



TELECOM REGULATORY AUTHORITY OF INDIA

Report on Activities

(1st January 2014 to 31st December 2014)

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PREFACE

The Telecom Regulatory Authority of India (TRAI) is a statutory body set up for regulating the Telecom and Broadcasting Sectors. TRAI was created by enacting the TRAI Act 1997 (as amended in the year 2000). This Act, along with the notification of the Government dated 9th January 2004, empowers TRAI to recommend conditions for entry of new telecom service providers as well as terms and conditions of license and ensure compliance of the terms and conditions of the license. The Act also empowers TRAI to lay down the standards of quality of service and ensure compliance, specify the tariff policy and make recommendations regarding terms and conditions on which Addressable Systems of TV shall be provided to customers and parameters for regulating maximum time for advertisements in pay as well as other TV channels. TRAI's scope of work also includes issues relating to telecom and cable tariff policy, commercial and technical aspects of interconnection, free choice and equal ease of access for the public to different telecom services, resolution of conflicts that may arise due to market developments and diverse network structures for various telecom services. TRAI also facilitates development of forums for interaction amongst service providers and interaction of the Authority with consumer organizations to further the consumer interest.

The Authority initiated various measures to promote the growth and development of the telecom and broadcasting sectors during 2014. On the telecom front, TRAI addressed the complex issues of Spectrum Pricing, Spectrum Trading and Spectrum Sharing. Recommendations were made to the Government on improving telecom services in Andaman & Nicobar Islands & Lakshadweep and provisioning of INMARSAT/Satellite services. On the tariff front, the Authority continued with the general policy of forbearance in respect of most services. The ceiling tariff for Domestic Leased Circuits (DLCs) was reduced. With this reduction, customers seeking DLCs on thin routes connecting small cities, remote and hilly areas etc. would benefit. The reduction in ceiling tariff for DLCs would also boost the overall growth of the economy. The Authority issued the International Calling Card Service (Access charges) Regulations 2014. These regulations are expected to pave the way for introduction of calling cards, resulting in real choice for the customer to pick his/her international long distance operator. This would further lower the tariff for ISD Calls. Effective measures in consumer interest were also taken.

In the Broadcasting Sector, the Authority addressed the issues of Migration of FM Radio Broadcasters to the next phase, grant of new DTH Licenses, Media Ownership and Community Radio. The Authority also sent its recommendations on the Regulatory Framework for Platform Services. The Authority also made *suo motu* recommendations on a regulatory framework for ground-based broadcasters to ensure that any TV channel that is distributed on any TV network

in India is covered by a regulatory framework, whether it is obtained from a satellite-based broadcaster; produced by the network operator or sourced from a terrestrial broadcaster.

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 were efforts to improve the TRAI - 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 2014. 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.



(Sudhir Gupta)
Secretary

REPORT ON ACTIVITIES

I. CONSUMER INTERESTS

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

Quality of Service

The Authority has laid down the standards of Quality of Service (QoS) for various services provided by the telecom service providers (TSPs) to their customers. TRAI also monitors and ensures compliance of the standards to ensure good service to consumers.

TRAI continuously monitors the performance of TSPs through quarterly 'Performance Monitoring Reports' (PMRs) and 'Point of Interconnection Congestion Reports' submitted by them against QoS benchmarks. TRAI also regularly interacts with service providers with the intent to improve quality of service. In order to independently assess the QoS provided by the TSPs, TRAI has engaged independent agencies on a zonal basis for auditing and assessing the quality of service. TRAI also conducts surveys and audits through independent agencies 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 and are available on TRAI website. TRAI has also been imposing financial disincentives on service providers for failure to comply with the quality of service benchmarks. This is an ongoing activity to ensure that the TSPs meet the prescribed benchmarks and acts as an effective tool to ensure compliance by TSPs on pan-India basis.

During the year, the following additional measures, were taken to improve delivery of services:

1. *The Quality of Service of Broadband Service (Second Amendment) Regulations 2014 dated 25th June, 2014*

The Authority laid down the QoS standards for Broadband service through the Quality of Service of Broadband Service Regulation 2006 dated 6th October 2006. Through the cited amendment, the definition of 'Broadband' was modified from the earlier definition of a connection with a minimum speed of 256 Kbps to a connection with a minimum download speed of 512 Kbps. This should ensure better quality, faster and smoother internet access to subscribers.

2. The “Standards of Quality of Service for Wireless Data Services (Amendment) Regulations, 2014”, dated 24th July, 2014

In order to ensure proper delivery, QoS and transparency in wireless data services for consumers, the Authority laid down the QoS standards for wireless data services through the Standards of QoS for Wireless Data Services Regulations, 2012 on 4th December, 2012. In these regulations, the “minimum download speed” is one of the QoS parameters. It was mandated that the TSPs will measure the minimum download speed according to the test methodology prescribed, for each of the data plans offered and report to TRAI. There were concerns expressed by customers that the TSPs were not mentioning the minimum download speeds in their offer. Through this amendment, the Authority mandated TSPs to indicate the minimum download speed available to customers in all the data plans. The TSPs have also been mandated to print details of the minimum download speed on the vouchers of the wireless data plans, publish on their websites, at their complaint centres and sale outlets.

3. The Standard of Quality of Service of Basic Telephone Service (wireline) and Cellular Mobile Telephone Service (Third Amendment) Regulations 2014 dated 21st August 2014

The Authority has issued benchmarks for various parameters pertaining to wire line and cellular mobile services being provided to telecom customers by TSPs under the Standards of Quality of Service of Basic Telephone Service (Wireline) and Cellular Mobile Telephone Service Regulations 2009 (7 of 2009). The Authority has been monitoring compliance with these benchmarks by various TSPs on a periodic basis and has been imposing financial disincentives on TSPs wherever there has been failure to meet the stipulated benchmarks. From the monitoring of performance of TSPs, TRAI has observed that compliance with benchmarks for parameters relating to fault incidences, fault repair and response time to the customer for assistance has been a recurrent problem area. There have been representations from these TSPs to the Authority expressing their inability and practical difficulties in achieving prescribed benchmarks and requesting the Authority to review the benchmark for some of the parameters. After discussing the issue with the service providers, the Authority initiated a consultation process to rationalize the parameters of QoS of Basic Telephone (wireline) and Cellular mobile telephone. After consultations and internal assessments, it was found that there are practical and genuine difficulties in achieving benchmarks of some QoS parameters. After detailed analysis, the benchmarks were rationalized through this amendment to ensure better compliance by TSPs. This step will ensure better quality of service to wireline and mobile consumers.

4. Direction dated 27th May 2014 to Multi System Operators (MSOs) in DAS areas to ensure delivery of individual subscriber bills, provide option for online bill payment and electronic acknowledgment to the subscriber for the payment made

During the inspection of some MSOs, the Authority observed that compliance with the provisions of the Standard of Quality of Service (Digital Addressable Cable TV Systems) Regulations and Directions related to provision of bills and receipts to subscribers was not satisfactory. Accordingly, the MSOs registered for providing Cable TV Services in DAS areas were directed to ensure that the bill to each subscriber is delivered through the means chosen by the subscriber, provide an online bill payment option and ensure electronic acknowledgment to the subscriber for the payment made. This step is aimed towards increasing transparency and ensuring better quality of service.

Retail and Wholesale Tariffs

TRAI protects interests of consumers through Tariff Regulations 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 charges where the market is not delivering optimal rates. 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 were specified during the period:

1. The Telecommunications (Broadcasting and Cable) Services (Second) Tariff Order (Eleventh Amendment dated 31st March 2014 and Thirteenth Amendment dated 31st December 2014)

TRAI has been regulating tariff for the broadcasting and cable TV services since 2004. The objective has been to give relief and protection to consumers of broadcasting and cable TV services from frequent hikes in cable TV charges. Accordingly, in the principal tariff order notified in 2004 for cable TV services offered through analog cable TV systems, TRAI prescribed that the prevailing charges at various levels, as on 26th December 2003, shall be the tariff ceilings. However, TRAI has been reviewing the prescribed ceilings, from time to time, to make adjustments for inflation. Certain provisions of the tariff order were under judicial scrutiny since 2008 and a tariff determination exercise was under way as per directions of the Hon'ble Supreme Court. Therefore, from January 2009 to March 2014, periodic reviews to make inflation-linked adjustments could not be carried out. In March 2014, with concurrence of the Hon'ble Supreme Court, the Authority carried out the review.

Based on the rise in the wholesale price index (WPI) over the last five years and considering other relevant factors, the Authority came to a conclusion that an overall 27.5% inflation hike is to be allowed, both at the wholesale and retail levels. Taking into account the consumer's

interest, the Authority prescribed that this hike be implemented in two installments. The first installment of 15% was made effective from 1st April 2014. This was notified vide the Telecommunications (Broadcasting & Cable) Services (Second) Tariff (Eleventh Amendment) Order 2014 dated 31st March 2014. The second installment for the remaining inflation-linked increase shall be made effective from 1st January 2015 which shall be notified subsequently. This is expected to give adequate and reasonable time to all stakeholders to adjust to these hikes. To take care of the second installment of the inflation linked hike, the Authority notified the Telecommunications (Broadcasting & Cable) Services (Second) Tariff (Thirteenth Amendment) Order 2014 dated 31st December 2014.

2. Amendment to tariff orders / regulations pertaining to commercial subscribers

In a matter relating to a tariff order prescribing tariffs for commercial subscribers, the Hon'ble Supreme Court, in April 2014, asked TRAI to come out with a new tariff dispensation for such subscribers. Accordingly, on 16th July and 18th July 2014, TRAI notified amendments to tariff orders / regulations pertaining to commercial subscribers of broadcasting and cable TV services. These amendments bring in clarity regarding the manner of distribution of TV signals to commercial subscribers, prescribe tariffs based on intended use of the TV signals, and aim to enhance transparency in tariff regulation.

The salient features of the tariff orders / regulations are:

- (i) Commercial establishments that do not specifically charge clients/guests on account of providing/showing television programmes, and offer such services as part of amenities, are to be treated like ordinary subscribers, and charges would be on a per television basis;
- (ii) In cases where commercial establishments specifically charge clients/guests on account of providing/showing television programmes, the tariff would be determined on mutually agreed terms between the broadcaster and the commercial subscriber;
- (iii) In all cases, the commercial subscriber would obtain television services only from a distribution platform operator (MSO/DTH operator/Cable Operator/IPTV operator/HITS operator).

3. Telecommunications Tariff (Fifty seventh Amendment) Order 2014 dated 14th July 2014 & Telecommunications Tariff (Fifty eighth Amendment) Order 2014 dated 1st August 2014, reduces ceiling tariffs for Domestic Leased Circuits (DLCs)

A leased circuit is a two-way link for the exclusive use of a subscriber regardless of the way it is used by the subscriber. A leased circuit having both of its end-links within India is termed a Domestic Leased Circuit (DLC). As per the present licensing regime in the country, both, national long distance operators (NLDOs) and access service providers (ASPs) can provide

DLCs. The ceiling tariffs for DLCs were last specified by the Authority through the Telecommunication Tariff (36th Amendment) Order, 2005 dated 21.04.2005. In 2014, it was observed that prevailing tariffs for DLCs on dense routes were significantly below the ceiling tariffs prescribed by the Authority. However, tariffs in hilly and remote areas were operating at ceiling rates. It was noted that there was a decline in the per unit cost of providing DLCs due to (i) advancement in transmission technologies, (ii) increase in transmission infrastructure and (iii) increase in the bandwidth carrying capacity of transmission media. The Authority also noticed signs of a lack of competition in some parts of the country. With a view to align ceiling tariffs with the present costs, the Authority decided to review the ceiling tariffs for DLCs.

After a comprehensive consultation, the Authority, through the TTO (Fifty seventh Amendment), 2014, brought about the following changes in the tariff regime for DLCs;

- (i) Tariffs for DLCs of less than E1 capacity have been kept under forbearance.
- (ii) Ceiling tariffs for DLCs of E1, DS-3 and STM-1 capacities have been reduced.
- (iii) The DLCs of STM-4 capacity, the tariff for which was under forbearance, have been brought under tariff regulation by way of prescription of ceiling tariffs.

It is expected that with the implementation of the reduced ceiling tariffs, customers seeking DLCs on thin routes connecting small cities, remote and hilly areas like Assam, North East, Jammu and Kashmir and other areas such as Himachal Pradesh, Uttarakhand, Jharkhand, Orissa etc. (i.e. the routes which are not sufficiently competitive) would benefit. The Authority is of the view that the reduction in ceiling tariffs for DLCs would help improve demand and, in turn, give a substantial boost to the overall growth of the economy.

Transparency in Service Provisions

Ensuring transparency in service provision is an important dimension of consumer protection. TRAI has taken the following steps for ensuring such transparency:

1. Amendments to the existing regulatory framework with regard to distribution of TV channels from broadcasters to Distribution Platform Operators (DPOs) viz. Cable, DTH, HITS and IPTV operators

During Phase I and Phase II of digitalization of cable TV sector, it was noticed that the authorised agents/aggregators of the broadcasters were forming large bouquets, combining channels of different broadcasters and forcing it on the DPOs viz. cable, DTH, HITS and IP TV operators. This was resulting in distortions in the market. Incidentally, the Ministry of Information and Broadcasting (MIB) had also sent a reference to TRAI requesting for a review of the regulatory framework with regard to aggregators. The amendments aim at contributing

to the orderly growth and overall development of the sector by streamlining the distribution of TV channels from broadcasters to DPOs. The salient provisions in these amendments are:

- (i) A broadcaster is defined as an entity having the necessary Government permissions in its name.
- (ii) Only the broadcaster shall publish the Reference Interconnect Offers (RIOs) and enter into interconnection agreements with DPOs. However, in case a broadcaster, in discharge of its regulatory obligations, is using the services of an agent, such authorised agent can only act in the name of and on behalf of the broadcaster.
- (iii) The broadcaster shall ensure that its authorised agent, while providing channels/bouquets to the DPOs, does not alter the bouquets as offered in the RIO of the broadcaster.
- (iv) In case an agent acts as an authorised agent of multiple broadcasters, the individual broadcasters shall ensure that such agent does not bundle its channels or bouquets with that of other broadcasters. However, broadcasting companies belonging to the same group can bundle their channels.

2. “International Calling Card Services (Access Charges) Regulations, 2014” dated 19th August, 2014

Earlier, a customer did not have the option to choose his long distance carrier for making ISD calls and get the advantage of lower tariff because of competition in the long distance sector. Due to this lack of choice, the TSP of the consumer was able to charge high retail tariffs for long distance calls. The Authority issued a direction on 24th July, 2002 to enable consumers to choose an NLDO/ILDO carrier for their STD/ISD calls. The direction could not be implemented due to various reasons. The licences were amended in 2010 to allow an NLDO/ILDO to issue calling cards directly to consumers. The Intelligent Network Regulation was also amended to facilitate time-bound agreements between TSPs. However, consumers still did not have the choice of Long Distance Operator for making STD/ISD calls, as the TSPs tried to evade the introduction of competition, their stance shifting every time the issue was taken up. The net result was that greater choice to consumers for making long distance calls was averted. When the Intelligent Network Regulations were amended in 2012 to facilitate interconnect agreements so that consumers get a choice of NLDO/ILDO, TSPs dragged their feet and no consensus could be achieved; some access providers offered unrealistic access charges to ILDOs, making the entire process a non-starter.

To address the above issue which had been pending for more than 10 years, a Consultation Paper on ‘Revenue Sharing Arrangement for Calling Card Services’ was issued on 14th November,

2013. After consultation, TRAI issued Regulations prescribing access charges payable by an ILDO to the Access Service Provider. Access charges to be paid by the ILDO to Access Service Provider shall be 40 paise per minute for wireless services and Rs.1.20 per minute for wireline services. These regulations are expected to pave the way for introduction of calling cards, providing choice for the customer to select an ILDO. Calling cards would further result in lower tariffs for ISD calls.

3. Directions dated 30th September and 7th November 2014 to M/s Loop Mobile (India) Limited with regard to closure of services in Mumbai Licensed Service Area (LSA) due to expiry of its CMTS licence on 29th November, 2014

Due to expiry of its Cellular Mobile Telephone Service (CMTS) licence, M/s Loop Mobile (India) Limited closed its operation on 29th November, 2014.

To protect the interest of consumers of M/s Loop Mobile and to provide advance information about closure of service of M/s Loop and facilitate subscribers of M/s Loop to port their mobile number to the service provider of their choice without any hassle, the Authority directed M/s Loop Mobile (India) Ltd. on 30th September 2014, to inform the date of closure of its services in Mumbai LSA to:

- (i) all its existing subscribers in its aforesaid LSA either in writing or by sending SMS/e-mail, within ten days of the issue of the said direction;
- (ii) every new subscriber at the time of his enrollment to its network.

Pursuant to this direction, on the request of M/s Loop informing that its existing systems may not be able to cater to surge of requests in the event of 'an SMS blast to subscribers' or an 'advertisement in the newspapers giving an option to subscribers to port out', the Authority through its direction dated 7th November 2014, had allocated an additional service provider code to M/s Loop so as to enable it to generate a large number of Unique Porting Codes in advance, for all of its subscriber base and to communicate the same to its subscribers so that the subscribers can port out their mobile numbers.

The Authority also informed all subscribers of M/s Loop in Mumbai service area through a press release to port out from Loop's network before 29th November 2014.

Combating Spam (Unwanted telemarketing calls)

1. The Telecom Commercial Communications Customer Preference (Fifteenth Amendment) Regulations, 2014" dated 7th April 2014

TRAI issued the Telecom Commercial Communications Customer Preference Regulation, 2010 TCCP Regulations dated 15th December, 2010 to provide for a comprehensive regulatory

framework for curbing Unsolicited Commercial Communications (UCC). These regulations have been amended from time to time to fine tune them to meet current needs. Vide the 13th Amendment, to further strengthen this framework, it was provided that telecom resources of entities such as banks, insurance companies and real estate companies on whose behalf UCCs were sent, were also to be disconnected, thereby prescribing as a deterrent against such organizations and to inculcate a greater sense of responsibility in them.

Some of these entities have represented to the Authority requesting for reconnection of their disconnected resources. The Authority noted the various measures taken by these entities, their channel partners, dealers, agents etc. in order to comply with the regulations. After examination, wherever the Authority was satisfied with such measures, the Authority ordered the reconnection of disconnected telecom resources of such entities, except the resources which were used for originating the UCC.

To streamline the reconnection procedure for such entities, the Authority, through these regulations, has prescribed a reconnection charge of Rs.500 per telecom resource (subject to a maximum of Rs.5,00,000) to be collected from these entities. These charges will act as a further deterrence against misuse of telecom resources for unwanted calls.

2. The Telecom Commercial Communications Customer Preference (sixteenth Amendment) Regulations, 2014" dated 9th December 2014

The Authority had taken a series of measures to stop the menace of unsolicited commercial communications (unwanted telemarketing calls). One such measure was to mandate only an alpha header, with no reply path, for sending transactional messages. The Authority received a number of representations from various stakeholders requesting for allowing a return path in transactional messages as many applications like social networking sites require two-way or interactive communication. The Authority, through this amendment has enabled two-way interactive SMS transactional communication, through a suitable header starting with 5 for various user-friendly applications. Through this amendment, various ILDOs have also been allowed to carry international transactional messages from international entities.

To ensure suitable safeguards against misuse of reply path, the financial disincentives for such transactional messages are double than that for normal transactional messages.

3. Amendment to Direction dated the 10th December, 2008 providing codes for alpha-numeric identifier towards sending commercial SMSs

To assist the customer in identifying the source and origin of the SMS sent by a TSP, the Authority directed that the alpha numerical identifier provided, along with the code of the service area, be sent for all commercial SMSs for sender identification. After the issuance of

the direction, some service providers have ceased operation and licenses have been issued to new service providers necessitating new allocation of codes for the service providers. Through this amendment, the revised list of codes for the service providers were notified.

4. Direction for obtaining explicit consent of consumers for provisioning non-subscription based Value Added Service products embedded in SIM Application Tool Kit (STK) of SIM card.

While the menace of activation of subscription based Value Added Services (VAS) was addressed to a great extent with the double confirmation procedure as per TRAI regulations, consumers continued to complain regarding false activations of various VAS embedded in the SIM card itself. This direction seeks to address the issue relating to activation and deactivation of non-subscription based Value Added Service (VAS) products embedded in SIM Application Tool Kit (STK) of a SIM Card. As a measure of consumer protection, the service providers were directed to ensure that the VAS for products embedded in the SIM are also provided to the consumer only after obtaining the explicit consent of the consumer. The direction also defines how service providers have to obtain the explicit consent of consumers.

Consumer Complaint Redressal

The Telecommunications Consumer Redressal (Third Amendment) Regulations 2014 dated 1st July, 2014.

The Authority amended Regulation 2 of the Telecommunications Consumer Redressal Regulations 2012, to include the definition of broadband as under:

(f) “Broadband” or “ Broadband service” means a data connection that is able to support interactive services including Internet access and has the capability of the minimum download speed of five hundred and twelve kilo bits per second (512 kbps) to an individual subscriber from the point of presence (POP) of the service provider intending to provide Broadband service.”

The objective of the amendment was to ensure that consumers get faster speed and better experience when using a broadband connection.

Consumer Participation

TRAI has instituted a procedure for registration of consumer bodies and organizations. These organizations- called Consumer Advocacy Group (CAG)-are expected to co-ordinate and articulate consumer responses to TRAI’s activities, and also assist TRAI in consumer education.

It shall be primary responsibility of every consumer organization registered with TRAI to work for protection and propagation of consumer interest.

24 additional CAGs were registered this year. The details of CAGs registered with TRAI are available on the TRAI website. The Regional Offices of TRAI are also interacting with these agencies, coordinating their activities and helping them to sort out consumer-related issues with the service providers.

In 2014, the Regional Offices and TRAI Head office have organized 111 Customer Outreach Programmes (CoPs) in States/cities/towns across India. Consumer Awareness Programmes have also been organized in 11 professional colleges across the country. 4 Regional Workshops aimed at Capacity Building of Consumer Advocacy Groups and Consumer Education were organized at Lucknow, Surat, Shillong and Raipur. The Regional Offices of TRAI have helped the CAGs and consumers to get a better understanding of the quality of service issues and consumer rights. Subscribers were informed about regulations/orders/directions issued by TRAI for protecting the interests of the customers besides informing customers about the customer Grievance Redressal mechanism. Many systemic issues that arose from these interactions with customers in these COPs have been addressed. Some of the key issues addressed include: excess billing, activation and deactivation of SIM/VAS services, MNP, Network related issues, Tariff, Broadband issues and strengthening of the the Appellate Authority mechanism etc. TRAI has also printed 54,000 Consumer Handbooks on Telecommunications in Hindi, English and 9 regional languages which were distributed to consumers attending the COPs. These books have also been provided to registered CAGs for distribution in their respective areas. TRAI has also developed Radio Jingles in Hindi, English and 10 Regional languages on VAS/UCC which were aired in various FM channels in 84 cities across the country for one week in the months of June, July, August & October 2014.

II. RECOMMENDATIONS

SPECTRUM, LICENSING, UNIVERSAL ACCESS TO TELECOM, FULL MOBILE NUMBER PORTABILITY, ADJUSTED GROSS REVENUE, FM RADIO, DIRECT TO HOME, MEDIA OWNERSHIP, COMMUNITY RADIO, PLATFORM SERVICES.

Recommendations were made to the Government on diverse subjects including market structure and entry of new operators in the sector, the licensing framework and management of scarce resources such as spectrum, telecom development in remote areas and to underserved populations, consumer safety and security. Under this mandate, TRAI took action on the following matters during the year:

Spectrum

1. Recommendations dated 28th January 2014 on Working Guidelines for Spectrum Trading

Over a period of time, auctions have emerged as the well-accepted method of spectrum assignment. However, the spectrum is assigned for a very long duration of time. It is possible that a TSP which purchased spectrum through an auction may not be interested in carrying on with business and may seek an exit. Similarly, it is also possible that a TSP has more spectrum than it actually requires, whereas others may need to buy spectrum either as a new entrant or to supplement their existing holding. The average spectrum holding of TSPs in India are low in comparison with international standards and there is an urgent need for consolidation of fragmented spectrum holdings.

Through spectrum trading, the right to use spectrum is transferred voluntarily by the present user either in full or in part of its total holding, in exchange for a monetary consideration. Spectrum trading provides flexibility in managing the spectrum requirement and facilitates optimal use of spectrum by way of consolidation of spectrum holdings.

On 9th September 2013, the Authority furnished its recommendations to the Department of Telecommunications (DoT) on 'Valuation and Reserve price of Spectrum' wherein it was recommended that Spectrum Trading should be permitted in the country. Through its letter dated 11th October 2013, the DoT conveyed its in-principle approval of TRAI's recommendations on Spectrum Trading. Thereafter, the Authority constituted a Steering Committee to prepare the working guidelines on Spectrum Trading.

Based on the deliberations of the Steering Committee, the Authority finalized its recommendations on 'Working Guidelines on Spectrum Trading' on 28th January 2014. The salient features of the recommendations are:

- (i) Under spectrum trading, only outright transfer of spectrum is permitted, i.e. the ownership of the usage right is transferred to the buyer. Spectrum leasing is not permitted at this point of time.
- (ii) Spectrum trading will not alter the original validity period of spectrum assignment.
- (iii) For the present, spectrum trading shall be permitted only on a pan-LSA (Licensed Service Area) basis i.e. spectrum cannot be traded for a part of the LSA.
- (iv) The seller and the buyer shall be required to inform the Licensor regarding the spectrum trade, 6 weeks prior to the effective date of trade. However, no permission will be required from the Licensor/Government for Spectrum Trading.
- (v) All spectrum bands earmarked for Access Services by the Licensor will be treated as tradable spectrum bands. Currently spectrum in 800MHz, 900MHz, 1800MHz, 2100MHz, 2300MHz and 2500MHz spectrum bands have been allocated for Access Services.
- (vi) The licensee can trade its spectrum only if the entire spectrum held in a particular spectrum band within an LSA is either been acquired through an auction in the year 2010 or afterwards, or on which it has already paid the prescribed market value (as decided by the Government from time to time) to the Government.
- (vii) A TSP will not be permitted to trade any spectrum in the spectrum band in which it has acquired any spectrum through trading (or auction) for a period of 2 years from the effective date of transfer of spectrum (or effective date of assignment), i.e. TSP is required to hold spectrum for at least two years from the date it acquires the spectrum.

2. Recommendations dated 22nd February 2014 on Reserve Price for Auction of Spectrum in the 800 MHz Band

Apropos DoT's reference dated 12th December 2013 seeking recommendations on the applicable reserve price for auction of spectrum in 800 MHz in all the service areas, TRAI issued a Consultation Paper (CP) on 30th December 2013 on "Valuation and Reserve Price of Spectrum" raising specific issues for consideration of stakeholders.

After considering the comments received from the stakeholders and further analysis, the Authority furnished its recommendations on “Reserve Price for Auction of Spectrum in the 800 MHz Band” on 22nd February 2014. The salient features of the recommendations are:

- (i) The entire available spectrum with the DoT in the 800 MHz band should be put to auction.
- (ii) Spectrum in the 800 MHz band should be auctioned in a block size of 1.25 MHz.
- (iii) At least one chunk of contiguous 5 MHz spectrum (i.e. 4 carriers) should be carved out before the auction. The carrier reassignment, if required, may be carried out amongst the existing TSPs in the 800 MHz band to make at least 4 contiguous carriers available. Alternatively, the NIA for the auction may clearly stipulate that only contiguous blocks of 5 MHz will be sold. However, the reconfiguration of the frequencies should be worked out while auction is under way so that the reassignment is possible to be effected on completion of the auction.
- (iv) A new entrant i.e. a TSP which does not have any spectrum holding in the 800 MHz band must bid for a minimum of 4 carriers. However, an existing TSP i.e. a TSP having some spectrum holding in the 800 MHz band should be permitted to bid for a minimum 1 block of spectrum. New entrants must be assigned the earmarked contiguous carriers only.

The recommendations discussed the various methodologies that have been used to arrive at the valuation of the spectrum in the 800 MHz band. The Authority recommended reserve prices of the spectrum in the 800 MHz band on the basis of the valuation of the spectrum.

3. Recommendations dated 21st July 2014 on ‘Guidelines on Spectrum sharing’

In India, there are 7-13 licensees (2G, 3G and BWA) in a Licensed Service Area (LSA), which is a large number by any global standard. As a result, spectrum holding per TSP is small and fragmented. Spectrum fragmentation results in poor (low efficiency) utilization of the spectrum. The basic objective of spectrum sharing is to provide an opportunity to TSPs to pool their spectrum holdings and thereby improve spectral efficiency. Sharing can also provide additional network capacities in places where there is network congestion due to a spectrum crunch.

The gain in spectral efficiency increases non-linearly with the quantum of spectrum. At present, spectrum sharing is not permitted in India. In February 2014, the Authority constituted a Steering Committee consisting of senior officers of TRAI and representatives of all the TSPs

to frame guidelines for spectrum sharing. The Authority finalized and forwarded its recommendations on 21st July, 2014, the salient features of which are:

- (i) Spectrum sharing refers to an arrangement between two access licensees (CMTS/ UASL/UL (AS)/UL) in a LSA, where both licensees having access spectrum in the same band, pool their respective spectrum in that LSA for their simultaneous use.
- (ii) Spectrum sharing would involve both the TSPs utilising the spectrum. Leasing of spectrum is not permitted. Both licensees will continue to hold their primary right over their own spectrum.
- (iii) All access spectrum i.e. spectrum in the bands of 800/900/1800/2100/ 2300/ 2500 MHz will be sharable provided that both the licensees are having spectrum in the same band.
- (iv) Both the licensees, willing to share their spectrum, shall inform the licensor at the time of entering into spectrum sharing agreement.
- (v) At present, there are many licensees having administratively assigned spectrum in the 800 MHz, 900 MHz and 1800 MHz band. If any one or both of the licensees, sharing their spectrum, have administratively assigned spectrum in that band, then, after sharing, they will be permitted to provide only those services which can be provided through the administratively held spectrum.
- (vi) If both the licensees are sharing the spectrum in a band in which they have only that spectrum which is either acquired through an auction in the year 2010 or afterwards, or on which the licensee has already paid the prescribed market value³ (as decided by the Government from time to time) to the Government, they can offer services using all those technologies (namely GSM, CDMA, WCDMA, LTE etc), which they can independently provide through their own spectrum holding.
- (vii) Spectrum sharing will be restricted to sharing by only two licensees subject to the condition that there will be at least two independent networks provided in the same band.

4. Recommendations dated 29th August 2014 on 'Allocation and pricing of Microwave Access (MWA) and Microwave Backbone (MWB) RF carriers'

Mobile backhaul is an integral part of network which connects cell site Base Transceiver Stations (BTSs) with Base Station Controllers (BSCs). Due to increasing use of newer multimedia applications (images, videos etc), the proliferation of third and fourth generation (3G/4G) wireless

mobile systems is increasing. The data transfer capabilities of 3G/4G networks is directly dependent on the capacity of the backhaul network. Therefore, requirement of mobile backhaul capacity is expected to grow rapidly in future. The backhaul can be provided through copper cable, Optical Fibre and Microwave (MW). Since MW is cheaper, scalable and a highly reliable option, it is the dominating backhaul technology in the country. In certain rural and remote locations, MW is the only practical high-capacity backhaul solution available. Therefore, it is vitally important that sufficient MW backhaul carriers are made available to the TSPs at a reasonable price.

On a specific reference from DoT on various issues related to the assignment and pricing of MW carriers, TRAI issued a Consultation Paper on 28th March 2014. The Authority forwarded its recommendations on 'Allocation and Pricing of Microwave Access (MWA) and Microwave Backbone (MWB) RF carriers' on 29th August, 2014. The salient features of the recommendations are:

- (i) A ceiling should be fixed on the number of MWA carriers that can be assigned to a TSP. The TSPs should be assigned MW Access carriers as per their request as long as it is within the ceiling limit.
- (ii) The assignment of MW Access carriers (backhaul carriers) should be done on an exclusive basis for entire LSAs whereas assignment of MW Backbone carriers (used for long distance inter-city links) should be done on a link-to-link basis.
- (iii) Presently, MW Access carriers are assigned in 13 GHz, 15 GHz, 18 GHz and 21 GHz spectrum bands. The higher frequency bands viz. 26/28/32/38/42 GHz should also be earmarked for this purpose.
- (iv) The prevailing spectrum charges mechanism based on percentage AGR for MW Access carriers should be continued. However, different rates should be charged for different spectrum bands. The charges for MWA carriers in the 13/15, 18/21, 26/28/32 and 38/42 GHz bands should be 0.17 %, 0.12%, 0.1% & 0.07% of AGR per carrier respectively.
- (v) For MWB carriers, the charging should be done on a link-to-link basis at the rate of Rs.13900 per KM per annum per carrier.
- (vi) In order to increase broadband penetration in India, the usage of high capacity backhaul in the 60 GHz band (known as V band) and 70 GHz band (known as E band) should be opened with 'light touch regulation' and allotment should be on a link- to-link basis.

5. Recommendations dated 15th October 2014 on “Valuation and Reserve Price of Spectrum: Licences expiring in 2015-16”

Access licences (CMTS/UAS) which were awarded in 1995/96 are due to expire during 2015/16. In this context, the DoT sought the recommendations of the Authority on the applicable reserve price for all the LSAs for auction of spectrum in 900 MHz and 1800 MHz bands. After consultation with the stakeholders and internal analysis, the Authority forwarded its recommendations on “Valuation and Reserve Price of Spectrum: Licences expiring in 2015-16” to the DoT on 15th October 2014.

In these recommendations, the Authority has emphasized the importance of the upcoming auction for the TSPs whose licences are due to expire in 2015-16. In the 900 MHz band, only the spectrum held by them is available for auction. These licensees will have to win back this spectrum to ensure business continuity in an LSA; if they don't, it jeopardizes the large investment that they had made. The continuity of services to millions of customers is also at stake. In this backdrop, the Authority emphasized the need to make available additional spectrum before conducting the auction. The salient features of the recommendations are:

- (i) Notwithstanding the clearly-stated objective in the National Telecom Policy (NTP) - 2012 and various recommendations made by the Authority over the past decade for improving the supply of spectrum availability for commercial use, DoT/ WPC¹ have so far not been able to take effective steps to lay out a roadmap for increasing the supply of spectrum to ensure the orderly growth of the telecom sector. Therefore, the Authority has emphasized the need for an urgent dialogue at the level of the Finance Minister, Minister of Communications and IT and the Defence Minister to ensure availability of additional spectrum for commercial use.
- (ii) The Authority has also recommended that steps could be taken to make additional spectrum available in the 900, 1800 and 2100 MHz bands. The measures suggested include taking back of 1.2 MHz spectrum in the 900 MHz band from BSNL, implementing the E-GSM band solution, utilising spectrum earmarked for Defence but lying idle in the 1800 MHz band and vacation of spectrum by Defence in the 2100 MHz band.
- (iii) The spectrum in the 800 MHz, 900 MHz, 1800 MHz and 2100 MHz bands should be auctioned together.
- (iv) The Government should announce the roadmap for the auction of spectrum in 700 MHz band. This should be done before the conduct of the upcoming auctions in 900/1800 MHz band so that TSPs can take informed decisions regarding their participation in the auction.

¹ The Wireless Planning & Coordination wing of the DoT.

- (v) The auction should be carried out only after a clear roadmap is made available for vacating spectrum in the 2100 MHz band from Defence and in the 900 MHz band from BSNL.
- (vi) The Authority highlighted the deleterious fallout of conducting auctions without addressing the supply constraint for the telecom sector and for the economy. In this backdrop, the Authority recommended scheduling of the forthcoming auction after resolving the above issues.
- (vii) The quantity of spectrum available is not only small but also very fragmented. The non-availability of contiguous spectrum is a major impediment in the deployment of new technologies. Therefore, the Authority has reiterated its earlier recommendation that the frequency rearrangement in the same band, from within the assignments made to the licensees, should be permitted amongst all licensees irrespective of whether the spectrum is liberalised or not. However, the use of spectrum shall be liberalized only if the entire spectrum holding of a licensee in a particular band is liberalized.
- (viii) All efforts should be made to make spectrum available in contiguous form. In its recommendations, the Authority demonstrated how such contiguity can be achieved in 7 LSAs in the 900 MHz band. Nevertheless, the entire available spectrum should be put to auction.

6. Recommendation on “Valuation and Reserve Price of Spectrum : 2100 MHz Band”

In its recommendations on ‘Valuation and Reserve Price of Spectrum: Licences Expiring in 2015-16’ dated 15th October 2015, the Authority recommended that the auctions in the 2100 MHz band should be carried out along with the auctions in 900/1800 MHz band. Department of Telecommunications (DoT), through its letter dated 16th October 2014, sought the Authority’s recommendations on the Reserve Price for auction of right to use of spectrum in 2100 MHz, 2300 MHz and 2500 MHz bands. Subsequently, on 27th November 2014, the DoT requested TRAI to expedite the process for its recommendations on the reserve price of 2100 MHz band and related issues so that the auction of spectrum in this band could be conducted along with the auction of spectrum in the 800/900/1800 MHz bands scheduled in February 2015.

The Authority, considering the request of DoT to expedite the process for its recommendations on the reserve price of 2100 MHz band, released a Consultation Paper on

“Valuation and Reserve Price of Spectrum: 2100 MHz Band” on 2nd December 2014 which was confined to issues related to 2100 MHz band only. Subsequently, the Authority sent its Recommendations on **“Valuation and Reserve Price of Spectrum: 2100 MHz Band”** on 31st December 2014 to Government. The Recommendations discuss various methodologies that have been used to arrive at the valuation of the spectrum in the 2100 MHz band and reserve prices of the spectrum in the 2100 MHz band.

Licensing

Recommendations dated 12th May 2014 on ‘INMARSAT / Satellite Phone services’

The DoT through its letter of 13th December 2013 sought TRAI’s recommendations on the appropriateness and feasibility of including INMARSAT services ‘under Unified License GMPCS Authorization’ or framing of another authorization under the Unified License. The Authority formulated and forwarded its recommendations on the issue on 12th May 2014. The gist of the recommendations is:

- (i) The DoT may authorize BSNL to establish a gateway immediately under ‘*Sui generis*’ category.
- (ii) The DoT may consider the request of BSNL for waiver of entry fee, processing fee and PBG for such authorization.
- (iii) License fee @ 8 % of AGR may be levied for such services.

Universal Access to Telecom

Recommendations dated 22nd July 2014 on ‘Improving telecom services in Andaman and Nicobar Islands (ANI) and Lakshadweep

DoT sought TRAI’s recommendation on a comprehensive plan for improving telecom services in Andaman and Nicobar Islands (ANI) and Lakshadweep and also to assess the investment required for providing quality telecommunication services in these islands.

A detailed consultation was carried out with all stakeholders including the TSPs operating in the region and officers of the administrations of Andaman and Nicobar Islands and Lakshadweep.

The Authority recommended a comprehensive telecom plan for improving telecom services in these islands at a capital investment of Rs.2278 crores approx. i.e. Rs.1773 crores approx. for ANI and Rs.505 crores approx. for Lakshadweep.

To provide sufficient bandwidth for broadband and e-governance services in line with the NTP-2012 policy of providing 'Broadband on demand' and ensuring equitable and inclusive development of the area, the Authority recommended that:

Connectivity to 6 major islands of ANI from Chennai through submarine cable must be established at the earliest possible in a single phase. In addition to the planned connectivity with Chennai, connectivity of ANI should also be made to Kolkata through submarine cable. Keeping in view the strategic importance of Lakshadweep, secure and reliable connectivity should also be established through a submarine cable, thereby connecting Cochin with the major islands of Lakshadweep.

The Authority also recommended the following policy initiatives to facilitate telecom development in ANI and Lakshadweep:

- (i) Annual Satellite Bandwidth hiring charges for providing telecom services in these islands should be borne by USOF completely.
- (ii) In GSAT-16, at least 6 transponders of C-Band may be allocated to BSNL exclusively for providing telecom services in ANI and Lakshadweep.
- (iii) BSNL should be permitted to hire satellite bandwidth directly from foreign satellites which are on the ISRO coordinated orbits.
- (iv) UT administrations should accord priority in allotment of land and necessary permissions to BSNL/ TSPs for the establishment of Telecom infrastructure.

Full Mobile Number Portability

Opinion of TRAI dated 21st July 2014 on additional entry fee and Bank Guarantees for MNP licensees for 'Full Mobile Number Portability'

TRAI received a reference from the DoT on 27th December 2012 seeking the recommendations of the Authority for implementing "Full Mobile Number Portability" across the country. After consultation with stakeholders and examination of various issues, the Authority gave its recommendations on 'Full Mobile Number Portability' on 25th September 2013. These recommendations provided a technical solution for implementation of inter-service area MNP by which a subscriber will be able to port his mobile number from one service area to another.

MNP is administered through a central clearing house and number portability database maintained by the two MNP service providers. On 2nd July, 2014 the DoT conveyed acceptance

of TRAI's recommendations on Full Mobile Number Portability in-principle and requested TRAI to give its opinion for additional entry fee, Performance Bank Guarantee (PBG) and Financial Bank Guarantee (FBG) to be charged from the existing licensees in view of the enhancement of scope of their license due to implementation of "Full Mobile Number Portability".

After examining the issues involved, the Authority finalized and provided its response on 21st July, 2014. The salient features of the recommendations are:

- (i) No change in the entry fee for MNP service providers for implementing Full Mobile Number Portability.
- (ii) Performance Bank Guarantee and Financial Bank Guarantee for the MNP service providers should be continued as per the existing licence conditions.

Adjusted Gross Revenue (AGR) in the ISP Licence Agreement.

Recommendations dated 1st May 2014 on 'Definition of Adjusted Gross Revenue (AGR) in Licence Agreements for provision of Internet services and minimum presumptive AGR'

DoT vide letter dated 22nd October 2012 sought TRAI's recommendations on (i) the definition of AGR in the ISP License Agreements for provision of Internet Services granted in 1998, 2002 and 2007 guidelines, (ii) the applicability of minimum presumptive AGR and value, if applicable, for BWA Spectrum holders under Internet Service and (iii) the amendment in the "Format of Statement of Revenue and Licence Fee" to be reported by various categories of Internet Service Licensees.

After consultation and analysis of the issues, the Authority concluded that having taken the logical step of implementing a unified license with the objective of providing a simple and clear licensing framework for all kinds of telecommunications services, the definition of AGR and licence fee should be uniformly applicable for ISP licences at par with the licences for other telecom services. This view is consistent with the recommendations of the Authority on various earlier occasions that the regulatory framework should ensure a level playing field for all licensees for fair competition and to prevent misuse of any terms and conditions of the licence. The Authority forwarded its recommendations to the DoT on 1st May, 2014. The salient features of the recommendations are:

- (i) A uniform licence fee of 8% of the AGR shall be applicable for all ISP licences. Revenue for the purpose of licence fee for ISP licences shall include all types of revenue from Internet services, allowing only those deductions available for pass through charges and taxes/levies as in the case of access services, without any set-

off for expenses. Revenues from Internet services shall also be included in the definition of AGR.

- (ii) Minimum presumptive AGR for the purpose of licence fee shall be applicable on the existing ISPs holding the BWA spectrum as applicable to the licensees who obtained access spectrum through competitive bidding.
- (iii) For existing ISPs who are holding BWA spectrum from the 2010 auction, the value of presumptive AGR shall be equal to 5% of the sum of the total bid amount by the Licensee for the respective Service Area, as applicable to the licensees who obtained spectrum in the auctions conducted in November 2012 and March 2013.

FM Radio

Recommendations dated 20th February 2014 on “Migration of FM Radio Broadcasters from Phase-II to Phase-III

The MIB sent a reference to TRAI seeking recommendations on the amount of migration fee to be charged from existing FM operators on their migration from Phase-II to Phase-III of FM Radio Broadcasting. The permissions for operating FM Radio as per Phase-II policy were granted by MIB during the period 2005 to 2009 in 86 cities. As per the Phase-II policy, the permissions were granted for a period of 10 years to each FM Radio operator and there is no provision for extension of permission in the Phase-II policy. Therefore, Phase-II permissions will start expiring from 31st March 2015 onwards. There was no great incentive for an existing operator to pay a migration fee and operate as per the Phase-III policy only for the balance period of Phase-II permissions. Accordingly, the Authority in its Recommendations on ‘Migration of FM Radio Broadcasters from Phase-II to Phase-III’ dated 20th February 2014 recommended a period of permission of 15 years after migration from Phase-II to Phase-III. The salient features of the recommendations are:

- (i) TRAI reiterated early implementation of its recommendations on minimum channel spacing of 400 KHz for FM Radio broadcast issued on 19th April 2012, which will in effect increase the number FM channels in each city for auction.
- (ii) The period of permission to operate the existing FM channels on migration from Phase-II to Phase-III will be fifteen (15) years.
- (iii) Cutoff date for migration is to be decided by MIB after the completion of auction process for Phase-III of FM Radio. However, the cutoff date should not be later than 31st March 2015.

- (iv) A formula was prescribed for migration of FM operators from Phase II to Phase III.
- (v) The methodology to be adopted for determining the reserve price for fresh cities in Phase-III should be reconsidered as the current methodology might jeopardise the auction.

The details of cities in group X, Y & Z are given at Annexure – I.

Direct to Home (DTH)

Recommendations dated 23rd July 2014 on “Issues related to New DTH Licenses”

In the DTH Guidelines, under which licenses are issued to DTH operators, there is no explicit provision for an extension or a renewal of the licenses on completion of the license period. In this regard, the MIB sought recommendations of TRAI. After examination, the Authority concluded that to allow the DTH operators to continue their business after the expiry of the stipulated 10 year license period, the Government will have to issue a new license. Accordingly, the Authority looked at the issues concerning the DTH sector holistically and, after following the due consultation process, sent its recommendations to the MIB on “Issues related to New DTH Licenses” on 23rd July, 2014.

Apart from removing the ambiguity over renewal of licenses, these recommendations suggest that the Government come out with a new licensing regime for DTH sector which, amongst others, allows for longer license period, rationalised license fee, rationalised and regulated cross-holding and vertical integration between broadcasters and distribution platform operators including DTH operators. The recommendations also suggest a mechanism for migration of operators from the existing regime to the new regime. A new licensing regime, incorporating the provisions in the said recommendations, is expected to bring in, amongst others, certainty in DTH business, ease taxation pressures, attract better investments in the sector etc. and, thereby, promoting the overall efficiency in DTH operations. The salient features of the recommendations are:

- (i) *A New DTH licensing regime*
 - (a) The period of DTH license to be increased from 10 years to 20 years, renewable by 10 years at a time.
 - (b) One time entry fee to be retained at Rs.10 crore.
 - (c) Existing license fee to be reduced from 10% of Gross Revenue (GR) to 8% of Adjusted Gross Revenue (AGR) in line with the telecom licenses.

- (d) The existing DTH licensees to be permitted to migrate to new regime at any time during the currency of their existing licenses.
 - (e) BIS to come out with updated specifications for Set Top Boxes in consultation with TRAI which should be complied by DTH licensees.
 - (f) The DTH licensees to be mandated to comply with the tariff order/scheme prescribed by TRAI for commercial inter-operability.
- (ii) *Cross Holding/Control in the Broadcasting and Distribution Sectors*
- (a) Policy on Cross-holding/Control to be restructured to bring in uniformity in the broadcasting and distribution sectors.
 - (b) Comprehensive definition of 'control' to be uniformly adopted in all segments of broadcasting and distribution sectors.
 - (c) Relevant market for DTH to be the entire country and for MSO/HITS – State.
 - (d) Broadcasters and Distribution Platform Operators (DPOs) – MSO/HITS and DTH operators to be separate legal entities.
 - (e) Rationalized and regulated vertical integration to be permitted between broadcasters and DPOs.
 - Vertically integrated broadcaster(s) and DPO to be subjected to additional set of regulations.
 - A vertically integrated broadcaster to be permitted to control only one DPO.
 - A vertically integrated DPO to be restricted from controlling any other DPO of other category in the relevant market.
 - A vertically integrated DPO not to be permitted to acquire more than 33% of the market share in the relevant market.
 - (f) The additional regulations for a vertically integrated broadcaster to include:
 - The agreements with the DPOs to be non-discriminatory and on charge-per subscriber (CPS) basis.
 - To file the Reference Interconnect Offer (RIO) for approval by the Authority. All Interconnection Agreements to be only on the terms specified in the RIO.
 - To make disclosures as prescribed by the Authority.

- (g) The additional regulations for a vertically integrated DPO would be:
- DPO to declare its channel carrying capacity and not to reserve more than 15% of this capacity for its vertically integrated broadcaster(s). Rest of the capacity to be offered to other broadcasters on non-discriminatory basis.
 - DPO to publish the access fees for carriage of channels over its network. The charging of the access fees should be on non-discriminatory basis.
 - To make disclosures as prescribed by the Authority.

Media Ownership

Recommendations dated 12th August 2014 on “Issues related to Media Ownership”

Ensuring plurality of voices in the media, i.e., availability of fair, balanced and unbiased representation of a wide range of opinions and views, is critical for any democratic polity. Ensuring both external plurality, namely multiple voices in the national media market, and internal plurality, i.e. presentation of a range of facts and news in an unbiased manner by a media outlet, are fundamental in the working of a democracy.

Regulatory restrictions on cross-media holdings seek to ensure external plurality in the media market, while restrictions in vertical holding by any entity of a broadcaster and a distribution entity are important to ensure that the distribution channels remain open to all desirous of presenting an opinion or view to the public. Finally, content regulation is critical in a time when news is increasingly seen as an asset belonging to a media entity's owners to be monetized for political/ business/ or pecuniary gain.

Recommendations on “Issues related to Media Ownership” were issued on 12th August 2014. The key issues addressed and the concerned recommendations are:

- (i) Defining who owns a media entity and controls it – In brief, an entity that possess not less than fifty per cent of voting rights in the media entity or can appoint more than fifty per cent of the members of its board of directors will be deemed to control it. The Recommendations also take into consideration control through debt, and has recommended the loan threshold that will deem the lender to be in control of a media entity.
- (ii) Cross-Media Ownership - The restrictions recommended on cross-media ownership apply on the media entities that cover news and current affairs genres in the television and print segments only, as impact of radio and internet in India on opinion formation

is marginal. In the print segment, only daily newspapers, including business and financial newspapers, should be considered. The recommendations in brief are:

- To find out whether a media market is concentrated and whether any one entity has a disproportionate market share, the Herfindahl Hirschman Index (HHI) has been proposed to be adopted to measure concentration in a media segment in a relevant market
 - The relevant geographic market is defined in terms of the language and the State(s) in which that language is spoken in majority. A combination of reach and volume of consumption metrics to be used for computing market shares for the television segment. For the print segment, using only the reach metric is considered sufficient.
 - The rule based on HHI to be implemented is - the television as well as newspaper markets will be deemed to be concentrated if the $HHI > 1800$ in each. In such a case a media entity contributing more than 1000 to the HHI of the television market, cannot contribute more than 1000 towards HHI in the newspaper market as well, and vice-versa. If it does so, it will have to dilute its control in one of the two segments. This rule applies only if the HHI thresholds are violated consecutively for two years.
 - Detailed reporting requirements, which are to be made on an annual basis to the licensor and the regulator, have been provided.
- (iii) Vertical Integration amongst Media Entities – Regarding vertical integration amongst broadcasters and DPOs, the Authority reiterated its recommendations as contained in its “Recommendations on Issues related to New DTH Licenses” dated 23rd July 2014.
- (iv) Issues affecting Internal Plurality – Regarding internal plurality, the Authority noting that its Recommendations of 12th November 2008 and 28th December 2012 about who cannot own media entities had not yet been acted upon by the Government, strongly recommended that they be implemented forthwith. In addition, on examination of fresh issues the Authority recommended:
- Practices such as “private treaties”; “Advertorials”; and “paid news” should appropriately be proscribed given their insidious character and ability to undermine distribution of true and fair news.
 - Establishment of a “Media Regulator” to ensure editorial independence. With respect to the “media regulator”, the Authority recommended *inter alia* that –

the Government should not regulate the media; there should be a single regulatory authority for TV and print mediums; the regulatory body should consist of eminent persons from different walks of life, including the media but it should be manned predominantly by eminent non-media persons; and it should have the power to investigate complaints, impose and enforce an appropriate regime of penalties.

- The Authority noting that there would still exist the need for a comprehensive evaluation of the legislative and legal framework in order to establish a robust institutional mechanism in the long term, recommended that a Commission, perhaps headed by a retired Supreme Court Judge, be set up to comprehensively examine various issues relating to the media, including the role and performance of various existing institutions, and the way forward.

Community Radio

Recommendations dated 29th August, 2014 on “Issues related to Community Radio Stations”

The MIB had sent a reference to TRAI seeking recommendations of the Authority on extension of permission granted to Community Radio Stations (CRS) in India. According to the 2006 Policy Guidelines for CRSs, the period of validity of Grant of Permission Agreements (GOPA) is five years and the guidelines contain no provisions for the renewal/ extension of permissions. The validity of the GOPAs issued under these Guidelines for some of the CRSs, had expired on completion of five years, requiring them to stop operating. The Authority, therefore, in an interim reply suggested continuation of the GOPAs on the same terms and conditions.

CRS are an important medium for empowerment and social development of the local communities. Therefore, going beyond the terms of reference from MIB, the Authority in a pre-consultation process sought inputs from CRS permission holders on the issues relevant for the growth of CRS in the country based on their experiences over the past decade. Several responses were received; these *inter alia* included comments on procedural matters; technical issues; content; aid and assistance.

In addition to the issues highlighted, the Authority also noted the important role, the CRS play in serving the local communities by providing relevant information/alerts during natural calamities and emergency situations. The Authority, after analyzing all issues comprehensively, sent ‘Recommendations on Issues related Community Radio Stations’ to MIB on 29th August, 2014. The salient features of the recommendations are:

- (i) Initial permission for operating a CRS to be five (5) years;

- (ii) Extension of permission for five (5) years at a time, to be allowed following performance evaluation;
- (iii) CRS to be allowed to broadcast locally relevant news and current affairs content sourced exclusively from AIR, in its original form or translated into the local language/ dialect.
- (iv) National Disaster Management Authority to draw up detailed guidelines, in consultation with the MIB and the Wireless Planning and Coordination Wing of the DoT, for fully utilizing CRSs in disaster mitigation and relief work.
- (v) MIB to set-up an online 'single window' system, integrating the entire application/ approval process for establishing a community radio station. The online system is to be based on a seamless e-governance platform integrating the different government departments involved in the approval process.

Platform Services

Recommendations dated 19th November 2014 on the 'Regulatory Framework for Platform Services'

MIB sent references to the Authority to provide its Recommendations on issues relating to ground based channels being operated by cable TV operators and programming services being offered by DTH service providers to their subscribers. Collectively these kinds of programming services provided by the Distribution Platform Operators (DPOs) are referred to as Platform Services (PS).

At present, the PS offered by DPOs are not subject to any specific regulations or guidelines. Similarly, there are several ground-based broadcasters who provided local TV channels to cable operators for distribution which are also not covered by any specific regulations. Since, all of these platform services and local channels are being operated and distributed without even a simple registration system in place; the possible impact of the content carried on these channels on the law and order/ security situation is a cause for concern. In addition, the differentiated treatment under the different policy guidelines applicable to the different types of DPOs has to be addressed, to provide for similar regulatory frameworks for what after all are inter-changeable services. Therefore, there is an urgent need to establish a simple, robust and fair regulatory system that addresses all concerns regarding the PS being distributed on cable TV networks.

After an extensive consultation process in which open houses discussions were held with stakeholders in all four regions in India, the Authority forwarded its Recommendations

on 'Regulatory framework for Platform services' to the Government on 19th November 2014. The salient features of the Recommendations are:

- (i) Defining what is 'platform service' and the content that can be carried on these channels;
- (ii) Establishment of an online system by MIB to register all the platform services being offered. Registration is to be on the basis of a simple set of information and at a nominal registration fee of Rs. 1000 per channel;
- (iii) Prior clearance is to be obtained from the district authorities for any local information; local affairs bulletins that may be transmitted;
- (iv) Incorporation as a company under the Indian Companies Act, 2013 for all DPO's desirous of providing platform services; and
- (v) Limitations have been prescribed on the number of PS channels that a DPO may offer to a subscriber.

In addition to the recommendations on PS, the Authority *suo motu* made recommendations for a regulatory framework for ground based broadcasters. This has been done to ensure that any TV channel that is distributed on any TV network in India is covered by a regulatory framework, whether it is obtained from a satellite-based broadcaster; produced by the network operator or sourced from a terrestrial broadcaster. The recommendations for the ground-based broadcasters are largely similar to those for satellite broadcasters, barring the requirements of seeking spectrum and approvals in that regard from Department of Telecommunications (DoT) and Department of Space (DoS).

Re-transmission of FM radio channels on TV channel distribution networks has also been recommended provided that all the legal rights to do so are obtained. However, the Authority has said that this matter will be revisited at a later point in time, once the FM radio industry fully develops in India.

III. OTHER ISSUES

1. Publication of Technology Digest

New technologies are constantly being developed and finds its applications in the range of services being provided in telecommunications sector. However, keeping pace with advances in telecom technology becomes difficult for most telecom professionals. To identify and share new technology trends with industry, TRAI publishes a technology bulletin called 'Technology Digest' which focuses on one technology aspect in every issue. During 2014 Technology Digest on the subject of future generation network titled 'Beyond 4G' and issues related to data titled 'Lots of Data (Big Data)' were published.

2. Green Telecommunications

TRAI is monitoring the implementation of DoT's Direction on Green Technologies in Telecom Sector. In this regard, Carbon Footprint Reports of the NLDs/ILDs/ISPs and Access SPs including BSNL and MTNL for Base Year (2011-12), (2012-13) and 1st Half of (2013-14) has been received in TRAI. The Voluntary Codes of Practice have also been submitted through associations of telecom operators.

3. MIS Project

The MIS Project was launched on 1st January 2014 for securely receiving various reports from the Service Providers in electronic form. The project also helps in generation of various regular reports automatically in the required form. Generation of various dashboards which can provide summary information is included in the project. The project thus helps all the stakeholders in improving efficiency and accuracy, besides saving paper. The specialized reports can also be generated as per the need from the data received from the stakeholders.

4. Formulation and implementation of Information Security Policy for TRAI

Information Security Policy for TRAI has been finalized and implemented within TRAI. The Policy will act as an internal assurance mechanism to protect and safeguard all critical information being handled at TRAI to ensure confidentiality, integrity and availability. The policy covers the protection of all information processed or stored on the TRAI's server systems and transmitted over its networks for the work of TRAI.

5. Audit and Survey

TRAI has engaged independent agencies on zonal basis 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 undertaken by independent agencies and the results of survey undertaken by independent agencies about customer perception of service through its website for the information of all stakeholders. The publishing of quality of service related information has also been egging the service providers to improve the quality of service performance and also to address deficiencies in meeting the benchmarks.

The audit work has been awarded to M/s IMRB, M/s TUV & SUD and M/s CS Datamation. The audit reports are uploaded on the website. The audit work for the period January to March, April to June 2014 and July to September 2014 was carried out and the same is uploaded on the website.

The survey work has been awarded to M/s VOICE, Mott Mac Donald and IMRB. The survey reports are uploaded on the website. The Customer Satisfaction Survey for the period October 2013 to March 2014 (Half yearly) was carried out and has been uploaded on the website of TRAI.

6. Information paper on “Effects of Electromagnetic Field Radiation from Mobile Towers and Handsets”

In July 2014, TRAI released an Information Paper on “Effects of Electromagnetic Field Radiation from Mobile Towers and Handsets” to clear the air and apprise consumers about EMF radiation. It elaborates on the various aspects of radiations emanating from mobile towers and mobile handsets including the norms prescribed by various international bodies. The paper also contains a write-up on sources of exposure, effects of EMF exposure on humans, absorption of energy from EMF and International Commission on Non-Ionizing Radiation Protection (ICNIRP) Guidelines for Emissions from Base Stations. The paper has information on various studies published on effects of EMF radiations and stands taken by various individuals/ bodies. The paper also has information on the current radiation standards in India and those followed in other countries.

7. Metering and Billing

The metering and billing regulation envisage audit of the billing system of the TSPs by the auditors empanelled by TRAI. The auditors have undertaken the audit in accordance with

the checklist of audit laid down by TRAI. The service providers have filed their action taken report on audit observations for all the licensed service areas for basic and mobile services separately.

The TSPs have taken corrective actions based on the observations reported by the auditors and refunded overcharged amounts to the impacted customers. An amount of Rs 1,87,54,612 was refunded to affected customers and an amount of Rs. 13,73,616 was deposited in the Telecom Consumers Education and Protection Fund (TCEPF) of TRAI.

DETAILS OF CITIES IN GROUP X, Y & Z

- (i) Group X - Kolkata, Indore, Baroda, Bhopal, Jabalpur, Coimbatore, Visakhapatnam, Ranchi, Raipur, Gwalior, Jalandhar, Trivandrum, Kannur, Trichur, Gangtok, Panaji and Shimla.
- (ii) Group Y - Mumbai, Delhi, Chennai, Ahmedabad, Surat, Pune, Nagpur, Jaipur, Bangalore, Jamshedpur, Rajkot, Amritsar, Varanasi, Kochi, Madurai, Bhubaneswar, Siliguri, Guwahati, Jodhpur, Patiala, Udaipur, Kota, Puducherry, Mangalore, Hissar and Karnal.
- (iii) Group Z - Lucknow, Kanpur, Hyderabad, Asansol, Patna, Agra, Allahabad, Vijayawada, Rourkela, Muzaffarpur, Kolhapur, Nasik, Aurangabad, Sholapur, Sangli, Ahmednagar, Jalagaon, Dhule, Bilaspur, Akola, Nanded, Chandigarh, Ajmer, Bareilly, Jammu, Srinagar, Bikaner, Aligarh, Gorakhpur, Jhansi, Kozhikode, Tiruchi, Tirupati, Mysore, Tuticorin, Tirunelveli, Gulbarga, Rajahmundry, Warangal, Shillong, Agartala and Itanagar.