

16 February 2016

Shri. Arvind Kumar  
Advisor (NSL)  
Telecom Regulatory Authority of India  
New Delhi – 110 002

Dear Sir,

Subject: Counter comments to draft direction on delivering broadband services  
in a transparent manner

I thank you for the opportunity to respond to the draft. This response is divided into two parts. Part I deals with various issues related to the broadband usage, especially from a rural angle. In the part II, I am giving my counter comments to other stakeholders. I believe that TRAI will seriously look into these things, as it has done always in the past; and take the best decision for all the stakeholders upholding the rights and interests of the customer and ensuring a healthy telecom industry.

Thanking you,

Derick Thomas  
derick.thomas@msn.com

## PART I

- 1. Definition of broadband:** Although service providers are silent about the definition of broadband, some of the other stakeholders are vocal about this. savetheinternet.in has suggested to redefine broadband as minimum 4 Mbps. I second their suggestion.
- 2. Pay as you go plans:** There are many customers who use pay as you go plans on mobile internet. There is a discriminatory practice among many wireless service providers to charge Internet access using a previous generation technology (2G) at a higher rate than what the present generation technology(3G/4G). This practices is totally unacceptable. To understand the gravity of the situation, I would like to quote the following example: A person living in a village using 2G will be paying more than someone living in urban area using 3G/4G. The person may be using a 4G enabled CPE/handset, but because the service provider is not offering the 3G/4G access, the customer is forced to pay higher charges. TRAI should explicitly forbid any such practice by service providers.
- 3. Contention ratio:** TRAI should define maximum contention ratio at POP/BTS level for each service provider. Today, there is no guarantee that I will get the speed I have subscribed at peak times, even while accessing sites which have direct peering relationships with service providers. Different service providers use different contention ratio and hence it puts the users at the mercy of the service providers. It is not an issue in the urban areas, where 3-4 service providers are present. But in rural areas, where only one provider is present, it creates a lot of issues for people who use the Internet. TRAI, as a regulator, should not allow any such divide.

4. **Unit of Measurement:** All the service providers advertise the speed of their Internet connection in Mbps. But some of them provision their network based on 1024Kbps as 1Mbps, while some others provision with 1000Kbps as 1Mbps. Although the difference is marginal, there should be a uniformity in defining and provisioning speed. TRAI should mandate the use of either Mbps or Mibps with 1000 or 1024 as the multiplication factor.
5. **Bundled CPE:** TRAI should mandate the service providers not to force their customer to buy CPE from the them<sup>1</sup>. Such activities limits the choice of a customer and should not be allowed to continue.
6. **IPv6 compliant CPEs only:** TRAI should mandate the service providers to sell only IPv6 compliant CPEs. Further, it should take the issue up with relevant authority to ensure that only such CPEs are sold in the market after a target date.
7. **Modification of IP headers/body and traffic interception:** All service providers should be explicitly forbidden from modifying IP Header/Body and traffic interception in HTTP connections for whatever purpose. This includes injection of advertisements and scripts.
8. **Nagging Screens:** The providers use many nagging screens to inform the users about the data limits and many a times ask users to restart CPE modems. Such tactics should not be allowed. A few individual users have also mentioned this, and I concur with them.
9. **Forbearance of Price:** Currently, all service providers practice forbearance of price for broadband access. The argument for forbearance of prices were that competition will increase and price discovery will happen to give the customers best prices in the market. But in practice, such things never happened. This is applicable for both wireless and fixed connections.

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<sup>1</sup><http://www.apbsnl.net/2015/08/pan-india-bsnl-withdrawn-customer-owned.html>

1. *Wireless Connections:* The prices for broadband access varies by service providers as much as by 25%<sup>2</sup>.
2. *Fixed Connections:* The prices are different for various service providers. Further, it should be noted that the price revision in the plans are applicable only for new customers on connections offered by some service providers.

All service providers would agree that the prices of broadband has fallen by many folds in the past 10 years. A 1:1 STM-1 connectivity which used to cost more than INR 1 Crore 10 years ago is now available at less than INR 8 Lakhs for all the service providers now. But it has not resulted in the fall of Internet prices for retail customers. In many areas, the service providers are still using the infrastructure laid down 10-15 years ago. The services providers must have realized their returns on investment long ago, and there is no reason to have the prices held at such high levels still now.

Such imbalances in pricing and discrimination among new and old customers should be explicitly forbidden by the regulator. And, since forbearance is not working in this case, TRAI should regulate the prices at periodic intervals until there are at least four providers of broadband in each village.

**10.Pulsing of connections:** While pulsing of voice connections are always mentioned in the voice plans, such details seldom find mention in the advertisements for broadband plans. The end users may not realize this and will complain about data quota deduction. I have seen many such complaints in social media, where users are completely clueless about

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<sup>2</sup>Kerala Circle: BSNL 1.1GB at INR 198 vs. Idea 1GB at INR 249

how their data plan has expired so fast. This is especially important in case of mobile broadband connections where intermittent connection failures are so common. Hence, the regulator should:

1. Define an appropriate pulsing for Mobile and fixed connections

OR

2. Mandate that pulsing details are always included in the advertisements in an easy to understand manner

**11. End Retail – Business Divide:** One thing which is not mentioned in any of the responses is about the retail – business divide. It is not widely known to a layman that service providers extend their services to business entities as well. In providing such services, the service providers are forced to negotiate their prices with such entities. This is working really well for the business users. There is another side to this positive thing: cross subsidy. Suppose 1 GB of data is available in the market at INR 250 for 30 days. But in the corporate deals, the price may touch even INR 100 or below depending on the number of connections which a corporate user is willing to commit to the service provider. Often, such deals would be making loss as an individual case to the service provider. But they would be forced to offer very low prices to retain their customers and the keep the relationship. The net effect is that the retail users are subsidizing corporate users and service providers end up losing business due to unhealthy competition. The regulator should forbid the service providers from offering any plan which is not available to a retail user. This would ensure the health of the telecom sector, if such measures are taken on voice plans as well. Reserve Bank of India introduced base rate replacing Benchmark Prime Lending Rate to correct a similar flaw in banking system<sup>3</sup>.

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<sup>3</sup> <http://www.businessstoday.in/banking/understanding-base-rate/story/8806.html>

**12. Publish the list of blocked websites:** The service providers are mandated to block certain websites as per the direction I&B ministry. But ISPs block websites according to their will as well. Hence, as website available on one provider may not be available on another service provider. Hence the regulator should mandate all service providers to furnish a list of all the blocked websites in their website and update the same by 10<sup>th</sup> of every month. The same shall be given to TRAI on a quarterly basis as well.

**13. Blocked protocols:** It is well known that some service providers block certain protocols (Torrent, WebRTC etc.). But it affects the user experience. The use case for each and every Internet user will not be known to the service provider. I may be using bittorrent protocol to update my operating system and if a service provider does not accept it, the connection is not reliable, then I would have a difficult time updating my computer. This is especially true, considering the fact that many OS updates are more than 1GB in size. Hence TRAI should instruct the service providers not to block any protocols for whatever reason. This is very important for innovations in Internet to continue.

## PART II

### **Response to Comments from Bharti Airtel**

It is submitted that beyond the data usage limit, we can specify the maximum speed to be provided to the customer and not the technology. Since, promised data quota is being offered on promised technology; once, the quota is expired, a service provider should be allowed to throttle the speed. Hence, specifying technology may not be a tenable requirement.

Response: In such cases, the plans should not be advertised as “unlimited” plans.

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In case of fair usage plans, the subscriber remains a broadband subscriber till the expiry of his assigned quota. Beyond the assigned quota, it cannot be the prerogative of the customer to keep on accessing data at the defined broadband speed. Hence, a service provider should be free to throttle the speed to 64kbps after the expiry of assigned data limit to the customer.

In fact, it has been observed that some customers misuse the minimum broadband speed provision and tend to overuse the data limit in their quota. Thus the cost increases for all customers due to higher usage at 512kbps. As a result, we are forced to keep the price at a higher threshold for every customer. Therefore, if broadband has to become affordable in the country, ideally, the Authority should not mandate any broadband speed after exhaustion of quota. However, if the

Authority wants to fix a speed limit is after the expiry of quota, it may be fixed at 64 kbps.

Response: It may be noted that the upstream connectivity procured by service providers are not metered. They are limited by their speed only. The argument that some people *misuse* the minimum broadband speed does not hold. A customer's *use* is a providers *misuse* and vice versa. Hence I do not support the concept of FUP on wireline Internet access.

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In case of limited plans, where only a fixed data quota is provided, there cannot be any mandate for providing minimum speed. Therefore, in case of limited plans, the broadband connection will be turned off after the expiry of quota.

Response: In such cases, the usage charges beyond the allowance should not be charged at per MB rate as many providers are doing it. The allowance should be as a percentage of the subscribed plan at a lower rate. This will help many people to avoid "bill shocks".

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Giving pop up alerts on every login after data usage crosses the quota limit of 80% may result into consistent irritant for customers and lead to spike in customers' complaints due to inconvenience. Further, most of the fixed broadband customers are accessing Broadband services over Wi-Fi mode (always on connections) and the connection is being shared amongst many users/ devices. Hence, it is submitted that only



an alert requirement may be provided through SMS or e mail in case of 80% limit.

Response: Agree. Please refer to my comments on “Nagging Screens” in the first section.

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### **Response to Sistema Shyam TeleServices Limited**

There are two types of data tariff plans:

- i. Limited Data Tariff plans
- ii. Unlimited Data Tariff plans (with fair usage policy)

Limited Data Tariff Plans: The broadband speed in case of limited data tariff plans is provided to the customer till the consumption of the committed data under that tariff plan.

Unlimited Data Tariff plans (with fair usage policy): In case of broadband unlimited data tariff plans the subscriber should be provided the broadband speed till the consumption of specified data thereafter the throttling of speed should be allowed in order to avoid any exploitation/misuse by the subscriber.

Response: Same as that to Bharti Airtel

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### **Response to comments from Reliance Communications**

However, in case of fair usage plans, the subscriber remains into broadband services till the expiry of his assigned quota. Beyond the assigned quota, as per his plan the speed gets reduced which may be

lower than 512Kbps. In order to avoid any misuse of the broadband service beyond the designated quota, a service provider should be provided the freedom to throttle the speed after the expiry of assigned data limit to the customer.

Response: I do not support FUP for the reasons mentioned earlier.

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### **Response to comments from Save The Internet**

The minimum guaranteed speed must be specified separately for uploads and downloads. Specification of upload speed is especially important because users are content/service creators on the internet.

Response: Agree with this proposal. The download and upload speeds must be separately mentioned considering the fact that popular broadband technologies provide asymmetric speeds. In addition, the usage of “speed upto XXX Mbps” should be such that it will guarantee them XXX Mbps speed.

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Latency to point of presence (PoP) of the service provider is also an important measure of network quality, and thus must be specified as well. Further, latency must be individually defined for each kind of last mile connectivity (xDSL, cable, fibre, 3G, 4G/LTE etc.) that an ISP provides.

Response: I disagree with this proposal. The term PoP is very ambiguous. For a TSP providing wireless broadband on 4G, their PoP is nearest BTS. And different providers having BTS at different location and users being mobile makes the

situation impractical to provide latency figures to PoP. Latency sensitive applications should prefer fixed line broadband.

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Transparency in fair usage policy (FUP)

Response: I do not agree with FUP.

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Like in voice, data packs shall follow a monthly schedule for all plans with duration greater than 25 days. Data plans with validity of say, 28 days etc., are misleading for a consumer, and allows the broadband provider to charge for an extra month per year.

Response: Agree. This is a much needed reform.

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For ease of comparison to the consumer, each data plan should specify the cost

- a. per Mb of data (before FUP in case of fixed broadband)
- b. per day of usage.

Response: Unit for reporting of data should be standard. There is still a confusion about the if multiplication factor used for conversion is 1000 or 1024.

1 MiB = 1024 KiB (Bytes)

While specifying speed 1 Mbps = 1000 Kbps.

So for an end customer who does not want to divulge into details, TRAI should define the the units.

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Thus, the use of the term 'unlimited' for plans with FUP or other restrictions is misleading to the user and such descriptions must not be allowed.

Response: Agree.

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If upload and download speeds are different, ISP/TSPs must specify both clearly in equal and largest used font size (this information must not be only in fine print).

Response: Agree. This is critical and can avoid a lot of confusion and complaints.

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Customers should be able to switch plans at any time in their billing cycles wherein the difference in pricing/data should be prorated and the user should only be charged the difference.

Response: Agree. And, there should not be any switching fee.

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There must be a cap on the number of different data plans provided by a service provider, similar to the cap that exists for voice plans 9 in order to reduce confusion in the minds of consumers and prevent mistakes that arise out of unending choices.

Response: Agree.

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Such proxy/NAT implementations at the ISP level should only be permitted as a stop gap measure lasting no longer than 3 4 months. ISPs which fail to transition their customers to IPv6 after the grace period must be penalized.

Response: Disagree. Although the situation referenced is real, moving customers to IPv6 is not the solution, since most websites are still on IPv4. Hence provision for an IPv6 only connection is not justified. Moreover, the number of IPv6 enabled CPE modems that is being sold in the market is miniscule. Having said that the regulator should urge service providers to start deploying dual stack networks. The regulator needs to look into IPv6 in a separate consultation paper, as the technical aspects are much wider in this context. Having said that, an Internet connection without a public IP does not serve the requirements of certain customers. Hence, if a customer wants public IP, it (dynamic IP) should be assigned to that customer free of charge.

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All broadband providers must provide access to emergency services 10 free of cost similar to 100 series emergency services over telephone. Special QoS requirements must be imposed on all broadband providers to ensure delivery of emergency services. This is especially important for users who are unable to access emergency services using a phone such as those with speech impediments or those who are hard of hearing.

Response: Disagree. Since most customers have access to basic telephony services, which can be used to reach out to emergency services, this redundant provision is not justified for.

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ISPs must not be allowed to automatically redirect or tamper with traffic for any purpose, including mails and/or service advertisements

Response: Agree. Please see my notes on modification of IP headers/body on page 3.

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### **Response to comments from Mr. Aakash Malhotra**

Comments on definition of Broadband in India: National Telecom Policy - 2012 recommended minimum broadband speed to be increased to 2mbps by the year 2015. This never happened. I think we have reached a stage where 2mbps is not enough to handle basic internet services at optimal performance. My suggestion would be to set it at 4mbps download and 1mbps upload (or the top speed network is capable of in case of DSL which has technical limitations) for wired broadband connections as most internet service providers end up selling plans offering higher speeds for only a few GBs forcing the user to end up with minimum allowed speeds for the rest of the month. Plus the 80% regulation means that they would still be able to get away with by offering just 3.2mbps on a 4mbps connection to the end user.

Response: Agree. This has to read in conjunction with Save The Internet's comments on the same subjects and my comments on contention ratio on page 2.

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Comments on Fair Usage Policy and transparency in alerts: I understand that fair usage policies are a necessary evil. This is why TRAI needs to ensure that minimum broadband speed is set at a level that allows the user to access the internet/web-services at reasonable speeds at all times on wired connections. I further recommend that TRAI should make it mandatory for the ISP to clearly state both upload and download speeds pre/post fair usage policy to the end user. This should apply at the time of applying for a new connection and in all communications (bills etc.) for zero confusion. Right now, companies like Airtel are offering 100mbps plans but the speeds are only applicable on downloads because the upload speeds are still restricted at 1mbps which are not revealed to the customer.

Response: Disagree with FUP and agree with transparency aspect.

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### **Response to comments from Anshul Upadhyay**

There is nothing fair about the fair usage policy and should be scrapped. Unlimited plans should be truly unlimited with no caps to data limits.

Response: Agree with the comments.

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i) Internet Service Providers must avoid using the word "Unlimited" or "Limitless" or variations thereof to refer to broadband plans wherein there is a data-limit based Fair Usage Policy. This is because the word "Unlimited" in this context is misleading and may lead to certain customers believing that the advertised speed will be available to them without a data limit.

ii) Bar Internet Service Providers, especially mobile broadband providers, from using "Upto X Mbps" in their marketing material. This is because the highest speed advertised ("Upto") is usually not attainable unless internet traffic on the ISP is abnormally low, which may occur only at night time. This is also misleading to the customer, as they might believe that they will be able to access the internet at the advertised "Upto" speed more often than they actually end up availing this speed.

Response: Agree with the comments.

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