ANNEXURE A

Idea Cellular response to the TRAI Consultation Paper on "Regulatory Framework for Over-the-top (OTT) Services"

Summary submissions

A. At the outset, we welcome TRAI's Consultation Paper on Regulatory Framework for Over-the-top (OTT) services. The Authority has correctly highlighted that the Telecom Service Providers (TSPs) are currently overwhelmed by online content, known as over-the-top (OTT) applications and services.

Indian Internet growth story unique – No comparison with Europe/ US

B. **In India Internet usage is primarily driven through mobility, since fixed line penetration level was never high.** Most Indians get their first experience of the Internet on a mobile phone. This is unlike other countries in Europe or US etc. where initial internet proliferation happened predominantly through fixed line route. In those countries internet through cable and fixed line options like landline, DSL etc. has been the mainstay for a long time. Also, in US and Europe the there is competition amongst **3-4 fully capitalized** mobile players while in India there is hyper competition between 7-8 players who are financially stretched and operate on significantly lower quantum of spectrum as compared to US and European operators.

C. However, there can never be a fair comparison of internet concepts or tariffs or level of competition between markets such as Europe/ US & India. ***Typically, the data rates for 1 GB of traffic in US, is ~USD $20 to $30 or ~Rs. 1250 to 1850 (India equivalent) as compared to Rs.250 in India.*** Interestingly, though data rates in India are lower, however, the cost of equipment are similar to US, but the quantity of spectrum available in India is miniscule. Hence **any comparative discussion on internet concepts such as Net Neutrality etc. needs to be seen in this context.**

Idea supports Net Equality – Internet for All, not just few.

D. **Idea fully supports the principle of Net Neutrality,** which is necessary for the proliferation of Internet. The Company also believes that the current understanding of this concept varies across stakeholders and thus creates varied opinions/ conclusions. In our view, Net Neutrality is a complex issue which needs to be understood in the right context and hence we submit that Government form an expert committee, comprising of TSPs, OTT Companies, Device companies, thought Leaders and technical experts to define Net Neutrality in Indian context.

E. Mobile internet penetration in India is around 25%. Hence the balance 75% of the Indian population have yet to experience the benefits of internet. The top priority from the Indian perspective should thus be to extend the benefits of the internet to the balance ***"1 Billion Indians".*** This brings us to the concept of **Net Equality**, which means:

a. **"Internet for All":** The benefit of Internet should be available to all strata of the society, especially the "Unconnected ones". All the unconnected consumers have to leapfrog from their current world of isolation to the world of Internet. This requires huge demand generation, sales and marketing efforts including sampling, trials and education efforts and large scale network, service and sales and marketing investment by TSPs. Other stakeholders of ecosystem like OTT players and device companies have to also contribute to Government vision for Internet to All. India witnessed this revolution from 2007 onwards in the context of voice telephony and Indian Telecom operators need to repeat the same success for internet connectivity.

b. Net equality means that the consumers should be **"free to choose ".**This choice should span across content, device and operators.

c. Consumers should have the access to possible solutions which will make internet affordable such as Toll Free/Sponsored Data Plans etc.

d. **"Same Service, Same Rules"** so that all stake holders are bound to offer same services under the same regulations and no one gets an undue advantage.

Idea Cellular strongly supports Net Equality: To achieve the first objective of Net Equality i.e. taking internet to the masses including Indian hinterland and deep rural areas, TSPs require to commit huge financial investments. As is widely known, the current financial health of the Mobile industry is not robust enough to make such large investments as current investments from the Industry are yielding negative to low return on capital deployed by the operators.

Internet for all – Where are we today & how would we reach to next billion internet users ?

F. Availability of mobile broadband

a. As per the latest TRAI recommendations on delivering Broadband quickly (dated 17.04.2015) – refer page 2, para 1.3, as of September 2014, India has a 15 per cent Internet user penetration and is ranked 142nd, way below some of its neighboring countries like Bhutan and Sri Lanka.

b. Merely 70 MN mobile wireless subscribers are on broadband speed of 256 Kbps and above.

c. Connecting 1 Billion subscribers at minimum speed of 2 Mbps with average consumption of 1GB per month would generate 1000 Peta Byte traffic per month. This would also require covering 4 to 5 Lakh villages through a wide network of towers, optic fiber across length and breadth of country and most critical affordable , low frequency spectrum.

d. In spite of auctioning 3G &Broadband Wireless Access Spectrum of 2300 MHz (20 MHz) way back in 2010, India is far from achieving ubiquitous high speed internet connectivity for its citizens. On other side, China (single operator) which recently launched rolled out 4G service has integrated more than 1 million BTS during last 18 months. At present, India is nowhere near meeting the target for a service which is considered almost a basic necessity in many developed countries.

e. The realization of larger goal "Internet for All" requires a holistic approach by all the stake holders i.e. Government, Investors, Telecom Operators, Consumers, Device companies and OTT players. Therefore an urgent need to review present policies on Spectrum (especially on lower frequency), hassle free and single window approvals for fiber layout and tower installations are the need of the hour.

f. **Government and policy makers or even Niti Aayog need to assess the funds required for covering 5.50 lac villages with high speed internet connectivity and create a framework for attracting investment.**

Can Telecom Industry lead the revolution for next 1 billion Internet users?

G. Industry operating at a loss even after 20 years of operations

The telecom industry has been suffering from poor financial performance, mainly because of two factors - hyper competition resulting in low tariffs (lowest in the world) and multifold increase in spectrum prices. The financial highlights of the telecom operators based on filing of operators with the Registrar of Companies/ Stock exchanges for the year 2013-14 is summarized below -

Operator Financials for Financial Year 2013-14 Rs Crs.

Operator	Source	Consolidated Figures			Net Debt / EBITDA	Consol. Gross Block (Incl CWIP)
		EBITDA	PAT	Net Debt		
Bharti Airtel Ltd.	**AR**	27,777	2,773	60,542	2.2	2,10,196
Idea Cellular Ltd.	**AR**	8,334	1,968	20,231	2.4	62,639
Reliance Communications Ltd.	**AR**	7,726	1,048	40,178	5.2	1,12,872
Vodafone*						
Vodafone Cellular Ltd.	**MCA**	2,010	223	7,439	3.7	11,040
Vodafone Digilink Ltd.	**MCA**	1,199	52	3,836	3.2	7,289
Vodafone East Ltd.	**MCA**	327	65	2,357	7.2	4,076
Vodafone India Ltd.	**MCA**	949	-115	19,545	20.6	16,297
Vodafone Mobile Services Ltd.	**MCA**	911	136	8,813	9.7	13,707
Vodafone South Ltd.	**MCA**	4,566	1,783	5,002	1.1	15,880
Vodafone Spacetel Ltd.	**MCA**	-461	-2,090	14,363	N.A.	6,920
BSNL	**MCA**	-759	-7,020	4,013	N.A.	1,71,655
MTNL	**AR**	-614	-3,800#	13,933	N.A.	27,396
Tata						
Tata Teleservices Ltd.	**MCA**	188	-6,166	22,966	122.4	31,624
Tata Teleservices (Mah) Ltd.	**AR**	706	-560	6,498	9.2	8,830
Aircel						
Aircel Ltd.	**MCA**	294	-3,478	18,763	63.7	18,811
Aircel Cellular Ltd.	**MCA**	153	-48	16	0.1	1,426
Dishnet Wireless	**MCA**	473	-3,352	17,478	37.0	14,750
Sistema Shyam Teleservices Ltd.	**AR**	-816	-2,073	4,626	N.A.	8,911
Uninor	**QR**	-476	-	0		
Total		**52,486**	**-16,856**	**2,70,599**		**7,44,320**

QR - Quarterly Report *AR - Annual Report* *MCA - Ministry of Corporate Affairs website*

#Excluding Exceptional Revenue of Rs. 116,207 mn

**Based on information available for FY14 from MCA

Net Debt and EBITDA figures are derived based on the information provided in the relevant source documents mentioned above

The following are the submissions in this regard –

a. The telecom Industry is thus financially stretched and is suffering from high capital investment and poor return of capital employed (RoCE). The current gross block of all TSPs is in excess of Rs 7.4 lac crores. After the recent spectrum purchase, the RoCE of TSPs (listed) is expected to fall to 3.6% to 5.1%, which is lower as compared with other similar equity investment options that give RoCE of 12-15%.

b. There is a misconception that telecom companies are making great profits. As can be seen from above table majority of telecom operators are incurring losses and hence on an overall basis the industry is incurring huge losses (about Rs 16,800 crs as shown above).

c. Even the minority who do make marginal profits have RoCE much below the cost of capital. It is important to note that these companies are not some startups, but businesses who have been operating for 20 years now and still struggling to see decent returns.

d. Most importantly, these are the results before accounting for the higher price of spectrum. We have further done more analysis on the three profitable operators (listed companies) based on their last available results (for quarter ending Dec'14). It can be seen that all of them have an RoCE much below their cost of capital (~13%) and this will get adversely impacted due to renewal of spectrum at much higher prices.

	Rs Crs.	Idea	Bharti	RCOm
A	**YTD Q3FY15 Consolidate Financials**			
	EBITDA*	10,330	30,959	7,387
	PAT*	3,002	5,238	648
	Net Debt	11,978	66,839	36,767
	Net Debt/EBITDA	1.16	2.16	4.98
	ROCE**	9.6%	5.8%	3.8%
B	**Impact of Spectrum Renewal**			
	on PAT	2,734	2,092	256
	% of impact to original PAT	- 91.1%	- 39.9%	- 39.5%
	on Net Debt (Renewal Payout)	27,905	21,301	2,593
C	**Revised - Considering Impact of Spectrum Renewal**			
	EBITDA*	10,330	30,959	7,387
	PAT	268	3,145	392
	Net Debt	39,883	88,139	39,360
	Net Debt/EBITDA	3.86	2.85	5.33
	ROCE**	5.1%	4.9%	3.6%

Source: Quarterly Report

*Annualised YTD Q3FY15 numbers
** Is calculated as PAT plus net Interest and Finance Cost Less Tax @34% divided by average capital employed

It is clear from above that :

i. **Industry's financial performance is far from healthy.**
ii. **The most efficient operators are not able to cover their cost of capital.**
iii. **The current tariffs in India are the lowest in the world and even in the historical spectrum price regime these were inadequate to cover cost of capital.**
iv. **Hence, tariffs need to improve from current levels to first cover the cost of capital and then to cover the higher cost of spectrum post renewal.**

However, we need to remember that India has been extremely successful in ensuring 900 Million consumers connected on voice telephony and this revolution has been made possible by competitive industry, building large scale telecom networks reaching nearly 5 lac rural villages through innovative business models, certainty in regulatory framework, large investments by TSPs, ability to attract investment and forbearance in tariffs. Indian TSPs have proven their capability and have made Indian Telecom Sector as the 2nd largest in the world in terms of subscribers and minutes of usage, thereby being the poster boy of liberalization of Indian economy.

H. **Forbearance in tariff must continue to attract investments into telecom sector -** In about 5 years' time, 1 Billion Indians are expected to be connected to the Internet. On an average 1000 MB /month usage, would generate 1000 Peta Byte mobile data traffic which is 12-15 times the current levels. Catering to such a large traffic requires huge capital investments and thus TSPs should be able to attract financial and strategic investors into the telecom sector. **To attract such a large investment in private sector domain, freedom in tariffing and continued forbearance policy are essentia**l. Controlled and regulated price regime will not attract investors and this will severely impact the growth of internet in India.

Given the financial health of the Industry, all the stake holders i.e. Government, policy makers, TSPs, ISPs, consumer bodies must again come together to create robust frame work for connecting 1 Billion Indian with high speed Internet and work with a missionary zeal to achieve it .

Major Impediment to Internet for All - OTT VOIP

I. **Voice and Data Tariffs in India**: The industry has evolved with voice as the main service. Hence, the base cost of the investment was largely allocated to voice business and voice pricing is a reflection of that cost. When data services came to India in a big way post the allocation of 3G spectrum in 2010, in the interest of growing data business, the data pricing was based on incremental cost of providing data services. Hence, the full cost of mobility services has been absorbed by the voice business and the data pricing is based on incremental cost principle only. This was workable in an environment where data traffic was a small proportion of the total business. However, with the growth of data traffic, the ability of the voice business to absorb the investments required for data business is constrained.

More importantly, with the advent of VOIP services riding free on Indian mobile operators expensive data network, the voice business which was absorbing most of the costs of telecom operators will no longer be able to do so. This will result in the following –

a. Data prices will have to go up significantly from current levels just to maintain the existing revenue. The difference in customer revenue between a CS call and a VOIP call is quantified below, based on data given in para 2.37 of the consultation paper, for revenue from a VOIP call.

	Particulars	Unit	Outgoing	Incoming	Total
1	Voice call on CS network				
	Customer Revenue for 1 minute call	Paise/min.	75.0	-	75.0
2	VOIP call as data traffic				
a.	Data Usage per minute of call	MB / min	0.15	0.15	0.30
b.	Data Tariff per MB	Paise / MB	25	25	25
c.	Consumer Revenue for 1 minute call	Paise/min.	3.75	3.75	7.5
3	Consumer Revenue for CS call / Consumer Revenue for VOIP Call (1/2.c)	Multiple	-	-	**10.0**
4	Equivalent data price to have parity with voice call on CS network (2.b x 3)	Paise / MB	-	-	**250**

Based on above tariff pattern (which does not provide adequate return to operators in any case) if all the current Voice and SMS traffic was to convert to data traffic on OTT applications, the scenario will be as under using a sample calculation price for Rs.100,000 of consumer revenue.

Working for Rs.100,000 consumer revenue						
Service	UOM	Traffic		Tariff (P/unit)	Revenue (Rs.)	% of Revenue
		Current Traffic	Equivalent Data (MB)			
Voice	Minutes	109,333	32800	75	82,000	82%
SMS	Nos.	15,000	27	20	3,000	3%
Data	MB	60,000	60,000	25	15,000	15%
Total			**92827**	**108**	**100,000**	

b. **It is clear that if data pricing for all services (including VOIP) will be the same, then the current tariffs of Voice (75p / min), SMS (20p/SMS) and Data (25p/MB) will have to converge to anywhere between 108 p/MB to 250 p/ MB for data just to maintain the current revenue as shown above. This will have to be increased further to be able to cover the current deficit vis a vis cost of capital.**

Stable Voice Revenues are key for the future of Mobile data growth

J. The industry is presently supporting rapid in growth in data penetration as the data prices are at affordable levels based on incremental costs. However, if there was only one service being data which will fulfil all requirements, then while the voice price per minute may come down, the rate for data will have to be increased multifold from current Rs.0.25/MB as explained above. This will hinder growth of data services in lower end strata of society and vision of broadband for all.

K. In summary, there is a need to maintain parity between current tariffs for voice services and VOIP services by allowing the telecom operators to charge differential tariff for data traffic for VOIP applications. If the decision is made to have the same data tariff for VOIP and other data applications, it will result in the current data tariffs increasing anywhere between 6 to 10 times from the current levels - detriment to the growth of non-VOIP data applications and the vision of a "Digital India."

India needs Digital services – However can we allow a single application, VOIP (Voice Over Internet Protocol), to kill all other revolutionary internet applications – the reason for which internet has been built.

L. The objective of "Digital India" is to provide data connectivity to the entire Indian population, so that they can benefit from data access. This data access supports multiple applications including ecommerce, video, social networking, payment systems, education, health services and the list is endless. Most importantly, it provides affordable internet access, the benefits of which are well known.

M. India has a highly penetrated and evolved voice communication service, but needs Digital services for growth in the sectors like Education, Mobile Banking, Health, Governance, Information, E-Commerce, Entertainment, Gaming, etc.

N. If VOIP service is allowed to spread without any regulation and control, then it would lead to exponential increase in data tariffs. We know that VOIP is not the main application of Internet. We all use internet for much more critical online services such as e-governance, email, medical, services, commerce, education, browsing, IT industry connectivity, social interactions, video services etc. Today and in future for introduction of Machine to Machine Services.

O. However VOIP significantly compromises TSPs ability to offer affordable data services to lower strata and rural India and thus would be the single biggest reason for the rise in data tariffs. This data tariff increase would thus impact other important applications of internet and would jeopardize the real use of internet and prevent the spread of benefits of Internet to the unconnected population of India. We must prevent a single application to negatively impact all other critical and beneficial internet applications, to support creative energy and innovative skills of new entrepreneurs and services arising out of the net.

Need for Regulatory Neutrality

P. **Regulatory neutrality must be maintained for OTT services-**Some of the services being provided by OTT players are a perfect substitute of PSTN/Internet Telephony services, but with lower QoS standards than offered by Licensed Telecom Service Providers (TSPs) in India and violate the basic principle of 'SAME SERVICE SAME RULES". Our views in this regard are listed below :

a) According to the present licensing regime, services such as Internet Telephony is a licensed service permitted only under UAS/ISP or Unified License granted under Section 4 of the Indian Telegraph Act 1885. Hence, **companies offering OTT voice services without holding a telecom license in India would essentially violate and circumvent Indian telecom licensing provisions and provide services that are otherwise only permitted under a telecom license.**

b) Typically, TSPs are liable and responsible for a plethora of licensing provisions and regulations that include, regulatory levies and license fees, QoS, Tariff Regulations, KYC, confidentiality of customer information, Regulatory Audits, Consumer Protection Regulations, emergency services, privacy of communication and lawful monitoring and interception. These conditions are not imposed on unlicensed OTT players, and the **resulting arbitrage allows OTT communication providers to offer Internet Telephony for free or for a greatly reduced price in comparison to TSPs.**

c) OTT communication players, are thus sitting outside Licensing regime and are not burdened by multiple historic obligations that currently apply to TSPs. Absence of any level playing field with TSPs is a source of unfair competitive advantage for OTT players but this poses social and economic risks:

i. Lower consumer protection / data privacy and security approaches which do not reflect national telecom policy; Detail on security issues highlighted in our response to query no. 6.

ii. Lower control on internet content which does not reflect national security standards;

iii. Business models which depend on "*untaxed"* service revenues reflecting wide OTT freedom to structure businesses to avoid license fee payments and general taxes.

Q. Thus, clearly allowing the **proliferation of unregulated VoIP/Internet Telephony at a massive scale is leading to a significant disruption in the existing voice business of TSPs and would discourage TSPs capability and incentive to invest in infrastructure.** Such a situation would jeopardize the national objectives of bringing affordable and ubiquitous telephony and broadband access to all across the nation.

R. Further, besides impacting the health of TSPs, such an arrangement is also causing **significant loss of revenues for the Exchequer.** Governments thus face financial and regulatory challenges as

global OTT players use opportunities to locate revenues and profits in low tax jurisdictions and seize opportunities for regulatory arbitrage.

Thus, the services being provided by OTT communication services are not only a challenge to TSPs, but in fact would result in applying brakes on massive financial investments being undertaken by TSPs for expansion of networks into deep rural pockets which is meant for the next billion Internet users and to those who have yet to experience the utility of Internet. The targets specified by the National Telecom Policy 2012 for "broadband for all" and most critically, the vision of Hon'ble Prime Minister for Digital India is thus under grave threat. The country is already lagging behind in broadband growth and we cannot afford to allow single VOIP application to take us away from our goal to make this country Digital. Considering the strong linkage between economic growth and spread of mobile broadband, it is even more critical to ensure that enabling environment is created for massive telecom investments.

In view of all the above, Idea Cellular submits that:

I. Currently only 70 Mn subscribers are connected through wireless broadband and we have a massive task of connecting 1 Billion Indian spread across 5.50L towns and villages with high speed internet. **The realization of larger goal "Internet for All" requires a holistic approach by all the stake holders, Government, Investors, and Telecom Operators, Consumers and Device companies and OTT.** Therefore an urgent need to review present policies on Spectrum (especially on lower frequency), hassle free and single window approvals for fiber layout and tower installations are the need of the hour. **This vision of Digital Bharat also requires huge investments. Government and policy makers should also assess the fund requirement and create a framework for attracting investment for financially stretched Telecom industry.**

II. The priority is to ensure proliferation of internet to the next billion. **Net equality is thus the most critical requirement. Net Equality means:**

a. "Internet for All ": Benefits of Internet should be available to all strata of the society, especially the "Unconnected ones". This requires huge efforts and investment by TSPs, OTT players and device companies.
b. Net equality means that the consumers should be "free to choose ".This choice should span across content, device and operators.

c. Consumers should be have the access to the solutions which will make internet affordable such as toll free/sponsored Data.
d. "**Same Service, Same rules**" so that all stake holders are bound to offer services under the same regulations and no one gets the undue advantage.

III. **However while providing Net Equality, the Authority needs to ensure that operators are provided with flexibility to manage the increasing complexities in network arising out of growth in data and limited spectrum availability. With limited spectrum availability and projected growth to 1000 peta bytes of data per month for the country from current low levels of 40 to 50 peta bytes of data per month, the networks require enhanced traffic management systems and it is essential that operators are given freedom to manage such complex situations.**

IV. **Traffic management is an essential function of networks** to manage the growing volumes of data traffic and to meet the performance expectations of the different traffic types to ensure better experiences for all consumers. We hope TRAI will recognise the importance of traffic management and service delivery, and the increased need for such practices as networks and services become more complex.

Regulations that prohibit traffic management or prescribe a limited set of permissible cases are not future-proof, would stop the march of technology and will have unintended consequences for innovation, investments and the quality of experience for the users of the services. We are of the view that TSPS should be permitted the flexibility to differentiate between different types of traffic to ensure the internet remains open and thriving. Traffic management is essential for optimizing the traffic based on customer requirement and even device usage.

Different type of services need varying treatment. For example voice needs to be given instant priority for excellent experience, video needs to be delivered in packets and superior video compression techniques need to be applied for lower consumer costs and search and social networking applications can work by design in delayed environment. Also with massive growth in quality of smartphone technology, superior traffic management techniques are being applied on higher end phones, latest version of browsers powered by global companies like Apple, Google, Microsoft, Nokia etc. Please note that this is not giving any precedent to any specific application, m but better traffic management to nature of services. Before defining net neutrality, the Regulator has to involve all stakeholders including equipment suppliers, device and chipset

manufactures, software companies providing capacity solutions, so that the country can have the fine balance between technology advancement and neutrality principle.

V. **Even otherwise, it has to be acknowledged that certain situations require priority**. For example, DoT in its recent order on improving communication network during Disasters has inter alia, required that priority call routing in mobile networks during emergencies shall be done by TSPs through latest 3GPP standards. **Such priorities may be required even for applications such as Education, tele medicine, disaster management etc. in near future and hence the operators would need flexibility on issues of traffic management etc.**

VI. **There is a need to address the various regulatory imbalances that exist in the eco-system and ensure Regulatory Neutrality i.e. "SAME SERVICE SAME RULES" so that there is a level playing field for all the players that exist in the eco-system.**

VII. Current licensed network operators are long-term contributors to Indian economy , but are faced with continuing demands for investments to improve their services (in particular, to install broadband, increase network capacity and network quality) and must be able to compete effectively with OTT providers in order to continue to invest.

VIII. Idea Cellular believes that **Government needs to evolve a framework which ensures level playing field and addresses following concerns on OTT players:**

- ✓ **Registration, data retention and support for law enforcement and national security**
- ✓ **Customer data privacy and security;**
- ✓ **Content standards and consumer protection;** and
- ✓ **Regulatory levies and taxation**.

IX. Further, in the overall value chain the maximum cost is incurred by the TSPs. This includes costs for spectrum, huge infrastructure running into thousands of crores to increase reachability and maintain Quality of service, servicing the end customer etc. Even the cost of ISP to reach the servers of OTT players is being borne by the TSP. Therefore **we recommend that OTT players especially those providing communication services should pay the TSPs for creating the above value in the following manner:**

Option 1: TSPs should be allowed to charge for communication services over and above the charges being applied for bundled data or data packs.

Option 2: Payment by OTT communication service providers. The OTT players should deploy their servers within India. Consumers will pay normal data charges for using OTT communication services and the deficit will be paid by the OTTs, based on volume of traffic. The pricing for message, file transfer, voice can be different. The commercials of this arrangement to be mutually decided between OTT players and TSP.

X. We should not allow OTT VOIP application to kill other critical and useful applications of Internet such as commerce, education, IT connectivity, browsing, interactive platform etc. If voice revenue continues to get impacted, then operators would be forced to revise tariffs data tariffs and this would raise the price for even basic applications like browsing/ email. Thus TSPs need to be protected from unregulated OTT VOIP so that they continue to offer affordable internet tariffs.

XI. Lastly, the Authority should also note that out of nearly 200 Mn subscribers experiencing wireless internet, only about 70 Mn are able to experience broadband speeds, while rest 180 Mn generally get internet speeds of 200 KBPs or less. For such subscribers to get higher speeds, an investment of at least Rs 5-10 lac crores Rupees is required over next few years for introducing 3G, 4G and latest 5G services for Indian consumers. Such an investment, would require "certainty of policy" and flexibility to operators to be able to acquire, service and charge customers in innovative and flexible ways. Thus such certainty of continuity of principles like forbearance on tariffs are most critical to ensure such high level of investments.

We now proceed (from page 14) to provide our responses to specific queries raised by TRAI in its consultation paper.

Idea Response to Specific queries of TRAI Consultation paper

At the outset, we would like to submit that our responses to the Queries 1 – 20 from the Consultation Paper may kindly be read in conjunction with our summary submissions made above under the following heads:

- **Indian Internet growth story unique – No comparison with Europe/ US**
- **Idea supports Net Equality – Internet for All, not just few.**
- **Internet for all – Where are we today & how would we reach to next billion internet users ?**
- **Can Telecom Industry lead the revolution for next 1 billion Internet users?**
- **Major Impediment to Internet for All - OTT VOIP**
- **Stable Voice Revenues are key for the future of Mobile data growth**
  India needs Digital services - Can we allow a single application, VOIP (Voice Over Internet Protocol), to kill all other critical internet applications – the reason for which internet has been built.
- **Need for Regulatory Neutrality**

Question 1: Is it too early to establish a regulatory framework for OTT services, since internet penetration is still evolving, access speeds are generally low and there is limited coverage of high-speed broadband in the country? Or, should some beginning be made now with a regulatory framework that could be adapted to changes in the future? Please comment with justifications.

Kindly refer to our summary submissions, we believe that it is the right time to establish a regulatory framework for OTT services. While the internet services penetration is still evolving , OTT players have reached a point from where rapid take off is likely to happen. Hence the regulatory framework should be established now.

Since OTTs providing communication services offer same service as TSPs, we should apply the principle of "Same Service, Same Rule" and all OTTs providing communication services should be brought under Telecom regulatory framework. We also recommend suitable regulatory framework for other OTTs.

Mobile internet is currently available mainly to the urban consumers. Taking internet to deep rural and hinterland subscribers requires very large investment by TSPs. If communication OTTs are not regulated

now, this will lead to voice revenue erosion of TSPs (80-85 % of their revenue) and this will deter TSPs from investing in network infrastructure which will lead to slowing down the growth of Internet in rural India.

Idea Cellular believes that Government needs to ensure level playing field which addresses:

- **Registration, data retention and support for law enforcement and national security**
- **Customer data privacy and security;**
- **Content standards and consumer protection;** and
- **Regulatory levies and taxation**.

Idea Cellular believes that **Government needs to evolve a Regulatory framework which ensures level playing field and addresses following concerns regarding OTT players - And the beginning should be made now.**

Question 2: Should the OTT players offering communication services (voice, messaging and video call services) through applications (resident either in the country or outside) be brought under the licensing regime? Please comment with justifications.

We have already highlighted that:

1. **Some of the services being provided by OTT communication players are a perfect substitute of PSTN/Internet Telephony services offered by Licensed Telecom Service Providers (TSPs) in India and violate the basic principle of "Same Service, Same Rules".**

2. According to the present licensing regime, services such as Internet Telephony is a licensed service permitted only under UAS/ISP or Unified License granted under Section 4 of the Indian Telegraph Act 1885. Hence, **companies offering OTT communication services without holding a telecom license in India would essentially violate and circumvent Indian telecom licensing provisions and provide services that are otherwise only permitted under a telecom license.**

3. Typically, TSPs are liable and responsible for plethora of licensing provisions and regulations that include, regulatory levies and license fees, QoS, Tariff Regulations, confidentiality of customer information, Regulatory Audits, Consumer Protection Regulations, emergency services, privacy of communication and lawful monitoring and interception. These conditions are not imposed on

unlicensed OTT players, and the **resulting arbitrage allows OTT providers to offer Internet Telephony for free or for a greatly reduced price in comparison to TSPs.**

4. **OTT communication players, are thus sitting outside licensing regime and are not burdened by multiple historic obligations that currently apply to TSPs. Absence of any level playing field with TSPs is a source of unfair competitive advantage for OTT players and this poses social and economic risks:**

    a. Lower consumer protection / data privacy and security approaches which do not reflect National Telecom Policy; Details on Security issues highlighted in our response to query no. 6.

    b. Lower control on internet content which does not reflect national security standards;

    c. Business models which depend on "*untaxed"* service revenues reflecting wide OTT freedom to structure businesses to avoid license fee payments and general taxes.

5. Thus, clearly allowing the **proliferation of unregulated VoIP/Internet Telephony at a massive scale is leading to a significant disruption in the existing voice business of TSPs and would dent TSPs capability and incentive to invest in internet backbone infrastructure.** Such a situation would jeopardize the national objectives of bringing affordable and ubiquitous telephony and broadband access to all across the nation.

6. Further, besides impacting the health of TSPs, such an arrangement is also causing **significant loss of revenues for the Exchequer.** Governments thus face financial and regulatory challenges as global OTT players use opportunities to locate revenues and profits in low tax jurisdictions and seize opportunities for regulatory arbitrage.

In view of the above, it is only appropriate that OTT players providing communication services be brought under a suitable Regulatory framework that results in creation of Regulatory neutrality.

As highlighted earlier, Idea Cellular believes that <u>Government needs to evolve a framework which ensures level playing field and addresses following concerns</u> on OTT players:

- ✓ **Registration, data retention and support for law enforcement and national security**
- ✓ **Customer data privacy and security;**
- ✓ **Content standards and consumer protection;** and
- ✓ **Regulatory levies and taxation**.

Question 3: Is the growth of OTT impacting the traditional revenue stream of TSPs? If so, is the increase in data revenues of the TSPs sufficient to compensate for this impact? Please comment with reasons.

We would like to highlight that:

1. **Voice and Data Tariffs in India**: The industry has evolved with voice as the main service. Hence, the base cost of the investment and operating cost for the network, acquisition and servicing the customer, cost of complying with Regulatory demands, was primarily allocated to voice business and voice pricing is a reflection of full cost. When data services came to India in a big way post the allocation of 3G spectrum in 2010, in the interest of growing data business, Indian telecom operators priced the consumer mobile data services based on incremental cost of providing data services. Hence, the full cost has been absorbed by the voice business and the data pricing is based on incremental cost. This was workable in an environment where data traffic was a small proportion of the total business. However, with the growth of data traffic, the ability of the voice business to absorb huge demands of investments required for data business is constrained.

2. **More importantly, with the advent of VOIP services, the voice business which was absorbing most of the costs of telecom operators will no longer be able to do so. This will result in the following –**

   a. Data prices will have to go up significantly from current levels just to maintain the existing revenue**.** The difference in customer revenue between a CS call and a VOIP call is quantified below, based on data given in para 2.37 of the consultation paper, for revenue from VoIP call.

	Particulars	Unit	Outgoing	Incoming	Total
1	Voice call on CS network				
	Customer Revenue for 1 minute call	Paise/min.	75.0	-	75.0
2	VOIP call as data traffic				
a.	Data Usage per minute of call	MB / min	0.15	0.15	0.30
b.	Data Tariff per MB	Paise / MB	25	25	25
c.	Consumer Revenue for 1 minute call	Paise/min.	3.75	3.75	7.5
3	Consumer Revenue for CS call / Consumer Revenue for VOIP Call (1/2.c)	Multiple	-	-	**10.0**
4	Equivalent data price to have parity with voice call on CS network (2.b x 3)	Paise / MB	-	-	**250**

Based on above tariff pattern (which does not provide adequate return to operators in any case) if all the current Voice and SMS traffic was to convert to data traffic on OTT applications, the scenario will be as under using a sample calculation price for Rs.100,000 of consumer revenue.

Working for Rs.100,000 consumer revenue						
Service	UOM	Traffic		Tariff (P/unit)	Revenue (Rs.)	% of Revenue
		Current Traffic	Equivalent Data (MB)			
Voice	Minutes	109,333	32800	75	82,000	82%
SMS	Nos.	15,000	27	20	3,000	3%
Data	MB	60,000	60,000	25	15,000	15%
Total			**92827**	**108**	**100,000**	

It is clear that if data pricing for all services (including VOIP) will be the same, then the current tariffs of Voice (75p / min), SMS (20p/SMS) and Data (25p/MB) will have to converge to anywhere between 108 p/MB to 250 p/ MB for data just to maintain the current revenue as shown above. This will have to be increased further to be able to cover the current deficit vis a vis cost of capital.

3. The objective of "Digital India" is to provide data connectivity to the entire Indian population, so that they can benefit from data access. This data access supports multiple applications including ecommerce, support of payment systems, education, health services and the list is endless. Most importantly, it provides affordable internet access, the benefits of which are well known.

4. **The industry is presently supporting rapid in growth in data penetration as the data prices are at affordable levels based on incremental costs. However, if there was only one service being data which will fulfil all requirements, then while the voice price per minute may come down, the rate for data will have to be increased from current Rs.0.25/MB to as explained above. This will hinder growth of data services.**

5. Further, current networks of operators have been built mainly for voice (GSM networks). These networks have the widest coverage in the country today. However, if all voice was to convert to

data, then significant new investments will have to be made in new data networks, whereas the current large investments in the GSM networks will be wasted to a large extent.

6. **In summary, there is a need to maintain parity between current tariffs for voice services and VOIP services by allowing the telecom operators to charge differential tariff for data traffic for VOIP applications. If the decision is made to have the same data tariff for VOIP and other data applications, it will result in the current data tariffs increasing anywhere between 6 to 10 times from the current levels to the detriment of growth of non-VOIP data applications and the vision of a "Digital India."**

Thus, the communication services being provided by OTT players are not only a challenge for the TSPs revenues, they threaten to put an end to the massive investments being undertaken by TSPs for expansion of telephony networks into deep rural pockets that would have enabled millions of people to access basic internet services. The vision of Hon'ble Prime Minister for a "Digital India" is thus under grave threat.

Question 4: Should the OTT players pay for use of the TSPs network over and above data charges paid by consumers? If yes, what pricing options can be adopted? Could such options include prices based on bandwidth consumption? Can prices be used as a means of product/service differentiation? Please comment with justifications.

We have submitted earlier that, in the overall value chain the maximum cost is incurred by the TSPs. This includes costs for spectrum, huge infrastructure running into multiple billion dollars to increase coverage and maintain Quality of services, acquiring and servicing the end customer etc. Even the cost of ISP to reach the servers of OTT players is being borne by the TSP. Therefore we recommend that OTT players and especially those providing communication services should pay the TSPs for creating the above value in the following manner

Option 1: TSPs should be allowed to charge for communication services over and above the charges being applied for bundled data or data packs

Option 2: Payment by OTT communication service providers. The OTT players should deploy their servers within India. Consumers will pay normal data charges for using OTT communication services and the deficit will be paid by the OTTs, based on volume of traffic. The pricing for message, file transfer, voice can be different. The commercials of this arrangement to be mutually decided between OTT players and TSP.

Question 5: Do you agree that imbalances exist in the regulatory environment in the operation of OTT players? If so, what should be the framework to address these issues? How can the prevailing laws and regulations be applied to OTT players (who operate in the virtual world) and compliance enforced? What could be the impact on the economy? Please comment with justifications.

In the current context, the TSPs operate in a heavily regulated environment and on the other hand, the OTT service providers operate in a completely free operating, 'unregulated' market environment for similar services. Current licensed network operators are long-term contributors to Indian economy, but are faced with continuing demands for investments to improve their services (in particular, to install broadband, increase network capacity and network quality). **This is a huge imbalance that needs to be corrected so that TSPs can compete effectively with OTT providers in order to be able to continue to invest.**

Relevant telecom laws/regulations being followed by TSPs and not by OTTs

1. **No Payment of Regulatory levies and License fee including USOF, Spectrum usage charges, other taxes.**

2. **National Security and other norms which OTT players do not follow.**
    - Telecom companies are to be registered in India
    - Domestic traffic to stay within India:
    - Network to be set up within service area or country: Lawful interception:
    - Usage of Higher Encryption Key
    - Access to subscriber database:
    - Maintenance of CDR/IPDR: ISP cannot connect with PSTN/PLMN.
    - Emergency services

3. **OTT players are not required to follow customer-centric regulations.**
    - Telecommunications Tariff
    - Quality of Service norms
    - Metering and Billing norms
    - Complaint Redressal Mechanism
    - Unsolicited Commercial communications (UCC)

In view of the above, it is only appropriate that OTT players be brought under a suitable Regulatory framework.

Further, while, OTT services are welcome in keeping with the spirit of innovation and encouraging entrepreneurship, however those in providing substitutable communication service and in violation of existing laws or matters of common public interest like privacy, national security etc. need to be strictly within the domain of **Regulatory framework so as to ensure "same service , same rules".**

Voice and messaging services in India are governed by the regulation in India and hence any OTT apps that provide messaging and VOIP services should be brought under such regulatory framework. If VOIP service is allowed to spread without any regulation and control, then it would lead to exponential rise in data tariffs. We know that VOIP is not the main application of Internet. We all use internet for much more critical, knowledgeable and useful services such as e-governance, email, medical, commerce, education, browsing, IT industry connectivity, social interactions and video services etc.

However VOIP significantly compromises TSPs ability to offer affordable data service and If voice revenue continues to get impacted, then operators would be forced to revise tariffs data tariffs and this would raise the price for even basic applications like browsing/ email. Thus TSPs need to be protected from unregulated OTT VOIP so that they continue to offer affordable internet tariffs and to **prevent a single application from negatively impacting all other critical and beneficial internet applications. Any data tariff increase due to inability of maintaining parity for voice and VoIP calls would jeopardize the real use of internet and prevent the spread of benefits of Internet to the unconnected population of India and that would in turn negatively impact the country's economic growth considering the strong linkage between the two.**

There is a thus a urgent need to address the various regulatory imbalances that exist heavily against the mobile operators and ensure Regulatory Neutrality so that there is a level playing field for all the players that exist in the eco-system. In order to achieve Regulatory Neutrality, the Authority should apply the principle of, "Same services, Same rules". Only under such an environment, the TSPs will get a fair chance to compete with concerned OTTs on similar pricing and terms.

Idea Cellular also believes that **Government needs to evolve a Regulatory framework which ensures level playing field and addresses following concerns on OTT players:**

- **registration, data retention and support for law enforcement and national security**
- **customer data privacy and security;**
- **content standards and consumer protection;** and
- **Regulatory levies and taxation**.

Question 6: How should the security concerns be addressed with regard to OTT players providing communication services? What security conditions such as maintaining data records, logs etc. need to be mandated for such OTT players? And, how can compliance with these conditions be ensured if the applications of such OTT players reside outside the country? Please comment with justifications.

Some of the critical National Security and other norms, which OTT communication players are in violation of are as under:

- **Lawful interception:** As per clause no. 8.1.1 of UL (ISP), lawful interception and monitoring systems are to be set up by Licensee for internet traffic including internet telephony traffic at their cost. *However, OTT players do not provide live lawful interception in unencrypted & readable format to Indian security agencies.*

- **Emergency services:** As per clause 7.1 of UL, TSPs have to offer all public utility service or emergency services like police, fire, as toll free services to its customers. *However, OTT players do not offer emergency services to their Indian customers.*

- **Telecom companies are to be registered in India:** Telecom services/licenses can be provided/obtained only by the Companies registered in India so that they are subject to Indian laws. *A majority of companies of OTT players are not registered in India and beyond the scope of any Indian law.*

- **Domestic traffic to stay within India:** As per clause no. 39.23(iii) of UL; domestic traffic shall not be hauled/routed to any place outside India. *However, OTT players route India traffic (message / voice from one person to another person in India) outside India as they have not placed their server in India.*

- **Network to be set up within service area or country:** As per clause no. 4.5 of UL, the network related elements (Short message Service Centre/voice switching center/MSC/media gateway,

etc.) should be located in a service area or anywhere in India, subject to the scope of applicable license. *However, OTT players have set up their switching network outside India for provision of telecom services to customers located in India.*

- **Usage of Higher Encryption Key:** As per clause no. 2.2(vii) of ISP license, TSPs can use encryption key up to 40 bit key length. If encryption equipment higher than this limit is deployed, it requires prior written permission from DoT and deposit the decryption key. *Since OTT players have deployed encryption equipment much higher than this limit (Skype use 256 bit AES encryption) and do not share decryption key, Indian security agencies cannot intercept the communication of Indian citizens/person located in India for lawful purpose.*

- **Access to subscriber database:** As per clause 39.19 of UASL, DoT will have an access to the subscriber database of the Licensee. Indian TSPs follow subscriber verification guidelines. *However, OTT players do not provide traceable identity/access of their Indian customers to Indian security agencies.*

- **Maintenance of CDR/IPDR:** As per clause 7.1 and 7.2 of UL (ISP), TSPs are required to maintain CDR/IPDR for internet including internet telephony services for a minimum period of one year. For one year, these companies have to maintain log-in/log-out details of all subscribers for services provided such as internet access, e-mail, internet telephony, etc. *However, OTT players are not required to follow these rules.*

- **ISP cannot connect with PSTN/PLMN:** As per clause no. 22(v) of ISP license, the licensee is not permitted to have PSTN/PLMN connectivity. Voice communication to and from a telephone connected to PSTN/PLMN and following E.164 numbering is prohibited in India. *However, OTT players can terminate their traffic on PSTN/PLMN in India through their connectivity with PSTN at foreign location.*

The biggest security threat is from the select off shore OTT communication service players which are highly capitalized, global monopolies and today control multiple million customers across continents . The mandate of all OTTs providing communication services should be equivalent to a TSP. For e.g. maintaining transaction records with identity of subscribers, sharing of protocols with LEAs and LI system provider to decode the communication or all this communication should happen with known protocols without any encryption which can be reproduced in case of monitoring. All the transactions and logging should happen within India so that the designated agencies can have access to the data.

Question 7: How should the OTT players offering app services ensure security, safety and privacy of the consumer? How should they ensure protection of consumer interest? Please comment with justifications.

Some of the critical Customer Centric Regulations, which OTT players are in violation of are as under:

- **Complaint Redressal Mechanism:** TRAI has issued Telecom Consumers Complaint Redressal Regulations, which deal with handling of consumer complaints and provision of toll free Consumer Care number. Further, consumers have adequate protection if TSPs do not resolve their complaint. *However, Indian customers have no safeguard if they are cheated by OTT players in any manner.*

- **Unsolicited Commercial communications (UCC):** In order to curb menace of UCC, TSPs follow TRAI regulations of UCC National Do Not Call Registry (NDNC). Stringent penalty provisions for violation of these regulations have been prescribed by TRAI. *However, OTT players services can be used for spreading UCC (both voice and message) as they are outside the scope of regulation of UCC and NDNC.*

- **Telecommunications Tariff:** Through various regulations, TRAI has protected the interest of consumer (say six months protection against tariff hike) related to telecom tariffs. *However, OTT players, who charge tariffs for their services (say Skype), do not follow these regulations. Indian customers have no safeguard if they are cheated by these OTT players.*

- **Quality of Service norms:** TRAI has laid down QoS standards for various services and issued various regulations for QoS. While these regulations/norms are for TDM based networks; however, telcos follows these norms for IP based network/services as well. *However, OTT players are not subject to any prescribed QoS norms. So, Indian customers have no safeguard if they receive poor QoS.*

- **Metering and Billing norms:** TRAI has laid down various regulations for metering and billing accuracy. Such regulations protects the interest of consumers by ensuring that there is an accuracy of measurement and reliability of billing. *However, OTT players are not subject to any metering & billing regulation and as a result, Indian customers have no safeguard if they are charged higher than promised for OTT services.*

Further, the govt. of India mandates services providers to conform to KYC norms to ensure safety, security and privacy of consumers. The OTT providers do not have to conform to any such norms. They take a customer's consent by getting them to agree to lengthy terms and conditions which may or may not be compliant with the law of the land.

In view of the above:

A. There is a need to address the various regulatory imbalances that exist in the eco-system. There is a need to ensure Regulatory Neutrality so that there is a level playing field for all the players that exist in the eco-system.

B. In order to achieve Regulatory Neutrality, the Authority should apply the principle of, **"Same services, Same rules". Only under such an environment, the OTTs will have the compulsion to comply with the Authority's customer-centric regulations and ensure security, safety and privacy of the consumer along with protection of consumer interest.**.

Question 8: In what manner can the proposals for a regulatory framework for OTTs in India draw from those of ETNO, referred to in para 4.23 or the best practices summarized in para 4.29? And, what practices should be proscribed by regulatory fiat? Please comment with justifications.

There are no regulations at this point of time in India for OTT communication services Regulation, interconnection and pricing framework. Basis the contours of emerging "best practices" we propose the following in terms of access, interconnection and pricing for OTT services.

a) Separate regulatory practices for communication services and non – communication services. (e.g. Germany, France.)

b) Use of price discrimination on traffic to ensure development of broadband infrastructure (e.g. UK, Korea).

c) Use of a Fair, Reasonable and non-discriminatory approach in dealing with regulatory issues concerning OTT players (e.g. Korea, ETNO).

Question 9: What are your views on net-neutrality in the Indian context? How should the various principles discussed in para 5.47 be dealt with? Please comment with justifications.

1. While, **Idea fully supports the principle of Net Neutrality,** which is necessary for the proliferation of Internet, however we believe that the current understanding of this concept varies across stakeholders and thus creates varied opinions/ conclusions. In our view, Net Neutrality is a complex issue which needs to be understood in the right context and hence we submit that Government form an expert committee, comprising of TSPs, OTT Companies, Device companies, thought Leaders and technical experts to define Net Neutrality in Indian context.
2. Mobile internet penetration in India is less than20%. Hence the balance 80% of the Indian population have yet to experience the benefits of internet. The top priority from the Indian perspective should thus be to extend the benefits of the internet to the balance 1Billion Indians. This brings us to the concept of **Net Equality**, which means:

    a. **"Internet for All":** The benefit of Internet should be available to all strata of the society, especially the "Unconnected ones". All the unconnected consumers have to leapfrog from their current world of isolation to the world of Internet. This requires huge efforts and investment by TSPs, OTT players and device companies. We have witnessed this happening in the context of voice telephony and we need to repeat the same success for internet connectivity.

    b. Net equality means that the consumers should be **"free to choose ".**This choice should span across content, device and operators.

    c. Consumers should have the access to possible solutions which will make internet affordable such as Toll Free/Sponsored Data Plans etc.

    d. **"Same rule for Same service"** so that all stake holders are bound to offer same services under the same regulations and no one gets an undue advantage.

Question 10: What forms of discrimination or traffic management practices are reasonable and consistent with a pragmatic approach? What should or can be permitted? Please comment with justifications.

In case of any wireless network capacities are shared and used by all customers accessing the network at any point of time. Also traffic specifically incase of data is found to transmit in bursts and hence difficult to predict. Thus traffic management techniques, deployed by network are all the more important, for handling such situations and to ensure adequate customer experience and to maximize yield from the available capacity. The Authority has itself in its latest Recommendations on "Delivering BB quickly – what do we need to do" stated that "***current availability of spectrum in our LSAs is about 40% of that available in comparable countries elsewhere*****". This not only underlines the need for additional spectrum for commercial telecom services, it also indirectly implies that traffic management techniques deployed within the network are an absolute must to ensure adequate and seamless customer experience.**

We all are aware that data network, eventually on which the OTTs ride, caters for various type of services like streaming, interactive, conversational and background. And the customer experience for these individual type of services completely depends upon how the traffic management are done e.g services like mail, browsing etc. may work on best effort basis while other type of traffic may require prioritization. Here it may be relevant to note the Licensor and the Regulator have themselves **in the past acknowledged that certain situations require priority**. For example, DoT in its recent order on improving communication network during Disasters has inter alia, required that priority call routing in mobile networks during emergencies shall be done by TSPs through latest 3GPP standards.

Idea Cellular feels that such priorities may be required even for applications such as Education, tele medicine, disaster management etc. in near future and hence the operators would need flexibility on issues of traffic management etc. However if this is not done certain services which demands lower latencies or higher bandwidth will suffer. 3G and 4G technologies have specified the same and thus the operators should be allowed adopt these solutions to maximize yield. These kind of traffic management techniques which actually are not on per specific application basis but based on classification of services and part of 3GPP standards should be allowed

It has also been observed that OTT applications if not build with adequate care and without understanding of wireless network may hog network resources or generate too much of signaling traffic which can harm the network. There are ample examples of the same. These situation may also result in barring other users/application to access the network resource thus creating bad user experience. In wake of no regulations on the OTTs and no way to confirm whether a particular OTT application is optimized for network, TSPs should be allowed to take action to protect their network from such OTTs by applying necessary means to curb killer OTTs or those which impact other applications and services in the interest of its protecting its consumer base and network.

TSPs should have the right to deploy optimization and traffic management techniques like Caching, Video compression and optimization etc. which also improves customer experience and make network smart and efficient. However, these techniques can be implemented only if the deployed systems are able to recognize the data flowing through the pipe. Many OTT applications and Webs have fully encrypted data and such OTTs will not gain the benefits of such techniques. However, these situations should not be considered as discriminatory in any way as the OTT applications themselves are impairing themselves of getting the benefit by deploying encryption.

There may be certain application e.g. M2M, health, safety or emergency handling applications or sites which may require guaranteed quality of service for their applications to run efficiently. As the technology evolves and offers solutions for these OTT applications to work in conjunction with TSPs for protecting acceptable QoS standards, a proper Net Neutrality definition can permit such innovation and not debar consumer and society to take advantage of such advancement.

In all other situations and when network capacities are not challenged all OTTs should be provided equal access to network bandwidth and on best effort basis. Or incase specifically asked by licensor in the national interest.

In summary:

a. **Regulations that prohibit traffic management or prescribe a limited set of permissible cases are not future-proof and will have unintended consequences for innovation, investments and the quality of experience for the users of the services**.

b. T**he Authority needs to ensure that operators are provided with flexibility to manage the increasing complexities in network arising out of growth in data and limited spectrum availability. With limited spectrum availability and projected growth to 1000 peta bytes of data per month for the country from current low levels of 40 to 50 peta bytes of data per month, the networks require enhanced traffic management systems and it is essential that operators are given freedom to manage such complex situations.**

c. Traffic management is a critical requirement of networks to manage the growing volumes of data traffic and to meet the performance expectations of the different traffic types to ensure better experiences for all consumers.

d. Traffic management is thus essential for optimizing the traffic based on customer requirement and even device usage.

e. We are of the view that mobile operators should be permitted the flexibility to differentiate between different types of traffic to ensure the internet remains open and functional.

We hope TRAI will recognise the importance of traffic management and service delivery, and the increased need for such practices as networks and services become more complex.

Question 11: Should the TSPs be mandated to publish various traffic management techniques used for different OTT applications? Is this a sufficient condition to ensure transparency and a fair regulatory regime?

TSPs have always been committed to the cause of consumer transparency remain committed to doing so in the future also. There are thus no issues with publishing the details of various traffic management techniques, if mandated by the TRAI. However, since such details might be too technical in nature, we recommend such details may only be furnished to the Authority as per a specified format and at a pre-defined frequency.

Question 12: How should the conducive and balanced environment be created such that TSPs are able to invest in network infrastructure and CAPs are able to innovate and grow? Who should bear the network up gradation costs? Please comment with justifications.

At the outset, there is need for us to remember that India has been extremely successful getting 900 Million consumers connected on voice telephony and this revolution has been made possible by competitive industry, building large scale telecom networks through innovative business models, predictability in regulatory framework, large investments by TSPs, ability to attract investment and forbearance in mobile tariffs. Indian TSPs have proven their capability and have made Indian Telecom Sector as the 2nd largest in the world in terms of subscribers and minutes of usage.

Currently only 70 Mn subscribers are connected through wireless broadband and we have a massive task of connecting 1 Billion Indian spread across 4 to 5 lac towns and villages with high speed internet. It is our estimate , based on 3G & 4G services, India would need 5 to 10 year time to build capacities for 1 billion

internet users with an average 1000 MB /month usage, i.e. 1000 Peta Byte mobile data capacity which is 12-15 times the current levels. Catering to such a large traffic requires huge capital investments and thus TSPs should be able to attract financial and strategic investors into the telecom sector. **Government and policy makers should also assess the fund requirement and create a framework for attracting investment for financially stretched Telecom industry. Further, t**o attract such a large investment, freedom in pricing and continued forbearance policy are essential. Controlled and regulated prices will not attract investors and this will severely impact the growth of internet in India.

Further, the realization of larger goal "Internet for All" requires a holistic approach by all the stake holders, Government, Investors, and Telecom Operators, Consumers and Device companies and OTT. Therefore an urgent need to review present policies on Spectrum (especially on lower frequency), hassle free and single window approvals for fiber layout and tower installations are the need of the hour. **This vision of Digital Bharat also requires huge investments.**

In addition, all OTT players (except telephony OTTs) needs to be brought under basic minimum regulations to take of issues like security and privacy as per the law of India. Net neutrality should cover all partners of eco system (TSP, device, OTT) proliferating internet. We believe this will ensure creation of balance and conducive environment for growth. India is on the inflection point, where mobility will be the key driver for internet.

Idea Cellular believes that **Government needs to evolve a Regulatory framework which ensures level playing field and addresses following concerns on OTT players:**

- **registration, data retention and support for law enforcement and national security**
- **customer data privacy and security;**
- **content standards and consumer protection;** and
- **Regulatory levies and taxation**.

If level playing field is created and "Same Service, Same Rules" principle is applied, TSPs will be in a position to keep building the network and bear the costs. Absence of level playing field and "Same Service, Same Rules" principle will dry up the investment in the network and will impact the vision of Digital India.

Question 13: Should TSPs be allowed to implement non-price based discrimination of services? If so, under what circumstances are such practices acceptable? What restrictions, if any, need to be placed so that such measures are not abused? What measures should be adopted to ensure transparency to consumers? Please comment with justifications.

We do not support discrimination of services. It is and will be our endeavor to provide service on the best effort basis.

However since the capacity in the wireless telecom networks is not unlimited, TSPs should be allowed to apply traffic management and optimization techniques for improvement of customer experience and network yield. TSPs should have the freedom to apply traffic management for giving preferences of mission critical, important and urgent applications such as health, IT services, issues of National Importance, Emergency applications etc. over other applications. Thus OTTs and content providers may be classified under various segments based on the kind of services they provide and who can be allowed better QoS.

We are strictly against any type of degradation of services. However incase certain OTTs require specific QoS to service his customer or due to any other technical reasons, the OTT or the content provider be allowed to collaborate with operators. TSPs should also be allowed to charge differently for differential QoS sought by the consumers.

Further, many existing practice of audits by licensor may be extended to monitor and ensure transparency.

Question 14: Is there a justification for allowing differential pricing for data access and OTT communication services? If so, what changes need to be brought about in the present tariff and regulatory framework for telecommunication services in the country? Please comment with justifications.

There is sufficient justification for allowing differential pricing for data access and OTT applications by select global giants offering communication services. As submitted earlier, Revenue realization from data consumption in case of voice usage over OTT (VoIP) yield to Indian telecom operators of 7- 8 Paisa per minute only and this is significantly lower as compared with normal voice usage where the yield is 75 paisa per minute.

If the decision is made to have the same data tariff for VOIP and other data applications, it will result in the current data tariffs increasing anywhere between 6 to 10 times from the current levels to the detriment of growth of non-VOIP data applications and the vision of a "Digital India."

Therefore there is a need to have a Level Playing field and application of the principle of "**Same Service, Same Rules**" for all communication OTTs. Further, we propose to charge differential pricing for all OTTs offering communication services as per the following:

Option 1: TSPs should be allowed to charge for communication services over and above the charges being applied for bundled data or data packs.

Option 2: Payment by OTT communication service providers. The OTT players should deploy their servers within India. Consumers will pay normal data charges for using OTT communication services and the deficit will be paid by the OTTs, based on volume of traffic. The pricing for message, file transfer, voice can be different. The commercials of this arrangement to be mutually decided between OTT players and TSP.

Question 15: Should OTT communication service players be treated as Bulk User of Telecom Services (BuTS)? How should the framework be structured to prevent any discrimination and protect stakeholder interest? Please comment with justification.

We propose bilateral arrangement based on mutually agreed terms between the stakeholders that is OTT and the TSPs.

We are of the view that the Bulk User of Telecom Services (BuTS) is not a good framework in the Indian context. The desired objectives of growth of applications including applications developed locally in India can be achieved on the basis of a mutually agreed arrangement.

Question 16: What framework should be adopted to encourage India specific OTT apps? Please comment with justifications.

India has proven its credential in IT and software development and in OTT space also, a lot of India companies are behind the success of US and European OTTs. Hence launching India specific OTTs and promoting and supporting them is a logical step and a critical step towards achieving vision of Digital India. Indian OTTs are also required as till date most of the leading OTTs do not address the needs of Indian

masses, primarily rural Indian, e.g. in health, education, energy and agriculture sectors. Therefore we would support Indian OTTs in these fields.

Framework for encouraging OTT Apps in India encompasses all the players in the ecosystem including TSPs, App Providers, Device Manufacturers and content discovery Services etc. We recommend involving all the participants in deciding the final framework for encouraging Indian OTT fairly. Obligations of each of participants of the ecosystem should be defined clearly.

Question 17: If the OTT communication service players are to be licensed, should they be categorized as ASP or CSP? If so, what should be the framework? Please comment with justifications.

We have already highlighted earlier that, there is a need to address the various regulatory imbalances that exists in the eco-system and ensure Regulatory Neutrality so that there is a level playing field for all the players that exist in the eco-system.

In order to achieve Regulatory Neutrality, the Authority should apply the principle of, "**Same Service, Same Rules**". Only under such an environment, the TSPs will get a fair chance to compete with OTTs on similar pricing and terms.

Idea Cellular believes that **Government needs to evolve a Regulatory framework which ensures level playing field and addresses following concerns on OTT players:**

- **registration, data retention and support for law enforcement and national security**
- **customer data privacy and security;**
- **content standards and consumer protection;** and
- **Regulatory levies and taxation**.

Thus, typically, t*he mandate of all OTTs providing communication services should be equivalent to a TSP. For e.g. maintaining transaction records with identity of subscribers, sharing of protocols with LEAs and LI system provider to decode the communication or all customer communication should follow only known protocols without any encryption which can be reproduced in case of monitoring. All the transactions and logging should be restricted to operate within India so that the designated security and monitoring agencies can have full access to the customer data. There is also an issue of customer privacy, which needs to be separately addressed.*

Question 18: Is there a need to regulate subscription charges for OTT communication services? Please comment with justifications.

As submitted earlier, in absence of any Level Playing Field and absence of application of "**Same Service, Same Rules"** 'principles, we recommend that OTT communication services be charged to ensure Regulatory neutrality and level playing field. One of the options is to charge through subscription based charges. However, such subscription charges should remain under forbearance and be based on mutual commercial discussions.

Question 19: What steps should be taken by the Government for regulation of non-communication OTT players? Please comment with justifications.

Non-communication OTT players should be allowed to mushroom and no license is needed at this stage. Innovation should be encouraged and India should benefit from high quality IT specialists who want to turn entrepreneurs. It is critical that their cost structure is kept low at this stage. Internet offers plethora of opportunities and India needs development of regional content, applications for diverse geographies, and convergence of developed world applications into usable Indian flavor applications content. TSPs infrastructure, APN can help massive growth in sectors like education, travel, health and pharmacy, rural development, entertainment, E-commerce and tourism etc. and pre-mature licensing would kill the development of this eco system and Indian entrepreneurial spirit.

Question 20: Are there any other issues that have a bearing on the subject discussed?

1. It has been observed that more and more traffic is becoming encrypted due to which though the transaction is happening through the Telecom Network, these data cannot be reproduced by operators in case required by LEA's. In the interest of the national security it is desirable that OTTs and content should be classified and only what require to be important from consumers safety and privacy be allowed to be encrypted. All packet deep inspection techniques should work on these OTT applications.

2. Also, such encryption is impairing TSPs to deploy effectively any kind of Caching or optimization technique and achieve better customer experience.

3. The OTTs have no responsibility towards customers QoS and many a times it has been observed that the customers develop a bad perception about the network even though the issue may be with the

OTT's application. Such complaints generally get routed to the TSPs Customer Care and they have to bear the cost for servicing such issues even though they are not directly related to them. In view of the same, OTTs should be restricted from using flash message like "check your network connections" or "contact your network operators" for any kind of failure without verifying the actual reason of the failure.

4. Many OTT players have shown inclination and propensity of qualifying/publishing network quality ranking based on the techniques deployed on servers at their end. These techniques do not have sufficient data to qualify differences between actual network qualities, bad experience due to device issues or customer behavior related issues, etc. Such practices should not be allowed. We feel that only the regulator is in a position to publish such report on a scientific and non-discriminatory basis.

5. Many browsers and applications force all the traffic of the customer to be routed through an aggregation server hosted by the browser provider before getting routed to actual site. The servers may be picking up important information about customer or inserting information which the consumer may not be aware off. Practices such as Parental control etc. create issues. We feel such practices are against net neutrality and should not be allowed. We feel that such aggregators are misusing the internet pipe without the end user knowing about it and hence such aggregators should surely come under some regulations.