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Resp Sir/s,

Sub: Response to TRAI CP No: 8/2015 on Differential Pricing for Data Services

The undersigned has been associated with India's internet history from the year 1995 and had helped steer the privatisation process of Internet services, help draft the ISP license conditions in 1998 (the most open and pro competition license in the Telecom arena till then), involved with helping frame all the Internet policies and regulations actively till 2006, apart from having conceptualised and helped set up and run NIXI as well during its crucial formative years.
Therefore, having spent nearly a couple of decades, with all the experience at hand, we believe that outcome of this CP will potentially have a profound impact on the Oneness and Openness of the Internet, especially since several other developing countries will be looking up to India, as to the course we adopt and then follow suit. Will we keep Internet intact as one global interconnected network of networks or we give way to commercial and business interests and allow it to become a fragmented Internet divided into different silos manned by commercial gatekeepers. Our responses are as under:

Question 1: Should the TSPs be allowed to have differential pricing for data usage for accessing different websites, applications or platforms?

Answer: No, TSPs/ISPs should definitely not be allowed to enter into business or commercial agreements with Content Providers, where the former can (willingly or under some coercion) charge a fee of varying degrees to the content providers, for delivering the later's packets (contents) to it's own

subscriber base. Vice versa, Content providers should not induce or coerce ISPs to enter into any additional fee, toll or rent-seeking regime. There clearly has to be a Zero Price Access Regime (explained later).

If allowed, the likely effect can be illustrated thus:

Differential Pricing will translate into a practice where eg. an Airtel will charge Whatsapp and Whatsapp will agree to pay Airtel a certain amount of financial consideration (a termination fee) or some other mutually agreed commercial consideration in kind say prioritized access/better QoS to voice calls on Whatsapp used by certain segments of Airtel Internet subscribers and in turn Airtel can apply a discriminatory double/triple dipping charge for those voice calls on Whatsapp which otherwise, as of now, is free from a customers perspective – though the customer has paid Airtel for access and likewise Whatsapp has also paid an access fee to its TSP/ISP) and ISPs at both ends exchange traffic at IP transit points for a fee they pay and receive. Conversely, where TSP/ISPs if allowed to charge a differential fee based on status and type of content provider, then he will also be at liberty to not charge or enter some non financial arrangements with some content providers (such as exclusive access to each other's customer base which will become captive to this cartel for exploitation at some stage) which will then lead to discriminatory fee regime where some content provider are charged and some are not, thus empowering TSP/ISPs as Internet Gatekeepers where they decide which content to charge and which not to charge and how much. Predatory pricing and denial of access against the interests of certain groups of content on the Internet may happen eventually.

The situation above runs completely contrary to the foundational principles of Internet, which has been an open, neutral and transparent platform, free of settlement fee regime, irrespective of the number and status of TSP/ISP, users and content providers.
The openness of the Internet platform itself is responsible for the fact that nearly 60% and increasing number of the users are also the content providers. All of the billion sites and the content providers therein are users of the Internet first and foremost and they all pay a differentiated (based on speed and quantity of data consumed) access charge to their respective TSP/ISP to get online and use the Internet. TSPs/ISPs further get to share this access revenue by way of IP transit charges that they pay to each other.
Hence, Facebook, Google, Skype, etc. are also users. ISPs have never been

allowed to obstruct one user from accessing the other user/s. An individual user has every opportunity and right to communicate with the other user whoever or wherever he/she may be, on the Internet. However, it is a known fact that TSPs/ ISPs have tried to protect own business self interests but have been historically, time and again debarred by evolved regulators, from blocking, slowing or degrading access of one user content by another user (exception being legitimate legal barriers/local laws prohibiting certain content/services altogether).

Internet, therefore, has to be equated with a public highway where, irrespective of the size, speed and type (motorcycle, car or truck), all users have equal non discriminatory right of way and right of use, and the toll collector can only charge a differentiated access fee once, based on the type of vehicle. In terms of analogy, TSP/ISPs already charge this differentiated access fee to the Internet from various users (including content providers), based on consumption of bandwidth capacity and speed and also share revenues with other TSPs/ISPs via transit fee, etc. This differentiated Internet access fee is already accepted universally.

However, over and above this accepted form of access fee, any approval to charge any other type of additional toll in the name of differential pricing would amount to distorting the guiding principle of the open and transparent Internet, where, TSP/ISP will use every opportunity to monopolize users and deliver content as an exclusive fragmented part of the Internet that they claim as their own exclusive property, based on market power (as is the case with Zero rating and Freebasics). In regulatory terms it is well established that players with SMP or significant market power can and do tend to abuse their positions, to indulge in unfair rent seeking and anti competitive behaviour and if faced with competition can resort to predatory pricing tactics in order to disadvantage emerging competition.

In the case of Internet globally, as well as in India, TRAI must recognize that while on paper there seems sufficient competition in the Internet business, it is really a very disproportionate market and the facts bear this out as under:

1. Despite 500 plus ISP licensees existing at any point of time, top 10 ISPs control 98% of the Internet subscriber base in India, which means they have control over approx. 312 million subscribers as of now.
2. Top 5 of these ISPs control nearly 80% of the Internet subscriber base in India ie. 255 million subscribers are captive to just 5 service

providers as of now.

3. These top 10/5 ISPs are also Telecom Service Providers and hence present a picture of a skewed market dominated by a few providers. They are also owners of telecom and Internet infrastructure, which needs to be used by competing ISPs and in some cases they have in house content and applications businesses, which they have to promote.
4. 10 websites which are most accessed in India, as per current Alexa ranking (for India) are Google – holds the top 2 positions, Facebook, Youtube, Amazon, Yahoo, Flipcart, Wikipedia, Twitter, Twitter and Indiatimes.

Currently, there are unclear or non-existent regulatory barriers, which may act as anti competitive safeguards against TSP/ISPs who are owners of infrastructure, access service providers as well as have Content and application services and simultaneously they are providers to the same set of businesses that they also compete with.

Differential tariffs, if allowed will damage the fragile openly competitive nature of the Internet business, which is still evolving and result in a wider game of favourable inclusion or retaliatory exclusion of content and therefore undue toll extraction attempts by ISPs from content providers.
In the Indian context, it is not difficult to imagine a scenario, where the top dominant Service Providers will enter into favorable or sweetheart deals and agreements with any or all of these top 10/20 or even 50/100 top sites/content providers (using their traffic rankings as a base to negotiate) to deliver their specific packets to their respective last mile customers with more favorable QoS, speeds and prices compared to less paying or nil paying sites. Hence, if Airtel has an agreement with Google, Facebook has an agreement to deliver through Reliance and so on, obviously based on commercial and business considerations, some grave repercussions in the future would be where: (names used only for illustration purposes here)

a) Airtel customers may be deprived of Facebook, since it's rival Reliance has a pact with FB, or Reliance will deliver without Google. Other ISPs will enter into similar contracts with other popular sites and use that as their USP to attract and retain customers but in any case end up giving a fragmented version of the Internet and not the entire Internet as we know it today.
b) Airtel will have no incentive but every reason to slow down, downgrade

or worse block Facebook since this content has an agreement with rival Reliance and competes with Google/or its own inhouse Messenger app for the hits of vast number of users. There could even be a situation where say Airtel and Reliance will set higher charges for their respective users to access rivals content if they insisted on it.

c) Airtel and Reliance will have all the reason to block applications such as Internet Telephony based voice and chat services, which they consider as a threat to their own larger, and lucrative telecom business. If they do it will set back such historical developments, where voice was converted to Internet data packets and enabled people to communicate cheaply, only because innovation over the Internet was not allowed to be restricted by vested interests.
d) The dominant operators will acquire the ability to pick and choose content that will get access to the Internet, and ignored if there commercial demands are not met or fulfilled. Eventual vitiation would be where ISPs will block or deny any user if opinions expressed do not meet with the ISPs approval, in effect giving them power of censorship rights over the Internet.
e) Dominant ISPs and Content Providers will create packages of specific content, which they 'like' with different pricing schemes and force customers to choose packages in model very similar to how cable TV business is operated. Even worse, there may be replication of the Mobile Value Added Services business model where smaller emerging content and applications will be forced by ISPs to part with 60-80% of their own customer revenues as share of the ISP.
f) Currently, the Internet as we know it, with the World Wide Web, is one whole Internet, accessible in its entirety to each and user universally without any discrimination (exception being legal blocking). There is no basic Internet or Premium Internet/Web. It is completely neutral, but recent controversy over Freebasics (which promotes access to basic internet) has bared open the intent to divide the Internet into segments and restricting access to certain parts of Internet depending on customer segment and profile.
g) With Internet of Things shaping up in the near future and in situations where common household goods will become connected to the Internet as well, ISPs as gatekeepers will likely apply their market power to even limit the customer's choice to brands of appliances & devices that have agreements with the TSP/ISPs. This will become possible if we, by regulatory dictat set a precedent now in the present to allow ISPs to

apply Negative or Positive pricing regime.

Hence, differential pricing can have damaging implications even under the garb of 'public service or in the interest of poor or unconnected people or masked as charity'. It will allow the dominant ISPs and popular content providers to gain abilities to subvert the entirely open nature of Internet as opposed to the current situation where there is permission less environment and no user irrespective of technology platforms used, needs ISPs clearance to access the entire Internet and all legally available content and also is not at mercy of ISPs to express and share opinions or innovate and develop services and applications for others to use.

Internet model has been historically different from telecom model where in the telecom model 'carriage fee and termination fee' is a matter of right for the Telco's. It has been even different from cable TV model where some content providers may provide a channel for free but most popular content providers usually levy a fee on the carrier which in turn charges the end user accordingly.

The Internet has always followed the 'Zero price access Rule' (a term used by C. Scott Hemphill in his 2008 paper for Columbia University School of Law) where access providers are prohibited from charging any content provider to reach his customer. While Hemphill himself has not favoured it from an economic argument point of view, he does state that the justification for Net Neutrality centres around the Zero Price rule and that his paper has not gone into the details of access providers blocking, denying or degrading services to those who do not pay and also that in the US, there exist very strong anti-trust laws which act as restrained to extraction and exclusion types of activities – and India unfortunately lacks in such appropriate speedy justiciable mechanisms).

Hence, in summary, differential pricing is bad in concept, with have hugely damaging repercussions and potentially destruct the Open Internet.

Question 2: If differential pricing for data usage is permitted, what measures should be adopted to ensure that the principles of non-discrimination, transparency, affordable Internet access, competition and market entry and innovation are addressed?

Answer: As explained above in Answer 1, there is no reason to consider permitting Differential pricing in any form. As mentioned, the Internet today by virtue of it's design and architecture is still evolving and is endowed with the characteristics of being a neutral, non-discriminating, open access platform and is technically impervious by itself to distinguish and discriminate between one or the user, irrespective of location, size and type, except where network management comes into practice to manage QoS with regards to bandwidth needs, consumption, latency and jitter, etc. Instead of considering permitting TSPs/ISPs any leeway in introducing artificial economic and technical barriers to access and use of Internet, regulator can take the following steps:

1. Forbear and refrain from introducing any differential pricing mechanisms, which allows or enables ISPs to directly or indirectly to charge, extract additional fee or toll from any user/content provider or enter into any agreement with any user/content provider, other then a standard format access service contract that ISPs have with their users. All users whether it is the proverbial Ganesh from a village or a Facebook, must be treated as equal Internet access seekers and users, adhering to QoS norms established by the regulator. In practice, though larger entities/users have distinctive needs to maintain a larger dedicated, reliable and more predictable access network, which are provided tailored solutions with their own inherent costs and price points.
2. Importantly, while forbearing, a limited Ex-Ante Regulatory declaration would be useful in declaring a Zero Price Access Rule where no additional charges can be demanded from a content provider potentially earning revenues nor paid to the ISPs by any content provider for the privilege of accessing, interacting or addressing the ISPs customers. Care needs to be taken that any non-financial, indirect benefits may also not be accorded by ISP to a Content provider or vice versa which may result in distorting competition or limit access of users to the entire Internet. ISPs should be obligated to share their agreements with corporate entities on a regular basis with the regulator.
3. In effect, therefore, practices such as Zero rating where Content Provider and ISP collude to subsidize users and lure them to accept limited versions of Internet and particular sites/apps only, should be categorically debarred. Several research papers mention the Internet as

a Two sided market phenomenon comprising of users on one side and content providers on the other, with ISPs as neutral intermediaries. As number of users rise, it becomes an incentive for providers to develop content that users will use incrementally and as number of content providers rise, they act as magnates for new users to use and experience the Internet. Therefore, it is vitally important that no artificial restrictions are imposed to hamper the neutrality of this naturally occurring evolution of the Internet.

4. It should be kept in mind that allowing any collusion between large, popular and dominant content providers and the dominant ISPs will only lead to debilitating market entry conditions for new entrants, who seek to vie for user hits. It's the neutral, open, free to access Internet platform, which has lead to mushrooming of nearly a billion sites on the Internet. It they had to pay a gatekeepers toll, the Web would be not be as we see it today. Hence, to maintain the openness, competitiveness, innovations and still fast evolving nature of the Internet, it is essential that a few ISPs and Content providers are not allowed to hold Internet hostage to their business ambitions.
5. We definitely do not believe that there are any applications or services, which should be picked up and specified as critical or in public interest where limited application of differential pricing can be justified. On the Internet, all content by default receives similar treatment (based on the packet headers) and the eventual categorization is the choice of the user using the content, for example Ganesh's personal email goes as fast or slow as any Zuckerberg's email and Internet in that sense is inherently non-discriminatory, exception being the capacity and speed of bandwidth which we subscribe too (which is the discriminatory pricing rule which is already universally allowed to ISPs).

Question 3. Are there alternative methods, technologies, business models, other than differentiated tariff plans, available to achieve the objective of providing free internet access to the consumers? If yes, please suggest/describe these methods/technologies/business models. Also, describe the potential benefits and disadvantages associated with such methods, technologies, and business models?

Answer: With a near universal consensus that access to Internet is a human right, denial of which leads to continued deprivation of those without Internet access from the social and economic gains, the objective has to be to provide

access to the complete Internet and not provide a distorted, conditional or limited access to specific types of sites masquerading and marketed as Internet.

Top down approach to the policy of providing Universal Access to Internet has yielded limited results. Most of the large USO funds are being directed towards attempts to build and expand the network in areas where other networks have not yet been built. However, as is well known, due to delays and other reasons it will be several years before the networks actually reach the areas. There is absolute uncertainty with regards to addressing the last mile access network and even if that is somehow achieved, the challenges of getting people online and to use the Internet will remain.

So, there are two aspects to the divide; one where networks are available, but a large number of people still do not use the Internet and second where the networks have still to be built and efforts under the USO are being made.

For the purpose of this paper, we will concern ourselves with the challenge of enabling unconnected people to become Internet users, where networks are either available or can be accessed from close vicinity.

In most parts of India where, networks have reached and mobile penetration has been sufficiently achieved, Internet access has been going up albeit slower than expectations.
This can be largely attributed to reasons such as:
a) low or nil awareness of the usefulness and ease of use of the Internet
b) low use of smart phones capable of accessing internet for beneficial usage
c) high cost (perceived or real) of ownership of devices and Internet access
d) lack of training and skill building opportunities to use computers and Internet

We strongly believe and advocate that instead of the top down approach (as attempted through USOF), we need to shift towards a bottom up approach. This approach relies upon the following characteristics to enhance connectivity and digital opportunities:

a) Engaging with the local communities hitherto underserved deprived of or not adopting Internet for different reasons.
b) Engaging consortium of local stakeholders viz. administrative machinery (in urban settings) and panchayat/block level (in village

setting), civil society, NGOs, development agencies, willing service providers and funding agencies willing to engage with identified local communities.

c) Addressing and sensitizing the community, making them aware of locally relevant content, applications, services to develop a buy in and acceptance is crucial. Instead of pushing services to them, model is to recognize and provide according to their needs.
d) Setting up community based wi-fi projects and Internet training centers and running initial pilots offering free access to Internet, certified trainings and other services for a period of time say 1 -2 years.
e) The projects are budgeted and cost of creating the local Wi-Fi network, Telco/ISPs provisioning costs, computers, trainings, etc. are paid for through funds earmarked for the purpose. For this we suggest driving towards Municipal/Panchayat level USO Policy mechanism (covering their respective communities as per point 'b' above) to generate adequate local funding.
f) At (e) above, one can explore possibility and willingness of Telco's/ISPs to use the extent of their CSR funding obligation to underwrite cost of bandwidth capacities to the particular community.
g) The business model has to be self sustaining one where Free access services is limited by reasonable time tenure that is sufficient for the target community to 'experience the benefits' through sustained trainings, provision of quality and relevant services. Once given access, need and demand builds up over time. ROI on Capex/Opex will be staggered over time (say 5 years) and hence mostly viable in the long run.
h) In our unique pilot, which we successfully run, we have observed very favorable outcomes, in terms of social acceptance, enthusiasm to learn and use computers and Internet, exponential jump in registered user base, use of mobiles for Wi-fi access, purchase of computers and smartphones and eventual willingness to pay reasonable fee for Internet access overtime.
i) Additional methods of enticing adoption and usage amongst unconnected people could include provision of direct subsidy of access charges on mobile internet for a certain level of population (such as those registered under MNREGA) using part of the USO Funds can also be explored .

Question 4: Is there any other issue that should be considered in the present consultation on differential pricing for data services?

Answer: Some issues that TRAI must bear in mind and address appropriately in the context of the present CP are those where:

a) The ISP License condition in defining the Scope of Services is very clear and specific wherein it is incumbent upon the ISPs to provide all subscribers' access to the entire Internet. Further, all Licensees cannot discriminate between different subscribers and have to provide services to all on the same commercial principles. It is, therefore, inexplicable as to how, certain ISPs can distinguish a set of existing and potential subscribers and provide them access to only specific and limited sites on the Internet. The model used by Freebasics or similar ones and delivered by licensed ISP/s is a breach of the License conditions and hence cannot be allowed. And since, differential access itself is illegal under the present license conditions, differential pricing itself will not be legally tenable.
b) TRAI has not yet closed the earlier CP on OTT services, which also raised issues similar to the present case, regarding some Telco's attempt at distorting the market conditions by segregating certain types of Internet traffic (voice, video, chat, etc. which are mainstays of the growing Internet) and extract additional price from the users. While, it is common knowledge that that CP was poorly drafted and without much merit, people deserve to know from TRAI the fate of the same.
c) Net Neutrality defined by Tim Wu originally states thus, "**...**is the principle that Internet service providers and governments should treat all data on the Internet the same, not discriminating or charging differentially by user, content, site, platform, application, type of attached equipment, or mode of communication.
d) If TRAI has to uphold the above global principle, it must use this opportunity to also reverse known violations of the tenet, specifically where TSPs/ISPs do not provide access to Indian users the benefit of Internet Telephony in the domestic network, therefore denying more affordable communication facilities to the users.
e) Free and Open Internet allow and empower people universally to freely communicate, express, mobilize, inform, conduct business irrespective of geographic, economic or political boundaries that divide them. Services like Feebasics not only encourage violation of Indian License

conditions, they will have the effect of obstructing the vast number of 'poor Indians' from accessing the complete global Internet, offering them limited filtered content which they 'like' and therefore end up being able to eventually manipulate their Internet usage and potentially influence and monopolize their economic behavior by subterfuge. This needs to be discouraged at any cost.

We hope the above inputs will be useful and helpful towards determining issues at hand, appropriately.

Some of the References used:

1) White House paper on Net Neutrality
2) Research papers by Robin S Lee & Tim Wu, C. Scott Hemphill, Babette Boliek, Weiseman & Kulick , etc.

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