1999 (as amended from time to time).

➢ **Direction dated 10ᵗʰ August 2017 to service providers regarding unsolicited bulk SMSs relating to investment in securities market**

TRAI on 10ᵗʰ August 2017 issued direction to service providers regarding unsolicited bulk SMSs relating to investment in securities market. This direction mandates the cellular mobile telephone service providers, to take following steps for controlling bulk messages relating to securities:

- SMSs relating to investment advice/stock tips only from SEBI registered investment advisers, stock brokers, sub brokers, portfolio managers and merchant bankers shall be sent or allowed to be sent as transactional message only through registered Telemarketers;

- Necessary arrangements shall be made to filter and block the SMSs sent by Telemarketers using bulk SMS channel containing certain key words relating to securities, such as buy, Sell, Hold, Accumulate, Target followed by Scrip code/ Scrip name provided by any recognized as stock exchange; and

- Verify the identity of the sender by the service provider as registered telemarketer, as the case may be, and collect and keep the identify documents for one year.

➢ **Direction dated 18th August 2017 to submit monthly report on wireless subscriber base as per methodology prescribed by the Department of Telecommunications**

Department of Telecommunications had, in order to have a uniform subscriber base reporting, through letter dated 29ᵗʰ August, 2005, as amended vide letter dated 7ᵗʰ September, 2005, issued instructions to all licensees prescribing new methodology for reporting the subscriber base. It was, however, noticed that some of the Telecom Service Providers were not strictly following the afore-mentioned methodology prescribed by DoT for reporting of subscriber base. Therefore, a Direction was issued to all the TSPs on 18ᵗʰ August 2017 to submit monthly report on wireless subscriber base as per methodology prescribed by the Department of Telecommunications.

➢ **Direction dated 19ᵗʰ September 2017 with regard to closure of commercial services by M/s Reliance Communications Ltd in Gujarat service area**

TRAI, with a view to facilitate mobile number portability of mobile subscribers, issued Direction on 19ᵗʰ September 2017 to M/s RCL; MNPSPs; and TSPs with regard to closure of GSM services by M/s. Reliance Communications Limited in Gujarat licensed service area consequent to expiry of its Unified Access Service (UAS) license and upgrading of network to LTE/4G in 800 MHz band under the authorization for providing Access Service under the Unified License in the said service area w.e.f. 30ᵗʰ September 2017.

➢ **Direction dated 1ˢᵗ November 2017 to M/s Reliance Communications Limited/ M/s Reliance Telecom Limited regarding disruption in 2G services**

It was brought to the notice of TRAI through media reports regarding disruption of 2G services of M/s Reliance Communications Limited (RCL)/ M/s Reliance Telecom Limited (RTL) in all Licensed Service areas. TRAI, therefore, issued a Direction on 1ˢᵗ November 2017 to M/s RCL / RTL, inter-alia, to

(i) furnish reasons for disruption of 2G services in different licensed service areas;

(ii) ensure QoS of the entire network as prescribed by the LICENSOR and the Authority from time to time;

(iii) issue and communicate unique porting code to the subscribers through SMS immediately, as and when such request is received and respond to all the requests of mobile number portability made by the subscribers as per provisions of the regulations;

(iv) furnish licensed service area wise details of the number porting requests received, details of unique porting codes generated on such requests and number of subscribers ported out in last two weeks (w.e.f. 31ˢᵗ October, 2017).

➢ **Direction dated 3ʳᵈ November 2017 to All Access Service Providers (Wireless) and MNPSPs with regard to discontinuation of 2G/GSM Services and upgrading of Network from CDMA to LTE/4G in 800 MHz band in various licensed service areas by M/s Reliance Communications Ltd**

A Direction was issued on 3rd November 2017 to MNPSPs, TSPs so as to facilitate Mobile Number Portability of subscribers of M/s Reliance Communications Limited (RCL) with regard to discontinuation of 2G/GSM services by M/s RCL in Andhra Pradesh, Haryana, Maharashtra, UP(East), UP(West), Tamil Nadu, Karnataka and Kerala licensed service areas and upgrading of network from CDMA to LTE/4G in 800 MHz band in Delhi, Rajasthan, UP(West), Tamil Nadu, Kerala, Karnataka, West Bengal, Gujarat and Kolkata licensed service areas consequent to conclusion of merger of licenses of M/s Sistema Shyam Telecommunications Limited into M/s Reliance Communications Limited.

➢ **Direction dated 17th November 2017 to M/s Reliance Communication Ltd. with regards to unspent prepaid balance consequent to closure of 2G/GSM services and discontinuation of CDMA Services in various LSAs**

Pursuant to the closure of 2G / GSM services and upgradation of network from CDMA to LTE / 4G in 800 MHz band by M/s Reliance Communications Ltd (RCL) in various service areas, a large number of subscribers, both prepaid and postpaid, would be inconvenienced and forced to port out their mobile number to other service provider of their choice and some of the subscribers might not be able to port out by 31st December, 2017, or might not be willing to do so. Under normal circumstances, the balance prepaid amount would have been utilized by the prepaid subscribers before porting out of their mobile number; but due to sudden closure of services, the unspent prepaid balance amount is outstanding with M/s RCL in the form of recharge coupon / plans and also unspent balance left by the subscribers who would not be able to port out by 31st December, 2017 or might not be willing to port out their numbers to other networks. Therefore, through a Direction dated 17th November 2017, M/s RCL was directed to inform the unspent prepaid balance with M/s RCL, consequent to closure of 2G / GSM services by the service provider in some of the licensed service areas; and discontinuation of CDMA services due to upgrading of network from CDMA to LTE/4G in 800 MHz band in some of the licensed service areas after conclusion of merger of licenses of M/s Sistema Shyam Telecommunications Limited into M/s Reliance Communications Limited.

➢ **Directions to deposit in TCEPF the excess amount charged from the subscribers in violation of the licence conditions**

The Department of Telecommunications on 20th May 2005 permitted inter-service area connectivity between access providers in paired circles i.e. the

States of Maharashtra (Mumbai Metro and Maharashtra telecom circle service areas), Tamil Nadu (Chennai Metro and Tamil Nadu telecom circle service areas), Uttar Pradesh (including Uttaranchal) [UP (E) and UP (W) telecom service areas] and West Bengal (Kolkata Metro and West Bengal telecom service area).

TRAI found that certain mobile service providers were offering higher differential charges for calls to the networks of BSNL and MTNL. TRAI, therefore, issued direction on 27th February, 2006 to all Mobile Service Providers in the aforesaid four states to immediately discontinue differential tariff and report compliance of the same to TRAI. The said direction was, however, challenged through various petitions / appeals before different courts. TRAI, therefore, through another direction dated 22nd March 2007 directed all the TSPs to deposit the excess amount charged from the subscribers in a separate bank account until further directions.

Consequent upon the Hon'ble Supreme Court dismissing the appeal filed by the TSPs, TRAI issued directions to the following TSPs to deposit in the Telecom Consumers Education and Protection Fund (TCEPF) the excess amount charged from the subscribers in violation of the license conditions which cannot be refunded to the subscribers due to non-availability of call detail records:

(i)   M/s Idea Cellular Ltd on 24th August 2017;

(ii)   M/s Bharti Airtel Ltd on 30th November 2017; and

(iii)   M/s Vodafone India Ltd on 30th November 2017.

➢ **Directions dated 13th December 2017 to M/s Reliance Communications Ltd. and M/s Reliance Telecom Ltd. regarding facilitation of MNP for subscribers pursuant to discontinuation of voice services in various licensed service areas**

Direction was issued to all Access Service Providers, MNPSPs and M/s Reliance Communications Limited and M/s Reliance Telecom Ltd on 13th December 2017 to facilitate Mobile Number Portability for the subscribers, pursuant to discontinuation of voice services in licensed service areas of Bihar, Delhi, Himachal Pradesh, Jammu & Kashmir, Kolkata, Madhya Pradesh, Mumbai, Orissa, Punjab, Rajasthan and West Bengal by M/s Reliance Communications Limited and in the licensed service areas of Assam, Bihar, Himachal Pradesh, Kolkata, Madhya Pradesh, North East,

Orissa and West Bengal by M/s Reliance Telecom Limited w.e.f. 31st January 2018.

> **Direction dated 14th December 2017 on the Standards of Quality of Service of Basic Telephone Service (Wireline) & Cellular Mobile Telephone Service, Regulations 2017 (7 of 2009), to submit compliance reports of benchmarks of Quality of Service parameters**

This direction mandates the cellular mobile telephone service providers, to submit their compliance reports, within a period of twenty one days of the end of each quarter ending on the 31st March, the 30th June, the 30th September and the 31st December of the year, respectively, in writing and also in the electronic format in Microsoft Excel format, duly signed by the authorized signatory of the service provider, on quarterly basis, in respect of parameters of Cellular Mobile Telephone Service at serial number (i), (ii), (iii) and (iv) under Network Service Quality parameters at Serial Number A of Regulation 5 of the Regulations, in the format annexed as Annexure-1 to this direction.

> **Direction dated 14th December, 2017 on the Standards of Quality of Service of Basic Telephone Service (Wireline) & Cellular Mobile Telephone Service, Regulations 2017 (7 of 2009), for publishing information relating to performance with respect to Quality of Service benchmarks on the website of service providers**

This direction directs the cellular mobile telephone service providers, to publish on their website, on quarterly basis, the performance with respect to the benchmarks of Quality of Service parameters specified in Regulation 5 of the Regulations, in the Revised Format attached with this direction within forty five days after the end of every quarter.

> **Direction dated 20th December 2017 to M/s Aircel Ltd. and M/s Dishnet Wireless Ltd. regarding facilitating MNP**

Direction was issued to all Access Service Providers, MNPSPs and M/s Aircel Ltd. in order to facilitate Mobile Number Portability for the subscribers of M/s Aircel Ltd pursuant to notice of surrender of License given under clause 10.3 of Unified Access Service in licensed service areas of Gujarat, Haryana, Himachal Pradesh, Madhya Pradesh, Maharashtra and Uttar Pradesh (West) by M/s Aircel Ltd. and M/s Dishnet Wireless Ltd w.e.f. 30th January 2018.

Consultations

➢ **Consultation Paper dated 4th January 2017 on "Net Neutrality"**

TRAI on 4th January 2017 issued Consultation Paper on Net Neutrality for seeking the comments of the stakeholders. In view of the complexity of the subject, TRAI undertook two stage-consultation process on Net Neutrality.

In the first stage, of pre-consultation, was an attempt to identify the relevant issues in all the areas on which the DoT had sought TRAI's recommendations, for which, pre-consultation paper was released in May 2016.

In the second stage, TRAI has considered all relevant issues identified during the pre-consultation process and the preliminary inputs gathered from stakeholders on these issues and a comprehensive consultation paper was prepared. The purpose of this stage of consultation is to proceed towards final views on policy or regulatory interventions, where required on the issue of Net Neutrality. The last date for written comments by stakeholders was 12th April 2017 and counter comments is 26th April, 2017. The Open House Discussions on the same was held in Mumbai on 26th May 2017.

➢ **Consultation Paper dated 16th January 2017 on "Approach towards Sustainable Telecommunications"**

TRAI received a reference from the Department of Telecommunications on 23rd November 2015 seeking recommendations on 'Implementation of Renewable Energy Technology (RET) in Telecom Sector' for Methodologies for measuring Carbon Emission and calibration of Directives issued by DoT in 2012 and approach for its implementation.

This Consultation paper outlines the significance of energy efficiency in modern telecommunication networks and suggests directions for optimizing network performance in terms of energy demands. The methodology which may be adopted for calculation of carbon footprint of the network has been deliberated in detail. Keeping in view the various aspects of energy efficiency in telecom networks, the way ahead to achieve the renewable energy targets in telecom sector has been discussed.

Through this consultation paper TRAI is seeking the views of the stakeholders on many significant issues i.e. approach for calculating the carbon footprint, need for auditing the carbon footprint of a telecom network by a third party auditor and its mechanism, formulas suitable for

calculation of Carbon footprints from Grid supply and DG Sets, options available for renewable energy solutions, support to industry for effective implementation of RET/Energy efficient solutions, methodology for setting new Renewable energy targets in the telecom sector and the timeframe for achieving these targets etc.

> **Consultation Paper dated 17th March, 2017 on "Regulatory Principles of Tariff Assessment"**

The Authority on 17th March, 2017 issued a Consultation Paper on "Regulatory principles of Tariff Assessment". The consultation paper deals with emergent issues and challenges, inter-alia, related to regulatory principles of tariff assessment e.g. transparency, promotional offers, disclosures and non discrimination, adherence to the principle of non=predatory pricing, relevant market, assessment of dominant position etc. The consultation process aims to being about greater clarity in interpretation of various regulatory principles set out in the TTO in consonance with the best global practices.

The consultation paper on "Regulatory Principles of Tariff Assessment" was uploaded on TRAI's website (www.trai.gov.in) and the written comments on the issues raised in the consultation paper were invited from the stakeholders by 17th March, 2017 and counter comments by 24th March, 2017. The dates were further extended on the request of stakeholders for submission of written comments up to 7th April, 2017 and counter comments by 14th April, 2017. Comments and counter comments have been received and uploaded in TRAI website.

> **Consultation Paper dated 20th March 2017 on "Introduction of UL (VNO) for Access Service authorization for category B license with districts of a State as a service area"**

The Department of Telecommunication (DoT), through its reference dated 11th July, 2016 has requested TRAI to issue recommendations for Access Service authorization for category 'B' license with districts of a State as a service area for Virtual Network Operators (VNOs).In 1994, DoT introduced a scheme of operation called Direct Inward Dialing (DID) to provide facilities of group EPABX by the private entities as franchisees of DoT.

Pursuant to TRAI recommendation on "Introduction of Virtual Network Operators in telecom sector" dated 1st May 2015, DoT issued guidelines on 31st May, 2016 for the grant of Unified License (VNO). Further, vide its notification dated 5th July 2016, DoT separately issued guidelines for grant of UL (VNO) for authorization for category 'B' license with districts of

a State as a service area for entrepreneurs like Direct Inward Dialing (DID) franchisees.

TRAI issued this Consultation Paper, raising specific issues, for consideration of stakeholders. Therefore, this consultation paper is limited to the issues related to the modalities for the introduction of UL (VNO) Cat-B for Access Service authorization for service area under geographical area of a District of a State/UT). The Consultation Paper has been placed on TRAI's website www.trai.gov.in.

➤ **Pre-consultation Paper dated 19th April, 2017 on "Ease of Doing Business in Broadcasting Sector"**

TRAI on 19th April 2017, released a Pre-consultation paper on "Ease of Doing Business in the Broadcasting Sector" seeking comments of the stakeholders. The pre-consultation paper aims to identify various issues relating to Ease of Doing Business in broadcasting sector. The comments of stakeholders are solicited on the following issues: -

• Issues related to processes and procedures for obtaining permission/ license/registration for the broadcasting services and subsequent compliances connected with these permissions.

• Allocation of broadcasting spectrum.

• Other Issues such as (i) Disaster Recovery Site for DTH Operator, (ii) Transmission of radio services over DTH platform, (iii) Right of Way for cable operators, (iv) Broadband through cable TV, (v) Open sky policy for KU band, (vi) Rationalization of FDI policy in broadcasting sector, (vii) Developing India as a teleport hub, (viii) Skilled manpower in broadcasting sector & Indigenous manufacturing of broadcasting equipments.

In addition, there could be other issues which may be requiring policy interventions to facilitate ease of doing business. In view of the above, the stakeholders are requested to identify such areas of concern and provide complete details of the nature of the problem and scope for improvement with suggest mechanisms that can ease the business activity in the broadcasting sector.

➤ **Consultation Paper dated 1st June 2017 on "Data Speed under Wireless Broadband Plans"**

TRAI issued a Consultation Paper dated 1st June 2017 on "Data Speed under Wireless Broadband Plans. Through this Consultation paper, the Authority

intends to seek the inputs of the stakeholders on ensuring transparency and customer awareness regarding data speeds under wireless broadband plans.

➤ **Consultation Paper dated 10ᵗʰ July 2017 on "Issues related to Digital Radio Broadcasting in India"**

TRAI on 10ᵗʰ July 2017, released consultation paper on "Issues related to Digital Radio Broadcasting in India" in order to seek stakeholders' comments on various issues relating to development of an eco-system for deployment of digital radio broadcasting by private FM radio broadcasters. Some benefits of Digital Radio were as follows: -

• Better quality of signal or clear reception with high and consistent sound performance.

• Efficient use of allocated frequency – multiple radio channels can be broadcasted on a single frequency.

• Frequency reuse possible – to cover a large geographical area.

• Reduced transmission power requirements.

• Automatic tuning of various available private and public radio stations.

• Efficient reception of radio channels in static, portable and mobile environments such as moving vehicles, mobile phones etc.

• Value Added Services such as Emergency Program Guide, Emergency Warning Feature (EWF), updates on news and weather etc. can be provided simultaneously along with program relay.

• Enable the government to retrieve spectrum and re-allocate it for more efficient use.

• Possibility of Simulcast allowing broadcasters to save cost of transmitting signal in both formats, analog as well as digital formats.

➤ **Consultation Paper dated 31ˢᵗ July 2017 on "Ease of Doing Business in Broadcasting Sector"**

TRAI, on 31ˢᵗ July 2017, released a Consultation Paper on the "Ease of Doing Business in Broadcasting Sector" with the following objectives: -

• To review various policy issues related to the broadcasting sector with a view to create a conducive and business friendly environment in the sector.

- To identify procedural bottlenecks that affect ease of doing business in broadcasting sector and recommended measures for simplifying the rules, regulations and bring more transparency and clarity in policies/ framework of the broadcasting sector.

- To remove entry barriers by laying down well defined and transparent procedures and processes thereby creating level playing field and competition in the sector.

- To facilitate innovation and technology adoption in the sector for providing better quality of services to the consumers.

- To steer further growth of the sector by attracting investment through investor friendly policies.

- To promote indigenous manufacturing of broadcasting equipments.

➢ **Consultation Paper dated 9ᵗʰ August 2017 on "Privacy, Security and Ownership of the Data in the Telecom Sector"**

TRAI released a Consultation Paper on "Privacy, Security and Ownership of the Data in the Telecom Sector" on 9ᵗʰ August 2017. Through this Consultation Paper the Authority had decided to seek inputs of the stakeholders on the following:

- To identify the scope and definition of Personal data, Ownership and Control of data of users of telecom services.

- Understand and Identify the Rights and Responsibilities of Data Controllers.

- To assess the adequacy and efficiency of data protection measures currently in Place in the telecom sector.

- Identify the key issues pertaining to data protection in relation to the delivery of digital services. This includes the provision of telecom and Internet services by telecom and Internet service providers (TSPs) as well the other devices, networks and applications that connect with users through the services offered by TSPs and collect and control user data in that process.

➢ **Consultation Note dated 11ᵗʰ August 2017 on "Solution Architecture for Technical Interoperable Set Top Box"**

TRAI, on 11ᵗʰ August 2017, issued the Consultation Note on "Solution Architecture for Technical Interoperable Set Top Box" presenting

the solution for technically interoperable STB to all the concerned stakeholders to seek their comments on the proposed solution. Consultation note along with solution architecture document was uploaded on TRAI's website.

➢ **Draft Telecommunication Mobile Number Portability (Seventh Amendment) Regulations, 2017 for consultation dated 16th August 2017**

TRAI had issued the Telecommunication Mobile Number Portability (MNP) Regulations 2009 dated 23rd September 2009 laying down the basic business process framework for implementation of MNP in the country. In a continuous endeavour to make MNP process more subscriber friendly, based on feedback from the stakeholders and its own analysis, TRAI has issued various Directions and amendments to the MNP regulations. The present consultation on amendment of MNP regulations is also a part of the same process.

Rejection of porting requests creates dissatisfaction and frustration among subscribers. It is observed that, grounds of rejection dependent on Unique Porting Code (UPC), namely 'UPC Mismatch' and 'invalid/expired UPC', jointly contribute around 40% of the total rejection of porting requests. Through this amendment, TRAI proposes a mechanism for sharing the UPC generated by Donor Operator with MNP Clearing House, which in turn can be approached by the Recipient Operator, to confirm the correctness and validity of the UPC submitted by the subscriber. This will result in reduction of rejection of porting requests and will increase subscriber satisfaction. The draft amendment also proposes to make provision to transmit the relevant information viz. date of the bill, amount outstanding, last date of payment, date of the notice and period of notice given to the subscriber by Donor Operator through the MNP Clearing House along with the non-payment disconnect requests initiated by the Donor operator. The draft Amendment Regulations was issued on 16th August 2017 seeking the comments of the stakeholders.

➢ **Consultation Paper dated 28th August 2017 on "Auction of Spectrum in 700 MHz, 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz, 2500 MHz, 3300-3400 MHz and 3400-3600 MHz bands"**

Department of Telecommunications through their reference dated 19th April 2017 sought recommendations of the TRAI on applicable reserve price, quantum of spectrum to be auctioned and associated conditions for auction of spectrum in 700, 800, 900, 1800, 2100, 2300, 2500, 3300-

3400 and 3400-3600 MHz Bands. Based on the available information, a consultation paper was issued on 28th August 2017 seeking the comments of the stakeholders.

In this consultation paper specific issues have been raised for consideration of stakeholders. The key issues raised are quantum of spectrum to be auctioned, optimal block size, duplexing scheme, spectrum cap, roll-out conditions and methods to be used for valuation and estimation of reserve price of spectrum.

➢ **Consultation Paper dated 18th September 2017 on "Promoting Local Telecom Equipment Manufacturing"**

TRAI had released a Consultation Paper on "Promoting Local Telecom Equipment Manufacturing" on 18th September 2017. The consultation paper is issued with the following objectives: -

- To identify the policy measures required to boost Innovation and productivity of local Telecom manufacturing in India.

- Examine the existing patent laws in context of promoting local manufacturers.

- Examine the issues of Standardization, Certification and Testing of Telecom Equipments and suggest a framework for improvement to support local telecom equipment manufacturing.

- Examine issues related to IPR affecting the local telecom equipment manufacturing industry.

- Examine the current fiscal incentives to promote the local telecom manufacturing and recommend measures for implementation in the future.

- Identify measures to be taken to attract foreign investment for setting up establishments in India.

➢ **Consultation Paper dated 29th September 2017 on "In Flight Connectivity (IFC)"**

Department of Telecommunications through its reference dated 10th August 2017 has communicated that there is a proposal to introduce In-Flight Connectivity (IFC) for voice, data and video services over Indian airspace for domestic, international and overflying flights in Indian Air Space. DoT has also requested TRAI to furnish its recommendations on licensing terms and conditions for provision of IFC for voice, data

and video services and associated issues such as entry fee, license fee, spectrum related issues including usage charges and method of allocation and other conditions.

In this regard, a consultation paper on "In-Flight Connectivity" has been floated on 29th September 2017 seeking the comments of the stakeholders.

> **Consultation Paper dated 9th October 2017 on "Next Generation Public Protection and Disaster Relief (PPDR) communication networks"**

Public Protection and Disaster Relief (PPDR) communications supports a wide range of services related to day to day life of public such as maintenance of law and order, protection of life and property, disaster relief and emergency responses.

The advancement of the technology has provided PPDR networks with latest and enhanced features in terms of capability, capacity and interoperability. Broadband PPDR supports wide range of applications such as sending live images, videos and texts apart from the voice communications. Existing PPDR networks in the country are analog and digital systems supporting narrowband voice and data communications. Introduction of advanced PPDR communication networks can be a great enabler in decision making and handling of PPDR operations for personnel and organizations involved.

Keeping in view the need to have a robust policy framework for the introduction of an advanced, reliable, robust and responsive PPDR communication system in the country, TRAI has initiated *suo-motu* a Consultation Paper (CP) on 9th October 2017 on "Next Generation Public Protection and Disaster Relief (PPDR) communication networks" for the comments of the stakeholders.

The consultation paper has elaborated on the issues and shortcoming with existing PPDR networks, features of Next Generation PPDR networks, technical specifications and spectrum availability and future requirements. Execution models prevailing in various countries for Next Generation PPDR network have been deliberated and included in this consultation paper as international practices.

> **Consultation Paper dated 20th December 2017 on "Making ICT accessible for Persons with Disabilities (PwDs)"**

TRAI on 20th December 2017 suo-motu initiated a Consultation Paper on "Making ICT accessible for Persons with Disabilities (PwDs)" with an objective to identify the key areas requiring policy interventions for removal of barriers being faced by PwDs in accessing telecom and broadcasting services so that

affirmative actions at policy level in the form of recommendations to the government or formulation of regulation or advisory to equipment/ service providers or a combination of these can be taken.

Other Issues (Telecom Sector)

➢ **Seminar on "Brainstorming Broadband: Developing a Roadmap for India" held on 18th January 2017**

TRAI in collaboration with National Institute of Public Finance & Policy (NIPFP) conducted a Seminar on 18th January 2017 at New Delhi on "Brainstorming Broadband: Developing a Roadmap for India".

The Seminar was inaugurated by Shri Manoj Sinha, Hon'ble Minister of State (Independent Charge) for communications.

The Seminar was organized in the framework of TRAI's policy objective to expand broadband access in India. It focused on the roadblocks to broadband proliferation and create consensus on possible solutions. The discussions covered issues such as business case for rural broadband: demand side approaches focusing on encouraging uptake; spectrum availability and RoW challenges among others. The seminar was attended by representatives from relevant Government Ministries, Industry stakeholders, experts, academia and consumer groups.

➢ **TRAI seeks comments of stakeholders on "Ease of doing Telecom business" dated 14th March 2017**

Promoting "Ease of doing business" is amongst the priority work items for unhindered growth of the telecom sector. A number of steps have already been taken for ease of doing business. Steps like adoption of market based spectrum management such as assignment of spectrum through auction, permitting spectrum trading, spectrum sharing and liberalisation of administratively assigned spectrum, Unified Licensing regime, Merger and Acquisition guidelines, Virtual Network Operation etc. have been guided by the principles of "ease of doing business". The Authority is of the opinion that various processes that a telecom licensee is required to go through, should be simplified and combined to the extent possible to economise on efforts on part of the Telecom Service Providers (TSPs) as well as the Government. Therefore, it is important to identify the bottlenecks, obstacles or hindrances that are making it difficult to do telecom business in India and thus, require regulatory intervention. All the stakeholders

were, therefore, requested on 14th March 2017 to provide inputs with detailed explanation and justification. The paper is available in the official website at www.trai.gov.in.

Audit and Survey

TRAI has engaged independent agencies for auditing and assessing the performance of service providers on quality of service and also for assessing customer perception of service through survey.

TRAI also publishes information about the quality of service performance by service providers, the results of Audit and assessment of Quality of Service under taken by Independent Agencies and the results of survey under taken by independent agencies about customer perception of service through its website for the information of stakeholders. The publishing of quality of service related information has also been forcing the service providers to improve the quality of service performance and also to address deficiencies in meeting the benchmarks.

A fresh Tender for Drive test was floated and work is awarded to M/s Phimetrics Technology Pvt. Ltd., in all the four zones. Till date 15 reports of Drive tests were uploaded on TRAI web site.

Further a separate tender for Audit & Assessment was floated on 30th March 2017. The 26 Financial bids received for all four zones are opened and evaluated by a Tender Evaluation Committee.

The IVR survey work for Delhi, Madhya Pradesh and Karnataka as a pilot project was carried out by M/s Viva Connect Ltd. The report has been uploaded on TRAI website on 8th August 2017.

Monitoring and ensuring of Quality of Service (Performance Monitoring Reporting of TSPs, Audit and Assessment of Quality of Service of various TSPs and Customer Perception Reports offered by TSPs)

TRAI monitors the performance of service providers through quarterly Performance Monitoring Reports, Point of Interconnection congestion reports submitted by service providers.

For ensuring quality of service, TRAI has been closely monitoring the performance of service providers against the quality of service benchmarks through Performance Monitoring Reports. TRAI is also having regular interactions with service providers for improving quality of service. Further, TRAI has engaged independent agencies for auditing and assessing quality

of service and IVR surveys are being done as a poilate project through independent agency to assess the Customer Perception of Service in Delhi, Karnataka and Madhya Pradesh Service Area. The results of the audit and assessment of quality of service and IVR surveys are published for the information of stakeholders. TRAI has also been imposing financial disincentive on service providers for failure to comply with the quality of service benchmarks.

Open House Discussion (OHD) on Consultation Paper on "Captive VSAT CUG Policy Issues" held on 19th January 2017 at New Delhi

TRAI conducted an Open House Discussion (OHD) on Consultation Paper on "Captive VSAT CUG Policy issues" on 19th January 2017 at New Delhi.

Open House Discussion (OHD) on Consultation Paper on "Spectrum, Roaming and QoS related issues on Machine-to-Machine (M2M) Communications" held on 7th April 2017 at New Delhi

TRAI conducted an Open House Discussion (OHD) on Consultation Paper on "Spectrum, Roaming and QoS related requirements of machine-to-machine (M2M) communications" on 7th April 2017 at New Delhi.

Open House Discussion (OHD) on Consultation Paper on "Spectrum, Roaming and QoS related issues on Machine-to-Machine (M2M) Communications" held on 26th May 2017 at Mumbai

TRAI conducted an Open House Discussion (OHD) on Consultation Paper on "Issues related to closure of Access Services" on 28th April 2017 at Mumbai.

Open House Discussion (OHD) on "Regulatory Principles of Tariff Assessment" was conducted on 30th May 2017 at New Delhi

TRAI conducted an Open House Discussion (OHD) on Consultation Paper on "Regulatory Principles of Tariff Assessment" on 30th May 2017 at New Delhi.

Open House Discussion (OHD) on Consultation Paper on "Introduction of UL (VNO) for Acess Service authorization for Category 'B' Licenses with districts of a State as a service area" held on 6th July 2017 at Pune

TRAI conducted an Open House Discussion (OHD) on Consultation Paper on "Introduction of UL (VNO) Access Service authorization for Category

'B' license with districts of a State as a Service Area" on 6th July 2017 at Pune.

Open House Discussion (OHD) on Consultation paper on "Review of Interconnection usage charges" held on 20th July 2017

TRAI conducted an Open House Discussion (OHD) on Consultation paper on "Review of Interconnection usage charges" on 20th July 2017 at New Delhi. The OHD was attended by Member of Parliament, TSPs, Telecom Associations, Government officials and individuals.

Open House Discussion (OHD) on Consultation Paper on "Network Testing before launch of commercial services" held on 18th August 2017 at New Delhi

TRAI conducted an Open House Discussion (OHD) on Consultation Paper on "Network Testing before launch of commercial services" on 18th August 2017 at New Delhi.

Open House Discussion (OHD) on "Data Speed under Wireless Broadband Plans" held on 3rd October, 2017

TRAI conducted an Open House Discussion (OHD) on 3rd October, 2017 in New Delhi on Data Speed under Wireless Broadband plans. The OHD was attended by various stakeholders like TSPs, Telecom Associations, individuals etc.

Open House Discussion (OHD) on Consultation Paper on "In-Flight Connectivity" held on 27th November 2017 at New Delhi

TRAI conducted an Open House Discussion (OHD) on Consultation Paper on "In-Flight Connectivity" on 27th November 2017 at New Delhi.

Workshop on "Review of Interconnection Usage Charges" held on 18th July 2017

TRAI conducted a Workshop on "Review of Interconnection Usage Charges" on 18th July 2017 at New Delhi. This day-long Workshop was attended by Access Service Providers (ASPs). The ASPs made presentation on their view points with respect to the approach to be used for prescribing termination Charge.

Workshop on "Public Open Wi-Fi Pilot" held on 25th July 2017

TRAI conducted a Workshop on "Public Open Wi-Fi Pilot" on 25th July 2017 at Bengaluru. The objective of the pilot is to formulate framework architecture

and specifications for providing public Wi-Fi services through Public Data Offices (PDOs). The Workshop was well attended by various stakeholders including industry representatives.

Workshop on "Review of International Termination Charges" held on 16th October 2017

TRAI conducted a Workshop on "Review of International Termination Charges" on 16th October 2017 at New Delhi. This Workshop was attended by International Long Distance Operators (ILDOs) who carry voice traffic to/from India and Access Service Providers (ASPs). They made presentation on their view points with respect to the approach to be used for prescribing International Termination Charge.

Other Issues (Broadcasting Sector)

Seminar on "Digital Broadcasting in India-way forward" held on 4th May & 5th May, 2017

A two-day seminar on "Digital Broadcasting in India-way forward" was organized on 4th May & 5th May, 2017 at "The Ashok" Hotel, 50-B, Diplomatic Enclave, Chanakyapuri, New Delhi.

Workshop on "Solution Architecture for Technical Interoperable Set Top Box" held on 26th September 2017

A workshop on "Solution Architecture for Technical Interoperable Set Top Box" was held in Delhi on 26th September 2017 at "Gulmohar" Habitat World, India Habitat Centre, Lodhi Road, New Delhi-110003.

Open House Discussion (OHD) on Consultation Paper on "Issues related to Digital Radio Broadcasting in India" held on 25th October 2017

An Open House Discussion (OHD) on Consultation Paper on "Issues related to Digital Radio Broadcasting in India" was held on 25th October 2017 at "Tagore Chamber", Scope Convention Centre, Lodhi Road, New Delhi.

Open House Discussion on the Consultation Paper on "Ease of Doing Business in Broadcasting Sector" held on 1st November 2017

An Open House Discussion (OHD) on Consultation Paper on "Ease of Doing Business in Broadcasting Sector" was held on 1st November 2017 at "Mirza Ghalib Chamber, SCOPE Convention Centre, Lodhi Road, New Delhi.

TRAI issues Advisory to All DTH Operators for Enabling Online Payment System using BHIM/UPI & Bharat QR code on 7th November 2017

On 7th November 2017, an advisory was released for all the DTH Operators for enabling online payment system using BHIM/UPI & Bharat QR code. The Advisory was issued for enabling digital payments for convenience to consumers as well as for service providers. The full text of the Advisory is available on TRAI's website www.trai.gov.in.

Direction dated 8th November 2017 regarding "Display of registered satellite TV channels on landing page"

On 8th November 2017, in order to protect the interest of service providers and consumers & ensure orderly growth of the sector, a direction was issued to all the broadcasters and distributor of Television Channels to restrain from placing any registered satellite television channel, whose TV rating is released by TV rating agency, on the landing LCN or landing channel or boot up screen.

Annexure

List of Places where Consumer Outreach Programmes/Workshops were conducted during the period from 1st January 2017 to 31st December 2017

S.NO.	PLACE OF COPs	Date
1	Bhubaneswar (Odisha)	24.01.2017
2	Jalna (Maharashtra)	25.01.2017
3	Dholpur (Rajasthan)	27.01.2017
4	Khargone (Madhya Pradesh)	30.01.2017
5	Giridih (Jharkhand)	30.01.2017
6	Koppal (Karnataka)	09.02.2017
7	Port Blair (A&N Islands)	10.02.2017
8	Akodra (Gujarat)	15.02.2017
9	Jammu (J&K)	16.02.2017
10	Osmanabad (Maharashtra)	27.02.2017
11	Beed (Maharashtra)	28.02.2017
12	Patna (Bihar)	28.02.2017
13	Kaurali (Rajasthan)	08.03.2017
14	Itanagar (Arunachal Pradesh)	10.03.2017
15	Raebareli (Uttar Pradesh)	16.03.2017
16	Dhenkanal (Odisha)	22.03.2017
17	Itarsi (Madhya Pradesh)	27.03.2017
18	Kolkata (West Bengal)	29.03.2017
19	Srikakulam (Andhra Pradesh)	30.03.2017
20	Unnao (Uttar Pradesh)	30.03.2017
21	Fatehgarh Sahib (Punjab)	30.03.2017
22	Parwanoo (Himachal Pradesh)	31.03.2017
23	Tonk (Rajasthan)	17.05.2017
24	Panna (Madhya Pradesh)	18.05.2017
25	Mirzapur (Uttar Pradesh)	25.05.2017
26	Navsari (Gujarat)	25.05.2017
27	Suryapeta (Telangana)	30.05.2017
28	Darjeeling (West Bengal)	30.05.2017

S.NO.	PLACE OF COPs	Date
29	Shillong (Meghalaya)	08.06.2017
30	Palwal (Haryana)	08.06.2017
31	Srinagar (Uttarakhand)	15.06.2017
32	Tenali (Andhra Pradesh)	16.06.2017
33	Ferojpur (Punjab)	20.06.2017
34	Mangaldai, Darang (Assam)	21.06.2017
35	Anuppur (MP)	22.06.2017
36	Ramnagar (Karnataka)	22.06.2017
37	Parbhani (Maharashtra)	28.06.2017
38	Hingoli (Maharashtra)	29.06.2017
39	Hazaribagh (Jharkhand)	30.06.2017
40	Theni (Tamilnadu)	07.07.2017
41	Leh (Jammu & Kashmir)	12.07.2017
42	Jhargram (West Bengal)	20.07.2017
43	Sultanpur (Uttar Pradesh)	20.07.2017
44	Bundi (Rajasthan)	21.07.2017
45	Burhanpur (Madhya Pradesh)	27.07.2017
46	Sivasagar (Assam)	08.08.2017
47	Haldwani (Uttrakhand)	10.08.2017
48	Tarn Taran (Punjab)	10.08.2017
49	Vizianagaram (Andhra Pradesh)	30.08.2017
50	Kasauli (Himachal Pradesh)	31.08.2017
51	Mangalore (Karnataka)	08.09.2017
52	Barasat (West Bengal)	14.09.2017
53	Sonepat (Haryana)	14.09.2017
54	Nagapattinam (Tamilnadu)	19.09.2017
55	Tuticorin (Tamilnadu)	21.09.2017
56	Bhandara (Maharashtra)	21.09.2017
57	Vadodara (Gujarat)	23.09.2017
58	Neyyatinkara (Kerala)	11.10.2017
59	Rampur (Uttar Pradesh)	12.10.2017

S.NO.	PLACE OF COPs	Date
60	Korba (Chhattisgarh)	26.10.2017
61	Ujjain (Madhya Pradesh)	06.11.2017
62	Kishanganj (Bihar)	08.11.2017
63	Latur (Maharashtra)	09.11.2017
64	Udhampur (J&K)	10.11.2017
65	Chamba (HP)	17.11.2017
66	Haveri (Karnataka)	17.11.2017
67	Kadapa (Andhra Pradesh)	22.11.2017
68	Raj samand (Rajasthan)	23.11.2017
69	Darbhanga (Bihar)	29.11.2017
70	Hanuman Garh (Rajasthan)	30.11.2017
71	Tikamgarh, Madhya Pradesh	07.12.2017
72	Kohima (Nagaland)	09.12.2017
73	Villipuram (Tamilnadu)	12.12.2017
74	Meerut (Uttar Pradesh)	14.12.2017
75	Alipurduar (West Bengal)	14.12.2017
76	Tirupur (Tamilnadu)	14.12.2017
77	Buldhana (Maharashtra)	21.12.2017
78	Karimganj (Assam)	27.12.2017
79	Bhavnagar (Gujarat)	29.12.2017