



5 July 2016

Mr. A. Robert J. Ravi, Advisor (QOS)
Telecom Regulatory Authority of India
Mahanagar Door Sanchar Bhawan
Jawahar Lal Nehru Marg, New Delhi – 110002

Re: Pre-consultation on net neutrality

Dear Mr. A. Robert J. Ravi,

These comments are submitted as part of your pre-consultation on net neutrality, specifically to answer question #6 “What further issues should be considered for a comprehensive policy framework for defining the relationship between TSPs and OTT content providers?” I offer a review of the 7 points of a good policy. This checklist can help you ensure that your policy is sound.

I work at the Center for Communication, Media, and Information Technologies (CMI) at Aalborg University in Copenhagen, Denmark.¹ Aalborg University is known for its scholars of innovation, including Bengt Åke Lundvall who coined the term “learning economy”² and who developed the National Innovation System³ concept. The mission of CMI, a cross-disciplinary center within the Department of Electronic Systems, is to explore and develop the potential of new converging communication, media and information technologies and associated platforms and to offer competences and expertise to companies and public institutions. Our university has a partnership with Vishwaniketan’s Institute of Management Entrepreneurship & Engineering Technology (iMEET)⁴ outside Mumbai and hosts Indian PhD students in Demark. My doctoral project leader Knud Erik Skouby is Special Advisor to the The Global ICT Standardization Forum for India with the goal of helping to develop telecom infrastructure in rural India.⁵ My research focuses on net neutrality policy, and I am one of the few academics who has attempted to measure the economic impacts of the policy across countries. Earlier I lived in India where I had I the honor to work under the tutelage of Dr. M. Vidyasagar at the Advanced Technology Center at TCS Innovation Labs-Hyderabad. Please note that these comments reflect my own views and that I have received no compensation as part of this proceeding. Like my other submissions,⁶ these are offered for the benefit of TRAI in its duty to the people of India.

¹ <http://www.cmi.aau.dk/>

² <http://www3.druid.dk/wp/20060006.pdf>

³ [Lundvall, B-Å.](#) (ed.) (1992). National Innovation Systems: Towards a Theory of Innovation and Interactive Learning, Pinter, London

⁴ <http://vishwaniketan.edu.in/>

⁵ <http://slideplayer.com/slide/7652986/>

⁶ See http://traf.gov.in/Comments_Data/Others/Layton.pdf and <http://roslynlayton.com/wp-content/uploads/2015/04/Layton-Elaluf-Submission-to-TRAI-OTT-Consultation-24-Apr-2015.pdf>



India was considered one of the great regulatory success stories. Because of the reforms to unleashing market forces, mobile subscriptions increased 500-fold and prices dropped more than 95 percent.⁷ This story is a textbook example of the value of good telecom regulatory policy. However the Telecom Regulatory Authority of India appears to have abandoned its rational approach with its recent ban of differential pricing.⁸

There appears to be a misunderstanding about the word “discriminate” when it comes to price differentiation. There is a secondary definition of discrimination which has to do with prejudice, for example “an employment policy that discriminates against women”. However the primary definition is to recognize a distinction, to differentiate, or to perceive differences, as in “babies can discriminate between different facial expressions.”⁹ The economic concept of “price discrimination” is predicated upon this primary meaning. When a vendor can perceive differences between two or more customers, then it may be possible to charge them different prices for the same product (price discrimination) or to customize the product offered to each in a manner that reflects the difference (product differentiation). If the customized products impose different expended or expected costs on the vendor, then charging different prices does not constitute price discrimination.¹⁰

If any institution is in a position to regulate differential pricing, it is the telecom regulator. The very history of telecommunications regulation is about enabling differential pricing for telephone service. Price differentiation has existed for decades in local calling versus long distance, in interstate versus intrastate communications, in business versus consumer services, and in low versus high-volume users. If net neutrality advocates support that the Internet should be a public utility like the telephone network, then it is ahistorical and illogical that differential pricing should not be applied to the Internet, especially if the goal is to make it affordable for the maximum number of users.

Moreover the ban on differential pricing contravenes the Telecom Tarriff Order (TTO) which notes

- The need for tariff reform to stimulate competition, specifically to support entrant TSPs and reduce the power of incumbents
- Emphasis on the “social objective” of encouraging low users of telecom to get connected and use the system more intensively; and
- That service providers will be provided enhanced flexibility for pricing and giving alternative tariff packages to customers.

TRAI’s decision is probably illegal, but it has not been challenged probably because the Indian courts are corrupt and ineffective.

⁷ Colin Blackman and Lara Srivastava, *10th Anniversary Telecommunications Regulation Handbook*, vol. March 2011 (infoDev | The World Bank | The International Telecommunication Union, n.d.), <http://www.infodev.org/articles/10th-anniversary-telecommunications-regulation-handbook>.

⁸ http://www.trai.gov.in/WriteReadData/WhatsNew/Documents/Regulation_Data_Service.pdf

⁹ “Discriminate - Definition of Discriminate in English from the Oxford Dictionary,” accessed June 27, 2016, <http://www.oxforddictionaries.com/definition/english/discriminate>.

¹⁰ Dennis W. Carlton and Jeffrey M. Perloff, *Modern Industrial Organization*, 4 edition (Boston: Pearson, 2004).



In any case, history will be the judge. I predict that TRAI's ban on differential pricing will be considered one of the greatest follies in the history of telecom regulation. My teacher William Melody, a noted regulatory economist and founder of LIRNE, declares the importance of an "independent telecom regulator." TRAI's decision, made in a complicit capitulation to internet activists and Google-funded net neutrality advocates,¹¹ effectively protects the advertising monopoly of Google by barring competitive entry and denying the people of India competition.

To bring quality control to your decision making, the following checklist will help you determine whether you are making a sound telecom policy.

- Aligned with national laws and institutional goals
- Based on rational, comprehensive data and evidence—both quantitative and qualitative
- Clearly states the reasons why it's needed and the proposed outcome
- Provides a framework for achieving the outcome
- Concise, clearly communicated and widely understood
- Creates value and benefits with measurable outcomes
- Monitored, evaluated, and reviewed regularly.

Today there are some 50 countries with net neutrality rules. These rules cover a range of requirements and prohibitions for telecom operators in the management of their networks. Net neutrality is a concept coined by law professor Tim Wu in a 2003 article¹² which he proposed that the internet should be a "neutral platform" for innovation. He called for user rights to access the content and services of their choice with the devices of their choice. Importantly, Wu noted that telecom operators should "police what they own", that is to say as long as telecom operators provided unrestricted access to the Internet, they could manage their proprietary networks in a prudent way. Wu offers rules about network management that would only be applied only "if necessary". That is to say, Wu's hope is that operators would act in his preferred way without the need of regulation. Importantly, Wu never discussed zero rating or specialized services. He did not even have a smartphone or mobile broadband at the time he wrote the article.

However today's net neutrality rulemaking is unrecognizable to what Wu's article described. The concept has been appropriated by American Internet companies is effectively a form of corporate cronyism used to limit market entry by new players.¹³ Regulators take up net neutrality rulemaking not because of violation, but because of self-preservation. Having succeeded to make competitive markets for mobile service, they need something new to regulate. "An agency that has been rendered obsolete by exogenous changes in the form of technological development or new marketplace developments will find that it must provide favors to discrete constituencies in order to preserve some measure of support for its continued existence,"¹⁴ noted Yale University scholars in "Reflections on

¹¹ <https://nointernetforpoorpeople.com/>

¹² http://papers.ssrn.com/sol3/papers.cfm?abstract_id=388863

¹³ <http://www.theatlantic.com/politics/archive/2014/09/netflix-has-replaced-google-as-the-face-of-net-neutrality/456822/>

¹⁴ Jonathan Macey & Jeffrey Miller. Reflections on Professional Responsibility in a Regulatory State. Yale Law School Legal Scholarship Repository, 1995. http://digitalcommons.law.yale.edu/cgi/viewcontent.cgi?article=2445&context=fss_papers



Professional Responsibility in a Regulatory State” some 20 years ago. Hence TRAI has found its new constituency, the global Google-funded net neutrality lobby.

Countries with net neutrality rules use either soft or hard measures. Soft measures are voluntary agreements by telecom operators to uphold certain principles through instruments such as self-regulation, codes of conduct, principles, and so on. Soft measures can involve oversight by telecom regulators as well as multistakeholder dialogues.¹⁵ Historically the countries with most history and success with net neutrality, as measured by the level of internet innovation and lack of violation or litigation, have used soft measures. These countries include the Nordics, Japan, South Korea, Switzerland, and the United Kingdom. Incidentally these countries are frequently praised by Internet activists for high quality broadband. Moreover soft measures most closely align to Tim Wu’s article for net neutrality.

Hard measures are promulgated either through legislation or regulation. These measures are binding, include prohibitions on specific traffic management practices, ban certain kinds of partnerships between telecom operators and content providers, and proscribe harsh punishments. The countries with hard rules include those in Latin America, Netherlands, and Slovenia. In 2015 the Federal Communications Commission voted 3-2 by party lines to impose hard rules; nine lawsuits were filed against the telecom regulator. The rules were upheld 2-1 in appellate court, and will likely continue to be litigated. In the EU hard rules came into effect in April 2016 with guidelines being developed by the Body of European Regulators for Electronic Communications (BEREC). Both BEREC and the FCC have been effectively captured by Internet activists, capitulating to “clicktivist” email campaigns rather than relying the expert, independent practice of telecom regulation.¹⁶ Litigation is ongoing in Slovenia as operators are challenging what they term regulators’ arbitrary and capricious bans against partnerships as a violation of the country’s constitutional right of freedom of enterprise. TRAI’s ban on differential pricing probably violates the Indian constitution right to contract.

It bears mention that extreme versions of net neutrality such as bans on zero rating and specialized services are being challenged in a number of countries, so TRAI should be wise not make telecom policy that violates **national laws and institutional goals**.

Countries have been very busy making net neutrality rules—under the pressure of Google-funded advocates, but no telecom regulator has conducted a regulatory impact assessment before promoting the policy. Should TRAI undertake the **rational, data collection process to gather evidence**, it could gain some credibility for its policy. However the process to do so will likely uncover that the ecosystem is competitive and that proactive net neutrality rules are not needed. I believe this is why regulators don’t use evidence to promote net neutrality policy, because there is none. See the comments from former FCC economist Tim Brennan who called the FCC’s Open Internet rules an “economics free zone” and then updated his comments to say that the order was “wrong, unsupported, and irrelevant.”¹⁷

¹⁵ For a policymaker’s guide to this approach, see <http://www.aei.org/wp-content/uploads/2016/06/Beyond-net-neutrality.pdf>

¹⁶ <http://www.techpolicydaily.com/communications/like-fcc-berec-bows-activists-open-internet/>

¹⁷ http://www.freestatefoundation.org/images/Is_the_Open_Internet_Order_an_Economics_Free_Zone_062816.pdf



One of the failings of net neutrality advocates is to define a clear vision of what should change when rules are in place. “Without Net Neutrality, the next Google would never get off the ground,”¹⁸ observes Save the Internet, a leading global advocate for net neutrality. If we take them at their word, we should see the next Google emerge from countries with hard net neutrality rules. But it never has. The fact of the matter is that the world’s internet traffic is increasingly concentrated to a few destinations. Countries with hard net neutrality rules experience an increase in the market share of the largest providers such as Google and Netflix. Moreover as my research shows, local content and app development declines. As such, TRAI needs to provide a **concise, clearly communicated, and widely understood** reasoning for why it needs such a policy that effectively bars market entry of competitors, denying them the ability to differentiate.

If the telecom regulator can make a coherent policy based one evidence with a supportable goal, then it should be able to **provide a framework for achieving the outcome and measure the value and benefits created by the policy.**

There is no doubt that regulators excel in increasing the paperwork required of telecom operators, but it should be mindful that any new rules are not burdensome. For example the FCC Open Internet rules fall especially heavy on small providers. One estimation is that one man-year of paperwork is required to comply. This puts small providers out of business, the opposite of the goal to create competition.

I know from having lived in India that it is a country with tremendous potential for excellence and self-determination. As such, TRAI should distinguish itself not by copy-pasting the policy recommended Google-funded Internet activists, but crafting an authentic, evidenced-based approach suitable for its national interest.

Sincerely,

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¹⁸ Press F. Net Neutrality: What You Need to Know Now [Internet]. Free Press. [cited 2016 Jun 20]. Available from: <http://www.savetheinternet.com/net-neutrality-what-you-need-know-now>