

# MEDIANAMA

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Submission for the TRAI's consultation on **Differential Pricing for data services**

Dear Sir / M'am,

I would request you not to publish my email address.

At the outset, I am greatly appreciative of the TRAI, for giving us this opportunity to participate in this consultation paper on Differential Pricing of data services, a core element of Net Neutrality, and an issue which will impact the availability of information to the citizens of India, and the future of India's digital startups and entrepreneurs.

I'm writing on behalf of MediaNama, an online publication read by around 250,000 people each month, and covers developments in the digital ecosystem in India, with the objective of providing news and analysis to help create **a fair, open and competitive digital ecosystem in India**. We've participated in consultations with the TRAI and the DIPP in the past, as well as in the process initiated by Parliamentary Standing Committee on IT on the issue of Paid News in the Media and Net Neutrality. Over the years, we have focused on policy issues related to Internet Freedom, censorship, paid news, surveillance and privacy, and from a business perspective, lowering of regulatory barriers and the easing of controls on Internet businesses and mobile operators. This, combined with our reportage on business financials and on investments and financing of Internet startups gives us a breadth of understanding of **business and policy across content and carriage, large companies and small, and Internet and mobile, from an independent perspective**.

Thank you for allowing us this opportunity to take part in this important process. This consultation will help define the future of the Internet in India, which is in your hands.

We had addressed some of these issues in our submission to the TRAI's consultation paper on regulation of OTT Services (dated 27th March 2015), and we would urge you to also take into consideration our submission then. We would also request the TRAI to not ignore the over 1 million submissions made by citizens of India, in what was truly an open and uniquely participative consultation process, and include those answers when considering a regulation on Differential Pricing for Data services. In addition, we would request the TRAI to Ensure that violations of Net Neutrality are paused until a clear policy is finalized.

**Our submission:**

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

**Answer:**

Network operators are there to provide services to the consumer, and not should be selling their consumers to the highest bidder via differential pricing. Doing so would convert an access business to an audience business. The Internet should not be converted into a DTH like business.

Specific comments on Differential Pricing:

1. **Definition of Net Neutrality includes differential pricing:** To understand this, we must first understand the implications of differential pricing for the Internet.

The Internet is an interconnection of networks, wherein, via peering, data packets are transferred from source to destination, through a series of handshakes between ISPs. While the ISPs have internal agreements for payments for transferring these data packets, the source of data packets only has a direct relationship with its immediate ISP connection, and the consumer of the data also only has a direct relationship with her immediate ISP. The network is neutral in the sense that for both the source and the end consumer, the ISPs transferring data do not price data packets differently on the basis of the source of the data or the end consumer.

Any interference in this time-tested model will impact the way ISPs transfer data, and impact the way the Internet functions. We would urge you to accept the definition of Net Neutrality based on how Professor Vishal Misra of Columbia University defines it:

“Internet is a platform where ISPs provide no competitive advantage to specific apps/services, either through pricing or QoS”

His rationale for choosing this definition, and addressing the confusion around the definition of Net Neutrality is in Annexure 1.

In addition, three principles had been affirmed by Anurag Thakur<sup>1</sup>, the Chairman of Parliament's Standing Committee on IT, on 3rd April 2015:

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<sup>1</sup> <https://twitter.com/ianuragthakur/status/583895078764023809>

## Principles of Net Neutrality

### 1. All sites and apps must be equally accessible:

ISPs and telecom operators should not block certain apps and sites, just because they don't pay them a revenue share. No gateways to the Internet should be allowed, and no preferential listing of certain sites, whether via commercial arrangements or not.

### 2. All sites must be accessible at the same speed (at an ISP level):

This means no speeding up of certain sites because of business deals. More importantly, it means no slowing down some sites.

### 3. The cost of access must be the same for all sites (per Kb/Mb or as per data plan):

This means no "Zero Rating", or differential rating for different sites, apps or services. In countries like India, Net Neutrality is more about cost of Internet access than speed of Internet access, because we don't have fast and slow lanes: all lanes are slow.

## 2. Impact of price discrimination on Internet businesses:

At the core of this debate is the issue of how we let one business (at network operator) regulate the consumer's ability to access another (app or website), given that the availability to provide Internet access (spectrum and right-of-way access) is not unlimited, and exclusively with a few entities (network operators). **A genuine free market requires restrictions on the ability of large predatory companies, whether multinational or otherwise, to create monopolies.**

A non-discriminatory Internet **decentralizes the sources of innovation because everyone can create Internet services and applications without having to obtain permission from network providers.**<sup>2</sup> It allows collaborators to create open source and free tools to provide an alternative to proprietary tools, and improve on them. Today, a text messaging platform, Whatsapp, can incorporate voice calling over Internet protocol without needing permission. Line has incorporated messaging, calling and games into a single application. WeChat has done this and added e-commerce. There are games that integrate messaging and Internet Telephony, allowing gamers to interact with each other while playing. Everything is a remix on the Internet<sup>3</sup>. All businesses are

<sup>2</sup> [http://digitalcommons.law.yale.edu/cgi/viewcontent.cgi?article=1222&context=fss\\_papers](http://digitalcommons.law.yale.edu/cgi/viewcontent.cgi?article=1222&context=fss_papers)

<sup>3</sup> <http://everythingisaremix.info/blog/everything-is-a-remix-case-study-the-iphone>

about bundling and unbundling<sup>4</sup>, and there is no ecosystem in existence that is as agile, innovative, free and competitive as the Internet. For innovation to take place, platforms have to be affordable, stable, predictable and neutral.

Access to the Internet is, traditionally, **uniquely non-discriminatory**. Differential pricing would end up giving apps or services a specific competitive advantage, irrespective of the intent behind the application or service, and allow disproportionate power in the hands of network operators. We would urge you not to allow this. **In addition, we would also urge you to prevent network operators from changing the end-user-pays approach of Internet access.** By allowing network operators to directly charge businesses for enabling access to an individual website would end up creating a framework for discriminatory practices from network providers. It would allow network providers to insert themselves in the middle of a direct relationship between a website/application and its user.

**The Internet is a highly competitive global marketplace.** The Internet demands significant capital and efficiency from its participants, due to its nature of being a global marketplace. India offers significant efficiencies when it comes to technology talent, which has allowed it to become a dominant provider of IT enabled services as vendors to major companies worldwide. However, India still suffers from poor ease of doing business<sup>5</sup>, ranked at 142 in the world, and many companies are looking to raise money are looking an international domicile to register their business. For Blume Ventures, an Indian VC fund funded by Indian investors, several of their firms have chosen to shift domicile to the US or Singapore in order to raise funds and target global markets.

### **Indian startups are not choosing India**

According to data provided by iSpirt<sup>6</sup>, a think tank set up with the intent to help transform India into a hub for new generation software products:

- 54% of tech companies that raised Series A in 2014 are domiciled outside India
- 65% of tech companies that raise Series A in 2015 are expected to be domiciled outside India
- 9 of the biggest 30 B2B product companies are now domiciled outside India
- 25% of all product startups - any size and any vintage - are now domiciled outside India.

<sup>4</sup> <http://a16z.com/2014/02/25/future-of-news-business/>

<sup>5</sup> <http://www.doingbusiness.org/rankings>

<sup>6</sup> <http://www.ispirt.in/>

Startups are fragile businesses, ever evolving and innovating, at great speed, if not at great scale. For Internet startups to operate efficiently, there needs to be predictability, stability and reliability of Internet access.

To this end, **a regulatory framework** (via rules or legislation) **for Net Neutrality, in order to prevent predatory practices such as differential pricing and speed manipulation from network operators** is necessary to ensure that Indian startups are not discriminated against.

Any failure to do so will force startups to shift even operations to international markets, at a time where it is necessary to create a market conducive to their growth. Deepinder Goyal, Founder and CEO of Zomato has taken his Delhi based business to 23 countries<sup>7</sup>, tweeting that<sup>8</sup> he “Couldn’t have built Zomato if we had a competitor on something like Airtel Zero”:



### Negative impact of differential pricing:

1. **The creation of a vendor relationship for Internet companies with telecom operators:** Allowing differential pricing will transform the Internet economy into a mirror of the Mobile Value Added Services ecosystem, which allows network operators to convert an access business into an audience business. Network operators are there provide services to the end customer, and not should be selling their customers to the highest bidder via differential pricing.

<sup>7</sup> We have scale on our mind - Deepinder Goyal, Zomato <http://www.medianama.com/2015/01/223-zomato-ceo-deepinder-goyal/>

<sup>8</sup> <https://twitter.com/deepigoyal/status/586581043139907585>

Currently, telecom operators provide Internet access to the interconnected network that is the Internet, and consumers choose where they wish to go. Any form of preferential treatment via price discrimination that is an outcome of a partnership between a telecom operator and an Internet company converts this into an audience business, with telecom operators allowing businesses access to their “audience”, by acting as a gatekeeper between the Internet business and its customer.

### **A case of discrimination**

In 2008, Airtel and Vodafone had blocked<sup>9</sup> Netcore’s MyToday services for no apparent reason. MyToday was an opt-in text-alert service that consumers had chosen to sign up for. AUSPI, the association of CDMA telecom operators had then said<sup>10</sup> that Netcore was free to go to court if it wanted its services back up. The Mobile VAS ecosystem was limited to a few companies because telecom operators chose services they wanted customers to be allowed to access: they restricted access to short codes, billing integration, and chose one company over another if any company was becoming too large.

An ecosystem similar to MVAS is sought to be created with Data VAS, by converting an access business into an audience business, and creating a direct dependency among Internet companies on the access service provider, where, today, due to existing peering and interconnection agreements between ISPs for transfer of data packets, none exists. **A “Data VAS” model will be bad for innovation and will impede the competitiveness of Indian business and national economic growth.**

Any service or company specific preferential partnership will create an unhealthy dependency on the either the company or a group of companies on the service provider. This preferential partnership could be via either:

- a. **Creation of packages for services:** wherein companies that don’t tie up with the telecom operators could be excluded. This will be a walled garden.
- b. **Prioritization of speed:** wherein certain sites could be speeded up in comparison with others. With limited bandwidth available, this chokes the bandwidth for users accessing sites and services that provided by companies who are unwilling to pay. Following a partnership with Google, for the Indian

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<sup>9</sup> [http://www.business-standard.com/article/technology/vodafone-blocks-netcore-free-sms-109021700039\\_1.html](http://www.business-standard.com/article/technology/vodafone-blocks-netcore-free-sms-109021700039_1.html)

<sup>10</sup> <http://www.medianama.com/2008/07/223-the-trai-open-house-discussion-on-mobile-vas-off-deck-vs-on-deck-licensing-interconnect-agreements-dispute-resolution-and-revenue-share-thresholds/>

Premier League in 2010, Airtel had provided a fast lane to users accessing YouTube, increasing their speed to 2 Mbps.<sup>11</sup>

- c. **Zero rating and cost based prioritization:** this advantages those companies that are willing to pay to allow consumers to access their sites, and slices up the Internet into paid and free parts, thereby lowering propensity to access for services unwilling to pay telecom operators. In particular, this benefits larger companies like Facebook and Google. In 2013, Airtel partnered with Google to offer Google services (Google Search, GMail and Google+) for free.<sup>12</sup>

This permission to prioritize traffic due to any considerations other than maintaining the stability of the network lends itself to two situations:

1. Predatory activities from telecom operators, as was evident in case of Mobile VAS, which restrict the ability of consumers to access these startups.
2. Collusion between larger Internet companies and telecom operators, in order to reduce competition for the Internet companies.

**2. Telecom operators favouring their own services over others:** There are instances in the past where telecom operators have used the absence of law to prioritise their own competing services over those of competition. Some examples:

- a. **Zero rating own services:** Bharti Airtel, when it launched its online music streaming service Wynk,<sup>13</sup> it waived data charges for Airtel users, using its ownership of content and carriage. This effectively puts competitors like Saavn, Gaana and Rdio at a competitive disadvantage, with no means to competing.
- b. **Speeding up own services:** Games downloaded from Airtel's "Games on Demand" service are available at a speed higher than that of other service providers, with download speeds for users not on a 2mbps plan upgraded while downloading games from the Airtel service, no matter which plan they have signed up for<sup>14</sup>.
- c. **Blocking competing services:** Vodafone and Airtel had blocked Netcore's MyToday Mobile VAS service, since MyToday's content over SMS competed with similar services from telecom operators.

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<sup>11</sup> <https://gigaom.com/2010/03/25/youtube-caught-in-net-neutrality-flap-in-india/>

<sup>12</sup> <http://www.medianama.com/2013/06/223-airtel-partners-google-to-offer-free-google-search-gmail-google>

<sup>13</sup> Airtel's music service Wynk: Fair usage limits; Violating Google Play Store & Apple App Store policies? <http://www.medianama.com/2014/09/223-airtels-music-wynk/>

<sup>14</sup> [http://www.airtel.in/broadband-vas/broadband-vas/games\\_on\\_demand.html](http://www.airtel.in/broadband-vas/broadband-vas/games_on_demand.html)

It is easy for telecom operators to launch products that compete with existing online products, and degrade the experience of all other services. Therefore, it is essential, in order to maintain fair competition and diversity of availability of both content and services that telecom operators are restricted from adopting anti-competitive and predatory practices.

We do not recommend restricting telecom operators from launching competing services, since fair competition will only help give consumers more options to choose from. However, **we recommend restricting telecom operators from using their position as an access pipe to manipulate access of competing Internet services, or giving preferential treatment to their own service.** The policies access service provider must be source agnostic.

**3. Larger Internet companies colluding to control the Indian Internet:** Technology is the classic david vs goliath story. Facebook came as a startup and defeated MySpace and Orkut, just as Google beat Microsoft online. This was possible because no direct relationship was possible between access service providers (telecom operators and ISPs) and apps and services. Remember that an Indian company, Wingify, built an A/B testing service that competes with Google's free alternative. Chennai based Zoho competes with Google Docs.

By allowing large companies such as Facebook and Google to partner with telecom operators, you will enable the concentration of power with these large companies, to the detriment of startups from India. It is worth noting that Google and Facebook, both of which have previously inked anti-net neutrality agreements with telecom operators, are members of the COAI, the telecom operator association. Imagine if it cost more to access Zoho than Google Docs, because of a collusive agreement between Google and Airtel. In addition, imagine if Facebook became the gatekeeper for online content and services: it would be easy for the company to extract rent for discovery and usage, and share that with the telecom operator. Imagine if Facebook had access to all of the data from all Internet services: it would be easy for it to map consumer behaviour, create services and give it preferential positioning on its FreeBasics platform.

To quote the DOT committee report on Net Neutrality and its comments on Internet.org (now Free Basics):

In India, it provides restricted Internet access to subscribers of one TSP. Until April 2015, Internet.org users could have access for only a few websites, and Facebook acted as the gatekeeper. In May 2015, it announced that the platform would be opened to more.



The committee was conscious that market for content provision indicates that clear market leaders emerge in a short while, and if such market leaders are able to dictate the path to specific content, then the principles of non-discriminatory access from the user viewpoint can be compromised leading to distortions emerging in the content provision market and consequent implications for the larger Internet economy and emergence of new innovations.

**The committee therefore is of the firm opinion that content and application providers cannot be permitted to act as gatekeepers and use network operations to extract value even if it is for an ostensible public purpose.**

Collaborations between TSPs and content providers that enable such gatekeeping role to be played by any entity should be actively discouraged. If need be government and the regulator may step in to restore balance to ensure that the internet continues to remain an open and neutral platform for expression and innovation with no TSP/ISP or for that matter any content or application provider, having the potential or exercising the ability to determine user choice distort consumer markets or significantly controlling preferences based on either market dominance or gatekeeping roles.

To emphasise some of the issues of FreeBasics, we wish to highlight some of the points made by SaveTheInternet.in:

**Claim :** Facebook's [Free Basics](#) is an Open Platform.

**Rationale:** It is open to all developers agreeing on Facebook's technical guidelines

**Response:**

Reading carefully the technical guidelines we noticed that the technical standards of Free Basics doesn't allow:

- JavaScript/Video/Large and SVG Images/Flash
  - Secured connection; HTTPS is allowed only with a "dual certificate", better known as a Man-In-The-Middle attack, where Facebook can read and tamper with Data Passing through the Free Basics platform.

The first requirements ensure that none of the new services on Free Basics can have interactive content, which might compete with interactive services of Facebook owned companies. It should also be noted that the technical guidelines do not mention that the services owned by Facebook will have the same restrictions.

The second requirement means service like digital social network, messaging and email services have to agree to share their secure data with Facebook or not participate in the Free Basics Platform.

Other requirements that we noticed are:

- It may take 8 to 10 weeks to receive a response from a member of the Internet.org team.
- A developer is required to have a Facebook account, and is required to agree

to Facebook's Terms of Services in addition to Free Basics terms.  
8 to 10 weeks is enough time to render crisis response applications and websites like chennairains.org useless. The second clause excludes developers who refuse to have a Facebook account because they were are not comfortable with Facebook's Data Usage and Privacy Policy.

Another fact that cannot be ignored is that Facebook has reserved itself the right to accept and reject applications. This places it in a position of power over developers where it acts in the role of a gatekeeper to Free Basics. Using this power it has determined the technical requirements and will subsequently exercise them. This is done without a transparent judicial process which cannot be expected of any private operator like Facebook. They also make no promise that these guidelines may not change to become more onerous in the future. For example, implementing Facebook login may become mandatory in the future. All of this must be viewed in the context that the Internet itself is an open platform where people can build without permission.

Facebook is using a very narrow definition of "openness" which only helps Facebook and friends.

2.

**Claim:** Free Basics provide no advantage to Facebook

**Rationale:** Facebook does not receive or give any money to developers, telcos or anyone else for their participation in Free Basics, nor does Facebook generate any revenue from the version of Facebook within Free Basics as there are no ads in it.

Response:

It is important to note that directly earning money through access fees or ads is not necessary to give advantage to Facebook. The Technical guidelines of Free Basics ensure that Facebook can be the only social network on Free Basics, Whatsapp can be the only messaging service and instagram can be the only photo sharing website.

[Yochai Benkler](#) has illustrated how networks become more valuable as they gather scale. Hence every new sign up on Free Basics which is heavily tilted towards a signup on Facebook increases the commercial value of Facebook per user as a network.

Facebook only says that they don't monetize through Facebook now, not that they will never do it. They themselves have agreed that there can be ads in Free Basics in the future. It is also reasonable to expect to have ads in Free Basics in the future because it is huge monetization opportunity.

Issues of trust also exist with Facebook in which one sided and unilateral terms of service are interpreted, amended and changed at its sole discretion. It often does this to its own benefit with little transparency. For instance, in 2010 researchers discover that Facebook is transmitting data about users on 3rd party sites using its like Button. WSJ and NYT reported it and Facebook said don't worry "it doesn't use data from Like buttons and other widgets to track users or target advertising". In 2014 when people weren't looking, it started using

browsing behavior for targeted ads. Same thing goes for its data retention policies, now they say they don't store personally identifiable information but they don't say will never do it. (ref [ProPublica](#))

3.

**Claim:** Facebook gets access to all usage data of sites that are on Free Basics is a myth.

**Rationale:** "Facebook takes user privacy and security extremely seriously. Free Basics receives and stores data on navigation information – the domain or name of the Third-Party Service accessed through Free Basics, and the amount of data (e.g. megabytes) used when you access or use that service – because it needs to determine what traffic can be delivered free of data charges. Facebook does not store any personal navigation information from within the service beyond 90 days. We don't share any personally identifiable information with our content partners and there is no requirement for those partners to send Facebook such information about their users."

**Response:** The secured connection clause in technical guides implicitly ensures that Facebook has access all usage data of sites that are on Free Basics. Facebook also doesn't claim that it will not monetize on the data or combine it with the navigational data of Free Basics with the data collected through Facebook and its other services.

Facebook already tracks Facebook users and nonusers browsing behavior to sell them targeted ads. The whole business model of Facebook revolves around advertising and monetization of user data. If Facebook claims that they are or they won't use data collected through Free Basics for their advantage then the burden of proof lies with Facebook. One way to do is it open source the Free Basics platform and infrastructure and invite third party researchers to verify their claims.

As we mentioned above Facebook also claims that it user privacy and security extremely seriously. There have been numerous cases of privacy violations by Facebook. Which obviously includes collection of vast amount of personal data of users and sharing it with advertisers and data brokers. In a recent case a Belgian court barred Facebook from tracking people who don't have Facebook accounts, though Facebook continue to do it in other parts of the world. (ref [Ars Technica](#))(ref [EFF](#))

In addition, Facebook is likely to claim that it is merely an "on-ramp" for the web, and a certain high percentage of its users end of buying data packs. We'd like to highlight observations made by a reporter from SNL.com ([source](#)):

"In my local area of Ahmedabad, Gujarat, some RCom stores have stopped marketing and promoting the service of late following customer complaints. One RCom store manager said that while Free Basics, or Freenet, was quite popular at launch, the store soon started hearing from angry customers who said the "free" part of the marketing and branding of Free Basics was misleading."

Thus the TRAI must take into account that the service may be merely helping Reliance Communications take customers away from other telecom operators, and not

necessarily adding new subscribers. There is no independent way of verifying Facebook's data for FreeBasics.

**The TRAI must also take into account the fact that FreeBasics isn't just available to new Internet users. It is also available to those users with existing Internet connections and data packs. This creates a tiered system for the Internet, with Facebook and those companies that partner with it available for free, and the rest not.** This, in turn, encourages usage of Facebook and its partners, and disadvantages those who don't partner with them. Here Reliance Communications influences consumer choice by zero rating FreeBasics, and FreeBasics influences consumer choice by ensuring zero rating for those sites and services that are a part of this package.

To emphasise the impact on competition, we'd like to highlight a comment on HackerNews that points us in a direction that TRAI can explore. The comment ([source](#))

Okay, let's give the users of Facebook predecessors of Free Basic a voice.  
Here am I, a German who used to use Facebook Zero (free access to Facebook via 3G) while I was in middle (and later high) school.  
As soon as it became available, I – and some of my friends – stopped using SchuelerVZ, the social network most people used to use at the time – and instead actually tried to convince others to switch to Facebook, too.  
"It's free! You don't need to pay anything!"  
We tried to get as much content as possible inside the network, and never actually left it – because we had literally no money on our prepaid SIMs, and therefore couldn't access other pages. Everything that wasn't on Facebook didn't exist for us.  
In only a few months after Facebook Zero launched, the user numbers of SchuelerVZ and StudiVZ rapidly declined.  
Today, we don't have a choice for social networks anymore, Facebook has a monopoly.  
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Facebook Zero: <http://0.facebook.com/>

The TRAI should take into consideration the impact of Zero Rating by any telecom operator for any service, on the basis of this comment. While Facebook's activities on its own platform should be subject to CCI scrutiny, the TRAI is well within its rights using Tariff regulations to ensure that licensed oligopolies like telecom operators don't give a competitive advantage to any FreeBasics like service, including paid services such as Airtel Zero.

**4. Negative impact on Innovation:** Lack of Net Neutrality, whether via differential pricing or speed manipulation, will facilitate the destruction of competition. A Vodafone would never have created an innovative VoIP service, which would threaten its own

traditional and slowly-becoming-outdated business model of revenue generation. It should not be allowed to place curbs on VoIP or messaging, whether via arbitrary differentiated pricing, blocking or throttling. Today you are looking at messaging and VoIP in the context of PSTN based telephony, but have you considered what might have happened if the world looked at email in the context of written letters<sup>15</sup>, or if a power company hikes charges specifically for CFLs<sup>16</sup> because users prefer them and they are more efficient?

Net Neutrality implications for Websites and Apps		
Factor	Neutral (current)	Non Neutral
Starting up	Very quick. No permissions required, apart from statutory requirements for registering a business.	Slow. Need permission from telecom operators to enable Internet access/speed/costing
Carriage Fee	None	Yes. Negotiate carriage fee with each telecom operator separately.
User relationship	Direct user relationship	Relationship with user depends on telecom operator.
Ability to iterate and change models	Very quick	Re-enabling service depends on telecom operator (Mobile VAS experience: <a href="http://rashmيرانjanpadhy.com/2015/04/12/airtel-kills-startups-and-innovation-a-real-story/">http://rashmيرانjanpadhy.com/2015/04/12/airtel-kills-startups-and-innovation-a-real-story/</a> )
Competition	Based on product/service quality and cost to consumer, availability of funds	Based on <b>telecom operator relationships</b> , cost being charged by telecom operator, product/service quality, cost to consumer, availability of funds

<sup>15</sup>

[http://www.reddit.com/r/india/comments/2qiegm/important\\_announcement\\_from\\_postal\\_department/](http://www.reddit.com/r/india/comments/2qiegm/important_announcement_from_postal_department/)

<sup>16</sup> <http://zigzackly.blogspot.in/2014/12/jo-mera-hai-woh-mera-hai.html>

Zoom out and examine your role in the context of the future for this country, which holds the potential for the creation of thousands of Zomato's, Flipkart's, Practo's, Wingify's, Paytm's, and whether changing the rules of Internet access hampers or spurs innovation.

**3. Impact on community initiatives and access to knowledge:** Please also keep in mind that the Internet isn't just a marketplace: it is a global commons. By allowing network providers the ability to set up mechanisms for price discrimination would allow them to incentivise the usage of those entities who are able and willing to pay them, and in turn (on a comparative basis) dis-incentivise the non-commercial contributory part of the Internet which has given us community run initiatives like Wikipedia and more recently, contributory initiatives such as Chennairains.org, which was a volunteer driven effort in order to aid those in need of help during the recent floods in Chennai.

"Karthik Balakrishnan, the Web developer behind chennairains.org, says he got the idea to make the website after he pinged Sandhya Ramesh, who was actively coordinating relief efforts on Twitter at the time. She in turn linked him to Sowmya Rao's Google spreadsheet. It showed the crowdsourced list of beds available, connecting people who were displaced from their own houses, and were looking for places to stay. Balakrishnan and Rao chatted along with the spreadsheet at two in the morning, following which Balakrishnan booked the domain and posted the site by 3.30am. "Little did I know then, that the hastily-put together spreadsheet would bloom into a multi-faceted, volunteer driven, highly energetic online movement to help Chennai that would be used by police officers, government officials," Rao adds."

[Read the rest at NDTV](#)

Imagine if this was needed to be set up in a permission based ecosystem like Airtel Zero or FreeBasics: the speed of response would be constrained by the speed of response of Airtel or Facebook.

Facebook's terms and conditions regarding FreeBasics state:

"Due to the large volume of requests we are currently receiving, it may take 8 to 10 weeks to receive a response from a member of the Internet.org team." ([source](#))

Please note that since launch, there are only 101 websites on FreeBasics in India. This list of sites is not public. The growth of the Internet, and the ability for anyone to set up a website or a service is because of permissionless innovation. It's hypocritical of Facebook to set up a permission based ecosystem under FreeBasics for the developing world, including India, while at the same time taking a different approach in the US:

Facebook has signed [the Internet Association's amicus curiae brief supporting the FCC](#), stating "The open architecture of the Internet creates an innovation-without-permission ecosystem. Consumers (and consumers alone) decide the winners and losers on the open Internet."

**Preventing price discrimination is also key to consumer choice and media diversity.**

In an article for the Indian Express, Vibodh Parthasarathi, who teaches and researches media policy at the Centre for Culture, Media & Governance, Jamia Millia Islamia notes:

By maintaining parity of availability (no preferential content/service), uniformity of affordability (no zero-rating) and equity of access (including through technological standards), net neutrality protects diversity online in two minimal ways. First, it demands ISPs make available all types of services and content on equal footing, thereby preserving Source Diversity. However, like all marketplaces, there is a gap between what is on offer and what is actually consumed online. With this nuance net neutrality warrants, secondly, we are empowered to choose equally between comparable, and comparably offered, services/content. This preserves Exposure Diversity, or the diversity actually incurred at the user-end. Extensive research in both television and internet has shown diversity of source and exposure are not always positively correlated.

The abundance of the internet is conditional to our being provided and accessing all sites equally, i.e., without being technologically hindered (including through proprietary formats), financially biased (through differential pricing or speeds) or commercially limited (by constricting offerings). Invariably, these hurdles work together—differential pricing tends to de jure result in preferential offerings. Net neutrality is perhaps the only principle nurturing both, the equal availability of diverse content and the parity in accessing such diverse content. Consequently, questioning net neutrality implicitly questions the value of diversity which resides at the heart of the internet, as much as at that of our human experience.

The founder of Facebook reiterated where connectivity is a challenge, access could be widened by offering some services gratis. The very thought of "some services" conjures a risky trade-off—where diversity takes a hit. This risk is compounded without any end-user involvement—an increasingly common in governance tool—in deciding the composition of "basic" services. Bundling, including Internet.org, distorts information flows at the supply and demand sides by respectively limiting competition among online services and by pre-determining the choice of services being used. How would Zuckerberg react to users being empowered to choose what their basic services is composed of? If not, then we are effectively being asked to choose between no access and access to an oligopoly of ideas.

This carries another important message for policymakers: While the principles of net neutrality and universal connectivity must necessarily coexist, they should not be deliberately confused. Practices of bundling, fast-laning and zero-rating signify implicit and explicit forms of architectural data rationing—thereby directly posing grave risks to online diversity.

[\(source\)](#)



We would urge you to ensure that the petty self-interest of both oligopolistic telecom operators and large Internet companies does not hold innovation, freedom of expression, access to information and knowledge to ransom, and a structure is put into place to ensure that **providers of Internet access (telecom operators and ISPs) are not in a position to pick which site or service on the Internet win: that choice must be of the consumer's alone.**

Net Neutrality implications for Consumers		
Factor	Neutral (current)	Non Neutral
Access to knowledge	Millions of websites to choose from. Access to everything	Only get access to those websites which pay or partner with the telecom operators. Most sites not available.
Speed	All sites load at the same speed	Some sites load faster than others
Payment	Pay for how much data you use, as per plan	Pay for what you use, or pay nothing for a few sites that partner with telcos.
Access to global services	Access to all global sites	Under zero rating or packages, no access to global sites that don't partner with telecom operators.

Apart from this, research from Amba Kak of the Oxford Internet Institute indicates that for financially constrained users, “some access is better than none”, but the trade-off they are willing to make is how much they use the internet, not necessarily how much of the internet they get to use.” ([source](#))

Kak [writes in Business Standard](#):

“What I learnt from my interviews was that the next generation of internet users are mostly young, and curious about the ability of the internet to materially benefit their lives. Limited access curtailed this ability. Some also expressed fear of being unexpectedly charged for leaving the “free zone”, by, for example, clicking on links on Facebook. They felt more comfortable with the standard flat-fee data plans.”

#### 4. Prevent the creation of walled gardens:



The Internet is not ten, hundred, ten thousand or even a million websites. It comprises of hundreds of millions of sites and applications, which are available to all Internet users to choose from. This has been made possible because the access service provider does not influence consumer choice by either modifying the speed of Internet access, availability of sites and services and price of accessing a particular website or service.

All websites are available, all at the same speed of Internet access (per kbps or mbps) and at the same cost (according to a wholesale data pack charge).

**If we had unlimited spectrum or unlimited right of way**, this problem would not arise. A pure free market operation would have allowed each individual website to buy a slice of spectrum or wireline access, to offer access to its services online, or their own package of services. Consumers would have had unlimited choice of providers, and could have picked and chosen what they wanted, and fair competition would have helped determine the best consumer proposition.

However, we're not living in that ideal world and spectrum is scarce, as is right of way. Telecom operators and ISPs are mere licensees, not owners, given the mandate to increase penetration of mobile and Internet, in exchange for exclusive right to provisioning these services. Should better technology, and indeed, the usage of national resources like spectrum, and the future of thousands of Internet companies be forsaken to protect the interests of an oligopoly of 13 telecom operators, of which just three, Airtel, Idea and Vodafone, account for as much as 64% of active mobile users<sup>17</sup>? Steps must be taken to ensure that telecom operators and ISPs don't operate like the Land Mafia of the technology space.

### **Telecoms have financial incentives to violate Net Neutrality**

It's important to note that there is disincentive for telecom operators to offer a neutral web, because while in case of open competition between telecom operators and ISPs, consumers are charged around Rs 0.26 per MB (data realization per mb<sup>18</sup>), while Airtel presumably charges Rs 1/MB from Internet companies<sup>19</sup>. This means two things:

1. There is financial incentive for telecom operators to invest more in their Zero rating services, because they make more money on Zero rating than they do on connectivity where consumers pay.
2. There is financial incentive for telecom operators to increase prices of access

<sup>17</sup> <http://www.medianama.com/2014/11/223-september-2014-india-telecom-data/>

<sup>18</sup> <http://www.medianama.com/2015/04/223-airtels-mobile-internet-q4-fy15/>

<sup>19</sup> <http://www.financialexpress.com/article/industry/tech/is-airtel-zero-violating-net-neutrality/62733/>

to the public and open Internet, to bring it on par with the money they earn from zero rated services.

Thus, there is financial incentive for them to carve out private areas, such as Airtel Zero, out of a public Internet, and restrict or limit access for consumers to the few services that can pay them:

### **Addressing some points likely to be made by telecom operators**

1. Telecom operators are likely to say that Internet companies are “free riding” on telecom networks.

**This is factually incorrect.** Internet companies pay their own ISP’s for hosting and connectivity, and consumers pay their ISP/telecom operator for accessing these services. By making Internet companies pay for consumer side access as well will mean that there is triple charging going on, with the Internet company paying twice, and consumer paying once. This also means that **messaging and VoIP services from telecom operators and affiliated/partner companies (Airtel Talk and Hike, for example), will get a distinct competitive advantage**, since the money that those services pay, will go from one pocket of the telecom operators to another.

**2. Telecom operators are likely to say they won’t have incentive to invest in network capacity:** While we understand that infrastructure rollouts are necessary for Digital India, there are few important points to note here:

- a. **Government projects for infrastructure rollout:** it is important to note that the National Optical Fibre Network is meant to address exactly this mandate, by making fibre connectivity available in rural India. In urban India, projects are being rolled out for providing free WiFi.
- b. **Private infrastructure rollouts are demand led and demand is high:** It is important to understand that telecom operators themselves have said that they plan to roll out Internet infrastructure, given consumer demand. Himanshu Kapania, CEO of Idea Cellular, said on its earnings conference call on April 29th 2015<sup>20</sup>, excerpted below:

“As I mentioned, capex expenditure for us is RoI led, and we are allocating expenditure to capex because we believe that the demand that we are seeing is much higher than what we have seen in FY13-14. It is important for us to tap a larger percentage of the demand. Most of it is going to preparing us for

<sup>20</sup> <http://www.medianama.com/2015/05/223-idea-earnings-call-q4-fy15-voip/>

mobile data as well as new markets where we don't have 2G presence. There is a small component for reconfiguring our spectrum, but that will allow us to into 3G business. So it is all demand led."

"The pace of 3G adoption - we're very pleasantly surprised. It gives us a lot of confidence to go ahead and make the investment now. We have seen that there is sufficient RoI. For us, the capex investment is RoI led. There is a reason why we're increasing our guidance, because there is sufficient RoI available and helps us in our growth journey."

c. **Airtel says that investments have already been made:** In a recent earnings conference call, Gopal Vittal of Bharti Airtel had told investors<sup>21</sup>:

'on whether new towers are required to accommodate data growth that CapEx requirement "is not material. There could be some requirement in a few places and a few cities but it is still a little early to say so we will assess that as we go forward." He added that in some cities where there is congestion, the company will assess the need for standalone sites, but "frankly it is not significant at this stage so we will wait and watch.'"

Therefore, there don't appear to be any challenges related to being able to afford infrastructure rollout, and if there are issues, then the USO Fund should be allocated to help address these issues.

d. There is adequate money being made from data services. Broadly:

- Data consumption is increasing, but on 2G and 3G
- 2G users are increasing, but many existing 2G users are shifting to 3G connections
- 3G users are increasing, both due to additions and switching of 2G users
- Data ARPU is increasing
- VAS Revenues are increasing

**Please Note:** We've attached a detailed presentation on the growth in data services along with our submission. This should indicate that telecom operators have sufficient incentive to grow data services.

In the recent earnings conference call, Idea Cellular CEO Himanshu Kampania said that.

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<sup>21</sup><http://www.medianama.com/2015/02/223-no-evidence-of-voip-cannibalization-of-voice-airtel-india-ceo-gopal-vittal/>

“What we are observing is that there is all round improvement in usage, and the applications that consumers are expecting are far more varied, and a lot more newer applications are being accessed. The largest application accessed are the video apps, across various sites. Other is time being spent on social media. There is significant usage of e-commerce, mobile banking and specialised services. In terms of handsets, primarily the lower end of 3G handsets are fueling the growth, 4-4.5", in a price bracket which is Rs 4500 to Rs 7000 . More and more consumers are upgrading their Rs 1500 2G phones.”

#### **4. Telecom operators might say that Internet services are choking their network:**

This is factually incorrect. Internet services don't choke networks, the consumer demand for these services chokes networks. If consumers want HD videos, then they'll try and watch them. In the process, they'll pay more data charges to watch these videos. There is a financial incentive for telecom operators to:

1. Improve the quality of their networks by investing in better equipment and/or fibre for carrying traffic
2. Invest in data only base stations. Bharti Infratel mentioned in its recent earnings call that these are being installed.
3. Offload traffic to WiFi by investing in WiFi networks, which will have lower cost for telecom operators, per MB used, and they can still charge customers rates for Mobile Internet. For example, at Cyberhub in Gurgaon, Airtel operates a Wifi network for offloading data, and this has charges equal to Mobile Internet data, even though mobile is theoretically more expensive, and is charged higher.

#### **5. Telecom operators say that Zero Rating is like toll free data, and may drive innovation:**

Zero rating will not drive innovation. With Zero Rating, consumers will get a poorer version of the Internet. As Sh. Naveen Patnaik, CM of Odisha, pointed out in his letter to TRAI, “Free” is not the same as “Freedom”, and “if you dictate what the poor should get, you take away their rights to choose what they think is best for them.” Controlling access to the Internet has far reaching implications. Facebook's internet.org, which has been launched in many countries in South America, Asia, India and Africa, is a violator of Net Neutrality, by providing access to a few sites selected by telecom operators, including some selected news media websites.

You, as legislators, will understand better how much influence media and social media have on people today. The power to control information is the biggest weapon in a democracy. Plurality and diversity of both views and platforms are important, and for

this, the Internet needs to be kept open and neutral.

Zero rating is priced based preferential treatment of services, and its dangers are immense:

1. **Zero rating is “positive discrimination”** and instead of making some services more expensive, like Airtel did with Internet calling in December 2014, **it involves making some services comparatively more expensive than others by making other services cheaper.** India is a country with low speeds and price conscious consumers. Hence, an access service provider charging differently for different services will lead to preferential access for the cheaper service.

This lends itself to predatory pricing from telecom operators, wherein they can make general Internet access more expensive, and make some services cheaper. There are two models of Zero Rating: Paid Zero Rating (for example, Airtel Zero) and Unpaid Zero Rating (for example, Facebook’s internet.org): Paid Zero Rating, such as Airtel Zero, where a telecom operator takes money from an Internet company and makes access for consumers free, and free Zero Rating, such as Internet.org from Facebook where no money changes hands, but a directory of services controlled by Facebook and telecom operators is made available to consumers for no data charges.

Tim Berners-Lee, one of the founding fathers of the Internet as we know it, wrote in February that Net Neutrality is “also about stopping ‘positive discrimination’, such as when one internet operator favours one particular service over another. If we don’t explicitly outlaw this, we hand immense power to telcos and online service operators.”

Sir Lee, in May 2015, also called zero rating a step backwards:

“In the particular case of somebody who’s offering ... something which is branded internet, it’s not internet, then you just say no. No it isn’t free, no it isn’t in the public domain, there are other ways of reducing the price of internet connectivity and giving something ... [only] giving people data connectivity to part of the network deliberately, I think is a step backwards.” ([source](#))

The business model of Zero Rating is also suspect. Professor Vishal Misra writes on the business of Zero Rating ([source](#)):

“If ISPs Zero Rate content, somebody has to pay for the bandwidth. Suppose the Content provider pays for it. Then there is a pricing problem:

- ISPs cannot charge the content provider a price above the price they charge consumers. Suppose they charge consumers  $X$  per MB of data, and they charge content providers  $X+Y$  per MB of data. Then, for sufficient traffic where overheads are accounted for, it is cheaper for content providers to send recharge coupons back directly to the customers who used their services. Long term, pricing above the consumer price is not sustainable.
- ISPs cannot charge the content provider a price below the price they charge consumers. Suppose they charge consumers  $X$  per MB of data, and they charge content providers  $X-Y$  per MB of data. Then if the plan is truly open, a company like [Gigato](#) can come along, buy data in volume and become a virtual ISP. They can funnel traffic to services via their servers (they can remain good guys and not decrypt or store private data), sell the bandwidth to consumers at  $X-Y/2$  and pocket the difference. The ISPs lose out.

Or alternately, the ISP pays for the bandwidth of the content.

- This opens the possibility of [vertical integration](#), where ISPs ZeroRate their own content, and that is extremely bad for competition. Or ISPs ZeroRate only a select group of content providers, for non-transparent reasons (FreeBasics or Binge On "technical" requirements that make the walled gardens implicitly closed), leading to a fractured experience/Internet for their consumers.

It is not clear to me what the business model is for ZeroRating, where the ISPs make money and provide an Open and Neutral Internet experience for their consumers. Economic issues are really the core of Network Neutrality, and nobody has explained to me how the economic model of ZeroRating remains consistent with Network Neutrality"

We would aver that the idea behind Zero Rating is essentially a means to gain discretionary power, which lends itself to the corruption that plagued Mobile VAS.

Apart from this:

#### a. Impact of Zero Rating:

- Slicing the Internet into services:** Zero rating, whether paid or unpaid, creates a fundamental and permanent shift in the way the Internet works, by splitting it into free and paid. Services such as Airtel Zero will slice the Internet, and will lead to the launch of similar services from all telecom operators. There might be an Idea Zero, Vodafone Zero, Aircel Zero, Uninor Zero, Tata Docomo Zero. Add to this Internet.org, which will have its selection of services also determined by telecom operators<sup>22</sup>. This means that each user will get a different experience of websites, and may never know the universe of knowledge outside of this collection of websites. That restricts consumer choice. Zero rating is "positive discrimination". Airtel Zero favors those services who pay them to be zero

<sup>22</sup> <http://www.medianama.com/2015/05/223-facebooks-internet-org-privacy/>

rated. Internet.org favors those services which are low bandwidth, and allow Facebook to access user data even if Facebook is not being used on Internet.org.

- ii. **More bureaucracy for startups:** Airtel Zero changes the way the we access information via the Internet. Telecom operators and ISPs run highways to the city that forms the Internet. The web was created as an open platform, where anyone could set up and host their site anywhere, and be available across the globe. This is why sites hosted in India are available across the globe, and vice versa. Websites don't tie up with and pay each telecom operator and ISPs in each country (hundreds across the world) so that consumers can access these sites. If the next 200 million users in India are on Airtel Zero, startups and other companies will have to choose between ignoring these customers or tying up with multiple Indian telecom operators. This lends itself to red-tapism at telecom operators, and corruption and collusion. Historically, telecom operators have co-ordinated when negotiating rates with content owners. In 2008, Viren Popli, Head (Mobile) for Star TV, said<sup>23</sup> that "If you have ever dealt with mobile operator, you will know that after your meeting ends with one operator, every mobile operator knows what you're talking about." In case of Internet.org, the sites have to work without javascript and https, are less secure, and have to conform to facebook's guidelines in order to be made available to consumers, apart from approval from telecom operator partners.
- iii. **Usage of the open web declines:** When consumers try and move out of a zero rated platform to the open web, they will rightly be informed that they are going to be charged for this. This is information is essential in order to prevent charges when the user may not want to be charged. However, adding a layer of confirmation usually leads to reduction in conversion rate, since accessing a link is often on an impulse, whereas choosing to pay to access a link is an additional decision. As an example of the impact of adding an additional layer of confirmation, Cleartrip saw a decline in mobile bookings after a second factor of authentication was introduced for mobile, as per RBI guidelines<sup>24</sup>. Ecommerce companies actively work to reduce the number of clicks and steps required for a purchase, and each reduction leads to higher conversions.
- iv. **Impact on access speeds:** Many telecom operators actively reduce speeds for customers beyond a certain usage of data, by instituting what

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<sup>23</sup> <http://www.medianama.com/2008/08/223-momo-mumbai-dont-compare-the-us-market-for-vas-to-the-indian-market-viren-popli-svp-mobile-for-star-india/>

<sup>24</sup> <http://www.medianama.com/2011/02/223-how-indias-banks-killed-the-future-of-commerce-hrush-bhatt-cleartrip/>



they call a “Fair Usage Policy”. In Airtel’s words “We have observed that few of our customers have been using an excessive amount of bandwidth, thus impairing the browsing experience of an overwhelming majority of broadband users.”<sup>25</sup>

Telecom operators today complain about not having adequate spectrum as a reason for poor connectivity speeds. An report from Ericsson, released recently, stated<sup>26</sup>: “48 percent of those using mobile internet on 2G or 3G are unable to perceive any difference between 2G and 3G services”.

With poor connectivity speeds, it’s important to assess the impact of zero rated access: consumption of free zero rated services is likely to be higher than that of paid services, and with limited bandwidth and spectrum, there is a distinct possibility that zero rating will consume more data, and leave limited bandwidth for open web access.

- v. **Incentives aligned towards favoring Zero Rating over open web:** In its statement regarding Airtel Zero, the company had cited<sup>27</sup>, as an example, an amount of Rs 1/mb being charged from Internet companies for accessing Airtel Zero websites. This is almost 4 times the data realization per MB reported by Airtel in its Q4-FY15 financial results. Thus, Airtel’s incentives will be aligned towards increasing usage of its Zero Rating platform, where it makes more money, via usage of services from vendors, versus the rest of the web. There is also incentive for Airtel to increase cost of open web access, in order to drive both startups and users to the Zero platform.
- vi. **Zero Sum game, with competitive pressure on startups:** Once a startup joins, because of high dependency, competitive pressure ensures that others also join. When Flipkart allegedly joined Airtel Zero, its competitors began examining that option. Times Internet has said that most of its publication businesses will not exit Internet.org unless their competitors also do so: no one will risk being the first to leave if competing sites are around. This means that with all competitors on board, this becomes a necessary expense for all startups, and no one except the

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<sup>25</sup> <http://www.medianama.com/2009/03/223-airtel-to-moderate-user-broadband-speeds-what-of-net-neutrality/>

<sup>26</sup> <http://www.ericsson.com/res/docs/2015/consumerlab/ericsson-consumerlab-the-changing-mobile-broadband-landscape-india.pdf>

<sup>27</sup> <http://www.teleanalysis.com/resources/column/airtel-zero-is-similar-to-toll-free-services-srini-gopalan-14338.html>



telecom operator benefits. Zero rating is a means of instituting a carriage fees for telecom operators.

**b. Zero rating is not a toll free number:**

- i. **Access is not just a support mechanism:** A toll free voice service is a support mechanism for most businesses, and not the sole entry point for the business like an app or a website. An Internet company has 100% dependency on Internet access providers and telecom providers, while that is not the case with most companies that use toll free voice services. This leaves room for potential abuse, in case of differential pricing, manipulation of access speeds, or monopolistic hiking of rates, like in case of carriage fees in Cable TV, which led to manipulative practices and significant losses<sup>28</sup>, as well as the shutting down of several channels<sup>29</sup>
  - ii. **A toll free voice service isn't the mode of delivery for the service itself:** it's a mode of information, and rarely, a mode of transaction. In case of the Internet, all delivery of content and communications takes place over the access mechanism, and all transactions take place via the access for ecommerce companies.
  - iii. **Providers of toll free voice services do not compete with their customers:** However, in case of the Internet, telecom operators have launched competing services. As explained earlier, Airtel's Wynk is a music streaming service which has plans that come bundled with free data, while, at the time of launch, its competitors did not have that option. This is a cross-media ownership issue, where the carriage mechanism also owns content, and can abuse its position of controlling access.
- c. **Zero Rating of government services:** The Indian government's decision to open up the Application Protocol Interface (API) for government services is a laudable move. The challenges of government departments choosing to be the sole access points to digital services are well known and documented: they suffer from either lack of adequate communication to potential users and stakeholders, of poor infrastructure and product design, and sometimes the inability to handle significant loads. The issues faced by IRCTC are well documented, and we've seen the websites provided by the Ministry of Company Affairs face issues as well. In line with the "Minimum Government, Maximum Governance" mandate, opening up the API for government services allows creative entrepreneurs to imagine better and unique consumer products, and compete for customers.

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<sup>28</sup> <http://www.thequint.com/2015/apr/15/after-my-cable-massacre-i-punch-for-net-neutrality>

<sup>29</sup> [http://www.business-standard.com/article/opinion/vanita-kohli-khandekar-net-neutrality-lessons-from-cable-tv-115041401043\\_1.html](http://www.business-standard.com/article/opinion/vanita-kohli-khandekar-net-neutrality-lessons-from-cable-tv-115041401043_1.html)

To achieve this goal, the National eGovernance Division, Ministry of IT, Govt of India has hired Amit Ranjan, a former entrepreneur himself, to help create an ecosystem where Indian startups can create applications and produce better consumer experiences. In an appeal to domain experts, Ranjan has written<sup>30</sup>:

“Imagine if the simplicity and fluidity of platforms like Wikipedia, Facebook, Whatsapp, Skype could be replicated in the citizen services that you and I use everyday – be it applying for a passport or a driving license, filing your taxes or getting your govt scholarship. Imagine what citizen services can be built on top of the biometric identification system Aadhaar, which currently at 830 million is just a stone’s throw from the billion mark. Imagine if the internet could be the same change agent in the lives of our less connected co-citizens in far off towns & villages, in the tribal areas, in remote rural corners where roads don’t reach – that’s what e-governance is about.”

Asking for developers, designers, big data engineers, open source community managers and others to join, Ranjan has pointed out that “There is a shift towards technology enabled open governance systems (open source, open APIs, open standards, open data) and you could drive this openness inside the government.”

**However, if the government services are going to be Zero rated, then what incentive is there for entrepreneurs to invest in, and build services that compete with Zero rated government services?**

The idea should be to encourage entrepreneurs, not compete with them. Faced with competition from the government, which could have zero rating for its services, there is a distinct possibility that such initiatives to open up API will fail. The government will have to choose between the two.

In addition, we endorse the suggestion by Nandan Nilekani to take the approach of providing data to users in a manner similar to Direct Benefit Transfer. The reason that the government is choosing to provide benefits directly to consumers is to allow them the right to choose. A similar right must be given when it comes to usage of data. Let those in need of Internet access determine what they need to use the data for.

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<sup>30</sup> <http://www.webyantra.com/2015/04/17/come-join-the-team-building-stuff-for-1-3-billion-indian-citizens-from-the-startup-trenches-inside-the-government/>

**A Non-Neutral Internet will set back the growth of the Internet in India**, and adversely impact digital inclusion, just as the decision from the Reserve Bank of India to restrict mobile payments when Wallet365 was launched in 2006<sup>31</sup>, delayed the financial inclusion that is currently being attempted again by the government via Payments Banks and the Jan Dhan Yojana.

India has around 400 million users million Internet users according to the IAMAI, the second largest in the world, most of whom have come online in the last four years, and around 25% of which (100 million) have come online in 2015 alone. At the heart of the Prime Minister's Digital India initiative is the goal of providing Internet connectivity to all Indian citizens. It is important that while trying to make the Internet available to every Indian citizen, we are also conscious of what kind of an Internet is being made available to them.

We should not compromise the basic principles of the Internet in our haste to get people online: the Internet that they get should be open, neutral and non discriminatory, for it to enable collaboration, innovation and progress. **The Internet Freedom of our citizens and startups was not sold to telecom operators with the spectrum auctions.**

However, India is a country with poor quality Internet access, and the focus should be on increasing access in a neutral way, along with improving quality of service.

For this, we need more competition. Despite what telecom operators claim, Airtel, Idea and Vodafone account for as much as 64% of active mobile users<sup>32</sup>, have 3G Interconnection agreements, and a tower joint-venture together. Airtel, the second largest wireline ISP has a WiFi joint venture with Vodafone called FireFly Networks. We'd also like to point out the lack of competition in providing broadband access: the ISPAI has also parroted the views of the telecom operators to the TRAI. These ISPs and telecom operators, lest it be forgotten, also instituted limits on broadband usage, in terms of the Fair Usage Policy, which leaves broadband customers little choice of ISP.

At present, instead of growing the market, the top three telecom operators are focusing on splitting the market between themselves. Where is the competition? They speak in the same voice, when it comes to demanding that they be allowed to violate net neutrality by pushing for licensing or registration of Internet companies and/or buying bulk data from telecom operators. **They're merely splitting the market between themselves.** Developing nations like Brazil, Chile and Mexico, and many European nations have taken steps to enforce net neutrality consistent with its universal definition of non discrimination between Internet services. Talking of "redefining net neutrality for

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<sup>31</sup> <http://www.techshout.com/internet/2006/08/timesofmoney-launches-wallet365com-indias-first-e-wallet/>

<sup>32</sup> <http://www.medianama.com/2014/11/223-september-2014-india-telecom-data/>

the Indian context” is merely a pretext from the Telecom operators to deceive the Indian government.

The government should institute policies that force competition among telecom operators, so that consumer quality of service is forced to go up, and consumer experience of the Internet in terms of speeds of access and latency reduces.

We would urge you to protect Net Neutrality, and not allow telecom operators to manipulate how consumers consume content on the Internet by instituting anti-neutrality practices. There must be:

1. No licensing or registration of Internet companies, whether communications or non-communications based.
2. No manipulation of speed, availability (via packaging of individual sites) or cost of Internet access (via Zero rating or by making some services such as messaging or Internet calling more expensive).

**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?**

Ans: Differential pricing must not be permitted, as indicated in the answer to Question 1.

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

**Answer: Net-Neutral alternatives to Zero Rating:**

1. **Internet access coupons using the USO fund or with contributions from Internet companies as CSR:** One simple method is the introduction of couponing, where free Internet access of around 100 mb can be given to citizens to try out services of their choice, without the government or the telecom operators selecting which services consumers should use. This can either be funded using the USO Fund, or organizations such as Facebook, which claim they want to get more users online, can contribute money to a separate fund that be used by the government to buy data from citizens, as per their choice of telecom operator. It could also be a part of their CSR activity. Please note that

telecom operators sometimes give promotional data for free, to enable users to start accessing the Internet.

2. **Sachet pricing of Internet access** is also available, to allow citizens to avoid excessive charges, and to make it cheaper for them to get online. For example, Vodafone offers data packs such as Rs 17 for 85 mb of data, with a validity of 2 days.
3. **Advertising supported Internet access:** Apart from this, there can be advertising supported neutral services for free, such as that being provided by Ozone Networks at the Mumbai Airport. In addition, with branding arrangements, brands could give free Internet access (to the whole web) on purchase of products and services, in a way similar to giving free data recharges to individuals.
4. Subsidised Internet access in partnership with venues: Network operators can provide free Internet access in partnership with venues such as coffee shops and stores.

As infrastructure is deployed and more spectrum released for services, the cost of Internet access will go down. Launch of 4G services will reduce the cost of 3G and 2G services, just as cheaper 4G handsets will make 3G and 2G handsets cheaper. There is always a downward pressure on costs with improvement technology, making it more accessible to the poor.

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

Answer: Along with not allowing differential pricing, please ensure that telecom operators are unable to charge online businesses, and unable to discriminate on basis of quality of service, whether via a commercial or non-commercial arrangement. Telecom operators may claim that they have never manipulated speeds before: This is factually incorrect. For the Indian Premier League in 2010, Airtel had provided a fast lane to users accessing YouTube, increasing their speed to 2 Mbps, thereby, comparatively, throttling those users who weren't watching YouTube<sup>33</sup>. Two years later, the Measurement Lab (M-Lab) reported that Airtel and other ISPs had been throttling BitTorrent traffic in India for years<sup>34</sup>. Please note that even today, Airtel has a paid Games on Demand service, where downloads of games are increased to 2mbps for all users, in competition with other services. Differential speeds for individual services do exist, and should be prevented.

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<sup>33</sup> <https://gigaom.com/2010/03/25/youtube-caught-in-net-neutrality-flap-in-india/>

<sup>34</sup> <http://www.thehindu.com/sci-tech/technology/internet/isps-slam-brakes-on-bittorrent-speeds/article3751310.ece>

**In conclusion: Focus should be on improving access without compromising Net Neutrality. Don't allow Differential pricing, since that is a step backward. There is sufficient incentive for telecom operators to roll out data networks.**

## **Annexures**

Definition of Net Neutrality  
by Vishal Misra  
([source](#))

**Tuesday, December 29, 2015**

### **Half the equation and half the definition**

There is a lot of confusion over what constitutes Net Neutrality, so much so that parties fiercely on the opposite side of issues both claim to be for it. As an example, the current controversy over Free Basics has been between Facebook, whose CEO penned an Op-Ed entitled "[Free Basics protects net neutrality](#)", and on the opposite side of it is a volunteer coalition, SaveTheInternet (STI), whose entire charter is to protect Net Neutrality. As the Op-Ed from the volunteers [suggests](#), the basic contention between Facebook and the volunteers is a different definition of Net Neutrality. While the concept of Net Neutrality was coined by Tim Wu back in 2003, the definition of what constitutes Net Neutrality has been evolving.

Let me walk you through the evolution of the definition that the STI coalition is going with, which is widely accepted and which I have arrived at after years of researching the issue. I will explain why Facebook (amongst countless others, they are not solely to blame here) only consider half the equation and thus end up with half the definition.

I'll start with the folk-definition that we started hearing, around 10 years ago:

### **Folk Definition: All packets must be treated equally**

As networking researchers we knew that this definition was not practical and it made little sense to us. Without getting too much into boring details, we knew routers on the

Internet did not treat all packets identically (TCP-SYN packets are treated differently from TCP-Data or TCP-Ack packets, UDP packets are treated differently, packets in the tail of the queue are dropped during congestion etc. etc.). However, we also knew what the principle of Net Neutrality was trying to say, and that was the network did not discriminate. So the folk definition needed to be made crisper. The FCC adopted Net Neutrality rules last year and the definition broadly laid out the following principles:

**FCC: ISPs will not block or throttle any traffic and will not implement any paid prioritization (no fast lanes)**

This definition changes the abstraction from how packets are treated, to how services are treated which is a logical progression. However the FCC missed out in one crucial aspect, and that is not incorporating the concept of differential pricing in its Net Neutrality Principles. Zero Rating, which is a special case of differential pricing, was not a big problem in the US when the Open Internet order was voted upon, and the FCC preferred a wait and watch approach to it (as a refresher, Zero Rating is the concept where consumers don't pay for the bandwidth of some or all services, and instead the cost of the bandwidth is borne either by the ISP or the content provider). The FCC definition focused on *quality of service* (QoS) as the determining factor for Net Neutrality, and insisted that all content on the Internet received the same quality of service from ISPs. The intent was to not provide competitive advantage to any service on the Internet, as that was in the best interest of both consumers as well as entrepreneurs. However it missed out in the following way:

As a brief background, in game theory (the mathematical tool we have used in our work on analyzing the issue), the quantity that we focus upon is called [Consumer Surplus](#). Surplus is defined as Utility derived from a particular service *minus* the **cost paid** to obtain that service. The Utility is a mathematical quantity that models the impact of the QoS obtained for a particular application, and the FCC was absolutely correct in enforcing neutrality there, but the FCC did not model the *cost paid* in its definition of Net Neutrality (and it is the definition Facebook uses to justify Free Basics as being consistent with Net Neutrality). How much an application costs changes the surplus a consumer obtains, and applications with similar utility (quality) but with differing costs provide different surpluses. In game theoretic models higher surpluses get competitive

advantages, thus it is *crucial* to model the cost aspect of an application to get to a definition of Net Neutrality that works. Differential pricing or Zero Rating of select services absolutely violates the principle of Net Neutrality if we consider the impact on consumer surplus.

Thus, if we only model half the equation, we end up with a definition of Net Neutrality that focuses *only* on QoS, however if we model the equation fully then the price of the service comes into play. A lot of people only model half the equation (Facebook included) and thus claim that differential pricing (Zero Rating specifically) is fine under Network Neutrality, but that is not true. If we are talking about a true level playing field, then the other half of the equation cannot be ignored.

Access Now, a global non-profit aimed at protecting the digital rights of citizens, has adopted a definition that states the following:

**Access Now: Net neutrality requires that the Internet be maintained as an open platform, on which network providers treat all content, applications and services equally, without discrimination.**

This definition implies that differential pricing cannot be adopted, but it does not say so explicitly and people (usually differential pricing advocates) can easily ignore the pricing aspect of a service and say Zero Rating is consistent with this definition. To fix this minor issue, and make things explicit, I have proposed the following definition which has received acceptance from academics, policy makers, entrepreneurs and activists alike, and I announced it publicly sometime back:





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Internet is a platform where ISPs provide no competitive advantage to specific apps/services, either through pricing or QoS

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This definition has the following properties

1. It incorporates both QoS and Pricing in the definition of Net Neutrality, thus correctly modeling consumer surplus.
2. It makes explicit the notion that Net Neutrality is not how we treat packets but how we treat competition.
3. It allows for reasonable traffic management by ISPs without violating Net Neutrality.
4. It allows *differential* QoS and/or pricing as long as it is allowed in a non-discriminatory way. ISPs can prioritize *all* real time traffic (e.g. all voice or all Video Conference traffic in a provider agnostic way) over all non-real time traffic. Similarly all emergency services or health monitoring apps can be prioritized.
5. It allows creating and differentially pricing entire class of services. For instance, an ISP can create an extremely low latency service and offer it to all games/gamers without discrimination, and that should be fine. The definition permits differentiation between services, but prohibits discrimination within a service.
6. It ensures a level playing field on the Internet, where upstarts can come in and compete on the basis of ideas.
7. Lastly, and this is only half in jest, the definition fits in 140 characters including a hashtag.

I am a big believer in the power of capitalism, as I think humans are largely selfish with varying degrees of altruism. However, for capitalism to work for the greater good of society, it is critical that the selfish interests of corporations align with public interests.

And that's where regulators step in, using the concept of [mechanism design](#), to introduce a minimal set of regulations that incentivize corporations to act in societal interest. I think the concept of Net Neutrality, defined in the way above, provides the mechanism for the Internet economy to work in the public interest. I hope the right regulations get passed.