Compilation of inputs from IT for Change to a series of consultations by Telecom Regulatory Authority of India (TRAI) on issues around net neutrality in India

(2015-2017)

Between 2015-2017, IT for Change actively engaged in a series of consultations convened by the Telecom Regulatory Authority of India (TRAI), on regulation of Over-the-Top services, differential pricing of data, and core principles of net neutrality in the Indian context.

In these responses, IT for Change develops a unique set of perspectives on net neutrality principles that are rooted in indivisibility of civil, political, social, economic and cultural rights. They call for Internet egalitarianism to be seen as the key value underpinning net neutrality – instead of free market principles or a narrow focus on just the right to free expression.

1. Net neutrality is framed as a positive right and not just a negative one. In this regard, IT for Change's inputs , *inter alia*, call for providing all citizens a certain amount of free data allowance.

2. In addition to the free data allowance, mobile-based public services and other essential services should be provided free of cost to to all citizens. Such instances of positive discrimination should be seen as a valid exemption, and not a violation, of the principles of net neutrality.

These original contributions from IT for Change have given rise to a new and alternate framework for net neutrality. Both these points have since been taken up by many other stakeholders, and are likely to influence TRAI when it shortly makes its final recommendations on net neutrality.

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I. Inputs to the Department of Telecommunication's Committee on Net Neutrality

IT for Change

May 2015

1. The primary issue here is of how the Internet and its neutrality is seen from a larger public policy principle, and why. This corresponds to the first point of the Committee's terms of reference. In getting the primary framework wrong or inadequate leads to many a net neutrality discussions and arguments taking place at cross-purposes to each other, and thus not fruitful. It is important to see net neutrality not just as matter of 'economic balance' between the telecom sector and the Internet sector, as it often largely gets seen as. Next, it is also not just a matter of a free, open and competitive market, which no doubt is an important consideration here, with regard to the burgeoning and the innovative Internet sector. Net neutrality encompasses important public policy and regulatory elements from the telecom sector – chiefly the common carriage principle – and also from the media sector, since the Internet is today a key media of our society. Both telecom and media are considered to be sectors of special importance from a public interest point of view which is why they are subject to special regulatory approaches, beyond what ordinary economic sectors are subject to. ***Further, and this is our principal contribution here, since the Internet underpins deep transformations in virtually every sector of our society today, it represents a techno-social infrastructure of an exceptional importance. Over and above everything else, it is important to preserve a 'neutral' and egalitarian nature of this key techno-social infrastructure of the Internet if we want a more equal and just society, which is India's constitutional mandate to seek and preserve. Net neutrality is about maintaining such an egalitarian architecture of the Internet.*** Even very small deviations or distortions in the architectural design can show as hugely amplified distortions in the social supra-structures, in terms of various social systems that are being built on the Internet/ digital paradigm today – in areas as diverse as business, media and governance to education, health and livelihood support. It is important to preserve net neutrality as a public policy principle basically to preserve the egalitarian nature of the Internet, and to help ensure that our new digitally-mediated social systems are more equal and just than the existing ones. Correspondingly, allowing net neutrality to be compromised will mean a push towards greater inequality and social and economic injustices in the society.

2. A lot of current discussion in India centres around what is called as ***'zero rating'***, whereby Internet content/application/service providers pay the ISPs to carry their content free to the consumers. Although such a practice involves no technical priorisation or deterioration of any content or service, it introduces a huge distortion in the architecture of the public Internet; with a version of the 'Internet' put together by the ISPs and its partners being made available for free as against the priced 'public Internet' where all content, applications and services are available on an equal basis. This introduces a perverse incentive into the system whereby the individual consumers are expected to exercise a choice of immediate benefit and opt for the 'free channel', which is to the larger social detriment in terms of a comprised public and egalitarian quality of the Internet as a whole. This is the classical issue of how a series of free and narrow/ immediate self-interest

based individual choices may not lead to the best overall collective social choice. It is not enough to argue on the basis of a *de jure* position that even while some content is zero rated, all other content too remains available for the same price as it would be if no content was zero rated. ***We need to understand through forward-looking analytical exercises the* de facto *situation that will arise with 'zero rating' practices, and its highly distortive impact on the architecture of public Internet, and thus on the Internet-mediated social systems that are emerging. Consider a situation whereby whenever one goes shopping, the shopping place has two sections, one with an entry fee and other free to enter. One would normally almost always go towards the free section, as long as one knows that enough variety and choice is available also in the free section***. If 'zero rating' is allowed and takes root, ISPs and their partners will ensure that the 'zero rated' 'Internet section' has enough variety and choice to tempt most Internet users; only it will not be the real open and public Internet that we all today take for granted. ***It is not difficult to see how the 'special section' of the Internet which is free for 'users' and requires entry fee for 'providers' of content, applications and services has a perverse incentive and logic to easily become the dominant part of the Internet.*** For any public minded person, the incalculable loss in terms of what we really understand by the Internet as an open platform should be obvious. It is therefore imperative that 'zero rating' is treated as a violation of the public interest principle of net neutrality and is expressly disallowed.

3. It is certainly important that telecom business remains viable in an increasingly IP-centric environment. This however should not be done by allowing distortions in the basic egalitarian architecture of the Internet but by ensuring that all users of the networks, including the big content providers, pay their due compensation to network builders and providers. Without going into details we may just mention here that ***it is important to undertake public interest regulation of the inter-connection market*** to make sure that big players, whether content providers or telcos, are not able to unfairly treat players with lesser market power.

4. The terms of reference for the Committee also speak of unevenness of regulation across the telecom sector and the Internet sector (with which we mean what is mentioned in the Committee's terms of reference as the content and applications sector). To the extent this regulatory imbalance is about economic issues like levy of various kinds of fees, it may be necessary to undertake a comprehensive review of the whole communication sector in the new context. However, any levies etc can only be made overall on data services as such and it is not possible to begin selecting some or the other OTT services for special levies, for the simple reason that it not possible at a logical level is to separate OTT services that directly compete with services traditionally provided by the telecom sector; any simple web based application can today provide all such services.

5. It is also important to undertake a comprehensive review regarding what does universal service obligations mean and require in the new context of an Internet-centric communication paradigm.

6. As for other regulatory issues like privacy, security, consumer protection, media aspects of the Internet, and so on, it is important to see them not from a prism of regulatory burden

on the telecom sector versus the Internet sector. What is required is a comprehensive new approach to look at these important social and policy issues in the context of the new Internet-centric communication paradigm, and an emerging Internet-mediated society. ***The committee should recommend to the government to initiate a new and a different approach and process in this regard. We should move towards developing a new, rights-based Internet policy and regulatory framework.*** Brazil's recent Marco Civil framework is an example of such an approach.

7. Net neutrality is not a technical principle; it is a regulatory principle. Technically equal treatment of all bytes is not sacrosanct and discrimination is fine as long as it serves stated and clear public interest rather than the commercial interests of the ISPs. Some such public interest may be in terms of requirements for appropriate traffic management for a better Internet experience for all or for prioritizing some emergency services. What gets considered as public interest for such discriminatory purposes however cannot be allowed to be determined by ISPs, because they would try to mask their commercial interest as pursuance of public interest. Policy, law and regulation should clearly lay out the larger principles under which technical discrimination may be allowed, and adherence to them has to be closely monitored and ensured.

8. Treating net neutrality foremost as a social egalitarian principle also helps us avoid extreme 'technical' positions – like seeking strict neutralities of some kinds even when they manifestly go against the public interest. ***It is possible that upholding public interest may at times call for positive discrimination in favor of some applications, content and services.*** This may not amount to a violation of net neutrality, in the same way as reservations for women in jobs is not considered as gender discrimination. However, ***such legitimate public interest has to be determined by a duly empowered and accountable public body and not by the ISPs.*** As Internet connected mobile phones become near ubiquitous even in developing countries, it is entirely possible that governments enable and promote a 'zero data charge' channel for some essential citizen services, which could include obtaining their participation in key public discussions and policy decisions. Similarly, with the Internet likely to become a key if not the main platform for community media, it could be useful to explore committed channels for community radio/ TV, possibly with zero data charges. At an appropriate stage and time, possibilities of such kind can be enforced by the regulator on the telcos through license conditions. Such measures indeed contribute to a greater non-discrimination or neutrality of the Internet, in that they merely mitigate inequalities and discrimination in the overall social structures. Positive discrimination on the Internet in public interest, as determined by duly legitimate means, fits with the definition of ***net neutrality that bars any discrimination among different applications, content and services 'by infrastructure providers' on any kind of 'commercial grounds'.***

II. Comments to TRAI's Consultation Paper on Regulatory Framework for Over-the-top (OTT) Services

IT for Change

24th April 2015

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.

Our first response it that circumstances have indeed changed considerably with data-centric communication flows. Therefore, it is best to look at the situation anew, from a different perspective centred on current and emergent data-centric reality, rather than simply extend or extrapolate traditional telecom thinking and regulatory frameworks. For instance, use of the term OTT services is neither very clear nor common, and a rather telecom centric way of looking at the Internet, which in fact is redefining so many sectors, including the telecom sector. Indeed, Internet is becoming central to so many new social activities, organization and institutions, that it would no doubt be needed to be regulated in public interest. However, Internet and Internet services must not just be seen in relation to the underlying telecom infrastructure as the OTT term and the general tenor of the consultation paper seems to do. We need to address the totality of the current data-centric or Internet-centric scenario to device new thinking, paradigms and regulatory practices. It is appreciated that TRAI has a telecom mandate, and institutions do have jurisdictional as well as paradigmatic constraints, and also inertia with regard to frameworks and vocabulary. However, in our view, with India standing at a very important historical cusp, with Internet possibly a means for transformational positive social and economic shifts, what is required for the TRAI is to make bold departures and look at Internet-related issues differently, and not necessarily in a telecom-centric manner. So, yes, Internet and Internet services need regulation, but that requires a different kind of approach and thinking which we suggest TRAI should independently initiate. It should not be a byproduct of, or a sideshow to, a consultation that seems largely focused on (1) claimed depletion of revenues of telecos as competing Internet services become popular, and (2) imbalance between regulation over telecom services and Internet services. This is a very roundabout, and in our view an inappropriate, way to approach the issue of regulating the Internet in public interest. Net neutrality and its impact on telecom revenue, along with the issue of regulation of interconnection, is a set of very important issues that should be deliberated upon and decided independently, and these we think are and should be the main foci of the current consultations.

In sum, we do think that new kinds of regulatory thinking and practice with regard to the Internet and Internet services, especially those that are emerging as monopolies in their respective segments, are urgently needed. We think TRAI should initiate an independent process for that, employing different points of departure than done in this current paper. The current consultation and its outcomes should focus on three closely connected issues – net neutrality, interconnection regulation, and revenue models and sustainability of

telecom business in the new data-centric environment, which can include discussing possible revenue sharing between telecoms and Internet services. However, it may not be quite appropriate to treat the larger issue of regulation of Internet services in the shadow of this more focused set of issues, and making the former somewhat secondary or even instrumental to contestations about these other issues.

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.

No, a licensing regime for such services is inappropriate. One, unlike the mature field of telecom services, such Internet based services are in a strong flux of innovation and disruption, with new kinds of services evolving continuously. Any prior licensing will simply kill this field. Further, it is difficult to identify what kind of communication services will be licensed and which not, since various kinds of communication services – from text, to audio to video – are now increasingly embedded even in normal websites and applications. Licensing will simply foreclose all new possibilities and innovations in this area. Indeed, we know that if Internet services were licensed when they first came around, we would not have the Internet as we know it. Nobody, we think, will like to be in that kind of a situation.

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.

Major disruptions are underway in this sector, and of course growth of OTT or Internet services is impacting traditional revenue streams of TSPs. Whether the corresponding increase in data revenues is enough to offset these losses is a difficult question to answer. With all communication going data-centric, TSPs will of course need to earn enough from data revenues to survive. There is no other option. So, the question is better put as; what kind of data revenue models for TSPs are most appropriate (and sufficient) in the current and emergent scenario, in the best public interest. It is important and necessary to have a full-fledged debate on this issue. As to why any revenue streams that distort the basic egalitarian model of the Internet, represented as the net neutrality principle, are inappropriate will be discussed in response to subsequent questions.

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.

Here we come to the heart of the matter of net neutrality. OTT services should pay a fair cost to TSPs for carrying data in 'uplinking' to the Internet, whether as normal charges that any customer pays for such 'uplinking', or as per charging methods for Content Delivery Networks or as paid peering at peering points, as appropriate. It is important to regulate interconnection regimes in public interest so that costs of data carriage is fairly divided

among all uses, and market muscle is not able to determine interconnection/ transit charges as often does in the current system to completely non-transparent interconnection systems based simply on market power based ad-hoc relationships. Any fair allocation of costs should however be allowed to have no bearing on quality of transit, which should be the same for all content once on the public Internet system.

The above is on the 'up-linking' side for OTTs, which is basically an issue of interconnection regimes. What we are clear is that on the 'down-linking' or consumer-facing side, there should be no model that allows OTT players to pay extra to either improve the quality of their services relative to other services, or to offer some services on differential cost models to the customer (subsidized or on zero cost). It is here, on the consumer side, that the net neutrality question really comes in. Differentiating Internet services at the consumer end whether on quality or on the basis of cost to the customer, is neither simply an issue of consumer choice nor of just providing an alternative with respect to who pays for data costs of certain services. Such differentiation is a much deeper issue of causing a fundamental distortion in the Internet's architecture, which directly degrades the Internet's overall social potential.

It may be difficult to appreciate the real significance of the net neutrality principle without understanding the distortion that any violation of net neutrality (including zero rating) causes to the basic egalitarian nature of the Internet, and its hoped for egalitarian impact on our emerging social system that are mutating on the back of the digital context and opportunity. It is important to go beyond just issues of fair allocation of costs of laying telecom infrastructure and consumers right to free choice. The moment service differentiation is allowed on the consumer side, it becomes a distortion that travels and ripples out rapidly as a drop of poison does in a fluid! It begins to distort the basic equality and egalitarianism of the networked digital system, and through it the possibility of a certain degree of egalitarianism that can and should get embedded in the new Internet-mediated social systems, in areas as diverse as media and business and governance, to education, public health and livelihood support. As soon as players begin to build revenue models around discrimination between different streams of data traffic, a fundamental distortion in the architecture of the Internet sets in, which will keep spreading wide and deep through the society's digitally-mediated systems, and rent-seeking based revenue models will keep replicating and amplifying at every level in every sector. This is how the violation of this key egalitarian principle of net neutrality spreads rapidly outwards and has huge negative externalities in terms of overall social cost.

As much as, or even more than, providing the freedom of choice, the Internet inherently provides a certain level of equality of opportunity. This is what makes it such a unique techno-social infrastructure. 'Whether or not to protect and promote this key characteristic of the Internet' is the key social and political choice that we are faced with in considering the question of net neutrality. At times, making such a social choice of fostering equality of opportunity may even come at the cost of certain kinds of efficiencies. The question here therefore is not just of TSP's revenue models, or of free market principles based rights of TSPs and Internet companies to do their business and offer different service models. It is not even just about consumer choice. We can think of how a common schooling system is aimed at ensuring a certain equality of opportunity for all children. Net neutrality similarly fosters an equality of opportunity for all actors and activities that employ the Internet for

various purposes. We may have lost the opportunity of a common schooling system, though it works well in many countries like the UK, and our own right to education is humble though limited attempt in that direction. But we still have a largely net neutral Internet. This is an existing good thing for us to lose or keep! For the state through a regulatory intervention, or simple neglect, to allow the principle of net neutrality to erode amounts to the state intervening to enable less rather than more egalitarianism in our emerging social systems. This is not the mandate of the Indian state to do; the mandate is to intervene on the side of greater egalitarianism. It is important to frame net neutrality first in these higher and more basic socio-political terms before we get into subsidiary issues around the economics of telecom business. (We are not disregarding the latter issue which is indeed very important, and to which we will come back later. This is just to put out what we think should be the state's order of priorities.)

We do not think any forward looking analysis has been done about what would be the social cost of violating net neutrality principles as we move into a scenario of pervasive digital systems, all built on the Internet based interconnectivity between people and machines. Once this principle is violated and the new digital systems get built on an architecture which does not observe net neutrality it will be near impossible to roll back such society-wide structural changes. They would have got too deeply embedded and basic to the new social designs. It is this level of monumental decision that we are facing in dealing with the net neutrality question.

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.

Speaking about a regulatory imbalance may be the wrong way to look at the situation, which as we said earlier, is no doubt greatly changed and requires new thinking and new regulatory practices. It is possible that the nature of the changes is such that it is required to reduce some kinds of regulatory burden on TSPs rather than correspondingly increase it on OTT players. On the other hand, it is also certainly possible that upholding public interest may require new regulations over the OTT players or extending some older ones.

As to the question about what should be the framework to address these issues; one, we think a new and different process should be initiated by TRAI on this specific subject without mixing it with what is largely being considered as a net neutrality related consultation (whether intended as such by TRIA or not). We do think that the new Internet/ digital realities have changed the situation in some fundamental respects. A key change is with regard to how in the earlier times, telecom was a rather specialized service, and attracted the attention of a limited range of experts, with the public engagement being largely of the limited nature that is typical for any important public utility. Today however the Internet is intertwined with practically every aspect of people's lives, and society's institutions, in ways that are qualitatively different from how telecom has been seen, and engaged with.

It is therefore important to begin engaging with Internet issues employing a rights based framework, which include not only negative rights like freedom of expression and privacy, but also positive rights like universal access, and a certain degree of basic 'neutrality' and egalitarianism of the Internet. Brazil's Marco Civil framework, even with its defects, is a good example of a rights based framework for regulation of our communicative space, or generally, the Internet. It will be useful for TRAI to begin an exercise towards evolving such a framework, which should be presented as something that should underpin the government's proposed Communication Convergence Bill. It is also an opportune time to tap into the enormous groundswell of public interest in Internet regulation issues that has suddenly developed around the net neutrality issue.

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.*

There admittedly exist serious issues and concerns around security with respect to many Internet services. The best way to address them will be through exploring an entirely new approach around society's convergent communication systems, which is becoming Internet-centric. This is not to deny that there is much of worth in the old/ existing approaches that should also be simultaneously considered to provide an appropriate security framework. Such a framework should be (1) human rights based, proceeding from the core concept of human security, and (2) meshed well, and considered together, with other Internet governance issues like privacy, freedom of expression, global nature of the Internet, and so on.

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.

Our response to this is in line with the response to question 6. There certainly are very significant new issues that have arisen in these areas, which should be addressed with some urgency. A composite human rights framework for Internet governance and regulation should be worked out based on extensive consultations. TRAI should begin such a process at the earliest, with appropriate framing of issues, and a framework (human rights based) of approaching them.

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 summarised in para 4.29? And, what practices should be proscribed by regulatory fiat? Please comment with justifications.

It is paradoxical that ENTO wants that OTT service be 'required to pay fair compensation for carried traffic at the interconnection point (4.23 a) but would also like to have no 'regulatory interference' in negotiating inter-connection arrangements (4.23 c). They seem to be both asking for regulatory intervention with regard to the interconnection arrangements and speaking against it!

In any case, we think that OTT services should indeed pay 'fair' charges for transit, but what is fair would then need to be determined employing some larger public interest principles. This calls for regulatory oversight of interconnection regimes to ensure fair allocation of transit costs to all involved players. However, whatever may get considered as fair payments for interconnection, there cannot be any prioritisation of traffic for any party over other traffic, and so we are certainly against the end to end QoS proposal of ETNO contained in point 4.23 b.

It may be especially interesting to look at appropriate paid peering models for big content providers 'offloading' directly at peering points, because unlike ISPs that do settlement free peering based on a symmetric relationship (including of revenue streams from respective customers), the relationship between a content provider peering with an ISP is asymmetric. It is important to go into depth of the question of fair interconnection regimes, among different kinds of ISPs as well with CDNs, and also direct peering by content providers, and come up with a model which is fair for all. However, the important issue here is, and we repeat, this cannot translate into any paid prioritisation for any traffic. Once any traffic is on the public Internet, it gets the same treatment as any other. Interconnection regimes have significant international dimensions, especially with so much more content flowing into developing countries than flowing out. Smaller developing countries still face the burden of having to pay for both up and down connectivity, since the interconnection arrangements are completely based on market power, and are very non-transparent. Unfair inter-connection regimes was a key issue at the World Summit on the Information Society, but it did not get resolved. The ten year review of the World Summit on Information Society towards the end of this year may be a venue to bring up this issue again. The appropriate role of ITU in this area may also be explored.

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.

The principles discussed under 5.47 do not amount to upholding of net neutrality. They are important, but there application without enforcing complete non discrimination in traffic on commercial grounds would still fundamental distort the open nature of the Internet. These principles by themselves will not ensure the objective stated in the first part of para 5.47; to allow “the Internet to serve as a platform for application innovation, free speech and decentralized economic, social, cultural and political interaction”. If net neutrality is allowed to be eroded these key soci-political hopes form the Internet will begin to quickly evaporate. In fact, the statement of these principles appears to be a dangerous foil behind which the principle of net neutrality may be allowed to be compromised. We read this section with considerable concern, among many others which seem to tilt towards advising the option of letting go of the net neutrality principle.

Net neutrality should be upheld as a principle of 'no discrimination among Internet applications, content and services based on any commercial considerations', whether in favour of TSP's own offerings or of their partners. This included complete banning of any arrangements where service providers may partially or fully subsidize the data costs so that the consumers get some services free or subsidized with respect to data costs (zero rating).

We however do not think that net neutrality means that content providers can peer for free with ISPs at interconnection points. That is an aspect of inter connection regime, which should be regulated to ensure fairness to all involved parties, but without any traffic priortisation or degrading, or unfair refusal to carry any traffic, or seeking unfair price for carrying it. Net neutrality basically assures that once traffic enters the public Internet system is cannot be discriminated, positively or negatively, on any commercial grounds. As mentioned, to uphold this principle at any price is key with regard to the extent to which our emergent digitally-mediated social systems and structures will be egalitarian, which is a key political mandate and priority of the state.

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.

No kind of discrimination should be allowed to be done on any commercial grounds. The moment players are allowed to build revenue models around discrimination between different streams of data traffic a fundamental distortion in the architecture of the Internet sets in, which will keep spreading wide and deep through the society's digitally-mediated systems, and there will rent-seeking based revenue models replicated and amplifying at every level. This is how the violation of this key egalitarian principle of net neutrality spreads rapidly outwards and has huge negative externalities in terms of overall social cost. The term 'pragmatic' should be employed with care here, because we are dealing with a core issue of larger public interest, and not just some arrangements among different business parties. A high social and political imperative cannot be jettisoned on some kind of 'pragmatic' considerations, whatever it may mean. To the extent pragmatic here means ensuring that telco business remain sustainable, there are other means to ensure such an objective which have been discussed earlier. In any case, this objective has to be treated at a rather subsidiary level to the higher socio-political principles and imperative that demands net neutrality.

However, discrimination for traffic management in a manner that is fair to all, and works within clearly articulated principles (TRAI has a role here) is of course fine.

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 should be mandated to publish various traffic management techniques. However, such transparency alone does not address the key question of net neutrality. In fact, the question is of larger structural implications, and its requirements are not met even from ensuring consumer choice. It is a matter of a larger and very important social choice, about a higher or lesser degree of egalitarianism of our emerging social systems.

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 upgradation costs? Please comment with justifications.

This is an important question to ponder upon and address, but at a level subsidiary with regard to the higher principle of ensuring strict net neutrality. Both interconnection regimes and consumer data charges and models must be regulated in a manner that ensures adequate returns on the investments by TSPs (without violating net neutrality). Government should also try to reduce other kinds of upstream cost burdens on TSPs through various means.

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.

No discrimination among Internet services should be allowed to be done by TSPs. No such practice is acceptable under any circumstances. Transparency to consumers is important, but does not replace the imperative of net neutrality.

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.

No, it will be inappropriate to give differential treatment to OTT communication services and other kinds of data access. This violates the net neutrality principle. In any case, as mentioned earlier, with innovative practices being employed, it is difficult to define what is a OTT communication service and what not.

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.

As mentioned, fair and non-discriminatory regimes should be ensured at interconnection points, if needed through regulation. However, this may be needed to be done looking at things with a fresh mind and not just imposing old telcom based models which may or may not be suitable for the Internet.

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

This is a very important point, and should be a policy objective of the government. This question should be dealt along with other issues of Internet regulation through a separate process that we discussed earlier. Briefly, enforcing competition law, checks against vertical integration and cross-platform ownership, open standards, data portability, enforcing interoperability among platforms, public sector support for local applications, and such are the measures that one can think of in this area.

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

It will be inappropriate to license OTT communication services.

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

At this stage it is not required. However, consumer interest vis v vis Internet services is an area that has to be watched closed. A overall consumer protection framework could be a part of a new rights-based Internet regulatory approach, a process for which has been discussed earlier. What kind of regulatory structures may be required to enforce such a framework is something that has to be decided as a part of such an elaborate process of developing such a framework.

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

The question gets answered in several responses above. TRAI and the government must initiate a new participatory process to develop a rights-based Internet regulatory framework, Brazil's Marco Civil being one such example. A whole range of Internet-related issues will need to be considered in an interconnected manner.

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

We tried to cover everything we could think of in above responses.

III. Counter Response to Stakeholder Comments on TRAI's Consultation Paper on a Regulatory Framework for Over-the-top (OTT) Services

IT for Change

8th May 2015

Reading the very great variety of submissions to the TRAI consultation paper, we will like to submit our responses to some key points raised in these submissions.

Our current submission deals with the following key points in response to various elements in the numerous inputs made to the TRAI consultation paper on 'Regulatory Framework for OTT Services'.

(1) What is the key basis or justification of a net neutral Internet in terms of recognized social value, that the Indian state is supposed to uphold. We see that there is a lot of confusion about the basic justifications for the net neutrality principle.
(2) The issue of zero rating that has been raised in many submissions: much of our response deals with this issue.
(3) What to do to keep telecom business viable?
(4) Regulation of various Internet services.
(5) What kind of 'technical discrimination' and 'positive discrimination' can be allowed on the Internet without considering it a violation of net neutrality.

Our points in the above areas are listed below – the numbering of response points does not correspond to the above summary of topics.

1) The primary issue here is of how the Internet and its neutrality is seen from a larger public policy principle, and why. This corresponds to the first point of the Committee's terms of reference. In getting the primary framework wrong or inadequate leads to many a net neutrality discussions and arguments taking place at cross-purposes to each other, and thus not fruitful. It is important to see net neutrality not just as matter of 'economic balance' between the telecom sector and the Internet sector, as it often largely gets seen as. Next, it is also not just a matter of a free, open and competitive market, which no doubt is an important consideration here, with regard to the burgeoning and the innovative Internet sector. Net neutrality encompasses important public policy and regulatory elements from the telecom sector – chiefly the common carriage principle – and also from the media sector, since the Internet is today a key media of our society. Both telecom and media are considered to be sectors of special importance from a public interest point of view which is why they are subject to special regulatory approaches, beyond what ordinary economic sectors are subject to. ***Further, and this is our principal contribution here, since the Internet underpins deep transformations in virtually every sector of our society today, it represents a techno-social infrastructure of an exceptional importance. Over and above everything else, it is important to preserve a 'neutral' and egalitarian nature of this key techno-social infrastructure of the Internet if we want a more equal and just society, which is India's constitutional mandate to seek and***

preserve. Net neutrality is about maintaining such an egalitarian architecture of the Internet. Even very small deviations or distortions in the architectural design can show as hugely amplified distortions in the social supra-structures, in terms of various social systems that are being built on the Internet/ digital paradigm today – in areas as diverse as business, media and governance to education, health and livelihood support. It is important to preserve net neutrality as a public policy principle basically to preserve the egalitarian nature of the Internet, and to help ensure that our new digitally-mediated social systems are more equal and just than the existing ones. Correspondingly, allowing net neutrality to be compromised will mean a push towards greater inequality and social and economic injustices in the society. ***Net neutrality is basically about a certain 'equality of opportunity' , in social, economic, cultural and political fields. Such a high and prior value, which is constitutionally required by the state to uphold, cannot just be weighed against normal commercial and business considerations.***

2) A lot of current discussion in India centres around what is called as ***'zero rating'***, whereby Internet content/application/service providers pay the ISPs to carry their content free to the consumers. Although such a practice involves no technical priorisation or deterioration of any content or service, it introduces a huge distortion in the architecture of the public Internet; with a version of the 'Internet' put together by the ISPs and its partners being made available for free as against the priced 'public Internet' where all content, applications and services are available on an equal basis. This introduces a perverse incentive into the system whereby the individual consumers are expected to exercise a choice of immediate benefit and opt for the 'free channel', which is to the larger social detriment in terms of a comprised public and egalitarian quality of the Internet as a whole. This is the classical issue of how a series of free and narrow/ immediate self-interest based individual choices may not lead to the best overall collective social choice. It is not enough to argue on the basis of a *de jure* position that even while some content is zero rated, all other content too remains available for the same price as it would be if no content was zero rated. ***We need to understand through forward-looking analytical exercises the* de facto *situation that will arise with 'zero rating' practices, and its highly distortive impact on the architecture of public Internet, and thus on the Internet-mediated social systems that are emerging. Consider a situation whereby whenever one goes shopping, the shopping place has two sections, one with an entry fee and other free to enter. One would normally almost always go towards the free section, as long as one knows that enough variety and choice is available also in the free section***. If 'zero rating' is allowed and takes root, ISPs and their partners will ensure that the 'zero rated' 'Internet section' has enough variety and choice to tempt most Internet users; only it will not be the real open and public Internet that we all today take for granted. ***It is not difficult to see how the 'special section' of the Internet which is free for 'users' and requires entry fee for 'providers' of content, applications and services has a perverse incentive and logic to easily become the dominant part of the Internet.*** For any public minded person, the incalculable loss in terms of what we really understand by the Internet as an open platform should be obvious. It is therefore imperative that 'zero rating' is treated as a violation of the public interest principle of net neutrality and is expressly disallowed.

3) It is important to appreciate the real difference between a net neutral Internet and a non net neutral one. It is not the difference between say a fancy warm blanket and a shoddy one, whereby to someone suffering the cold the latter is better than having nothing. In terms of the Internet, the equivalent to this blanket analogy will be of a high speed Internet connection versus a very poor connection. The difference between a net neutral and a non net neutral Internet is a very different one. It is about an Internet bound by certain public policy requirements that defend larger public interest versus an Internet not so bound and may thus hurt larger public interest. To make an argument in favor of providing non net neutral Internet to people in poverty because it is cheaper or free is to say that such people do not require the public policy protections that are provided to other people. Surely, in most cases, such people require such protections more than others require it. The public policy imperatives that underpin the net neutrality principle concern a more egalitarian Internet, a more culturally diverse Internet, and so on. It is very patronising to tell people in poverty that they simply cannot afford such higher values. It is like saying democracy, for instance, is not for them. Lets use another analogy, of media which is subject to many regulatory controls - like prohibition of 'paid news', clear separation of editorial and commercial content, a minimum percent of editorial content and thus limiting the extent of commercial content, checks on vertical and cross media ownership, and so on. ***Now lets say some media houses come up with a plan that they are ready to provide a special media channel much cheaper or free to people in poverty as long as all these regulatory provisions are not applied to this particular channel. Would that be fair to people in poverty?*** If not, providing a non net neutral Internet to then for free is also not fair. It is simply setting them up, taking advantage of their poor bargaining power, for a digital ecosystem that would further exploit themselves, and deny them the protections - which are available to others - that could save them for such exploitative digital systems.

4) It is certainly important that telecom business remains viable in an increasingly IP-centric environment. This however should not be done by allowing distortions in the basic egalitarian architecture of the Internet but by ensuring that all users of the networks, including the big content providers, pay their due compensation to network builders and providers. Without going into details we may just mention here that ***it is important to undertake public interest regulation of the inter-connection market*** to make sure that big players, whether content providers or telcos, are not able to unfairly treat players with lesser market power.

5) TheTRIA consultation also speak of unevenness of regulation across the telecom sector and the Internet sector (with which we mean what is mentioned in the Committee's terms of reference as the content and applications sector). To the extent this regulatory imbalance is about economic issues like levy of various kinds of fees, it may be necessary to undertake a comprehensive review of the whole communication sector in the new context. However, any levies etc can only be made overall on data services as such and it is not possible to begin selecting some or the other OTT services for special levies, for the simple reason that it not possible at a logical level is to separate OTT services that directly compete with

services traditionally provided by the telecom sector; any simple web based application can today provide all such services.

6) It is also important to undertake a comprehensive review regarding what does universal service obligations mean and require in the new context of an Internet-centric communication paradigm.

7) As for other regulatory issues like privacy, security, consumer protection, media aspects of the Internet, and so on, it is important to see them not from a prism of regulatory burden on the telecom sector versus the Internet sector. What is required is a comprehensive new approach to look at these important social and policy issues in the context of the new Internet-centric communication paradigm, and an emerging Internet-mediated society. ***The committee should recommend to the government to initiate a new and a different approach and process in this regard. We should move towards developing a new, rights-based Internet policy and regulatory framework. Brazil's recent Marco Civil framework is an example of such an approach.***

8) Net neutrality is not technical principle; it is a regulatory principle. Technically equal treatment of all bytes is not sacrosanct and discrimination is fine as long as it serves stated and clear public interest rather than the commercial interests of the ISPs. Some such public interest may be in terms of requirements for appropriate traffic management for a better Internet experience for all or for prioritizing some emergency services. What gets considered as public interest for such discriminatory purposes however cannot be allowed to be determined by ISPs, because they would try to mask their commercial interest as pursuance of public interest. Policy, law and regulation should clearly lay out the larger principles under which technical discrimination may be allowed, and adherence to them has to be closely monitored and ensured.

9) Treating net neutrality foremost as a social egalitarian principle also helps us avoid extreme 'technical' positions – like seeking strict neutralities of some kinds even when they manifestly go against the public interest. ***It is possible that upholding public interest may at times call for positive discrimination in favor of some applications, content and services.*** This may not amount to a violation of net neutrality, in the same way as reservations for women in jobs is not considered as gender discrimination. ***However such legitimate public interest has to be determined by a duly empowered and accountable public body and not by the ISPs.*** As Internet connected mobile phones become near ubiquitous even in developing countries, it is entirely possible that governments enable and promote a 'zero data charge' channel for some essential citizen services, which could include obtaining their participation in key public discussions and policy decisions. Similarly, with the Internet likely to become a key if not the main platform for community media, it could be useful to explore committed channels for community radio/ TV, possibly with zero data charges. At an appropriate stage and time, possibilities of such kind can be enforced by the regulator on the telcos through license conditions. Such measures indeed contribute to a greater non-discrimination or neutrality of the Internet, in that they merely mitigate inequalities and discriminations in the overall

social structures. Positive discrimination on the Internet in public interest, as determined by duly legitimate means, fits with the definition of ***net neutrality that bars any discrimination among different applications, content and services 'by infrastructure providers' on any kind of 'commercial grounds'.***

IV. Comments to TRAI's Consultation Paper on Differential Pricing for Data Services

IT for Change

7th January 2016

Before responding to the specific questions 1, 2 and 3, we would like to present an overall rationale and framing of our inputs. This can be done as a response to the question 4, which is;

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

(The response to question 4 below is also summarised in a recent op-ed in Deccan Herald, "So, what could be wrong with free Internet?")
Internet is a powerful new phenomenon, which renders the issue of its regulation very complex, apart from being an uncharted territory. It can therefore also can be quite confusing, dividing even people and groups who may otherwise have similar interests.

In these circumstances, it is required that regulatory interventions around the Internet are preceded by a thorough assessment of the nature of this phenomenon, and its role in emerging structures and systems of an information society, or, in this context, more aptly called as, a digital network society. The current controversy around net neutrality must trigger such a larger examination by TRAI in the coming months.

Internet is much more than just a telecommunication system. Traditional telecommunication systems have been a relatively inert and stable layer supporting distance communication, with very little internal differentiation. The typical regulatory issues here therefore have been of inter-connection, universal coverage, quality, and pricing of services. All such issues are relevant to the Internet as well.
Next, the Internet is also considered a new form of media, as the term 'social media' implies. In its 2014 recommendations on 'issues related to media ownership', TRAI did describe the Internet as a form of media. It then made this observation about the Internet, "...the impact of the new media platforms on plurality could be reviewed at a later stage when their penetration becomes deeper and usage substantial". Since, as discussed below, Internet is a key 'design element' in the emerging digital networked social configurations, the issues of plurality of media and Internet must be addressed now,before new social designs become too entrenched. The current TRAI consultation paper rightly employs concepts from media regulation like 'vertical integration' and 'gate-keeping' as being key to Internet regulation as well.

Beyond its role as a telecommunication system and a new form of media,**Internet has a key constitutive role in the transformations that are currently taking place across all sectors of the society** from governance, democracy, education, and health, to transport and entertainment, to work, trade and business. (In this regard, it is better to use the composite term 'Internet and its associated digital phenomenon' as the key driver of transformation. But in this input we will loosely just say 'Internet' in its place). In this

constitutive role in digital network society transformations, the Internet must provide an even playing field for all actors and activities engaged in these changes. Even the slightest unevenness or deformity in the Internet magnifies into major deformities in the social systems transforming on the top of it, causing both considerable inequities and inefficiencies.

Next to its 'constitutive role', and in part in continuation of it, is **the role of Internet as the 'people connecting layer' for all new digitally-transformed social systems**. The current early stages of the digital network society suggest a tendency towards increased monopolization in every sector as it becomes digital. The Internet, as the 'people connecting layer' for digital systems, then becomes the all-important 'manoeuvring zone' for people, enabling some degree of resistance to monopolization, allowing interoperability and switch-overs across different options. But if this public connectivity layer can also be rigged, by selling privileged transit over it, the risk of monopolization and lock-ins by a few corporates over key social sectors gets greatly enhanced.

It is in **Internet's such dual role, as a constitutive element, and a 'people connecting layer', with regard to the emerging digital network society paradigm,** that the need to fully protect its net neutrality character is most clearly evident. In this formative stage of a new social paradigm, fiddling with the basic design of the Internet is to compromise the very design of the new social systems. Once, a flaw in Internet's design, like zero or differential pricing, is allowed to take root, it will quickly become a core design element of new digital-social arrangements. At that stage, it will be impossible to recover from it with the new digital social design having become relatively stable and entrenched. It is for this reason that the exigency of protecting the net neutral character of the Internet cannot be met down the line after a greater digital systems maturity has been attained, or by ex post interventions. It should be done now, and ex ante.

Lastly, regulatory interventions are especially required when the expected market dynamics are too highly loaded in a particular manner which is problematic. It is easy to see that monopoly inclined digital companies, in all sectors, would find it a small price to pay the telcos for a privileged use of the Internet as 'people connecting layer', rather than the consumers paying for connectivity. Telcos also realize that, while the value transiting through their networks with increasing digitalization of society is almost limitless, what they can charge consumers for connectivity has its limits. Instead, charging those who use a privileged transit over their networks to consolidate monopolies, and profiteer from it, is an ever-expanding source of revenue. **It is so beneficial to all the big economic actors involved, at the expense of the rights and freedom of the people, that the slightest window of ambivalence that may be left in the regulation will be employed to quickly develop new digital social systems models that would then be difficult to reverse.**

It is of course for this reason, for instance, that the telco partners of the Free Basics platform are foregoing revenues in letting their networks to be used for free by the application provider and even allowing the latter to enjoy all the publicity of doing a 'humanitarian act' (while, in fact, Facebook is not the one providing free connectivity).**This shows how large are the stakes here, and that they pertain to the overall, long-term, model of rent-seeking with regard to the ever-expanding digital social activities.**

In the light of the above framing, we will now respond to the specific questions 1, 2 and 3 as below.

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

No. Price based discrimination for data usage for accessing different websites/ applications/ platforms **should never be allowed**, in any circumstances. It should not even be allowed for temporary, promotional purposes. If a telco wants to promote its service, it can offer the entire Internet free, if needed, with time and/ or data cap restrictions. The only reason for differential pricing is to open up revenue streams from the content/ applications providers side, which immediately distorts the basic model of the Internet, which distortion will magnify and propagate through all digital social systems, as discussed earlier. **Internet must always provide all (legal) content and application at exactly the same terms to everyone.** That is basic to its social role as an egalitarian networking platform, where every actor and node gets treated the same as any other. The slightest compromise on this basic design will be like an interminable tear that will cut through the fabric of hope for digital network society that provides everyone equality of opportunity and formal status.We must mention here that **we consider free provision of key public, emergency and other essential services, as determined by the regulator (and regularly revisited) and not a private company – whether a telco or an application provider – not only acceptable but also necessary.** This must be enforced on all telcos as a licensing condition. After all, as more and more of these services become digital, it is irrational to deny someone an essential public service, or emergency medical help, just because one has run out of one's data pack! TRAI must set up an internal system of assessing and listing such free services and make it compulsory for all telcos to carry them free. To avoid confusion in discussions in this key area, we can employ 'zero rating' as a term only for a situation where selection of free services is made by telcos and not the regulator (a practice which should be fully disallowed).**Regulator mandated free services can be named with a different term' like 'public and other essential services'.**

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?

Once differential pricing is allowed, no complementing measure will be able to stop the quick slide towards the complete inversion of the Internet's egalitarian model. We will rapidly see emerging new telco and monopoly application/ content providers' business models that would be too potent an economic combination to be able to resisted. These will soon become the dominant models of the Internet, and new social systems will shape around them. Very soon, they will be too entrenched to ever be reversed.
We must remain attuned to the very strong, almost explosive, dynamics at work as Internet shapes new digital social systems. Things that look in control may not remain in control once problematic practices like differential pricing are allowed, even on a tentative basis. Neither can they be controlled through supposed additional cautionary measures nor by ex post regulatory interventions. There is a basic systemic design issue at stake here.

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, pleas suggest describe these methods/technologies/business models. Also, describe the potential benefits and disadvantages associated with such methods/technologies/business models?

Internet is being referred to as a human right in many global discussions, and is being considered as such legally in some countries. Basic connectivity is the very foundation of 'Digital India'. There can be no 'Digital India' without universal connectivity of sufficient quality. Everyone therefore should be connected by Internet, whether one can afford it or not. Apart from the social considerations, there are such huge externalities of universal connectivity that it makes eminent economic sense as well. **Every citizen should be provided a basic minimum data quota, as set by the regulator, and mandated through licensing conditions on telcos.** Government may think of initially offsetting some of the revenue losses through USO Funds. However, as per telcos own logic in pushing zero-rated services, citizens that get free data quota are expected to keep aspiring for higher data usage and better data services and thus such a practice of 'free data quota' will only bring more revenue for them in the long term.
Meanwhile, government of India must leverage its National Optic Fibre Network, which should be handed over to local self governance bodies to run the last mile – over both wired and wifi models. These bodies may license local private operators – like the cable operator model – to retail connectivity but with the condition of free supply to community institutions like school, hospital, anganwadi, etc, **and a basic free data quota for all**.
There is no alternative to wired, optic fibre connectivity, supported by local wifi networks, to address the issue of universal connectivity of a sufficient quality for all. Mobile operators must also offload to Wi-fi connectivity wherever possible.

V. Counter Response to Stakeholder Comments on TRAI's Consultation Paper on Differential Pricing for Data Services

IT for Change
14th January 2016

Having gone through the responses of various stakeholders to the consultations on 'Differential Pricing For Data Services', we note that those supporting 'differential pricing' are citing two main arguments. We find both these arguments difficult to sustain, ***especially if we focus on what the nature of the phenomenon of the Internet is***, whose power and socially transformational role is the reason behind such a hot debate on this issue. The prime responsibility of TRAI is to protect this basic nature of the Internet which alone is responsible for its huge positive social impact.

The main arguments forwarded by those who want 'differential pricing' to be allowed can be clubbed under two categories;

1. the need to allow innovation in the telecom and Internet sectors, which sectors also require adequate funding to flow into these sectors.
2. the need for universalizing access to the Internet, in a situation where a vast majority do not have adequate resources to buy connectivity at 'normal prices'.

We will briefly respond to both these arguments.

Need for innovation and resources for laying infrastructure

In making this argument, examples of 'differential pricing' as a normal practice in other sectors is often quoted. But let us first fully understand, what is it that we are pricing, meaning the Internet. Internet's unique, explosive, value comes from its one feature; every node on the network is treated equally as any other. ***It was as if suddenly, somehow, every human being was put in equal proximity to everyone else! This is the basic transformational feature behind whatever the Internet has done to our social systems***, which in fact is ushering what is considered as a new kind of society, the digital network society.

There is an interesting definition of the Internet, which we find very instructive for the present context;

> "What scholarly and popular writing alike denominate as a thing ("the Internet") is actually the name of a social condition: the fact that everyone in the network society is connected directly, without intermediation, to everyone else." (*Cited by Eben Moglen in firstmonday.org/ojs/index.php/fm/article/view/684/594)*

We cannot speak of innovations around the Internet, or with regard to increasing its reach, without being clear about 'what the Internet basically is'. An innovation which destroys the basic principle of the Internet can hardly be called an innovation. In this regard, when people speak about accessing a 'part of the Internet' they do not understand that the

Internet is either all of it, or it is not the Internet. It is like one cannot be a little pregnant! ***If everyone cannot participate equally on the Internet, it is not the***

Internet. Period. Yes, access is needed to be able to participate, but what kind of improved access would it be that changes the very nature of that which is sought to be accessed. That is not access. It is a trap.

There is no problem about 'differential pricing' on the access side, with regard to keeping intact the phenomenon of the Internet. Such pricing should be determined by normal telecommunication regulation concerns, and can allow pricing innovations, as do exist. The issue is very different on the 'participation' side or aspect of the Internet, where not just 'differential pricing' but any pricing at all makes it something different than the Internet.

It should be clear, in this regard, that '***differential pricing of data services' which prima facie looks like some kind of differential pricing on the access side, is really about pricing 'participation' on the Internet*** from the content/ application side. At least, it is being set up for that, for such a model to slowly gain acceptability. ***There is simply no reason why a telco will provide cheaper access to some content/ application if it does not obtain some benefit from the content/ application provider.*** This is as clear as daylight! Current models where there is seemly no gain made by the telco is just a deliberately misleading front presented in collusion by the telcos and big content/ application providers. Both stand to gain immensely from a deformed and unequal Internet because it allow them to build long term highly remunerative rent seeking models.

One can think of it like this;, it may require resources to access a playing field, but once there, it is a game only if everyone can participate equally. Internet is that new social playing field where everyone should be able to participate equally. ***That is the principal job of the law and regulation to ensure and maintain – the Internet as a level playing field.*** Ensuring universal access to it only comes after that, and cannot be at the cost this basic feature of the Internet.

The examples from other sectors about 'differential pricing' as a necessary allowance for innovation do not hold true for the Internet, on the 'participation', or the content/ application provision side. It may have some relevance on the 'access' side, meaning of course access to the whole Internet being priced differentially.

Interesting, both the innovation/ resource-requirement argument and the 'need to universalize the Internet' argument', are supported by claiming a far-reaching social-transformational role of the Internet. This is a paradox. Because, 'differential pricing' by hitting at the very heart of the logical basis of the Internet's transformational capability aims at killing the goose whose golden eggs are being extolled. Such throttling of the very source of the biggest value of the Internet may not become immediately evident, but it will spread like a relatively slow poison reversing the egalitarian role and potential of the Internet, across all sectors on which we see its growing impact.

Need to universalize the Internet

Perhaps the most unfortunate aspect of this whole debate has been how the interests of impoverished people have been made as a key basis of arguments in favour of 'differential

pricing'. It is these people who stand to benefit most from a more egalitarian social paradigm that a net neutral Internet can possibly ensure, and 'differential pricing' will definitely destroy.

Basically, impoverished people are being told that access to the Internet will be free but participation will be priced. Just dont think of participating, be satisfied with access! So that various exploitative economic models can suck out resources even from the bottom of the pyramid. (As unregulated global trade would do, about which India has been very active at the global level in staving off the dangers, for the sake of its farmers and workers.)

Participation is about the content/ application side of the Internet, access is about the user/ consumer side. Pricing participation and making access free is what fully destroys the basic Internet model. And that is what differential pricing basically does. The improvised can access the Internet free or cheap, but for that, the 'Internet' that they get will be determined by those who hold superior economic power. That is the deal. It is not difficult to see who benefits and who loses in this arrangement.

This issue of content/ application -side 'differential pricing' is a structural question. It cannot be framed in individual choice frameworks, as many supporters of 'differential pricing' have done in their comments. It is the regulator's responsibility to address such structural issues, and not just go by free-market and individual choice logic. ***It is akin to some media organization offering to provide cheap or free media in exchange for being released from regulatory obligations like ban on 'paid news'*** and the requirement to maintain a minimum editorial content to advertisements ratio. In the same way as that cannot be considered as just an issue of individual users choice, but is clearly a larger structural issue, so is differential pricing and net neutrality.

Universal data allowance – The need of the hour

Perhaps the most heartening feature of the current consultation has been the wide acceptability of the idea of some kind of universal data allowance for every citizen. This would be key to the hopes of a truly 'digital India', and could trigger powerful new social forces. Such an allowance will in fact also greatly benefit the telco/ Internet sector, as people's appetite is whetted and they will like to go for higher levels of paid connectivity and services, as best suit their digital lives. This has been the main logic provided by the supporter of zero rated services, and if harnessed in this way, it indeed has great potential.

TRAI must formulate recommendations on such a free data allowance for every citizen and forward them to the government. This thinking should also inform the recommendations that TRAI is developing on the implementation of BharatNet. ***BharatNet must also ensure such a few data quote for all citizens,*** and this provision should be built in the design of its last-mile implementation.

VI. Comments to TRAI's Consultation Paper on Free Data

IT for Change
16h June 2016

Question 1: Is there a need to have TSP agnostic platform to provide free data or suitable reimbursement to users, without violating the principles of Differential Pricing for Data laid down in TRAI Regulation? Please suggest the most suitable model to achieve the objective.

We are not clear about the objective of this current round of consultation, which follows the rather clear recently passed order on 'Prohibition on Differential Pricing for Data Services Regulation, 2016'. We take it that there is no intention to amend this important regulation. We see this clearly stated in the above question. Any model suggested under this consultation, therefore, should not only ensure that TSPs themselves do not offer differential pricing but also, to quote the mentioned 2016 regulatory order;

> "No service provider shall enter into ***any arrangement***, agreement or contract, by whatever name called, with any person, natural or legal, ***that has the effect of discriminatory tariffs for data services*** being offered or charged to the consumer on the basis of content." (Emphasis added.)

The key condition for any suggested model in response to this consultation is that it must not involve a TSP entering into any kind of agreement or arrangement "that has the effect of" discriminatory tariff charged to the consumer on the basis of content. ***This will also rule out any kind of "passive role" (the term used in current consultation) as well, which could be of facilitating a discriminatory tariff arrangement***, even if the TSP itself collects nothing. It was made clear in the explanatory text of the mentioned regulation that ***discriminatory tariff involves both "zero or discounted tariff".***

However, we are concerned that ***most examples provided in the consultation paper***, of what it considers "TSP agnostic models" that now seem to be open to be considered, ***would clearly involve TSPs entering into some kind of "...arrangement*** … that has the effect of discriminatory tariffs for data services being offered or charged to the consumer on the basis of content". They are therefore clearly in violation of the regulatory order on differential pricing. Since these examples that violate the earlier order are put forward in this consultation paper, we are afraid that there seems to be an intention ***to open the earlier order to some amendments, or perhaps some kind of 'technical' bypassing***. We hope such fear turns out to be unfounded.

The current paper is very clear in its opening part that the responses should suggest possible options that facilitate some kinds of free access ***"without violating the existing TRAI Regulation on discriminatory tariff for data services"***. We hope that this proviso of the current consultation is maintained to be absolutely inviolable.

Two types of models seem to be under consideration. For the first kind, ***the TSPs provide some kind of technical interface***, or API, that "enables" content providers – via a third party TSP agnostic platform – to either *post facto* reward consumers for accessing some

content, or s***imply pay to the TSP the cost of accessing such content***, which therefore becomes free for the consumer to access. The second kind is where a third party platform rewards consumers accessing certain content ***"without involving the TSPs at all"*** – like the quoted current rewards based businesses already existing in India, and listed in para 12 of the paper.

For the first kind, where the TSPs offer an technology interface, or API, to facilitate shift of "cost burden" for certain content from the consumer to a "platform provider", ***it clearly involves an "arrangement"*** that 'has the effect of discriminatory tariffs for data services being offered or charged to the consumer on the basis of content'. Such a model therefore clearly violates the recent regulation against such practices and thus cannot be allowed. We are not able to see why such a model is even cited as an example in the current consultation paper. Any such API will have to separately bill different types of content for each consumer, charging some of it to the consumer and rest to the zero-rating platform provider. This clearly constitutes an "arrangement" with the platform provider, that has the effect of discriminatory pricing to the consumer – where some content is coming to her free and not the rest. This would be inadmissible under the recent order.

The last round of consultation was dominated by debates around the Free Basics platform. The consequent regulatory decision was then rightly read, and celebrated, as disallowing Free Basics kinds of practices. The question now is, if the above kind of model is allowed, what stops Free Basics from becoming that "TSP agnostic platform", using the API provided by the TSPs to zero-rate content that is on Free Basics. ***We would then just be seeing Free Basics, and similar applications, coming back through another route.*** Just that now they have to be equally available on all TSPs, and not just one or two, as Free Basics earlier was. ***It is not clear how spreading the problematic Free Basics like practices now equally to all TSPs rather than just one or two can be considered a good move*** – when most people had expressed views against such practises. Such practises are also roundly criticised in the recent regulatory order on discriminatory pricing. Allowing such a model therefore would be almost going completely against that much-praised order.

That leaves a second kind of model where platforms – like the existing ones in India cited in para 12 of paper – reward accessing certain content post facto, directly to the customer, including through providing data top-ups. ***This may be possible to do without any kind of direct arrangement with the TSP***, and therefore does constitute a distinct case. Here, our main argument is that ***law and regulation must aim for right outcomes and not just look narrowly at the processes of providing a service***. A regulation against price discrimination in data services must ensure that the consumer does not face any price discrimination, whichever way it may come. In so far as ***this second kind of model also has exactly the same final effect as the first***, in that the consumer gets some data free but the rest gets costed, still fully contravenes the spirit of the recent regulation, and should therefore not be allowed. As the regulatory order had rightly observed, "what cannot be done directly also cannot be done indirectly". This is just doing price discrimination, which includes, zero-rating, somewhat indirectly. It must not be allowed. We are unclear about another model suggested in the paper, that of direct cash transfer. Is it a cash transfer to the consumer from government or some other public interest agency to cover the access cost for the full Internet (even if just to some extent)? Or is it some

kind of cash transfer from a content provider, directly or through a third party service provider (platform), to the consumer just for data charges for accessing only its content? If the former, it is most welcome and should be encouraged. But instead of transferring cash to the consumer, the government or other public interest agency can directly pay the TSP. Such an arrangement, since it does not facilitate discriminatory pricing, would not be illegal under the recent order. However, if the latter, whereby a content provider makes cash transfer for accessing its content, it really, in effect, means free data for some content and not for other content, which is again as much a case of discriminatory pricing as any else. This fully goes against the spirit of the recent order, and causes all the undesirable social outcomes that the order's explanatory note discussed so eloquently.

From the media interviews of TRAI officials, it appears that the whole basis of the earlier order and overall regulatory exercise, that caught popular imagination as nothing like this before, is being dramatically changed. Suddenly we are talking of something entirely different. To all the involved people, it was always about net neutrality, that all content on the Internet, as the consumer receives it, is treated in the same fashion. ***It now appears that the main issue here is being described as whether or not the same services and offerings (whether net neutral or not) are available equally on every TSP or not. This is an entirely different matter, and not what has been bothering people, and they responding about. For instance, people clearly had a problem with Free Basics as being not net neutral; one did not hear anyone having the problem why is Free Basics not available on all TSPs.*** One did not hear anyone on either side of the debate talk about this issue. This amounts to upending the whole idea and spirit of the debate in which the nation so passionately and also rationally engaged. If such a shift in the basic proposition of these consultations is actually being done, it amounts to a great disrespect to the public, and public opinion, regarding a cause in which it showed much interest and passion.

One last point; the fact that this new consultation is being done does appear to mean that there is now some predilection towards allowing some latitude on zero-rating; perhaps along the models that have been discussed in the paper. As argued, these models all go against the letter and spirit of the recent order. We see that there is some, unsubstantiated, shift towards arguing that such zero-rating provisions will somehow be most used by small entrepreneurs. This is especially evident in paras 8 and 9 of the consultation paper. Whereas in the last round, the deep pocket content providers were, rightly, considered most likely to dominate the zero rating scene. ***We could not understand the basis of such a shift now, to consider zero-rating as more likely to be done by small entrepreneurs.*** If the models discussed in the current paper are allowed, they will also be most used by big content providers, with the same kind of deleterious affect on consumers, including the poor among them, and on the general society, as were so well argued in the last order. ***No reasons have been provided why the new discussed models will be more used by small entrepreneurs rather than big companies.*** This is an absolutely wrong premise, on which this new consultation seems to be standing. All these models cost money to content providers, and will be most used by those who have the most money. We think that the cover of the supposed benefit to small entrepreneurs is unjustly used by big companies who want such practices to be allowed, to

enable then to dominate and close the market to newcomers. Therefore, allowing even the new discussed models will actually harm small entrepreneurs, which is why most of them have been arguing for complete ban on all kind of zero-rating models.

Question 2: Whether such platforms need to be regulated by the TRAI or market be allowed to develop these platforms?

No kind of platform that enables zero rating or otherwise any kind of price discrimination for data services ***should be allowed, whether run by TSPs, facilitated by them, or run by other parties.*** TRAI, like for any good law or regulation, must regulate for actual social outcomes, and not just with regard to technical or business processes that produces them. Enabling clever new business/ technical models to do what TRAI has well argued in its recent order as being detrimental to consumers, even more to the poorer among them, as well as to the larger society, will just make a mockery of law and regulation.

It is important to remember that the Internet is basic to almost all emerging social systems. Just like a small change in the DNA magnifies manifold in the human body, allowing even a small loophole in the regulation that allows TSPs and big content providers to set up non net neutral business models, will immediately be greatly exploited using clever new business practices, in a manner that such non net neutral models would become the dominant ones. Such are the extremely powerful “commercial forces” backing changes to the neutral character of the Internet, which does not allow easy (improper) exploitation of this key part of new social systems.

Question 3:Whether free data or suitable reimbursement to users should be limited to mobile data users only or could it be extended through technical means to subscribers of fixed line broadband or leased line?

As we discuss in answer to the next question, number 4, it is important for TRAI to look at ways whereby disadvantaged citizens are able to get some basic data entitlement. Such an entitlement should be provided both on mobiles and wired networks. As there is much more bandwidth available on wired networks, which is required for many tasks, that are increasingly essential, like e-education, e-health, e-governance, e-agriculture, and so on, such a basic free quota for everyone is very much necessary to be provided on wired networks, in addition to being provided on mobile networks (since mobility is also a very important matter).

Question 4: Any other issue related to the matter of Consultation.

We understand that a key concern that bothers TRAI, and very rightly so, is how to ensure that Internet connectivity is universalized as soon as possible, as most social systems shift to the Internet. Not connecting everyone sooner than later will cause major and unacceptable exclusions. The best way to do so is to provide a basic free quota of connectivity to every citizen, separately on mobile and wired networks.

Communication resources are most logical as well as convenient to adapt to a basic entitlement

framework. Here, we do not have a material resource being distributed, where each additional unit costs considerably to make. First of all, once a communication system is set up, there is very little marginal cost for providing additional resources. Further, any communication resource employs significant public resources like spectrum and the right of way. ***Government must leverage the public resources it makes available to communication companies to make them provide a free data quota to all citizens***. ***This can be done as a licensing condition for communication companies.*** Government should also consider paying out of the ***Universal Service Funds***, and/or set up corpus for private contributions. In fact, the enormous ***earnings from spectrum allocation,***
and locally from giving right of way, should logically be used for universalizing Internet connectivity, through supporting such free data quotas.

Fortunately, much more than other subsidies, free data quotas are also easier to manage. They do not have much of a targeting problem. They can be given to all citizens, and, such is the exploding need for data for almost every possible activity that, those who have extra money would still spend considerably on data above the free quota limit, and thus the companies would not lose much revenue. Even the disadvantaged, or poorer, people, who get such free quota would mostly come to spend beyond this quota limit to get additional services, and thus it simply brings many new customers to the companies, apart from serving a most important public interest. There is also no leakage, because if a part of the licensing conditions there will be no payments involved, and even if payments are involved, they go directly to the TSPs.

We should also leverage National Optic Fibre Network (NOFN), a public infrastructure, to provide wholesale backhaul to ***community run networks, which should provide a free basic data entitlement to everyone, while commercializing the rest of data provision***. Local governments will also be willing to invest money into such local community run networks, and thus the burden of subsidy gets distributed. We understand that the current effort is to rely wholly on private partners for last mile connectivity from the NOFN. This policy should be revised, with a greater tilt towards community run networks. Even a rich country like the US, and many others similarly placed, are increasingly relying on community run networks. US President, Barack Obama, has strongly backed community based networks. In the circumstances, it is unfortunate that a developing country like India is not looking seriously into this option.

Lastly, we also think that basic government services, and other public interest services (as identified by TRAI), should by regulation be provided free by all TSPs. As more and more public services migrate to digital platforms, they cannot be denied to any citizen just because she may not have a data package, or may have exhausted it. We see that the recent order makes an exception for emergency service. Such an exception should also be extended to key public services, and other specifically identified public interest services. The list of such exempted services should be decided by the regulator and not the TSP. TSPs cannot be allowed any leeway in this regard. Such positive discrimination, a long-cherished concept of social policy, cannot be equated with problematic zero-rating, as decided by the TSPs.

A combination of basic free data allowance, and free essential services, is essential for an inclusive digital India. There is no way around it.

VII. Comments to TRAI's Pre-Consultation Paper on Net Neutrality

IT for Change
21th June 2016

Question 1: What should be regarded as the core principles of net neutrality in the Indian context? What are the key issues that are required to be considered so that the principles of net neutrality are ensured?

Internet is a paradigmatic new phenomenon, whose impact on our societies is such as to fundamentally transform most social systems. In dealing with such a phenomenon, especially at formative times like now, it is important to go back to the basics. It is therefore heartening that TRAI has kicked-off this exercise of framing net neutrality regulation by seeking opinion on what should be the core principles on which such regulation can be based.

In this respect, we need to look at both what is the nature of the Internet in the manner it is impacting the society, and the areas and aspects of society that get impacted. Internet is not just a standalone communication system, as most earlier telecommunication systems were. ***It today provides the digital infrastructure, or the playing field, that increasingly supports and shapes the organisation of emerging social systems***, in their new digital avatar – be it business and work, or education, health and governance. It is therefore important to treat the Internet as a kind of playing field underpinning new social systems; and a playing field must be fully even, allowing no advantage at all to one side over the other. Sides may compete on their other abilities, but must be able to derive no advantage from the nature of the playing field. This is the key principle of any good playing field, and also a tenet of economic, social and political justice. ***Internet must foremost be seen as such an even playing field.***

Next, we must consider the areas or aspects of society that are impacted. Unfortunately, discussions in this regard remain mostly confined to the market space; Internet is supposed to ensure greatest competition and innovation. It is for this purpose, it is claimed, that it should remain neutral, and provide an even playing field. However, the market principles of free choice and need for innovation can get equally quoted to seek business models that allow playing around with the neutrality of the Internet (or the evenness of the playing field it provides), as long as net neutral offerings are also available in the market. ***A non net neutral Internet, even if available in addition to net neutral offerings, does greatly distort competition, and therefore eventually, with oligopolistic domination, possibilities of free choice.*** Internet access therefore cannot be considered as just a normal market good, where free market, with light competition-related regulation, will suffice. ***It has to be seen from a public good, or regulated public utility, perspective even from the economic sector point of view.***

The Internet impacts much more than just the market, or our economy. It has pervasive social, cultural and political impacts, and is transforming social systems in all these sectors. The second perspective that often gets applied to the Internet is of civil and political rights, called as negative rights, because here the state's obligation is to not interfere, and prevent interferences, with individual freedoms (without having the

responsibility to pro-actively provide anything). ***A non net neutral Internet interferes with freedom of expression and association, by discriminating against some content/ services over others.*** Although, TSPs argue that as long as net neutral channels are also equally available in addition to non- net neutral ones, this may not be true.

The real argument for complete net neutrality of the Internet thus requires an assertion of positive rights of people, covering all areas, civil, political, economic, social, cultural, and the right of development (all internationally recognised human rights). Such positive rights requires not just forbearance by the state, and restraining possible interfering actors, but also for it to actively assist in providing grounds of fulfilling rights, and ensuring economic, social, cultural and political justice.

It is significant that the regulator seeks responses to their questions “in the Indian context”. ***For a developing country like India, a positive rights approach to net neutrality, which included all kinds of above listed rights, is even more important because (1) there is huge internal inequity, ameliorating which, and providing economic and social justice to all, is the constitutional responsibility of the state, (2) India is on the wrong end of immense global inequalities, which get transposed as much if not more to the Internet's content and services space.***

It is therefore important that India's regulatory approach to net neutrality proceeds from these two primary premises:

1. Internet is no ordinary communication system. ***It increasingly acts as what should be an even playing field for almost all economic, social, cultural and political activities and systems.*** Internet must therefore primarily be seen from an “even playing field” angle, whereby it should be stringently rule-bound to provide no kind of advantage to any 'player' over the other.

2. Its playing field nature should be considered not only in the economic space, but also in social, cultural and political contexts, where its role is at least as important. N***et neutrality regulation should take a rights-based approach, and be aimed at protecting and promoting people economic, social, cultural, political rights, as well as the right to development.*** It should also play an active role to ensure that these rights are actually obtained, including through positive discrimination in favour of (a) those who remain unconnected, and (b) content and services that have a strong public interest, and markets fail to provide equitably.

Lastly, while regulatory interventions may need to be clearly directed at specific business practices, ***the regulator should regulate by social objectives and outcomes.*** It is even more true in times like now which are characterised by such rapid change that (1) it is increasingly difficult to preserve boundaries between different technology/ business spaces (like between telcom and Internet), and (2) the nature of social impact is quite new and fast-changing, but evidently very deep and far-reaching. We should therefore first take a fix on the social objective(s) that are being sought to be achieved, and then calibrate specific regulatory interventions and orders as closely as possible towards them.

It is best to therefore define net neutrality in terms of what happens at the user/ consumer, and society's, end rather than, as traditionally done, what a TSP can or cannot do. The latter would of course be a subject of the specific necessary action and orders to ensure net neutrality.

We propose that net neutrality is, or its core principles are, defined as:

1. ***The user/consumer must receive all content and services on the Internet at the same level with respect to transmission quality and price.*** Not receiving some content altogether (blocking), or receiving some with deteriorated quality (throttling) or some other with higher quality than the rest (prioritization) , all qualify as not receiving all content at the same transmission quality. Price discrimination includes zero or discounted cost of access for some content against others.

2. ***Not only direct but also any indirect methods of unfavourably affecting the conditions of equality for all content and services, as described in 1 above, at the user/ end is disallowed.*** This would, for example, include ongoing or *post facto* compensation of any kind to the user/ consumer for accessing certain content/ services.

3. ***Traffic management to improve the overall quality of access is allowed, when done in an application agnostic (traffic class based) manner, where no commercial motive can be discerned, and as per regulatory guidelines issued from time to time.***

4. ***Providing public interest content, as defined by the regulator and not left to TSPs' discretion, at cheaper or zero price is acceptable, as a case of "positive discrimination", and is not a net neutrality violation.*** This can be justified by both key principles of net neutrality; such a practice only further evens the "playing field", and also helps upholding the whole range of human rights that net neutrality aim at defending/ providing.

(In addition to zero-rated public interest content, free data quotas, both for mobile and wired connections, should be provided as an entitlement for every citizen. This can be done through licensing conditions, and/or by direct governmental support using Universal Service Funds and proceedings from spectrum allocation.)

We must explain and justify why the accent should be on what happens at the user/ consumer/ society's end and not on technical and business processes. This also has implications for the consultation on "Free Data" which presented possible options that could allow Internet companies to do what TSPs are being barred from doing, but with exactly the same impact on the user/ society.

We now know that our communication systems are in deep ferment (and converging); what were earlier clearly telecom services, like voice telephony and short messaging, are now equally or even better provided over Internet platforms. The last year's consultation paper on ""Regulatory Framework For Over-the-Top (OTT) Services" and question 6 in the

present consultation paper testifies to the vexatious issues faced by the regulator in this regard.

As VoIP and Internet chat services can respectively be considered telephony and short messaging provided in a “virtualised telecom” form, there would increasingly be little distinction between telcom and Internet services, as far as the user/ consumer is concerned. If telecom is unique in being an intermediary providing access to a large number of other services, Internet platforms of various kinds today increasingly play a similar role. The regulator therefore needs to begin looking at society's key communications systems from a unified regulatory angle, as more and more erstwhile telecom services get virtualised. It must begin to regulate by consumer and social outcome, and not the technology or business process that is involved.

Question 2: What are the reasonable traffic management practices that may need to be followed by TSPs while providing Internet access services and in what manner could these be misused? Are there any other current or potential practices in India that may give rise to concerns about net neutrality?

Such “reasonable traffic management” may be allowed as is necessary to improve users' overall quality of experience, is application agnostic but based on class-of-traffic, and has no commercial motive whatsoever (other that improving overall user experience) that can be associated with it. The regulator should provide guidelines from time to time about what can be accepted as “reasonable traffic management”, and TSPs work according to it. Any unexpected or emergency measures must immediately be reported to the regulator and made public, and should be able to be challenged on grounds of what constitutes “reasonable traffic management”, especially from the angle of commercial motives.

In any case, TSPs should publicise their traffic management practices, and these should also be be subject to periodic third party audits.

Question 3: What should be India's policy and/or regulatory approach in dealing with issues relating to net neutrality? Please comment with justifications.

Our response to question 1 mostly covers this question as well. We will therefore simply summarize it here.

1. Internet should not be treated as an ordinary market good. It is not even just an ordinary communication system (which, in any case, has always been seen in a public good/ utility framework). Internet underpins and shapes almost all new digital social systems. ***Internet must be considered as an even playing field, giving no advantage whatsoever to any player, on which social activities in various sectors take place.*** This is the first regulatory principle for the Internet.

2. Internet is not important just to the economic sector. It is equally if not more important to social, cultural and political sectors. ***Internet must be regulated employing a rights-based framework, which would including upholding civil, political, economic, social and cultural rights of people, as well as their right***

to development. A right based approach can be considered as the second key regulatory principle.

3. ***Regulation should be based on specific user end and social outcomes, and not narrowly focussed on specific technologies or business models.*** No distinction should especially be made between whether a service is provided as a telcom service or as an Internet service. Regulation should only depend on the nature of service, as seen from consumer society's end.

Accordingly, it must be ensured that a user/ consumer receives all content and services with the same quality of transmission and cost of accessing, with reasonable traffic management allowed as discussed earlier. Positive discrimination of public interest content, as determined by regulators, is however allowed. Free data quotas should be provided to all citizens as an entitlement.

Question 4: What precautions must be taken with respect to the activities of TSPs and content providers to ensure that national security interests are preserved? Please comment with justification.

We consider this question as not related to the concept of net neutrality, and therefore would not get into a detailed response here. However, all security measures as provided by law may be taken. The correspondingly law however should be developed after extensive consultations, and not violate people's privacy, and in this regard follow principles of being “necessary and proportionate”. (See this link for a good text on the issue.) All security measures put in place should be subject to judicial oversight.

Question 5: What precautions must be taken with respect to the activities of TSPs and content providers to maintain customer privacy? Please comment with justification.

This again is not an issue directly related to net neutrality, although it must be stated that most ***net neutrality violations involve technical means*** of distinguishing different kinds of content from the traffic stream, for instance deep packet inspection, ***which practices have considerable privacy implications, and are thus to be disallowed on that basis alone.***

There is a need for drafting a comprehensive legislation on privacy in India, which takes into account new, pervasively invasive nature of the Internet, as well as the immense economic value of data (along with, crucially, the issue of its ownership with respect to entitlement of value that can be obtained from it). Appropriate regulation should then be derived from this legal framework.

As discussed, any such legislation and regulation should be neutral with regard to the communication system involved, and should be oriented to individual/social costs and benefits. Meaning, it should equally apply to data practises of TSPs and of Internet service/ app providers.

TRAI should use its existing powers to enforce user privacy equally on TSPs and large-scale communication or OTT (over the top) platform services, as discussed in the next section. Some privacy regulations exist under the IT Act, 2002, which however covers only “sensitive private data” (narrowly defined), and only private companies (and not governmental bodies). Major revisions to our privacy frameworks are required, keeping up with worldwide developments in this area.

Question 6: What further issues should be considered for a comprehensive policy framework for defining the relationship between TSPs and OTT content providers?

As argued earlier, we may need to begin closing the distinction between TSPs and OTT (over the top) services in some important respects, as far as both relate to mass scale, or society wide, communication systems. It does not therefore mean that we just enforce the whole regulatory framework traditionally associated with TSPs as such on all OTT services as well. In the new environment, we need to revisit the whole communication regulation framework, and perhaps start from the start, re-examining the logic and applicability of each of its pieces to the new conditions. As an illustrative example, instead of licensing everything now, this could in fact mean de-licensing some small-scale community level ISPs (or licensing them in a very different manner). This was just meant to be an example to show that moving towards a common regulatory framework does not necessarily mean putting all the burdens of the old framework on the new Internet based communication systems. It many parts, and aspects, it could also mean lightening the regulatory burden all across.

We accept that because of their physical nature (carrier of physical signals), especially being the physical point of contact to the user, and the its need to access some public resources, like spectrum or right-to-way, TSPs retain some important distinguishing features. These would always be kept in mind. These characteristics may make them more important to regulate. (Although, interestingly, in the new environment, they are also relatively so much easier to regulate – being physically locatable, as compared to OTT service providers – which apart from being virtual, the most socially important among them are generally not India based and therefore largely inaccessible to regulation.)

However, we need to be able to directly regulate “all” actors that are capable to causing 'social damage', or can be employed for some important 'public interest' cause, in an area which is recognised as of special and vital significance to the society, i.e. communication (or the society's new digital playing field). This especially when such 'social damage', or inversely, possible 'public interest', is of appreciable society-wide significance.

The new composite regulatory framework that covers TSPs as well OTT providers should therefore

1. ***Judge the need for intervention by social outcomes, and not technology/ business model.***

2. ***Recognise an actor as requiring regulatory oversight and action from the extent and nature of the 'public interest' involved, whereby only large-scale, society-wide activities may need generalised, pre facto, regulation, and not***

> ***smaller activities.*** (Using such a footprint criterion rather than telecom-Internet distinction.)

First of all, we must recognise the social outcomes/ issues in pursuance of which regulatory watch and intervention is required; for instance, net neutrality, universal access, privacy, openness/ inter-operability practises, easy access to public interest content/ services, and so on.

Next, picking actors that require *pre facto* generalised regulation would depend on key criteria of the size of operation, share of market, etc, which should involve considerable society-wide foot-print. This would cover most communication systems that provide society-wide services to a considerable section of society. ***Two sided markets of Internet platforms constitute a key group among such potential candidates for generalised regulation (if they meet the size of operation/ impact criterion)***.

We may need to develop other, or additional, criteria for verticals specific service providers. Movie ticket booking and food home delivery services are not socially as significant (though they may also involve strong market domination and anti-competitive practices) as verticals like health and education. Therefore benchmarks for bringing any Internet service/ applications (or OTT provider) in a regulatory framework should also depend on the nature of the involved sector.

All this requires moving towards a new, composite, but nuanced, regulatory framework for society's communication and informational services. We understand that this present consultation may have a limited scope, but the complex issues that we face, including those discussed in this paper, can only be satisfactorily resolved if we move towards such a converged approach. TRAI can begin thinking about it, and make necessary recommendations to the government, which did at one time envisage some kind of a “Communications Convergence Bill”. Meanwhile, within TRAI's existing remit, such a spirit of convergence must informs its regulations as well as recommendations to the government.

VIII. Comments to TRAI's Consultation Paper on Net Neutrality

IT for Change
4th January 2017

Q.1 What could be the principles for ensuring nondiscriminatory access to content on the Internet, in the Indian context? [See Chapter 4]

Since this is the principal question that comes from chapter 4 of the consultation paper on "Core Principles of Net Neutrality", we understand that it concerns such core principles of Net Neutrality (NN). But since the question does not ask, "what should be the core principles of NN?", we assume that TRAI is not in favour of developing any such principles. We view this as an inappropriate approach. This is because Internet is a central pillar of social reorganisation towards a digital society; its nature and architecture must therefore be guided by clear public interest principles. In default, vested powerful forces will shape its nature/ architecture for various kinds of social, economic and political controls. It is the public interest, and our social and political values, which must determine what kind of Internet, and what kind of digital society, we get. These must be captured into a set of core principles of NN for a plural, empowering and egalitarian Internet.

In India, we can use the term "Digital India" instead of digital society because it represents a key political and policy agenda of the government. The government has a strong vision of Digital India "to transform India into a digitally empowered society and knowledge economy". Its key three areas are, "digital infrastructure as a utility to every citizen, governance and services on demand and digital empowerment of citizens".

For framing Internet regulation, including NN, we need to ask ourselves, what kind of Internet will ensure such a "Digital India"? And, what kind will prevent movement towards such an India? It is from this larger vision that TRAI must derive its vision for regulation of the Internet, and for its conception of a set of core principles of NN in the Indian context.

The framing of question one, and discussions in the consultation paper, suggest that TRAI prefers a minimalist conception of NN, derived from developed countries contexts. In fact, it goes a few steps ahead, which is not a good sign for India The above question speaks of "non discriminatory access to content", as the stand-in phrase for- what is NN? This hardly makes for defining or framing NN- even compared to how EU and US define it. EU regulation speaks of an equal "right to distribute content" as well (which has very different implication from right to access content), and the US one speaks of "value to the society" and not just the user. (These quotes are taken from this consultation paper itself.)

The TRAI's approach on the other hand seems to centre just on accessing, and not distributing, content, and on user's individual interests and not of the larger society. Such minimalist (or non) principles based conception of NN that TRAI seeks, in our view, is not going to serve the government's objectives for a "Digital India". The context of Indian society requires us to be even more mindful of equity and larger social interest concerns than the developed countries as seems to be the case here. TRAI must revise the way it frames NN, and take a broader social, empowerment and rights based approach which is rooted in Indian contexts and the values that the Indian state professes. This must be set

out as core principles that we seek for a Digital India and, correspondingly, for an Internet that is appropriate for that vision of India.

We had framed some such core principles of NN in response to the earlier TRAI consultation asking for them. Please see our earlier response.[1] We will briefly reaffirm those principles. (1) Internet is to be seen as an enabler of a level playing field, socially, economically, politically and culturally. (2) NN must be framed based on a rights based approach, including social, economic and cultural rights. (3) NN rules must be regulated by social outcomes, and not by technologies or the technology/ business actor involved (for instance, whether a telco or an Internet application).

While we consider it important that India specific NN principles are adopted, at the very least those adopted by EU and listed in this paper at section 4.1.4 should be seriously taken into consideration. Internet service should be identified as a public utility, as done in the US, and corresponding public interest principles laid out with regard to it. When Indian policy documents in all fields begin with the key social contexts and political visions for India, we are unable to understand why with regard to one on Internet policy makers are shying away from mentioning terms like rights, empowerment, equal opportunity, public interest, public utility, and so on. The very approach to Internet regulation must change fundamentally towards these directions.

Digital infrastructure and services represent a fast moving area. Unless we first develop clear guiding public interest principles, it will become impossible to protect public interest from eroding against the pushes of very strong economic interests that leverage rapid digital changes to develop rent-seeking structural positions. The latter will take us towards an inequitable society, and away from the Digital India we envision. A common set of public interest principles will allow us to address these problems as they arise.

To end, we think that “non discriminatory access to content on the Internet” is a very inadequate, even misleading, framework to describe NN. Much greater elaboration is required of what we mean by NN, especially in India's specific context. We understand that final regulatory rules and orders have to be narrow, specific and sharp, but they must follow from clearly articulated policy objectives and larger principles framed under them.

Q.2 How should “Internet traffic” and providers of “Internet services” be understood in the NN context? [See Chapter 3]

All IP based networks that are available to the public in a use-agnostic manner, as well as their functional equivalents, should be considered Internet, and the digital flows over it “Internet traffic”. All those who make such services available to the end users are providers of Internet services. Providers of services that are essentially oriented to such Internet service for end users, even if not in directly linked to them, would also be called Internet service providers (although, more correctly, Internet-related service provider), but perhaps should constitute a different category for regulation point of view.

a) Should certain types of specialised services, enterprise solutions, Internet of Things, etc be excluded from its scope? How should such terms be defined?

1 http://www.itforchange.net/sites/default/files/ITfC%20-%20response%20to%20NN%20pre-consultation.pdf

In this regard, roughly speaking, four kinds of services may be distinguished;

(1) Internet services that are directly available to all end users, the public Internet.
(2) Specialised services that cater to sectors or kinds of services that require guaranteed QoS like tele-health, automated cars, etc.
(3) IP based services that connect nodes within an organisation or other pre-defined set of actors, but not outside, also called VPNs.
(4) Services that may not directly connect to end users but mainly exist for the sake of provision of Internet services to the end user, like CDNs.

Only the first category should be allowed to use the name “Internet”. Others are IP based services but not Internet. All these different categories require different regulatory treatment. This is possible to do if, as argued in response to the first question, larger public interest principles related to society's communication and digital infrastructure are first laid out – including determining the nature of public interest in maintaining it as a level playing field and respecting and promoting people's rights – this includes negative and positive rights. These principles can then be applied to specific situations, including in terms of the above four categories of IP based communication services. We are unable here to go into elaborating how they will apply to each category, but doing so in reference to clearly specified overall public interest concerns and principles should not be too difficult.

Other categories above are relatively well defined but much controversy exists about defining “specialised services”. With most jurisdictions establishing NN rules, it is the “specialised services” exemptions that telcos and big Internet companies are likely to “innovatively” explore to violate the spirit of NN rules, and unfairly dominate the digital sector. It is therefore important to define this category precisely, keep a close track of how such a definition is employed, and fine tune it as required. For the present we would like to go with the following definition:

> “.....specialised service' means an electronic communications service operated and provided within closed electronic communications networks that is separate from the open internet. These services provide access for a determined number of parties to specific content, applications or services, or a combination thereof, do not replace functionally identical services available over internet access services, rely on strict admission control by deploying traffic management to ensure an appropriate level of network capacity and adequate quality relying on admission control and are not marketed or used as a substitute for internet access services.”[2]

Based on these criteria, any specialised service should be especially pre-recognised by TRAI as such, including the manner in which it may connect or not with an Internet service.

(b) How should services provided by content delivery networks and direct interconnection arrangements be treated?
Please provide reasons.

2 https://edri.org/wp-content/uploads/2014/02/4-Criteria-for-Specialised-Services.pdf

As mentioned above, the four categories that we suggested will require different regulatory treatments. In case of CDNs and direct inter-connection arrangements, it is important to note that these services or actions are directly aimed at enabling Internet service as it reaches the end user, even if not directly connecting to her. While these services may be allowed, their social impact should be closely watched, especially to check whether: some services are crowding out other contents and services because of the difference in quality becoming too high due to CDN like arrangements; these arrangements are by themselves fair, equitably available to all, and telcos do not provide those availing of CDNs hidden priority benefits in the last mile connection to the end user.

Experts have noted how CDNs are becoming so dominant as to be replacing the public Internet in a very substantial measure. Geoff Huston, who has been called as the father of the Australian Internet[3], and inducted into the Internet Hall of Fame, observes:

> CDNs are essentially private systems, beyond the reach of conventional communications regulatory regimes. … In today's Internet what do we mean in a policy sense by concepts such as "universal service obligation" "network neutrality" "rights of access" or even "market dominance" when we are talking about diverse CDNs as being the dominant actors in the Internet ecosystem?[4]

A close regulatory watch therefore must be kept on the impact of CDNs on *de facto* Net Neutral nature of the Internet, especially in terms of its plurality, and an equitable right to distribute. CDNs cannot be allowed to squeeze out a genuinely public and plural Internet. Once again, if we have appropriate public interest principles laid out for NN, and regulation is undertaken by outcome and not just the techno-business process employed, it would be possible to check unfair practices through evolving regulatory procedures.

Q.3 In the Indian context, which of the following regulatory approaches would be preferable:
[See Chapter 3]
(a) Defining what constitutes reasonable TMPs (the broad approach), or
(b) Identifying a negative list of non reasonable TMPs (the narrow approach).
Please provide reasons.

The "broad approach" is mentioned in the consultation paper as prescriptive and the "narrow approach" as the one based on larger principles but flexible within them. We think that there should be higher level broad principles – not of providing flexibilities for TMPs, but as encompassing the public interest issues implicated in regulating NN and TMPs (these are the same as the larger NN principles we mentioned in our response to Q 1). Within these principles, a broad approach should be taken that allows only such reasonable TMPs that are clearly defined. (Principles of no commercial motive and technical necessity that is objectively established, and is transparent, non-discriminatory and proportionate.)

3 http://internethalloffame.org/blog/2012/07/09/father-australian-internet-warns-address-crunch-0
4 http://www.potaroo.net/ispcol/2017-03/gilding.html

Novel and/ or emergency situations can be dealt with by letting ISPs take the urgent action they deem necessary, but which they are confident that they can defend for the broader public interest principles that have been laid out. Any such action should be reported to TRAI within a stipulated short period, with justification, and how it measures up to the broad public interest principles. Based on this, the regulator will take a decision whether the practice should be disallowed, or allowed as a new category of exception accepted as a legitimate TMP. It can also decide that the whole effort was a bad faith one by the ISP and no case of plausible adherence to the public policy principles established can be made out, in which case the ISP can be appropriately penalised.

Therefore, we propose a “broad approach” with a list of allowed TMPs, but with higher public interest principles being laid out to take care of emergent, possibly novel, situations (the need to deal with which is the main justification given by those proposing a “narrow approach”).

Q.4 If a broad regulatory approach, as suggested in Q3, is to be followed: [See Chapter 3]
(a) What should be regarded as reasonable TMPs and how should different categories of traffic be objectively defined from a technical point of view for this purpose?

As mentioned, core principles of NN will guide the overall determination of what is considered as reasonable TMP in the extant situation, and also for new, unexpected, situations, in the future. Currently, the definition followed by EU as described in the consultation paper's section 3.4.1 i, iv, and x, seems appropriate and adequate.

As to defining different categories of traffic from a technical point of view, regulator should undertake a technical study in this regard, taking wide inputs, and share its findings for public comments. Pending that exercise, all discrimination should be disallowed.

(b) Should application-specific discrimination within a category of traffic be viewed more strictly than discrimination between categories?

The broad principle has to be of no discrimination at all. But, of course, discrimination within a category of traffic is absolutely unacceptable (this is the very meaning of these categories). As for discrimination across categories, we recommend TRAI to take up a technical review in this regard. Pending this, such discrimination should not be allowed. If any comes to TRAI's notice, it should be assessed against high level NN principles that we seek to be laid down and an appropriate decision taken. (We do have sympathy for issues like video streaming congesting networks, say in places where public free Wi-Fi is more urgently needed for checking travel information etc. Therefore category of traffic based discriminations in some contexts can be in public interest. However, we will not explore such case scenarios here, other than mentioning that any such discrimination should always meet a clear public purpose, which can only be determined by a duly constituted authority/process, mostly by the regulator itself.)
(c) How should preferential treatment of particular content, activated by a users choice and without any arrangement between a TSP and content provider, be treated?

We are unable to understand how a user can control, even through the mediation of the ISP, preferential treatment of any particular content, which for the most part will travel through a pipe that she shares with other users. Will the content/ service get a preferential treatment for all users of that common pipe as well? But what if other users did not want it, for that particular content/ service? On the other hand, there will be little point in providing preferential treatment only for that very part of the pipe that is exclusive to the user.

Q.5 If a narrow approach, as suggested in Q3, is to be followed what should be regarded as non reasonable TMPs? [See Chapter 3]

A narrow approach should not be used. As expressed in the consultation paper, in this fast moving field, with the digital context allowing many kinds of technical/business model flexibilities, any narrow approach will soon get circumvented, in manner that works against public interest.

Q.6 Should the following be treated as exceptions to any regulation on TMPs? [See Chapter 3]
(a) Emergency situations and services;
(b) Restrictions on unlawful content;
(c) Maintaining security and integrity of the network;
(d) Services that may be notified in public interest by the Government/ Authority, based on certain criteria; or
(e) Any other services.
Please elaborate.

Yes, these should be treated as exceptions. Such exceptions also underline why NN should be seen as a social regulatory principle(s) and not a narrow technical issue (as the framing “non discriminatory access to content” suggests.)

While exceptions (b) and (c) are obvious, and (c) almost so, it can hardly be argued that in case of public or personal emergency – exception (a) – one must insist on protocol even when it could mean great damage to life and/or property. NN purists would normally oppose exception (d), as they would not want the exercise of discretion on matters that cannot be objectively determined. We are of the view that important and essential services like public services, basic and essential information, etc, should be available for free (free of data charges) on the Internet. However, determination of the such priority or free content cannot be left in the hands of the government's executive branch. It must be with the regulator to decide and must abide by the pre-defined principles, and must be subject to judicial review. Every time a new category or content is added to this list (which should be done in only rare cases), it must be expressly justified by the nature of public interest that is met, and how it adheres to the pre-defined principles. This is imperative to protect the Internet from becoming a major means of state's (incumbent government’s) propaganda.

As for (e), it obviously means any services other than those duly notified by competent authority, as discussed above. No such exceptions should be allowed, even if is seen as serving public interest. ISPs cannot be given that discretion.. Under no circumstances can

they choose to favour any kind of content, however good their intention may be, and even if there be complete absence of any proof or signs of bad intention or vested interest. As argued above, we do not favour even government doing it; only the quasi-judicial regulator can decide what is public interest content, subject to judicial oversight.

Q.7 How should the following practices be defined and what are the tests, thresholds and technical tools that can be adopted to detect their deployment: [See Chapter 4]
(a) Blocking;
(b) Throttling (for example, how can it be established that a particular application is being throttled?); and
(c) Preferential treatment (for example, how can it be established that preferential treatment is being provided to a particular application?).

These terms are fairly well defined in mature NN regulatory frameworks discussed in the paper, and we can follow those definitions.

Q.8 Which of the following models of transparency would be preferred in the Indian context:[See Chapter 5]
(a) Disclosures provided directly by a TSP to its consumers;
(b) Disclosures to the regulator;
(c) Disclosures to the general public; or
(d) A combination of the above.
Please provide reasons. What should be the mode, trigger and frequency to publish such information?

All of these, as extensively and frequently as feasible, as determined by the regulator.

Q.9 Please provide comments or suggestions on the Information Disclosure Template at Table 5.1?Should this vary for each category of stakeholders identified above? Please provide reasons for any suggested changes. [See Chapter 5]

The one provided in the consultation paper is satisfactory.

Q.10 What would be the most effective legal/policy instrument for implementing a NN framework in India? [See Chapter 6]

Internet is a powerful complex and dynamic artifact, which makes NN a difficult area to regulate. The existing enabling laws have been made in a different era and context. On the other hand, we still cannot predict the nature of technical changes, even in the near to mid term. In light of these circumstances, we have a two layered response to this question.

As an immediate measure, TRAI should take the option which it described in the paper as “put in place an umbrella regulation on NN, with subsections addressing tariff (incorporating the existing regulations on discriminatory tariff), QoS and related transparency requirements.” Coming to the issue of NN from two different direction: banning differential tariffs for different content (as already done) under one kind of powers that TRAI has; and establishing rules for non-discriminatory QoS for all content, under

another rule- is not a satisfactory approach for the long-run, although it can serve as a stop-gap arrangement. We will soon see new technical and business models that find other ways of doing the same kind of discriminations as these two measures try to stop. (As already being done by Internet applications providing *de facto* zero rating for select content through auto-replenishing user's data packs in short time cycles – a practice that TRAI, unfortunately, seems to have approved in an earlier order.)

TRAI should therefore leverage a broad range of mandates and powers given to it under the enabling law to come up with a framework NN regulation, which lays done the larger public interest principles behind NN, and how they will be operationalised in current circumstances. It must establish a mechanism for constant review of Internet services, it's emerging and new technical and business models, and their social impact. As a regulator, TRAI must be most concerned with the nature of social impact, and not just who causes it and through what means. It should take all steps to prevent adverse social impacts, and promote positive ones. If it finds itself unable to take appropriate steps within its power and mandate, it should make necessary recommendations to the government to take the required steps, including adoption of new laws and expanding/creating new mandate/ powers for TRAI.

TRAI should also advice the government to amend the licence for ISPs to incorporate these NN rules, which gives an extra edge to TRAI's enforcement capacities. As observed in the paper: “The Authority could accordingly recommend amending the license agreement to add an explicit reference to the core principles followed by a general mandate to adhere to “directions issued by the Licensor/TRAI from time to time.”

As a more permanent measure, TRAI must recommend to the government to look at the general nature of digital infrastructures in the digital age, in their role in ensuring a Digital India as envisioned by the government (Digital India documents centrally refer to digital infrastructure). It should make an assessment of such various horizontal infrastructures, beginning from the telecom infrastructure, whose neutral, or rather equitable, nature is essential to ensure an equitable and empowering digital society.
In an earlier TRAI consultation papers on NN referred to “search neutrality”, and the last question 13 here refers to how the nature of browser, operating system etc affects user's digital experience and opportunities. There have been major discussions worldwide on algorithm transparency, and platform governance. All these issues, beginning with NN, fall in a single large basket – of ensuring basic techno-social conditions of equity, non-discrimination and empowerment in the digital society. With provision of such an equal playing field, and thus ensuring of equal opportunity (which is the very meaning of digital empowerment, as envisaged for “Digital India”), actors can then employ their skills and competitive advantages for shaping their social and economic advancement. Basic principles of NN, or equity and justice, for techno-social infrastructures of a digital society must be enshrined in a new legislation, with contextual elaborations with regard to each of the mentioned areas. This, we think, is the most appropriate and moreover sustainable solution for ensuring NN. This will however, also require considerable extension of TRAI's mandate, including perhaps a change in its name to “The Digital Regulatory Authority of India”, or “Telecom and Digital Regulatory Authority of India”.

(a) Which body should be responsible for monitoring and supervision?

TRAI's misgivings on this count due to its limited resources are understandable. It is an undeniable fact that the nature and role of digital communication infrastructures in current times, and even more so in the near future, are incomparable to what has been till now. The issue here is not just of the enabling laws and mandate of TRAI but also its operational structures and resources. However, stop-gap measures will not do. Such is the importance of digital infrastructures to the nature of the emerging digital society that ham-handed short-term fixes can cause major structural distortion which would be very harmful to public interest. We would advise extreme caution in this regard, since we are in the formative times of a new social design. Defects that get introduced in it today are likely to become so deeply entrenched as to possibly become irreversible.

Therefore, there is no option other than for TRAI to develop its capacity so that it can deal with what is. Essentially a public and regulatory role that only a public regulator can play it. Monitoring and supervision cannot be given off to any other body – certainly not to a private body. Sanctity of what is public role and function must be maintained, and cannot be handed over to unaccountable private interests. This is a key tenet of democratic social organisation. Meanwhile, TRAI must takes step to further promote participatory democracy and should become more open and do more regular consultations with public. (It is already doing a good job of it!)

In conclusion, TRAI must be in charge of supervision and monitoring. It should seek more resources for itself for this purpose, and set up specialised cells that are resourced and skilled for this job.

(b) What actions should such body be empowered to take in case of any detected violation?

NN violations concern very powerful business entities, and involve long term perverse interests. These very often involve cross-sectoral collusion of big business interests. The penalties, beginning with financial ones, must therefore be so strict that they can actually act as a deterrent. They should rise rapidly with the period of violation. Extended violations should result in suspension of license, and repeat violations in its cancellation.

(c) If the Authority opts for QoS regulation on this subject, what should be the scope of such regulations?

No distinction in QoS between different kinds of content should be allowed, other than reasonable TMPs clearly exempted by the regulator, and other kinds of content categories that may be allowed through clear and specific order of the regulator, like emergency services, that we have discussed.

Different QoS for specialised services will be allowed within a separate regulatory framework, which will closely follow the manner in which these services are used, their price determined (which must be cost based), and whether they are available equitably to all actors who want to use it (without price, nature of actor, standards, etc based exclusions). What we are insisting here is that even if different QoS parametres are allowed for “specialised services”, even within this category the larger public interest

principles for NN will have to be applied to ensure an equal playing field for all, and no unfair advantages to any.

Q.11 What could be the challenges in monitoring for violations of any NN framework? Please comment on the following or any other suggested mechanisms that may be used for such monitoring: [See Chapter 6]
(a) Disclosures and information from TSPs;
(b) Collection of information from users (complaints, user-experience apps, surveys, questionnaires); or
(c) Collection of information from third parties and public domain (research studies, news articles, consumer advocacy reports).

All of these are required, and are indispensable in order for TRAI to perform its functions adequately. As we suggested, TRAI may need new resources and internal specialisation and a committed cell for this purpose. These above mentioned processes should be supported by such a cell, and integrated into its activities.

Q.12 Can we consider adopting a collaborative mechanism, with representation from TSPs, content providers, consumer groups and other stakeholders, for managing the operational aspects of any NN framework? [See Chapter 6]
(a) What should be its design and functions?
(b) What role should the Authority play in its functioning?

We find the suggestion for a “collaborative mechanism”, considerably underscored and developed in the consultation paper, quite intriguing. Not to jump the gun, but the manner of the description of this option gives us the feeling that TRAI is already predisposed towards it. First of all, we are unsure what exactly is this proposed mechanism supposed to do. Is it a mechanism for supervision, for implementation or for monitoring. The discussion in the consultation paper moves indiscriminately between these very different functions of public bodies. Below are some quotes from the paper about the likely function of this new proposed mechanism;

> “adoption of a collaborative approach for reviewing the effectiveness of any NN framework”
>
> “a multistakeholder initiative to review compliance with NN requirements”
>
> “ address new challenges in implementation”
>
> “ review and coordination process”
>
> “ to provide inputs on the technical and operational aspects of implementation of any NN framework”

The discussion in the consultation paper begins with highlighting “the key issue of identifying the body that should be responsible for monitoring and supervision of any NN violations”. And the above question 12 is framed as “ adopting a collaborative mechanism,

with representation from TSPs, content providers, consumer groups and other stakeholders, for managing the operational aspects of any NN framework".

These are a bewilderingly different kinds of public functions; from advising and providing inputs, to reviewing effectiveness, to reviewing specific compliance, to addressing challenges in implementation, to coordination, to monitoring compliance, to supervision, to managing operational aspects of NN! The question arises, what exactly is TRAI planning to outsource to a multistakeholder body, which includes the very companies that it is supposed to regulate. Does it really plan telcos to participate in supervising NN, monitoring and reviewing compliance, and managing operational aspects of NN framework? Can there be a worse form of regulatory capture!

The proposal of an outside body, mentioned here in this question as a possibly multistakeholder body, is made much worse with the example considered in the consultation paper of US based Broadband Internet Technical Advisory Group (BITAG). BITAG is an industry driven forum, whose main purpose was to forestall NN regulatory moves that were building up at the US regulator's. In any case, even BITAGs own definition of its role was fully advisory, to "inform federal agencies in their industry oversight functions."[5] rather than the extensive roles envisaged in the TRAI paper. The key US civil society group Free Press criticized formation of BITAG by observing: "Allowing industry to set its own rules is like allowing BP to regulate its drilling." (Interestingly, data has been called by many observers as the "new oil", in terms of its systemic economic impact.) We strongly advise TRAI to forgo going down any such route of – excuse our use of the phrase – formalising regulatory capture by telecom and data companies precisely at a time when strict and vigilant regulation of the digital sector has become of paramount importance.

The other example discussed in the paper is of Brazil Internet Steering Committee, an institution we respect a lot, and have had occasions to work with closely. However, in terms of NN or such Internet related social policy issues, this body's role is entirely advisory. Its main role is with regard to technical governance of the Internet. Further, the nature of composition of this body has been planned extremely carefully to avoid any kind of capture, and ensuring sustained focus on public interest. Such a body would be worth considering for India, but with similar kind of care with regard to its constitution, but that is a separate and a larger discussion – in view of a very different mandate and role of that body. That kind of body cannot come into existence for the limited role envisaged for it in the consultation paper. It is to be developed in India, it should have a similar role as in Brazil, and similar composition. (We do recommend exploring this.) However, it still can hardly take up the long list of roles that TRAI envisages for a new body.

If TRAI's objective is to become more participative, and open to public and stakeholders, we suggest that it adopts a structure of three stakeholder advisory committees – one each of civil society, business (including but not just telecom), and technical experts. Such a structure is used by the Committee for Digital Economy of OECD, and it works quite well. This OECD committee's work methods on how advice and inputs are taken from these advisory committee and processed may also be adopted in general. Sufficient care should

5 All quotations in this paragraph are from https://arstechnica.com/tech-policy/2010/06/net-neutrality-advisory-forum-wants-engineers-to-hash-it-out/

be taken to lay rules on how these advisory committees are constituted, ensuring full representation of a wide set of interests and views. But to repeat, they will have only an inputting and advisory role.

Beyond getting inputs and advice, it is really not possible to outsource any core public functions that TRAI and other government agencies are supposed to perform. Monitoring appears to be the chief concern of the regulator here. TRAI must provide sufficient new means of taking in outside information and knowledge, supporting civil society watchdogs, protecting whistle-blowers from within telecos, and so on, for this purpose. Beyond that, monitoring is an enforcement related function, it cannot be allowed to be filtered through processes dominated by those who are supposed to be monitored in the first place namely telcos and other businesses with vested interests in violating NN.

Q.13 What mechanisms could be deployed so that the NN policy/regulatory framework may be updated on account of evolution of technology and use cases? [See Chapter 6]

The above suggested structure of tripartite advisory committees structure will be very useful to keep track of evolution of technology and use cases. Apart from it, TRAI would have to upgrade its in-house research and analysis capacities,and build close relationships with academic and other policy research centres.

Q.14 The quality of Internet experienced by a user may also be impacted by factors such as the type of device, browser, operating system being used. How should these aspects be considered in the NN context?Please explain with reasons.[See Chapter 4]

As we have argued earlier, a neutral and equitable digital society, for equalising social and economic opportunities, requires the neutrality of many horizontal layers of digital system that underpins such a digital society. All these layers therefore require public interest regulation. There are some common larger public interest principles for all these layers and many more specific ones. We suggest that TRAI recommends to the government to explore a “digital equality” legislation, that will provide the enabling basis for appropriate and sustained NN regulation, as also for corresponding regulation in other digital layers/areas.