

# OVERVIEW OF TELECOM & BROADCASTING SECTORS



## OVERVIEW

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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. The Authority initiated various measures to promote the growth and development of the telecom and broadcasting sectors during 2016-17. 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 year 2016-17 in Telecom sector saw the advent and adaptation of 4G services. With the entry of new player, the tariffs reduced further and the data usage proliferated. The number of mobile base stations also jumped during the year further improving coverage and reach. With increased availability of smart phones, India is witnessing a data revolution. The mobile services are serving as a major backbone on which the important sectors of economy like banking, health and education are riding. During the year, while discharging various recommendatory and regulatory functions, TRAI has tried to address various issues faced by the telecom sector. Recommendations were made to the Government on key issues concerning telecommunications sector such as “Proliferation of Broadband through Public Wi-Fi Networks”, “Complaint/ Grievance Redressal in the Telecom sector”, “Spectrum Usage Charges and Presumptive Adjusted Gross Revenue for Internet Service Providers and Small Aperture Terminal Service Providers”, “In-Building Access by Telecom Service Providers”, “Licensing Framework for Audio Conferencing/ Audio Tex/ Voice Mail Services”, “Encouraging data usage in Rural Areas through provisioning of free data”, and “Aadhaar based e-KYC services”. In relation to telecommunication tariff, TRAI continued with the general policy of forbearance in respect of most services. Amendments in Telecom Tariff

Order (TTO) were made to enable more effective and affordable mobile banking.

TRAI also took several effective measures in the interest of broadcasting consumers. For instance, in the Broadcasting sector, digitisation of the cable sector, which aims at empowering the consumer and providing him better service quality and enhanced choice, was continuously pursued and monitored against various odds and challenges. Digitization, with specific focus on cable TV sector was scheduled to be executed in four phases and all these phases of implementation were completed by 31<sup>st</sup> March 2017 accordingly. The Authority also initiated a number of steps aimed towards bringing in measures to ensure stability and uniform growth of the sector that is presently undergoing a huge transformation from the erstwhile analog era. The Authority has prescribed new regulatory framework for digital addressable systems to bring transparency, non-discrimination, ensure level playing field among stakeholders and to provide enhanced choice to consumers. Enabling such an environment will encourage future investments and bring about faster development in the broadcasting and cable services sector.

2. The significant events relating to Telecom and Broadcasting sectors during the year 2016-17 are detailed below:

## I. TELECOM SECTOR

The Indian telecom industry is the second largest in the world in terms of the number of subscribers. The sector has witnessed exponential growth over the last few years primarily due to affordable tariffs, wider availability, roll out of facilities and services such as Mobile Number Portability (MNP), 3G and 4G, evolving consumption patterns

of subscribers, and a conducive regulatory environment.

Continuing this trend, the Telecom Sector witnessed substantial growth in the number of subscribers during the year 2016-17 also. At the end of the financial year, the subscriber base was 1194.58 million out of which 1170.18 million were wireless subscribers. During the year, wireless subscriber base recorded an increase of 136.55 million, while the overall tele-density increased from 83.36 to 92.98. The year also saw increase in rural tele-density from 51.37 to 56.91 while the urban tele-density also increased from 154.01 to 171.80. During the year 2016-17, 63.63 million subscribers have submitted their porting requests to different service providers for availing Mobile Number Portability (MNP) facility. With this the MNP requests increased from 209.13 million at the end of March 2016 to 272.76 million at the end of March 2017. The Internet subscriber base in the country as on 31<sup>st</sup> March 2017 stood at 422.19 million as compared to 342.65 million as on 31<sup>st</sup> March 2016. The total broadband subscriber base in the country has increased from 149.75 million as on 31<sup>st</sup> March 2016 to 276.52 million as on 31<sup>st</sup> March 2017.

In order to create an enabling and stable environment for telecommunications services and to ensure greater access, transparency, non-discrimination, consumer protection, and stable growth in functioning of the sector, a comprehensive review of the regulatory framework for the telecommunications sector, which includes tariff, interconnection and quality of service, has been undertaken by TRAI. To ensure transparency while effecting any change in the existing regulatory framework, TRAI issues consultation papers which gives an

opportunity to the stakeholders to deliberate and offer their comments on the proposed regulatory framework. As part of this critical exercise that ensures that robust regulation emerges from the consultative process, TRAI issued various important consultation papers inviting written comments / counter comments from the stakeholders during the financial year ending March 31st, 2017. These included consultation Papers on “Regulatory Principles of Tariff Assessment”, “Net Neutrality”, “Model for Nation-wide Interoperable and Scalable Public Wi-Fi Networks”, “Approach towards Sustainable Telecommunications”, “Review of Interconnection Usage Charges” and “Review of network related Quality of Service standards for Cellular Mobile Telephone Service”.

An important aspect of TRAI’s functions as mandated under the TRAI Act is to make recommendations to the Government on diverse subjects including market structure, entry of new operators in the sector, the licencing framework, management of scarce resources such as spectrum, consumer safety and security etc. Under this mandate, several significant policy regulatory recommendations were made during the year which included recommendations on “Licensing Framework for Audio Conferencing/ Audio Tex/ Voice Mail Services”, “Aadhaar based e-KYC services”, “In-Building Access by Telecom Service Providers”, “Proliferation of Broadband through Public Wi-Fi Networks”, “Complaint/ Grievance Redressal in the Telecom sector” and “Spectrum Usage Charges and Presumptive Adjusted Gross Revenue for Internet Service Providers and Small Aperture Terminal Service

Providers”.

In order to keep abreast with the changing policy and regulatory requirements of the telecommunications sector, TRAI also issued the following key amendment regulations and guidelines in the course of the last financial year:

1. The Mobile Banking (Quality of Service) (Second Amendment) Regulations, 2016
2. Telecom Consumers Protection (Tenth Amendment) Regulations, 2016
3. Guidelines for Telecom Service Providers for ensuring transparency and uniformity in the process of tariff recharges/payments through Third Party Apps/Websites

## II BROADCASTING SECTOR

The significant events relating to broadcasting and cable services during this period are as follows:

- i. The broadcasting sector consists of Television and Radio Services. India has the world’s second largest TV market in the world after China. The pay TV universe consists of around 92<sup>1</sup> million Cable TV subscribers and 63.61 million active DTH subscribers. The terrestrial TV network of Doordarshan serves about 92<sup>2</sup> per cent of country’s population through a vast network of terrestrial transmitters.
- ii. There are 48 pay broadcasters, an estimated 60,000 cable operators, 1327<sup>3</sup> Multi System Operators (MSOs) registered with Ministry of Information and Broadcasting (MIB), six pay DTH operators, in addition to the public service broadcaster - Doordarshan

<sup>1</sup>Source : FICCI –KPMG Indian Media and Entertainment Report 2017

<sup>2</sup>Source : MIB Annual Report 2016-17

<sup>3</sup>Source : MIB website [www.mib.gov.in](http://www.mib.gov.in)

providing a free-to-air DTH service. Of the 888 registered TV channels with the Ministry of Information and Broadcasting at the close of financial year 2016-17, 212 are SD pay TV channels (including 5 advertisement-free pay channels) and 83 are HD Pay TV channels.

- iii. India's television industry grew from Rs 54,200<sup>1</sup> crore in 2015-16 to Rs 58,800<sup>1</sup> crore in 2016-17, thereby registering a growth of around 8.48%. Subscription revenues account for a major share of the overall industry revenue. Subscription revenues rose from Rs. 36,100<sup>1</sup> crores in 2015-16 to Rs. 38,700<sup>1</sup> crore in 2016-17. On a similar note, advertisement revenues grew from Rs. 18,100<sup>1</sup> crore in 2015-16 to Rs. 20,100<sup>1</sup> crore in 2016-17. The FM (Frequency Modulation) radio broadcasting sector has also registered an impressive growth. There were 293 private FM radio stations operational by March 2017, besides the public service broadcaster- All India Radio (AIR) having a network of 420<sup>4</sup> centres and 610<sup>4</sup> broadcast transmitters [140<sup>4</sup> MW (Medium Wave), 422<sup>4</sup> FM and 48<sup>4</sup> SW (Short Wave)]. AIR service covers around 99.20%<sup>4</sup> of the geographical area of the country while serving 99.19%<sup>4</sup> of the population. With regards to Community Radio Stations, 268 licenses were issued (GOPA Signed) by March 2017 for the setting up of such stations and 206 radio stations have become operational. The radio industry is entirely

dependent on advertisement revenues and has registered a growth of around 6.37 percent during the year 2016-17. Advertisement revenues have also risen from Rs. 1923.91 crore in 2015-16 to 2046.54 crore in year 2016-17.

- iv. The last decade has witnessed significant changes in the dynamics of the Cable & Satellite (C&S) TV market. The most significant development has been the digitization of the cable TV sector in India. Digitization, with addressability, of cable TV sector was planned to be executed in four phases and all the four phases of implementation has been completed by 31<sup>st</sup> March 2017. By the end of March 2017, around 73 million Set Top Boxes (STBs) have already been installed. The experience of the all the four phases of digitization has been very encouraging and implementation of digitization with addressability is bound to be a game changer to drive structured growth in the broadcasting and cable TV services in the country.

### **Review of regulatory framework for broadcasting and Cable TV Services**

- v. In order to create an enabling environment for broadcasting and Cable TV Services and ensuring transparency, non-discrimination, consumer protection and orderly growth of the sector, a comprehensive review of the regulatory frame-

<sup>1</sup> Source: FICCI –KPMG Indian Media and Entertainment Report 2017

<sup>4</sup> Source: AIR website – [www.air.org.in](http://www.air.org.in)

work for the television broadcasting sector, which includes tariff, interconnection and quality of service, has been undertaken by TRAI. As part of this exercise, TRAI issued following consultation papers inviting written comments / counter comments from the stakeholders:-

1. Consultation Paper on “Tariff Issues related to TV Services”.
2. Consultation Paper on “Interconnection framework for Broadcasting TV Services distributed through Addressable Systems”.
3. Consultation Paper on “Issues related to Quality of Services in Digital Addressable Systems and Consumer Protection”.

In order to bring transparency while bringing change in existing regulatory framework, TRAI issued (a) Draft Telecommunication (Broadcasting and Cable Services) (Eighth) (Addressable Systems) Tariff Order, (b) Draft Interconnection Regulations for TV broadcasting services provided through addressable systems and (c) Standards of Quality of Services and Consumer Protection (Addressable Systems) Regulations seeking comments of the stakeholders. The intent to upload these

three drafts was to give an opportunity to the stakeholders to offer their comments, if any, on the proposed regulatory framework. After carefully examination of the written submission of the stakeholders on these three drafts, the Authority notified the followings:-

- a. The Telecommunication (Broadcasting and Cable) Services (Eighth) (Addressable Systems) Tariff Order, 2017.
- b. The Telecommunication (Broadcasting and Cable Services) Interconnection (Addressable Systems) Regulations, 2017.
- c. The Standards of Quality of Service and Consumer Protection (Addressable Systems) Regulations, 2017.

### Directions / Advisories

- vi. To enable effective implementation of DAS and to ensure compliance with the regulatory framework laid down by TRAI, several Directions & Advisories were also issued by TRAI to the service providers, from time-to-time. In some cases, show-cause notices were also issued as per provisions of the TRAI Act.



## PART – I

# POLICIES AND PROGRAMMES



## (A) REVIEW OF GENERAL ENVIRONMENT IN THE TELECOM SECTOR

- 1.1 In 2017, the Telecom Regulatory Authority of India (TRAI) completed twenty years of its existence. Much has changed in the last two decades since TRAI first came into being as the independent statutory body, tasked with protecting the interests of telecom service providers and consumers and promoting the orderly growth of the sector. In 1997, India had a modest telecom market of a little over 14.5 million phone connections and “telephone on demand” was the initial policy goal. However, now India has transformed into the second largest telecom market in the world, boasting of over 1.15 billion subscribers today.
  
- 1.2 This growth of the telecom sector has witnessed a substantial increase in the number of subscribers during the year 2016-17 as well. At the end of financial year 2016-17, the overall telecom subscriber base has reached 1194.58 million as compared to 1058.86 million at the end of financial year 2015-16 an increase of 135.72 million. While the number of urban subscribers increased to 692.97 million, the number of rural subscribers increased to 501.61 million in the financial year 2016-17. This financial year also saw 63.63 million subscribers have submitted their porting requests to different service providers for availing Mobile Number Portability (MNP) facility. With this the MNP requests increased from 209.13 million at the end of March 2016 to 272.76 million at the end of March 2017. The Internet subscriber base in the country as on 31<sup>st</sup> March 2017 stood at 422.19 million as compared to 342.65 million as on 31<sup>st</sup> March 2016. The overall subscriber base and tele-density by the end of the financial year 2016-17 is depicted in **Table-1**.

**Table-1: Overall Subscriber base and Tele-density**

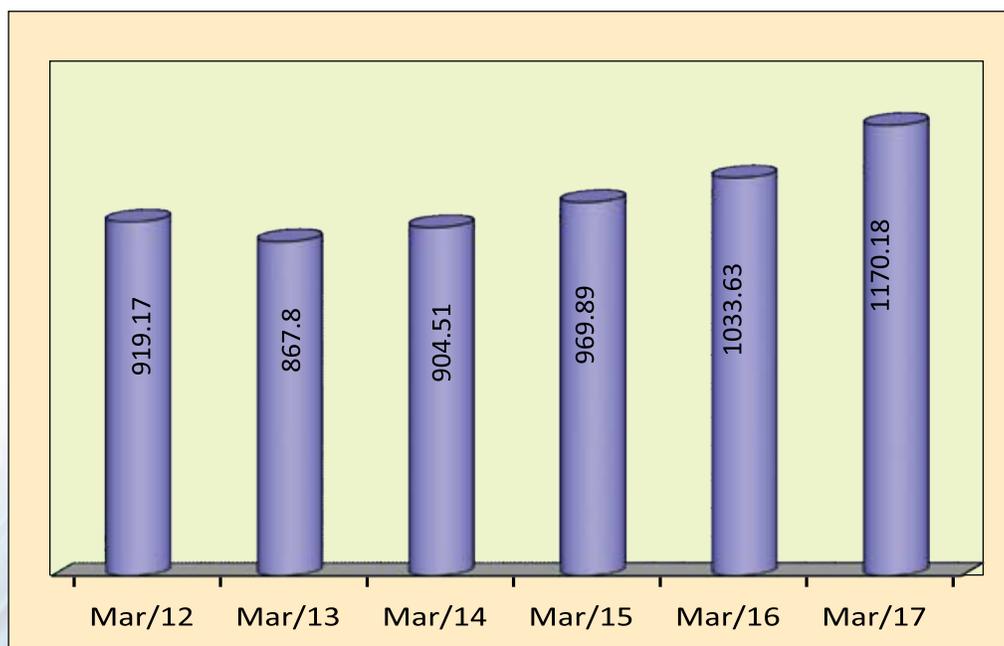
Particulars	Wireless	Wireline	Total Wireless + Wireline
<b>Total Subscribers (Million)</b>	<b>1170.18</b>	<b>24.40</b>	<b>1194.58</b>
<b>Urban Subscribers (Million)</b>	<b>672.42</b>	<b>20.56</b>	<b>692.97</b>
<b>Rural Subscribers (Million)</b>	<b>497.76</b>	<b>3.85</b>	<b>501.61</b>
<b>Overall Teledensity</b>	<b>91.08</b>	<b>1.90</b>	<b>92.98</b>
Urban Teledensity	166.71	5.10	171.80
Rural Teledensity	56.47	0.44	56.91
Share of Urban Subscribers	57.46%	82.24%	58.01%
Share of Rural Subscribers	42.54%	15.76%	41.99%
<b>No. of Broadband Subscribers(Million)</b>	<b>258.28</b>	<b>18.24</b>	<b>276.52</b>

The details of subscriber base in Wireless, Wireline segments; requests for Mobile Number Portability; Tele-density; Internet subscribers; trends in telecom tariffs; Quarterly Telecom Services Performance Indicators; and Financial performance of Telecom Sector are given in subsequent paragraphs.

### (a) Wireless

1.1.1 The wireless subscriber base was 1170.18 million as on 31<sup>st</sup> March 2017 in comparison to the subscriber base of 1033.63 million as on 31<sup>st</sup> March 2016 registering a growth of 13.21% during the financial year 2016-17. The status of wireless subscriber base during the last 6 years is depicted in **Figure 1**.

**Figure 1: Wireless subscriber base during the last 6 years**



**(b) Mobile Number Portability**

1.1.2 Mobile Number Portability (MNP) allows subscribers to retain their existing telephone number when they switch from one access service provider to another irrespective of mobile technology or from one technology to another of the same or any other access service provider. On 1st August 2008, the government released guidelines for MNP Service License and issued a separate Licence for MNP service subsequently in 2009.

Notably, during the year 2016-17, 63.63 million subscribers submitted their porting requests to different service providers for availing Mobile Number Portability facility. With this the MNP requests increased from 209.13 million subscribers at the end of March 2016 to 272.76 million at the end of March 2017. The service area wise cumulative porting requests made till the end of March 2017 is depicted in **Table -2**.

**Table-2: Service area wise cumulative porting requests at the end of March 2017**

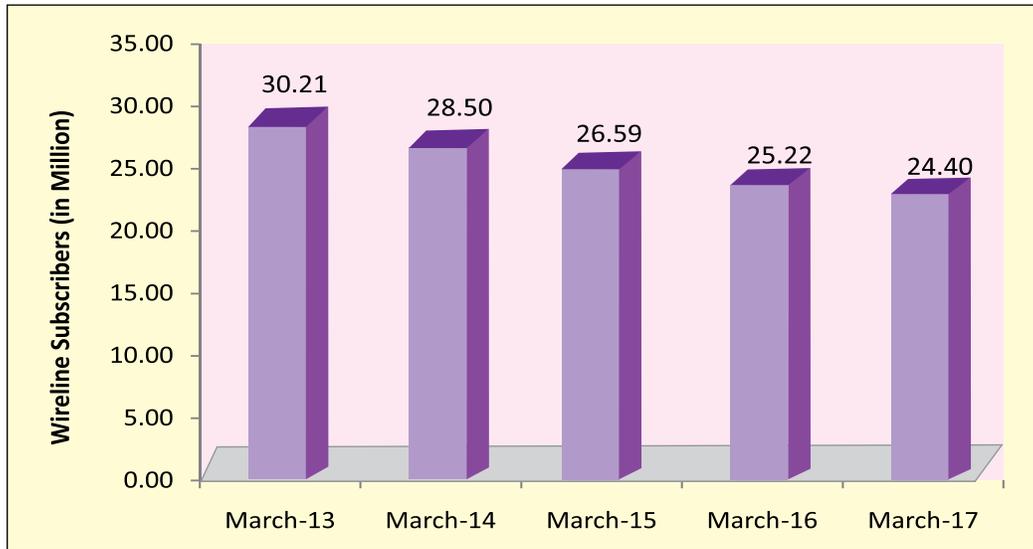
Cumulative MNP Requests (Service Area-wise) at the end of March, 2017				
	Service Area	MNP requests processed by		Total Number of Porting Requests
		Zone-I	Zone-II	
ZONE-I	Delhi	11,699,640	168,715	11,868,355
	Gujarat	19,477,763	66,846	19,544,609
	Haryana	10,866,668	35,231	10,901,899
	Himachal Pradesh	981,234	5,243	986,477
	Jammu & Kashmir	121,833	2,662	124,495
	Maharashtra	18,480,886	122,251	18,603,137
	Mumbai	14,982,297	115,322	15,097,619
	Punjab	10,603,089	91,999	10,695,088
	Rajasthan	22,949,262	53,228	23,002,490
	Uttar Pradesh (East)	13,632,759	48,170	13,680,929
	Uttar Pradesh (West)	12,262,962	29,027	12,291,989
ZONE-II	Andhra Pradesh	83,862	24,553,476	24,637,338
	Assam	14,045	1,388,021	1,402,066
	Bihar	133,104	9,986,726	10,119,830
	Karnataka	169,054	29,736,869	29,905,923
	Kerala	28,222	7,475,542	7,503,764
	Kolkata	34,810	5,664,468	5,699,278
	Madhya Pradesh	122,051	18,715,877	18,837,928
	North East	5,825	524,440	530,265
	Orissa	31,960	5,389,587	5,421,547
	Tamil Nadu	47,329	16,668,195	16,715,524
	West Bengal	51,843	15,140,494	15,192,337
	<b>Total</b>	<b>136,780,498</b>	<b>135,982,389</b>	
	<b>Total (Zone-1+Zone-2)</b>			<b>272,762,887</b>

**(c) Wireline**

1.1.3 The total wireline subscriber base as on 31<sup>st</sup> March, 2017 stood at 24.40 million as compared to 25.22 million subscribers on 31<sup>st</sup> March, 2016, registering a decline of 3.27% during

the year 2016-17. Out of 24.40 million wireline subscribers, 20.56 million are urban subscribers and 3.85 million are rural subscribers. The wireline subscriber base for the last five years is depicted in **Figure 2:**

**Figure 2: Wireline Subscribers in last 5 years**

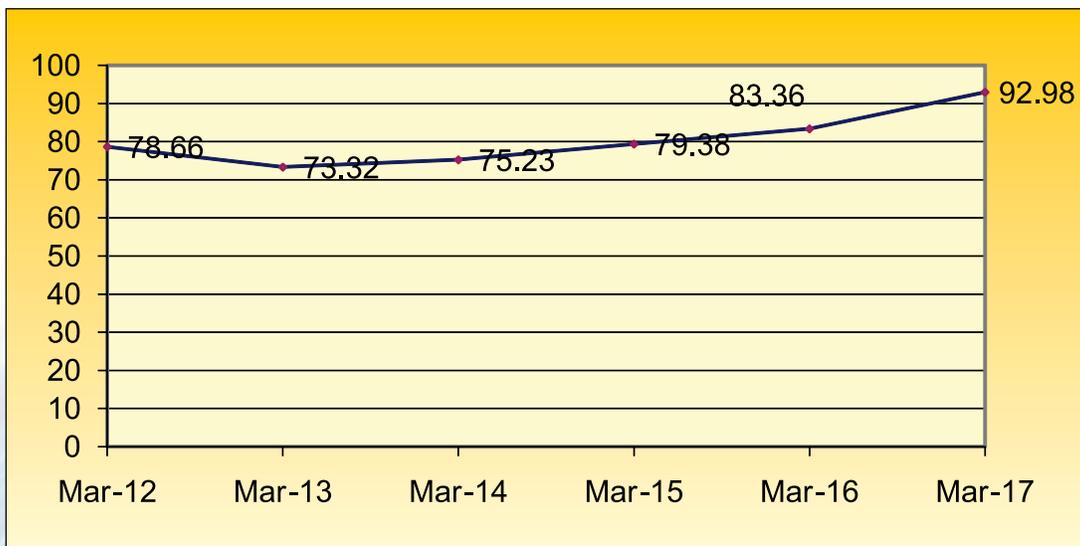


**(d) Tele-density**

1.1.4 The net effect of high increase in wireless telecom subscription is seen in increased tele-density which crossed 90 mark in the month of January, 2017. Notably, the

figure at the end of March, 2017 stood at 92.98 as compared to 83.36 at the end of previous year recording an increase of 9.62. The trend of tele-density since March 2012 is depicted in **Figure-3.**

**Figure-3 Growth of Tele-density**



**(e) Internet and Broadband subscribers**

1.1.5.1 The Internet subscriber base in the country as on 31<sup>st</sup> March, 2017 stood at 422.20 million as compared to 342.65 million as on 31<sup>st</sup> March, 2016. The total broadband subscriber base of the country as on 31<sup>st</sup> March, 2017 is 276.52 million whereas it

was 149.75 million on 31<sup>st</sup> March, 2016. As evident from the table below, near doubling of mobile wireless subscription is a major driving force behind the overall increase in internet penetration.

The details of subscription as reported by the service providers in the country as on 31<sup>st</sup> March, 2017 is indicated in **Table - 2:**

**Table – 2: Internet Subscribers**  
(Subscribers in Millions)

	Segment		Category	Internet Subscribers		% Growth
				Mar-16	Mar-17	
A.	Wired		Broadband	16.98	18.24	7.40%
			Narrowband	3.46	3.33	-3.65%
			Total	20.44	21.58	5.53%
B.	Wireless	Fixed Wireless (Wi-Fi, Wi-Max, Radio & VSAT)	Broadband	0.525	0.560	6.78%
			Narrowband	0.028	0.022	-22.27%
			Total	0.553	0.582	5.32%
	Mobile Wireless (Phone + Dongle)	Broadband	132.24	257.71	94.88%	
		Narrowband	189.41	142.32	-24.86%	
		Total	321.66	400.04	24.37%	
Total Internet Subscribers			Broadband	149.75	276.52	84.65%
			Narrowband	192.90	145.68	-24.48%
			<b>Total</b>	<b>342.65</b>	<b>422.20</b>	<b>23.21%</b>

1.1.5.2 The Quarter-wise Internet / Broadband subscription as reported by the service

providers for 2016-17 is in **Table -3:**

**Table-3: Quarter-wise Internet/ Broadband Subscriber base of 2016-17**

(Subscribers in Millions)

Service	June-16	Sept-16	Dec-16	Mar-17
Broadband	162.06	192.30	236.09	276.52
Narrowband	188.42	175.18	155.41	145.68
Total Internet	<b>350.48</b>	<b>367.48</b>	<b>391.50</b>	<b>422.20</b>

**(f) The Indian Telecom Services Performance indicator**

1.1.6 TRAI has been bringing out a monthly press release on Telecom Subscription

Data for the country. This press release includes information on total subscriber base, Tele-density, service provider wise market share, Mobile Number Portability (MNP) requests, Peak VLR data, Net

Additions during the month in wireless, wireline and Broadband segments etc. As per the latest monthly press release, the

highlights of telecom subscription data for the country as on 31<sup>st</sup> March, 2017 are given in **Table - 4:**

**Table – 4: Highlights of Telecom Subscription Data as on 31<sup>st</sup> March, 2017**

Particulars	Wireless	Wireline	Total (Wireless+Wireline)
<b>Total Telephone Subscribers (Million)</b>	<b>1170.18</b>	<b>24.40</b>	<b>1194.58</b>
Net Addition in March, 2017 (Million)	5.98	0.054	6.03
Monthly Growth Rate	0.51%	0.22%	0.51%
<b>Urban Telephone Subscribers (Million)</b>	<b>672.42</b>	<b>20.56</b>	<b>692.97</b>
Net Addition in March, 2017 (Million)	0.78	0.03	0.82
Monthly Growth Rate	0.12%	0.17%	0.12%
<b>Rural Telephone Subscribers (Million)</b>	<b>497.76</b>	<b>3.85</b>	<b>501.61</b>
Net Addition in March, 2017 (Million)	5.19	0.02	5.21
Monthly Growth Rate	1.05%	0.52%	1.05%
<b>Overall Tele-density(%)</b>	<b>91.08</b>	<b>1.90</b>	<b>92.98</b>
Urban Tele-density(%)	166.71	5.10	171.80
Rural Tele-density(%)	56.47	0.44	56.91
Share of Urban Subscribers	57.46%	84.24%	58.01%
Share of Rural Subscribers	42.54%	15.76%	41.99%
<b>Broadband Subscribers (Million)</b>	<b>258.28</b>	<b>18.24</b>	<b>276.52</b>

In the month of March, 2017, 6.03 million subscribers submitted their requests for Mobile Number Portability (MNP). With this, the cumulative MNP reached 272.76 million at the end of March 2017, since implementation of MNP.

Number of active wireless subscribers (on the date of peak VLR) in March, 2017 was 1016.38 million.

The following **Table-5** depicts the percent growth in subscriber base of telephone and broadband service and tele-density in the country in the F.Y. 2016-17.

**Table – 5: Percent growth in subscriber base of telephone and broadband service and tele-density in the country in the F.Y. 2016-17**

Particulars	As on 31.03.2016	As on 31.03.2017	% growth in F.Y. 2016-17
Total Telephone Subscribers (in million)	1058.86	1194.58	12.82%
Wireless Telephone Subscribers (in million)	1033.63	1170.18	13.21%
Wireline Telephone Subscribers (in million)	25.22	24.40	-3.25%
Urban Telephone Subscribers (in million)	609.69	692.97	13.66%
Rural Telephone Subscribers (in million)	499.17	501.61	0.49%
Overall Tele-density (%)	83.66	92.98	11.14%
Broadband Subscribers (in million)	149.75	276.52	84.65%

TRAI has also been publishing a quarterly report on ‘The Indian Telecom Services Performance Indicators’. This report presents the key parameters and growth

trends for Telecom & Broadcasting services. A summary of the telecom service performance indicators for the above mentioned period is illustrated in

**Table - 6:**

**Table: 6 - Performance Indicator (Data as on 31<sup>st</sup> March, 2017)**

<b>Telecom Subscribers (Wireless +Wireline)</b>	
Total Subscribers ( in million)	1,194.58
% change over the previous quarter	3.72%
Urban Subscribers	692.97
Rural Subscribers	501.61
Market share of Private Operators	89.81%
Market share of PSU Operators	10.19%
Teledensity	92.98
Urban Teledensity	171.80
Rural Teledensity	56.91
<b>Wireless Subscribers</b>	
Total Wireless Subscribers	1,170.18
% change over the previous quarter	3.80%
Urban Subscribers	672.42
Rural Subscribers	497.76
GSM Subscribers	1,157.59
CDMA Subscribers	12.59
Market share of Private Operators	91.06%
Market share of PSU Operators	8.94%
Teledensity	91.08
Urban Teledensity	166.71
Rural Teledensity	56.47
<b>Wireline Subscribers</b>	
Total Wireline Subscribers	24.40
% change over the previous quarter	-0.02%
Urban Subscribers	20.56
Rural Subscribers	3.85
Market share of Private Operators	29.71%

<b>Telecom Subscribers (Wireless +Wireline)</b>	
Market share of PSU Operators	70.29%
Teledensity	1.90
Urban Teledensity	5.10
Rural Teledensity	0.44
No. of Village Public Telephones (VPT)	2,29,685
No. of Public Call Office (PCO)	4,52,036
<b>Telecom Financial Data</b>	
Gross Revenue (GR) during the quarter	₹ 63,315 Crore
% change in GR over the previous quarter	-4.84%
Adjusted Gross Revenue (AGR) during the quarter	₹ 40,831 Crore
% change in AGR over the previous quarter	-11.05%
Share of Public sector undertakings in Access AGR	12.56%
Monthly Average Revenue Per User (ARPU) for Access Services	₹ 89.34
<b>Internet/Broadband Subscribers</b>	
Total Internet Subscribers	422.19
% change over previous quarter	7.84%
Narrowband subscribers	145.68
Broadband subscribers	276.52
Wired Internet Subscribers	21.58
Wireless Internet Subscribers	400.62
Urban Internet Subscribers	285.68
Rural Internet Subscribers	136.52
Total Internet Subscribers per 100 population	32.86
Urban Internet Subscribers per 100 population	70.83
Rural Internet Subscribers per 100 population	15.49
<b>Broadcasting &amp; Cable Services</b>	
Number of private satellite TV channels permitted by the Ministry of I&B for uplinking only/downlinking /uplinking	888
Number of Pay TV Channels	295
Number of private FM Radio Stations (excluding All India Radio)	293
Number of Pay Subscribers Active with Private DTH Operators	63.61
Number of Community Radio Stations licenced (GOPA signed)	268

<b>Telecom Subscribers (Wireless +Wireline)</b>	
Number of Operational Community Radio Stations	206
Number of pay DTH Operators	6
<b>Revenue &amp; Usage Parameters</b>	
Monthly ARPU GSM Full Mobility Service	₹ 83
Monthly ARPU CDMA Full Mobility Service	₹ 131
Minutes of Usage (MOU) per subscriber per month - GSM Full Mobility Service	405 Minutes
Minutes of Usage (MOU) per subscriber per month - CDMA Full Mobility Service	250 Minutes
Total Outgoing Minutes of Usage for Internet Telephony	258
<b>Data Usage of Mobile Users</b>	
Data Usage per subscriber per month – GSM (2G+3G+4G)	1,006 MB
Data Usage per subscriber per month - CDMA	473 MB
Data Usage per subscriber per month – Total(GSM+CDMA)	1,000 MB
Average outgo per GB data for GSM including LTE	₹ 6.36
Average outgo per GB data for CDMA	₹ 40.34

## (B) REVIEW OF POLICIES AND PROGRAMMES

1.2 Since its inception, TRAI's objective has been to create and nurture conditions for orderly growth of the telecom sector in the country in a manner and at a pace which will enable India to play a leading role in the emerging global information society. In this regard, TRAI has initiated and implemented various policies and programmes over the time. A review of the following key policies and programmes of TRAI in respect of telecom sector is provided below :

- (a) Rural Telephone Network;
- (b) Expansion of Telephone Network;
- (c) Entry of private sector in both basic and value added service;
- (d) Technical compatibility and effective interconnection between service providers;
- (e) Telecommunication technology;
- (f) Implementation of National Telecom Policy;
- (g) Quality of Service; and
- (h) Universal Service Obligation

### 1.2.1 Rural Telephone Network

#### Wireless

1.2.1.1 As on 31<sup>st</sup> March 2017, the Wireless rural [Mobile and WLL (F)] market has reached the 497.76 million mark as against 444.84 million as on 31<sup>st</sup> March 2016. The share of rural subscribers is now 42.54% of total wireless subscribers. The rural wireless subscriber base since March 2012 is indicated in **Figure - 4**. The service provider wise rural wireless subscriber base & their market shares are shown in **Table -7** and **Figure-5**.

Figure-4: Rural Wireless Subscriber (in million)

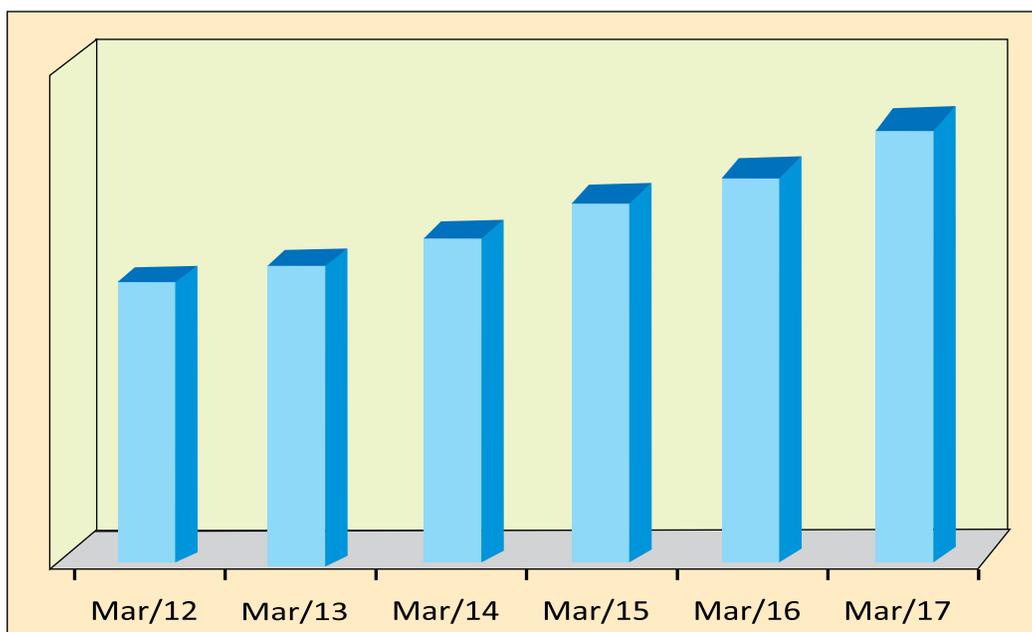
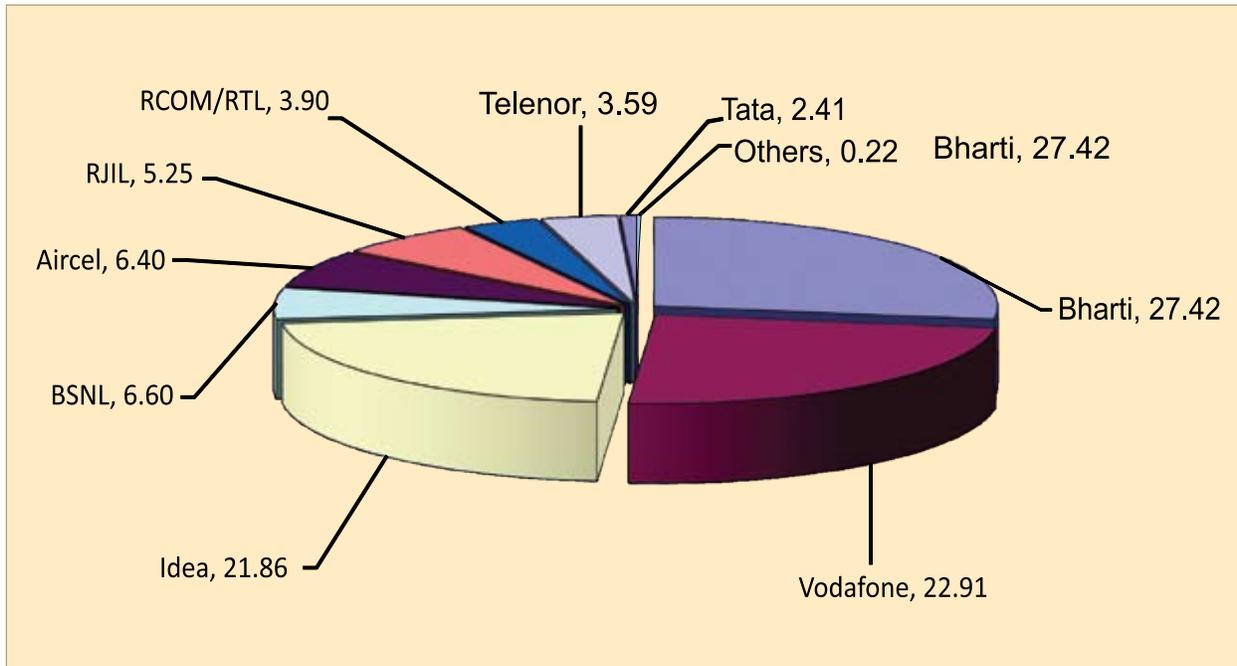


Table - 7: Service Provider-wise Rural Wireless Subscribers and Market Share

Sl No	Wireless Group	Subscribers as on (in millions)		Rural Subscribers as on (in millions)		Market Share of Rural Subscribers as on (in %)	
		March 2016	March 2017	March 2016	March 2017	March 2016	March 2017
1.	Bharti	251.24	273.65	121.98	136.69	27.42	27.46
2.	Vodafone	197.95	209.06	106.02	114.03	23.83	22.91
3.	Idea	175.07	195.37	97.41	108.79	21.90	21.86
4.	Reliance	102.41	83.50	25.32	19.40	5.69	3.90
5.	Aircel	87.09	90.90	29.78	31.86	6.69	6.40
6.	BSNL	86.35	100.99	28.90	32.88	6.50	6.60
7.	RJIL	-	108.68	-	26.14		5.25
8.	Tata	60.10	48.99	15.87	12.01	3.57	2.41
9.	Telenor	52.45	50.49	15.96	14.85	3.59	2.98
10.	Sistema	7.69	4.91	1.64	1.07	0.37	0.21
11.	MTNL	3.56	3.63	-	0.05	-	0.01
12.	Quadrant	3.16	0.00	0.08	0.00	0.02	-
	<b>Total</b>	<b>1033.63</b>	<b>1170.18</b>	<b>444.84</b>	<b>497.76</b>	<b>100.00</b>	<b>100.00</b>

**Figure-5: Market Share of Service Provider of Rural Wireless Subscribers (%)**



Note: Others include Sistema and MTNL

### Wireline Services

1.2.1.2 As on 31<sup>st</sup> March, 2017, the rural wireline subscriber base stood at 3.85 million as compared to 4.32 million at the end of 31<sup>st</sup> March, 2016, registering a decline

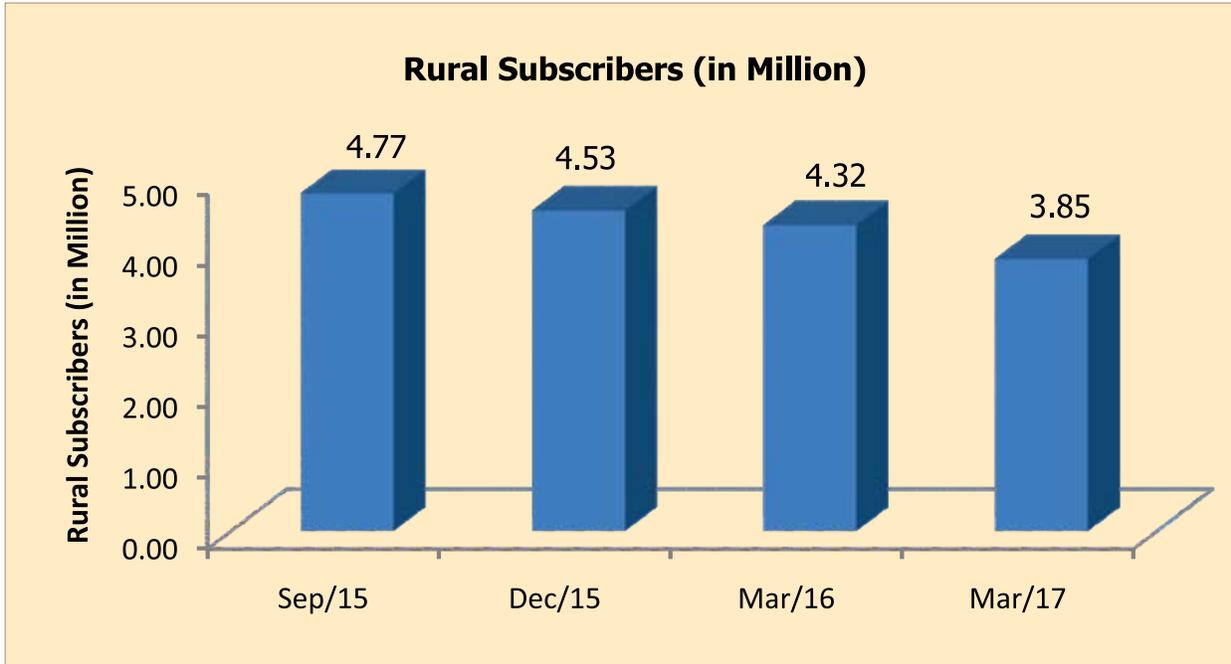
of 11.07% over the year. The service provider-wise wireline rural subscriber base & their market share are shown in **Table-8**.

**Table-8: Service Provider-wise Rural Wireline Subscriber Base and Market Share**

Sl. No.	Wireline Group	Total Wireline Subscribers		Rural Wireline Subscribers		Market Share of Rural Wireline Subscribers (in %)	
		March'16	March'17	March'16	March'17	March'16	March'17
1	BSNL	14,762,370	13,688,964	42,03,916	3,723,712	97.23	96.85
2	MTNL	3,504,088	3,462,374	-	-	-	-
3	Bharti	3,663,649	3,865,764	-	-	-	-
4	Quadrant	252,803	262,891	57,355	58,711	1.33	1.53
5	Sistema Shyam	59,130	56,669	10,170	10,023	0.24	0.26
6	TATA	1,722,362	1,750,102	50,678	50,897	1.17	1.32
7	Reliance	1,169,952	1,174,675	1,677	1,673	0.04	0.04
8	Vodafone	90,214	139,188	-	-	-	-
	<b>Total</b>	<b>25,224,568</b>	<b>24,400,627</b>	<b>43,23,796</b>	<b>3,845,016</b>	<b>100.00</b>	<b>100.00</b>

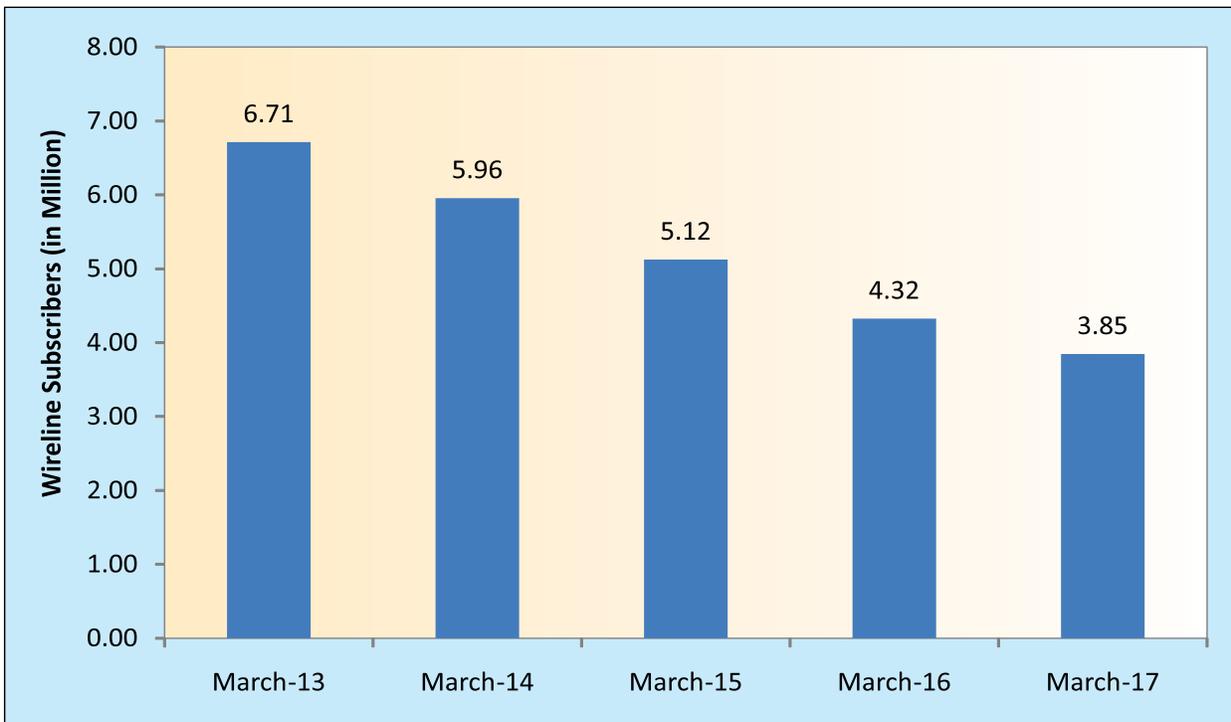
- (ii) The status of rural wireline subscribers at the end of each quarter during 2016-17 is depicted in **Figure – 6:**

**Figure-6: Bar chart showing rural wireline subscribers**



- (iii) The status of rural wireline subscribers during the last five financial years is depicted in the **Figure- 7.**

**Figure-7: Bar chart showing rural subscribers during 2013-2017**



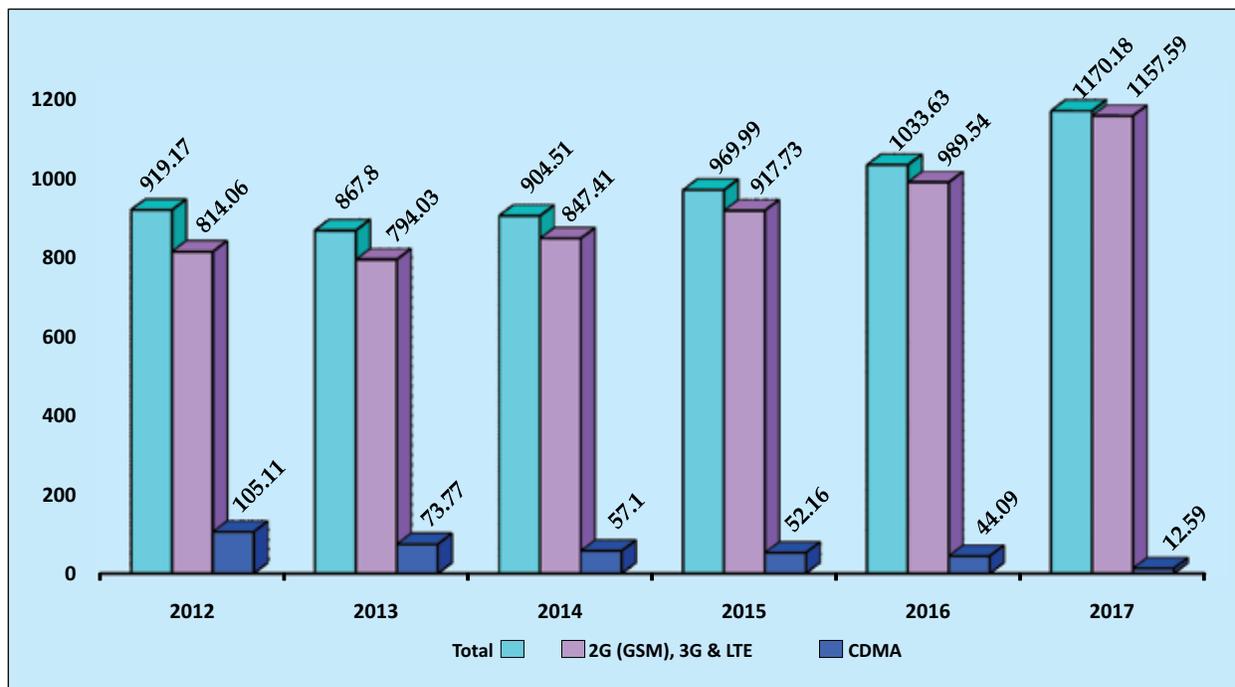
## 1.2.2 Expansion of Telephone Network

### Wireless Services

1.2.2.1 The Wireless Subscriber base is 1170.18 million as on 31<sup>st</sup> March 2017 in comparison to the subscriber base of 1033.63 million as on 31<sup>st</sup> March 2016. The subscriber base has increased by 136.55 million subscribers in the financial

year 2016-17. The total subscriber base of wireless services has grown from 919.17 million in March 2012 to 1170.18 million in March 2017. Out of 1170.18 million subscribers at the end of financial year 2016-17, 1157.59 million (98.92%) were 2G (GSM), 3G & LTE Subscribers and 12.59 million (1.08%) were CDMA Subscribers. The trend of subscriber base from March 2012 to March 2017 is depicted in **Figure-8**.

**Figure-8: Subscriber base of wireless Operators (in million)**



The subscriber base of individual wireless service providers from 2012-13 to 2016-17 along with their percentage growth over the financial year 2015-16 is given in

the **Table-9**. The market share of different mobile operators as on 31<sup>st</sup> March 2017 is displayed in **Figure-9**.

**Table-9 : Wireless Subscriber Base from 2012-13 to 2016-17**

(Subscriber base in million)

Service Providers	2012-13	2013-14	2014-15	2015-16	2016-17	%age growth/ reduction over FY 2015-16
Bharti	188.20	205.39	226.02	251.24	273.65	8.92
Vodafone	152.35	166.56	183.80	197.95	209.06	5.61

Service Providers	2012-13	2013-14	2014-15	2015-16	2016-17	%age growth/ reduction over FY 2015-16
Idea	121.61	135.79	157.81	175.07	195.37	11.60
RCOM/RTL	122.97	110.89	109.47	102.41	83.50	-18.46
BSNL	101.21	94.65	77.22	86.35	100.99	16.95
Aircel	60.07	70.15	81.40	87.09	90.90	4.37
Reliance JIO (*)	-	-	-	-	108.68	
Tata	66.42	63.00	66.32	60.10	48.99	-18.49
Telenor	31.68	35.61	45.62	52.45	50.49	-3.74
Sistema	11.91	9.04	8.86	7.69	4.91	-36.15
Videocon (@)	2.01	4.99	7.13	6.56	-	-
MTNL	5.00	3.37	3.51	3.56	3.63	1.97
Loop (#)	3.01	2.90	-	-	-	-
Quadrant (\$)	1.37	2.17	2.73	3.16	-	-
<b>Total</b>	<b>867.8</b>	<b>904.51</b>	<b>969.89</b>	<b>1033.63</b>	<b>1170.18</b>	<b>13.21</b>

Source: Service Providers

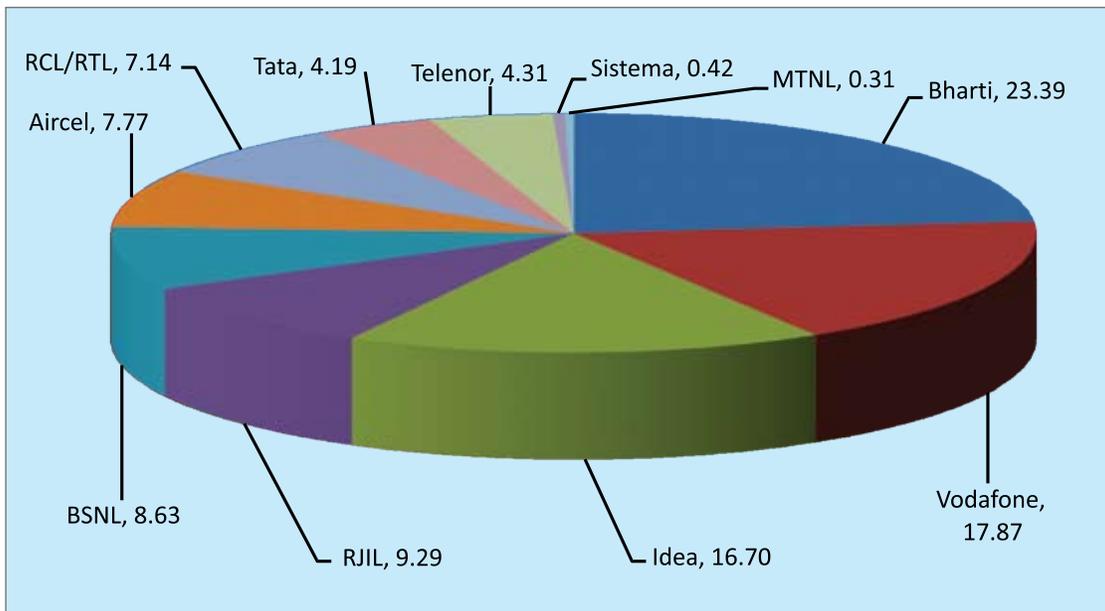
(\*) M/s Reliance Jio Infocomm Ltd launched their commercial services in 2016-17

(#) M/s Loop services were discontinued since 2014-15

(@) M/s Videocon Ltd. Discontinued their commercial service since May 2016

(\$) M/s Quadrant Televentures Ltd. Discontinued their commercial service on 15<sup>th</sup> February 2017

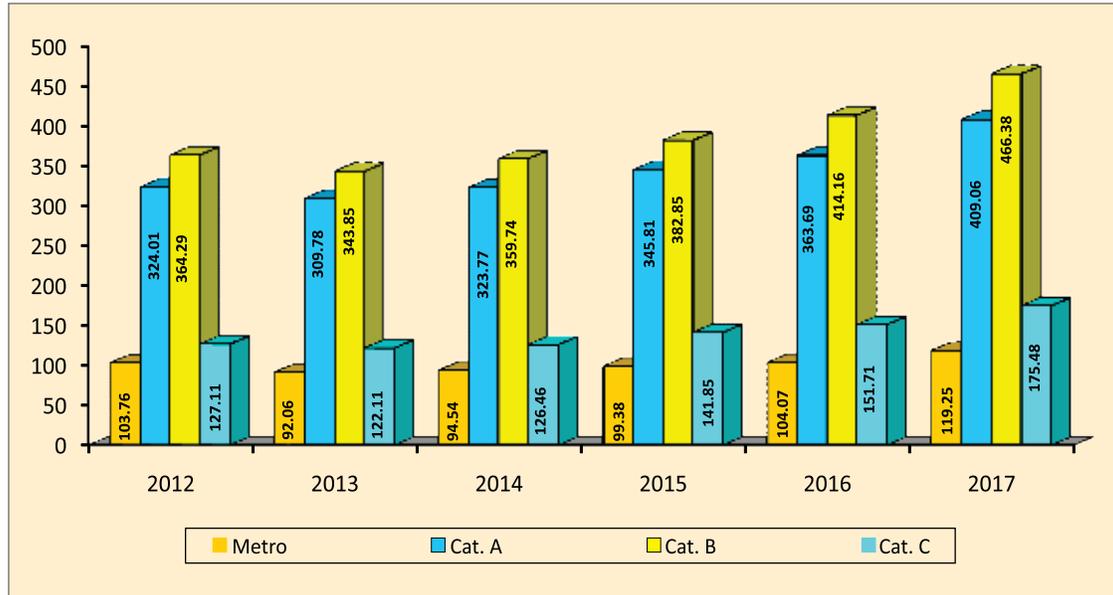
**Figure-9: Market Share of Wireless Service Providers (as on 31<sup>st</sup> March 2017) (in %)**



The subscriber base for Cellular Wireless services in different categories of service

areas for the period March 2012 to March 2017 is indicated graphically in **Figure-10**.

**Figure -10: Subscriber Base for Wireless Services in Metros and Circles from March, 2012 to March, 2017 (Figures in Millions)**



The list of wireless service providers in various service areas is given in **Table-10**.

**Table-10: Wireless Service Providers as on 31<sup>st</sup> March, 2017**

Sl. No	Service Provider	Number of SAs	Service Area (SAs)
1.	Bharti Airtel Limited	22	All India
2.	Aircel Group	22*	All India
3.	Reliance Communications Ltd.	20	All India (except Assam & North East)
4.	Reliance Telecom Ltd.	8	Kolkata, Madhya Pradesh, West Bengal, Himachal Pradesh, Bihar, Odisha, Assam & North East
5.	Vodafone Ltd	22	All India
6.	Tata Teleservices Ltd	19	All India except Assam, North East & Jammu & Kashmir
7.	IDEA Cellular Ltd	22#	All India
8.	Sistema Shyam Telelink	9	Delhi, Kolkatta, Gujarat, Karnataka, Tamil Nadu (incl. Chennai), Kerala, Uttar Pradesh (West), Rajasthan, West Bengal
9.	Bharat Sanchar Nigam Ltd	20^	All India (except Delhi & Mumbai)

Sl. No	Service Provider	Number of SAs	Service Area (SAs)
10.	Mahanagar Telephone Nigam Ltd	2 <sup>^</sup>	Delhi, Mumbai
11.	Telenor Communication (India) Pvt. Ltd.	6	Maharashtra, Gujarat, Andhra Pradesh, Uttar Pradesh (West), Uttar Pradesh (East), Bihar
12.	Reliance Jio Infocomm Ltd	22	All India

(\*)TN&AP – CMTS

(#) Delhi, HP & UP (E) - CMTS

(^) BSNL/MTNL – CMTS in all LSAs

In the remaining LSAs the TSPs have either UASL, UL or UL(AS)

Source: DoT Website.

**Wireline Services**

1.2.2.2 The Service Provider wise break-up of wireline subscribers of 24.40 million as on 31<sup>st</sup> March, 2017, is shown in **Table-11** and the break-up in terms of rural and urban subscriber is shown in **Table-12**.The incumbents BSNL and MTNL have 56.10%

and 14.19% market share respectively in the wireline subscriber base, while all the six private operators together have 29.71% share. The share of private operators has increased from 27.58 % as on 31<sup>st</sup> March, 2016 to 29.71% as on 31<sup>st</sup> March, 2017, registering an increase of 2.13 %.

**Table-11: Service Provider wise details of Wireline Subscriber base as on 31<sup>st</sup> March, 2017**

Sl. No.	Name of the Service Provider	Area of Operation	Subscriber base (Wireline)
1	BSNL	All India except Delhi & Mumbai	13,688,964
2	MTNL	Delhi & Mumbai	3,462,374
3	Bharti Airtel Ltd	Andhra Pradesh (including Telangana), Delhi, Gujarat, Haryana, Himachal Pradesh, Karnataka, Kerala, Kolkata, Madhya Pradesh (including Chattisgarh), Maharashtra, Mumbai, Punjab, Rajasthan, Tamilnadu (including Chennai), UP-East and UP-West.	3,865,764
4	Quadrant Televentures Ltd.	Punjab	262,891
5	Reliance Communications Ltd.	Andhra Pradesh (including Telangana), Bihar (including Jharkhand), Delhi, Gujarat, Haryana, Himachal Pradesh, Karnataka, Kerala, Kolkata, Madhya Pradesh (including Chattisgarh), Maharashtra & Goa, Mumbai, Orissa, Punjab, Rajasthan, Tamilnadu (including Chennai), UP(East), UP(West) and West Bengal	1,174,675

Sl. No.	Name of the Service Provider	Area of Operation	Subscriber base (Wireline)
6	Sistema Shyam Teleservices Ltd.	Rajasthan	56,669
7	Tata Teleservices Ltd. & Tata Teleservices (Maharashtra) Ltd.	Andhra Pradesh (including Telangana), Bihar (including Jharkhand), Delhi, Gujarat, Haryana, Himachal Pradesh, Karnataka, Kerala, Kolkata, Madhya Pradesh (including Chattisgarh), Maharashtra & Goa, Mumbai, Orissa, Punjab, Rajasthan, Tamilnadu (including Chennai), UP(East), UP(West) (including Uttarakhand) and West Bengal	1,750,102
8	Vodafone	Andhra Pradesh (including Telangana), Assam, Bihar (including Jharkhand), Delhi, Gujarat, Haryana, Himachal Pradesh, Karnataka, Kerala, Kolkata, Madhya Pradesh (including Chattisgarh), Maharashtra & Goa, Mumbai, North East, Orissa, Punjab, Rajasthan, Tamilnadu (including Chennai), UP(East), UP(West) and West Bengal	139,188
	<b>TOTAL</b>		<b>24,400,627</b>

Source: As per data furnished by the TSPs.

**Table-12: Wireline Subscriber Base of Service Providers as on 31<sup>st</sup> March, 2017**

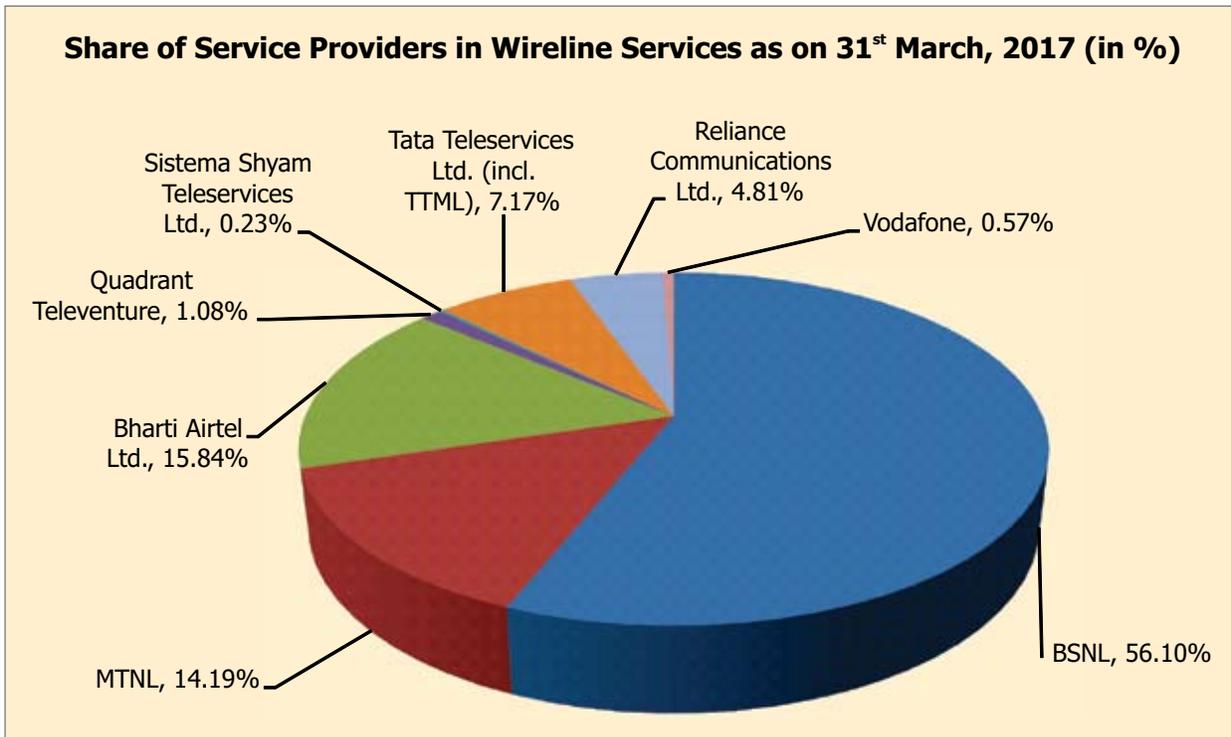
Sl. No.	Service Provider	Urban Subscribers	Rural Subscribers	Total Wireline subscribers
1	BSNL	9,965,252	3,723,712	13,688,964
2	MTNL	3,462,374	0	3,462,374
3	Bharti Airtel Ltd.	3,865,764	0	3,865,764
4	Quadrant Televenture	204,180	58,711	262,891
5	Sistema Shyam Teleservices Ltd.	46,646	10,023	56,669
6	Tata Teleservices Ltd. (incl. TTML)	1,699,205	50,897	1,750,102
7	Reliance Communications Ltd.	1,173,002	1,673	1,174,675
8	Vodafone	139,188	0	139,188
	<b>Total</b>	<b>20,555,611</b>	<b>3,845,016</b>	<b>24,400,627</b>

### Share of Service Providers in wireline subscribers

1.2.2.3 About three-fourth of total wireline subscribers are connected to the networks of BSNL/MTNL and the remaining wireline connections are

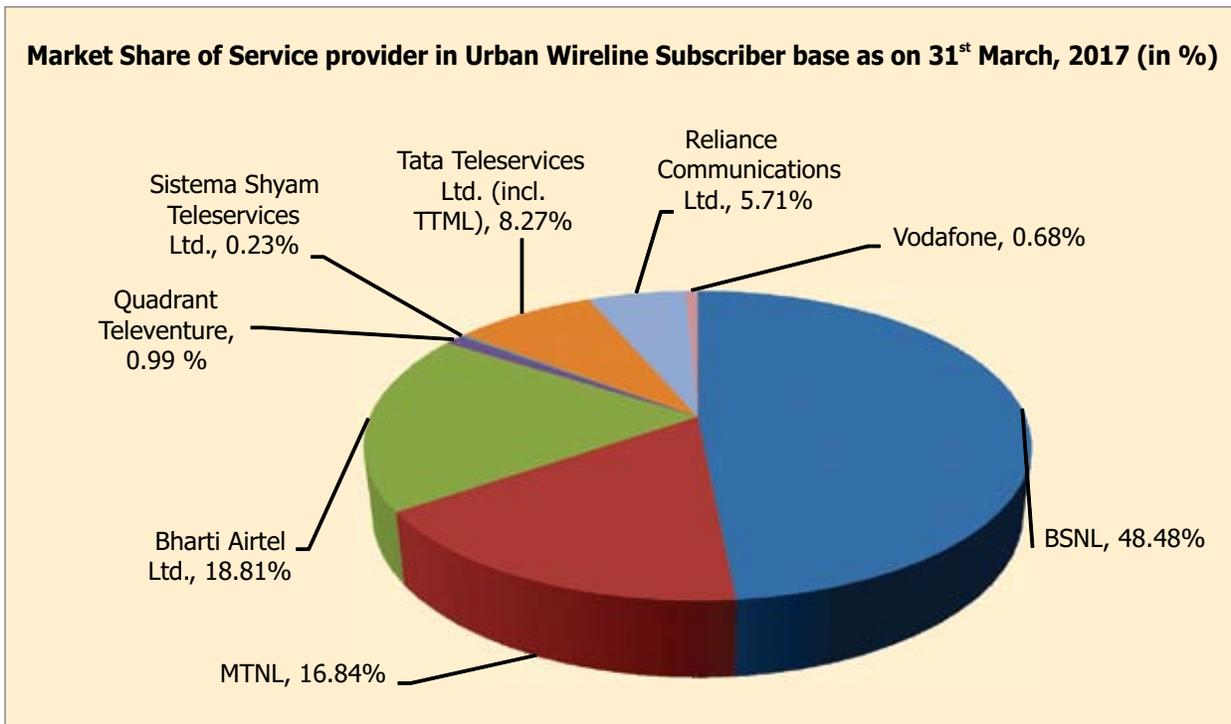
provided by different private service providers. The market share of different service provider in total wireline subscriber base is shown in the **Figure-11**.

**Figure-11: Composition of share of Service Providers.**



- (ii) As on 31<sup>st</sup> March, 2017 the total urban wireline subscribers were 20.56 million, out of which about 65.32% are provided by BSNL/MTNL. The market share of different wireline service providers in urban areas is depicted in the **Figure -12**.

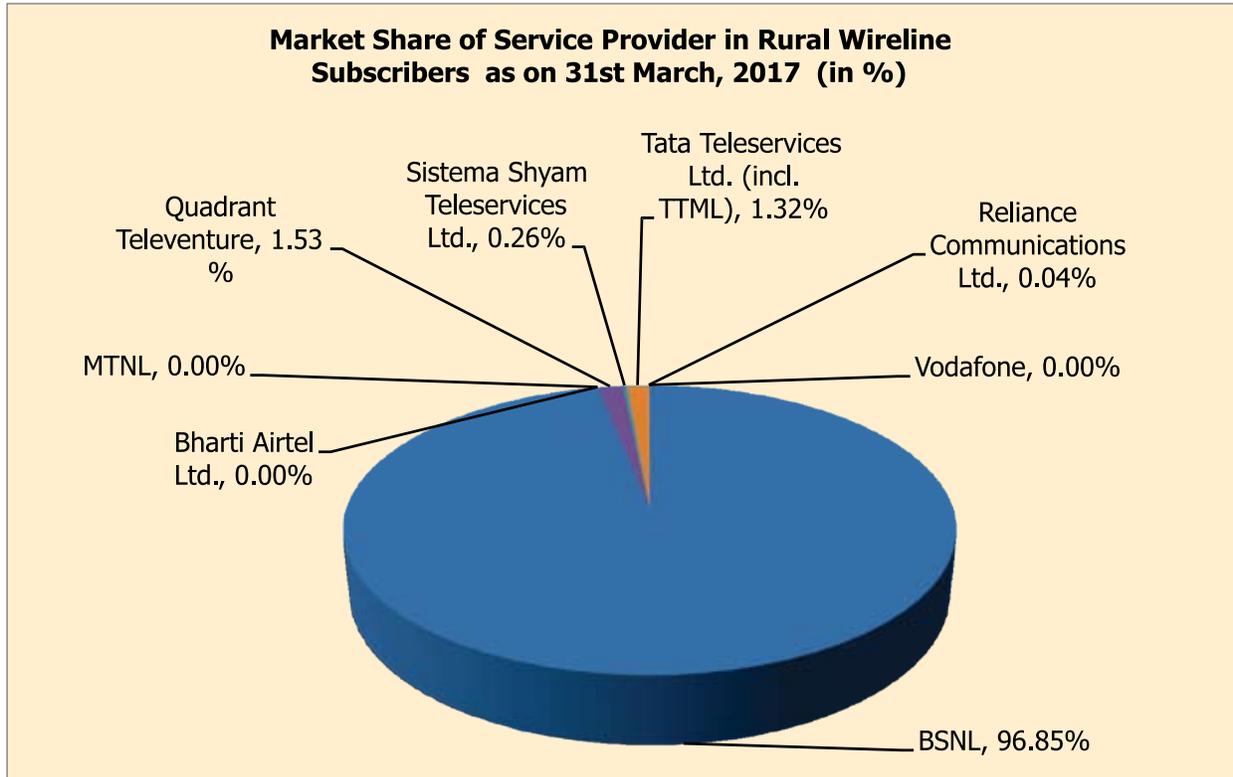
**Figure -12: Composition of share of Service Providers in urban areas**



(iii) As on 31<sup>st</sup> March, 2017, the total rural wireline subscribers were 3.85 million. The market share of different wireline

service providers in rural areas is depicted in the **Figure-13**.

**Figure -13: Composition of share of Service Providers in Rural areas**



### Public Call Offices (PCOs):

1.2.2.4 PCOs were set up during the initial years of telecom in India when the last mile connectivity was yet to be provided in wireline even in urban areas. The declining trend in PCOs could be attributed to the increasing penetration of mobile connections due to reduction in entry

level costs and availability of customised tariff schemes in the market. As on 31<sup>st</sup> March, 2017, the total number of Public Call Offices (PCOs) is 0.45 million, as compared to 0.59 million as on 31<sup>st</sup> March, 2016. The number of PCOs provided by BSNL, MTNL and Private Operators is indicated in **Table-13**.

**Table-13: Public Call Offices in India**

S. No.	Name of the Service Provider	As on 31st March, 2016	As on 31st March, 2017
1	BSNL	3,55,844	2,78,700
2	MTNL	1,34,006	1,28,055
3	Private Operators	99,086	45,281
	<b>Total</b>	<b>5,88,936</b>	<b>4,52,036</b>

### Village Public Telephones (VPTs):

1.2.2.5 Village Public Telephones (VPTs) which are rural public access phones constitute an important initiative undertaken by the Universal Service Obligation Fund (USOF) to provide universal access to affordable telecommunications facilities to people in rural and remote areas. As on 31<sup>st</sup> March, 2017, the total number of Village Public Telephones (VPTs) provided by the service providers 2.30 lakh as against 5.87 lakh as on 31<sup>st</sup> March, 2016. **Table-14** provides the number of VPTs functioning in the country.

**Table -14: Village Public Telephones in India**

S. No.	Name of the Service Provider	As on 31 <sup>st</sup> March, 2016	As on 31 <sup>st</sup> March, 2017
1	BSNL	5,82,482	2,28,403
2	Private Operators	4,317	1,282
	<b>Total</b>	<b>5,86,799</b>	<b>2,29,685</b>

### Equipped Switching Capacity

1.2.2.6 As on 31<sup>st</sup> March, 2017, the service provider wise total equipped switching capacity and working connections are shown in **Table-15**.

**Table-15: Service Provider wise Equipped switching capacity**

Sl. No.	Name of the Service Provider	Service Area	As on 31 <sup>st</sup> March, 2017	
			Equipped Switching Capacity (Number of Lines)	Working Connections
1	Bharat Sanchar Nigam Ltd.	All India except Delhi & Mumbai	36,064,516	13,688,964
2	Mahanagar Telephone Nigam Ltd.	Delhi & Mumbai	7,802,897	3,462,374
3	Bharti Airtel Ltd.	Andhra Pradesh (including Telangana), Delhi, Gujarat, Haryana, Himachal Pradesh, Karnataka, Kerala, Kolkata, Madhya Pradesh (including Chattisgarh), Maharashtra, Mumbai, Punjab, Rajasthan, Tamilnadu (including Chennai), UP-East and UP-West.	5,190,440	3,865,764
4	Quadrant Televentures Ltd.	Punjab	473,835	262,891
5	Reliance Communications Ltd.	Andhra Pradesh (including Telangana), Bihar (including Jharkhand), Delhi, Gujarat, Haryana, Himachal Pradesh, Karnataka, Kerala, Kolkata, Madhya Pradesh (including Chattisgarh), Maharashtra & Goa, Mumbai, Orissa, Punjab, Rajasthan, Tamilnadu (including Chennai), UP(East), UP(West) and West Bengal	2,692,000	1,174,675

Sl. No.	Name of the Service Provider	Service Area	As on 31 <sup>st</sup> March, 2017	
			Equipped Switching Capacity (Number of Lines)	Working Connections
6	Sistema Shyam Teleservices Ltd.	Rajasthan	140,000	56,669
7	Tata Teleservices Ltd. & Tata Teleservices (Maharashtra) Ltd.	Andhra Pradesh (including Telangana), Bihar (including Jharkhand), Delhi, Gujarat, Haryana, Himachal Pradesh, Karnataka, Kerala, Kolkata, Madhya Pradesh (including Chattisgarh), Maharashtra & Goa, Mumbai, Orissa, Punjab, Rajasthan, Tamilnadu (including Chennai), UP(East), UP(West) (including Uttarakhand) and West Bengal	2,490,849	1,750,102
8	Vodafone	Andhra Pradesh (including Telangana), Assam, Bihar (including Jharkhand), Delhi, Gujarat, Haryana, Himachal Pradesh, Karnataka, Kerala, Kolkata, Madhya Pradesh (including Chattisgarh), Maharashtra & Goa, Mumbai, North East, Orissa, Punjab, Rajasthan, Tamilnadu (including Chennai), UP(East), UP(West) and West Bengal	175,000	139,188

**Source:** As per report furnished by the Service Providers.

## Internet and Broadband subscribers

1.2.2.7 The Internet subscriber base in the country as on 31<sup>st</sup> March, 2017 stood at 422.20 million as compared to 342.65 million as on 31<sup>st</sup> March, 2016. The total broadband subscriber base of the country as on 31<sup>st</sup> March, 2017 is 276.52 million

whereas it was 149.75 million on 31<sup>st</sup> March, 2016. The details of subscription as reported by the service providers in the country as on 31<sup>st</sup> March, 2017 is indicated as below:

[Subscribers in Millions]

	Segment	Category	Internet Subscribers		% Growth
			Mar-16	Mar-17	
A.	Wired	Broadband	16.98	18.24	7.40
		Narrowband	3.46	3.33	-3.65
		Total	20.44	21.58	5.53

	Segment	Category	Internet Subscribers		% Growth	
			Mar-16	Mar-17		
B.	Wireless	Fixed	Broadband	0.525	0.560	6.78
		Wireless (Wi-Fi, Wi-Max, Radio & VSAT)	Narrowband	0.028	0.022	-22.27
		Total	0.553	0.582	5.32	
	Mobile	Wireless (Phone + Dongle)	Broadband	132.24	257.71	94.88
		Narrowband	189.41	142.32	-24.86	
		Total	321.66	400.04	24.37	
<b>Total Internet Subscribers</b>		Broadband	149.75	276.52	84.65	
		Narrowband	192.90	145.68	-24.48	
		<b>Total</b>	<b>342.65</b>	<b>422.20</b>	<b>23.21</b>	

2.2.2.8 Quarterly-wise Internet / Broadband subscription as reported by the service

providers for 2016-17 is as below:

(Subscribers in Millions)

Service	June-16	Sept-16	Dec-16	Mar-17
Broadband	162.06	192.30	236.09	276.52
Narrowband	188.42	175.18	155.41	145.68
<b>Total Internet</b>	<b>350.48</b>	<b>367.48</b>	<b>391.50</b>	<b>422.20</b>

### 1.2.3 Entry of Private Sector in basic and value added service

1.2.3.1 As on 31<sup>st</sup> March 2017, following are the number of licenses under UL / UL (AS) / UASL /CMTS:

Name of license	Number of licence
Basic	2
Unified Licence (UL)	15
Unified Licence (Access Services [UL (AS)])	6
Unified Access Service Licence (UASL)	86
Cellular Mobile Telephone Service (CMTS) Licence	28

Source: DoT

### 1.2.4 Technical Compatibility and effective interconnection with service providers

1.2.4.1 Under the TRAI Act, the Authority is mandated to fix the terms and conditions of interconnectivity and to ensure

technical compatibility and effective interconnection between service providers. Interconnection lies at the core of the telecom business in a multi-operator environment. The terms and conditions of interconnection need to be regulated to ensure a level playing field among service providers. Accordingly, Consultation Papers were issued on “Review of Interconnection Usage Charges” and “Review of the Regulatory Framework for Interconnection” during to seek inputs from all stakeholders including private telecom operators on the changes required in the regulatory framework. Further, a direction was issued on 7<sup>th</sup> October, 2016 to all telecom service providers to ensure compliance of the terms and conditions of the license relating to interconnection and the provisions of the Standards of Quality of Service of Basic Telephone Service (Wireline) and Cellular Mobile Telephone Service Regulations, 2009.

## 1.2.5 Telecommunication Technology

1.2.5.1 The Authority issued a Consultation Paper on ‘Cloud Computing’ on 10<sup>th</sup> June 2016 for seeking the comments of stakeholders. The following key issues were discussed in the paper:

- Regulatory framework for Cloud Computing
- Security over the Cloud
- Cost benefit Analysis
- Quality of Service of the Cloud Services

- Inter-operability amongst the cloud players
- Incentivisation for conceptualization and implementation of India based Cloud Services
- Legal framework for multiple Jurisdictions/ Areas of operation
- Implementation Strategies of Cloud Services in Government (Central and States/UTs) Organizations and other strategic networks.

A Consultation paper on Net Neutrality was also issued on 4<sup>th</sup> August, 2016 to gather the comments of the stakeholders. The detail of this Consultation Paper is given in Part II of the Report.

## 1.2.6 Implementation of National Telecom Policy

1.2.6.1 In accordance with the provisions contained in the National Telecom Policy 2012 regarding “One Nation – Full Mobile Number Portability” (FMNP), TRAI forwarded its recommendation on FMNP across license service areas, on 25<sup>th</sup> September 2013. Based on the recommendations of the Authority, the Department of Telecommunications on 3<sup>rd</sup> November, 2014, issued amendment(s) to the MNP License Agreement. Accordingly, the Authority issued 6<sup>th</sup> Amendment to the Telecommunication Mobile Number Portability Regulation, 2009 on 25<sup>th</sup> February 2015 which facilitated Full MNP (PAN India Portability) in the

country w.e.f. 3<sup>rd</sup> May, 2015. Through this Amendment, apart from facilitating Pan-India Portability, a few changes have also been made in the porting process.

Machine-2-Machine (M2M), the basis for automated information exchange between machines, is foundational for IoT with uses across industry verticals like smart city, smart grid, smart transportation, smart health etc. Government of India has emphasised on the potential of M2M in the National Telecom Policy 2012. In this regard, the DOT sought recommendations from TRAI vide reference letter dated 5th January, 2016 on the following aspects:

- a) M2M spectrum requirements;
- b) M2M roaming requirements; and
- c) QoS in M2K services

Accordingly, the Authority released a consultation paper in this regard on 18th October, 2016 and sought comments from stakeholders. After due consultation and internal examination, TRAI will provide its recommendations on this issue.

Another objective of the NTP 2012 is to strengthen the Grievance Redressal Mechanisms to provide timely and effective resolution. On this front, TRAI made recommendations dated 10<sup>th</sup> March 2017 on “Complaints/Grievance Redressal in Telecom Sector”. The recommendation has been elaborated in detail in Part-II of the Report.

## 1.2.7 Quality of Service (QoS)

1.2.7.1 TRAI has laid down the benchmark for various Quality of Service parameters through the following regulations:

- (a) The Standards of Quality of Service of Basic Telephone Service (wireline) and Cellular Mobile Telephone Service Regulations, 2009.
- (b) The Quality of Service of Broad Service Regulations, 2006.
- (c) The Standards of Quality of Service for Wireless Data Services Regulations, 2012.

The Quality of Service performance of service providers against the benchmarks are assessed through compliance reports submitted by service providers. The compliance reports of Network related parameters for Cellular Mobile are submitted on monthly basis and all other compliance reports relating to 2G, 3G, Wireless Data Services, Basic services (Wireline) and Broadband services are submitted on a quarterly basis. For ensuring compliance with the Quality of Service benchmarks and to protect the interests of the consumers, TRAI had introduced the system of financial disincentives through the Second Amendment regulations issued on 8th November 2012. These regulations provide financial disincentives for non-compliance with the benchmarks, delay in submission of compliance reports and false reporting. These regulations were amended on 15<sup>th</sup> October, 2015 making the financial disincentives more stringent for Cellular Mobile Services in cases where there are continuous failures to meet the benchmarks.

TRAI also undertakes audit and assessment of Quality of Service through

independent agencies. The details of surveys are given in Part-III.

The performance of the service providers are evaluated every Quarter based on the compliance reports submitted by service providers and also based on the reports of the audit agencies engaged by TRAI. Wherever deficiencies in achieving the quality of service benchmarks have been noticed through close monitoring of the performance of service providers by way of periodic reports, audit and assessment of quality of service through independent agencies, TRAI has been following up with the service providers for addressing such deficiencies in achieving the benchmarks for the various parameters.

## 1.2.8 Universal Service Obligation

1.2.8.1 Universal Service Obligation Fund (USOF) was established w.e.f. 01.04.2002 under the Indian Telegraph (Amendment) Act 2003 (further amended in 2006), to provide financial support for the provision of telecom services in commercially unviable rural and remote areas of the country. The Authority made Recommendations for Support for Rural Wire-line Connections installed Before 1<sup>st</sup> April 2002 vide its recommendations dated 14<sup>th</sup> May 2012. The amount of support is Rs.1500 Crore for the first year and Rs.1250 Crore for the second year.

Projects undertaken under the USO, inter-alia, include Shared Mobile Infrastructure Scheme, provision of Rural Community Phones (RCPs), provision of individual Rural Direct Exchange Lines (RDEL), rural wireline broadband scheme, Village Public Telephones (VPTs), the National Optical Fibre Network (NOFN), the Scheme for Mobile Communication Services in Left Wing Extremism (LWE) affected areas, and comprehensive Telecom Development Plan for the North Eastern Region.

In accordance with TRAI recommendation to Telecom Commission on 'Improving Telecom Services in Andaman & Nicobar Islands and Lakshadweep' on 22.07.2014, an integrated and comprehensive telecom development plan for Andaman & Nicobar Islands and Lakshadweep was approved. As per the plan, CAPEX worth Rs. 2035 Crore will be funded by USO fund to provide submarine OFC connectivity with islands, Satellite bandwidth augmentation, seamless 2G coverage, and intra-island OFC network in Andaman & Nicobar islands.

Most recently, in 2016, the Union Cabinet approved the proposal to extend subsidy support of Rs.1250 crore to BSNL from the USOF as compensation for the deficit incurred by BSNL in operating rural wireline connections installed prior to 1<sup>st</sup> April 2002.

## (C) REVIEW OF GENERAL ENVIRONMENT IN THE BROADCASTING AND CABLE TV SECTOR

1.3.1 The broadcasting sector consists of Television and Radio Services. India has the world's second largest Television market after China. The pay TV universe consists of around 92<sup>1</sup> Million Cable TV subscribers, 63.61 Million active DTH subscribers. The terrestrial TV network of Doordarshan serves about 92<sup>2</sup> per cent of country's population through a vast network of terrestrial transmitters. The broadcasting and cable television services sector consists of 48 pay broadcasters, an estimated 60,000 cable operators, 1327<sup>2</sup> MSOs registered with Ministry of Information and Broadcasting (MIB), six pay DTH operators, apart from a public service broadcaster Doordarshan beaming down a free-to-air DTH service. There were 888<sup>2</sup> TV channels registered with the Ministry of Information and Broadcasting as on 31<sup>st</sup> March, 2017, out of which 212 were SD pay TV channels (including 5 advertisement-free pay channels) and 83 HD Pay TV channels. India's TV industry grew from Rs 54200<sup>1</sup> crore in 2015-16 to 58800<sup>1</sup> crore during the year 2016-17, while registering an annual growth of around 8.48 percent. The subscription revenues account for a major share of the overall revenue of the TV industry. The subscription revenues grew from Rs. 36100<sup>1</sup> crore in 2015-16 to Rs. 38700<sup>1</sup> cr. in the year 2016-17. The advertisement revenue also grew from Rs. 18100<sup>1</sup> crore in 2016-17 to Rs. 20,100<sup>1</sup> crore in the year 2016-17. The FM radio broadcasting sector also registered an impressive growth. There were 293 private FM radio stations operational by March 2017, besides the public service broadcaster- All India Radio (AIR) having a network of 420<sup>2</sup> centres and 610<sup>2</sup> broadcast transmitters [140<sup>2</sup> MW (Medium Wave), 422<sup>2</sup> FM and 48<sup>2</sup> SW (Short Wave)]. AIR service covers around 99.20%<sup>2</sup> of the geographical area of the country while serving 99.19%<sup>2</sup> of the population. The radio industry, which is entirely dependent on advertisement

<sup>1</sup> Source: FICCI –KPMG Indian Media and Entertainment Report 2017

<sup>2</sup> Source: MIB website

revenues, registered a growth of around 6.37 percent during the year 2016-17. The advertisement revenue was Rs. 2046.54 crore in 2016-17 compared to Rs. 1923.91 crore in previous financial year. As on March 2017, 268 licenses were issued for setting up of community radio stations and 206 community radio stations have become operational.

The last decade has witnessed significant change in the dynamics of the Cable & Satellite (C&S) TV market. TRAI in its recommendations dated 05<sup>th</sup> August 2010 recommended complete digitization with addressability of the cable TV services sector in a phased manner. These were accepted by the Government, and suitable amendments were incorporated in the Cable TV Act by the Parliament. A notification was issued by the Central Government, laying down a roadmap for implementation of digital addressable cable TV systems (DAS) across the

country in four phases. The cut-off date for migration to “Digital Addressable Cable TV Systems” in the first phase, covering the four metropolitan cities, was 31.10.2012 and for the second phase, it was 30.03.2013. The cut-off date for the third phase was 31.12.2015 and the cut-off date for the fourth phase was 31.12.2016.

The Ministry of Information and Broadcasting (MIB) extended the cut-off date for Phase IV of Cable TV Digitization to 31st March 2017 in lieu of uncertainty in the market due to pending court cases and unsatisfactory progress of installation of Set Top boxes (STBs) in Phase IV areas. Further, Ministry also provided additional time for the remaining subscribers in Phase III areas to switch over to digital mode of transmission by 31st January, 2017 on account of ongoing court proceedings. The revised time-table and the schedule was as below:-

#### Migration Schedule - Digital Addressable Cable TV Systems

Phase	Areas	Sunset date for analog Cable TV
Phase –I	Four Metros of Delhi, Mumbai, Kolkata, Chennai	31.10.2012
Phase –II	Cities with population more than one million (38 cities)	31.03.2013
Phase –III	All Urban areas (Municipal Corporation/ Municipalities)	31.01.2017
Phase –IV	Rest of India	31.03.2017

As on 31<sup>st</sup> March, 2017, all the four phases of digitisation of cable TV services have been completed ushering in a new era of digital addressable cable TV systems.

## Broadcasting and Cable TV Sector

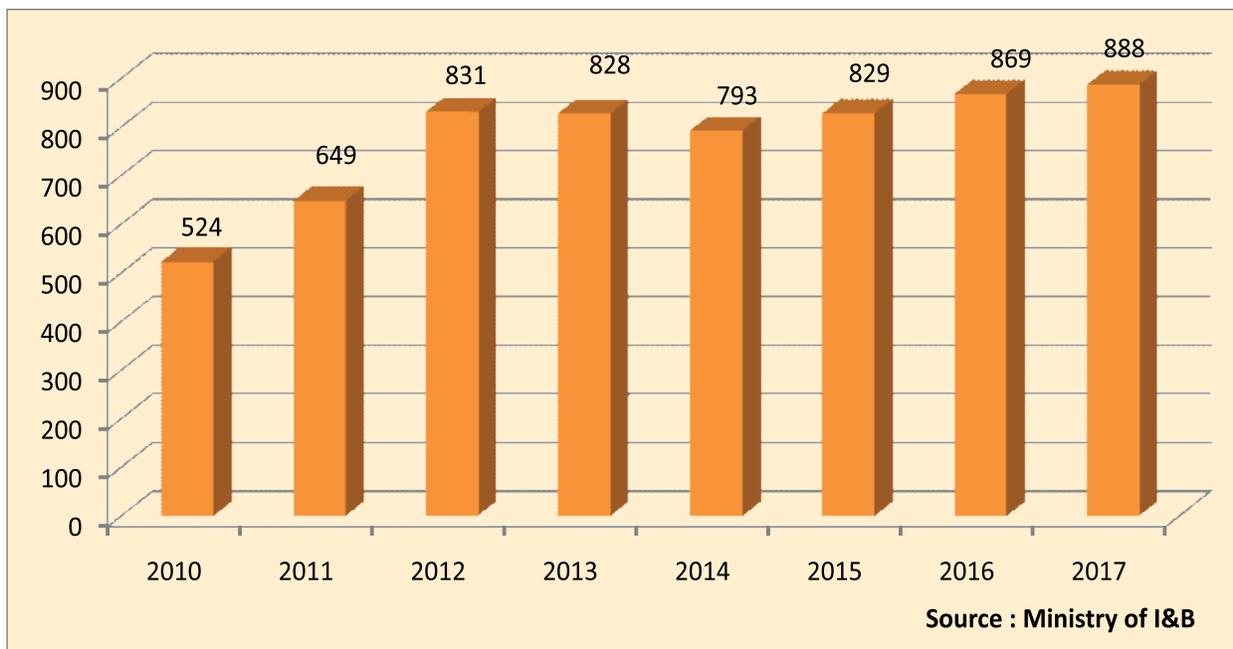
1.4. The broadcasting and cable TV services sector has exhibited consistent growth over the last two decades. The sector at this juncture comprises of analogue and digital cable TV services, DTH services, terrestrial TV services, IPTV services, and broadcast radio services. The FM radio services have also demonstrated consistent growth. Commensurating with the growth in the subscriber base, the number of platforms & service providers have also increased. The present status of various services in the broadcasting sector is outlined below.

### Satellite TV Channels

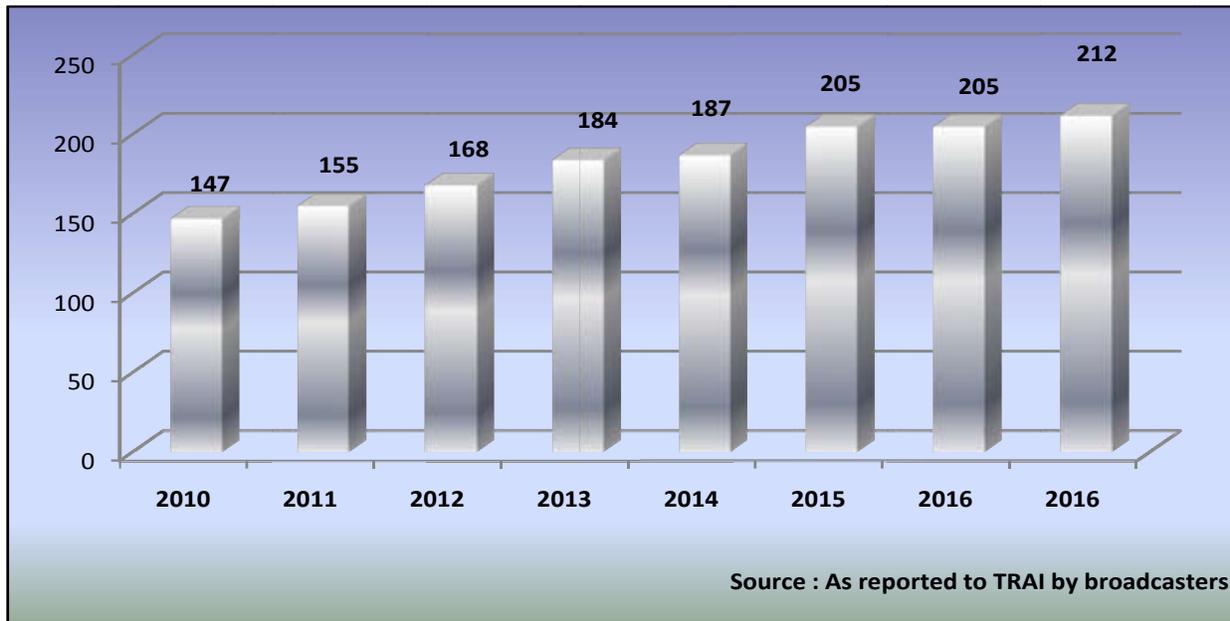
1.4.1 The total number of satellite TV channels permitted by Ministry of Information and Broadcasting has

increased substantially from 524 in the year 2010 to 888 in the year 2017. **Figure-14** depicts the total number of TV channels year- wise during this period. The number of Standard Definition (SD) pay TV channels has grown from 147 in the year 2010 to 212 in 2017. **Figure-15** depicts growth in the total number of SD Pay TV channels year wise during this period. In the last six year a substantial number of HD pay television channels have also been launched by the broadcasters. **Figure-16** depicts the year wise reported number of HD channels during this period. As of March 2017, there are a total of 83 operational HD channels. A list of broadcaster & their Pay TV channels (SD & HD) is at **Annexure I** at the end of this part of the Report.

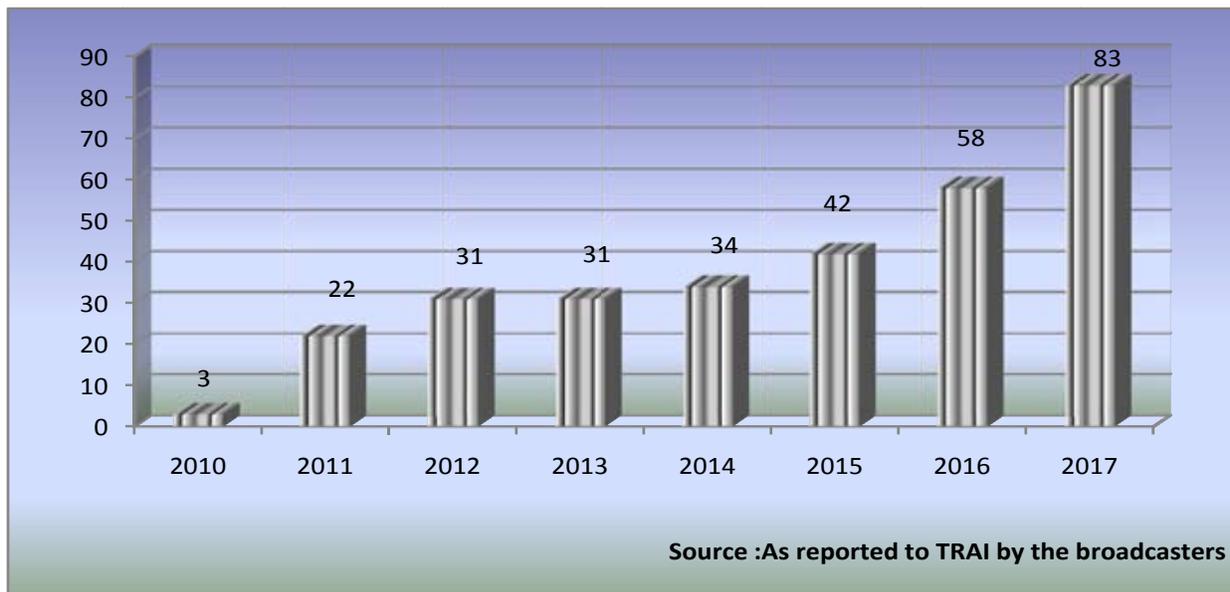
**Figure 14- : Annual growth in number of satellite TV channels (Pay & FTA) in India**



**Figure-15: Annual Growth in numbers of SD Satellite Pay TV channels**



**Figure 16: Annual growth in number of HD Satellite Pay TV channels**



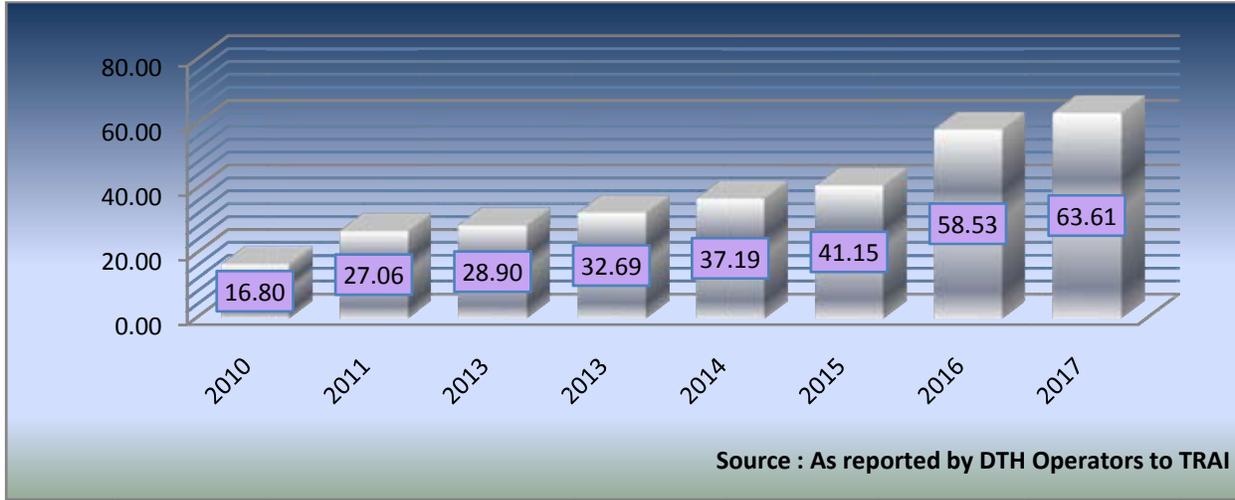
## DTH services

1.4.2 Since introduction in the year 2003, Indian DTH services have displayed a phenomenal growth. DTH has attained active subscriber base of around 63.61 million. As on March 2017, there are 6 pay DTH service providers catering to

this subscriber base. A list of pay DTH operators is placed at **Annexure II** at the end of this part of the report. This is besides the viewership of the free DTH services of Doordarshan. Yearly growth of the sector in terms of its net active subscriber base is depicted in **Figure 16**.

**Figure 16: Annual growth in net active subscriber base of pay DTH sector**

(In Millions)



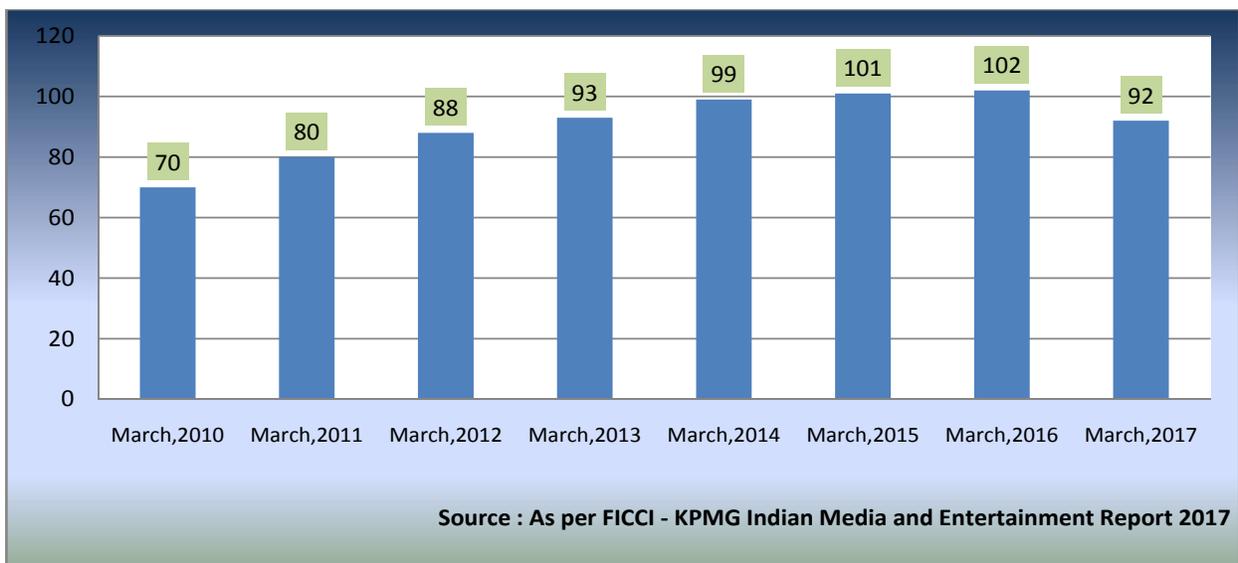
Apart from an increase in the availability of conventional TV channels, the pay DTH operators have continued to add several innovative offerings and value added services (VAS) such as interactive services like movie-on-demand, gaming, shopping, education etc.

### Cable TV Services

1.4.3 The cable TV segment is the largest of the TV service sector with an estimated subscriber base of around 92 million subscribers. **Figure- 17** depicts the growth of the pay cable TV sector in terms of yearly subscriber numbers, over the last six years.

**Figure – 17: Annual growth in number of pay Cable TV Subscribers**

(In Millions)



## Digital Addressable Cable TV Systems (DAS)

1.4.4 Ever increasing growth in the number of TV channels combined with the inherent limitations of the analog cable TV systems posed several challenges in the cable TV sector. The first limitation was the capacity constraint of the analog cable TV networks; the second reason its non-addressable nature. Evolution of technology and the onset of the digital era has paved the way towards modernisation of the cable TV industry, thereby enabling it to provide many new services to this large and upwardly mobile subscriber base.

The Telecom Regulatory Authority of India (TRAI) in the past had examined the subject of digitization in detail and also initiated a comprehensive public consultation process. Thereafter, on 5<sup>th</sup>

August 2010, it recommended, to the Government of India, implementation of Digital Addressable Cable TV Systems (DAS) across the country. While doing so, it also laid out a detailed roadmap to achieve the digitisation objective. The Government accepted the recommendations of TRAI and on 25<sup>th</sup> October, 2011, promulgated an Ordinance<sup>1</sup> amending the Cable Television Networks (Regulation) Act, 1995, mandating the implementation of Digital Addressable Cable TV Systems in India, in a phased manner, commencing in November 2012 and slated for complete implementation by December, 2016. Given the size, complexity and regional specifics of the country, the initial migration plan from analog Cable TV distribution systems to a completely digital was devised on the basis of the levels of urbanisation. The timeline of the plan was subsequently revised. The migrating schedule is at per **Table 16**.

**Table 16: Migration Schedule - Digital Addressable Cable TV Systems**

Phase	Areas	Sunset date for analog Cable TV
Phase –I	Four Metros of Delhi, Mumbai, Kolkata, Chennai	31.10.2012
Phase –II	Cities with population more than one million (38 cities)	31.03.2013
Phase –III	All Urban areas (Municipal Corporation/ Municipalities)	31.01.2017
Phase –IV	Rest of India	31.03.2017

<sup>1</sup> With Parliament passing the bill, the Ordinance dated 25<sup>th</sup> October 2011, became an Act on 30<sup>th</sup> December 2011.

As far as the implementation of DAS was concerned, TRAI devised a three-step approach:

- The first step was to ensure content availability through signing of formal

agreements between the broadcasters and MSOs. This, on the ground, was to ensure timely availability of adequate content to the MSOs.

- The second step was to seed the set-top-boxes (STBs); ensure collection of consumer details and populate these details into the Subscriber Management System (SMS). This was critical to bring in 'addressability' to the system.
- The third step was to ensure individual consumer billing so that the consumer pays according to his choice/subscription. This marked the biggest change from the earlier analog days when subscribers basically paid a lump-sum amount for whatever was being delivered through the cable, irrespective of fact whether they wanted that content or not.

Digitization, with addressability, of cable TV sector was planned to be executed in four phases and all the four phases of implementation has been completed by 31<sup>st</sup> March 2017. By the end of March 2017, around 73 million STBs have already been installed. The experience of all the four phases of digitization has been very encouraging and implementation of digitization with addressability is bound to be a game changer to drive structured growth in the broadcasting and cable TV services in the country. Experience gained over the implementation of all the four phases of digitization has been extremely encouraging. In fact a large number of maladies of the analog system, such as capacity constraints, non-transparent business transactions, limited consumer choice to services etc. are being addressed.

## Uniform Regulatory Framework for All types of addressable systems

1.4.5 The digitization for cable sector started in India in 2012 in four phases. All the four phases have been completed in March, 2017. With the implementation of DAS, all the pay TV broadcasting services are delivered through addressable systems. In order to give stimulus of the growth and to protect the interest of customers, there was a need to relook at the existing framework and prescribe a framework in digital era which is transparent, non-discriminatory, protect consumer interests and increase the growth in the sector.

With these four main objectives in mind, TRAI initiated the consultation process in January, 2016 and three different Consultation Papers on tariff related issues, interconnection related issues and quality of service related issues were floated. The detailed framework has been prescribed taking into consideration the views of the stakeholders given against the consultation papers and also expressed during the OHDs.

The Consultation process was very unique as the need for change in present regulatory framework was felt by all the stakeholders. Broadcasters wanted the freedom to price their channels and maximise their revenue both from subscription and advertisements. They felt that such freedom in not available in

the present framework as the ultimate pricing of the channels was controlled by the Distribution Platform Operators (DPOs). News broadcasters felt that Free-to-Air channels should be available to the customers without any charges and carriage fee charged by the DPOs should be regulated. DPOs on the other hand were pressing time and again that there should be adequate mechanism to monetise the investments made by them, so that they can upgrade their networks to provide multimedia services and broadband and also enrich the customers' experience by giving better quality of service. Customer also appeared to be unsatisfied as they felt that even after digitization, the option to select channels of their choice was not available with them. They were also critical for not getting the bills and receipts for the payments made by them.

All such issues have been addressed in the new regulatory framework. The broadcasters have been given complete flexibility to price their channels on a-la-carte basis. Apart from giving full control for optimally monetising channels both from subscriptions revenue and advertisement revenue. They also get freedom to bring variety and fulfill the requirement of class of consumers. It was not easy in present framework due to price caps. The channels can be provided to the consumers both in the a-la-carte as well as bouquet with only conditions that any channel having MRP more than Rs.19 will not form part of the

bouquet. This has been done to protect the interest of the consumers, so as to ensure that any channel in the bouquet is not being priced more than Rs.19 per month, as channel pricing in the bouquet is opaque. DPOs have been permitted to charge a maximum of Rs.130 excluding taxes as network capacity fee to provide capacity of 100 SD channels. This will permit upgradation of the network to give better quality and additional services to the consumers.

The issue of carriage fee also has been addressed and the cap of 20 paise per subscriber per channel has been prescribed. This will further reduce as number of subscribers subscribing to the channel increases and will become zero when 20% of the subscribers will be available on platform who choose the channel. Both broadcasters and DPOs have been permitted to bring out the Reference Interconnection Offer (RIO) transparently following the prescribed regulatory framework and including all terms and conditions so that their offering are clear and unambiguous to the seekers. In order to ensure that a-la-carte channel pricing is not illusionary, a relationship between the bouquet price and a-la-carte price of channels has been prescribed. In order to address the concerns of broadcasters to get the subscribers reports timely, adequate provisions have been made in the regulations.

From consumer point of view, uniform quality of service regulations has been prescribed for all addressable platforms.

Provisions have been made that MRP of all pay channels will be displayed in EPG to the consumers to make informed choice. For the purpose of generating consumer awareness and to provide all required information at one place, the provision of consumer corner and subscriber corner has been mandated on their website. Quality of Service regulations have simplified and streamlined the provisions relating to consumer premises equipment / STBs.

With new framework, it is expected that needs of the customers will be fulfilled in time bound manner and it will also provide adequate opportunities to the other stakeholders to innovate the business ingenuity and offering their services.

## Radio

1.4.6 Radio is a popular means for mass communication, owing largely to its wide coverage, portability, low set-up cost and affordability. In India, Radio coverage is available in the Short-wave (SW) and Medium-wave (MW) bands in the Amplitude Modulation (AM) mode and Frequency Modulation (FM) mode in the FM band. FM Radio broadcasting today, is the most popular and pervasive medium to provide entertainment, information and education to the masses. 293 private FM radio stations were operational at the end of March 2017, besides the public service broadcaster- All India Radio (AIR) having a network of 420<sup>2</sup> centres and 610<sup>2</sup> broadcast transmitters [140<sup>2</sup> MW (Medium Wave), 422<sup>2</sup> FM and 48<sup>2</sup> SW (Short Wave)]. AIR service covers around 99.20%<sup>2</sup> of the geographical area of the

country while serving 99.19%<sup>2</sup> of the population.

To expand the reach of FM Radio broadcasting in the country, the Government has embarked upon Phase-III to enable setting up of private FM Radio channels in all cities with a population of more than 1 lakh and in bordering areas of J&K, North Eastern States and island territories. The Government, on 25th July 2011, issued consolidated policy guidelines on Phase-III expansion of FM radio broadcasting through private entities. In Phase-III, an additional 966 channels across 333 cities have been made available for auction through an ascending e-auction process. Out of 333 cities, 69 cities already have operational FM Radio channel(s), whereas 264 cities are new cities where no FM Radio channel is operational by private FM radio broadcasters. In the first batch of Phase-III, 135 private FM Radio channels in 69 cities were auctioned in 2015. Out of these, 96 FM Radio channels in 55 cities have been successfully auctioned. In the second batch of Phase-III, 266 private FM Radio channels in 92 cities were auctioned in 2016. Out of these, 66 FM Radio channels in 48 cities have been successfully auctioned. As on 31st March 2017, 293 FM radio stations have been made operational in 84 cities by 32 private FM broadcasters. Allowing private FM broadcasters into the radio broadcasting sector has contributed towards significantly enhanced radio coverage while providing good quality

reception and content to radio listeners. This has also led to encouraging local talent while aiding employment opportunities in these areas. The annual increase in the number of private FM

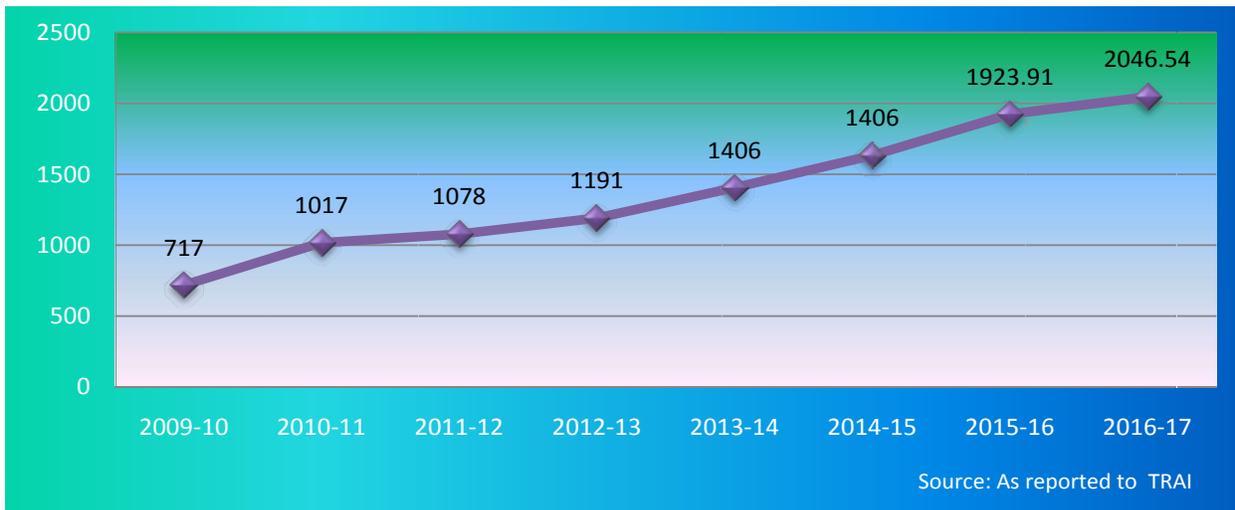
radio stations is depicted in **Figure 18**. The annual increase in Advertisement Revenue of private FM Radio stations (as per TRAI records) is depicted in **Figure 19**.

**Figure 18: Annual Growth in number of Private FM Radio Stations**



**Figure 19: Annual growth in FM Radio Advertisement Revenue**

(In crores)



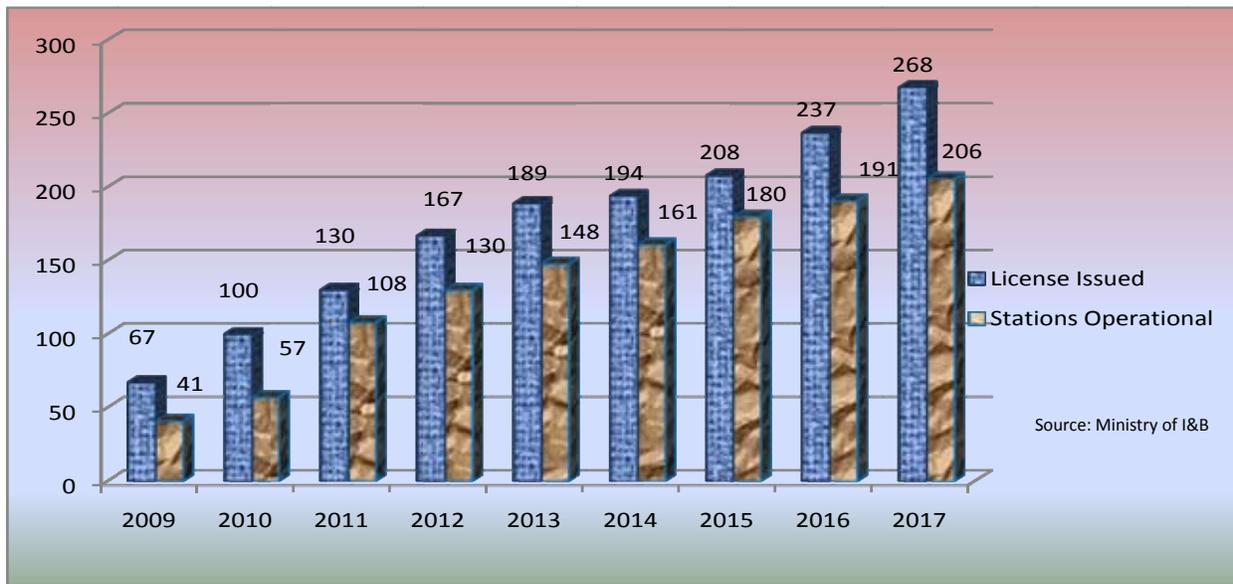
Another area of growth in the radio landscape in the country is the expansion in the number of Community Radio Stations (CRS). There is huge latent potential in CRS given the vast landscape

of this country, linguistic diversity, regional flavours & cultural variations. Community Radio broadcasting can serve as a medium for networking of small groups and communities with a specific focus on

daily concerns of the common man and also help them realize local aspirations. CRS are set up in association with educational institutions and civil society organizations. As on March 2017, out of

the 268 licenses issued for setting up of CRS, 206 stations are already operational. The annual growth in the number of community radio stations is depicted in **Figure 20**.

**Figure 20:- Annual Growth in number of Community Radio Stations**



## Teleports

1.4.7 Globally, teleports have evolved as providers of myriad solutions ranging from TV programme production and post-production to content hosting and distribution, system integration and network management. With liberal up-linking guidelines in India, there has been a major benefit to Indian channels that were earlier being up-linked from abroad in view of lower operating costs and availability of skilled manpower. If India were to develop further as a ‘Teleport hub’, even channels not meant for down-linking into India are likely to get shifted to India for up-linking. This may lead to enhanced employment and

revenue generation as well as increased foreign exchange earnings. Given its demonstrated technical capabilities and a favourable geographical location, India can emerge as an up-linking hub for TV channels viewed even in other parts of the world. Recognizing this, TRAI, in its recommendations dated 22<sup>nd</sup> July 2010 to the Government, on ‘Issues related to Uplinking / Downlinking of Television Channels in India’, had suggested that India be developed as a teleport hub.

## Tariff trends in the TV broadcasting sector

1.4.8 In order to provide cost effective broadcasting services to the consumer, TRAI lays down the regulatory

framework, from time-to-time, in the form of tariff orders. The tariffs for areas served through non-addressable systems and also for areas served by digital addressable systems such as DAS, DTH, HITS, IPTV etc. are governed by the respective tariff orders issued by TRAI. Addressable digitization is making fast inroads and it is expected that operators will increasingly offer value added services (VAS), interactive services including movie-on-demand, gaming, shopping etc. The tariff order dated 21<sup>st</sup> July 2010, as amended, applicable for all addressable platforms, mandates that all service providers must offer their available channels, on a-la-carte basis at the retail level. Further, on 03<sup>rd</sup> March 2017, TRAI notified tariff order applicable to broadcasting services relating to television provided

to subscribers, through addressable systems, throughout the territory of India.

### Stakeholders in the Cable and Satellite TV Service Sector

1.4.9. As on March 2017, the total number of private TV channels registered with the Ministry of Information and Broadcasting was 888 which include 212 SD pay channels (including 5 advertisement free pay channels) and 83 HD pay channels and. List of SD pay channels and HD pay channels are placed at **Annexure I and II**.

### Broadcasting & Cable services performance indicators

1.4.10 Overall status of the broadcasting and Cable TV services sector in the country is placed at **Table 17**.

**Table 17: Overall status of Broadcasting and Cable TV Services as on 31<sup>st</sup> March 2017**

Number of pay Cable TV subscribers (estimated)	92 Million
Number of active pay Subscribers with private DTH service providers	63.61 Million
Number of Cable TV operators (estimated)	60,000
Number of MSOs registered with MIB	1327
Number of pay DTH Operators	6
Number of Channels	888
Number of SD Pay TV Channels (including 5 Advertisement free channels )	212
Number of HD TV Channels	83
Number of FM Radio Stations (excluding All India Radio)	293
Number of Community Radio Stations licenced.	268
Number of Operational Community Radio Stations	206

1.4.11 Performance indicators of the Broadcasting sector over the four

quarters of 2016-17 are given in **Table 18.**

**Table 18: Performance Indicator of Broadcasting and Cable Services**

Broadcast & Cable Services	Quarter ending			
	June 2016	Sept. 2016	Dec. 2016	March 2017
Total Number of Registered Channels with I&B Ministry	892	881	899	888
Number of SD Pay Channels (Operational)**	208	207	208	212
Number of HD Pay Channels (Operational)	67	74	79	83
Net Active DTH Subscribers base* (in millions)	60.50	61.90	62.65	63.61
Number of Private FM Radio Stations	243	260	273	293

\* The net active subscriber base includes number of temporarily suspended subscribers who have been inactive but for not more than 120 days

\*\* Including 5 Advertisement free channels

Annexure – I

List of pay TV channels as on 31<sup>st</sup> March 2017

Sl. No.	Name of the broadcaster	Sl. No	Name of the channel	Declared as SD or HD
1	M/s 9X Media Private Limited	1	9XM	SD
2	M/s AETN 18 Media Pvt Limited	2	The History Channel	HD
		3	FY1 TV18	HD
3	M/s Asianet Communications Limited	4	Asianet	SD
		5	Asianet Plus	SD
		6	Asianet Movies	SD
		7	Suvarna Plus	SD
		8	Asianet HD	HD
9	Star Suvarna (Earlier name "Suvarna")	SD		
4	M/s B4U Television Network India Limited	10	B4U Movies	SD
5	M/s Bangla Entertainment Private Limited	11	AATH	SD
6	M/s BBC Global News India Private Limited	12	BBC World News	SD
7	M/s Bennett, Coleman & Company Limited	13	Zoom	SD
		14	Romedy Now	SD
		15	MN +(Earlier name "Movies Now +")	HD
		16	Magicbricks Now	SD
		17	ET NOW	SD
		18	Times Now	SD
		19	Romedy Now HD	HD
		20	Movies Now HD	HD
		21	Movies Now 2 HD	HD
		22	Movies Now 2	SD
23	Times Now HD	HD		
8	M/s Business Broadcast News Private Limited	24	BTVi(Earliername "Bloomberg TV India")	SD

Sl. No.	Name of the broadcaster	Sl. No	Name of the channel	Declared as SD or HD
9	M/s Celebrities Management Pvt Limited	25	Travel XP HD (Earlier name "Travel XP")	HD
		26	Travel XP Tamil	SD
10	M/s Greycells18 Media Limited	27	Topper TV (#)	SD
11	M/s Discovery Communications India	28	Animal Planet	SD
		29	Discovery Channel	SD
		30	Discovery Channel – Tamil	SD
		31	Discovery Kids Channel	SD
		32	Discovery Science	SD
		33	Discovery Turbo	SD
		34	ID Investigation Discovery	SD
		35	Discovery HD World (earlier name "Discovery HD")	HD
		36	Animal Planet HD World (earlier name "Discovery Home and Health")	HD
		37	TLC HD world (earlier name "Military Channel")	HD
		38	TLC	SD
		39	Dsport	SD
		12	M/s Da Vinci Media India Private Limited	40
13	E-24 Glamour Limited	41	E 24	SD
14	M/s Eenadu Televisoin Private Limited	42	ETV Telugu	SD
		43	ETV Andhra Pradesh (earlier name "ETV-2")	SD
		44	ETV - Telangana (earlier name "ETV-3")	SD
		45	ETV Cinema	SD
		46	ETV Life	SD
		47	ETV Plus	SD
		48	ETV Abhiruchi	SD
49	ETV HD	HD		

Sl. No.	Name of the broadcaster	Sl. No	Name of the channel	Declared as SD or HD
15	M/s EPIC Television Networks Pvt Limited	50	EPIC TV (HD Distribution)	HD
16	M/s Genx Entertainment Limited	51	UTV Bindass	SD
		52	UTV Action	SD
17	M/s IBN Lokmat News Private Ltd	53	IBN Lokmat	SD
18	M/s Mavis Satcom Limited	54	J Movies	SD
		55	Jaya Max	SD
		56	Jaya Plus	SD
		57	Jaya TV HD	HD
19	M/s ABP News Network Pvt Limited	58	ABP Ananda	SD
		59	ABP Majha	SD
20	M/s Sony Pictures Networks Distribution India Private Limited	60	Animax	SD
		61	AXN	SD
		62	SET MAX	SD
		63	MIX	SD
		64	SAB	SD
		65	SONY ENTERTAINMENT CHANNEL (SET)	SD
		66	PIX	SD
		67	SIX	SD
		68	MAX 2 (Earlier name "MAX HD")	SD
		69	PAL (Earlier Name "SAB HD")	SD
		70	SET HD	HD
		71	SIX HD	HD
		72	PIX HD	HD
		73	MAX HD	HD
		74	SONY ESPN HD	HD
75	Le PLEX HD	HD		
76	SAB HD	HD		
77	SONY ROX HD	HD		

Sl. No.	Name of the broadcaster	Sl. No	Name of the channel	Declared as SD or HD
21	M/s MSM World Wide Factual Media Private Limited	78	SONY BBC EARTH	SD
		79	SONY BBC EARTH HD	HD
22	M/s NDTV Life style Limited	80	NDTV Good Times	SD
23	M/s Neo Sports Broadcast Pvt Limited	81	NEO Prime (Earlier name "Neo Cricket")	SD
		82	Neo Sports	SD
24	M/s New Delhi Television Limited	83	NDTV 24*7	SD
		84	Granada TV (HD)	HD
		85	Trace Sports HD	HD
		86	NDTV Profit	SD
25	M/s NGC Network (India) Pvt Limited	87	Fox Life	SD
		88	National Geographic Channel (NGC)	SD
		89	Fox Life HD	HD
		90	Nat Geo Wild	SD
		91	National Geographic HD	HD
		92	Nat Geo Music HD	HD
		93	Nat Geo Wild HD	HD
		94	Nat Geo People HD	HD
		95	Baby TV HD	HD
26	M/s Odisha Television Limited	96	Prarthana	SD
		97	Tarang	SD
		98	Tarang Music	SD
		99	Alankar	SD
27	M/s Panorama Television Private Limited	100	ETV Bihar Jharkhand	SD
		101	ETV MP Chattisgarh	SD
		102	ETV Rajasthan	SD
		103	ETV Uttar Pradesh Uttarachal	SD
		104	ETV Urdu	SD
		105	ETV News Kannada	SD
		106	ETV News Bangla	SD
		107	ETV Haryana / Himanchal Pradesh	SD
		108	ETV News Gujarati	SD
109	ETV News Odia	SD		

Sl. No.	Name of the broadcaster	Sl. No	Name of the channel	Declared as SD or HD
28	M/s Paul Entertainments Pvt Limited	110	9X Tashan (Earlier name "Purvaiya")	SD
29	M/s Raj Television Network Limited	111	Raj Musix Kannada	SD
		112	Raj Digital Plus	SD
		113	Raj Musix	SD
		114	Raj News	SD
		115	Raj TV	SD
		116	Vissa TV	SD
30	M/s Sahara India Commercial Corporation Ltd	117	Sahara Filmy	SD
		118	Sahara One	SD
31	M/s Sarthak Entertainment Pvt Limited	119	Sarthak TV	SD
32	M/s Silverstar Communications Limited	120	Mega 24	SD
		121	Mega Musiq	SD
		122	Mega TV	SD
33	M/s Star India Private Limited	123	Channel (V)	SD
		124	Star Sports 4	SD
		125	FX	SD
		126	Life Ok (earlier name "Star One")	SD
		127	Movies OK (earlier name "Gold Action")	SD
		128	Star Sports 3	SD
		129	Star Gold	SD
		130	Star Jalsha	SD
		131	Star Movies	SD
		132	Star Movies Action	SD
		133	Star Plus	SD
		134	Star Pravah	SD
		135	Star Sports 1	SD
		136	Star Sports 2	SD
		137	Star World	SD

Sl. No.	Name of the broadcaster	Sl. No	Name of the channel	Declared as SD or HD
		138	Jalsha Movies (Earlier name "Star Bengali")	SD
		139	Star Sports HD 2	HD
		140	Star Sports HD 1	HD
		141	Life Ok HD	HD
		142	Star Gold HD	HD
		143	Star Movies HD	HD
		144	Star Plus HD	HD
		145	Star World Pmiere HD	HD
		146	Star Sports HD 3	HD
		147	Star Sports HD 4	HD
		148	Star Movies Select HD	HD
		149	Star World HD	HD
		150	FX HD	HD
		151	MAA Gold	SD
		152	MAA Movies	SD
		153	MAA Music	SD
		154	MAA TV	SD
		155	Star Pravah HD	HD
		156	Star Jalsha HD	HD
		157	Jalsha Movies HD	HD
		158	Star Sports Select HD 1	HD
		159	Star Sports Select HD 2	HD
		160	MAA HD	HD
		161	Star Gold Select HD	HD
		162	MAA Movies HD	HD
34	M/s SUN TV Network Limited	163	Adithya TV	SD
		164	Chintu TV	SD
		165	Chutti TV	SD
		166	Gemini Comedy	SD
		167	Gemini Life	SD
		168	Gemini Movies	SD

Sl. No.	Name of the broadcaster	Sl. No	Name of the channel	Declared as SD or HD
		169	Gemini Music	SD
		170	Gemini News	SD
		171	Gemini TV	SD
		172	KTV	SD
		173	Kiran TV	SD
		174	Kushi TV	SD
		175	SUN Life	SD
		176	Sun Music	SD
		177	Sun News	SD
		178	Surya Music (Earlier name "Sun News English")	SD
		179	SUN TV	SD
		180	SUN TV RI	SD
		181	Surya TV	SD
		182	Udaya Comedy	SD
		183	Udaya Movies	SD
		184	Udaya Music	SD
		185	Udaya News	SD
		186	Udaya TV	SD
		187	Kochu TV	SD
		188	Sun TV HD	HD
		189	KTV HD	HD
		190	Sun Music HD	HD
		191	Gemini TV HD	HD
		192	Sun Action (#)	SD
		193	Gemini Action (#)	SD
		194	Surya Action (#)	SD
		195	Suriyan TV (#)	SD



Sl. No.	Name of the broadcaster	Sl. No	Name of the channel	Declared as SD or HD
35	M/s Taj Television India Private Limited	196	Ten 2 (earlier name 'Ten Action')	SD
		197	Ten 1 (earlier name 'Ten Sports')	SD
		198	Ten 3	SD
		199	Ten Golf HD	HD
		200	Ten 1 HD (earlier name 'Ten HD')	HD
36	M/s Turmeric Vision Private Limited	201	Food Food TV	SD
37	M/s Turner International India Pvt Ltd	202	Cartoon Network	SD
		203	CNN International	SD
		204	HBO	SD
		205	POGO	SD
		206	Toonami (Earlier name "Boomerang")	SD
		207	WB	SD
		208	HBO HD (Earlier name "HBO Hits HD")	HD
38	M/s TV 18 Broadcast Limited	209	CNN News 18 (earlier name "CNN-IBN")	SD
		210	CNBC Bazaar	SD
		211	CNBC TV 18 Prime HD	HD
		212	CNBC Awaaz	SD
		213	CNBC TV 18	SD
39	M/s TV Today Network Limited	214	Aaj Tak	SD
		215	Delhi Aaj Tak	SD
		216	India Today (Earlier name "Headlines Today")	SD
		217	Aaj Tak Tez	SD

Sl. No.	Name of the broadcaster	Sl. No	Name of the channel	Declared as SD or HD
40	M/s United Home Entertainment Pvt Limited	218	Hungama TV	SD
41	M/s Disney Broadcasting (India) Limited	219	Disney Junior (Earlier name "UTV Comedy")	SD
		220	UTV Movies	SD
		221	Disney XD (Earlier name "UTV World Movies")	SD
		222	Bindass Play (Earlier name "UTV Stars")	SD
		223	The Disney Channel	SD
42	M/s Viacom 18 Media Private Limited	224	Colors	SD
		225	Comedy Central (HD Distribution)	HD
		226	MTV	SD
		227	NICK	SD
		228	Nick Jr / Teen Nick	SD
		229	SONIC	SD
		230	VH 1 (HD Distribution)	HD
		231	Colors Infinity HD	HD
		232	Colors Infinity	SD
		233	Colors HD	HD
		234	NICKS HD+	HD
		235	MTV Indies (HD Distribution)	HD
		236	Rishtey Cineplex	SD
		237	MTV Beats (Earlier name "X Zone")	SD
		238	Colors Kannada HD	HD
		239	Colors Marathi HD	HD
		240	Colors Bangla HD	HD
241	Colors Super	SD		
242	Colors Bangla (Earlier name "ETV Bangla")	SD		

Sl. No.	Name of the broadcaster	Sl. No	Name of the channel	Declared as SD or HD
		243	Colors Gujarati ( Earlier name "ETV Gujarati")	SD
		244	Colors Kannada (Earlier name "ETV Kannada")	SD
		245	Colors Marathi (Earlier name "ETV Marathi")	SD
		246	Colors Oriya (Earlier name "ETV Oriya")	SD
		247	MTV Beats HD	HD
		248	Cineplex HD	HD
		249	VH 1	SD
		250	Comedy Central	SD
43	M/s Vijay Television Pvt Limited	251	Vijay TV (except Tamil Nadu)	SD
		252	Vijay Super	SD
		253	Vijay HD	HD
44	M/s Zee Akaash News Private Limited	254	24 Ghanta	SD
45	M/s Zee Entertainment Enterprises Limited	255	Zee ETC Bollywood (Earlier name "Zee Bollywood")	SD
		256	Action Cinema	SD
		257	Zee Bangla Cinema	SD
		258	Zee Café HD	HD
		259	Zee Café	SD
		260	Zee Cinema	SD
		261	Classic Cinema	SD
		262	Zee Salaam	SD
		263	Zee Studio	SD
		264	Zee Talkies	SD
		265	Zee TV	SD
		266	Zing	SD
		267	Zindagi	SD
		268	& Picture	SD
		269	Zee Bangla	SD

Sl. No.	Name of the broadcaster	Sl. No	Name of the channel	Declared as SD or HD
		270	Zee Marathi	SD
		271	Living Foodz (earlier name "Zee Khana Khazana")	SD
		272	Zee TV HD	HD
		273	Zee Cinema HD	HD
		274	Zee Studio HD	HD
		275	& TV	SD
		276	& TV HD	HD
		277	Zee Kannada	SD
		278	Zee Telugu	SD
		279	& Pictures HD	HD
		280	Zee Cinemalu	SD
		281	Zee Yuva	SD
		282	Zee Marathi HD	HD
		283	Living Zen	SD
		284	Zee Bangla HD	HD
		285	Zee Talkies HD	HD
46	M/s Zee Media Corporation Limited	286	Zee 24 Taas	SD
		287	Zee Kalinga (Earlier name "Zee 24 Ghantalu")	SD
		288	Zee Business	SD
		289	Zee Punjab Haryana Himachal (Earlier name "Zee Punjabi")	SD
		290	Zee Madhya Pradesh Chattisgarh	SD
		291	WION	SD
		292	Zee Rajasthan News (Earliner name "Zee Marudhara" and "Zee Rajasthan Plus")	SD
47	M/s Zoom Entertainment Network Limited	293	Movies Now	SD
48	M/s AXN Networks India Private Limited	294	SONY ESPN (Earlier name "SONY KIX")	SD
		295	AXN HD	HD

**Annexure-II****List of Pay DTH Operators**

<b>S.No</b>	<b>DTH Operator</b>
1.	M/s. Tata Sky Ltd
2.	M/s Dish TV India Ltd
3.	SUN Direct TV(P) Ltd
4.	Bharti Telemedia Ltd.
5.	Reliance Big TV Pvt. Ltd
6.	M/s Videocon d2h Limited



**PART – II**

**REVIEW OF WORKING AND OPERATION  
OF THE TELECOM REGULATORY  
AUTHORITY OF INDIA**



# REVIEW OF WORKING AND OPERATION OF THE TELECOM REGULATORY AUTHORITY OF INDIA

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- 2.1 Part I of the Report has given an overview of the general environment prevailing in the telecom sector including broadcasting and cable services and has highlighted the policies and programmes of the Government during the year 2016-17. In line with the mandate given under the TRAI Act, TRAI has played catalytic role in the development of the telecom, broadcasting and cable services. It has been its endeavour to provide an environment, which is fair and transparent, encourages competition, promotes a level-playing field for all service providers, protects the interest of consumers and enables technological benefits to one and all.
- 2.2 Under the TRAI Act, 1997, TRAI is mandated, *inter-alia*, to ensure compliance of the terms and conditions of license, lay down the standards of quality of service to be provided by the service providers and ensure the quality of service, specify tariff policy and recommend conditions for entry of new service providers as well as terms and conditions of license to a service provider. TRAI's scope of work also includes consideration and decisions on issues relating to monitoring of tariff policy, commercial and technical aspects of interconnection, principles of call routing and call handover, free choice and equal ease of access for the public to different service providers, resolution of conflicts that may arise due to market developments and diverse network structures for various telecom services, need for up-gradation of the existing network and systems, and development of forums for interaction amongst service providers and interaction of the Authority with consumer organizations. The Government issued a notification dated 9<sup>th</sup> January 2004, whereby

broadcasting services and cable services were also defined as telecommunication services, thus bringing these sectors under the ambit of TRAI. The Government also issued another notification dated 9<sup>th</sup> January 2004, under Section 11(d) of the Telecom Regulatory Authority of India Act, 1997, which entrusted certain additional functions to TRAI. These functions were to make recommendations, regarding terms and conditions on which “Addressable System” shall be provided to the customers and the parameters for regulating maximum time for advertisements in pay channels as well as other channels.

2.3 To formulate recommendations and suggest policy initiatives, TRAI interacts with various stakeholders such as the service providers, their organizations, Consumer Advocacy Groups / Consumer Organizations and other experts in this field. It has developed a process, which allows all the stakeholders and the general public to participate in discussions about policy formulation by offering their views whenever sought for. This process involves floating of a consultation paper highlighting the issues involved and soliciting the views of the stakeholders on the issues, holding Open House Meetings arranged in different parts of the country, inviting written comments on e-mail and through letters, and having interactive sessions with stakeholders and experts to obtain different views and clarifications

on policy issues. The Regulations / Orders issued by TRAI also contain an Explanatory Memorandum which explains the basis on which the decisions are taken. The participative and explanatory process adopted by TRAI has received wide acclaim.

2.4 TRAI also interacts with the consumer organizations / Non Government Organizations (NGO) in the telecom and broadcasting sectors to obtain their views. It has a system of registering consumer organizations / NGOs connected with telecom functions and of interacting with them at regular intervals. TRAI is constantly adopting measures for strengthening the consumer organizations. It also organizes Seminars and Workshops with the participation of International Experts on various technical issues and invites stakeholders, consumer organizations and other research institutes to attend these seminars.

2.5 Under Section 11 (1) (a) of the TRAI Act 1997, the Authority is required to make recommendations either *suo moto* or on a request from the licensor, i.e., Department of Telecommunications, Ministry of Telecommunications or Ministry of Information & Broadcasting in the case of Broadcasting and Cable Services. Recommendations given by TRAI to Government during 2016-17 are given below.

## TELECOM SECTOR

Sl. No.	List of Recommendations
1.	Clarifications/Reconsideration dated 18 <sup>th</sup> April 2016 of Recommendations on “Valuation and Reserve Price of Spectrum in 700 MHz, 800 MHz, 900 MHz,1800 MHz, 2100 MHz, 2300 MHz and 2500 MHz bands dated 27 <sup>th</sup> January 2016.
2.	Recommendations dated 9 <sup>th</sup> May, 2016 on “Sale/Rent of International Roaming SIM Cards/ Global Calling Cards in India”.
3.	Recommendations dated 24 <sup>th</sup> May, 2016 on “Redefining the definition of Broadband Speed/ increasing the broadband speed”.
4.	Clarification/Reconsideration dated 12 <sup>th</sup> July, 2016 on “Recommendations on Valuation and Reserve Price of Spectrum in 700 MHz, 800 MHz, 900 MHz,1800 MHz, 2100 MHz, 2300 MHz and 2500 MHz bands.
5.	Recommendations dated 21 <sup>st</sup> October, 2016 in respect of violation of the provisions of the license agreements and the standards of QoS of basic telephone service (Wireline) and Cellular Mobile Telephone Service Regulations, 2009 by M/s Bharti Airtel Ltd.
6.	Recommendations dated 21 <sup>st</sup> October, 2016 in respect of violation of the provisions of the license agreements and the standards of QoS of basic telephone service (Wireline) and Cellular Mobile Telephone Service Regulations, 2009 by M/s Idea Cellular Ltd.
7.	Recommendations dated 21 <sup>st</sup> October, 2016 in respect of violation of the provisions of the license agreements and the standards of QoS of basic telephone service (Wireline) and Cellular Mobile Telephone Service Regulations, 2009 by M/s Vodafone India Ltd.
8.	Recommendations dated 16 <sup>th</sup> December, 2016 on “Licensing Framework for Audio Conferencing/ Audio Tex/ Voice Mail Services”.
9.	Recommendations dated 19 <sup>th</sup> December, 2016 on “Encouraging data usage in Rural Areas through provisioning of free data”.
10.	Recommendations dated 20 <sup>th</sup> January 2017 on “Permitting outstation Aadhaar Card Folders for e-KYC of Mobile Subscribers”.
11.	Recommendations dated 20 <sup>th</sup> January 2017 on “Verification of existing Mobile Subscribers through Aadhaar based e-KYC services”.
12.	Recommendations dated 20 <sup>th</sup> January 2017 on “In-Building Access by Telecom Service Providers”.
13.	Recommendations dated 7 <sup>th</sup> March 2017 on “Spectrum Usage Charges and Presumptive Adjusted Gross Revenue for Internet Service Providers and Small Aperture Terminal Service Providers”.
14.	Recommendations dated 9 <sup>th</sup> March 2017 on “Proliferation of Broadband through Public Wi-Fi Networks”.
15.	Recommendations dated 10 <sup>th</sup> March 2017 on “Complaints/Grievance Redressal in the Telecom Sector”.

## RECOMMENDATIONS

### ➤ **Clarifications/Reconsideration dated 18<sup>th</sup> April 2016 of Recommendations on “Valuation and Reserve Price of Spectrum in 700 MHz, 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz and 2500 MHz bands dated 27<sup>th</sup> January 2016**

2.5.1 The Authority had sent its recommendations on “Valuation and Reserve Price of Spectrum in the 700 MHz, 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz and 2500 MHz bands” dated 27<sup>th</sup> January 2016 to DoT. On 1<sup>st</sup> April 2016, DoT sought clarifications/ reconsideration on some of the recommendations.

After considering the comments given by DoT, TRAI has furnished its response to the Government on 18<sup>th</sup> April 2016. In its response the Authority mostly reiterated its earlier recommendations.

### ➤ **Recommendations dated 9<sup>th</sup> May, 2016 on “Sale/Rent of International Roaming SIM Cards/Global Calling Cards in India”**

2.5.2 The Authority had received grievances from the consumers who had availed the services of Indian entities having No Objection Certificate (NOC) from DoT for Sale/Rent of International Roaming SIM Cards/Global Calling Cards in India. The complaints ranged from overcharging to poor customer care to transparency in tariffs etc.

After analyzing the responses received from the companies having NOC by DoT and taking into account the grievances of

the consumers, the Authority submitted its suo motu Recommendations on “Sale/Rent of International Roaming SIM Cards/Global Calling Cards of foreign operators in India” to DoT, in the interest of the consumer on 9<sup>th</sup> May, 2016. The recommendations are as follows:

- (i) The itemized bill shall be provided within 10 days of the date of culmination of the journey. If the journey is undertaken for a period exceeding 30 days then the itemized bill shall be generated in 30 days cycle from the date of the commencement of the journey and provided to customer within 10 days.
- (ii) The customer should be given the option by the firm to choose a data service or a voice service or combination of both.
- (iii) In respect of a postpaid connection, there shall be a credit limit which may be fixed as per the customer’s requirement and customer is transparently informed of the same. The customer shall be informed through SMS/USSD message upon reaching 70% of the credit limit. If the credit limit is breached the services should be barred till such time the customer deposits the necessary amount with the operator.

### ➤ **Recommendations dated 24<sup>th</sup> May, 2016 on “Redefining the definition of Broadband Speed / increasing the broadband speed”**

2.5.3 A report on need for reviewing definition of Broadband along with the recommendations of the Authority that the current definition of broadband in the country should be reviewed and minimum

download speed be increased to 2 Mbps was sent to DoT on 24<sup>th</sup> May, 2016.

➤ **Clarification/Reconsideration dated 12<sup>th</sup> July, 2016 on “Recommendations on Valuation and Reserve Price of Spectrum in 700 MHz, 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz and 2500 MHz bands**

2.5.4 The Authority sent its recommendations on “Valuation and Reserve Price of Spectrum in the 700 MHz, 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz and 2500 MHz bands” dated 27<sup>th</sup> January 2016 to DoT. On 1<sup>st</sup> April 2016, the DoT sought clarifications/ reconsideration on some of the recommendations. After considering the comments given by the DoT, the Authority furnished its response to the DoT on 18<sup>th</sup> April 2016. In view of the developments that have taken place since 18<sup>th</sup> April 2016, DoT vide letter dated 24<sup>th</sup> June 2016 sought reconsidered opinion of the Authority on the Spectrum Usage Charges. The Authority gave its response on 12<sup>th</sup> July 2016 to DoT on Spectrum Usage Charges.

➤ **Recommendations dated 21<sup>st</sup> October, 2016 regarding ‘Violation of the provisions of the license agreements and the standards of QoS of basic telephone service (Wireline) and Cellular Mobile Telephone Service Regulations, 2009’ by M/s Bharti Airtel, M/s Vodafone India Ltd and M/s Idea Cellular Ltd**

2.5.5 The Authority on 21<sup>st</sup> October, 2016 recommended to Department of Telecommunications that a penal action of Rs.50 crore per LSA, where POI

congestion exceeded the allowable limit of 0.5%, may be initiated against M/s Bharti Airtel Ltd., M/s Idea Cellular Ltd. & M/s Vodafone India Ltd.

➤ **Recommendations dated 16<sup>th</sup> December, 2016 on “Licensing Framework for Audio Conferencing/ Audio Tex/ Voice Mail Services”**

2.5.6 TRAI received a reference from the Department of Telecommunications for review of the terms and conditions for issue of fresh licences for Voice Mail/ Audiotex/Unified Messaging Services (UMS) and for migration of existing licenses.

Keeping in view the changes in technology and the resultant new user applications and service delivery scenarios, there was a need to review the technical specifications, financial terms and conditions, scope and guidelines for the Voice Mail/Audiotex/ Unified Messaging Services (UMS) and the licence conditions.

TRAI issued a Consultation Paper on “Review of Voice Mail/Audiotex/Unified Messaging Services Licence” on 14<sup>th</sup> June 2016 seeking views of the stakeholders on many significant issues i.e. licensing framework for Voice Mail/Audiotex/ UMS, technical specifications, financial terms & conditions including revenue share with licensor, period of licence and migration terms for existing licenses etc. Subsequently, an Open House Discussion was also held in Delhi on 30<sup>th</sup> September 2016. The Authority after carefully examining various issues emanating from the written submissions of the

stakeholders and Open House Discussions has arrived at its Recommendations.

The salient features of the Recommendations are as under:

- A new chapter for authorisation titled “Audio Conferencing/ Audiotex/Voice Mail services” should be added in the Unified Licence. However, licensees with Access Services licence authorisation should also be allowed to provide these services.
- The latest TEC specifications on Audio Conferencing/Audiotex/Voice Mail should be specified in the technical conditions of the recommended chapter in UL subject to modifications or updations from time to time. However, Licence terms and conditions should override anything mentioned in the technical specifications.
- The clauses in the ‘Operating Conditions’ of the existing Voice Mail/ Audiotex/Unified Messaging Services licence should be made a part of the recommended chapter on Audio Conferencing/ Audiotex/Voice Mail in the Unified Licence. Dial out facility using resources of more than one access service provider may be allowed with

the condition that STD/ISD traffic should not be bypassed.

- The terms and conditions for providing these services under access service authorisation as well as under Audio Conferencing/ Audiotex/Voice Mail services authorisation recommended by the Authority, should be same.
- Calls originating from PSTN/PLMN/GMPCS/Internet Telephony networks should not be interconnected with those from Private/CUG networks.
- There should not be any standalone licence for Unified Messaging Service. The UMS service may be provided with access service authorisation or Internet Service authorisation under Unified Licence.
- In the recommended chapter for Audio Conferencing/ Audiotex/Voice Mail services authorization under UL the service area should be National Area only. The services should not be used in whatsoever manner for any illegal by pass of STD/ISD traffic of any licensed access service provider.
- The financial terms and conditions for the recommended Audio Conferencing/ Audiotex/Voice Mail authorisation under UL should be as follows:

Sl No.	Service	Minimum Equity (Rs. Cr.)	Minimum Net worth (Rs. Cr.)	Entry Fee (Rs. Cr.)	PBG (Rs. Cr.)	FBG (Rs. Cr.)	Application Processing Fee (Rs. Cr.)
1	Audio Conferencing / Audiotex / Voice Mail (National Area)	Nil	Nil	0.100	0.100	0.010	0.0015

- The annual licence fee for the recommended Audio Conferencing/ AudioteX/Voice Mail Service authorisation should be made same as that in other licence authorisations in the Unified Licence (which is presently 8% of Adjusted Gross Revenue; inclusive of USO levy which is presently 5% of AGR).
- The definition of AGR for the recommended Audio Conferencing/ AudioteX/Voice mail service authorisation under Unified Licence should be made similar to that for access service authorisation under Unified Licence.
- The Authority reiterates its recommendations on “Definition of Revenue Base (AGR) for the Reckoning of Licence Fee and Spectrum Usage Charges” dated 6<sup>th</sup> January 2015.
- The duration of the recommended Audio Conferencing/ AudioteX/Voice Mail authorisation should be made twenty years similar to other authorisations under UL.
- Standalone Voice Mail/AudioteX/Unified Messaging Services licence should be discontinued. No, further renewal of these licences should be done.
- The existing Voice Mail/AudioteX/ Unified Messaging Services licensees may be given the option to migrate to the recommended Audio Conferencing/ AudioteX/ Voice Mail authorisation under UL. There should not be any mandatory migration.
- The annual licence fee for existing standalone Voice Mail/ AudioteX/UMS licensees who do not migrate to UL should also be made equal to 8% of Adjusted

Gross Revenue. The definition of AGR should be made similar to that for Access service authorisation under UL.

- The existing standalone Voice Mail/ AudioteX/UMS licensees may be allowed to acquire customers only in the SDCA for which the licence has been granted; as per the clause 2.1 of the existing licence agreement document.
- The terms and conditions for provision of these services under Basic Services Licence, UASL or CMTS may also be clearly specified and should be made similar to the terms and conditions in the recommended chapter on Audio Conferencing/AudioteX/Voice Mail Services in the UL.

➤ **Recommendations dated 19<sup>th</sup> December, 2016 on “Encouraging data usage in Rural Areas through provisioning of free data”**

2.5.7 The Authority submitted its recommendations to DoT on ‘Encouraging Data usage in Rural Areas through Provisioning of Free Data’ on 19<sup>th</sup> December 2016. Summary of recommendations are as below:

- (i) In order to bridge the affordability gap for the persons residing in rural areas and to support Governments efforts towards cashless economy by incentivizing digital means, the Authority recommends that a scheme under which a reasonable amount of data say 100 MB per month may be made available to rural subscribers for free.
- (ii) The cost of implementation of the scheme may be met from USOF.

- (iii) To increase participation of other entities for incentivizing free data, there is a need to introduce third party (Aggregator) to facilitate schemes which are TSP agnostic and non discriminatory in their implementation.
- (iv) Scheme for free data must be TSP-agnostic, must not involve any arrangement between the TSP and the aggregator/content provider and should not be designed to circumvent “The Prohibition of Discriminatory Tariffs for Data Services Regulations,” notified on 8<sup>th</sup> February, 2016.
- (v) The following mechanism is recommended:
  - The Aggregators will need to register with DoT.
  - The registrant must be a company registered under Indian Companies Act, 1956.
  - The validity of registration shall be 5 years.
  - The registrant shall not either directly or indirectly, assign or transfer the Registration in any manner whatsoever to a third party either in whole or in part.

➤ **Recommendations dated 20<sup>th</sup> January 2017 on “Permitting outstation Aadhaar Card Folders for e-KYC of Mobile Subscribers” and Recommendations dated 20<sup>th</sup> January 2017 on “Verification of existing Mobile Subscribers through Aadhaar based e-KYC services”**

2.5.8 TRAI on 6<sup>th</sup> January 2016 recommended acceptance and adoption of Aadhaar based e-KYC service along with Aadhaar

based e-Sign as a valid alternative process. Subsequently, on 16<sup>th</sup> 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 20<sup>th</sup> January 2017. The key recommendations are:

- (a) 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.

- (b) 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](http://www.trai.gov.in).

➤ **Recommendations dated 20<sup>th</sup> January 2017 on “In-Building Access by Telecom Service Providers”**

2.5.9 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 20<sup>th</sup> January 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](http://www.trai.gov.in).

➤ **Recommendations dated 7<sup>th</sup> March 2017 on “Spectrum Usage Charges and Presumptive Adjusted Gross Revenue for Internet Service Providers and Small Aperture Terminal Service Providers”**

2.5.10 Department of Telecommunications vide letter dated 25<sup>th</sup> 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 19<sup>th</sup> August 2016 and an Open House Discussion was held on 19<sup>th</sup> 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 7<sup>th</sup> March 2017. The salient features of the recommendations are given below:

- (i) 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.
- (ii) Minimum presumptive AGR should not be made applicable to ISP licensees.
- (iii) 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.
- (iv) 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.
- (v) The minimum presumptive AGR should not be made applicable to commercial VSAT license.
- (vi) The SUC should not be more than 1% of AGR irrespective of the data rate.
- (vii) 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.

- (viii) 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.
- (ix) 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.

➤ **Recommendations dated 9<sup>th</sup> March 2017 on “Proliferation of Broadband through Public Wi-Fi Networks”**

2.5.11 TRAI has come out with its Recommendations on “Proliferation of Broadband through Public Wi-Fi Networks on 9<sup>th</sup> March, 2017. The salient features are as follows:

- (i) DoT may amend the terms of the ISP license to allow for sharing of active infrastructure, in line with the Unified License (UL).
- (ii) DoT may re-visit TRAI’s recommendations and consider de-licensing spectrum in the 5.725 – 5.825 GHz spectrum band for outdoor usage.

- (iii) 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.
- (iv) 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.
- (v) 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.
- (vi) 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.
- (vii) 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.

- (viii) 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.
- (ix) 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.

➤ **Recommendations dated 10<sup>th</sup> March 2017 on “Complaints/Grievance Redressal in the Telecom Sector”**

2.5.12 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 28<sup>th</sup> July, 2016. An Open House Discussions (OHD) was organized on the subject on 26<sup>th</sup> 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 10<sup>th</sup> March, 2017.

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

- a) 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.
- b) 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.
- c) A three stage grievance redressal mechanism for telecom sector is proposed as follows:
  - i. Resolution by Telecom Service Providers [TSPs]
  - ii. Resolution by Consumer Grievance Redressal Forum [CGRF]
  - iii. Determination by Telecom Ombudsman
- d) 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.
- e) 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.
- f) 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.
- g) 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.
- h) 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.
- i) 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.
  - j) In order to function as an effective Body, the ombudsman should have the power to levy penalties on the TSPs.
  - k) The ombudsman will have offices at national levels and sub-national levels covering each State.
  - l) 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.
  - m) A centralized web based system to be put in place which will allow flow

- n) 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.

### BROADCASTING SECTOR

Sl. No.	List of Recommendations
1.	Recommendations dated 15 <sup>th</sup> September, 2016 on “Issues related to Radio Audience Measurement and Rating in India”.
2.	Recommendations dated 31 <sup>st</sup> January 2017 on “Issues related to Digital Terrestrial Broadcasting in India”.
3.	Recommendations dated 29 <sup>th</sup> March 2017 on “Sharing of Infrastructure in Television Broadcasting Distribution Sector”.

### RECOMMENDATIONS

- **Recommendations dated 15<sup>th</sup> September, 2016 on “Issues related to Radio Audience Measurement and Rating in India”**
- 2.5.13 TRAI, on 15<sup>th</sup> September 2016, forwarded its Recommendations to the Ministry of Information and Broadcasting on “Issues related to Radio Audience Measurement and Ratings in India.
- The salient features of the recommendations were:

- (i) Guidelines for rating system to be notified by MIB.
- (ii) Any agency meeting the eligibility conditions can apply and get registered with MIB for doing the rating work. No cap on number of rating agencies has been prescribed.
- (iii) All rating agencies including industry led body are required to comply with the guidelines.
- (iv) Guidelines to cover registration, eligibility norms, cross-holding, methodology for conducting rating, complaint redressal, sale & use of ratings, audit, disclosure, reporting requirements and penal provisions.
- (v) Voluntary code of conduct by the industry for maintaining secrecy and privacy of the listeners included in the rating process.
- (vi) Restrictions on 'substantial equity holding of 10% or more' between rating agencies and broadcasters/advertisers/advertising agencies have been prescribed.
- (vii) The rating agency to set up an effective complaint redressal system.
- (viii) Data/reports generated by the rating agency to be made available to all interested stakeholders in a transparent and equitable manner.
- (ix) The rating agency to get its entire methodology/processes audited internally on quarterly basis and through an independent auditor annually. All audit reports to be put on the website of the rating agency.
- (x) Penal provisions for non-compliance of guidelines.
- (xi) Twelve months time given to the existing rating agency to comply with the guidelines

➤ **Recommendations dated 31<sup>st</sup> January 2017 on "Issues related to Digital Terrestrial Broadcasting in India"**

2.5.14 The Authority on 31<sup>st</sup> 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 )	31 <sup>st</sup> December 2019.
Phase II (cities having more than 10 lakh population as per Census 2011)	31 <sup>st</sup> December, 2021
Phase-III (Rest of India)	31 <sup>st</sup> December, 2023

- A minimum overlap of three month 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 29<sup>th</sup> March 2017 on “Sharing of Infrastructure in Television Broadcasting Distribution Sector”.**

2.5.15 TRAI on 29<sup>th</sup> March 2017 sent its Recommendations on “Sharing of Infrastructure in Television Broadcasting Distribution Sector”. The salient features of these recommendations were as follows:

- (i) The Central Government should encourage sharing of infrastructure, wherever technically feasible, in TV broadcasting distribution network services, on voluntary basis.
- (ii) On voluntary basis, sharing of head-end used for cable TV services & transport streams transmitting signals of TV channels, among MSOs, should be permitted.
- (iii) 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.
- (iv) 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.
- (v) 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.
- (vi) The distributors of TV channels should be permitted to share the common hardware for their Subscriber Management Systems applications and Conditional Access Systems applications.
- (vii) 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.

- 2.6 During the year 2016-17, the Authority in discharge of its functions assigned under the Telecom Regulatory Authority of India Act, 1997, has framed the following Regulations in Telecom and Broadcasting sectors.

## TELECOM SECTOR

Sl. No.	Particulars
1.	The Telecom Regulatory Authority of India (Officers and Staff Appointment) Regulation, 2016 (Eleventh Amendment) dated 8 <sup>th</sup> June 2016.
2.	Reporting System on Accounting Separation Regulations 2016 dated 10 <sup>th</sup> June, 2016.
3.	Guidelines for the Reporting System on Accounting Separation Regulations 2016 dated 10 <sup>th</sup> June, 2016.
4.	Telecom Consumers Protection (Tenth Amendment) Regulations 2016 dated 19 <sup>th</sup> August, 2016.
5.	Guidelines for Telecom Service Providers for ensuring transparency and uniformity in the process of recharges, payments through third party Apps, websites dated 14 <sup>th</sup> October 2016.
6.	The Mobile Banking (Quality of Service) (Second Amendment) Regulations, 2016 dated 22 <sup>nd</sup> November 2016.

## REGULATIONS

- **The Telecom Regulatory Authority of India (Officers and Staff Appointment) Regulation, 2016 (Eleventh Amendment) dated 8<sup>th</sup> June 2016**

- 2.6.1 The Authority notified TRAI ((Officers & Staff Appointment) (Amendment) Regulation, 2016 on 8<sup>th</sup> June 2016. This amendment was done on the basis of the recommendations of a Committee constituted to review the TRAI (Officers & Staff Appointment) Regulation, 2001 so as to establish a balance between the aspirations of TRAI Officers and Staff in terms of promotional avenues vis-à-vis the deputationists and to address the various anomalies which have arisen over a period of time in the TRAI Staff Regulations.

Main points of the Amendment are as follows:

- (i) Provision has been made for promotion from Deputy Advisor to Joint Advisor subject to the condition that number of posts to be available for promotion to Joint Advisor grade should be limited to 50% of total posts in the grade. The eligibility service for promotion/ deputation to the grade of Joint Advisor has been increased from 04 years to 05 years
- (ii) Condition of having worked in TRAI for 01 year before considering for absorption has been waived for the posts of Sr. Research Officer and below.
- (iii) For promotion from Attendant to the post of LDC either passing of typing test or proficiency in computer knowledge through a test in place of passing of typing test has been provided.
- (iv) The eligibility service for Pr. Advisor has been increased from 03 years to 04 years service in SAG grade.
- (v) A new Grade of Technical Officer (Engineering) has been introduced to get people of technical expertise.

(vi) Four grades of Driver in place of existing two have been introduced in consonance with the model Recruitment Rules for Drivers prescribed by DoP&T.

➤ **Reporting System on Accounting Separation Regulations 2016 dated 10<sup>th</sup> June, 2016**

2.6.2 “The Reporting System on Accounting Separation Regulations, 2016” along with its Guidelines was released on 10<sup>th</sup> June 2016 repealing the “The Reporting System on Accounting Separation Regulations, 2012”.

The Authority notified “The Reporting System on Accounting Separation Regulations, 2016, after consultations with all the stakeholders. The major changes made in Accounting Separation Regulations, 2016 are:

- Merger of Access Service (Full Mobility) and Access Service (WLL) as Access Service (Wireless).
- Separate reporting for Tower Business service, Dark Fiber service and Cable Landing Station service has been done away and are now captured under other specified telecom services.
- Separate reporting for postpaid segment and prepaid segment under Access Services has been discontinued.
- Provision has been made to bring uniformity in reporting period for reports based on Replacement Cost Accounting.
- Submission time of reports has been increased from six months to seven months.

➤ **Guidelines for the Reporting System on Accounting Separation Regulations 2016 dated 10<sup>th</sup> June, 2016**

2.6.3 The Guidelines for the Reporting System on Accounting Separation Regulations 2016 dated 10<sup>th</sup> June, 2016 contained broad methodology and principles to be followed by telecom service providers while preparing reports under Accounting Separation Regulations, 2016.

➤ **Telecom Consumers Protection (Tenth Amendment) Regulations 2016 dated 19<sup>th</sup> August, 2016**

2.6.4 The Authority released the Telecom Consumers Protection (Tenth Amendment) Regulations, 2016 on 19<sup>th</sup> August 2017.

The regulatory regime governed by TCPR-2012 allows Telecom Service Providers to offer data services in the form of Special Tariff Voucher (STV) either exclusively or in combination with other tariff items with a maximum permitted validity of 90 days. Requests were received in TRAI seeking longer validity for data-packs (i.e. Special Tariff Vouchers with only data benefits) primarily to address the concern of marginal consumers of wireless Internet who prefer lower denomination data packs with longer validity.

After due consultation process, the Authority notified the 10<sup>th</sup> Amendment to the TCPR permitting the maximum validity of 365 days for data only STVs instead of prevailing maximum validity of 90 days.

➤ **Guidelines for Telecom Service Providers for ensuring transparency and uniformity in the process of recharges, payments through third party Apps, websites dated 14<sup>th</sup> October 2016**

2.6.5 In the recent past in Indian telecom service sector, tariff recharges/payment

of bills through third party Apps/websites recharges (*hereinafter referred as Channel Partner*) have been increasingly recognised as a convenient mode of transaction. However, there exists a possibility of time gap in updating the information on websites/applications on the day of tariff product launch/revision between the Telecom Service Provider (TSP) and the Channel Partner(s), which may cause inconsistency and subscribers may not get perceived benefits. Considering the process involved and magnitude of growing transactions, the Authority, with an objective to ensure transparency, uniformity and protection to the subscribers in the process of tariff recharges/payments through Channel Partner or sub Channel Partners issued following Guidelines on 14<sup>th</sup> October 2016:

- There should not be any difference in the features of tariff products and benefits available on the TSP's website and Channel Partner's / sub Channel Partner's website(s)/app(s). A mechanism should be introduced by the TSP(s) where a new tariff product or any change in any tariff product is updated concurrently on Channel Partner(s) App(s)/website(s).
- Since Channel Partner(s)/sub Channel Partner(s) are non-licensed entities and appointed by TSP(s) based on mutually agreed terms and conditions between TSP and Channel Partner(s)/sub Channel Partner(s), all responsibilities for ensuring compliance of terms and conditions of the license agreement and other regulatory guidelines shall remain with the TSP.

- Any new tariff product or change in existing tariff product to be made live only at midnight (between 00:00 Hrs and 02:00 Hrs) on the date of the launch or change in tariff product.

➤ **The Mobile Banking (Quality of Service) (Second Amendment) Regulations, 2016 dated 22nd November 2016**

2.6.6 The Authority issued Regulation on "The Mobile Banking (Quality of Service) (Second Amendment) Regulations, 2016 (7 of 2016)" dated 22<sup>nd</sup> November 2016 to lay down a revised framework for mobile banking transactions and USSD based mobile banking and payment services. Also on the same day tariff orders were issued reducing the tariff for USSD based mobile banking, for the subscribers having feature phone. Together, these amendments will facilitate the banks, their agents or any entity authorized by the Reserve Bank of India for better delivery of banking and payment services to the consumers through mobile phones over USSD.

**BROADCASTING & CABLE TV Sector**

Sl. No.	List of Regulations
1.	The Telecommunications (Broadcasting and Cable) Services standards of Quality and Service and Consumer Protection (Addressable Systems) Regulations, 2017 dated 3 <sup>rd</sup> March 2017.
2.	The Telecommunications (Broadcasting and Cable) Services Interconnection (Addressable Systems) Regulations, 2017 dated 3 <sup>rd</sup> March 2017.

## REGULATIONS

➤ **Telecommunications (Broadcasting and Cable) Services, Standards of Quality of Services and Consumer Protection (Addressable Systems) Regulations 2017 dated 3<sup>rd</sup> March 2017**

2.6.7 TRAI on 3<sup>rd</sup> March 2017 released the Telecommunication (Broadcasting and Cable) Services, Standards of Quality of Services and Consumer Protection (Addressable System) Regulations 2017. The salient feature of these regulations were as follows:

- a) It is a common framework for standards of QoS and consumer protection across digital addressable platforms viz DTH, Cable TV, IPTV, HITS.
- b) Choice of subscription to a-la-carte channels and bouquets of channels by subscribers have been simplified.
- c) Standardization of dissemination of information related to services offered by DPOs through a customer care programming service.
- d) 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”.
- e) Mandatory offering of all channels and bouquets available on DPO platform on monthly subscription basis.
- f) 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.

- g) Simplification of Consumer premises equipment/Set Top Box schemes.
- h) Simplification of Consumer Application Form (CAF) and encouraging use of electronic CAF.
- i) Subscribers can get services temporarily suspended for up to three months in a year.
- j) Mandatory provision for recording the consent of the subscribers for any change in the subscribed packages.
- k) Protection of consumer interest in case of prolonged and continued disruption in service beyond 72 hrs.
- l) Use of ICTs for subscription and management of services.

➤ **Telecommunication (Broadcasting and Cable) Services Interconnection (Addressable Systems) Regulations, 2017 dated 3<sup>rd</sup> March 2017**

2.6.8 TRAI, on 3<sup>rd</sup> 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) A common regulatory framework for all types of TV distribution platforms providing services through Addressable Systems.
- b) Availability of signals to service providers on non-exclusive and non-discriminatory basis.
- c) 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.

- d) 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.
- e) Time bound provisioning of signals of TV channels & access to the network on the basis of transparent RIO framework.
- f) Interconnection agreements to be signed between broadcasters and distributors on the basis of RIO.
- g) 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.
- h) 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.
- i) Prescription of a framework for placement of TV channels in the Electronic Programme Guide (EPG).
- j) 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.

- 2.7 During the year 2016-17, the Authority issued the following Tariff Orders in Telecom and Broadcasting Sectors.

### Telecom Sector

Sl. No.	List of Tariff Orders
1.	The telecommunication tariff (Sixty-first Amendment) Order 2016 dated 22 <sup>nd</sup> November 2016.
2.	The telecommunication tariff (Sixty-second Amendment) Order 2016 dated 27 <sup>th</sup> December 2016.

### Tariff Orders

- **The Telecommunication Tariff (Sixty first Amendment) Order 2016 and (Sixty second Amendment) Order 2016 dated 22nd November 2016 & 27<sup>th</sup> December 2016**
  - 2.7.1 Telecom Regulatory Authority of India (TRAI) notified the Telecommunication Tariff (Sixty first Amendment) Order, 2016 and (Sixty second Amendment) Order 2016 dated 22<sup>nd</sup> November 2016 & 27<sup>th</sup> December 2016. These amendments have:-
    - (a) Reduced the ceiling tariff for the use of USSD for USSD based mobile banking and payment services from Rs.1.50 to Rs.0.50.
    - (b) Made USSD session applicable for banking services as well as all kind of third party

payments. Therefore, the ‘USSD session for mobile banking service’ has been renamed as ‘USSD session for mobile banking and payment service’.

### Broadcasting and Cable Services Sector

Sl. No.	List of Tariff Orders
1.	Telecommunication (Broadcasting and Cable) Services (Eighth) (Addressable Systems) Tariff Order, 2017 dated 3 <sup>rd</sup> March, 2017.
2.	Telecommunication (Broadcasting and Cable) Services (Eighth) (Addressable Systems) Tariff (Amendment) Order, 2017 dated 30 <sup>th</sup> March, 2017.

### Tariff Orders

➤ **Telecommunication (Broadcasting and Cable) Services (Eighth) (Addressable Systems) Tariff Order, 2017 dated 3<sup>rd</sup> March, 2017**

2.7.2 TRAI on 3<sup>rd</sup> March 2017 notified Telecommunication (Broadcasting and Cable) Services (Eighth) (Addressable Systems) Tariff Order, 2017. The salient features of the Tariff Order are as under:

- a) Broadcaster to declare maximum retail price (MRP) (excluding taxes), per month, of their a-la-carte pay channels for subscribers.
- b) 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.
- c) Separate bouquet for pay channels and free-to-air channels.
- d) Charges payable by a subscriber for distribution network capacity and channels have been separated.

- e) 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.
- f) 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.
- g) 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.
- h) 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.
- i) Every distributor of television channels shall offer all channels available on its network to all subscribers on a-la-carte basis.
- j) Every distributor of television channels shall declare distributor retail price of each pay channel and bouquet of pay channels payable by a subscriber:
- k) A subscriber can choose a-la-carte channels of its choice.
- l) 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.

- m) A subscriber has to pay separate charges, other than the Network Capacity fee, for subscribing to pay channels or bouquet of pay channels.
- n) 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.
- o) 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.
- p) 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**

2.7.3 TRAI on 30<sup>th</sup> March 2017 notified Telecommunication (Broadcasting and Cable) Services (Eighth) (Addressable Systems) Tariff (Amendment) Order, 2017.

The Authority had issued the Telecommunication (Broadcasting and Cable) Services (Eighth) (Addressable Systems) Tariff Order, 2017 (1 of 2017) on 3<sup>rd</sup> 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 requested the Authority to remove the ambiguity with regard to schedule of declaration of nature and MRP of Pay 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 amended the Telecommunication (Broadcasting and Cable) Services (Eighth) (Addressable Systems) Tariff Order, 2017.

2.8 Telecom Regulatory Authority of India issued the following Directions to the Service Providers during the year 2016-17 for compliance of its order / Regulations, some of these Directions are detailed below:-

## TELECOM SECTOR

Sl. No.	List of Directions
1.	Amendment dated 4 <sup>th</sup> April, 2016 to direction dated 12 <sup>th</sup> January 2016 on “Submission of Data of Network Parameters through Web Service”.
2.	Direction dated 25 <sup>th</sup> April, 2016 with regard to closure of services by M/s Videocon Telecommunications Ltd. in Bihar, Haryana, Gujarat, Madhya Pradesh, UP (East) and UP (West) licensed service areas with effect from 11 <sup>th</sup> May, 2016 consequent to trading of 1800 MHz Spectrum allotted to it to M/s Bharti Airtel Ltd.
3.	Direction dated 6 <sup>th</sup> May, 2016 with regard to obligation to provide Mobile Number Portability to the customer of M/s Videocon Telecommunications Ltd. in Bihar, Haryana, Gujarat, Madhya Pradesh, UP (East) and UP (West) licensed service areas on a non-discriminatory basis.
4.	Direction dated 20 <sup>th</sup> May, 2016 with regard to closure of CDMA services and roll out of LTE Services by M/s Reliance Communications Ltd. in Haryana, Himachal Pradesh, Orissa, Punjab and West Bengal Licensed service areas with effect from 15 <sup>th</sup> May, 2016 and in Andhra Pradesh, Bihar, Delhi, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Mumbai, UP (East) and UP (West) Licensed Service Areas with effect from 31 <sup>st</sup> May, 2016 consequent to liberalization of 800 MHz Spectrum
5.	Direction dated 23 <sup>rd</sup> June, 2016 with regard to extension of validity of unique porting codes (UPCs) that expired on 31 <sup>st</sup> May, 2016 issued to the subscribers of M/s Videocon Telecommunication Ltd. consequent to closure of its commercial services by Bihar, Haryana, Gujarat, Madhya Pradesh, UP (East) and UP (West) licensed service areas w.e.f. 11 <sup>th</sup> May, 2016.
6.	Direction dated 24 <sup>th</sup> June, 2016 with regard to closure of CDMA services and roll out of LTE Services in 800 MHz by M/s Reliance Communications Ltd. in Tamil Nadu including Chennai, Karnataka, Kerala and Rajasthan Licensed service areas with effect from 6 <sup>th</sup> July, 2016 consequent to liberalization of 800 MHz Spectrum and extension of unique porting codes (UPCs) generated pursuant to direction dated 20 <sup>th</sup> May 2016.
7.	Direction dated 7 <sup>th</sup> October 2016 to ensure compliance of the terms and conditions of license related to interconnection and the provisions of the standards of quality of service Basic Telephone Services (Wireline) and Cellular Mobile Telephone Service Regulations, 2009.
8.	Direction dated 31 <sup>st</sup> October 2016 to service providers for delivering broadband services in a transparent manner by providing adequate information to broadband consumers.
9.	Direction dated 17 <sup>th</sup> February, 2017 with regard to closure of GSM Services by M/s Quadrant Televentures Ltd. in Punjab License Service Areas w.e.f. midnight of 15 <sup>th</sup> February, 2017.

## DIRECTIONS

➤ **Amendment dated 4<sup>th</sup> April, 2016 to direction dated 12<sup>th</sup> January 2016 on “Submission of Data of Network Parameters through Web Service”**

2.8.1 This direction mandates the cellular mobile telephone service providers, to submit to TRAI, the master cell data of network parameters and upload daily cell network parameters data to server of TCCMS portal of TRAI through web-service in the prescribed format. This will enable TRAI to have faster access to information on network parameters.

➤ **Directions to M/s Videocon Telecommunications Ltd. (M/s VTL), al TSPs and MNPSPs dated 25<sup>th</sup> April, 2016; 6<sup>th</sup> May, 2016 and 23<sup>rd</sup> June 2016.**

2.8.2 Pursuant to Spectrum Trading Guidelines, M/s Videocon Telecommunication Ltd. (M/s VTL) entered into an agreement with M/s Bharti Airtel Ltd to trade right to use the entire 1800 MHz spectrum allotted to it. M/s VTL intimated the Authority that it shall discontinue its commercial services with effect from 11<sup>th</sup> May 2016 in Bihar, Haryana, Gujarat, Madhya Pradesh, UP (East) and UP (West) licensed service areas.

In order to facilitate Mobile Number Portability for subscribers of M/s VTL and also to ensure that subscribers are duly informed about the porting-out options available to them, the Authority issued directions to M/s VTL, all TSPs and MNPSPs dated 25<sup>th</sup> April 2016, 6<sup>th</sup> May 2016 and 23<sup>rd</sup> June 2016. Through

these directions additional codes were provided for generating UPC and the 90 days condition for activation of number in a network for subscribers of M/s VTL was relaxed.

➤ **Directions to M/s Reliance Communications Ltd (M/s RCL), all TSPs and MNPSPs dated 20<sup>th</sup> May 2016 and 24<sup>th</sup> June 2016**

2.8.3 M/s RCL informed the Authority regarding discontinuation of its CDMA services subsequent to liberalization of spectrum held by them:

- (i) In Haryana, Himachal Pradesh, Orissa, Punjab & West Bengal licensed service areas (LSAs) w.e.f. 15<sup>th</sup> May 2016;
- (ii) In Andhra Pradesh, Bihar, Delhi, Gujarat, Kolkata, Madhya Pradesh, Maharashtra, Mumbai, UP (East) & UP (West) LSAs w.e.f. 31<sup>st</sup> May 2016; and
- (iii) In Tamil Nadu (including Chennai), Karnataka, Kerala and Rajasthan LSAs w.e.f. 6<sup>th</sup> July 2016.

In order to facilitate Mobile Number Portability for subscribers of M/s RCL in these LSAs, TRAI issued direction to M/s RCL, all TSPs and MNPSPs on 20<sup>th</sup> May 2016 and 24<sup>th</sup> June 2016 providing additional codes for generating UPCs and also to relax the 90 days condition for activation of number in a network for subscribers of M/s RCL.

➤ **Direction dated 7<sup>th</sup> October 2016 to ensure compliance of the terms and conditions of license related to interconnection and the provisions of the standards of quality of service**

**Basic Telephone Services (Wireline) and Cellular Mobile Telephone Service Regulations, 2009**

2.8.4 The Authority, in exercise of power under section 13, read with section 11(1)(b), of TRAI Act, to protect the interest of the consumers directs all service providers holding Unified License with (Access Service Authorization), Universal Access Service License, Cellular Mobile Telephone Service License and Basic Service License to comply with the Standards of Quality Of Service of Basic Telephone Service (Wireline) and Cellular Mobile Telephone Service Regulations, 2009 dated the 20<sup>th</sup> March, 2009 and the terms and conditions of their respective licenses and to furnish the compliance report by 17<sup>th</sup> October, 2016.

➤ **Direction dated 31<sup>st</sup> October 2016 to service providers for delivering broadband services in a transparent manner by providing adequate information to broadband consumers**

2.8.5 In order to address the issue of delivering broadband services in a transparent manner by providing adequate information to broadband consumers, direction was issued on 31<sup>st</sup> October 2016 to All Unified Licensees, Unified Access Service Licensees (UASL), Cellular Mobile Telephone Service Licensees (CMTS), Internet Service Providers (ISPs).

➤ **Direction dated 17<sup>th</sup> February, 2017 with regard to closure of GSM Services by M/s Quadrant Televentures Ltd. in Punjab License Service Areas w.e.f midnight of 15<sup>th</sup> February, 2017**

2.8.6 M/s Quadrant Televentures Ltd (M/s QTL) informed about discontinuation of its commercial GSM services in Punjab Service Area on midnight of the 15<sup>th</sup> February 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 15<sup>th</sup> February 2017 for another 60 days.

After detailed examination, the Authority issued direction on 17<sup>th</sup> February 2017 to M/s QTL, other TSPs and MNPSs, to facilitate mobile number portability for subscribers of M/s QTL.

**BROADCASTING & CABLE TV SECTOR**

Sl. No.	List of Directions
1.	Direction dated 9 <sup>th</sup> May 2016 to broadcasters of Pay Channels.
2.	Direction dated 14 <sup>th</sup> June 2016 to M/s Silverstar Communications Ltd. to produce the terms and conditions of its Interconnection Agreement into writing for providing signals of its Pay Channels to its linked distributors of TV Channels.
3.	Direction dated 14 <sup>th</sup> June 2016 to M/s E24 Glamour Ltd. to produce the terms and conditions of its Interconnection Agreement into writing for providing signals of its Pay Channels to its linked distributors of TV Channels.

**DIRECTIONS**

➤ **Direction dated 9<sup>th</sup> May 2016 to broadcasters of Pay Channels**

2.8.7 TRAI on 9<sup>th</sup> May 2016 issued Direction under the TRAI Act, 1997 to the broadcasters to comply with the provisions of twin condition as stipulated in clause 3C of Tariff Order, 2004 and clause 4 of the Tariff Order, 2010 at the time of providing signals of TV channels including in terms of Cost-Per-Subscriber (CPS) agreements.

➤ **Direction to two Pay Broadcasters namely M/s Silver Star Communications Limited and M/s E24 Glamour Limited in r/o non-compliance of The Register of Interconnect Agreement, Regulations**

2.8.8 It is mandatory for every broadcaster to enter in to written interconnection agreement with DPO before providing signals of its Pay channels. Silverstar and

E24 had declared its channels as pay channels.

They were providing signals of their TV channels without any written interconnection agreement on the premise that they are not charging any money from DPOs though their channel is pay channel. The Authority directed Silverstar and E24 to enter in to written interconnection agreement for their pay channels and file the information relating to such agreement within 45 days from the date of issue of the direction.

2.9 In addition, the Authority issued following Consultation Papers/ Consultation Notes/ Pre-Consultation Paper to seek views of the various stakeholders on the various issues concerning the telecom and broadcasting sector:

## TELECOM SECTOR

Sl. No.	List of Consultation Papers
1.	Consultation Paper dated 19 <sup>th</sup> May, 2016 on "Free Data".
2.	Pre Consultation Paper dated 30 <sup>th</sup> May 2016 on Net Neutrality.
3.	Consultation Paper dated 10 <sup>th</sup> June 2016 on Cloud Computing.
4.	Consultation Paper dated 14 <sup>th</sup> June, 2016 on "Review of Voice Mail/Audiotex/Unified Messaging Services Licence"
5.	Consultation Paper dated 22 <sup>nd</sup> June, 2016 on "Internet Telephony (VoIP)".
6.	Consultation Paper dated 13 <sup>th</sup> July, 2016 on "Proliferation of Broadband through Public Wi-Fi Networks" - and Consultation Note dated 15 <sup>th</sup> November, 2016 on "Model for Nation-wide Interoperable and Scalable Public Wi-Fi Networks".
7.	Consultation Paper dated 26 <sup>th</sup> July, 2016 on "Complaint/Grievance Redressal in Telecom Sector"
8.	Consultation Paper dated 5 <sup>th</sup> August, 2016 on "Review of Interconnection Usage Charges".
9.	Consultation Paper dated 5 <sup>th</sup> August 2016 on "Review of network related Quality of Service standards for Cellular Mobile Telephone Service".

Sl. No.	List of Consultation Papers
10.	Consultation Paper dated 18 <sup>th</sup> October 2016 on “Spectrum, Roaming and QoS related requirements in Machine-to-Machine (M2M) Communications”.
11.	Consultation Paper dated 21 <sup>st</sup> October, 2016 on “Review of the Regulatory Framework for Interconnection”.
12.	Consultation Paper dated 28 <sup>th</sup> October 2016 on “Captive VSAT CUG Policy issues”.
13.	Consultation Paper dated 30 <sup>th</sup> November 2016 on “Issues related to closure of Access Services”.
14.	Consultation Paper dated 4 <sup>th</sup> January 2017 on “Net Neutrality”
15.	Consultation Paper dated 16 <sup>th</sup> January 2017 on “Approach towards Sustainable Telecommunications”.
16.	Consultation Paper dated 17 <sup>th</sup> February 2017 on “Regulatory Principles of Tariff Assessment”.
17.	Consultation Paper dated 20 <sup>th</sup> March 2017 on “Introduction of UL (VNO) for Access Service authorization for category B license with districts of a State as a service area”.

## CONSULTATION PAPERS

### ➤ Consultation Paper dated 19<sup>th</sup> May, 2016 on “Free Data”

2.9.1 To address the issue of providing free internet access to consumers and to explore a possibility of ‘TSP agnostic platform’ which can facilitate app developers to promote their website without entering into agreement with TSPs for making their website popular, the Authority has come out with the Consultation Paper (CP) on 19<sup>th</sup> May, 2016 on “Free Data” to explore model (s) that could achieve the benefits of offering free data while avoiding the ingenuity that the Differential Tariff Regulation is meant to prevent.

### ➤ Pre Consultation Paper dated 30<sup>th</sup> May 2016 on Net Neutrality

2.9.2 TRAI issued a Pre-Consultation Paper on Net Neutrality on 30<sup>th</sup> May 2016

for seeking the comments of the stakeholders. Pre-consultation paper is an attempt to identify the relevant issues in these areas, which will help TRAI in formulating its views on the way forward for policy or regulatory interventions on the issue of net neutrality. In response to this Pre-Consultation Paper various stakeholders had submitted their inputs on various issues that could be raised in the final Consultation Paper.

### ➤ Consultation Paper dated 10<sup>th</sup> June 2016 on Cloud Computing

2.9.3 TRAI issued a Consultation Paper on Cloud Computing on 10<sup>th</sup> June 2016 for seeking the comments of stakeholders. In cloud computing, resources such as computing power & infrastructure, application platforms and business processes are provided through the internet as general utilities to users in an on-demand fashion.

A consumer can access and use these resources and services from anywhere and anytime through an internet connection. The end user may not be aware of the equipment that is being used to provide him this service. Business enterprises are now increasingly seeking to reshape their business models to gain benefits from this new paradigm of resource sharing.

With a view to bring out all relevant aspects of the issues and to provide a suitable platform for discussions, TRAI had initiated this consultation paper to engage the industry and all the stakeholders. While examining the various dimensions and areas, the following key issues are discussed in the paper:

- Regulatory framework for Cloud Computing
- Security over the Cloud
- Cost benefit Analysis
- Quality of Service of the Cloud Services
- Inter-operability amongst the cloud players
- Incentivisation for conceptualization and implementation of India based Cloud Services
- Legal framework for multiple Jurisdictions/ Areas of operation
- Implementation Strategies of Cloud Services in Government (Central and States/UTs) Organizations and other strategic networks.

➤ **Consultation Paper dated 14<sup>th</sup> June, 2016 on “Review of Voice Mail/Audiotex/Unified Messaging Services Licence”**

2.9.4 TRAI received a reference from the Department of Telecommunications for review of the terms and conditions for issue of fresh licences for Voice Mail/Audiotex/Unified Messaging Services (UMS) and for migration of existing licenses.

Keeping in view the changes in technology and the resultant new user applications and service delivery scenarios, there is a need to review the technical specifications, financial terms and conditions, scope and guidelines for the Voice Mail/Audiotex/Unified Messaging Services (UMS) and the licence conditions.

TRAI issued a Consultation Paper on “Review of Voice Mail/Audiotex/Unified Messaging Services Licence” on 14<sup>th</sup> June 2016 seeking views of the stakeholders on many significant issues i.e. licensing framework for Voice Mail/Audiotex/UMS, technical specifications, financial terms & conditions including revenue share with licensor, period of licence and migration terms for existing licenses etc.

➤ **Consultation Paper dated 22<sup>nd</sup> June, 2016 on “Internet Telephony (VoIP)”**

2.9.5 Internet Telephony has been permitted to Internet Service Providers (ISPs) in restricted manner under ISP licensing conditions issued by Government in October 2007. As per ISPs licensing provisions, there is no restriction on PC-to-PC Internet Telephony calls. PC or adapter can be used to call PSTN/PLMN abroad; however Internet Telephony calls from such devices to PSTN/PLMN in India are not permitted under ISP license. ISPs are also not allowed to have interconnection with PSTN/PLMN networks.

The present Licensing framework permits Unified Access Service Licensees (UASL), Cellular Mobile Telecom Service (CMTS) Licensees and Unified Licensees to provide unrestricted Internet Telephony. Licenses further permits that while providing Internet Telephony service, the Licensee may interconnect Internet Telephony network with PSTN/PLMN/GMPCS network. Despite the fact that these licensees were allowed to provide unrestricted Internet Telephony, the service has not taken off in the country.

The objective of this consultation paper (CP) is to identify issues in providing Internet Telephony Services and address them. Some of the important issues are allocation of telephone numbers, Interconnection, Interconnection Usage charges, Quality of Service and access to Emergency etc.

The Consultation Paper raises the following main issues:

- (i) What should be the additional entry fee, Performance Bank Guarantee (PBG) and Financial Bank Guarantee (FBG) for Internet Service providers if they are also allowed to provide unrestricted Internet Telephony?
- (ii) What should be the termination charge when call is terminating into Internet telephony network?
- (iii) What should be the termination charge for the calls originated from Internet Telephony Network and terminated into the wire-line and wireless Network?
- (iv) How to ensure that users of International Internet Telephony calls pay applicable International termination charges?

- (v) Should the last mile for an Internet telephony subscriber be the public Internet irrespective of where the subscriber is currently located as long as the PSTN leg abides by all the interconnection rules and regulations concerning NLDO and ILDO?
- (vi) What should be the framework for allocation of numbering resource for Internet Telephony services?
- (vii) Is it possible to provide location information to the police station when the subscriber is making Internet Telephony call to Emergency number? If yes, how?

➤ **Consultation Paper dated 13<sup>th</sup> July, 2016 on “Proliferation of Broadband through Public Wi-Fi Networks” and Consultation Note dated 15<sup>th</sup> November, 2016 on “Model for Nation-wide Interoperable and Scalable Public Wi-Fi Networks”**

2.9.6 The growth of Internet penetration in India and realization of its full potential is closely tied to the proliferation of broadband services. WLANs created using Wi-Fi technology can be used for extending the “last-mile connectivity” of broadband connections to a wider segment of users. Wi-Fi networks can offer affordable, scalable and versatile technologies that can facilitate the spread of Internet access in rural and urban areas alike.

It is felt that Wi-Fi hotspots can be proliferated in every nook and corner of the country and it should be possible to set up such hotspots by shop owners and unemployed youths. Such a model will work much like a Public Call Office

(PCO) with the advantage that the operator of the Wi-Fi hotspot will not be serving the customer physically as all the transactions will happen electronically. ISPs will also be encouraged as there will be an increased consumption of data by the public. The model will also provide a boost to generation of employment in the country.

The objective of this Consultation Paper (CP) is to examine the need of encouraging public Wi-Fi networks in the country from a public policy point of view, discuss the issues in its proliferation and find out solutions for the same.

The CP raises the issues of various regulatory/licensing or policy measures required to encourage ubiquitous city-wide Wi-Fi networks as well as expansion of Wi-Fi networks in remote or rural areas. The CP also touches upon interoperability between the Wi-Fi networks of different service providers as also between cellular and Wi-Fi networks, frequency bands, payment and authentication procedure to access Wi-Fi.

To explore whether the model proposed can be incorporated in Public Wi-Fi networks to promote appropriate monetization and business models for sustainable and scalable infrastructure deployment and to explore the roles of different stakeholders in the Public Wi-Fi network value chain and build an ecosystem for promoting scalable and sustainable partnerships for large scale nationwide deployments, the Authority has come out with a Consultation Note on Model for Nation-wide Interoperable

and Scalable Public Wi-Fi Networks on 15<sup>th</sup> November 2016.

➤ **Consultation Paper dated 28<sup>th</sup> July 2016 on “Complaint/Grievance Redressal in Telecom Sector”**

2.9.7 The Authority issued a Consultation Paper on “Complaints / Grievance Redressal in Telecom Sector” on 28<sup>th</sup> July 2016. The Consultation Paper revisits the issue of redressal of individual consumer complaints and grievances in the telecom sector, which have grown rapidly in the last decade. The paper presents an overview of of the existing telecom consumer grievance handling mechanism and its efficacy; the mechanisms in place in other countries and in other sectors of similar size in India, and its’ impact; and the problem areas. The Consultation Paper raises the following issues.

- (i) Is the complaint redressal mechanism, as presently existing, adequate or is there a need to strengthen it?
- (ii) Are there any specific changes that can be made to the existing system to improve it?
- (iii) Should a separate - independent and appropriately empowered - structure to resolve telecom sector complaints and grievances be established?
- (iv) If yes, please comment with regard to the organization; its structure; kinds of complaints to be handled and its powers?
- (v) Is establishing an Office of Telecom Ombudsman an option that should be revisited, especially given the experience

of the past few years of increasing numbers of complaints?

- (vi) If yes, how should it be created – the legal framework? What should be its structure? How should it be funded? What types of complaints should it handle? What should be its powers, functions, duties and responsibilities?

➤ **Consultation Paper dated 5<sup>th</sup> August, 2016 on “Review of Interconnection Usage Charges”**

2.9.8 Interconnection Usage Charges (IUC) regime is an essential requirement to enable subscribers of one service provider to communicate with subscribers of another service provider. Providing interconnection entails costs for which service providers need to be fairly compensated. The IUC regime not only determines the revenue accruable to the service providers but also how this revenue is to be distributed among them. An efficient interconnection and charging regime is central to efficient and seamless connectivity between various networks.

The Authority specified IUC for the first time in 2003. Subsequently, these charges have been revised in 2006, 2009 and 2015. The prevailing termination charges are given in the following Table:

Type of call	Type of traffic	Termination charge
Local and national long distance call	Wireless to Wireless	₹ 0.14 per minute
	Wireless to Wireline	0 (Zero)
	Wireline to Wireline	0 (Zero)
	Wireline to Wireless	0 (Zero)
International call	International incoming call to wireless and Wireline	₹ 0.53 per minute

The Authority has undertaken the present review exercise in view of the fact that several telecom services providers in the country have, in the recent past, built access networks using 4G mobile technology. A few of these TSPs may carry voice on voice over LTE (VoLTE) technology in near future. Further, world-over, Internet Telephony (in which voice travels over public Internet) is beginning to emerge as a cost-effective mode of delivery of voice calls. Together, these developments require a review of the IUC regime in the country. The Consultation Paper inter-alia, seeks inputs of the stakeholders mainly on the following broad issues:

- (i) Approaches to be used for prescribing domestic termination charges (viz. mobile termination charges and fixed termination charges) for maximization of consumer welfare, adoption of more efficient technologies and overall growth of the telecommunication services sector;
- (ii) Approaches to be used for prescribing international termination charges and international settlement rates in the country for long-term sustainable growth of the International Long Distance (ILD) service segment.

➤ **Consultation Paper dated 5<sup>th</sup> August 2016 on “Review of network related Quality of Service standards for Cellular Mobile Telephone Service”**

2.9.9 TRAI issued the Consultation Paper on “Review of network related Quality of Service Standards for Cellular Mobile Telephone Service” on 5<sup>th</sup> August 2016 for seeking the comments of stakeholders. This consultation paper describes the various parameters and respective benchmarks for assessment of Quality of Service of 2G & 3G networks. The views of the stakeholders are called for so as to bring about changes in these benchmarks and measurement methodology and possibly add parameters, if required, to improve the Quality of Service experience by the customers. It is also envisaged to add relevant parameters for 4G/BWA services also, in view of their development in the network. The consultation paper sought to know from the stakeholders as to what will be the appropriate way to calculate call drop rates through meta data analysis of CDRs. The mechanism of imposing financial disincentives in case of below the benchmark performance has also been raised in this consultation.

➤ **Consultation Paper dated 18<sup>th</sup> October 2016 on “Spectrum, Roaming and QoS related requirements in Machine-to-Machine (M2M) Communications”**

2.9.10 TRAI received a reference from Department of Telecommunications (DoT) on 5<sup>th</sup> January, 2016. Through the reference the 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

M2M is the basis for automated information exchange between machines and can impact for 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.

While formulating this consultation paper on M2M issues, apart from the specific issues referred by DoT through the reference, the Authority realised that certain other regulatory aspects including policy and licensing framework for M2M service providers, various technical challenges in implementation, allocation and utilization of various network codes, data protection, and privacy issues also need to be deliberated. Therefore, these issues have also been included in the Consultation Paper.

➤ **Consultation Paper dated 21<sup>st</sup> October, 2016 on “Review of the Regulatory Framework for Interconnection”**

2.9.11 The Authority has come out with this Consultation Paper (CP) on 21<sup>st</sup> October, 2016 as the telecommunication service sector in the country has witnessed several economic and technological changes since 2002. A few of the developments in the sector are given below:

- Changes in the nature of telecom market - from pure State monopoly to intensely competitive market;

- Emergence of mobile telephony as a primary means of communication and continuous decline in the number of wireline subscribers in the last decade;
- Considerable increase in the number of NLDOS/ ILDOs;
- Introduction of Unified Licensing (UL) regime;
- Technological changes leading to migration to next generation networks (NGN) and Internet Protocol (IP) networks;
- Expiry of telecom licenses of some TSPs and consequential need for renegotiation of interconnection agreements.

These developments have altered the nature and economics of telecommunication services sector as well as the strategy of market players and have, in several ways, influenced the scale and choice of investments in different types of technologies and services. Many of these developments impinge upon the matter of interconnection between TSPs. Regulator is required to mandate a framework for interconnection, it has not only to ensure that the framework is efficient but also that the framework is able to adapt to the changing circumstances as outdated regulation run the risk of stifling market growth and innovation.

The Consultation Paper broadly raises following issues:

- (i) Which is the best option to ensure fair, reasonable and non-discriminatory terms and conditions of interconnection agreement between telecom service providers (TSPs), in view of the technological, market, licensing, regulatory and legal developments in

the telecommunication services sector in India since 2002?

- (ii) What should be the time-frame for entering into interconnection agreement when a new SP?
- (iii) Should an interconnection agreement between TSPs continue to operate if an interconnecting TSP acquires a new license upon expiry of an old license? Alternatively, should fresh agreements be entered into upon specific request of either party to the interconnection?
- (iv) Whether there is a need to continue with the present concept of interconnection seeker/interconnection provider? If yes, what should be the criteria?
- (v) Whether there is any need to review the level of interconnection?
- (vi) What should be the framework to ensure timely provisioning/augmentation of E1 ports?
- (vii) What should be the criteria to ensure that inflated demand for ports is not made by interconnection seeker?
- (viii) Whether interconnection and interconnection agreement should be service-specific or service-agnostic (i.e. a TSP can send any type of traffic on a point of interconnection which is allowed under the terms and conditions of the license given to it)?
- (ix) (Which policy and regulatory measures are required to be taken to encourage TSPs to migrate to Interconnection at IP level? What should be the terms and conditions for inter-connection at IP level?
- (x) Whether there is a need to establish a framework for Interconnect Exchange to eliminate bilateral interconnection

- issues? Whether access providers should be allowed to transit intra-circle calls?
- (xi) Under what circumstances, a TSP can disconnect POIs? What procedure should be followed before disconnection of POI?

➤ **Consultation Paper dated 28<sup>th</sup> October 2016 on “Captive VSAT CUG Policy issues”**

2.9.12 TRAI received a reference dated 16<sup>th</sup> March, 2016 from the Department of Telecommunications (DoT) seeking the recommendations of TRAI on minimum License Fee in respect of 2<sup>nd</sup> Hub in Captive VSAT 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 brought out some additional issues related to applicability of Royalty charges and delay in approvals in augmentation of bandwidth for Captive VSAT. The Authority has decided to include these issues also for the consultation of the stakeholders, so as to provide comprehensive recommendations on issues concerning captive VSAT licensees.

➤ **Consultation Paper dated 30<sup>th</sup> November 2016 on “Issues related to closure of Access Services”**

2.9.13. Due to the changes in policy for assignment of licence, spectrum trading and licences expiry from time to time, there is possibility of discontinuity of services to the subscribers by an access service provider. Recently there have been cases where due to licence expiry, trading of spectrum and upgradation of technology there has been discontinuity of services to

the subscribers. Certain issues arose due to these events. Therefore, the Authority decided, suo-motu, to come out with a consultation paper on the issue.

➤ **Consultation Paper dated 4<sup>th</sup> January 2017 on “Net Neutrality”**

2.9.14 TRAI on 4<sup>th</sup> January 2017 issued the Consultation Paper on “Net Neutrality” seeking the comments of 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, there 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.

➤ **Consultation Paper dated 16<sup>th</sup> January 2017 on “Approach towards Sustainable Telecommunications”**

2.9.15 TRAI received a reference from the Department of Telecommunications on 23<sup>rd</sup> 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 sought 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 17<sup>th</sup> February 2017 on “Regulatory Principles of Tariff Assessment”**

2.9.16 Telecom Regulatory Authority of India released a Consultation Paper on ‘Regulatory principles of tariff assessment on 17<sup>th</sup> February, 2017. 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 for comments of the stakeholders.

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

2.9.17. The Department of Telecommunication (DoT), through its reference dated 11<sup>th</sup> 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 1<sup>st</sup> May 2015, DoT issued guidelines on 31<sup>st</sup> May, 2016 for the grant of Unified License (VNO). Further, vide its notification dated

5<sup>th</sup> 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).

## BROADCASTING & CABLE TV SECTOR

Sl. No.	List of Consultation Paper
1.	Pre-Consultation Paper dated 4 <sup>th</sup> April, 2016 on "Set Top Box Interoperability".
2.	Consultation Paper dated 4 <sup>th</sup> May, 2016 on "Interconnection framework for Broadcasting TV Services distributed through Addressable Systems".
3.	Consultation Paper dated 19 <sup>th</sup> May, 2016 on "Issues related to Quality of Services in Digital Addressable Systems and Consumer Protection".
4.	Pre-Consultation Paper dated 23 <sup>rd</sup> May, 2016 on "Infrastructure sharing in Broadcasting TV distribution sector".
5.	Consultation Paper dated 24 <sup>th</sup> June, 2016 on "Issues related to Digital Terrestrial Broadcasting in India".
6.	Consultation paper dated 29 <sup>th</sup> September 2016 on "Infrastructure Sharing in Broadcasting TV Distribution Sector".
7.	Draft Telecommunication (Broadcasting and Cable Services) (Eighth) (Addressable Systems) Tariff Order, 2016 dated 10 <sup>th</sup> October 2016.

Sl. No.	List of Consultation Paper
8.	Draft "The Standards of Quality of Service and Consumer Protection (Digital Addressable Systems) Regulations, 2016" dated 10 <sup>th</sup> October 2016.
9.	Consultation Paper dated 14 <sup>th</sup> October 2016 on "Draft Telecommunication (Broadcasting and Cable Services) Interconnection (Addressable Systems) Regulations, 2016.
10.	Pre-consultation paper dated 19 <sup>th</sup> April, 2017 on "Ease of Doing Business in Broadcasting Sector".

## CONSULTATION PAPER

### ➤ Pre-Consultation Paper dated 4<sup>th</sup> April, 2016 on "Set Top Box Interoperability"

2.9.18 TRAI, on 4<sup>th</sup> April 2016, released a Pre-Consultation Paper on "Set Top Box Interoperability". TRAI has taken up the issue relating to development of interoperable STBs in Digital Television Broadcasting sector that must be compatible across all operators using the same platform. STB interoperability would empower consumers to change his cable TV (or DTH) service provider whenever required, without changing his STBs and with no major cost implications. This will also shift the focus of the sector towards providing better quality of services to the consumers at competitive prices. Implementation of STB inter-operability, may also lead to making STBs available in the open market while reducing costs and also addressing the challenge of e-waste resulting due to discarded set-top-boxes. Availability of set-top-boxes in open

market will reduce capital expenditure of service providers and improve the cash flow position of the industry.

The pre-consultation paper sought to identify various issues related to interoperability of STBs, challenges, identifying concerns of the industry and suggest a possible solution towards achieving technical interoperability of STBs.

➤ **Consultation Paper dated 4<sup>th</sup> May, 2016 on “Interconnection framework for Broadcasting TV Services distributed through Addressable Systems”**

2.9.19 TRAI, on 4<sup>th</sup> May, 2016, released a Consultation Paper on “Interconnection framework for Broadcasting TV Services distributed through Addressable Systems”. This consultation paper aimed at fostering competition, increasing trust amongst service providers, facilitating ease of doing business, reducing disputes, improving transparency & efficiency, promoting sustainable & orderly growth and providing effective choice to consumers.

➤ **Consultation Paper dated 19<sup>th</sup> May, 2016 on “Issues related to Quality of Services in Digital Addressable Systems and Consumer Protection”**

2.9.20 TRAI, on 19<sup>th</sup> May 2016, released a Consultation Paper on “Issues related to Quality of Service in Digital Addressable Systems and Consumer Protection”. The main objectives of current consultation were:-

- To develop unified regulatory framework for Addressable TV Platforms (DTH/CABLE

TV/ HITS/ IPTV) for QoS and consumer protection.

- To make consumers aware of the choices of services, terms and conditions of services, and providing ease of subscription.
- To simplify complaint booking and speedy redressal of complaints.
- To ensure orderly growth and level playing field for overall development of the broadcasting sector.
- To encourage use of modern Information Communication Technologies (ICTs) for improving QoS and providing better Quality of Experience to consumers.

➤ **Pre-Consultation Paper dated 23<sup>rd</sup> May, 2016 on “Infrastructure sharing in Broadcasting TV distribution sector”**

2.9.21 TRAI, on 23<sup>rd</sup> May 2016, released a Pre-Consultation Paper on “Infrastructure Sharing in Broadcasting TV distribution sector”. The pre-consultation paper aimed to identify various issues relating to sharing of infrastructure and separation of network & service provider functions so as to reduce cost of distribution of services through various TV distribution platforms. Comments of various stakeholders, organizations, associations, experts, individuals etc. are solicited so that all likely issues can be identified for consultation.

➤ **Consultation Paper dated 24<sup>th</sup> June, 2016 on “Issues related to Digital Terrestrial Broadcasting in India”**

2.9.22 TRAI, on 24<sup>th</sup> June 2016, released a Consultation Paper on “Issues related to Digital Terrestrial Broadcasting in

India". This Consultation Paper examined the existing terrestrial TV broadcasting scenario with an objective to evaluate the ongoing digitization efforts in the light of international practices adopted for such digital migration. The following are the broad objectives of the consultation:-

- To develop and suggest a road map for the transition to Digital terrestrial TV transmission/ Mobile TV transmission and also suggest the timelines for switching off the existing analogue transmission.
- To examine probable models for implementation of DTT in the country keeping in view the availability of multiple TV distribution platforms
- To examine the feasibility of participation of the private sector in the growth of India terrestrial broadcasting ecosystem
- To broadly assess the spectrum utilization for existing and future digital terrestrial broadcasting services.

➤ **Consultation paper dated 29<sup>th</sup> September 2016 on "Infrastructure Sharing in Broadcasting TV Distribution Sector"**

2.9.23 TRAI, on 29<sup>th</sup> September 2016, released a Consultation Paper on 'Infrastructure sharing in broadcasting TV distribution sector'. The objective of the consultation was, to issue recommendations to the Government of India to formulate a policy framework for enabling infrastructure sharing by DPOs so as to optimally utilize the infrastructure and to promote healthy competition among service providers

and, to identify the changes required in the Cable TV Act and the Rules made there under, in the license/ registration conditions of the Broadcasters/ DPOs in order to facilitate infrastructure sharing on voluntary basis.

➤ **Draft Telecommunication (Broadcasting and Cable Services) (Eighth) (Addressable Systems) Tariff Order, 2016 dated 10<sup>th</sup> October 2016**

2.9.24 Draft Tariff Order was released on 10<sup>th</sup> October 2016 seeking written comments from the stakeholders. The objective of the proposed tariff framework is to create an enabling environment for bringing in more transparency, equity and non-discrimination across the value chain while ensuring consumer protection and growth of the sector. In the draft Tariff Order, a new tariff framework was proposed wherein customers have been provided with adequate choice to select channels of their choice while ensuring transparency in the entire value chain.

➤ **Consultation Paper dated 10<sup>th</sup> October 2016 on the "Draft Standards of Quality of Service and Consumer Protection (Digital Addressable Systems) Regulations, 2016"**

2.9.25 Draft QoS Regulation was released on 10<sup>th</sup> October 2016 seeking written comments from the stakeholders. The objective of the proposed QoS regulation is to formulate Common framework for standard of QoS and consumer protection across digital addressable platforms viz DTH, Cable TV, IPTV, HITS. In the proposed QoS Regulation, choice of subscription

to a-la-carte channels and bouquets of channels by subscribers were simplified.

Draft interconnection regulations for TV broadcasting services provided through addressable systems.

Draft Interconnection Regulation was released on 14<sup>th</sup> October 2016 seeking written comments from the stakeholders. The objective of the proposed interconnection Regulation is to formulate common interconnection framework for all addressable systems namely DTH, HITS, DAS and IPTV.

➤ **Pre-consultation paper dated 19<sup>th</sup> April, 2017 on “Ease of Doing Business in Broadcasting Sector”**

2.9.26 TRAI on 19<sup>th</sup> 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.

## REVIEW OF WORKING AND OPERATION OF THE TELECOM REGULATORY AUTHORITY OF INDIA

The working and operation of Telecom Regulatory Authority of India in the specific context of policy framework is reviewed in the following paragraphs in respect of (a) Rural Telephone Network; (b) Expansion of Telephone Network; (c) Entry of Private Sector in basic and value added service; (d) Technical Compatibility and effective interconnection with service providers; (e) Telecommunication Technology; (f) Implementation of National Telecom Policy; (g) Quality of Service; and (h) Universal Service Obligation are elaborated below:-

### (a) Rural Telephone Network

2.10 The total rural subscriber base has reached 501.61 million as on 31<sup>st</sup> March 2017 from 449.17 million on 31<sup>st</sup> March 2016. As per the performance indicator report, 41.99 % of total subscribers are now in rural areas.

The rural wireline subscriber base is decreasing. As on 31<sup>st</sup> March, 2017, the rural wireline subscriber base stood at 3.85 million as compared to 4.32 million at the end of 31<sup>st</sup> March, 2016. 15.77% of total wireline subscribers are now in rural areas.

Whereas, the rural wireless subscriber base increased during the same period. As on 31<sup>st</sup> March 2017, the Wireless rural market has reached 497.76 million mark as against 444.84 million as on 31<sup>st</sup> March 2016. 42.54% of total wireless subscribers are now in rural areas.

## (b) Expansion of Telephone Network

2.11 As on 31<sup>st</sup> March, 2017, the total wireline subscriber base stood at 24.40 million. The incumbents BSNL and MTNL have 56.10% and 14.19 % market share respectively in the subscriber base, while all the six private operators together have 29.71% share. The share of private operators has increased from 27.59% as on 31<sup>st</sup> March, 2016 to 29.71% as on 31<sup>st</sup> March 2017 registering an increase of 2.12%.

The Wireless Subscriber base is 1170.18 million as on 31<sup>st</sup> March 2017 in comparison to the subscriber base of 1033.63 million as on 31<sup>st</sup> March 2016. The subscriber base increased by 136.55 million subscribers in the financial year 2016-17. The total subscriber base of wireless services has grown from 919.17 million in March 2012 to 1170.18 million in March 2017. Out of 1170.18 million subscribers at the end of financial year 2016-17, 1157.59 million (98.92%) were

2G (GSM), 3G & LTE Subscribers and 12.59 million (1.08%) were CDMA Subscribers.

## (c) Entry of Private Sector in basic and value added service

2.12 As on 31<sup>st</sup> March 2017, following are the number of licenses under UL / UL (AS) / UASL / CMTS:

Name of license	Number of licence
Basic	2
Unified Licence (UL)	15
Unified Licence (Access Services [UL (AS)])	6
Unified Access Service Licence (UASL)	86
Cellular Mobile Telephone Service (CMTS) Licence	28

Source: DoT

## (d) Technical Compatibility and effective interconnection with service providers

2.13 Under the TRAI Act, the Authority is mandated to fix the terms and conditions of interconnectivity and to ensure technical compatibility and effective interconnection between service providers. Interconnection lies at the core of the telecom business in a multi-operator environment. The terms and conditions of interconnection need to be regulated to ensure a level playing field among service providers. Accordingly, the following measures regarding interconnection were taken by TRAI during the reporting period:-

➤ **Consultation Paper dated 5<sup>th</sup> August, 2016 on "Review of Interconnection Usage Charges"**

2.13.1 Interconnection Usage Charges (IUC) regime is an essential requirement to enable subscribers of one service provider to communicate with subscribers of another service provider. Providing interconnection entails costs for which service providers need to be fairly compensated. The IUC regime not only determines the revenue accruable to the service providers but also how this revenue is to be distributed among them. An efficient interconnection and charging regime is central to efficient and seamless connectivity between various networks.

The Authority specified IUC for the first time in 2003. Subsequently, these charges have been revised in 2006, 2009 and 2015. The prevailing termination charges are given in the following Table:

Type of call	Type of traffic	Termination charge
Local and national long distance call	Wireless to Wireless	₹ 0.14 per minute
	Wireless to Wireline	0 (Zero)
	Wireline to Wireline	0 (Zero)
	Wireline to Wireless	0 (Zero)
International call	International incoming call to wireless and Wireline	₹ 0.53 per minute

The Authority has undertaken the present review exercise in view of the fact that several telecom services providers in the country have, in the recent past, built access networks using 4G mobile technology. A few of these TSPs may

carry voice on voice over LTE (VoLTE) technology in near future. Further, world-over, Internet Telephony (in which voice travels over public Internet) is beginning to emerge as a cost-effective mode of delivery of voice calls. Together, these developments require a review of the IUC regime in the country. The Consultation Paper inter-alia, seeks inputs of the stakeholders mainly on the following broad issues:

- (i) Approaches to be used for prescribing domestic termination charges (viz. mobile termination charges and fixed termination charges) for maximization of consumer welfare, adoption of more efficient technologies and overall growth of the telecommunication services sector;
- (ii) Approaches to be used for prescribing international termination charges and international settlement rates in the country for long-term sustainable growth of the International Long Distance (ILD) service segment.

➤ **Consultation Paper dated 21st October, 2016 on “Review of the Regulatory Framework for Interconnection”**

2.13.2 The Authority has come out with this Consultation Paper (CP) on 21<sup>st</sup> October, 2016 as the telecommunication service sector in the country has witnessed several economic and technological changes since 2002. A few of the developments in the sector are given below:

- Changes in the nature of telecom market - from pure State monopoly to intensely competitive market;

- Emergence of mobile telephony as a primary means of communication and continuous decline in the number of wireline subscribers in the last decade;
- Considerable increase in the number of NLDOS/ ILDOs;
- Introduction of Unified Licensing (UL) regime;
- Technological changes leading to migration to next generation networks (NGN) and Internet Protocol (IP) networks;
- Expiry of telecom licenses of some TSPs and consequential need for renegotiation of interconnection agreements.

These developments have altered the nature and economics of telecommunication services sector as well as the strategy of market players and have, in several ways, influenced the scale and choice of investments in different types of technologies and services. Many of these developments impinge upon the matter of interconnection between TSPs. Regulator is required to mandate a framework for interconnection, it has not only to ensure that the framework is efficient but also that the framework is able to adapt to the changing circumstances as outdated regulation run the risk of stifling market growth and innovation.

The Consultation Paper broadly raises following issues:

- (i) Which is the best option to ensure fair, reasonable and non-discriminatory terms and conditions of interconnection agreement between telecom service providers (TSPs), in view of the technological, market, licensing, regulatory and legal developments in

the telecommunication services sector in India since 2002?

- (ii) What should be the time-frame for entering into interconnection agreement when a new TSP?
- (iii) Should an interconnection agreement between TSPs continue to operate if an interconnecting TSP acquires a new license upon expiry of an old license? Alternatively, should fresh agreements be entered into upon specific request of either party to the interconnection?
- (iv) Whether there is a need to continue with the present concept of interconnection seeker/interconnection provider? If yes, what should be the criteria?
- (v) Whether there is any need to review the level of interconnection?
- (vi) What should be the framework to ensure timely provisioning/augmentation of E1 ports?
- (vii) What should be the criteria to ensure that inflated demand for ports is not made by interconnection seeker?
- (viii) Whether interconnection and interconnection agreement should be service-specific or service-agnostic (i.e. a TSP can send any type of traffic on a point of interconnection which is allowed under the terms and conditions of the license given to it)?
- (ix) Which policy and regulatory measures are required to be taken to encourage TSPs to migrate to Interconnection at IP level? What should be the terms and conditions for inter-connection at IP level?
- (x) Whether there is a need to establish a framework for Interconnect Exchange

to eliminate bilateral interconnection issues? Whether access providers should be allowed to transit intra-circle calls?

- (xi) Under what circumstances, a TSP can disconnect POIs? What procedure should be followed before disconnection of POI?

➤ **Direction dated 7<sup>th</sup> October, 2016 to all telecom service providers to ensure compliance of the terms and conditions of the license relating to interconnection and the provisions of the Standards of Quality of Service of Basic Telephone Service (Wireline) and Cellular Mobile Telephone Service Regulations, 2009.**

2.13.3 The Authority, in exercise of power under section 13, read with section 11(1)(b), of TRAI Act, to protect the interest of the consumers directs all service providers holding Unified License with (Access Service Authorization), Universal Access Service License, Cellular Mobile Telephone Service License and Basic Service License to comply with the Standards of Quality Of Service of Basic Telephone Service (Wireline) and Cellular Mobile Telephone Service Regulations, 2009 dated the 20<sup>th</sup> March, 2009 and the terms and conditions of their respective licenses and to furnish the compliance report by 17<sup>th</sup> October, 2016.

## (e) Telecommunication Technology

### (i) Consultation Paper on “Cloud Computing”

2.14.1 TRAI issued on 10<sup>th</sup> June 2016 a Consultation Paper on “Cloud Computing” for seeking the comments

of stakeholders. In cloud computing, resources such as computing power & infrastructure, application platforms, and business processes are provided through the internet as general utilities to users in an on-demand fashion. A consumer can access and use these resources and services from anywhere and anytime through a internet connection. The end user may not be aware of the equipment that is being used to provide him this service. Business enterprises are now increasingly seeking to reshape their business models to gain benefits from this new paradigm of resource sharing.

With a view to bring out all relevant aspects of the issues and to provide a suitable platform for discussions, TRAI had initiated this consultation paper to engage the industry and all the stakeholders. While examining the various dimensions and area, the following key issues are discussed in the paper:

#### Regulatory framework for Cloud Computing

- Security over the Cloud
- Cost benefit Analysis
- Quality of Service of the Cloud Services
- Inter-operability amongst the cloud players
- Incentivisation for conceptualization and implementation of India based Cloud Services
- Legal framework for multiple Jurisdictions/ Areas of operation
- Implementation Strategies of Cloud Services in Government (Central and States/UTs) Organizations and other strategic networks.

**(ii) Consultation Paper on “Net Neutrality”**

2.14.2 TRAI issued on 4<sup>th</sup> January 2017 the Consultation Paper on “Net Neutrality”, seeking the comments of stakeholders. In view of the complexity of the subject, TRAI undertook two stage-consultation processes on Net Neutrality.

In the first stage, of pre-consultation, there 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.

**(iii) MySpeedApp**

2.14.3 This application launched on 05<sup>th</sup> July, 2016 allows you to measure your data speed experience and sends the results to TRAI. The application captures and sends coverage, data speed and other network information along with device and location of the tests. The app does not send any personal user information. All results are reported anonymously.

**(iv) TCCCP Portal**

2.14.4 TCCCP Regulations being complaint based regulation, there was a need to put in place a complaint mechanism which is easy to use by the consumer. Hence,

TRAI has developed a mobile App for easy registration of UCC complaints to the service providers on 01<sup>st</sup> June, 2016. With this App, the consumer can also check the status of his complaint. The App is available in the Google App store and Mobile Seva App store. IT Division played a major role in developing the above Portal/App in coordination with the QoS Division/NISG team.

**(f) Implementation of National Telecom Policy**

2.15.1 In accordance with the provisions contained in the National Telecom Policy 2012 regarding “One Nation – Full Mobile Number Portability” (FMNP), TRAI after going through the consultation process and examination of various issues involved, forwarded its recommendation on FMNP across license service areas, on 25<sup>th</sup> September 2013. The Authority suggested amendments in the licenses of MNP service providers and mobile service providers. Accordingly, on 3<sup>rd</sup> November, 2014, the DoT issued amendment(s) to the MNP License Agreement. As per the DoT, the Full MNP is to be implemented in the country within a period of 6 months from the date of amendment to the Licenses, i.e. 3<sup>rd</sup> May, 2015. Accordingly, the Authority issued 6<sup>th</sup> Amendment to the Telecommunication Mobile Number Portability Regulation, 2009 on 25<sup>th</sup> February 2015 which facilitated Full MNP (PAN India Portability) in the country w.e.f. 3<sup>rd</sup> May, 2015. Through this Amendment, apart from facilitating Pan-India Portability, a few changes have also been made in the porting process.

Some of the main objectives of National Telecom Policy 2012 are: (i) To achieve the rural tele-density of 70 by the year 2017; (ii) provide affordable reliable broadband on demand by the year 2015; and (iii) to achieve 175 Million broadband connections by the year 2017.

Through various measures taken by the Authority (i) the rural tele-density has reached 57 by the end of March 2017 and (ii) the broadband subscription has reached 276.52 Million i.e. more than the objective of NTP 2012.

One of the objectives of the NTP 2012 is to strengthen the Grievance Redressal Mechanisms to provide timely and effective resolution. On this front, TRAI has made recommendations dated 10<sup>th</sup> March 2017 as detailed below:

➤ **Recommendations dated 10<sup>th</sup> March 2017 on “Complaints/Grievance Redressal in Telecom Sector”**

2.15.2 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”. After going through the consultation process and internal analysis the Authority formulated and forwarded its recommendations to the Government on 10<sup>th</sup> March 2017.

The salient features of the recommendations are as follows:

a) 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.

- b) 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.
- c) A three stage grievance redressal mechanism for telecom sector is proposed as follows:
  - i. Resolution by Telecom Service Providers [TSPs]
  - ii. Resolution by Consumer Grievance Redressal Forum [CGRF]
  - iii. Determination by Telecom Ombudsman
- d) 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.
- e) 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.

- f) 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.
- g) 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.
- h) 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.
- i) 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.
- j) In order to function as an effective Body, the ombudsman should have the power to levy penalties on the TSPs.
- k) The ombudsman will have offices at national levels and sub-national levels covering each State.
- l) 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.
- m) 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.
- n) 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.

## (g) Quality of Service (QoS)

2.16. TRAI has laid down the benchmark for various Quality of Service parameters through the following regulations:

- (a) The Standards of Quality of Service of Basic Telephone Service (wireline) and Cellular Mobile Telephone Service Regulations, 2009.
- (b) The Quality of Service of Broad Service Regulations, 2006.
- (c) The Standards of Quality of Service for Wireless Data Services Regulations, 2012.

2.16.1 The Quality of Service performance of service providers against the benchmarks are assessed through compliance reports submitted by service providers. The compliance reports of Network related parameters for Cellular Mobile are submitted on monthly basis and all other compliance reports relating to 2G, 3G, Wireless Data Services, Basic services (Wireline) and Broadband services are submitted on a quarterly basis. For ensuring compliance with the Quality of Service benchmarks and to protect the interests of the consumers, TRAI had introduced the system of financial disincentives through the Second Amendment regulations issued on 8<sup>th</sup> November 2012. These regulations provide financial disincentives for non-compliance with the benchmarks, delay in submission of compliance reports and false reporting. These regulations were amended on 15<sup>th</sup> October, 2015 making the financial disincentives more stringent for Cellular Mobile Services in cases where there are continuous failures to meet the

benchmarks. For delay in submission of compliance report financial disincentives of Rs. 5,000/- per day. For false reporting, the financial disincentive is Rs. 10,00,000/- per parameter. The details of the financial disincentives for Non-Compliance are given below:

### Cellular Services

- Not exceeding Rupees one lakh per parameter for first non-compliance with the benchmark in a quarter,
- Non-compliance with the benchmark of the same parameter consecutively in two or more subsequent quarters, not exceeding Rupees one and a half lakhs for second consecutive contravention and not exceeding Rupees two lakhs for each consecutive contravention thereof;
- Non-compliance with the benchmark for the same parameter in any subsequent quarter, which is not a consecutive non-compliance, Rupees one lakh per parameter.

### Basic Services (Wireline)

For non-compliance with the benchmarks the financial disincentive is Rs. 50,000/- per parameter.

### Broadband Wireless Services

For non-compliance with the benchmarks first instance the financial disincentive is Rs. 50,000/- per parameter and for second and subsequent contravention, the financial disincentive is Rs. 1,00,000/- per parameter.

2.16.2 TRAI also undertakes audit and assessment of Quality of Service through independent agencies. The Audit work

was awarded for conducting Audit and Assessment of Quality of service on zonal basis to M/s CS Datamation South Zone, M/s PhilStream Consulting Private Limited for North Zone and M/s IMRB in West & East Zone. The audit reports submitted by the audit agencies during the year 2016-17 were analysed and released on the website of TRAI for information of all stakeholders. As a pilot project, TRAI has during the quarter Oct-Dec.16 awarded the contract for IVR Survey to M/s Viva connects Pvt. Ltd. for conducting survey in Delhi, Karnataka and Madhya Pradesh service areas and the IVR survey reports are also released on the website of TRAI for information of all stakeholders. The details of surveys are given in Part-III.

The performance of the service providers are evaluated every Quarter based on the compliance reports submitted by service providers and also based on the reports of the audit agencies engaged by TRAI. Wherever deficiencies in achieving the quality of service benchmarks have been noticed through close monitoring of the performance of service providers by way of periodic reports, audit and assessment of quality of service through independent agencies, TRAI has been following up with the service providers for addressing such deficiencies in achieving the benchmarks for the various parameters. In this regard, various meetings were held in TRAI with the service providers from time to time. These meetings and follow-up action with the service providers have been pivotal in improving the quality of service. Further, based on compliance reports, wherever

non-compliance with the benchmarks are observed, the explanation of the service provider is called for and considering the explanation submitted by the service provider, gravity of non-compliance, action taken to improve the service, financial disincentives are imposed on service providers. The total amount of financial disincentive received during the financial year 2016-17 on account of QOS regulations violations was Rs.7.57 crore. 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 IVR 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.

2.16.3 During the year 2016-17 TRAI has issued various Consultation Papers, {the details of which are given below} relating to Quality of Service for seeking the views of stakeholders;

- Pre Consultation on Net Neutrality dated 30<sup>th</sup> May 2016,
- Consultation Paper on Cloud Computing dated 10<sup>th</sup> June 2016,
- Consultation Paper on Review of network related Quality of Service standards for Cellular Mobile Telephone Service dated 5<sup>th</sup> August, 2016

- Consultation Paper on Net Neutrality dated 4<sup>th</sup> January 2017

2.16.4 TRAI has issued The Mobile Banking (Quality of Service) (Second Amendment) Regulations, 2016 dated 22<sup>nd</sup> November 2016 regulations in 2016-17 relating to Quality of Service for enabling Mobile Banking through USSB.

2.16.5 TRAI had also issued a Direction under section 13, read with sub-clauses (i) and (v) or clause (b) of sub-section (i) of section-11, of the Telecom Regulatory Authority of India Act 1997 (24 of 1997) and regulation 9 of the Standards of Quality of Service of Basic Telephone Service (wire line) and Cellular Mobile Telephone service Regulations, 2009 (7 of 2009) dated the 20<sup>th</sup> March 2009 regarding submission of data relating to Quality of Service of network parameters through web-service.

**(h) Universal Service Obligation**

2.17 The Authority in its Recommendations dated 14<sup>th</sup> May 2012 on Support for Rural Wire-line Connections, installed before 1<sup>st</sup> April 2002 stated that support to M/s BSNL may be continued for two years for sustenance of rural wire-line connections, installed before 1<sup>st</sup> April 2002. The amount of support may be Rs.1500 Crore for the first year and Rs.1250 Crore for the second year.

**ADVISORY**

**Advisory dated 17<sup>th</sup> August, 2016 to Multi System Operators to provide signals of TV channels to LCOs only with written interconnection agreement**

2.18 The Telecommunication (Broadcasting and Cable Services) Interconnection (Digital Addressable Cable Television Systems) Regulations, 2012 requires that no Multi System Operator shall make available signals of TV channels to any linked local cable operator without entering into a written interconnection agreement and MSO shall handover a copy of the interconnection agreement signed by the MSO & LCO to the respective LCO within 15 days and obtain an acknowledgement thereof.

TRAI has also notified formats of the Model Interconnection Agreement (MIA) and Standard Interconnection Agreement (SIA) to be signed between MSOs and LCOs, so that there is a level playing field and less disputes between MSOs and LCOs. While the MIA enables MSOs and LCOs to have a mutual agreement in a structured manner in line with the regulatory framework, the SIA provides standard terms and conditions prescribed by the regulation that can be adopted by MSOs & LCOs for retransmission of TV signal, if they fail to mutually agree on MIA.

It has been brought to the notice of TRAI that some MSOs are alluring LCOs to provide signal without entering into written interconnection agreement. Such arrangements are against the interconnection regulations and also may result in disputes.

Accordingly, on 17<sup>th</sup> August, 2016, all MSOs were advised not to venture into such deals/arrangements which are liable to be punished under the TRAI Act.

## Other Activities

### Telecom

#### Consumer Outreach Programme (CoP)

2.19.1 During the year 2016-17, TRAI organized 85 Consumer Outreach Programmes (CoPs) across the country. State-wise list of CoPs organized by TRAI is given as annexure at the end of this part of the report. 6 Regional Workshops for capacity building of TRAI registered Consumer Advocacy Groups and consumer education were organized at Aizawl, Nainital, Kodaikanal, Nagpur, Rajkot and Bhubaneswar.

#### Media Campaigns

2.19.2 TRAI carried out media campaigns in print media and FM Radio on several important issues of consumer interest. Advertisements have been taken out in English, Hindi and other regional languages across the country on Tower Fraud, Toll Free Complaint Centre Number '198', Mobile Data Services, Myspeed App. and DND App. for creating widespread awareness among the consumers.

#### Registration of Consumer Advocacy Groups

2.19.3 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. As on 31<sup>st</sup> March 2017, 56 CAGs are registered with TRAI.

#### "Ease of doing business"

2.19.4 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 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 14<sup>th</sup> March 2017 to provide inputs with detailed explanation and justification. The paper is available in the official website at [www.trai.gov.in](http://www.trai.gov.in).

**Stakeholders Consultative Workshop dated 28<sup>th</sup> September, 2016 on "Public**

### **Wi-Fi: Commercial Models and Interoperability” at Bengaluru**

2.19.5 Stakeholders Consultative Workshop on ‘Public Wi-Fi: Commercial Models and Interoperability’ in academic collaboration with International Institute of Information Technology, Bangalore (IIIT-Bangalore) was conducted on 28<sup>th</sup> September, 2016 at Bengaluru. The workshop was attended by Telecom service providers (TSPs), Internet Service Providers (ISPs), Payment Solution Firms and Start-Ups, Wi-Fi solution providers, Wi-Fi Mobile Device Makers, Academia, System Integrators, Network Equipment Manufacturers, Software Vendors and Government Officials.

Experts from different areas and industry segments presented their view points and shared experiences. The intent was to get valuable feedback and comments from the above stakeholders on this very important theme.

### **Seminar dated 24<sup>th</sup> October, 2016 on “Unsolicited Downloads and Background Exchanges when using the Internet”**

2.19.6 TRAI in academic partnership with the Indian Institute of Technology Hyderabad conducted a Seminar on “Unsolicited Downloads and Background Exchange when using the Internet” on 24<sup>th</sup> October, 2016 at Hyderabad.

### **Seminar on “Brainstorming Broadband: Developing a Roadmap for India”**

2.19.7 TRAI in collaboration with National Institute of Public Finance & Policy (NIPFP) conducted a Seminar on 18<sup>th</sup> 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.

### **Open House Discussion on Consultation Paper on ‘In-building Access by Telecom Service Providers’**

2.19.8 An Open House Discussion on Consultation Paper on ‘In-building Access by Telecom Service Providers’ was held in New Delhi on 30<sup>th</sup> September 2016.

### **Open House Discussion on Consultation Paper on ‘Captive VSAT CUV Policy Issues’**

2.19.9 An Open House Discussion (OHD) on Consultation Paper on ‘Captive VSAT CUV Policy Issues’ was held on 19<sup>th</sup> January 2017 at New Delhi.

## **Broadcasting Sector**

### **Decision of the Authority relating to “Inflation linked hikes for TV tariff”**

2.19.10 TRAI, on 9<sup>th</sup> May 2016, uploaded the Decision of the Authority relating to ‘Inflation linked hikes for TV tariff’ through press release. Pursuant to the observation of the Hon’ble Supreme Court in its final orders dated 4<sup>th</sup> August 2015 while upholding the order dated 28<sup>th</sup> April 2015 of the Hon’ble TDSAT, the matter was examined afresh by TRAI taking into account the GDP Deflator as a measure of the inflation. Other associated factors like increase in the number of subscribers and also the increase in total revenues accrued to the broadcasters were studied to carry out a detailed and holistic analysis of the issues at hand.

During analysis of relevant data and the impact of various factors on the issue of inflation linked hikes in tariff ceilings at the wholesale levels, the Authority has observed that the annual revenues that actually accrued to the broadcasters have surpassed the estimated revenues that should have accrued to them after taking into account the year-on-year hike in inflation as calculated using the GDP deflator. The compound annual growth rate (CAGR) of the year-on-year revenues accruing to the broadcasters has also witnessed a positive growth. More importantly, this growth has kept well ahead of the estimated revenues compensated for the year-on-year change in the inflation as computed using the GDP deflator.

Consequent to aforesaid analysis of the facts, the Authority has observed that there is a healthy growth in the industry with rise in revenues outstripping the increasing inflation over the years and

therefore concluded that inflation linked hike provided earlier vide Eleventh T.A.O. and Thirteenth T.A.O. dated 31<sup>st</sup> March 2014 and 31<sup>st</sup> December 2014 respectively, which have been set aside by Hon’ble TDSAT vide its order dated 28<sup>th</sup> April 2015 and the said order of Hon’ble TDSAT has also been upheld by the Hon’ble Supreme Court of India, are not required at present.

**Open House Discussion (OHD) dated 18<sup>th</sup> May 2016 on the Consultation Paper on “Issues related to Radio Audience Measurement and Ratings in India”**

2.19.11 An Open House Discussion (OHD) on the consultation paper on “Issues related to Radio Audience Measurement and Ratings in India” was held on 18<sup>th</sup> May 2016 at India International Centre, New Delhi.

**Open House Discussion on Consultation Paper on “Tariff Issues related to TV Services”**

2.19.12 Open House Discussion on Consultation Paper on “Tariff Issues related to TV Services” was held on 8<sup>th</sup> April 2016 at New Delhi and 21<sup>st</sup> April 2016 at Raipur Chhattisgarh.

**Open House Discussion (OHD) on “Register of Interconnection Agreements (Broadcasting and Cable Services) Regulations 2016”**

2.19.13 An Open House Discussion (OHD) on the ‘Register of Interconnection Agreements (Broadcasting and Cable Services’ Regulations 2016, was held on 26<sup>th</sup> May, 2016 at India Habitat Centre, New Delhi.

**Open House Discussion (OHD) on the Consultation Paper on “Issues related to Quality of Services in Digital Addressable Systems and Consumer Protection”**

2.19.14 An Open House Discussion (OHD) on the Consultation Paper ‘Issues related to Quality of Services in Digital Addressable Systems and Consumer Protection’ was held on 28<sup>th</sup> July 2016 at India International Centre New Delhi.

**Open House Discussion (OHD) dated 13<sup>th</sup> July 2016 on the Consultation Paper on “Interconnection framework for Broadcasting TV Services distributed through Addressable Systems”**

2.19.15 An Open House Discussion (OHD) on the consultation paper “Interconnection framework for Broadcasting TV Services distributed through Addressable Systems” was held on 13<sup>th</sup> July 2016 at PHD Chambers of Commerce & Industry, New Delhi.

**Open House Discussion (OHD) on the Consultation Paper on “Complaints / Grievance Redressal in Telecom Sector.” was held on 26<sup>th</sup> October, 2016**

2.19.16 An Open House Discussion (OHD) on the Consultation Paper “Complaints / Grievance Redressal in Telecom Sector” was held on 26<sup>th</sup> October, 2016 at India Habitat Centre, Lodhi Road, New Delhi.

**Open House Discussion (OHD) dated 19<sup>th</sup> October 2016 on the Consultation Paper on “Issues related to Digital Terrestrial Broadcasting in India”**

2.19.17 An Open House Discussion (OHD) on the consultation paper “Issues related to

Digital Terrestrial Broadcasting in India” was held on 19<sup>th</sup> October 2016 at PHD Chambers of Commerce & Industry, PHD House, New Delhi.

**Open House Discussion (OHD) dated 19<sup>th</sup> December 2016 on the Consultation Paper on “Infrastructure Sharing in Broadcasting TV Distribution System”**

2.19.18. An Open House Discussion (OHD) on the consultation paper “Infrastructure Sharing in Broadcasting TV Distribution System” was held on 19<sup>th</sup> December 2016 at PHD Chambers of Commerce, New Delhi.

**Data relating to average duration per hour of advertisements (commercial & self promotional) during peak hours in News & pay Non-news Channels**

2.19.19 Data relating to average duration per hour of advertisements (commercial & self promotional) during peak hours in News & pay Non-news Channels for the period 28<sup>th</sup> December 2015 to 27<sup>th</sup> March 2016 was uploaded on TRAI’s website on 27<sup>th</sup> May 2016.

**Data relating to average duration per hour of advertisements (commercial & self promotional) during peak hours in News & pay Non-news Channels**

2.19.20 Data relating to average duration per hour of advertisements (commercial & self promotional) during peak hours in News & pay Non-news Channels for the period 28<sup>th</sup> March 2016 to 26<sup>th</sup> June 2016 was uploaded on TRAI’s website on 7<sup>th</sup> November 2016.

**Data relating to average duration per hour of advertisements (commercial &**

**self promotional) during peak hours in pay News & pay Non-news Channels**

2.19.21 Data relating to average duration per hour of advertisements (commercial & self promotional) during peak hours in News & pay Non-news Channels for the period 27<sup>th</sup> June 2017 to 25<sup>th</sup> September 2017 was uploaded on TRAI's website on 21<sup>st</sup> February 2017.

**Letter dated 21<sup>st</sup> June, 2016 to 48 Pay Broadcasters and 15 major MSOs in r/o re-transmission of signals of TV channels through Digital Addressable System (DAS) only in DAS notified areas**

2.19.22 It is mandatory for every cable operator to transmit or re-transmit programmes of any channel in an encrypted form through digital addressable system in such cities (areas) from such date as specified in the notification issued by Central Government under sub-section 1 of section 4A of the Cable Television Networks (Regulation) Act, 1995 (7 of 1995). As such, any transmission or retransmission of TV channels in analog mode in DAS notified areas is in contravention to the provisions of the Cable Television Networks (Regulation) Act, 1995 (7 of 1995). Accordingly, as soon as it was brought to the notice of TRAI that some multi system operators are still re-transmitting signals of TV channels in analog/un-encrypted mode in the areas notified by the Government of India for provisioning of cable TV services through digital addressable systems (DAS), 15 major MSOS have been directed to ensure provisioning of signals of TV channels only

through digital addressable system in DAS notified areas wherever the cut-off date as provided in the relevant notification issued by Government of India under section 4A of the Cable Television Networks (Regulation) Act, 1995 (7 of 1995) is over. All the broadcasters of pay channels were also directed not to provide signals of TV channels to such MSOs who are re-transmitting signals of TV channels in analog/un-encrypted mode in DAS notified areas without any authority of law and in contravention of the Cable Television Networks (Regulation) Act, 1995 (7 of 1995).

**Interaction with 'Multi System Operator' and 'Local Cable Operators'**

2.19.23 The 1<sup>st</sup> interaction with "Multi System Operator" and "Local Cable Operators" was held on 15<sup>th</sup> June 2016 at Bangalore coordinated by Regional Office, Bangalore.

The 2<sup>nd</sup> interaction with "Multi System Operator" and "Local Cable Operators" was held on 27<sup>th</sup> July, 2016 at Lucknow coordinated by Regional Office, Bhopal .

The 3<sup>rd</sup> interaction with 'Multi System Operator' and 'Local Cable Operators' was held on 12<sup>th</sup> August 2016 at Agra coordinated by Regional Office, Bhopal .

**Multi System Operators to provide signals of TV channels to LCOs only with written interconnection agreement.**

2.19.24 The Telecommunication (Broadcasting and cable services) Interconnection (Digital Addressable Cable Television Systems) Regulations, 2012 requires that no Multi System Operator shall make available

signals of TV channels to any linked local cable operator without entering into a written interconnection agreement and MSO shall handover a copy of the interconnection agreement signed by the MSO & LCO to the respective LCO within 15 days and obtain an acknowledgement thereof.

TRAI has also notified formats of the Model Interconnection Agreement (MIA) and Standard Interconnection Agreement (SIA) to be signed between MSOs and LCOs, so that there is a level playing field and less disputes between MSOs and LCOs. While the MIA enables MSOs and LCOs to have a mutual agreement in a structured manner in line with the regulatory framework, the SIA provides standard terms and conditions prescribed by the regulation that can be adopted by MSOs & LCOs for retransmission of TV signal, if they fail to mutually agree on MIA.

It was brought to the notice of TRAI that some MSOs are alluring LCOs to provide signal without entering into written interconnection agreement. Such arrangements are against the interconnection regulations and also may result in disputes.

Accordingly, all MSOs were advised not to venture into such deals/arrangements which are liable to be punished under the TRAI Act.

**Demonstration by C-DoT for STB**

2.19.25 The C-DoT made a demonstration on 24<sup>th</sup> December 2016 showing the framework for Set Top Box Interoperability.

**Report on Activities**

2.19.26 A Report on Activities of TRAI from 1<sup>st</sup> January 2016 to 31<sup>st</sup> December 2016 was also published to give the stakeholders a broader view and better understanding of initiatives taken by the Authority to enhance the growth of telecom and broadcasting sector and also the measures taken to protect the consumer interest.

**International Relations**

**2.19.27 International Training/ Meeting**

- (i) An ITU Training Programme on Bridging the Standardization Gap (BSG) – was held 25<sup>th</sup> & 28<sup>th</sup> April 2016 at TRAI Office, New Delhi.
- (ii) An ITU-T Study Group 3 Regional Group meeting was held at Hotel Claridges, New Delhi from 20<sup>th</sup> to 22<sup>nd</sup> September, 2016.
- (iii) A SATRC Working Group Meeting was held on Spectrum, New Delhi from 24<sup>th</sup> to 25<sup>th</sup> May, 2016.

**Signing of Lol/ agreement with International Regulators/ Institution**

- (i) A Lol was signed between Federal Communication Commission (FCC) and TRAI on 28<sup>th</sup> Feb 2017 at Barcelona.
- (ii) A General Agreement for Collaboration was signed between TRAI and the University of Florida on 2<sup>nd</sup> August 2016.

**International Delegation**

- A delegation led by Ms. Tarana Halim, Hon’ble State Minister of Posts and Telecommunications of Bangladesh visited TRAI on 26<sup>th</sup> July 2016 for a bilateral

Meeting with Chairman TRAI and senior officers of TRAI.

- A delegation from BTRC (Bangladesh Telecommunication Regulatory Commission) headed by their Chairman visited TRAI on 11<sup>th</sup> August, 2016 for a bilateral Meeting with Chairman TRAI and senior officers of TRAI.
- A delegation from Ministry of Information & Communication, Bhutan headed by Mr. Dasho Karma W. Penjor, Secretary visited TRAI for the bilateral meeting with Authority & Senior Officers, TRAI on 19<sup>th</sup> September 2016.
- Mr. Chaesub Lee, Director of the Telecommunication Standardization Bureau, ITU visited TRAI for bilateral meeting with Chairman, TRAI on 3<sup>rd</sup> March, 2017.
- A delegation from Morocco visited TRAI for a bilateral meeting with the Chairman, TRAI on 30<sup>th</sup> March, 2017.
- A seven member delegation chaired by Mr. Sebastien Soriano, Chairman, Body of European Regulators for Electronic Communications and Chairman, ARCEP visited TRAI on 31<sup>st</sup> March, 2017 for a bilateral meeting with Secretary and officers of TRAI.

**Administrative, Legal and Financial Issues Pending with Department of Telecommunications (DoT)**

In addition with the various matters discussed in the report, there are certain important issues pending with DoT for decision. The following Paras elaborate such Administrative, Legal and Financial Issues which are pending with DoT:

**(i) Proposal for Amendment of TRAI Act 1997**

TRAI has been established under TRAI Act 1997, inter-alia to regulate the Telecommunication services and to protect the interest of service providers and consumers of telecom sector. The Authority has been conferred powers to issue directions, regulations and orders in discharge of its regulatory functions but does not have any power to take punitive action to secure compliance of the regulatory measures taken by it. In order to ensure effective discharge of its functions under TRAI Act, 1997 the Authority sent a comprehensive proposal for amendment in the TRAI Act in the year 2007. Thereafter, several correspondences were made with DoT and two draft notes for Cabinet were also prepared by DoT but the proposed amendments have not yet been made. Recently, vide letter dated 3<sup>rd</sup> June 2016, a proposal to make suitable amendments in the TRAI Act incorporating provisions for protection of the interests of consumers and conferring penal powers upon TRAI was sent to DoT. Meetings were also held with the officers of TRAI, which was chaired by the Secretary, DoT. **The issue is under active consideration of DoT.**

**(ii) Amendment in Schedule I of TRAI (Salary, Allowances and other conditions of service of the officers and employee) Rules, 2002**

Schedule I of TRAI (Salary, Allowances and other conditions of service of the officers and employee) Rules, 2002 still shows the

pay scale of 5<sup>th</sup> CPC, whereas Government has implemented the recommendations of 6<sup>th</sup> Pay Commission & now even 7<sup>th</sup> Pay Commission.

The posts of Assistant Accounts Officer and Junior Account Officer, which were re-designated as Technical Officer and Section Officer, are to be deleted from Schedule-I of Rule 2002.

Further, DoT had given in principle approval for operating the posts of PCMO and Despatch Rider in TRAI vide letter No. 10-2/2004-Restg. dated 15<sup>th</sup> July 2004. DoT was also requested vide letter No. 5-1/2014-A&P dated 5<sup>th</sup> February 2017 and reminders dated 5<sup>th</sup> November 2014 & 27<sup>th</sup> November 2014 to incorporate in Schedule I of the said Rules four grade of Drivers in compliance of the OM No AB-14017/10/2014-Estt (RR) (3104937) dated 4<sup>th</sup> July, 2014 of DoP&T containing Model Recruitment Rules for Drivers. However, these posts have not so far been included in Schedule-I of the said rules.

TRAI has been persistently requesting DoT to amend the Schedule-I to incorporate all the above changes.

**(iii) Medical facility to employees of TRAI after their retirement**

Medical facility to employees of TRAI is governed by the Schedule II of TRAI (Salary, Allowance and other conditions of Service of the officers and employees) Rules, 2002. For inclusion of Medical

facility to employees of TRAI after their retirement, as suggested by DoT, TRAI had prepared the Draft Medical Rules on the lines of CS (MA) Rules, 1944 and sent the same to DoT vide letter No. 9-9/2007-A&P Dated 14<sup>th</sup> March, 2014. The matter is still pending with DoT.

**(iv) Issues relating to EL and HPL admissible to the Authority**

The terms and conditions of service of the Chairperson and whole-time Members of TRAI are governed by TRAI (Salary, Allowances and other conditions of service of Chairperson and whole-time Members) Rules, 2000 dated 26<sup>th</sup> June 2000. As per the Rule 3 of the said rule, the Chairperson and Whole-time Members of TRAI are entitled to encash upto 50% of their earned leave. A proposal vide DO letter No. 2-Member(1)/2012-A&P dated 17<sup>th</sup> August 2013 was sent to DoT with a request for amendment in the rule for encashment of 100% earned leave instead of existing limit of 50%.

Further, the said rules do not allow grant of half pay leave/commuted leave to the Chairperson and Members of the Authority. DoT was requested vide DO letter No. 13-1/2014-A&P dated 7<sup>th</sup> February, 2014 to allow half pay leave/commuted leave to the Chairperson and Members of the Authority as available to Group-A Officers of Central Government.

The matter is still pending with DoT.

**Annexure**

**Places where COPs were organised by Regional Offices of TRAI during 2016-17**

S.No	State	Place
1	Andhra Pradesh	Ananthapur
2		Ongole
3		Srikakulam
4	Arunachal	Itanagar
5	Assam	Nagaon
6		Tinsukia
7	Bihar	Rajgir
8		Patna
9	Chhatisgarh	Raipur
10		Rajnandgaon
11	Goa	Margao
12	Gujarat	Anand
13		Godhra
14		Akodra
15	Haryana	Faridabad
16		Narnaul
17		Panipat
18		Jhajjar
19	Himachal Pradesh	Nahan
20		Dalhousie
21		Solan
22		Palampur
23		Bilaspur
24		Parwanoo
25	Jammu & Kashmir	Jammu
26	Jharkhand	Giridih
27		Deoghar
28		Jamshedpur
29	Karnataka	Dharwad
30		Bidar
31		Bagalkot
32		Godag
33		Koppal

S.No	State	Place
34	Kerala	Wayanad
35	Maharashtra	Sangli
36		Nanded
37		Ratnagiri
38		Wardha
39		Yayatmal
40		Jalna
41		Osmanabad
42		Beed
43		Mizoram
44	Madhya Pradesh	Dhar
45		Mandla
46		Raisen
47		Khargone
48		Itarsi
49	Odisha	Sambalpur
50		Balangir
51		Puri
52		Dhenkanal
53	Punjab	Moga
54		Gurdaspur
55		Mohali
56		Fatehgarh Sahib
57	Rajasthan	Jaisalmer
58		Dausa
59		Phootalao
60		Dholpur
61		Karauli
62		Phalodi, Jodhpur
63	Sikkim	Gangtok
64	Telagana	Adilabad
65		Siddipet
66	Tamil Nadu	Arunachalam
67		Hosur
68		Tiruvallur
69		Chennai
70	Tripura	Agartala

S.No	State	Place
71	Uttar Pradesh	Gorakhpur
72		Lalitpur
73		Jaunpur
74		Saharanpur
75		Etawah
76		Raebareli
77		Unnao
78	Uttarakhand	Dehradun
79		Haridwar
80	West Bengal	Canning
81		Raigang
82		Bolpur
83		Islampur
84		Kolkata
85	Port Blair	Andaman & Nicobar Islands



Chairman TRAI interacting with the participants in an Open House Discussion held on 30<sup>th</sup> September 2016. Others on the dais are (from left to right) Shri Sanjeev Banzal, Advisor, Shri Sudhir Gupta, Secretary, Shri Anil Kaushal, Member TRAI and Shri U.K.Srivastava, Principal Advisor.



Chairman TRAI interacting with the participants in an Open House Discussion held on 8<sup>th</sup> April 2016 on “Tariff Issues related to TV Services”. Others on the dais are (from left to right) Shri S.K.Singhal, Advisor, Shri Sudhir Gupta, Secretary, Shri Anil Kaushal, Member TRAI and Shri S.K.Gupta, Principal Advisor.



Chairman TRAI interacting with the participants in an Open House Discussion held on 9th January 2017 on "Proliferation of Broadband through Public Wi-Fi Networks". Others on the dais are (from left to right) Shri U.K.Srivastava, Principal Advisor, Shri Sudhir Gupta, Secretary, Shri Anil Kaushal, Member TRAI and Shri Arvind Kumar, Advisor.



Shri Sunil Kumar Gupta, Principal Advisor interacting with the participants in an Open House Discussion held on 13th July 2016 on "Interconnection Framework for Broadcasting TV Services Distribution through Addressable Systems". Others on the dais are (from left to right) Shri S.K.Singhal, Advisor, Shri Sudhir Gupta, Secretary, Shri Ram Sewak Sharma, Chairman TRAI and Shri Anil Kausha, Member TRAI

## **PART – III**

# **FUNCTIONS OF TELECOM REGULATORY AUTHORITY OF INDIA IN RESPECT OF MATTERS SPECIFIED IN SECTION 11 OF TELECOM REGULATORY AUTHORITY OF INDIA ACT**



# FUNCTIONS OF TELECOM REGULATORY AUTHORITY OF INDIA IN RESPECT OF MATTERS SPECIFIED IN SECTION 11 OF TELECOM REGULATORY AUTHORITY OF INDIA ACT

*Section 11 of the Telecom Regulatory Authority of India Act, 1997, as amended, provides that –*

- (1) notwithstanding anything contained in the Indian Telegraph Act, 1885 (13 of 1885), the functions of the Authority shall be to—*
  - (a) make recommendations, either suo motu or on a request from the licensor, on the following matters, namely:*
    - (i) need and timing for introduction of new service provider;*
    - (ii) terms and conditions of licence to a service provider;*
    - (iii) revocation of licence for non-compliance of terms and conditions of licence;*
    - (iv) measures to facilitate competition and promote efficiency in the operation of telecommunication services so as to facilitate growth in such services;*
    - (v) technological improvement in the services provided by the service providers;*
    - (vi) type of equipment to be used by the service providers after inspection of equipment used in the network;*
    - (vii) measures for the development of telecommunication technology and any other matter relatable to telecommunication industry in general;*
    - (viii) efficient management of available spectrum;*

- (b) discharge the following functions, namely:
- (i) ensure compliance of terms and conditions of licence;
  - (ii) notwithstanding anything contained in the terms and conditions of the licence granted before the commencement of the Telecom Regulatory Authority of India (Amendment) Act, 2000, fix the terms and conditions of inter-connectivity between the service providers;
  - (iii) ensure technical compatibility and effective interconnection between different service providers;
  - (iv) regulate arrangement amongst service providers of sharing their revenue derived from providing telecommunication services;
  - (v) lay-down the standards of quality of service to be provided by the service providers and ensure the quality of service and conduct the periodical survey of such service provided by the service providers so as to protect interest of the consumers of telecommunications service;
  - (vi) lay-down and ensure the time period for providing local and long distance circuits of telecommunication between different service providers;
  - (vii) maintain register of interconnect agreements and of all such other matters as may be provided in the Regulations;
  - (viii) keep register maintained under clause (vii) open for inspection to any member of public on payment of such fee and compliance of such other requirement as may be provided in the regulations;
  - (ix) ensure effective compliance of universal service obligations.
- (c) levy fees and other charges at such rates and in respect of such services as may be determined by Regulations;
- (d) perform such other functions including such administrative and financial functions as may be entrusted to it by the Central Government or as may be necessary to carry out the provisions of this Act:

*Provided that the recommendations of the Authority specified in clause (a) of this sub-section shall not be binding upon the Central Government.*

*Provided further that the Central Government shall seek the recommendations of the Authority in respect of matters specified in sub-clauses (i) and (ii) of clause (a) of this sub-section in respect of new licence to be issued to a service provider and the Authority shall forward its recommendations within a period of sixty days from the date on which that Government sought the recommendations:*

*Provided also that the Authority may request the Central Government to furnish such information or documents as may be necessary for the purpose of making recommendations under sub-clauses (i) and (ii) of clause (a) of this sub-section and that Government shall supply such information within a period of seven days from receipt of such request:*

*Provided also that the Central Government may issue a licence to a service provider if*

*no recommendations are received from the Authority within the period specified in the second proviso or within such period as may be mutually agreed upon between the Central Government and the Authority:*

*Provided also that if the Central Government having considered that recommendation of the Authority, comes to a prima facie conclusion that such recommendation cannot be accepted or needs modifications, it shall, refer the recommendation back to the Authority for its reconsideration, and the Authority may within fifteen days from the date of receipt of such reference, forward to the Central Government its recommendation after considering the reference made by that Government. After receipt of further recommendation if any, the Central Government shall take a final decision.*

- (2) *Notwithstanding anything contained in the Indian Telegraph Act, 1885 (13 of 1885), the Authority may, from time to time, by order, notify in the Official Gazette the rates at which the telecommunication services within India and outside India shall be provided under this Act including the rates at which messages shall be transmitted to any country outside India:*

*Provided that the Authority may notify different rates for different persons or class of persons for similar telecommunication services and where different rates are fixed as aforesaid the Authority shall record the reasons there for.*

- (3) *While discharging its functions under sub-section (1) or subsection (2) the Authority shall not act against the interest of the sovereignty and integrity of India, the security of the State, friendly relations with foreign States, public order, decency or morality.*
- (4) *The Authority shall ensure transparency while exercising its powers and discharging its functions.*

3. The Authority, in pursuance of achieving the objectives of ensuring growth of industry and protecting interest of consumers has made several Recommendations either *suo moto* or on matters referred to it by the Government; notified various Regulations to carry out purposes of the Act; taken action to enforce licence terms and conditions; and initiated work on several other issues. By discharging various recommendatory & regulatory functions, TRAI has contributed to growth of telecom services including the broadcasting and cable TV services in terms of increased number of consumers and a vast network providing telecom services across the

length and breadth of the country. These continued measures have also resulted in overall benefits to the consumer in terms of choice of services, reduced tariff of telecom service, better quality of service etc. Some of the specific functions carried out by TRAI in respect of various matters specified in Section 11 of the TRAI Act are given below.

**(a) Telecommunication rates both within India and outside India including the rates at which messages shall be transmitted to any country outside India.**

3.1 Section 11 (2) of the Telecom Regulatory Authority of India Act, 1997 as amended

by TRAI (Amendment) Act, 2000, empowers the Authority to notify in the Official Gazette the rates at which telecommunication services within India and outside India shall be provided, including the rates at which the messages shall be transmitted to any country outside India. It also provides that the Authority may notify different rates for different persons or class of persons for similar telecommunication services. Besides specifying the tariff regime applicable to various services, TRAI is also required to ensure that tariffs prevailing in the market are consistent with the specified tariff regime. For this purpose, the Authority monitors the rates at which the service providers provide the various telecom services. Further, the function of specifying norms for fixation of rates for Pay Channels as well as fixation of rates for Cable Services is also assigned to TRAI. Details of action taken by TRAI in Telecom Sector and Broadcasting & Cable Sector during 2016-17 are discussed in the following paragraphs.

- 3.1.1 TRAI looks after consumer interests through tariff regulation. Tariff regulation takes the form of ensuring clarity and transparency in tariff offers to consumers and fixing tariff charges where the market is not delivering optimal rates. The specific measures taken in the telecom sector are as under:

➤ **Guidelines for Telecom Service Providers for ensuring transparency and uniformity in the process of tariff recharges/payments through Third Party Apps/Websites**

3.1.1.1. In the recent past in Indian telecom service sector, tariff recharges/payment of bills through third party Apps/websites recharges (*hereinafter referred as Channel Partner*) have been increasingly recognised as a convenient mode of transaction. However, there exists a possibility of time gap in updating the information on websites/applications on the day of tariff product launch/revision between the Telecom Service Provider (TSP) and the Channel Partner(s), which may cause inconsistency and subscribers may not get perceived benefits. Considering the process involved and magnitude of growing transactions, the Authority, with an objective to ensure transparency, uniformity and protection to the subscribers in the process of tariff recharges/payments through Channel Partner or sub Channel Partners issued following Guidelines on 14<sup>th</sup> October 2016:

There should not be any difference in the features of tariff products and benefits available on the TSP's website and Channel Partner's / sub Channel Partner's website(s)/app(s). A mechanism should be introduced by the TSP(s) where a new tariff product or any change in any tariff product is updated concurrently on Channel Partner(s) App(s)/website(s).

Since Channel Partner(s)/sub Channel Partner(s) are non-licensed entities and appointed by TSP(s) based on mutually agreed terms and conditions between TSP and Channel Partner(s)/sub Channel Partner(s), all responsibilities for ensuring compliance of terms and conditions of the license agreement and other regulatory guidelines shall remain with the TSP.

Any new tariff product or change in existing tariff product to be made live only at midnight (between 00:00 Hrs and 02:00 Hrs) on the date of the launch or change in tariff product.

➤ **Telecommunication Tariff (Sixty First & Sixty Second Amendment) Order, 2016 for reducing the present ceiling tariff for the use of USSD for USSD based mobile banking on payment services from Rs.1.50 to Rs.0.50**

3.1.1.2 Telecom Regulatory Authority of India (TRAI) has notified the Telecommunication Tariff (Sixty First Amendment) Order, 2016 on 22<sup>nd</sup> November, 2016 thereby:-

- (a) Reducing the ceiling tariff for the use of USSD for USSD based mobile banking and payment services from Rs.1.50 to Rs.0.50.
- (b) Making USSD session applicable for banking services as well as all kind of third party payments. Therefore, the 'USSD session for mobile banking service' is renamed as 'USSD session for mobile banking and payment service'.

➤ **Consultation Paper dated 17<sup>th</sup> February, 2017 on 'Regulatory Principles of Tariff Assessment'**

3.1.1.3 Telecom Regulatory Authority of India released a Consultation Paper on 'Regulatory principles of tariff assessment on 17<sup>th</sup> February, 2017. 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 for comments of the stakeholders.

In Broadcasting Sector also, during the reporting period, the Authority notified various tariff orders for DAS, DTH for regulating the broadcasting tariff to safe guard the interest of the customers. The following specific measures were taken in the broadcasting sector.

### Tariff Order for Addressable Systems

3.1.1.4. TRAI notified Tariff Order (TAOs) on 3<sup>rd</sup> March 2017 applicable to broadcasting services relating to television provided to subscribers, through addressable systems, throughout the territory of India. While framing the tariff order, the emphasis of the Authority was to ensure transparency, non-discrimination, consumer protection and create an enabling environment for orderly growth of the sector. The new framework attempted to address all the issues raised by the broadcasters, distributors of television channels and subscribers. The broadcaster will have to declare their channels as 'Pay' or 'Free-to-Air' (FTA). Broadcasters have been given complete flexibility to declare Maximum Retail Price (MRP) of their pay channels to subscribers with no restrictions as long as such channels are provided to consumers

individually. However, if a pay channel is provided as part of a bouquet, MRP of such pay channel cannot be more than Rs 19/-. This is to ensure protection of interest of consumers as bouquet deals are oblique to individual channel price. The new framework in no way restricts or curtails the freedom of broadcasters to price their channels. Provisions have also been made to ensure that no additional charges are levied for subscribing to FTA channels.

Further, Distributor of Television channels are permitted to charge a Network Capacity Fee of Maximum Rs 130/- (excluding taxes) per month from a subscriber for subscribing to a network capacity of 100 SD channels. This will ensure reasonable rate of return to the DPOs on investments in the existing distribution networks as well as incentivize them for additional investment to ensure better network quality for providing value added services and broadband to subscribers. In order to provide choice to the subscribers and to curb skewed prices of a-la-carte channels as compared to bouquets, the Authority has mandated that a broadcaster can offer a maximum discount of 15% while offering its bouquet of pay channels over the sum of MRPs of all the pay channels in that bouquet. The restriction of maximum discount of 15% on formation of bouquet is to ensure that subscriber is not forced to take a channel which he doesn't want. Forcing of non-driver channels to subscribers not only reduces choice of subscribers but also eats away bandwidth of distributors of television channels restricting entry of new and more

competitive channels. It is hoped that new framework will bring transparency, level playing field, encourage consumer choice and growth of the sector.

**b) Recommendations on (i) the need and timing of the new service providers; (ii) the terms and conditions of license to a new service provider; and (iii) revocation of licence for non-compliance of terms and conditions of licence.**

3.2 Under Section 11 (1) (a) of the TRAI Act 1997, the Authority is required to make recommendations either *suo moto* or on a request from the licensor, i.e., Department of Telecommunications or Ministry of Information & Broadcasting in the case of Broadcasting and Cable Services. Recommendations forwarded by TRAI to Government during 2016-17 are given below:-

- Clarifications/Reconsideration dated 18<sup>th</sup> April 2016 of Recommendations on "Valuation and Reserve Price of Spectrum in 700 MHz, 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz and 2500 MHz bands dated 27<sup>th</sup> January 2016.
- Recommendations dated 9<sup>th</sup> May, 2016 on "Sale/Rent of International Roaming SIM Cards/Global Calling Cards in India".
- TRAI's reply dated 24<sup>th</sup> May, 2016 on "Redefining the definition of Broadband Speed/increasing the broadband speed".
- Clarification/Reconsideration dated 12<sup>th</sup> July, 2016 on "Recommendations on Valuation and Reserve Price of Spectrum in 700 MHz, 800 MHz, 900 MHz, 1800

- MHz, 2100 MHz, 2300 MHz and 2500 MHz bands.
- Recommendations dated 21<sup>st</sup> October, 2016 in respect of violation of the provisions of the license agreements and the standards of QoS of basic telephone service (Wireline) and Cellular Mobile Telephone Service Regulations, 2009 by M/s Bharti Airtel.
- Recommendations dated 21<sup>st</sup> October, 2016 in respect of violation of the provisions of the license agreements and the standards of QoS of basic telephone service (Wireline) and Cellular Mobile Telephone Service Regulations, 2009 by M/s Idea Cellular Ltd.
- Recommendations dated 21<sup>st</sup> October, 2016 in respect of violation of the provisions of the license agreements and the standards of QoS of basic telephone service (Wireline) and Cellular Mobile Telephone Service Regulations, 2009 by M/s Vodafone India Ltd.
- Recommendations dated 16<sup>th</sup> December, 2016 on “Licensing Framework for Audio Conferencing/ Audio Tex/ Voice Mail Services”.
- Recommendations dated 19<sup>th</sup> December, 2016 on “Encouraging data usage in Rural Areas through provisioning of free data”.
- Recommendations dated 20<sup>th</sup> January 2017 on “Permitting outstation Aadhaar Card Folders for e-KYC of Mobile Subscribers”.
- Recommendations dated 20<sup>th</sup> January 2017 on “Verification of existing Mobile Subscribers through Aadhaar based e-KYC services”.

- Recommendations dated 20<sup>th</sup> January 2017 on “In-Building Access by Telecom Service Providers”.
- Recommendations dated 7<sup>th</sup> March 2017 on “Spectrum Usage Charges and Presumptive Adjusted Gross Revenue for Internet Service Providers and Small Aperture Terminal Service Providers”.
- Recommendations dated 9<sup>th</sup> March 2017 on “Proliferation of Broadband through Public Wi-Fi Networks”.
- Recommendations dated 10<sup>th</sup> March 2017 on “Complaints/Grievance Redressal in the Telecom Sector”.
- Recommendations dated 15<sup>th</sup> September, 2016 on “Issues related to Radio Audience Measurement and Rating in India”.
- Recommendations dated 31<sup>st</sup> January 2017 on “Issues related to Digital Terrestrial Broadcasting in India”.
- Recommendations dated 29<sup>th</sup> March 2017 on “Sharing of Infrastructure in Television Broadcasting Distribution Sector”.

The details of these Recommendations have already been discussed in Part-II of this Report.

### c) Ensuring technical compatibility and effective inter-connection

3.3 To facilitate seamless telecommunication across networks, it is necessary that different networks interconnect. The licence condition also prescribes that all access providers should interconnect with each other and with national and international long distance operators’ networks. Accordingly, the following interconnection recommendations and regulations were issued by TRAI during the reporting period:-

## TELECOM SECTOR

### ➤ Consultation Paper on “Review of Interconnection Usage Charges” dated 5<sup>th</sup> August, 2016

3.3.1. Interconnection Usage Charges (IUC) regime is an essential requirement to enable subscribers of one service provider to communicate with subscribers of another service provider. Providing interconnection entails costs for which service providers need to be fairly compensated. The IUC regime not only determines the revenue accruable to the service providers but also how this revenue is to be distributed among them. An efficient interconnection and charging regime is central to efficient and seamless connectivity between various networks.

The Authority specified IUC for the first time in 2003. Subsequently, these charges have been revised in 2006, 2009 and 2015. The prevailing termination charges are given in the following Table:

Type of call	Type of traffic	Termination charge
Local and national long distance call	Wireless to Wireless	₹ 0.14 per minute
	Wireless to Wireline	0 (Zero)
	Wireline to Wireline	0 (Zero)
	Wireline to Wireless	0 (Zero)
International call	International incoming call to wireless and Wireline	₹ 0.53 per minute

The Authority has undertaken the present review exercise in view of the fact that several telecom services providers in

the country have, in the recent past, built access networks using 4G mobile technology. A few of these TSPs may carry voice on voice over LTE (VoLTE) technology in near future. Further, world-over, Internet Telephony (in which voice travels over public Internet) is beginning to emerge as a cost-effective mode of delivery of voice calls. Together, these developments require a review of the IUC regime in the country. The Consultation Paper, inter-alia, seeks inputs of the stakeholders mainly on the following broad issues:

- (i) Approaches to be used for prescribing domestic termination charges (viz. mobile termination charges and fixed termination charges) for maximization of consumer welfare, adoption of more efficient technologies and overall growth of the telecommunication services sector;
- (ii) Approaches to be used for prescribing international termination charges and international settlement rates in the country for long-term sustainable growth of the International Long Distance (ILD) service segment.

### ➤ Consultation Paper dated 21<sup>st</sup> October, 2016 on “Review of the Regulatory Framework for Interconnection”

3.3.2. The Authority has come out with this Consultation Paper (CP) on 21<sup>st</sup> October, 2016 as the telecommunication service sector in the country has witnessed several economic and technological changes since 2002. A few of the developments in the sector are given below:

- (i) Changes in the nature of telecom market - from pure State monopoly to intensely competitive market;

- (ii) Emergence of mobile telephony as a primary means of communication and continuous decline in the number of wireline subscribers in the last decade;
- (iii) Considerable increase in the number of NLDOS/ ILDOs;
- (iv) Introduction of Unified Licensing (UL) regime;
- (v) Technological changes leading to migration to next generation networks (NGN) and Internet Protocol (IP) networks;
- (vi) Expiry of telecom licenses of some TSPs and consequential need for renegotiation of interconnection agreements.

These developments have altered the nature and economics of telecommunication services sector as well as the strategy of market players and have, in several ways, influenced the scale and choice of investments in different types of technologies and services. Many of these developments impinge upon the matter of interconnection between TSPs. Regulator is required to mandate a framework for interconnection, it has not only to ensure that the framework is efficient but also that the framework is able to adapt to the changing circumstances as outdated regulation run the risk of stifling market growth and innovation.

The Consultation Paper broadly raises following issues:

- (i) Which is the best option to ensure fair, reasonable and non-discriminatory terms and conditions of interconnection agreement between telecom service providers (TSPs), in view of the technological, market, licensing, regulatory and legal developments in

the telecommunication services sector in India since 2002?

- (ii) What should be the time-frame for entering into interconnection agreement when a new TSP?
- (iii) Should an interconnection agreement between TSPs continue to operate if an interconnecting TSP acquires a new license upon expiry of an old license? Alternatively, should fresh agreements be entered into upon specific request of either party to the interconnection?
- (iv) Whether there is a need to continue with the present concept of interconnection seeker/interconnection provider? If yes, what should be the criteria?
- (v) Whether there is any need to review the level of interconnection?
- (vi) What should be the framework to ensure timely provisioning/augmentation of E1 ports?
- (vii) What should be the criteria to ensure that inflated demand for ports is not made by interconnection seeker?
- (viii) Whether interconnection and interconnection agreement should be service-specific or service-agnostic (i.e. a TSP can send any type of traffic on a point of interconnection which is allowed under the terms and conditions of the license given to it)?
- (ix) Which policy and regulatory measures are required to be taken to encourage TSPs to migrate to Interconnection at IP level? What should be the terms and conditions for inter-connection at IP level?
- (x) Whether there is a need to establish a framework for Interconnect Exchange to eliminate bilateral interconnection

- issues? Whether access providers should be allowed to transit intra-circle calls?
- (xi) Under what circumstances, a TSP can disconnect POIs? What procedure should be followed before disconnection of POI?

## BROADCASTING SECTOR

### ➤ **Interconnection Regulations for Broadcasting Services related to Television provided through Addressable Systems**

3.3.3. TRAI notified Interconnection Regulation (TAOs) on 3<sup>rd</sup> March 2017 which regulated interconnection arrangements for broadcasting services relating to television provided through Addressable Systems. These regulations shall cover commercial and technical arrangements, among service providers for interconnection, for broadcasting services relating to television provided through addressable systems throughout the territory of India. In these regulations, due care has been taken to address various concerns of broadcasters, DPOs and LCOs to ensure transparency, non-discrimination and level playing field across the value chain. Steps have been taken for 'ease of doing business' and orderly growth of the sector. This is expected to bring in level playing field and effective competition in the sector. While doing so adequate flexibility and freedom has been provided to service providers for innovation and business ingenuity in offering their services.

In these Regulations, Broadcasters have been given freedom to publish their RIOs as per their business plans, in compliance to these regulations, encompassing

necessary and sufficient terms and conditions so that their offerings are clearly known to all DPOs. A time bound framework for signing of interconnection agreement has also been mandated. To ensure that the Maximum Retail Prices (MRPs) of TV channels and bouquets declared by broadcasters to subscribers are realistic, a reasonable cap on discounts offered by broadcasters to DPOs has been mandated. To improve the transparency, it has been prescribed that such discounts on their offerings should be objectively defined in their RIOs.

Similarly, for transparent and non-discriminatory access to all types of distribution networks; the same has been brought under the regulatory framework. Besides mandating a framework of RIO for charging of carriage fee on transparent basis, a cap on the rate at which a DPO can charge carriage fee has been prescribed. Further, it has also been provided that the carriage fee shall change with the change in subscription level of channels. In this way, entry for new channels in the market has been made predictable. The Authority has also prescribed model interconnection agreement (MIA) and standard interconnection agreement (SIA) to address the issues between DPOs and LCOs which protects the interest of both the parties.

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.

**d) Regulating arrangement amongst service providers of sharing their revenue derived from providing telecommunication service**

➤ **Consultation Paper dated 5<sup>th</sup> August, 2016 on “Review of Interconnection Usage Charges”**

3.4.1. Interconnection Usage Charges (IUC) regime is an essential requirement to enable subscribers of one service provider to communicate with subscribers of another service provider. Providing interconnection entails costs for which service providers need to be fairly compensated. The IUC regime not only determines the revenue accruable to the service providers but also how this revenue is to be distributed among them. An efficient interconnection and charging regime is central to efficient and seamless connectivity between various networks.

The Authority specified IUC for the first time in 2003. Subsequently, these charges have been revised in 2006, 2009 and 2015. The prevailing termination charges are given in the following Table:

Type of call	Type of traffic	Termination charge
Local and national long distance call	Wireless to Wireless	₹ 0.14 per minute
	Wireless to Wire-line	0 (Zero)

Type of call	Type of traffic	Termination charge
	Wireline to Wire-line	0 (Zero)
	Wireline to Wireless	0 (Zero)
International call	International incoming call to wireless and Wire-line	₹ 0.53 per minute

The Authority has undertaken the present review exercise in view of the fact that several telecom services providers in the country have, in the recent past, built access networks using 4G mobile technology. A few of these TSPs may carry voice on voice over LTE (VoLTE) technology in near future. Further, world-over, Internet Telephony (in which voice travels over public Internet) is beginning to emerge as a cost-effective mode of delivery of voice calls. Together, these developments require a review of the IUC regime in the country. The Consultation Paper issued today, inter-alia, seeks inputs of the stakeholders mainly on the following broad issues:

- (i) Approaches to be used for prescribing domestic termination charges (viz. mobile termination charges and fixed termination charges) for maximization of consumer welfare, adoption of more efficient technologies and overall growth of the telecommunication services sector;
- (ii) Approaches to be used for prescribing international termination charges and international settlement rates in the

country for long-term sustainable growth of the International Long Distance (ILD) service segment;

**e) Time period for providing local and long distance circuits of telecommunication between different service providers**

3.5 To provide a framework to ensure transparency, predictability and reasonableness and allow provision of DLC/local lead in a non-discriminatory manner, TRAI issued DLC Regulations on 14<sup>th</sup> September 2007. These regulations cover DLC and local Lead provided on any media i.e. copper, fiber, wireless etc. and using any transmission technology. These regulations make it obligatory for all service providers who have the capacity of copper, fiber or wireless, and who have been allowed under the licence to provide DLC, to share it with other service providers. From the analysis of the reports received it is observed that since the release of DLC regulations, the provision of DLCs / local leads have been streamlined.

**f) Ensuring compliance of the Terms and Conditions of License**

➤ **Direction dated 7<sup>th</sup> October, 2016 to ensure compliance of the terms and conditions of the license relating to interconnection and the provisions of the Standards of Quality of Service of Basic Telephone Service (Wireline) and Cellular Mobile Telephone Service Regulations, 2009.**

3.6.1. The Authority, in exercise of power under section 13, read with section 11(1)(b), of TRAI Act, to protect the interest of the

consumers directs all service providers holding Unified License with (Access Service Authorization), Universal Access Service License, Cellular Mobile Telephone Service License and Basic Service License to comply with the Standards of Quality Of Service of Basic Telephone Service (Wireline) and Cellular Mobile Telephone Service Regulations, 2009 dated the 20<sup>th</sup> March, 2009 and the terms and conditions of their respective licenses and to furnish the compliance report by 17<sup>th</sup> October, 2016.

➤ **Direction dated 31st October, 2016 to telecom service providers for delivering broadband services in a transparent manner by providing adequate information to broadband consumers**

3.6.2. In order to address the issue of delivering broadband services in a transparent manner by providing adequate information to broadband consumers, direction was issued on 31<sup>st</sup> October 2016 to All Unified Licensees, Unified Access service Licensees (UASL), Cellular Mobile Telephone Service Licensees (CMTS), Internet Service Providers (ISPs).

**g) Steps taken to protect the Interest of the Consumers of Telecommunications Services**

**Auditing of Metering and Billing System**

3.7.1. In order to (i) bring uniformity and transparency in the procedures being followed by service providers with regard to metering and billing; (ii) prescribe standards relating to accuracy of measurement, reliability of billing; (iii)

measure the accuracy of billing provided by the Service Providers from time to time and to compare them with the norms so as to assess the level of performance; (iv) minimize the incidences of billing complaints; (v) and to protect the interest of consumers of telecommunication services, TRAI had reviewed the Quality of Service (Code of Practice for Metering and Billing Accuracy) Regulation 2006 and issued the Quality of Service (Code of Practice for Metering and Billing Accuracy) (Amendment) Regulations, 2013 on 25<sup>th</sup> March, 2013. The Regulation mandates the service providers to arrange audit of their Metering and Billing System on an annual basis through any one of the auditors notified by TRAI and to furnish to TRAI an audit certificate thereof not later than 31<sup>st</sup> July of every year. The Regulation also provides that the service providers have to take corrective action on the inadequacies, if any, pointed out by the Agency in the Certificate and to file with TRAI an Action Taken Report thereon not later than 15<sup>th</sup> November of every financial year. Further, for effective implementation of these regulations TRAI has also enforced financial disincentive at the rate of Rs.1,00,000/-per week for delay in submission of Audit Reports and Action Taken Reports and Financial disincentive not exceeding an amount of Rs.10,00,000/- per action taken report for false or incomplete information. The service providers have submitted the audit reports and action taken reports within the time limit. The audit has helped in identifying billing and charging deficiencies leading to refunds of excess

charges levied to affected customers and addressing systemic issues.

### **Steps taken to protect Consumer Interest in TV Broadcasting Services.**

3.7.2. In order to protect the interest of the consumers, TRAI issued Standards of Quality of Services and Consumer Protection (Addressable System) Regulations 2017 applicable to broadcasting services related to television provided, through addressable systems, throughout the territory of India.

TRAI has been issuing QoS regulations from time to time to ensure protection of consumers and orderly growth of the broadcasting sector. In today's digital broadcasting scenario, consumers can access TV channels from multiple platforms such as cable TV, DTH, IPTV, etc. Today a large number of TV channels are available to the consumers, however majority of them still remain unaware and are unable to exercise their choice. They often find difficult to know the price of the channels, bouquets and other terms and conditions for subscription. The consumers need a Set-top-box which is a basic equipment required for receiving TV channels. It should be provided by the service providers to the consumers in a transparent manner clearly specifying the cost, ownership and maintenance provisions etc. It is observed that these terms and conditions are not widely published for information of the consumers, which results in large number of complaints. Further the formats and manner of disseminating the information are not consumer friendly

which leads to poor consumer awareness. It is also observed that consumers are charged even though the services remain interrupted and sometimes their service composition are also modified without their specific consent.

In order to empower the consumers to make informed decisions regarding subscription of channels and to protect their interests, TRAI has introduced measures using ICTs for improving the QoS. The service providers have been mandated to create a dedicated “consumer corner” and “subscriber corner” links on their websites, which shall contain relevant information for the benefit of consumers in standardized format. It has been made mandatory for the service providers to publicize service related information to consumers through their dedicated consumer care programming service. Further, it is also decided that name and price of all channels available on a service provider’s platform are to be transparently shown in the electronic programme guide to help the consumers to make appropriate choice.

To protect the interests of consumers, TRAI has also decided to restrict the service providers from changing the composition of the subscribed services without consent of the subscriber and such consent shall be recorded to resolve any dispute later. The service providers are prohibited from charging the subscribers for the duration of continuous interruption exceeding 72 hours.

## **h) Steps taken to facilitate competition and promote**

### **efficiency in the operation of telecommunication services so as to facilitate growth in such services.**

- 3.8. TRAI has always endeavoured to establish policies that are contemporary, in tune with the current developments, simple and pragmatic. They have had desired impact on competition, infrastructure, revenue and customer welfare. It has been conscious of the fact that regulatory certainty is important for formulation of appropriate business strategies, promoting competition and thereby giving customer the fruits of innovation. TRAI has carried out the job of increasing competition and easing entry of competitive service providers in all seriousness. Measures in the form of recommendations / regulations / tariff orders / directions etc. have proved to be key for growth of the industry.

To facilitate competition and promote efficiency in the operation of telecommunications and Broadcasting services following steps were taken by TRAI in 2016-17:

### **TELECOM SECTOR**

#### **➤ Recommendations dated 20<sup>th</sup> January 2017 on “In-Building Access by Telecom Service Providers”**

- 3.8.1. 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 only selective TSP are 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 20<sup>th</sup> January 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.

➤ **Recommendations dated 9<sup>th</sup> March 2017 on “Proliferation of Broadband through Public Wi-Fi Networks”**

3.8.2. TRAI on 9<sup>th</sup> March, 2017 has come out with its Recommendations on “Proliferation of Broadband through Public Wi-Fi Networks. The salient features are as follows:

- (i) DoT may amend the terms of the ISP license to allow for sharing of active infrastructure, in line with the Unified License (UL).
- (ii) DoT may re-visit TRAI’s recommendations and consider de-licensing spectrum in the 5.725 – 5.825 GHz spectrum band for outdoor usage.
- (iii) 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.
- (iv) 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.
- (v) 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.
- (vi) 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.

- (vii) 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.
- (viii) 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.
- (ix) 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.

**i) Levy of fees and other charges at such rates and in respect of such services as may be determined by Regulations**

3.9 TRAI is mandated to decide the tariff policies for telecommunications and broadcasting services. TRAI looks after consumer interests through tariff regulation. Tariff regulation takes the form of ensuring clarity and transparency in tariff offers to consumers and fixing tariff charges where the market is not delivering optimal rates. The following specific measures taken in this direction were:

- The telecommunication tariff (Sixty-first Amendment) Order 2016 dated 22nd November 2016.
- The telecommunication tariff (Sixty-second Amendment) Order 2016 dated 27th December 2016.
- Telecommunication (Broadcasting and Cable) Services (Eighth) (Addressable Systems) Tariff Order, 2017 dated 3rd March, 2017
- Telecommunication (Broadcasting and Cable) Services (Eighth) (Addressable Systems) Tariff (Amendment) Order, 2017 dated 30th March, 2017.

The details of these tariff orders have already been discussed in Part-II of the report.

**j) Steps taken to ensure effective compliance of universal service obligation (USO)**

3.10 The Authority in its recommendations dated 14<sup>th</sup> May 2012 on support for Rural Wire-line Connections, has recommended that support to M/s BSNL may be continued for two years for sustenance of rural wire-line connections, installed before 1<sup>st</sup> April 2002. The amount of support may be Rs.1500 crore for the first year and Rs.1250 crore for the second year. The Authority vide its recommendations dated 22<sup>nd</sup> July 2014 on “Improving Telecom Services in Andaman and Nicobar Islands and Lakshadweep” has recommended measures for improving the telecom services in these areas. Further, to encourage data usage in rural areas the Authority forwarded its Recommendations dated 19<sup>th</sup> December, 2016 on “Encouraging data usage in Rural Areas through provisioning of free data”.

**k) Details of advice rendered to the Central Government in the matter relating to development of telecommunication technology and any other matter relating in telecommunication industry in general.**

3.11 Details of advice rendered by TRAI to the Central Government in the matters relating to development of telecommunication and broadcasting cable sectors are given below:

- Clarifications/Reconsideration dated 18<sup>th</sup> April 2016 of Recommendations on “Valuation and Reserve Price of Spectrum in 700 MHz, 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz and 2500 MHz bands dated 27<sup>th</sup> January 2016.

- Recommendations dated 9<sup>th</sup> May, 2016 on “Sale/Rent of International Roaming SIM Cards/Global Calling Cards in India”.
- TRAI’s reply dated 24<sup>th</sup> May, 2016 on “Redefining the definition of Broadband Speed/increasing the broadband speed”.
- Clarification/Reconsideration dated 12<sup>th</sup> July, 2016 on “Recommendations on Valuation and Reserve Price of Spectrum in 700 MHz, 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz and 2500 MHz bands.
- Recommendations dated 21<sup>st</sup> October, 2016 in respect of violation of the provisions of the license agreements and the standards of QoS of basic telephone service (Wireline) and Cellular Mobile Telephone Service Regulations, 2009 by M/s Bharti Airtel.
- Recommendations dated 21<sup>st</sup> October, 2016 in respect of violation of the provisions of the license agreements and the standards of QoS of basic telephone service (Wireline) and Cellular Mobile Telephone Service Regulations, 2009 by M/s Idea Cellular Ltd.
- Recommendations dated 21<sup>st</sup> October, 2016 in respect of violation of the provisions of the license agreements and the standards of QoS of basic telephone service (Wireline) and Cellular Mobile Telephone Service Regulations, 2009 by M/s Vodafone India Ltd.
- Recommendations dated 16<sup>th</sup> December, 2016 on “Licensing Framework for Audio Conferencing/ Audio Tex/ Voice Mail Services”.

- Recommendations dated 19<sup>th</sup> December, 2016 on “Encouraging data usage in Rural Areas through provisioning of free data”.
- Recommendations dated 20<sup>th</sup> January 2017 on “Permitting outstation Aadhaar Card Folders for e-KYC of Mobile Subscribers”.
- Recommendations dated 20<sup>th</sup> January 2017 on “Verification of existing Mobile Subscribers through Aadhaar based e-KYC services”.
- Recommendations dated 20<sup>th</sup> January 2017 on “In-Building Access by Telecom Service Providers”.
- Recommendations dated 7<sup>th</sup> March 2017 on “Spectrum Usage Charges and Presumptive Adjusted Gross Revenue for Internet Service Providers and Small Aperture Terminal Service Providers”.
- Recommendations dated 9<sup>th</sup> March 2017 on “Proliferation of Broadband through Public Wi-Fi Networks”.
- Recommendations dated 10<sup>th</sup> March 2017 on “Complaints/Grievance Redressal in the Telecom Sector”.
- Recommendations dated 15<sup>th</sup> September, 2016 on “Issues related to Radio Audience Measurement and Rating in India”.
- Recommendations dated 31<sup>st</sup> January 2017 on “Issues related to Digital Terrestrial Broadcasting in India”.
- Recommendations dated 29<sup>th</sup> March 2017 on “Sharing of Infrastructure in Television Broadcasting Distribution Sector”.

The details of these Recommendations have already been discussed in detail in Part-II of the report.

## I) **Monitoring of the quality of services and details of promotional survey of such services by the service providers**

### (i) **Reports received from service providers**

#### **Basic and Cellular Mobile Services**

3.12.1. TRAI monitors the performance of Basic and Cellular Mobile service against the benchmarks prescribed by TRAI through quarterly performance monitoring report (PMR) received from service providers in accordance with the above directions. In order to improve the quality of service provided by the service providers TRAI has prescribed financial disincentive through ‘The Standards of Quality of Service of Basic Telephone Service (Wireline) and Cellular Mobile Telephone Service (Second Amendment) Regulations, 2012’ dated 8<sup>th</sup> November 2012 on Basic Telephone Service (Wireline) and Cellular Mobile Telephone Service operators for non-compliance with the benchmark for the Network Service Quality Parameters and Customer Service Quality Parameters. These regulations also provide for deterrent as financial disincentives against false reporting and delay in submission of report of the Quality of Service benchmarks.

#### **Broadband Service**

3.12.2. TRAI monitors the performance of the service providers against the Quality of Service benchmarks laid down by TRAI, through the quarterly Performance Monitoring Reports (PMRs) vide

Regulation on Quality of Service of Broadband Service dated 6<sup>th</sup> October, 2006. The quarterly reports submitted by Broadband service providers are analysed for assessing their performance with regard to the QoS benchmark. To further strengthen the quality of standards TRAI had issued “The Quality of Service of Broadband Service (Second Amendment) Regulations, 2012”, on 25<sup>th</sup> June 2014 to improve the speed of Broadband.

#### **Network/Point of Interconnection (POI) reports**

- 3.12.3. TRAI is monitoring the level of congestion at the POI between various Service Providers on Monthly basis. This parameter signifies the ease by which a customer of one network is able to communicate with a customer of another network. This parameter also reflects as to how effective is the interconnection between two networks. The bench mark notified by TRAI in the QoS Regulations for this parameter is <0.5%. TRAI receives monthly Poi Congestion Reports from Basic and Cellular Mobile Services for assessing their performance with regard to Quality of Service benchmarks.

#### **Assessment of Quality of Service through independent agencies**

- 3.12.4. TRAI also monitors the Quality of Service through audit and assessment done by independent agencies. These reports are analysed and released on the website of TRAI for information of all stakeholders. Also the areas of concern pointed out in the reports are shared with the service providers for improving Quality of Service.

As part of the Audit and Assessment of Quality of Service, TRAI had undertaken extensive drive tests of mobile network in select cities through the independent agencies. The cities covered in these drive tests conducted by TRAI through independent Agencies are Delhi, Mumbai, Kolkata, Panaji, Chennai, Jaipur, Amritsar, Shimla Solan, Agra, Surat, Patna, Chandigarh, Lucknow, Kanpur, Bhopal, Ahmedabad, Ranchi, Darjeeling & Sikkim, Hyderabad, Trivandrum, Nashik, Coimbatore, Mathura, Noida, Jammu, Jhansi, Kalyan, Rajkot, Ujjain, Jaisalmer, Mangalore, Mysore, Tiruchirappalli, Durgapur, Guwahati, Jamshedpur. In addition to the above cities, for the first time, TRAI conducted Drive Tests through independent Agencies on National Highways between Patna-Kolkata, Mumbai-Surat, Mumbai-Goa, Delhi-Jaipur, Delhi-Amritsar, Chennai-Madurai, Jaipur-Agra, Trivandrum-Coimbatore and Nagpur-Bhopal & on Train Routes between Kolkata-Mumbai & Agra-Ludhiana. The results of these drive tests are available on TRAI Analytic Portal of TRAI website.

#### **Assessment of customer perception of service through IVR surveys**

- 3.12.5. In accordance with the mandate given by the TRAI Act, 1997, TRAI undertakes through independent agencies assessment of customer perception of service provided by service providers through surveys. The work for the assessment of (i) implementation of effectiveness of various regulations, directions, and orders issued by TRAI in the interest of consumers and (ii) customer perception of telecom service

being provided by Basic, Cellular Mobile and Broadband service providers, through IVR Survey is being awarded as a pilot project in Delhi, Madhya Pradesh and Karnataka. The IVR survey work awarded to the independent IVR survey agency namely M/s Vivaconnect Pvt. Ltd. However, the case for finalization of a survey agency for conducting survey through IVR Telephone survey research tool in three service area namely, Delhi, Madhya Pradesh and Karnataka is under process.

As per the methodology of the IVR survey, IVR survey questionnaire has been framed to assess customer perception relating to five quality of

parameters specified in the regulation and for assessing effectiveness of the regulations relating to awareness about grievances redressal mechanism, implementation of mobile number portability, data speed, call charges, Tariff plan and UCC regulation. The respondent were asked to rate their satisfaction on a scale of 1-5, where 1 and 2 response will be considered as 'dissatisfied', 3 will be neutral and 4 & 5 will be satisfied customers and N is the total sample size achieved.

The IVR Survey reports submitted by the IVR Survey Agency are uploaded on TRAI website [www.trai.gov.in](http://www.trai.gov.in) for information of stakeholders.

## **PART – IV**

# **ORGANISATIONAL MATTERS OF TELECOM REGULATORY AUTHORITY OF INDIA AND FINANCIAL PERFORMANCE**



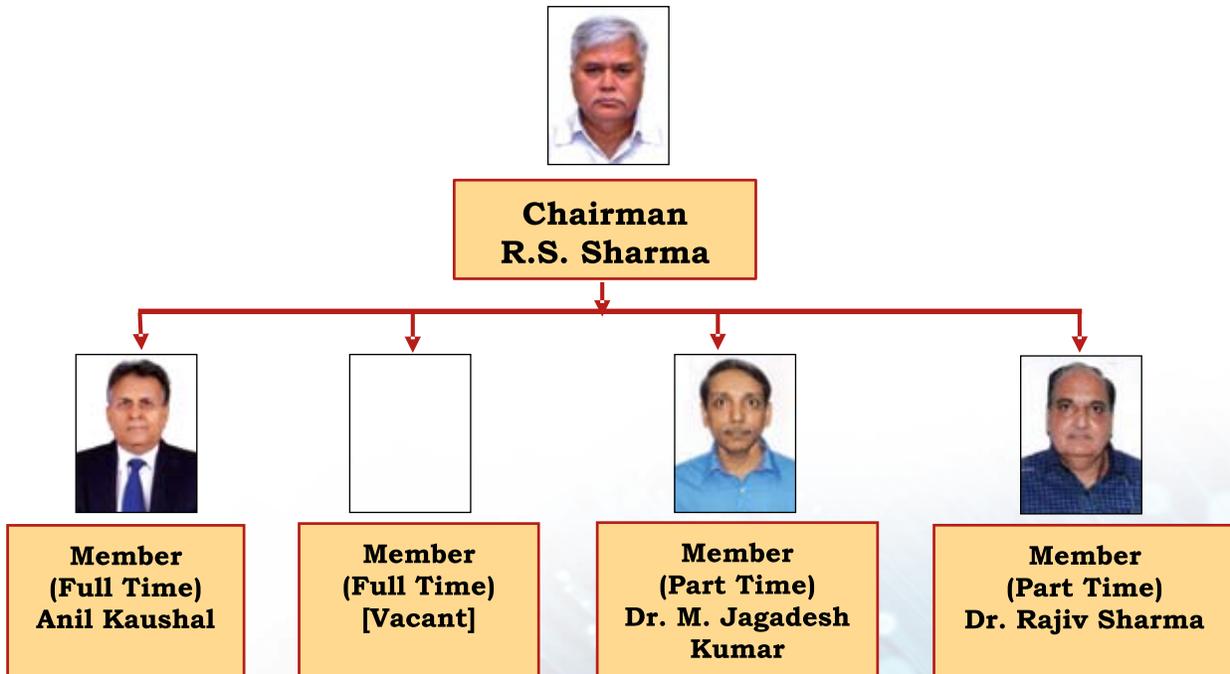
# A) ORGANIZATIONAL MATTERS OF TELECOM REGULATORY AUTHORITY OF INDIA

## A) Organizational matters of Telecom Regulatory Authority of India

4.1 This section provides information on organizational matters of TRAI relating particularly to organization structure, funding, human resources covering the areas of recruitment, capacity building and other general issues.

### (a) ORGANISATION

4.2 The Telecom Regulatory Authority of India was established under the Telecom Regulatory Authority of India Act, 1997 enacted on 28<sup>th</sup> March, 1997. The Telecom Regulatory Authority of India (Authority) is a body corporate by the name aforesaid, having perpetual succession and a common seal, with power, subject to the provisions of this Act,



to acquire, hold and dispose of property, both movable and immovable, and to contract, and shall, by the said name, sue or be sued. The TRAI (Amendment) Act, 2000 led to reconstitution of the Authority. The Authority consists of a Chairperson, and not more than two whole time members and not more than two-part time members, that are appointed by the Central Government. The head office of the Authority is at New Delhi. The constitution of the Authority as on 31<sup>st</sup> March 2017 was as follows:

### (b) SECRETARIAT OF TRAI (HQ)

4.3 The Authority functions with a Secretariat headed by the Secretary and assisted by seven divisions which are as follows:

**(i) Administration & International Relations (A&IR); (ii) Broadcasting & Cable Services (B&CS); (iii) Financial & Economic Analysis (F&EA); (iv) Networks, Spectrum and Licensing (NSL); (v) Quality of Service & Information Technology (QoS & IT) (vi) Legal and (vii) Consumer Affairs (CA).**

### ADMINISTRATION & INTERNATIONAL RELATIONS DIVISION

4.4 Administration Division is responsible for all administrative and personnel functions which include planning and control of human resource development in TRAI as well as ensuring coordinated availability of information on enforcement of all the Regulations / Directions/Orders issued by TRAI for the Authority's use. Administration Division has the responsibility of management and control of activities of Administration & Personnel Section (A&P), General Administration Section (GA), Communication & Public Relation (Comm. & PR) Section, International

Relation (IR) Section, OL Section, Management Representative and RTI (MR&RTI) Section. The Division also handles International relations which includes coordination with all International Organizations / bodies viz ITU, APT, World Bank, WTO, ADB, SATRC, OECD and Regulatory Bodies in other countries.

### BROADCASTING & CABLE SERVICES (B&CS) DIVISION

4.5 The Broadcasting and Cable Services (B&CS) Division is responsible for advising the Authority to lay down the overall regulatory framework; encompassing tariff, interconnection and quality of services aspects; for the broadcasting sector including broadcasting of satellite TV channels, Direct to Home (DTH) services, Cable TV services, Head-end in the Sky (HITS) services, Internet Protocol Television services, FM Radio broadcasting etc. The division is also responsible for examining the issues relating to modernization/ digitalisation of the broadcasting sector and making recommendations on various policy issues and terms & conditions of licenses/ permissions issued by the Government to various service providers in broadcasting sector. The division advises the Authority regarding the measures required to protect the interests of all the stakeholders of the broadcasting sector, which include facilitation of consumer choice, availability of services of desirable quality at affordable prices and promoting competition.

### FINANCIAL & ECONOMIC ANALYSIS (F&EA) DIVISION

4.6 F&EA Division is responsible for providing advice on all aspects relating to cost

methodologies and costing of telecom services, accounting separation and analysis of financial statements of service providers, etc. The division advises the Authority in the matter of framing appropriate tariff policy for telecom services from time to time; fixation of tariffs for various telecom services in India that are under tariff regulation which include tariff for Domestic Leased Circuits, International Private Leased Circuits and National Roaming in cellular mobile services. The division also advises the Authority on matters relating to fixation of cost based interconnection charges and on measures to promote competition in various segments of telecommunication services market in India. This Division also compiles “The Indian Telecom Services Performance Indicators Report” and publishes it on quarterly basis.

## NETWORKS, SPECTRUM AND LICENSING (NSL) DIVISION

4.7 NSL Division is responsible for fixing the terms & conditions of interconnection, ensuring effective interconnection between various service providers, handling of all interconnection issues including determination of Interconnection Usage Charges (IUC) and regular review thereof. The Division handles all issues related to Broadband penetration in the country. The Division is also responsible for infrastructure sharing, issues related to Infrastructure provider (IP-1), FTTH, FTTC etc. Further it is also responsible for monitoring of compliance of license conditions of Basic, National Long Distance (NLD) and International Long Distance (ILD) licenses and for issuing Regulation to ensure access to Cable Landing Stations is non-discriminatory and cost based.

The Division is also responsible for the issues related to management of Spectrum including, inter-alia, its efficient utilizations and its refarming. It also deals with issues related to introduction of new wireless technologies and related regulatory issues. The Division handles issues relating to compliance of terms and conditions of various licenses issued to mobile operators; recommendations related to various issues/aspects of wireless services including Mobile Number Portability; ensuring compliance of matters relating to Universal Service Obligations and efficient management of available spectrum for telecom services; preparation of Quarterly PMR pertaining to mobile services and also support to ITU/APT Study Group activities.

## QUALITY OF SERVICE & INFORMATION TECHNOLOGY (QOS & IT) DIVISION

4.8 QoS & IT division is responsible for laying down the standards of Quality of Service to be provided by the service providers; to ensure the quality of service and conduct the periodical survey of such service provided by the service providers so as to protect interest of the consumers of telecommunication services. The division is also responsible for maintaining register of interconnect agreements and of all such other matters as may be provided in the regulations.

The division also maintains all computer hardware assets and LAN setup of TRAI. It is also responsible for uploading of official

documents viz. orders, circulars, notices, consultation papers, recommendations, regulations etc. on TRAI's website. The division also caters to the various IT needs of other divisions like visualization of data, implementation and maintenance of various portals, web applications, mobile app development etc. The division handles Next Generation Networks, Implementation of Green Technology in Telecom Sector, Environmental issues in Telecom, Infrastructure Management, Manufacturing for Telecom Sector and issues related to convergence in telecommunications. The division with the help of National Institute of Smart Government (NISG) team is working on various platforms and developing various Mobile Apps/Portals. During the year the division was instrumental in getting launched new TRAI website with many new features.

## LEGAL DIVISION

4.9 Legal Division is responsible for rendering legal advice to the Authority on all regulatory issues. The Division manages all litigation matters in which TRAI is a party.

## CONSUMER AFFAIRS (CA) DIVISION

4.10 CA Division is responsible for development of consumer advocacy

in the telecommunication sector and creating general awareness amongst consumers about various measures taken by the Telecom Regulatory Authority of India to protect the interest of consumers. The division facilitates registration of consumer organizations and non-governmental organizations from all over the country with TRAI and interacts with them on various issues concerning the consumers. The other activities of division include organising consumer education programmes, capacity building of consumer organisations registered with TRAI, undertake media campaigns, developing and publishing consumer education material in English and other languages for enhancing consumer education etc.

## (c) HUMAN RESOURCES

4.11 A staff of 181 (as on 31.03.2017) is handling the work in the Secretariat of TRAI (HQ), which performs the tasks assigned to it by the Authority in discharge of its functions. Wherever necessary, consultants are engaged.

### (i) Staff strength of TRAI HQ (as on 31.03.2017)

4.12 As on 31.03.2017, the Staff strength of the TRAI (Headquarters) was as under:

S. No.	POSTS	SANCTIONED	ACTUAL
1.	SECRETARY	01	01
2.	PR. ADVISOR	14	13
3.	ADVISOR		
4.	JT. ADVISOR	25	22
5.	DY. ADVISOR	10	08

S. No.	POSTS	SANCTIONED	ACTUAL
6.	SR. PR. PRIVATE SECRETARY	03	03
7.	SR. RESEARCH OFFICER	35	25
8.	PRINCIPAL PRIVATE SECRETARY	05	04
9.	TECHNICAL OFFICER INCLUDING ENGINEERING DISCIPLINE	17	12
10.	SECTION OFFICER	20	16
11.	PRIVATE SECRETARY	12	11
12.	ASSISTANT	48	36
13.	PERSONAL ASSISTANT	18	09
14.	JR. HINDI TRANSLATOR	01	00
15.	LDC	07	02
16.	DRIVERS IN VARIOUS GRADES	13	11
17.	PCMO	02	02
18.	DESPATCH RIDER	01	01
19.	ATTENDANTS	05	05
<b>TOTAL</b>		<b>237</b>	<b>181</b>

4.13 Details of Secretary, Pr. Advisors / Advisors Level Officers in TRAI (HQ)

SL. NO.	NAME OF THE OFFICER/ POST HELD	
1	SH. SUDHIR GUPTA SECRETARY	
2	SH. U.K. SRIVASTAVA PRINCIPAL ADVISOR (NSL)	
3	SH. SUNIL BAJPAI PRINCIPAL ADVISOR (QOS & IT)	

SL. NO.	NAME OF THE OFFICER/ POST HELD	
4	SH. S.K. MISHRA PRINCIPAL ADVISOR (F&EA)	
5	SH. SUNIL KUMAR GUPTA PRINCIPAL ADVISOR (B&CS)	
6	SH. C.P.S. BAKSHI ADVISOR (ADMIN & IR)	

SL. NO.	NAME OF THE OFFICER/ POST HELD	
7	SH. MOHD. KASIM ADVISOR (B&CS)-I	
8	SH. SUNIL KUMAR SINGHAL ADVISOR (B&CS)-II	
9	<b>VACANT</b> ADVISOR(CA)	
10	SH. ARVIND KUMAR ADVISOR (BB&PA)	
11	SH. SANJEEV BANZAL ADVISOR (NSL)-I	
12	SH. SANJEET SINGH ADVISOR (LEGAL)	
13	SH. ASIT KADAYAN ADVISOR (CA & QOS)	

SL. NO.	NAME OF THE OFFICER/ POST HELD	
14	SMT. VINOD KOTWAL ADVISOR (F&EA)	
15	SH. KAUSHAL KISHORE ADVISOR (F&EA)	

4.14 TRAI officials are drawn on deputation from the Government Departments. These deputationists with relevant experience in the fields of telecommunication, economics, finance, administration, etc., are initially appointed for a period of two years and thereafter, if required, requests are sent to concerned Government Departments/Organisations for extending their deputations. Seeking extension of deputations in respect of trained and experienced existing employees has often proved to be difficult. While the scope, scale and complexity of Authority's functions continue to grow at a fast pace, the Authority is facing the problem of losing trained and experienced personnel due to their frequent repatriation to their parent departments. The Authority has, therefore, constituted a cadre of officers and staff with specialized expertise and skills with the option of permanent absorption in TRAI.

**ii) Recruitment**

4.15 The Authority has constituted its own cadre of officers and staff by way of

absorbing the officials who are on deputation to TRAI from various Ministries / Departments / PSUs. However, most deputationists, particularly in the senior and middle levels do not exercise option for permanent absorption. Therefore, the recruitment of personnel for its Secretariat by way of deputation from other Ministries / Departments / PSUs still continues. This is due to two reasons. Firstly, the prevailing remuneration package does not attract independent talent with expertise and experience in the areas covered by the Authority. Secondly, among Government employees, the relevant expertise is available mainly in the Ministries or with the Government owned Telecom Operators. The Authority has been experiencing difficulty in recruiting specialized manpower on account of unattractive terms & conditions of service.

**iii) Training**

4.16.1 TRAI accords utmost importance to human resource initiatives to develop expertise for its staff in the fields of Telecom and Broadcasting especially related to tariffs and quality of services standards, conduct of surveys on Quality of Service and other consumer related matters. This initiative has proved to be useful for its officers and staff in participating effectively in the consultative process for the Authority, both through the preparation of consultation papers and analysing feedback and responses received and also during Open House Discussion. This has also helped in developing the policy framework to address various issues which arise in regulating the telecom sector. In selecting

and designing training programmes / workshops, TRAI's endeavour is to impart diverse skills for macro level policy and handling of techno-economic operating details relevant for implementation and monitoring of policies. Special training programmes need to be identified / designed to meet the specific needs of TRAI. The Authority sponsors its officers for international training under the 'Institutional Capacity Building Project' for further developing their expertise within the organization.

4.16.2 A few TRAI officers were deputed during the year to attend International Training programmes conducted by various Institutions and International Telecommunications Union. The officers have received valuable inputs through these trainings and the inputs have enriched their skills in their respective area of regulatory work. Around 110 Officers/ Officials of TRAI were deputed for various domestic training programmes which include "Inner Engineering Programme" conducted through Isha Foundation, Delhi, "Numbering, Number Portability, Interconnection and NGNs" through ICC, Bath, UK, "Telecommunication Policy & Regulation" through IIT, Delhi, "Finance for Decision Making" through IIM, Bangalore, "Public Procurement for Govt. Officers" through NIFM, Faridabad, "Advance Professional Course in Competition Law and Market Regulation, 2016- online" through IICF, Manesar, "Radio Signals & Health" and "Competition Policy in the Digital Age" through GSMA, Delhi etc.

4.16.3 TRAI also has in place a system of in-house training and workshops, wherein

distinguished national and international experts are invited for interaction with its officers on latest developments in the telecom sector.

**iv) Seminar / Workshops**

4.17 In order to keep pace with the developments taking place globally, the Authority has deputed members of its staff to 26 international events, meetings and symposia which has helped Authority to gather valuable feedback/ inputs for its own policy formulation as well to keep abreast with the latest development in the fields of technology. It has also contributed to the international efforts being focused on issues of major regulatory concerns in India and many other countries and enabled India to play a leading role in emerging global information society.

**v) Office accommodation**

4.18 As per the policy of the Government of India TRAI is an eligible office for Office Accommodation from Government pool. But, since its inception in 1997 TRAI has been functioning in rented accommodation. In the past TRAI had made vigorous efforts to get its own office premises through Ministry of Communications & IT but has not been successful. TRAI being an autonomous regulatory body for regulating the affairs of Telecom Sector and Broadcasting and Cable Services needs its own office premise to keep its autonomous character intact. Presently, TRAI's office is located in the building owned by MTNL on rental basis.

**vi) Residential quarters for TRAI staff**

4.19 As per the existing policy of the Government of India employees joining the Authority

on deputation are permitted retention of general pool accommodation on payment of Special Licence Fee by the Authority who may recover normal licence fee from the employees. Permissible period of retention will be till the superannuation of the employees or till the duration of their tenure with the Authority, whichever is earlier. The eligibility for allotment of General Pool residential accommodation would be restricted to the officers posted in the Secretariat of the Authority (TRAI) in Delhi, who were eligible for allotment of accommodation from General Pool prior to their joining in the Authority on payment of special licence fee by TRAI to the Directorate of Estates. In view of the forgoing position, the Directorate of Estates is neither allotting the general pool accommodation nor allowing retention of the accommodation already allotted to the officers and staff, after they get absorbed in TRAI.

Arrangement for providing accommodation to the employees of TRAI has been made by signing MoU with MTNL/BSNL.

**vii) Vicennial celebration**

4.20 TRAI has been celebrating the year 2017 as vicennial year and many activities have been planned to celebrate the twenty glorious year of the existence of TRAI. A commemorative postal stamp was also released on this occasion.

**(d) FUNDING**

4.21.1 TRAI is an autonomous body set up by the Act of Parliament. It is wholly funded by grant received from the Consolidated Fund of India. As per section 22(1) a & b of the

TRAI Act 1997, there shall be constituted a fund to be called the Telecom Regulatory Authority of India general fund and there shall be credited there to all grants, fees and charges received by the Authority under this act; and all sums received by the Authority from such other sources as may be decided upon by the Central Government.

- 4.21.2 The total expenditure on the functioning of TRAI in the year 2016-17 was Rs. 75.58 crore (approx); out of this, Rs. 13.00 crore (approx) was incurred during 2016-17 on the 'Institutional Capacity Building Project' covering certain consultancy and training programmes. The major expenditures for functioning of TRAI include expenses on salaries and rent.
- 4.21.3 TRAI is of the view that in order to perform effectively as an independent regulator, it should be funded from a minor portion of the licence fees recovered as a cost of administration from those whom it regulates, and it should be empowered with the flexibility in determining the terms and conditions of its employees to enable it to recruit talents / professionals

from non-government sources also at senior and other levels. It is worth mentioning that some other national regulatory bodies like IRDA and SEBI are funded out of the fees recovered from the sector they regulate and hence these authorities have the flexibility to use these funds as per the specific requirements of their functioning.

**(e) OPENING OF TRAI REGIONAL OFFICES**

4.22 Authority had approved opening of 11 (eleven) Regional Offices of TRAI at various locations across the country in the year 2012. The Authority reviewed the working of the Regional Offices and approved closure of 5 Regional Offices located at Chandigarh, Patna, Mumbai, Guwahati and Lucknow and continuation of 6 Regional Offices located at Hyderabad, Kolkata, Bengaluru, Bhopal, Jaipur and Delhi during 2014-15. These Regional Offices of TRAI are operating on Pilot Project basis under Plan Fund as part of Capacity Building Project of TRAI. The locations of Regional Office with revised License Service Areas covered (during 2016-17) are as follows:-

Sl. No.	Location of the six TRAI ROs	License Service Areas covered by each RO
1	Kolkata	West Bengal, Kolkata, North East, Assam, Bihar
2	Bengaluru	Karnataka, Kerala, Maharashtra, Mumbai
3	Hyderabad	Andhra Pradesh, Tamilnadu including Chennai, Orissa
4	Bhopal	Madhya Pradesh, UP (East), UP(West)
5	Jaipur	Rajasthan, Haryana, Punjab, Gujarat
6	Delhi	Delhi, Himachal Pradesh, Jammu & Kashmir,

### Staff strength of TRAI Regional Offices (as on 31.03.2017)

4.23 As on 31.03.2017, the Staff strength of the TRAI (Regional Offices) was as under:

Sl. No.	Posts	Sanctioned	Work- ing
1.	ADVISORS	6	5
2.	JT. ADVISOR /DY. ADVISOR	12	7
3.	SR. RESEARCH OFFICER	12	10
4.	ASSISTANT	6	3
<b>TOTAL</b>		<b>36</b>	<b>25</b>

4.24 Details of Advisor level officers in TRAI Regional Offices (as on 31.3.2017)

Sl. No.	Location of Regional Office	NAME OF THE OFFICER (S/SHRI/SMT.)	POST
1.	Kolkata	Souvick Kumar Das	Advisor
2.	Hyderabad	<b>G. Muralidhar*</b>	Pr. Advisor
3.	Bhopal	<b>Arvind Sinha*</b>	Pr. Advisor
4.	Bengaluru	Shreenivas S. Galgali	Advisor
5.	Jaipur	Bhavana Sharma	Advisor
6.	Delhi	Vacant	--

\* With effect from 9.3.2017 on personal basis.

4.25 The role and functions of the above Regional Offices (RO) are:

- (i) Ensuring compliance of Tariff related Guidelines & effective monitoring of Retail Tariff of Telecommunications, Broadcasting & Cable Services;
- (ii) Proper coordination with Service Providers with regard to Regulatory and marketing aspects;

- (iii) Monitoring of Quality of Service and handling of consumer grievance;
- (iv) Organizing Open House Discussions (OHD) / Consumer Advocacy Groups (CAG) meetings of TRAI;
- (v) Coordination & monitoring of Audit and Survey by Independent Agencies appointed by TRAI;
- (vi) Development of CAG upto to District / Block level and close interaction with CAGs;
- (vii) Organizing Consumer Education Workshops;
- (viii) Close interaction with TERM Cell of DoT;
- (ix) Monitoring of implementation of Mobile Number Portability (MNP) Regulations and Unsolicited Commercial Communications (UCC) Regulations; and
- (x) Perform such other functions including such administrative and financial functions as may be entrusted to it by the Headquarters of TRAI or as may be necessary to carry out the provisions of TRAI Act.

### (f) RIGHT TO INFORMATION ACT

4.26.1 The Right to Information Act, 2005, which came into force from 12<sup>th</sup> October 2005 is also applicable to TRAI. Accordingly, in consonance with the provisions of the Act, the Authority has designated a Central Public Information Officer in TRAI assisted by a Central Assistant Public Information Officer. Officers of the level of Principal Advisor / Advisor have been designated as Appellate Authority and Transparency Officers under the Act. Name and designation of these officers

and the information required to be published under Section 4 (1) of the RTI Act have been placed on the website of TRAI.

- 4.26.2 During the year 2016-17, 998 applications were received seeking various information under the RTI Act 2005. All these applications were promptly dealt with and replies have been sent within the stipulated time period.

### (g) IS/ISO 9001:2008 CERTIFICATION TO TRAI

- 4.27.1 TRAI had been awarded ISO 9001:2000 certification in December 2004 by Bureau of Indian Standards (BIS). The same was renewed four times in the year 2007, 2010, 2013 and 2016 with the validity period of three years. The present series of ISO Standards IS/ISO 9001:2008 certification has been awarded to Telecom Regulatory Authority of India for a validity period up to September 2018. To evaluate the implementation and effectiveness of Quality Management System (QMS) in TRAI, BIS has also conducted surveillance audits once every year and four renewal audits since December, 2004. The quality-auditors have found the QMS functioning satisfactory and had recommended the continuance of the license issued by the BIS.
- 4.27.2 Conducting internal quality audit on a bi-annual basis has also ensured the continual improvement in the system. TRAI has 38 internal quality auditors for the purpose. The Quality Management System is also reviewed by the Secretary once in two months and by the Top Management once in a year.

### (h) IMPLEMENTATION OF OFFICIAL LANGUAGE POLICY

- 4.28.1 An Official Language Section under the supervision of Secretary, TRAI is functioning in Telecom Regulatory Authority of India to implement the provisions of Official Language Act, 1963, Official Languages Rules, 1976 and other administrative instructions issued on the subject from time to time by the Department of Official Language (Ministry of Home Affairs). TRAI makes every effort to ensure the compliance of the Official Language policy of the Union Government in TRAI. Besides, it also caters to the translation needs of various Divisions as and when regulations, press communiqués, tender notices, gazette notifications and other documents are issued in bilingual form.
- 4.28.2 The implementation of Official Language policy of the Union Government by all the Divisions and Sections of TRAI is monitored by the Official Language Implementation Committee (OLIC) constituted under the Chairmanship of Advisor (Administration). Meetings of the OLIC are held regularly in every quarter. In these meetings, special emphasis is given on increasing the progressive use of Hindi in official work. Besides, a review of the current status of implementation of Official Language policy in TRAI is also done and future action-plan in this regard is drawn. Valuable suggestions of the members of the Committee are invited to gear up the work relating to Official Language. During the period of the report, 4 meetings of OLIC were held on 28.06.2016, 29.09.2016, 30.12.2016 and 31.03.2017.

4.28.3 In compliance with the directives received from Department of Official Language (Ministry of Home Affairs) and Department of Telecommunications, "Hindi Pakhwara" was organized in TRAI from 1<sup>st</sup> September 2016 to 15<sup>th</sup> September 2016 during which various Hindi competitions viz. Hindi essay writing, speech, noting/drafting etc. were organized. A number of officers up to the rank of Senior Research Officer and staff took part in the competition with great zeal and enthusiasm. On the occasion of Hindi Day, a message from Chairman, TRAI for ensuring the compliance of Official Language rules/regulations was circulated among the officers/staff.

4.28.4 In order to increase the progressive use of Hindi in day-to-day official work, an annual incentive scheme viz. Varshik Protsahan Yojna has been introduced in TRAI for officers / employees for the last eight years. Under this scheme, 10 cash prizes are given every year to the officers / employees for doing official work in Hindi during the period of the scheme. This scheme has proved to be very popular among the staff and it has encouraged the staff to do most of their official work in Hindi throughout the year.

4.28.5 With a view to facilitate officers/staff to do noting and drafting in Hindi and also to apprise them of the Official Language policy of the Union government, regular Hindi workshops are organized in TRAI. During these workshops dictionaries, administrative glossaries, help/reference books etc. are distributed to the participants which render them useful help while doing their official work in Hindi. During the period under report, three Hindi workshops were organized in TRAI on 28.06.2016, 02.09.2016 & 17.02.2017.

**(i) IMPLEMENTATION OF RESERVATION PRESCRIBED FOR RESERVED CATEGORIES**

4.29 No appointment on direct recruitment basis has been made in TRAI during the year. TRAI has been adhering to the provisions of reservation prescribed for SCs, STs, OBCs, PWDs and other eligible categories while making promotions. Besides, for the matters relating to the representation of reserved categories, a Liaison Officer of the rank of Deputy Secretary has been appointed. All files relating to promotions in TRAI are routed through him.

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## B) AUDITED ACCOUNTS OF TRAI FOR THE YEAR 2016-17

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### **S**eparate Audit Report of the Comptroller & Auditor General of India on the Annual Accounts of Telecom Regulatory Authority of India for the year ended 31<sup>st</sup> March 2017

1. We have audited the attached Balance Sheet of the Telecom Regulatory Authority of India as on 31<sup>st</sup> March 2017 and the Income and Expenditure Account/Receipts and Payments Account for the year ended on that date under Section 19(2) of the Comptroller & Auditor General's (Duties, Powers & Conditions of Service) Act, 1971 read with Section 23(2) of the Telecom Regulatory Authority of India Act, 1997 (as amended in January 2000). These financial statements are the responsibility of the Telecom Regulatory Authority of India's management. Our responsibility is to express an opinion on these financial statements based on our audit.
2. This separate Audit Report contains the comments of the Comptroller & Auditor General of India (CAG) on the accounting treatment only with regard to classification, conformity with the best accounting practices, accounting standards and disclosure norms, etc. Audit observations on financial transactions with regard to compliance with the Law, Rules & Regulations (Propriety and Regularity) and efficiency-cum performance aspects, etc, if any, are reported through Inspection Reports/CAG's Audit Reports separately.
3. We have conducted our audit in accordance with the auditing standards generally accepted in India. These standards require that we plan and perform the audit to obtain reasonable assurance that the financial statements are free from material misstatements. An audit includes examining, on a test basis, evidences supporting the amounts and disclosure in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of financial statements. We believe

that our audit provides a reasonable basis for our opinion.

**4. Based on our audit, we report that:**

- i. We have obtained the information and explanations, which to the best of our knowledge and belief were necessary for the purpose of audit;
- ii. The Balance Sheet and the Income and Expenditure Account/Receipts and Payments Account dealt with by this report have been drawn up in the 'Uniform format of Accounts' approved by the Controller General of Accounts under Section 23 (1) of the Telecom Regulatory Authority of India Act, 1997 (as amended in January 2000)
- iii. In our opinion, proper books of accounts and other relevant records have been maintained by the Telecom Regulatory Authority of India

**GRANTS IN AID**

**1. Non Plan**

Out of the grants in aid (Non Plan) of Rs. 66.13 crore (including unspent balance of Rs. 3.13 crore of the earlier year) received during the year, TRAI utilised a sum of Rs 57.66 crore, leaving a balance of Rs.8.47 crore, as unutilised grant as on 31<sup>st</sup> March 2017.

**2 Plan**

Further, out of the grants in aid (Plan) of Rs. 13.94 crore (including unspent balance of Rs. 3.94 crore of the earlier year) received during the year, TRAI utilised a sum of Rs.

12.28 crore, leaving a balance of Rs. 1.66 crore as unutilised grant as on 31<sup>st</sup> March 2017.

- i. We report that the Balance Sheet and the Income and Expenditure Account/Receipts and Payments Account dealt with by this Report are in agreement with the books of accounts.
- ii. In our opinion and to the best of our information and according to the explanations given to us, the said financial statements read together with the Accounting Policies and Notes on Accounts, and subject to the significant matters stated above and other matters mentioned in **Annexure-I** to this Audit Report give a true and fair view in conformity with the accounting principles accepted in India:
  - a. In so far as it relates to the Balance Sheet (both Plan and Non-Plan) of the state of affairs of the Telecom Regulatory Authority of India as on 31 March 2017; and
  - b. In so far as it relates to the Income and Expenditure Account of the Surplus (both Plan and Non-Plan) for the year ended on that date.

**For and on behalf of C&AG of India**

Sd/-

(P.K. TIWARI)

Director General of Audit (P&T)

Place: Delhi

Date: -12-2017

## **Annexure-I to Separate Audit Report on the accounts of Telecom Regulatory Authority of India for the year ended 31 March 2017**

As per the information and explanations given to us, the books and records examined by us in normal course of audit and to the best of our knowledge and belief, we further report:

### **ADEQUACY OF INTERNAL AUDIT SYSTEM**

Internal Audit of TRAI was constituted vide circular no.1-25/2012-A&P dt 12 July 2013 for strengthening the administrative setup for internal audit and it was decided that internal auditor will report to Secretary TRAI. Thereafter the report will be forwarded to the respective divisions for necessary corrective measures. Technical Officer (Internal Audit Unit) has been appointed as the Internal Auditor of TRAI. Internal Audit Report for the year 2016-17 was approved by Secretary TRAI.

### **SCOPE OF INTERNAL AUDIT**

The scope and function of the internal audit of the organization depends on the nature of work, the number of subordinate offices, the strength of establishment, nature and quantum of expenditure etc. Annual Internal Audit plans have been prepared and acted upon regularly. However, Manual of Internal Audit specifying the duties and functions of the organization, with particular reference to the prevailing conditions in TRAI is not prepared.

### **DUTIES OF INTERNAL AUDIT**

The duties of the internal audit organization includes the following

- i. study of accounting procedures prescribed with a view to ensuring that they are correct, adequate and free from any defects or lacunae;
- ii. watch over the implementation of the prescribed procedures and the orders issued from time to time;
- iii. scrutiny and check of payments and accounting work of the accounting units;
- iv. periodical review of all accounts records;
- v. the appraisal, monitoring and evaluation of individual schemes;
- vi. assessment of adequacy and effectiveness of internal controls in general, and soundness of financial systems and reliability of financial and accounting reports in particular;
- vii. identification and monitoring of risk factors including those contained in the Outcome Budget;
- viii. providing an effective monitoring system to facilitate mid course corrections.

### **QUANTUM OF AUDIT**

The internal audit has conducted a general review of all the accounts records maintained by the office since the last inspection. Apart from the general review, it also conducted a detailed check

of accounts records of at least one month in a year, selected by the in-charge of internal audit. The extent and nature of checks included the following:

- a) Detailed scrutiny of accounts records required to be maintained in DDO's offices;
- b) Verification of payment and accounting procedures including procedures to be followed by DDOs.
- c) Checking whether recoveries and deductions made from the bills are in order, correctness and accuracy of calculations;
- d) Scrutiny of the sanctioning and purchase procedures, so as to ensure that they are free from any defect or lacunae; checking of contracts with respect to terms and conditions of contract;
- e) Checking the procedures followed for disposal of assets etc to ensure they are as per laid down condemnation and disposal procedures
- f) Payments are made in accordance with the rules and orders governing them with the correct arithmetical calculations;
- g) Scrutiny of general office management procedures adopted by the heads of offices in areas having financial and accounting implications, so as to suggest measures for tightening up administrative and financial control, savings in expenditure or streamlining of accounting.

#### **CHECKING OF RECEIPTS**

The respective divisions in TRAI are primarily responsible to ensure that all revenues (Fees/Penalties etc.) or dues to TRAI are correctly and properly assessed, realized and credited to respective account.

Internal Audit has conducted mandatory checks to see whether the TRAI has prescribed adequate regulations and procedures for effective check on collection and accounting of all revenue receipts and refunds, and that they are followed correctly.

#### **FREQUENCY OF INTERNAL AUDIT**

Internal Audit of important units was conducted once during the year.

As per size and nature of functions performed by TRAI the Internal Audit System is adequate.

#### **ADEQUACY OF INTERNAL CONTROL SYSTEM**

TRAI has framed the policies and procedures for appointment of staff/ officers, fixation of pay, extension of terms of consultant, settlement of personal claims, TA claims, training and study tours of officers and staff and regulations on various matters in accordance with the provisions of the TRAI Act. The same are being followed. Receipt and disbursement of cash and maintenance of cash book has been properly done in compliance with relevant rules and regulations. Physical verification of cash

has been regularly done and the maximum limit of the cash balance, as prescribed by the Authority, was maintained. Two types of funds – one Plan Fund and the other Non-Plan Fund are maintained by TRAI and separate books of accounts are maintained for each fund. TRAI General Fund is maintained by the Department of Telecommunication (DoT). Grants from the Government of India to TRAI under Plan and Non Plan heads are credited to this fund. Expenditure of TRAI is met out of the release of grants by DoT under plan and non- plan heads.

In our opinion, the internal control system of the organization is adequate and commensurate with its size and the nature of its functions.

#### **System of physical verification of fixed assets**

The **Registers of Fixed Assets** are maintained manually as well as in computerized form. Physical verification of assets/stores is being conducted annually.

In our opinion, the System of physical verification of fixed assets of the organization is adequate and commensurate with its size and the nature of its functions.

#### **System of physical verification of inventory**

Proper records of inventory have been maintained. The physical verification of inventory for the year 2016-17 has been done.

In our opinion, the system for physical verification of inventory is adequate and commensurate with its size and the nature of its functions.

#### **Regularity in payment of statutory dues**

There was no disputed amount payable in respect of any other statutory dues including Contributory Provident Fund.

## Brief Note on Internal Control System in Telecom Regulatory Authority of India 2016-17

An evaluation of the Internal Control System existing in Telecom Regulatory Authority of India (TRAI) was done during the course of certification of the annual accounts of TRAI for the year 2016-17 and the report on the same is furnished below:

### 1. Organizational Setup

The Authority consists of a Chairperson, two whole-time Members and two part-time Members, who are assisted by the Secretary in discharging their functions. The Secretariat of TRAI is headed by the Secretary and works through six functional divisions, viz. Network, Spectrum and Licensing; Consumer Affairs & Quality of Service (CA & QoS); Financial and Economic Analysis (F&EA); Administration and Personnel (A&P); Legal; Broadcasting and Cable Services (B&CS) and Technology division (TD). Each of these divisions is headed by a Principal Advisor/Advisor and they report to the Secretary. Each Principal Advisor/Advisor is assisted by Deputy Advisors or Joint Advisors, who in turn are assisted by the respective Senior Research Officers.

### 2. Policies and Procedures

The policies and procedures for appointment of staff/officers, fixation of pay, extension of terms of consultants, settlement of personal claims, TA claims, training and study tours of officers and staff and regulations on various matters are framed according to provisions contained in the TRAI Act.

### 3. Scope and independence of Internal Audit

TRAI has its own Internal Audit division headed by Technical Officer directly reporting to the Secretary TRAI. The reports of Internal Audits are submitted to the Secretary for approval and are thereafter forwarded to the respective divisions for necessary corrective measures. The actions taken by the divisions are monitored continuously and regularly. Internal Audit Report for the year 2016-17 was approved by Secretary TRAI.

### 4. Receipts and Disbursement of Cash

The work relating to receipt and disbursement of cash is done by the Cashier under the supervision of the Senior Research Officer (Finance). The Cash Book remains under the custody of the Cashier and the physical verification of cash is being regularly done. The maximum limit of the cash balance, as prescribed by the Authority, is being maintained.

### 5. Maintenance of Funds (Plan/ Non-Plan)

TRAI has maintained two types of funds – one is Plan Fund and the other is Non-Plan Fund. The expenditure pertaining to each fund is met from the respective funds and the books of accounts are also maintained separately.

## 6. TRAI General Fund

TRAI General Fund is maintained by Department of Telecommunications (DOT). Grants from the Government of India to TRAI under Plan and Non Plan heads are credited to this fund separately. Expenditure of TRAI is met out of the release of grants by DOT under plan and non plan fund and utilization certificates in respect of grants released are furnished by TRAI to DOT. The balance in the TRAI general fund with DOT is shown in the accounts of TRAI under the head "Advance and other amounts recoverable in cash or in kind or for value to be received on Capital Account" under Current Assets, Loans and Advances (Schedule-11) in the Balance Sheet. Confirmation of the balance in the fund and reconciliation with DoT for the year 2016-17 has not been done.

## 7. Fixed Assets

The Registers of Fixed Assets are maintained manually as well as in computerized form. Physical verification of assets/stores is being conducted annually.

## 8. Receipts and Receivable/disbursement of cash

All sanctions of the competent authority, which are forwarded to the Finance Division for payment, are checked with the existing rules/orders, approval of the Competent Authority, availability of funds under the allocation of Head of Accounts, etc. and final orders for payment are issued accordingly. Orders of authority which is not in consonance with GOIs decisions/orders are rectified by the Finance.

## 9. Pay Rolls/ Loans and Advances to individuals

The salary/ loans and advances of the TRAI employees are being prepared and paid as per the provisions contained in the orders issued by the Government of India from time to time.

## 10. Bank Balance / Bank Reconciliation

Cheques are issued on the basis of sanctions received from the respective Divisions. TRAI is maintaining a Cheque Issue Register in which the details of cheques issued and received are entered. Bank Reconciliation Statements are prepared on a monthly basis. Funds received through Government grants are kept in Current Account in Bank.

## 11. Register of HBA/MCA/Computer/Scooter advance

HBA/MCA/Computer/Scooter advances are being paid to its employees by TRAI. While making payments of these advances to its employees, TRAI has been considering the debit balances of the parent/previous offices of the employees who took absorption.

**FORM OF FINANCIAL STATEMENTS(NON-PROFIT ORGANISATIONS)  
TELECOM REGULATORY AUTHORITY OF INDIA  
BALANCE SHEET AS AT 31-03-2017**

	NON-PLAN			PLAN		
	2016-17	2015-16	2016-17	2015-16	2016-17	2015-16
1	(10,85,11,281)	38,78,61,209	63,18,61,878	68,66,36,926		
2						
3						
4						
5						
6						
7	39,45,12,390	19,25,02,035	10,51,22,032	6,61,85,695		
<b>TOTAL</b>	<b>28,60,01,109</b>	<b>58,03,63,244</b>	<b>73,69,83,910</b>	<b>75,28,22,621</b>		
<b>ASSETS</b>						
8	1,97,82,599	1,68,92,778	5,98,16,255	6,38,74,160		
9						
10						
11	26,62,18,510	56,34,70,466	67,71,67,655	68,89,48,461		
MISCELLANEOUS EXPENDITURE (to the extent not written off or adjusted)						
<b>TOTAL</b>	<b>28,60,01,109</b>	<b>58,03,63,244</b>	<b>73,69,83,910</b>	<b>75,28,22,621</b>		
24						
25						

Sd/-  
Pr. Advisor (F&EA)

Sd/-  
Secretary

Sd/-  
Member

Sd/-  
Chairperson

**FORM OF FINANCIAL STATEMENTS(NON-PROFIT ORGANISATIONS)  
TELECOM REGULATORY AUTHORITY OF INDIA  
INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31-03-2017**

INCOME	Schedule	NON-PLAN		PLAN	
		Current Year 2016-17	Previous Year 2015-16	Current Year 2016-17	Previous Year 2015-16
Income from Sales/Services	12				
Grants/Subsidies	13	63,00,00,000	55,89,00,000	10,00,00,000	14,75,00,000
Fee/Subscriptions	14				
Income from Investments (Income on Invest from earmarked /endow. Funds transferred to Funds	15				
Income for Royalty, Publication etc.	16				
Interest Earned	17				
Other Income	18	1,14,811	14,88,35,526	39,45,349	1,46,182
Increase (decrease) in stock of Finished goods and works-in-progress	19				
<b>TOTAL(A)</b>		<b>63,01,14,811</b>	<b>70,77,35,526</b>	<b>10,39,45,349</b>	<b>14,76,46,182</b>
<b>EXPENDITURE</b>					
Establishment Expenses	20	31,41,33,702	26,03,37,365		
Other Administrative Expenses etc	21	30,56,46,471	27,90,61,321	15,30,70,401	11,32,02,296
Expenditure on Grants, Subsidies etc	22				
Interest	23				
Depreciation (Net Total at the year end-corresponding to Schedule 8)		65,18,841	64,09,135	56,49,224	92,34,561
<b>TOTAL (B)</b>		<b>62,62,99,014</b>	<b>54,58,07,821</b>	<b>15,87,19,625</b>	<b>12,24,36,857</b>
Balance being excess of Income over Expenditure (A-B)					
Transfer to Special Reserve (Specify each)					
Transfer to / from General Reserve					
<b>BALANCE BEING SURPLUS/(DEFICIT) CARRIED TO CORPUS/CAPITAL FUND</b>		<b>38,15,797</b>	<b>16,19,27,705</b>	<b>-54,774,276</b>	<b>2,52,09,325</b>
<b>SIGNIFICANT ACCOUNTING POLICIES</b>	24				
<b>CONTINGENT LIABILITIES AND NOTES ON ACCOUNTS</b>	25				
		Sd/-	Sd/-	Sd/-	Sd/-
		Pr. Advisor (F&EA)	Secretary	Member	Chairperson

**FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)  
TELECOM REGULATORY AUTHORITY OF INDIA  
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31-03-2017**

**SCHEDULE I - CORPUS/CAPITAL FUND:**

	NON - PLAN		PLAN	
	Current Year 2016-17	Previous Year 2015-16	Current Year 2016-17	Previous Year 2015-16
Balance as at the beginning of the year	38,78,61,209	22,62,52,597	68,66,36,926	65,40,90,217
Add:/Less Contributions towards Corpus/ Capital Fund	(50,01,88,287)	(3,19,093)	(772)	73,37,384
Add/(Deduct): Balance of net income/ (expenditure) transferred from the Income and Expenditure Account	38,15,797	16,19,27,705	-54,774,276	2,52,09,325
<b>BALANCE SHEET AS AT THE YEAR-END</b>	<b>(10,85,11,281)</b>	<b>38,78,61,209</b>	<b>63,18,61,878</b>	<b>68,66,36,926</b>

**SCHEDULE 2 - RESERVES AND SURPLUS**

	NON-PLAN		PLAN	
	Current Year 2016-17	Previous Year 2015-16	Current Year 2016-17	Previous Year 2015-16
1. Capital Reserve:	-	-	-	-
As per last Account	-	-	-	-
Addition during the year	-	-	-	-
Less: Deductions during the year	-	-	-	-
2. Revaluation Reserve:	-	-	-	-
As per last Account	-	-	-	-
Addition during the year	-	-	-	-
Less: Deductions during the year	-	-	-	-
3. Special Reserve:	-	-	-	-
As per last Account	-	-	-	-
Addition during the year	-	-	-	-
Less: Deductions during the year	-	-	-	-
4. General Reserve:	-	-	-	-
As per last Account	-	-	-	-
Addition during the year	-	-	-	-
Less: Deductions during the year	-	-	-	-
<b>TOTAL</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

Sd/-  
Consultant (F&EA)

**SCHEDULE - 3-EARMARKED/ENDOWMENT FUNDS**

(Amount-Rs.)

	FUND-WISE BREAKUP						TOTALS			
	Fund WW	Fund XX	Fund YY	Fund ZZ	Current Year 2016-17	Previous Year 2015-16	Current Year 2016-17	Previous Year 2015-16	PLAN	
a) Opening balance of the funds										
b) Additions of the funds:										
i. Donations/grants										
ii. Income from investments made on account of funds										
iii. Other additions (Misc income, receipt of advances)										
<b>TOTAL (a+b)</b>										
c) Utilisation/expenditure towards objectives of funds										
i. Capital Expenditure										
- Fixed Assets										
- Others										
Total										
ii. Revenue Expenditure										
- Salaries, Wages and Allowances etc										
- Rent										
- Other Administrative Expenses										
Total										
<b>TOTAL (c)</b>										
<b>NET BALANCE AS AT THE YEAR-END (a+b+c)</b>										

Notes

- 1) Disclosures shall be made under relevant head based on conditions attaching to the grants
- 2) Plan funds received from the Central/State Governments are to be shown as separate funds and not to be mixed up with any other Funds

Sd/-  
Consultant (F&EA)

**SCHEDULE 4 - SECURED LOANS AND BORROWINGS**

	NON-PLAN		PLAN	
	Current Year 2016-17	Previous Year 2015-16	Current Year 2016-17	Previous Year 2015-16
1. Central Government	-	-	-	-
2. State Government (Specify)	-	-	-	-
3. Financial Institutions	-	-	-	-
4. Banks	-	-	-	-
a) Term Loans	-	-	-	-
- Interest accrued and due	-	-	-	-
b) Other-Loans (Specify)	-	-	-	-
- Interest accrued and due	-	-	-	-
5. Other Institutions and Agencies	-	-	-	-
6. Debentures and Bonds	-	-	-	-
7. Others (Specify)	-	-	-	-
<b>TOTAL</b>	-	-	-	-

Note Amount due within one year

Sd/-  
Consultant (F&EA)

**SCHEDULE 5 - UNSECURED LOANS AND BORROWINGS**

(Amount-Rs.)

	NON-PLAN		PLAN	
	Current Year 2016-17	Previous Year 2015-16	Current Year 2016-17	Previous Year 2015-16
1. Central Government		-		-
2. State Government (Specify)		-		-
3. Financial Institutions		-		-
4. Banks		-		-
a) Term Loans		-		-
- Interest accrued and due		-		-
b) Other - Loans (Specify)		-		-
- Interest accrued and due		-		-
5. Other Institutions and Agencies		-		-
6. Debentures and Bonds		-		-
7. Others (Specify)		-		-
<b>TOTAL</b>				-

Note Amount due within one year

Sd/-  
Consultant (F&EA)

### SCHEDULE 6 - DEFERRED CREDIT LIABILITIES

	NON-PLAN		PLAN	
	Current Year 2016-17	Previous Year 2015-16	Current Year 2016-17	Previous Year 2015-16
a) Acceptances secured by hypothecation of capital equipment and other assets	-	-	-	-
b) Others	-	-	-	-
<b>TOTAL</b>	-	-	-	-

Note: Amounts due within one year

Sd/-  
Consultant (F&EA)

### SCHEDULE 7 - CURRENT LIABILITIES AND PROVISIONS

(Amount-Rs.)

	NON-PLAN		PLAN	
	Current Year 2016-17	Previous Year 2015-16	Current Year 2016-17	Previous Year 2015-16
<b>A. CURRENT LIABILITIES</b>				
1) Acceptances	-	-	-	-
2) Sundry Creditors	-	-	-	-
a) For Goods	-	-	-	-
b) Others	-	-	-	-
3) Advances Received	-	-	-	-
4) Interest accrued but not due on:	-	-	-	-
a) Secured loans/borrowings	-	-	-	-
b) Unsecured Loans/borrowings	-	-	-	-
5) Statutory Liabilities	-	-	-	-
a) Overdue	-	-	-	-
b) Others	-	-	-	-
6) Other current Liabilities	-	-	-	-
1) For TRAI General Fund (EMD)	18,67,250	12,60,700	45,76,905	90,000
2) For Telemarketing Registration Fees			-	-
3) For Customer Education Fees	1,22,00,149		-	-
4) Penalty from Telemarketing	20,37,519		-	-
5) Financial disincentive	13,31,91,141			
<b>TOTAL (A)</b>	<b>14,92,96,059</b>	<b>12,60,700</b>	<b>45,76,905</b>	<b>90,000</b>
<b>B. PROVISIONS</b>				
1. For Taxation				
2. Gratuity	4,55,16,025	4,05,95,280	-	-
3. Superannuation/Pension				
4. Accumulated Leave Encasement	5,99,88,841	4,46,13,173	-	-
5. Trade Warranties/Claims				
6. Other (Specify)				
Provisions for expenses	13,97,11,465	10,60,32,882	10,05,45,127	6,60,95,695
<b>TOTAL (B)</b>	<b>24,52,16,331</b>	<b>19,12,41,335</b>	<b>10,05,45,127</b>	<b>6,60,95,695</b>
<b>TOTAL (A+B)</b>	<b>39,45,12,390</b>	<b>19,25,02,035</b>	<b>10,51,22,032</b>	<b>6,61,85,695</b>

Sd/-  
Consultant (F&EA)

**SCHEDULE 8 - FIXED ASSETS NON PLAN**

DESCRIPTION	GROSS BLOCK				DEPRECIATION			NET BLOCK		
	Cost/ valuation as at beginning of the year	Additions during the year	Deductions during the year	Cost/ valuation at the year- ended	As at the beginning of the year	Additions during the year	Deductions during the year	Total up to the year-end	As at the current year-end	As at the previous year-end
<b>A. FIXED ASSETS:</b>										
1. LAND	-	-	-	-	-	-	-	-	-	-
a) Freehold	-	-	-	-	-	-	-	-	-	-
b) Leasehold	-	-	-	-	-	-	-	-	-	-
2. BUILDINGS										
a) On Freehold Land	-	-	-	-	-	-	-	-	-	-
b) On Leasehold Land	-	-	-	-	-	-	-	-	-	-
c) Ownership Flats/ Premises	-	-	-	-	-	-	-	-	-	-
3. PLANT MACHINERY & EQUIPMENT										
4. VEHICLES	73,75,078		595,751	67,79,327	43,03,550	8,58,606	4,00,949	47,61,207	20,18,120	30,71,528
5. FURNITURE, FIXTURES	2,24,95,822	13,14,309		2,38,10,131	1,69,78,294	15,72,383		1,85,50,677	52,59,454	55,17,528
6. OFFICE EQUIPMENT	1,39,26,252	8,60,898		1,47,87,150	1,19,25,593	9,91,358		1,29,16,951	18,70,199	20,00,659
7. COMPUTER/PERIPHERALS	3,53,55,879	69,05,109		4,22,60,988	3,12,84,351	23,83,580		3,36,67,931	85,93,057	40,71,528
8. ELECTRIC INSTALLATIONS	84,82,815	4,44,488		89,27,303	64,18,703	6,37,832		70,56,535	18,70,768	20,64,112
9. LIBRARY BOOKS	39,79,115	78,660		40,57,775	38,11,692	75,082		38,86,774	1,71,001	1,67,423
10. TUBE WELLS & W. SUPPLY										
11. OTHER FIXED ASSETS										
<b>TOTAL OF CURRENT YEAR</b>	9,16,14,961	96,03,464	595,751	10,06,22,674	7,47,22,183	65,18,841	4,00,949	8,08,40,075	1,97,82,599	1,68,92,778
<b>PREVIOUS YEAR</b>	8,52,20,466	70,40,679	6,46,184	9,16,14,961	6,90,33,035	64,09,135	7,19,987	7,47,22,183	1,68,92,778	2,11,42,180
<b>B. CAPITAL WORK-IN-PROGRESS</b>										
<b>TOTAL</b>										

Sd/-

Consultant (F&EA)

### SCHEDULE 8 - FIXED ASSETS PLAN

DESCRIPTION	GROSS BLOCK			DEPRECIATION			NET BLOCK		
	Cost/ valuation as at beginning of the year	Additions during the year	Deductions during the year	Cost/ valuation at the year- ended	As at the beginning of the year	Additions during the year	Deductions during the year	As at the current year-end	As at the previous year-end
<b>A. FIXED ASSETS:</b>									
1. LAND	-	-	-	-	-	-	-	-	-
a) Freehold	-	-	-	-	-	-	-	-	-
b) Leasehold	-	-	-	-	-	-	-	-	-
2. BUILDINGS									
a) On Freehold Land	-	-	-	-	-	-	-	-	-
b) On Leasehold Land	-	-	-	-	-	-	-	-	-
c) Ownership Flats/Premises	-	-	-	-	-	-	-	-	-
d) Superstructures on land not belonging to the entity	-	-	-	-	-	-	-	-	-
3. PLANT MACHINERY & EQUIPMENT									
4. VEHICLES									
5. FURNITURE, FIXTURES	18,61,416	3,49,644	-	22,11,060	5,95,930	1,95,222	7,91,152	14,19,908	12,65,486
6. OFFICE EQUIPMENT	1,94,45,660	4,48,698	-	1,98,94,358	41,57,103	34,21,211	75,78,314	1,23,16,044	1,52,88,557
7. COMPUTER/PERIPHERALS	6,31,23,749	7,92,977	-	6,39,16,726	1,58,11,936	20,30,117	1,78,42,053	4,60,74,673	4,73,11,813
8. ELECTRIC INSTALLATIONS	12,940	-	-	12,940	4,636	2,674	7,310	5,630	8,304
9. LIBRARY BOOKS	3,64,407	-	-	3,64,407	3,64,407	-	3,64,407	, 0	, 0
<b>TOTAL OF CURRENT YEAR</b>	<b>8,48,08,172</b>	<b>15,91,319</b>	<b>-</b>	<b>8,63,99,491</b>	<b>2,09,34,012</b>	<b>56,49,224</b>	<b>2,65,83,236</b>	<b>5,98,16,255</b>	<b>6,38,74,160</b>
<b>PREVIOUS YEAR</b>	<b>6,76,45,773</b>	<b>1,71,62,399</b>	<b>-</b>	<b>8,48,08,172</b>	<b>1,16,99,451</b>	<b>92,34,561</b>	<b>2,09,34,012</b>	<b>6,38,74,160</b>	<b>7,30,78,721</b>
<b>B. CAPITAL WORK-IN-PROGRESS</b>									
<b>TOTAL</b>									

Sd/-  
Consultant (F&EA)

**SCHEDULE 9 - INVESTMENTS FROM EARMARKED/ENDOWMENT FUNDS**

(Amount-Rs.)

	NON-PLAN		PLAN	
	Current Year	Previous Year	Current Year	Previous Year
	2016-17	2015-16	2016-17	2015-16
1. In Government Securities	-	-	-	-
2. Other approved Securities	-	-	-	-
3. Shares	-	-	-	-
4. Debentures and Bonds	-	-	-	-
5. Subsidiaries and Joint Ventures	-	-	-	-
6. Others ( to be specified)	-	-	-	-
<b>TOTAL</b>	-	-	-	-

**SCHEDULE 10 - INVESTMENTS OTHERS**

	NON-PLAN		PLAN	
	Current Year	Previous Year	Current Year	Previous Year
	2016-17	2015-16	2016-17	2015-16
1. In Government Securities	-	-	-	-
2. Other approved Securities	-	-	-	-
3. Shares	-	-	-	-
4. Debentures and Bonds	-	-	-	-
5. Subsidiaries and Joint Ventures	-	-	-	-
6. Others (Bank FDRs)	-	-	-	-
<b>TOTAL</b>	-	-	-	-

Sd/-  
Consultant (F&EA)

**SCHEDULE 11 - CURRENT ASSETS, LOANS, ADVANCES ETC**

(Amount-Rs.)

DESCRIPTION	NON-PLAN		PLAN	
	Current Year 2016-17	Previous Year 2015-16	Current Year 2016-17	Previous Year 2015-16
<b>A. CURRENT ASSETS:</b>				
1. Inventories				
a) Stores and Spares	-	-	-	-
b) Lose tools	-	-	-	-
c) Stock-in-trade	-	-	-	-
Finished Goods	-	-	-	-
Work in progress	-	-	-	-
Raw Material	-	-	-	-
2. Sundry Debtors:				
a) Debts Outstanding for a period exceeding six months	-	-	-	-
b) Others	-	-	-	-
3. Cash balances in hand (including cheques/ drafts and imprest)	70,707	25,225	26,681	25,000
4. Bank Balances:				
a) With Scheduled Banks				
- On Current Accounts TRAI General fund	8,46,36,662	3,13,21,767	1,66,39,737	3,94,78,981
- On Current Accounts Registration Fees		2,32,000		-
Penalty from Telemarketers	20,37,519	2,65,91,413		-
- On Savings Account Customer Education Fees	1,22,00,149	8,47,72,637		-
- On Savings Account Financial Disincentive	13,31,91,141	38,74,71,105		-
a) With non-Scheduled Banks				
- On Current Accounts	-	-	-	-
- On Deposit Accounts	-	-	-	-
- On Savings	-	-	-	-
5. Post Office-Savings Accounts	-	-	-	-
<b>TOTAL (A)</b>	<b>23,21,36,178</b>	<b>53,04,14,147</b>	<b>16,666,418</b>	<b>3,95,03,981</b>

Sd/-  
Consultant (F&EA)

**SCHEDULE 11 - CURRENT ASSETS, LOANS, ADVANCES ETC**

(Amount-Rs.)

	NON-PLAN		PLAN	
	Current Year 2016-17	Previous Year 2015-16	Current Year 2016-17	Previous Year 2015-16
<b>B. LOANS, ADVANCES AND OTHER ASSETS</b>				
1. Loans				
a) Staff	4,02,258	11,22,595		
b) Other Entities engaged in activities/ objectives similar to that of Entity				-
c) Others (TA, LTC and Festival Advances to Officers & Staff))	17,48,913	62,500		
2. Advance and other amounts recoverable in cash or in kind or for value to be received:				
a) On Capital Account	2,75,00,000	2,75,00,000	64,35,00,000	64,35,00,000
b) Prepayments				
c) Others	30,67,080	27,76,195	1,70,01,237	59,44,480
3. Income Accrued				
a) On Investments from Earmarked/ Endowment Funds				
b) On Investments-Others				
c) On Loans and Advances	13,64,081	15,95,029		
d) Others				
(includes income due unrealised Rs.)				
5. Claims Receivable				
<b>TOTAL (B)</b>	<b>3,40,82,332</b>	<b>3,30,56,319</b>	<b>66,05,01,237</b>	<b>64,94,44,480</b>
<b>TOTAL (A+B)</b>	<b>26,62,18,510</b>	<b>56,34,70,466</b>	<b>67,71,67,655</b>	<b>68,89,48,461</b>

Sd/-  
Consultant (F&EA)

### SCHEDULE 12 - INCOME FROM SALES/SERVICES

(Amount-Rs.)

	NON-PLAN		PLAN	
	Current Year	Previous Year	Current Year	Previous Year
	2016-17	2015-16	2016-17	2015-16
1. Income from Sales	-	-	-	-
a) Sale of Finished Goods	-	-	-	-
b) Sale of Raw material	-	-	-	-
c) Sale of Scraps	-	-	-	-
2. Income from Services	-	-	-	-
a) Labour and Processing Charges	-	-	-	-
b) Professional/Consultancy Services	-	-	-	-
c) Agency Commission and Brokerage	-	-	-	-
d) Maintenance Services (Equipment/ Property)	-	-	-	-
e) Others (Specify)	-	-	-	-
<b>TOTAL</b>	-	-	-	-

### SCHEDULE 13 - GRANTS/SUBSIDIES

(Irrevocable Grants & Subsidies Received)	NON-PLAN		PLAN	
	Current Year	Previous Year	Current Year	Previous Year
	2016-17	2015-16	2016-17	2015-16
1) Central Government	63,00,00,000	55,89,00,000	10,00,00,000	14,75,00,000
2) State Government (s)				
3) Government Agencies				
4) Institutions/Welfare Bodies				
5) International Organisations				
6) Other (Specify)				
<b>TOTAL</b>	<b>63,00,00,000</b>	<b>55,89,00,000</b>	<b>10,00,00,000</b>	<b>14,75,00,000</b>

### SCHEDULE 14 - FEES/SUBSCRIPTIONS

	NON-PLAN		PLAN	
	Current Year	Previous Year	Current Year	Previous Year
	2016-17	2015-16	2016-17	2015-16
1. Entrance Fees	-	-	-	-
2. Annual Fees/Subscriptions	-	-	-	-
3. Seminar/Program Fees	-	-	-	-
4. Consultancy Fees	-	-	-	-
5. Others (specify)	-	-	-	-
<b>TOTAL</b>				

Note: Accounting Policies towards each item are to be disclosed

**SCHEDULE 15 - INCOME FROM INVESTMENTS**

(Amount-Rs.)

(Income on Invest. from Earmarked/ Endowment Funds Transferred to Funds)	Investment from Earmarked Fund			
	NON-PLAN		PLAN	
	Current Year 2016-17	Previous Year 2015-16	Current Year 2016-17	Previous Year 2015-16
1) Interest				
a) On Govt. Securities	-	-	-	-
b) Other Bonds/Debentures	-	-	-	-
2) Dividends	-	-	-	-
a) On Shares	-	-	-	-
b) On Mutual Fund Securities	-	-	-	-
3) Rents	-	-	-	-
4) Others (Specify)	-	-	-	-
<b>TOTAL</b>				
<b>TRANSFERRED TO EARMARKED/ENDOWMENT FUNDS</b>				

**SCHEDULE 16 - INCOME FROM ROYALTY, PUBLICATION ETC**

	NON-PLAN		PLAN	
	Current Year 2016-17	Previous Year 2015-16	Current Year 2016-17	Previous Year 2015-16
	1. Income from Royalty	-	-	-
2. Income from Publications	-	-	-	-
3. Others (specify)	-	-	-	-
<b>TOTAL</b>	-	-	-	-

**SCHEDULE 17 - INTEREST EARNED**

	NON-PLAN		PLAN	
	Current Year 2016-17	Previous Year 2015-16	Current Year 2016-17	Previous Year 2015-16
	1) On Term Deposits			
a) With Scheduled Banks	-	-	-	-
b) With Non-Scheduled Banks	-	-	-	-
c) With Institutions	-	-	-	-
d) Others	-	-	-	-
2) On Savings Account				
a) With Scheduled Banks	-	-	-	-
b) With Non-Scheduled Banks	-	-	-	-
c) With Institutions	-	-	-	-
d) Others	-	-	-	-
3) On Loans	-	-	-	-
a) Employees/Staff	-	-	-	-
b) Others	-	-	-	-
4) Interest on Debtors and Other Receivables	-	-	-	-
<b>TOTAL</b>	0	0	0	0

Note-Tax deducted at source to be indicated

## SCHEDULE 18 - OTHER INCOME

(Amount-Rs.)

	NON-PLAN		PLAN	
	Current Year	Previous Year	Current Year	Previous Year
	2016-17	2015-16	2016-17	2015-16
1. Profit on Sale/disposal of Assets			-	-
a) Owned assets		3,49,981	24,363	14,226
b) Assets acquired out of grants, or received free of cost			-	-
2. Export Incentives realized			-	-
3. Fees for Miscellaneous Services			-	-
4. Miscellaneous Income	1,14,811	1,62,218	39,20,986	1,31,956
5. Registration Fees from Telemarketers			-	-
6. Customer Education Fees from Telemarketers		1,26,19,860	-	-
7. Penalty from Telemarketers		30,95,573	-	-
8. Financial Disincentive		13,26,07,894	-	-
<b>TOTAL</b>	<b>1,14,811</b>	<b>14,88,35,526</b>	<b>39,45,349</b>	<b>1,46,182</b>

**SCHEDULE 19 - INCREASE/(DECREASE)  
 IN STOCK OF FINISHED GOODS & WORK IN PROGRESS**

	NON-PLAN		PLAN	
	Current Year	Previous Year	Current Year	Previous Year
	2016-17	2015-16	2016-17	2015-16
a) Closing stock				
- Finished Goods	-	-	-	-
- Work-in-progress	-	-	-	-
b) Less Opening Stock				
- Finished Goods	-	-	-	-
- Work-in-progress	-	-	-	-
<b>NET INCREASE/(DECREASE) [a-b]</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

## SCHEDULE 20 - ESTABLISHMENT EXPENSES

	NON-PLAN		PLAN	
	Current Year	Previous Year	Current Year	Previous Year
	2016-17	2015-16	2016-17	2015-16
a) Salaries and Wages	24,14,85,925	20,69,83,489	-	-
b) Allowances and Bonus	7,57,692	2,88,697	-	-
c) Contribution to Provident Fund	1,24,16,795	65,57,857	-	-
d) Contribution to Other Fund (specify)			-	-
e) Staff Welfare Expenses	6,72,895	6,13,524	-	-
f) Expenses on Employees Retirement and Terminal Benefits	4,35,47,601	3,34,17,085	-	-
g) Others (LTC, Medical to Officers & Staff and OTA to Staff)	1,52,52,794	1,24,76,713	-	-
<b>TOTAL</b>	<b>31,41,33,702</b>	<b>26,03,37,365</b>	<b>-</b>	<b>-</b>

**SCHEDULE 21 - OTHER ADMINISTRATIVE EXPENSES ETC**

(Amount-Rs.)

	NON-PLAN		PLAN	
	Current Year 2016-17	Previous Year 2015-16	Current Year 2016-17	Previous Year 2015-16
a) Purchases	-	-	-	-
b) Labour and processing expenses	-	-	-	-
c) Cartage and Carriage Inwards	-	-	-	-
d) Electricity and power	18,15,117	18,89,257	-	-
e) Water charges	-	-	-	-
f) Insurance	91,575	81,796	-	-
g) Repairs and maintenance	38,55,319	32,91,452	-	-
h) Excise Duty	-	-	-	-
i) Rent, Rates and Taxes	21,93,16,032	21,04,83,270	-	-
j) Vehicles Running and Maintenance	23,79,242	17,82,344	-	-
k) Postage, Telephone and Communication Charges	83,88,528	79,53,680	-	-
l) Printing and Stationery	64,24,572	59,94,350	-	-
m) Travelling and Conveyance Expenses	1,71,20,791	1,45,60,450	-	-
n) Expenses on Seminar/Workshops	1,26,531	36,240	-	-
o) Subscription Expenses	1,09,893	1,23,788	-	-
p) Expenses on Fees	2,84,618	13,483	-	-
q) Auditors Remuneration	1,77,785	2,02,706	-	-
r) Hospitality Expenses	17,13,295	11,43,384	-	-
s) Professional Charges	2,86,55,261	1,80,16,204	-	-
t) Provision for Bad and Doubtful Debts/ Advances	-	-	-	-
u) Irrecoverable Balances Written-off	-	-	-	-
v) loss on sale of assets	17,569	111,962	-	-
w) Freight and Forwarding Expenses	-	-	-	-
x) Software develop expenses	707,120	-	-	-
y) Advertisement and Publicity	-	-	-	-
z) Others	-	-	-	-
(i) Others (Payment to Security, Housekeeping etc.)	1,44,63,223	1,33,76,955	-	-
(ii) Expenditure on Capacity Building	-	-	15,30,70,401	11,32,02,296
<b>TOTAL</b>	<b>30,56,46,471</b>	<b>27,90,61,321</b>	<b>15,30,70,401</b>	<b>11,32,02,296</b>

Sd/-  
Consultant (F&EA)

### SCHEDULE 22 - EXPENDITURE ON GRANTS, SUBSIDIES ETC

(Amount-Rs.)

	NON-PLAN		PLAN	
	Current Year	Previous Year	Current Year	Previous Year
	2016-17	2015-16	2016-17	2015-16
a) Grants given to Institutions/ Organisations	-	-	-	-
b) Subsidies given to Institutions/ Organisations	-	-	-	-
<b>TOTAL</b>				

Note: Name of Entities, their Activities along with the amount of Grants/Subsidies are to be disclosed

### SCHEDULE 23 - INTEREST

	NON-PLAN		PLAN	
	Current Year	Previous Year	Current Year	Previous Year
	2016-17	2015-16	2016-17	2015-16
a) On Fixed Loans	-	-	-	-
b) On Other Loans (including Bank Charges)	-	-	-	-
c) Others (specify)	-	-	-	-
<b>TOTAL</b>	-	-	-	-

Sd/-  
Consultant (F&EA)

**FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS) TELECOM REGULATORY AUTHORITY OF INDIA  
RECEIPTS AND PAYMENTS FOR THE PERIOD/YEAR ENDED 31-03-2017**

	RECEIPTS		NON-PLAN		PLAN		PAYMENTS		NON-PLAN		PLAN	
	Current Year 2016-17	Previous Year 2015-16										
<b>I. Opening Balance</b>												
a) Cash in hand	25,225	52,214	25,000	25,000	28,08,90,744	23,63,33,679						
i) In current accounts	3,13,21,767	2,43,14,898	3,94,78,981	1,33,61,434	28,55,94,165	30,79,35,457	11,86,43,862	12,05,82,901				
ii) In deposit accounts												
iii) Savings accounts penalty registration fees	2,65,91,413	2,34,95,840	2,32,000	2,32,000								
customer education fees	8,47,72,637	7,21,52,777										
Financial disincentive	38,74,71,105	25,48,63,211										
<b>II. Grants Received</b>												
a) From Government of India	63,00,00,000	55,89,00,000	10,00,00,000	14,75,00,000								
b) V From State Government												
c) From other sources (details)												
(Grants for capital & revenue exp to shown separately)												
<b>III. Income on Investments from</b>												
a) Earmarked/Endow Funds												
b) Own Funds (Oth Investment)												
<b>IV. Interest Received</b>												
a) On Bank deposits					94,49,112	71,19,952	12,11,214	15,774				

RECEIPTS	NON-PLAN		PLAN		PAYMENTS		NON-PLAN		PLAN	
	Current Year 2016-17	Previous Year 2015-16	Current Year 2016-17	Previous Year 2015-16	Current Year 2016-17	Previous Year 2015-16	Current Year 2016-17	Previous Year 2015-16	Current Year 2016-17	Previous Year 2015-16
b) Loans, Advances et		2,56,325			c) To DOT for Telemarketer Registration fees		2,32,000			
					To DoT for Customer education fees		8,47,72,637			
					To DoT for Penalty from Telemarketeres		2,65,91,413			
					To DOT for Financial Disincentive		38,74,71,105			
c) Miscellaneous			39,20,986	1,31,956	<b>VI. Finance Charges (Interest)</b>					
<b>V Other Income (Specify)</b>										
To Miscellaneous Income	1,74,576	33,832			<b>VII. Other Payments (Specify)</b>					
					Loans and advances and security deposits		14,86,728	12,50,370	1,13,90,090	9,13,234
<b>VI Amount Borrowed</b>					<b>VIII. Closing Balances</b>					
<b>VII. Any other receipts (give details)</b>					a) Cash in hand		70,707	25,225	26,681	25,000
To Security Deposits	6,06,550	79,200	44,86,905	22,500	b) Bank Balances					
other advances					1) In current accounts		8,46,36,662	3,13,21,767	1,66,40,025	3,94,78,981
To Sale of Assets		3,49,981			TRAI General fund					
To loans and advances & security deposits					i) In current accounts		0	2,32,000		
To registration fees					Registration fees					
					ii) In deposit accounts					
To customer education fees	1,22,00,149	1,26,19,860			2) Savings accounts					
To penalty from telemarketers	20,37,519	30,95,573			i) customer education fees		1,22,00,149	8,47,72,637		
To financial disincentive	13,31,91,141	13,26,07,894			ii) penalty from telemarketers		20,37,519	2,65,91,413		
					iii) financial disincentive		13,31,91,141	38,74,71,105		
<b>TOTAL</b>	<b>130,86,24,082</b>	<b>108,30,53,605</b>	<b>14,79,11,872</b>	<b>16,10,15,890</b>	<b>TOTAL</b>		<b>130,86,24,082</b>	<b>108,30,53,605</b>	<b>14,79,11,872</b>	<b>16,10,15,890</b>

Sd/-  
Pr. Advisor (F&EA)

Sd/-  
Member

Sd/-  
Secretary

Sd/-  
Chairperson

## SCHEDULE 24 - SIGNIFICANT ACCOUNTING POLICIES

### 1 Accounting Conventions:

- (a) The financial statements have been prepared in the "Uniform Form of Accounts" as approved by the Controller General of Accounts vide their letter No. F.No.19(1)/Misc./2005/TA/450-490 dated 23.07.2007 for both Non-Plan and Plan activities appropriately and distinctly.
- (b) Accounts have been prepared on accrual basis for the current year i.e., 2016-17. There is no change in Method of Accounting from the preceding year.
- (c) Provisions for all the undisputed and known liabilities have been made in the Books of Accounts.
- (d) Figures have been rounded off to the nearest rupee.
- (e) Contingent liabilities are disclosed after careful evaluation of facts and legal aspects of the matter involved.

### 2 Fixed Assets

Fixed Assets are stated at cost of acquisition inclusive of inward freight, duties and taxes and incidental and direct expenses related to acquisition.

### 3 Depreciation:

- (a) Depreciation on Fixed Assets is provided on Straight Line Method at the rates specified in Part "C" of Schedule II of the Companies Act, 2013 except for the categories mentioned below on which higher rates of depreciation have been applied:

Category	Minimum prescribed depreciation rate as per Companies Act, 1956	Depreciation rate applied
Office Equipments	19.00%	19.00% *
Furnitures and Fixtures	9.50%	10.00%
Electrical Appliances	9.50%	10.00%
Airconditioners	9.50%	10.00%
Books and Publications	6.33%	20.00%

\* Office Equipments includes Mobile Handsets provided to the officers for official purposes. It has been decided by the Competent Authority vide Order No. 2-1/97-LAN dated 04.05.2007 to provide/write off these handsets in three years on the same pattern as DoT. Accordingly depreciation on Mobile Handsets from the year 2007-08 onwards have been charged off @ 33.33%.

- (b) In respect of additions to Fixed Assets during the year, depreciation is considered on Pro-rata basis.
- (c) Assets costing Rs. 5,000/- or less, each are fully provided.

### 4 Foreign Currency Transactions:

Transactions denominated in foreign currencies are recorded at the exchange rate prevailing at the time of transaction.

Sd/-  
Consultant (F&EA)

## 5 Retirement Benefits

- (a) Provision for Leave Salary and Pension Contribution up to 31.03.2017 in the case of employees on deputations have been provided in the Books of Accounts at the rates prescribed by Government of India under Fundamental Rules from time to time.
- (b) In the case of Regular employees, Provision for Leave Encashment and Gratuity for the year 2016-17 have been made on the basis of report furnished by the actuary.

## 6 Govt. Grant :

- (a) No grant in respect of specific fixed assets has been received during the current year.
- (b) Govt. grants are accounted for on the basis of grants received during the year from the Government.
- (c) The money received on account of Registration Fee, Customer Education Fee, Penalty on Telemarketers and Financial Disincentive has been accounted for on cash basis.

## SCHEDULE 25 - CONTINGENT LIABILITIES AND NOTES ON ACCOUNTS

### 1 Contingent Liabilities:

Claims against the Entity not acknowledged as debts Current Year (Nil) (Previous year Nil)

### 2 Current Assets, Loans and Advances:

In the opinion of the Management, the current assets, loans and advances have a value on realization in the ordinary course of business, equal at least to the aggregate amount shown in the Balance Sheet.

### 3 Taxation:

As per clause 32 of the TRAI Act, 1997, TRAI is exempt from tax on Wealth and Income.

### 4 Grants

During the accounting year i.e. 2016-17, the grants received during the year Rs.63 Crores and Rs 10 crores under Non Plan and Plan head respectively.

### 5 Transactions relating to the Telecom Commercial Communications Customer Preference Regulations, 2010

As per the provisions of "The Telecom Commercial Communications Customer Preference Regulations, 2010, TRAI had opened four accounts with Corporation Bank for deposition of Registration Fee, Customer Education Fee, Penalty from Telemarketers and Financial Disincentive Accounts. Up to 31-03-2016 a sum of Rs.2,32,000/-,2,65,91,413/-,8,47,72,637/- and 38,74,71,105.- were received on

Sd/-  
 Consultant (F&EA)

account of Customer Registration fees, Penalty from telemarketers, Customer education fees and financial disincentive imposed by TRAI on various regulations respectively and shown as Income up to 31-03-2016. As per letter no 1-15/2016-B/1271 dated 30/09/2016 of DOT, the same were remitted to DOT on 21/11/2016. The same were routed through capital fund as earlier the same were shown as income. During the year 2016-17, a sum of Rs, 1,22,00,149/-, 20,37,519/- and 13,31,91,141/- has been received as Customer education fees, penalty from telemarketers and financial disincentive respectively. These amounts are inclusive of interest earned during the year 2016-17. The same has been shown in schedule 7 of current liabilities.

6 Previous year figures:

Corresponding figures for the previous year have been regrouped/arranged wherever necessary. The expenditure/income relating to the previous year i.e prior period expenditure/income have been routed through capital fund .

A sum of Rs.4,87,635/- recoverable from DoT for vehical transferred to TDSAT has been routed through capital fund as the same was lying in Books of accounts for more than 14 years.

7. Transactions in Foreign Currencies

Expenditure in Foreign Non - Plan Head NIL

Currency:

Expenditure in Foreign Plan Head

Currency:

- |  |   |
|--|---|
| (a) Travel:  | A sum of Rs.63,35,218/-/- was paid to officers towards TA/ DA expenditure for overseas travel.<br>A sum of Rs. 16,04,804/- was paid for participation fees for foreign institutions |
| (b) Remittances and Interest payment to Financial Institution, Banks in Foreign Currency | Nil   |
| (c) Other Expenditure:   | Nil   |

8 Schedules 1 to 25 are annexed to and form an integral part of the Balance Sheet as at 31st March, 2017 and the Income and Expenditure Account for the year ended on that date.

Sd/-  
**Pr. Advisor (F&EA)**

Sd/-  
**Secretary**

Sd/-  
**Member**

Sd/-  
**Chairperson**

## C) AUDITED CONTRIBUTORY PROVIDENT FUND ACCOUNTS OF TRAI FOR THE YEAR 2016-17

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**S**eparate Audit Report on the Annual Accounts of Telecom Regulatory Authority of India-Contributory Provident Fund Account for the year ended 31 March 2017.

### 1. INTRODUCTION

We have audited the attached Balance Sheet of the Telecom Regulatory Authority of India-Contributory Provident Fund Account as on 31 March 2017 and the Income and Expenditure Account/Receipts and Payments Account for the year ended on that date under Section 19(A) of the Comptroller & Auditor General's (Duties, Powers & Conditions of Service) Act, 1971 read with Rule 5 (5) of the Telecom Regulatory Authority of India (Contributory Provident Fund) Rules, 2003, issued under Government of India, Extraordinary Gazette Notification No. GSR 333(E) dated 10th April 2003. These financial statements are the responsibility of the Telecom Regulatory Authority of India-Contributory Provident Fund Account's Management. Our responsibility is to express an opinion on these financial statements based on our audit.

2. This separate Audit Report contains the comments of the Comptroller & Auditor General of India (CAG) on the accounting treatment only with regard to classification, conformity with the best accounting practices, accounting standards and disclosure norms, etc. Audit observations on financial transactions with regard to compliance with the Law, Rules & Regulations (Propriety and Regularity) and efficiency-cum performance aspects, etc, if any are reported through Inspection Reports/CAG's Audit Reports separately.
3. We have conducted our audit in accordance with auditing standards generally accepted in India. These standards require that we plan and

perform the audit to obtain reasonable assurance that the financial statements are free from material misstatements. An audit includes examining, on a test basis, evidence supporting the amounts and disclosure in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of financial statements. We believe that our audit provides a reasonable basis for our opinion.

**4.** Based on our audit, we report that:

- i.** We have obtained all the information and explanations, which to the best of our knowledge and belief were necessary for the purpose of audit;
- ii.** The Balance Sheet and the Income and Expenditure Account/Receipts and Payments Account dealt with by this report have been drawn up in the 'Uniform format of Accounts' approved by the Controller General of Accounts under Rule 5 of the Telecom Regulatory Authority of India (Contributory Provident Fund) Rules, 2003.
- iii.** In our opinion, proper books of accounts and other relevant records have been maintained by the Telecom Regulatory Authority of India – Contributory Provident Fund Account.

- iv.** We report that the Balance Sheet and the Income and Expenditure Account/Receipt and Payments Account dealt with by this Report are in agreement with the books of accounts.
- v.** In our opinion and to the best of our information and according to the explanations given to us, the said financial statements, read together with the Accounting Policies and Notes on Accounts, and subject to the significant matters stated above and other matters mentioned in Annexure-I to this Audit Report, give a true and fair view in conformity with the accounting principles accepted in India:
  - a.** In so far as it relates to the Balance Sheet of the state of affairs of the Telecom Regulatory Authority of India-Contributory Provident Fund Account as on 31 March 2017; and
  - b.** In so far as it relates to the Income and Expenditure Account of the 'Excess of Income over Expenditure' for the year ended on that date.

**Sd/-**  
**(P.K. Tiwari)**  
**Director General of Audit (P&T)**

**ANNEXURE-I TO SEPARATE AUDIT REPORT ON THE ACCOUNTS OF TELECOM  
REGULATORY AUTHORITY OF INDIA-CONTRIBUTORY PROVIDENT FUND ACCOUNT FOR  
THE YEAR ENDED 31 MARCH 2017**

As per the information and explanations given to us, the books and records examined by us in normal course of audit and to the best of our knowledge and belief, we further report that:

**(1) Adequacy of Internal Audit System**

The Internal Audit of TRAI-CPF accounts was conducted in August 2017 and got approved by Secretary, TRAI. The Internal Audit System of the organization is adequate and commensurate with its size and nature of its function.

**(2) Adequacy of Internal Control System**

The Internal Control System of the organization is adequate and commensurate with its size and the nature of its functions.

Sd/-  
**(N.K. Gautam)**  
Dy. Director

## BRIEF NOTE ON THE INTERNAL CONTROL SYSTEM IN TELECOM REGULATORY AUTHORITY OF INDIA-CONTRIBUTORY PROVIDENT FUND ACCOUNT 2016-17

An evaluation of the Internal Control System existing in Telecom Regulatory Authority of India (TRAI)-CPF Account was done during the course of certification of the annual accounts of TRAI for the year 2016-17 and the report on the same is furnished below:

### 1. Introduction

The Telecom Regulatory Authority of India - Contributory Provident Fund (TRAI-CPF) Account was established with effect from 5 May 2003 in pursuance of Rule 3 (1) of the Telecom Regulatory Authority of India (Contributory Provident Fund) Rules, 2003, issued under Government of India, Extraordinary Gazette Notification No. GSR 333(E) dated 10 April 2003. TRAI has a total sanctioned strength of 237 and 181 men in position. Out of this, 61 are on deputation and 120 are on regular strength as on 31.03.2017. The deductions from salary on account of GPF/EPF/CPF as the case may be are made from the employees on deputation and are remitted to their parent offices as per terms and conditions of their appointment. In the case of regular staff of TRAI, CPF deductions are made from their salary as per the CPF Rules and employees' as well as employer's contributions are remitted to TRAI-CPF Account, by TRAI on a month to month basis along with the details of deduction of each employee.

### 2. Organizational Setup

TRAI-CPF Account has no separate employees on its own. The entire work of maintenance of TRAI-CPF Account is done by the Board of Trustees, which is constituted from the employees of TRAI

only. As per decision taken by the TRAI Authority, the Joint Advisor (F & EA) is the Secretary to the Board of Trustees. The following are the trustees of the Board:

- (i) Advisor (Administration) : President  
(Ex-officio)
- (ii) Dy. Advisor (HR) : Trustee  
(Ex-officio)
- (iii) Joint Advisor (F & EA) : Trustee
- (iv) PS (F & EA) : Trustee
- (v) Joint Advisor (F & EA) : Secretary,  
CPF Trust

The Secretary to the Board of Trustees is responsible for maintenance of Accounts of the TRAI-CPF Account and conducting the meetings of the Board of Trustees. All decisions of the Board of Trustees are taken in their periodical meetings.

### 3. Scope and independence of Internal Audit

TRAI has its own Internal Audit division headed by Technical Officer (IAU). The reports of Internal Audit, including CPF-Accounts, are submitted to the Secretary for approval and are thereafter forwarded to the respective divisions for necessary corrective measures. The actions taken by the divisions are monitored continuously and regularly.

### 4. Receipts and Disbursement of Funds

The work relating to receipt and disbursement of the funds is done by a Section Officer under the supervision of Secretary to the Board of

Trustees. No cash transaction is done in TRAI-CPF Account as all receipts and payments are made through cheques only. Receipt of CPF deductions from TRAI and payments made to the members of TRAI-CPF Account, if any, on account of CPF withdrawal or advance are regularly recorded in bank book.

### 5. Investments

The funds of TRAI-CPF Account are invested in various Securities as per Government norms. The interests accrued/ received on these securities are credited in interest income. The decisions of making investments are taken in the periodical meetings of Board of Trustees.

### 6. Interest

Interest on the CPF deposits of the members is credited to their individual accounts at the

rate specified by the Central Government from time to time for the payment of interest on subscriptions to the General Provident Fund. Deficit, if any, in the interest payable to the members is met from TRAI General Fund.

### 7. Withdrawal/Advance of CPF

The members of TRAI-CPF Account are entitled for withdrawal or for temporary advance out of their balance as per the guidelines of CPF Rules. In the case of advances given to the members, the Drawing and Disbursement Officer of TRAI is informed regarding the monthly deductions to be made from salary of the concerned members towards recovery of advances.

Sd/-  
(N.K. Gautam)  
Dy. Director

**FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)  
THE TELECOM REGULATORY AUTHORITY OF INDIA - CONTRIBUTORY PROVIDENT FUND ACCOUNT  
INCOME AND EXPENDITURE ACCOUNT FOR THE PERIOD/ YEAR ENDED 31-MAR-2017**

INCOME	Schedule	Current Year	Previous Year
Income from Sales/ Services	12	-	-
Grants/ Subsidies	13	-	-
Fee/ Subscriptions	14	-	-
Income from Investments (Income on Invest from earmarked /endow. Funds transferred to Funds)	15	5,102,687.61	5,045,117.87
Income for Royalty ,Publication etc	16	-	-
Interest Earned	17	5,566,021.47	4,797,396.25
Other Income	18	28,824.00	-
Increase (decrease) in stock of Finished goods and works-in-progress	19	-	-
<b>TOTAL (A)</b>		<b>10,697,533.08</b>	<b>9,842,514.12</b>
<b>EXPENDITURE</b>			
Establishment Expenses	20	-	-
Other Administrative Expenses etc	21	1,717.50	1,685.40
Expenditure on Grants, Subsidies etc	22	-	-
Interest	23	9,432,500.00	9,323,556.00
Diminution Value of Investments in Mutual Funds			
Depreciation (Net Total at the year end-corresponding to Schedule 8)			
<b>TOTAL (B)</b>		<b>9,434,217.50</b>	<b>9,325,241.40</b>
Balance being excess of Income over Expenditure (A-B)		1,263,315.58	517,272.72
Transfer to Misc Expenditure to the extent not written off - on account of Diminution Value of Investments			-
Transfer to / from General Reserve		1,263,315.58	517,272.72
Balance being Surplus/ (Deficit) carried to Corpus/ Capital Fund			
<b>SIGNIFICANT ACCOUNTING POLICIES</b>			
24			
<b>CONTINGENT LIABILITIES AND NOTES ON ACCOUNTS</b>			
25			

Sd/-	Sd/-	Sd/-	Sd/-
Sh. A.K. Dhingra	Sh. Anurag Sharma	Sh. K. V. Sebastian	Smt. Shalini Katoch
Jt. Advisor (F&EA)	Dy. Advisor (Admin)	Jt. Advisor (F&EA)	Private Secretary (F&EA)
Secretary (CPF)	Ex-Officio Trustee	Trustee	Trustee
			Ex-Officio President
			Advisor (Admin)
			Sh. Sanjeev Sharma

**FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)**  
**THE TELECOM REGULATORY AUTHORITY OF INDIA - CONTRIBUTORY PROVIDENT FUND ACCOUNT**  
**BALANCE SHEET AS AT 31-MAR-2017**

<b>CORPUS/CAPITAL FUND AND LIABILITIES</b>	<b>Schedule</b>	<b>Current Year</b>	<b>Previous Year</b>
TRAI - CPF MEMBERS' ACCOUNT	1	146,057,794.00	107,944,782.00
RESERVES AND SURPLUS	2	6,684,258.30	5,420,942.72
EARMARKED/ ENDOWMENT FUNDS	3		
SECURED LOANS AND BORROWINGS	4		
UNSECURED LOANS AND BORROWINGS	5		
DEFERRED CREDIT LIABILITIES	6		
CURRENT LIABILITIES AND PROVISIONS	7	3,446,852.35	2,104,670.33
<b>TOTAL</b>		<b>156,188,904.65</b>	<b>115,470,395.05</b>
<b>ASSETS</b>			
FIXED ASSETS	8		-
INVESTMENTS-FROM EARMARKED/ENDOWMENT FUNDS	9		-
INVESTMENTS - OTHERS	10	110,400,000.00	106,600,000.00
CURRENT ASSETS, LOANS, ADVANCES ETC	11	45,788,904.65	8,870,395.05
MISCELLANEOUS EXPENDITURE			-
(to the extent not written off or adjusted)			
<b>TOTAL</b>		<b>156,188,904.65</b>	<b>115,470,395.05</b>
SIGNIFICANT ACCOUNTING POLICIES	24		
CONTINGENT LIABILITIES AND NOTES ON ACCOUNTS	25		

Sd/-	Sd/-	Sd/-	Sd/-
Sh. A.K. Dhingra	Sh. Anurag Sharma	Sh. K. V. Sebastian	Sh. Shalini Katoch
Jt. Advisor (F&EA)	Dy. Advisor (Admin)	Jt. Advisor (F&EA)	Private Secretary (F&EA)
Secretary (CPF)	Ex-Officio Trustee	Trustee	Trustee
			Sh. Sanjeev Sharma
			Advisor (Admin)
			Ex-Officio President

**FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)  
THE TELECOM REGULATORY AUTHORITY OF INDIA - CONTRIBUTORY PROVIDENT FUND ACCOUNT  
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31-MAR-2017**

**SCHEDULE 1 - TRAI - CPF MEMBERS' ACCOUNT**

(Amount-Rs.)

	Current Year	Previous Year
Balance as at the beginning of the year	107,944,782.00	107,769,127.00
Deduct: Adjustments for previous year		
Add: Contributions towards Members' Account	38,113,012.00	175,655.00
Add/(Deduct): Balance of net income/(expenditure) transferred from the Income and Expenditure Account		
<b>BALANCE AS AT THE YEAR-END</b>	<b>146,057,794.00</b>	<b>107,944,782.00</b>

**SCHEDULE 2 - RESERVES AND SURPLUS**

	Current Year	Previous Year
1. Capital Reserve:		
As per last Account		
Addition during the year		
Less: Deductions during the year		
2. Revaluation Reserve:		
As per last Account		
Addition during the year		
Less: Deductions during the year		
3. Special Reserve:		
As per last Account		
Addition during the year		
Less: Deductions during the year		
4. General Reserve:		
As per last Account	5,420,942.72	4,903,670.00
Addition during the year	1,263,315.58	517,272.72
Less: Deductions during the year		
<b>TOTAL</b>	<b>6,684,258.30</b>	<b>5,420,942.72</b>

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THE TELECOM REGULATORY AUTHORITY OF INDIA - CONTRIBUTORY PROVIDENT FUND ACCOUNT  
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31-MAR-2017  
SCHEDULE 3 - EARMARKED/ENDOWMENT FUNDS**

	FUND-WISE BREAKUP					Current Year	Previous Year
	Fund WW	Fund XX	Fund YY	Fund ZZ	Year		
(Amount-Rs.)							
a) Opening balance of the funds							
b) Additions of the funds:							
i. Donations/grants							N. A.
ii. Income from investments made on account of funds							
iii. Other additions (sepcify nature)							
<b>TOTAL (a+b)</b>							
c) Utilisation/expenditure towards objectives of funds							
i. Capital Expenditure							
- Fixed Assets							
- Others							
Total							
ii. Revenue Expenditure							
- Salaries, Wages and allowances etc							
- Rent							
- Other Administrative expenses							N. A.
Total							
<b>TOTAL (c)</b>							
<b>NET BALANCE AS AT THE YEAR-END (a+b+c)</b>							

**Notes**

- 1) Disclosures shall be made under relevant head based on conditions attaching to the grants
- 2) Plan funds received from the Central/State Governments are to be shown as separate funds and not to be mixed up with any other Funds

**FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)  
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SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31-MAR-2017**

**SCHEDULE 4 - SECURED LOANS AND BORROWINGS**

	(Amount-Rs.)	
	Current Year	Previous Year
1. Central Government		
2. State Government (Specify)		
3. Financial Institutions		
4. Banks		
a) Term Loans		
- Interest accrued and due		N. A.
b) Other-Loans (Specify		
- Interest accrued and due		
5. Other Institutions and Agencies		
6. Debentures and Bonds		
7. Others (Specify)		
<b>TOTAL</b>		

**SCHEDULE 5 - UNSECURED LOANS AND BORROWINGS**

	(Amount-Rs.)	
	Current Year	Previous Year
1. Central Government		
2. State Government (Specify)		
3. Financial Institutions		
4. Banks		
a) Term Loans		
- Interest accrued and due		
b) Other-Loans (Specify		
- Interest accrued and due		N. A.
5. Other Institutions and Agencies		
6. Debentures and Bonds		
7. Others (Specify)		
<b>TOTAL</b>		

Note: Amount due within one year

**FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)**  
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**SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31-MAR-2017**

**SCHEDULE 6 - DEFERRED CREDIT LIABILITIES**

	Current Year	Previous Year
a) Acceptances secured by hypothecation of capital equipment and other assets		
b) Others		

**TOTAL**

Note: Amounts due within one year

**SCHEDULE 7 - CURRENT LIABILITIES AND PROVISIONS**

	(Amount-Rs.)	
	Current Year	Previous Year
<b>A. CURRENT LIABILITIES</b>		
1) Acceptances		
2) Sundry Creditors		
a) For Goods		
b) Others		
3) Advances Received		-
4) interest accrued but not due on:		
a) Secured loans/borrowings		
b) Unsecured Loans/borrowings		
5) Statutory Liabilities		
a) Overdue		
b) Others		
6) Other current Liabilities		
(i) Corporation Bank Asaf Ali Road - Book Overdraft	3,446,852.35	2,104,670.33
<b>TOTAL (A)</b>	<b>3,446,852.35</b>	<b>2,104,670.33</b>
<b>B. PROVISIONS</b>		
1. For Taxation		
2. Gratuity		
3. Superannuation/Pension		
4. Accumulated Leave Encasement		
5. Trade Warranties/Claims		
6. Other (Specify)		
<b>TOTAL (B)</b>	-	-
<b>TOTAL (A+B)</b>	<b>3,446,852.35</b>	<b>2,104,670.33</b>

**FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)  
THE TELECOM REGULATORY AUTHORITY OF INDIA - CONTRIBUTORY PROVIDENT FUND ACCOUNT  
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31-MAR-2017  
SCHEDULE 8 - FIXED ASSETS**

DESCRIPTION	GROSS BLOCK		DEPRECIATION		NET BLOCK	
	Cost/ valuation as at beginning of the year	Additions during the year	Cost/ valuation at the year- ended	As at the beginning of the year	On Additions during the year	On Deductions during the year- end
A. FIXED ASSETS:						
1. LAND						
a) Freehold						
b) Leasehold						
2. BUILDINGS						
a) On Freehold Land						
b) On Leasehold Land						
c) Ownership Flats/Premises						
d) Superstructures on land not belonging to the entity						
3. PLANT MACHINERY & EQUIPMENT						
4. VEHICLES						
5. FURNITURE, FIXTURES						
6. OFFICER EQUIPMENT						
7. COMPUTER/PERIPHERALS						
8. ELECTRIC INSTALLATIONS						
9. LIBRARY BOOKS						
10. TUBEWELLS & W. SUPPLY						
11. OTHER FIXED ASSETS						
<b>TOTAL OF CURRENT YEAR</b>						
<b>PREVIOUS YEAR</b>						
<b>B. CAPITAL WORK-IN-PROGRESS</b>						
<b>TOTAL</b>						
N. A.						

(Note to be given as to cost of assets on hire purchase basis included above)

**FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)**  
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**SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31-MAR-2017**

**SCHEDULE 9 - INVESTMENTS FROM EARMARKED/ENDOWMENT FUNDS**

(Amount-Rs.)		
	Current Year	Previous Year
1. In Government Securities		
2. Other approved Securities		
3. Shares		
4. Debentures and Bonds		N. A.
5. Subsidiaries and Joint Ventures		
6. Others ( to be specified)		
<b>TOTAL</b>		

**SCHEDULE 10 - INVESTMENTS OTHERS**

	Current Year	Previous Year
1. In Government Securities	59,700,000.00	59,700,000.00
<i>Long - term Investments - Rs. 5,97,00,000.00</i>		
<i>Current Investments -</i>		
2. Other Approved Securities		
3. Shares		
4. Debentures and Bonds		
5. Subsidiaries and Joint Ventures		
6. Others (Fixed Deposits in Banks/PSU) - Long - term	50,700,000.00	46,900,000.00
<b>TOTAL</b>	<b>110,400,000.00</b>	<b>106,600,000.00</b>

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SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31-MAR-2017**

**SCHEDULE 11 - CURRENT ASSETS, LOANS, ADVANCES ETC**

	(Amount-Rs.)	
	Current Year	Previous Year
<b>A. CURRENT ASSETS:</b>		
1. Inventories		
a) Stores and Spares	-	-
b) Loose tools	-	-
c) Stock-in-trade		
Finished Goods	-	-
Work in progress	-	-
Raw Material	-	-
2. Sundry Debtors:		
a) Debts Outstanding for a period exceeding six months	-	-
b) Others	-	-
3. Cash balances in hand ( including cheques/drafts and imprest)		
4. Bank Balances:		
a) With Scheduled Banks		
- On Current Accounts	-	-
- On Deposit Accounts (includes margin money)	37,700,780.00	2,773,365.00
- On Savings Account	11,360.22	155,046.22
a) With non-Scheduled Banks		
- On Current Accounts	-	-
- On Deposit Accounts	-	-
- On Savings Account	-	-
5. Post Office-Savings Accounts	-	-
<b>TOTAL (A)</b>	<b>37,712,140.22</b>	<b>2,928,411.22</b>

**FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)  
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SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31-MAR-2017**

**SCHEDULE 11 - CURRENT ASSETS, LOANS, ADVANCES ETC**

	(Amount-Rs.)	
	Current Year	Previous Year
<b>B. LOANS, ADVANCES AND OTHER ASSETS</b>		
1. Loans		
a) Staff		-
b) Other Entities engaged in activities/objectives similar to that of Entity		-
c) Other (Specify)		-
2. Advance and other amounts recoverable in cash or in kind or for value to be received:		
a) On Capital Account		-
b) Prepayments		-
c) Others		-
3. Income Accrued		
a) On Investments from Earmarked/Endowment Funds		-
b) On Investments - Others	8,076,764.43	5,941,983.83
c) On Loans and Advances		
d) Others		
(includes income due unrealised Rs.)		
4. Claims Receivable -		
<b>TOTAL (B)</b>	<b>8,076,764.43</b>	<b>5,941,983.83</b>
<b>TOTAL (A+B)</b>	<b>45,788,904.65</b>	<b>8,870,395.05</b>

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**SCHEDULE 12 - INCOME FROM SALES/SERVICES**

(Amount-Rs.)

	Current Year	Previous Year
1. Income from Sales	/	/
a) Sale of Finished Goods		
b) Sale of Raw material		
c) Sale of Scraps		
2. Income from Services		
a) Labour and Processing Charges		
b) Professional/Consultancy Services		
c) Agency Commission and Brokerage		
d) Maintenance Services (Equipment/Property)		
e) Others (Specify)		
<b>TOTAL</b>		

**SCHEDULE 13 - GRANTS/SUBSIDIES**

	Current Year	Previous Year	
(Irrevocable Grants & Subsidies Received)	/	/	
1) Central Government			
2) State Government (s)			
3) Government Agencies			N.A.
4) Institutions/Welfare Bodies			
5) International Organisations			
6) Other (Specify)			
<b>TOTAL</b>			

**FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)  
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**SCHEDULE 14 - FEES/ SUBSCRIPTIONS**

	(Amount-Rs.)	
	Current Year	Previous Year
1. Entrance Fees		
2. Annual Fees/Subscriptions		
3. Seminar/Program Fees		N. A.
4. Consultancy Fees		
5. Others(specify)		
<b>TOTAL</b>		

Note: Accounting Policies towards each item are to be disclosed

**SCHEDULE 15 - INCOME FROM INVESTMENTS**

	Investment - Others	
	Current Year	Previous Year
(Income on Invest. from Earmarked/Endowment Funds Transferred to Funds)		
1) Interest		
a) On Govt Securities	5,102,687.61	5,045,117.87
b) Other Bonds/Debentures		
2) Dividends		
a) On Shares		
b) On Mutual Fund Securities		
3) Rents		
4) Others		
<b>TOTAL</b>	<b>5,102,687.61</b>	<b>5,045,117.87</b>

TRANSFERRED TO EARMARKED/ ENDOWMENT FUNDS

**FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)  
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**SCHEDULE 16 - INCOME FROM ROYALTY, PUBLICATION ETC**

	Current Year	Previous Year
1. Income from Royalty		
2. Income from Publications		N. A.
3. Others (Specify)		
<b>TOTAL</b>		

**SCHEDULE 17 - INTEREST EARNED**

	Current Year	Previous Year
1) On Term Deposits		
a) With Scheduled Banks	5,559,055.47	4,790,722.25
b) With Non-Scheduled Banks		
c) With Institutions	-	
d) Others		
2) On Savings Account		
a) With Scheduled Banks	6,966.00	6,674.00
b) With Non-Scheduled Banks	-	-
c) With Institutions	-	-
d) Others	-	-
3) On Loans		
a) Employees/Staff	-	-
b) Others	-	-
4) Interest on Debtors and Other Receivables	-	-
<b>TOTAL</b>	<b>5,566,021.47</b>	<b>4,797,396.25</b>

**FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)**  
**THE TELECOM REGULATORY AUTHORITY OF INDIA - CONTRIBUTORY PROVIDENT FUND ACCOUNT**  
**SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31-MAR-2017**

**SCHEDULE 18 - OTHER INCOME**

	(Amount-Rs.)	
	Current Year	Previous Year
1. Profit on Sale/ Disposal of Assets		
a) Owned assets	-	-
b) Assets acquired out of grants,or received free of cost	-	-
2. Export Incentives realized	-	-
3. Fees for Miscellaneous Services	-	-
4. Miscellaneous Income	28,824.00	-
<b>TOTAL</b>	<b>28,824.00</b>	<b>-</b>

**SCHEDULE 19 - INCREASE/(DECREASE) IN STOCK OF  
FINISHED GOODS & WORK IN PROGRESS**

	Current Year	Previous Year
a) Closing stock		
- Finished Goods		
- Work-in-progress		
b) Less Opening Stock		
- Finished Goods		
- Work-in-progress		
<b>NET INCREASE/(DECREASE) [a-b]</b>		N. A.

**SCHEDULE 20 - ESTABLISHMENT EXPENSES**

	Current Year	Previous Year
a) Salaries and Wages		
b) Allowances and Bonus		
c) Contribution to Provident Fund		
d) Contribution to Other Fund(specify)		
e) Staff Welfare Expenses		
f) Expenses on Employees Retirement and Terminal Benefits		
g) Others		
<b>TOTAL</b>		N. A.

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**SCHEDULE 21 - OTHER ADMINISTRATIVE EXPENSES ETC**

	Current Year	Previous Year
a) Purchases	-	-
b) Labour and processing expenses	-	-
c) Cartage and Carriage Inwards	-	-
d) Electricity and power	-	-
e) Water charges	-	-
f) Insurance	-	-
g) Repairs and maintenance	-	-
h) Excise Duty	-	-
i) Rent, Rates and Taxes	-	-
j) Vehicles Running and Maintenance	-	-
k) Postage, Telephone and Communication Charges	-	-
l) Printing and Stationery	-	-
m) Travelling and Conveyance Expenses	-	-
n) Expenses on Seminar/Workshops	-	-
o) Subscription Expenses	-	-
p) Expenses on Fees	-	-
q) Auditors Remuneration	-	-
r) Hospitality Expenses	-	-
s) Professional Charges	-	-
t) Provision for Bad and Doubtful Debts/Advances	-	-
u) Irrecoverable Balances Written-off	-	-
v) Packing Charges	-	-
w) Freight and Forwarding Expenses	-	-
x) Distribution Expenses	-	-
y) Advertisement and Publicity	-	-
z) Others	-	-
- Bank & Finance Charges	1,717.50	1,685.40
<b>TOTAL</b>	<b>1,717.50</b>	<b>1,685.40</b>

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**SCHEDULE 22 - EXPENDITURE ON GRANTS, SUBSIDIES ETC**

	(Amount-Rs.)	
	Current Year	Previous Year
a) Grants given to Institutions/Organisations		
b) Subsidies given to Institutions/Organisations		N. A.
<b>TOTAL</b>		

Note: Name of Entities, their Activities along with the amount of Grants/Subsidies are to be disclosed

**SCHEDULE 23 - INTEREST**

	Current Year	Previous Year
a) On Fixed Loans		-
b) On Other Loans (including Bank Charges)		-
a) Others (specify) - Interest Payable to Members	9,432,500.00	9,323,556.00
<b>TOTAL</b>	<b>9,432,500.00</b>	<b>9,323,556.00</b>

**THE TELECOM REGULATORY AUTHORITY OF INDIA - CONTRIBUTORY PROVIDENT FUND ACCOUNT**

**RECEIPTS AND PAYMENTS FOR THE YEAR ENDED 31-MAR-2017**

RECEIPTS	Current Year	Previous Year	PAYMENTS	Current Year	Previous Year
I. Opening Balance					
a) Cash in hand			1. Expenses		
b) Bank Balances			a) Establishment Expenses		-
i) In current accounts			b) Administrative Expenses	1,717.50	1,685.40
ii) In deposit accounts	2,773,365.00	444,259.01			
iii) Savings accounts	175,011.89	226,666.41			
II. Grants Received			II. Payments made against funds for various projects		
a) From Government of India			(Name the fund or project should be shown along with		
b) From State Government			the particulars of payments made for each project)		
c) From Other Sources (Details)					
(Grants for capital & revenue exp to shown separately)					
III. Income on Investments from			III. Investments and Deposits made		
a) Earmarked/ Endow Funds			a) Out of Earmarked/ Endowment funds		
b) Own Funds (On Investment in Mutual Funds)			b) Out of Own Funds (Investments - Others)	21,000,000.00	18,700,000.00
			(Investments - Flexi Account)	37,700,780.00	2,773,365.00
IV. Interest Received			IV. Expenditure on Fixed Assets & Capital Work-in-progress		
a) On Bank Deposits	3,437,557.48	2,806,297.87	a) Purchase of Fixed Assets		

RECEIPTS	Current Year	Previous Year	PAYMENTS	Current Year	Previous Year
b) Loans, Advances etc.			b) Expenditure on Capital Work-in-progress		
c) Miscellaneous	5,089,405.00	5,089,430.00	V. Refund of surplus money/ Loans		
d) interest on savings	6,966.00	6,674.00	a) The Government of India	7,054,991.00	31,846,217.00
V Other Income (Specify)			b) The State Government	2,740,119.00	3,931,000.00
To Miscellaneous Income			c) Other providers of funds		
VI Amount Borrowed			VI. Finance Charges (Interest)		
VII. Any other Receipts (Give Details)			VII. Other Payments (Specify)		
Fees			Final Payments		
Capital Fund			Advances and Withdrawals		
Sales of Publication			VIII. Closing Balances		
Sale of Assets			a) Cash in hand		
Contribution from Members	26,792,210.00	22,843,335.00	b) Bank Balances		
Contribution from TRAI	12,060,702.00	4,805,817.00	i) In current accounts		
Transfer of Balances			ii) In deposit accounts		
Repayment of Advances	990,135.00	1,104,800.00	iii) Savings accounts	27,744.87	175,011.89
Maturity of FDs/ Encasement of Mutual Funds	17,200,000.00	20,100,000.00			
Interest Shortfall Recovered from TRAI Gen. Fund	-	-			
<b>TOTAL</b>	<b>68,525,352.37</b>	<b>57,427,279.29</b>	<b>TOTAL</b>	<b>68,525,352.37</b>	<b>57,427,279.29</b>

Sd/-	Sd/-	Sd/-
Sh. A.K. Dhingra	Sh. Anurag Sharma	Sh. K. V. Sebastian
Jt. Advisor (F&EA)	Dy. Advisor (Admin)	Jt. Advisor (F&EA)
Secretary (CPF)	Ex-Officio Trustee	Trustee
		Private Secretary (F&EA)
		Trustee
		Smt. Shalini Katoch
		Advisor (Admin)
		Ex-Officio President

## SCHEDULE 24 - SIGNIFICANT ACCOUNTING POLICIES

### 1 Accounting Conventions:

- i) The financial statements have been prepared in the "Uniform Format of Accounts" as approved by the Controller General of Accounts vide their letter No. F.No.19(1)/Misc./2005/TA/450-490 dated 23.07.2007.
- ii) Accounts have been prepared on accrual basis for the current year i.e., 2016-17. There is no change in Method of Accounting from the preceding year.
- iii) Investments depicted in Schedule 10 (Investments - Others) are carried at cost.

## SCHEDULE 25 - CONTINGENT LIABILITIES AND NOTES ON ACCOUNTS

### Contingent Liabilities:

- 1 Claims against the Entity not acknowledged as debts NIL

### Notes on Accounts

- 1 Investments have been made on the pattern prescribed in the Notification of Ministry of Finance (Department of Financial Services) dated 2nd March, 2015 effective from 1st April 2015.
- 2 Investments depicted in Schedule 10 (Investments - Others) include investment in Government Securities amounting to Rs. 5,97,00,000.00 and Others (FDs in Banks/ PSUs) amounting to Rs. 5,07,00,000.00. Out of the investments in Govt. Securities, an amount of Rs. 5,97,00,000.00 are Long-term Investments as these are being held for more than one year from the date on which they have been made .
- 3 Corresponding figures for the previous year have been re-grouped/re-arranged wherever necessary.
- 4 With effect from 01.01.2016, TRAI CPF Trust has decided to credit TRAI contribution to the Members of the TRAI CPF Trust on the basis of monthly emoluments drawn, whereas previously it was being credited on the basis of emoluments drawn by the employee as on 31st March of the previous year.

Sd/-	Sd/-	Sd/-	Sd/-	Sd/-
Sh. A.K. Dhingra Jt. Advisor (F&EA) Secretary (CPF)	Sh. Anurag Sharma Dy. Advisor (Admin) Ex-Officio Trustee	Sh. K. V. Sebastian Jt. Advisor (F&EA) Trustee	Smt. Shalini Katoch Private Secretary (F&EA) Trustee	Sh. Sanjeev Sharma Advisor (Admin) Ex-Officio President