



Verizon Response to TRAI Consultation Paper No: 2/2015 on Regulatory Framework for Over-the-top (OTT) services

Verizon Communications India Private Limited (“VCIPL”) is pleased to submit its comments to the Telecom Regulatory Authority of India (TRAI) in response to the Consultation Paper No. 2/2015 issued by TRAI dated 27th March 2015. The subject matter of the present consultation paper is important and timely, as innovation combined with technology has brought to the market new service formats and offerings for Indian consumers, increasingly sophisticated networks and service platforms and, important for the purpose of this consultation, the need to balance the interests of all the stakeholders in the Internet ecosystem of help assure a continued flow of investment and innovation.

About Verizon

Verizon¹ has been operating in the Indian ICT market since 2008 and holds National long-distance (NLD), International long-distance (ILD) and Internet Service Provider (ISP) licenses in India. Verizon is a global leader in delivering broadband and other wireless and wireline communications services to consumer, business, government, and wholesale customers. Globally, Verizon serves 99% of the Fortune 500, including enterprise customers in 75 countries. Our global IP network reaches customers in 150 countries. Verizon also is a global leader in developing new and innovative services that run over those networks in the areas of cloud computing, machine-to-machine, telematics, security solutions, energy management, smart communities, connected homes, telemedicine, work-at-home applications and mobile commerce – just to name a few. Through continuous innovation, we are creating new markets and opportunities to drive growth and prosperity around the world.

I. Introduction

We appreciate the opportunity to provide input on this important TRAI Consultation Paper. Like all major ISPs in India, we support an Open Internet. As a provider of services in India and across the global Internet ecosystem, we are engaged and share innovative and sustainable ideas in a number of the government Internet policy inquiries and hope that our input will be helpful in this context.

During the last decade, India has witnessed rapid growth in its telecom sector. This growth could not have happened without investment from the private sector. The investment from the private sector similarly was only possible through the current process of liberalization of the regulatory regime in India. Although this growth has been rapid, we believe that there is still much potential waiting to be unlocked in the Indian market. This is because investment to-date has been hampered by regulatory burdens and uncertainty within the telecom sector. The Government of India has a unique opportunity to set the policy agenda in a way that will support telecom sector growth and add to India’s overall economic development. To see continued and accelerated investment and development in this market, India’s regulatory regime must keep to its current approach of liberalizing and moving towards the creation of a light-touch regulatory environment. The telecom market in India is the second-largest in the world after China, and has great potential for further investment and growth provided. However, market size alone cannot be solely relied on if the desired outcome is a competitive, innovative, developed and thriving Indian telecom sector: it is critically important that the policy settings are right as well.

¹ VCIPL is a unit of Verizon Communications, Inc.

In assessing the issues raised in the consultation, TRAI should recommend a policy approach that will enable India to achieve its goals of increasing broadband access, penetration and build-out; stimulating foreign investment; and promoting innovation. This policy approach should embody high-level principles: in general policies should be pro-investment and pro-innovation, future-proof and flexible, fit for purpose (proportionate), technology neutral, and should foster comparable consumer protections across sectors, where appropriate.

With regard to the foregoing and in the absence of a record of market failure we believe that the best approach would be to refrain from adopting specific regulations around either net neutrality or OTTs, and instead rely on high-level principles and existing tools in competition law and consumer protection. We understand that the Competition Commission of India may be examining certain alleged anti-competitive activities of some of the Indian telecom operators.² This potential investigation reinforces the point that existing laws, including the antitrust laws, are sufficient to protect against unlawful behavior. In addition, TRAI may consider recommending that the government convene a multi-stakeholder (e.g., government, ISPs, consumers, technical experts) entity on net neutrality and OTT issues to monitor developments and recommend any necessary actions.

In line with our presence in India as a provider of communication products and enterprise solutions, predominantly to large business and government customers, we have focused our response on the two broad categories -- OTT services and net neutrality -- pertinent to our activities, rather than responding to all the questions individually.

II. There is No Need to Establish a Regulatory Framework for OTT Services at This Time

We do not believe there is a demonstrated need for extending regulatory intervention to bring the OTT service offerings under a “telecom like” licensing regime. The transformative technological evolution and the innovation environment that led to it will not benefit from incrementally imposing existing sector-specific regulation on new services. Instead, this consultation provides an opportunity to consider deregulating the service offerings of TSPs to bring beneficial regulatory parity/equivalence and removing barriers to the service offerings of licensed telecom companies.

Now is not the time for establishing a regulatory framework for OTT services, as other key challenges continue to prevail, such as the low internet penetration in India. As per the Press Release No. 28/2015 dated 10th April 2015, the number of telecom subscribers (wirelines and wireless) are 987.30 Mn whereas the number of broadband subscribers is 97.37 Mn. The number of broadband subscribers in India is a fraction of the mobile penetration,³ underscoring the urgency of the need to review India’s present policies and initiatives to establish the proper foundation for the infrastructure investment necessary to boost broadband penetration.

Moreover, India’s competition and consumer protection laws should be sufficient to address potential harms that face the marketplace (as we are already seeing with the competition cases referred to above). Beyond this, there are good examples of case studies or models in other markets where competition issues have been successfully addressed through standing committees, industry principles and the like. This approach would enable the Indian government to adopt the right regulatory environment to stimulate investment, provide flexibility for differing business models and a wide range of commercial

² See “CCI probing Indian telcos violating net neutrality,” http://telecom.economictimes.indiatimes.com/news/industry/cci-probing-indian-telcos-violating-net-neutrality/46854200?action=profile_completion&email=priya.mahajan@hk.verizonbusiness.com&utm_source=Mail&utm_medium=ET_batch&utm_campaign=ettelecom_news_2015-04-09#/46854200?&_suid=1428559112014017390784385949837

³ TRAI Press Release No. 28/2015 dated 10th April 2015 on ‘Telecom subscription data as of 28th February 2015

arrangements, protect consumers and promote the adoption of broadband and innovative services – without the need for innovation and investment depressing regulation.

III. TRAI Should Recommend Measures to Increase Innovation Investment and Broadband and Internet Penetration

TRAI's recent recommendations on actions required to be taken both by the Government and the service providers to accelerate the proliferation and use of broadband in the country⁴ underscores the critical need for policies that enable investment and expansion of operators into new business models in the Indian ICT market. According to these recommendations, "India has a 15 per cent Internet user penetration and is ranked 142nd, way below some of its neighboring countries like Bhutan and Sri Lanka."⁵

TRAI has noted that against a target of achieving 175 million broadband connections by 2017, only 85.74 million have been achieved and that too with the current download speed definition of 512 kbps⁶ and concluded that India is far from reaching its broadband connection goals. There is, therefore, an urgent need to review present policies, the current state of implementation of building infrastructure required for penetration of broadband (the means) and the supporting software/apps that will provide the content.⁷

TRAI had noted in its earlier consultation **Paper no. 12/2014 dated 24th September 2014** that the primary elements of a proposed broadband ecosystem could be amongst other factors, an **enabling regulatory framework, a simplified licensing regime** and the development of locally relevant content and applications.⁸ We agree. There is huge potential and opportunity for further investment in increasing India's broadband infrastructure and penetration for delivery of a host of innovative services. TRAI should recommend policies that foster further investment and innovation in this sector.⁹ For example, one of way to promote network deployment is to further deregulate the licensed services to encourage buildout of broadband networks more fully throughout the country. Conversely, any attempt to change the regulatory framework by bringing more services under licensing regime would dampen the investor sentiment and suppress investment.

IV. TRAI Should Recommend the Adoption of a Regulatory Equivalence Approach

We recommend that TRAI consider adopting a regulatory equivalence approach that removes restrictions on telecom service providers (TSPs) that compete with non-regulated OTT providers of equivalent services. This essentially means offering the same treatment to the same services when offered by TSPs and OTTs. There is a compelling case for deregulation of the licensing regime further, so that TSPs and the OTTs can compete on a level playing field subject to no or minimal regulatory restrictions. This will have the salutary benefit of driving more broadband penetration and bringing innovative services to end users at competitive rates.

Some examples of the current lack of parity are illuminating. While OTT players offering communication services (voice, messaging and video call services) are not subject to restrictions on the interconnection

⁴ See, TRAI Recommendations entitled "Delivering Broadband Quickly: What do we need to do?" (17th April 2015) at <http://www.trai.gov.in/WriteReadData/Recommendation/Documents/Broadband=17.04.2015.pdf>.

⁵ Id. at ¶1.9, p. 4.

⁶ See, TRAI Recommendations entitled "Delivering Broadband Quickly: What do we need to do?" (17th April 2015) at <http://www.trai.gov.in/WriteReadData/Recommendation/Documents/Broadband=17.04.2015.pdf>

⁷ Id. at ¶1.8, p. 4.

⁸ <http://www.trai.gov.in/WriteReaddata/ConsultationPaper/Document/Consultation%20Paper%20on%20Broadband%2024Sep2014.pdf>.

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of closed user groups (CUGs) with the PSTN, TSPs, on the other hand, must adhere to the CUG/PSTN restrictions while offering similar services due to license terms and conditions. Similarly, the Internet telephony license restricts the interconnection of Internet telephony with PSTN/PLMN, whereas OTTs offering internet telephony are not subject to such restrictions.

Thus, there is an urgent need to review the current licensing framework to align it with emerging technology trends and remove the artificial restrictions that are imposed on the service offerings of TSPs. Using the above example, removal of the restrictions on CUG/PSTN interconnection would allow TSPs to compete straight up with OTTs, bringing with it all the benefits of a more robust competitive landscape.

Simplifying the licensing fee regime is also an important step to bringing regulatory parity. Under the current model, the TSPs' networks are leveraged for delivery of the OTT services, and TSPs are heavily regulated due to restrictive license terms and conditions, roll out obligations, security considerations, license fees and other compliance obligations. To be able to offer ICT services, TSPs need to opt for a specific service-based license and for each service category^{10 11}, a different license is required. Similarly, the license fee structure needs to be reviewed and the cascading impact of license fees needs to be removed to do away the impact of multistage assessment of license fees. In addition, the encryption terms and conditions in the license that restrict the deployment of encryption up to 40 bits without approval of DoT, need to be suitably amended to align with the emerging security landscape and technological advancements.

These are just examples of the improvements to the licensing model that would benefit the market players without adversely impacting consumers or competition. The guiding principle must be to bring regulatory parity to similar service offerings of OTTs and TSPs. And this must be achieved by making necessary changes in the licensing framework to enable seamless delivery of converged services in a technology and service neutral environment.

A. TRAI Should Support a Deregulatory Approach

Convergence of service is an important objective in the NTP-2012 and TRAI and the industry have an opportunity to translate this vision into affirmative action. One of the objectives of the policy is to identify areas where existing regulations impose unnecessary burdens and to then take remedial steps -- in line with international best practices -- to help propel India forward as a global leader in the development and provision of cloud services.

Deregulation of TSPs' service offerings bringing TSPs' and OTTs' services to par would assist with this objective. As TRAI has noted in its present Consultation Paper, broadband networks provided by TSPs

¹⁰ Broad categories of service-based licenses required for different kinds of services under the Unified License regime include the following:

- a. Unified License (All Services)
- b. Access Service (Service Area-wise)
- c. Internet Service (Category-A with All India jurisdiction)
- d. National Long Distance (NLD) Service
- g. International Long Distance (ILD) Service
- h. Global Mobile Personal Communication by Satellite (GMPCS) Service
- i. Public Mobile Radio Trunking Service (PMRTS)Service
- j. Very Small Aperture Terminal (VSAT) Closed User Group (CUG) Service
- k. INSAT MSS-Reporting (MSS-R) Service.
- l. Resale of International Private Leased Circuit (IPLC) Service

¹¹ The DoT currently imposes the following charges on licensee:

- an entry fee for acquiring the license
- a license fee as a percentage of AGR, paid on a quarterly basis
- spectrum usage charges as a percentage of AGR, paid on a quarterly basis.

are used by OTT players as platforms for the development of new businesses and in some cases competing for similar services.¹ NTP-2012 rightfully recognizes the need for review of the existing regime, the goal of stimulating healthy growth and the predominant role of the private sector in this field. There is a strong case for further deregulation in order to maximize the public good by making available affordable, reliable and secure telecommunication and broadband services across the entire country which TRAI should support.

V. TRAI Should Recommend the Adoption of a Principles-based Framework for Consumer Protection

In order to reach its goals, India should implement policies that create an environment in which providers in all parts of the Internet ecosystem are incented to invest and innovate. TRAI can best further this goal with respect to both the OTT and net neutrality issues in this consultation by recommending the adoption of a ***principles-based framework***, based on industry best practices and focused on consumer choice, competition, transparency, and effective multi-stakeholder processes. Using principles rather than prescriptive, detailed regulations will achieve the of consumer protection goals of net neutrality without exacerbating the risk of diminishing incentives for investment and innovation. This framework should focus specifically on the protection of individual consumer users, and as discussed below, should exclude enterprise services, VPNs, CDNs.

One “best practice” that TRAI should consider recommending is the creation of a multi-stakeholder entity to examine these issues over a multi-year period (minimum of three) and observe developments in India and elsewhere. Such an approach would enable the Indian government to fully vet the merits of different approaches before taking any precipitous action that might be counter-productive to its ultimate economic and policy objectives.

In the interim, TRAI should consider recommending that India consult with industry and other stakeholders to develop a set of high-level (self-regulatory) principles and identify mechanisms to address any anti-competitive behavior that might occur in the market. This co-regulatory and innovative approach, which has been highly successful in other jurisdictions such as Australia, would allow the government to act as a backstop, if needed, to address real world developments that harm competition or consumers on the Internet through the exercise of existing enforcement laws, whilst considering its ultimate approach to the policy issues.

VI. TRAI Should Not Support Prescriptive Rules As Such Rules Will Distort Markets and Harm Consumers

Verizon fully supports an open Internet and has publicly committed to ensuring that consumers can access any lawful content, services, and applications, regardless of their source. <http://publicpolicy.verizon.com/blog/entry/no-question-about-an-open-internet>

As TRAI correctly notes in its current consultation paper, the Internet is one of the most remarkable success stories in history. In less than two decades it has become a ubiquitous presence in our daily lives and a key driver of the global economy. The Internet is a complex ecosystem of interrelated actors who cooperate and compete with one another in myriad ways to meet consumers’ needs. Yet for all its global complexity, it operates amazingly well and continues to evolve — largely without the guiding hand of government regulation. The openness that has brought the Internet to where it is today should remain and Verizon fully supports that notion. However, we also firmly believe that a move to telecom-style regulation will be counter-productive and harmful to the long-term future of the Internet.

Prescriptive rules distort the functioning of competitive markets which ultimately harms, not helps, consumers. In contrast, an open Internet by its nature benefits consumers and the Internet ecosystem

generally and creates a virtuous circle of incentives and investment. And investment is what India needs to meet its goals for market development and broadband penetration. This is why we support the open Internet principles but not prescriptive rules. Indeed, a broadband provider that blocked lawful content, applications, or services would quickly harm its reputation in the marketplace and lose customers. The market provides effective discipline in this regard, and where a provider is truly misbehaving, the competition and consumer protection laws serve as potent reminders.

A. Enterprise Services Should be Excluded from Any Consideration of Net Neutrality

The debate around the Open Internet typically focuses on consumer protection and consumer access to the Internet and we believe that is the appropriate place for it to unfold and not in the enterprise or large business market.

The specificities of business service providers *and customers* (e.g., differing contract provisions and business needs) in the Internet and communications space means that net neutrality provisions serve little purpose and, more importantly, create the substantial risk of disproportionately impacting innovation and investment if applied to business service providers. The reasons for exclusion of enterprise services from the net neutrality discussion are multi-fold:

- First, the marketplace for these services is well-functioning and highly competitive.
- Second, enterprise services are typically sold to individual customers and are often contracted for on an individual case basis; consumer services are not individualized (other than through common differentiated service offerings) and are not offered through customized or individually negotiated agreements.
- Third, the nature of the services themselves is radically different in the enterprise space. Unlike mass-market consumer services, large business and enterprise services present various specificities that differentiate them from mass-market services which are significantly more complex (e.g., telecom services provided and multiple locations across countries, different access technologies, bundles of services, demanding Service Level Agreements (SLAs), to name just a few).
- Fourth, enterprise customers can take care of themselves and they typically have sophisticated knowledge of the technology and economic implications of the services they are buying.
- Finally, from a consumer protection perspective, terms relating to the required quality levels, detailed service transparency, technical characteristics, and penalties for noncompliance, are already addressed in large part under a contract. Thus, the extension of net neutrality obligations to the high-end enterprise market is unnecessary and could be harmful.

Most of these distinctions between “mass market” and “enterprise” services were captured by the FCC when it explicitly excluded enterprise services from the scope of its 2010 Net Neutrality ruling.¹² **Notably, the FCC defines** the scope of the Order’s rules as any broadband Internet access service provided to the mass market, and states: “The term (“mass market”) does not include enterprise service offerings which are typically offered to larger organisations through customized or individually negotiated arrangements.”¹³

A similar approach was taken in the UK where the voluntary code of practice as well as **Ofcom’s statement on Net Neutrality**, both refer to consumers only.¹⁴

¹² Federal Communications Commission, Report and Order on Preserving the Open Internet (December 23,2010), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-10-201A1.pdf.44-

¹³ Id. at ¶¶ 44-45.

¹⁴ BSG Open Internet Code of Practice (<http://www.broadbanduk.org/wp-content/uploads/2013/06/BSG-Open-Internet-Code-of-Practice-amended-May-2013.pdf>) which refers out to Ofcom’s November 2011 statement on NN (<http://stakeholders.ofcom.org.uk/binaries/consultations/net-neutrality/statement/statement.pdf>).

For all these reasons, Verizon urges TRAI to recommend that enterprise services be excluded from any net neutrality framework that is developed.

B. Traffic Management Practices Benefit the Consumer and Should Be Allowed

Traffic management practices play a key role in enhancing consumer experience and making networks more efficient. Generally, traffic management practices are used by operators to efficiently manage their network resources (e.g., to manage congestion) or for a variety of other circumstances, such as network integrity and delivery requirements. Considering the benefits of traffic management practices and given the fast pace evolution of our industry, drafting an exhaustive list of reasonable traffic management practices would be counter-productive. Moreover, to underscore the importance of excluding enterprise services from any net neutrality framework, the overlay of regulatory-driven traffic management requirements on top of negotiated commercial quality of service and SLA requirements would present a daunting – and unnecessary -- compliance challenge to service providers **and** their commercial customers.

VII. Clarifications Regarding “Verizon Practices” Referenced in the Consultation Paper

We note that TRAI in its consultation paper has made references to certain practices followed by Verizon in the US with respect to network traffic. To ensure Verizon’s actual practices are properly described, we request on behalf of our US affiliate that the information in Annex-A be placed into the record.

VIII. Final Recommendations/Conclusions

- Implement policies that create an environment in which providers in all parts of the Internet ecosystem continue to have the incentives they need to invest and innovate.
- Recommend adoption of a principles-based framework based on industry best practices focused on consumer choice, competition, transparency, and effective multi-stakeholder processes.
- Recommend against a prescriptive, detailed set of regulations.
- Consider deregulation and a review of the existing licensing regime to bring beneficial parity in the service offerings of OTT and TSP’s.
- Focus any recommendations and frameworks specifically on the protection of individual consumer users, and exclude enterprise services.
- Consult with industry and other stakeholders to develop a set of high-level, self-regulatory principles and establish mechanisms to identify and address any anti-competitive behavior that might occur in the market (to supplement existing enforcement mechanisms).
- Create multi-stakeholder entity to examine these issues over a multi-year period (a minimum of three) and observe developments in India and elsewhere.
- Take note of the jurisdictions in which co-regulatory approaches have been successful, such as in Australia & UK.

ANNEX-A

References to Verizon's Practices

I. Verizon Has Never "Throttled" Netflix Traffic

On page 87 of the Consultation Paper, TRAI incorrectly cites Verizon as "throttling the speeds for Netflix streaming." This is not true now, nor has it ever been true. This is an oft-repeated misperception based on inaccurate media reports in 2013 and 2014. The reality is that Netflix sends out an unprecedented amount of traffic. Before 2014, Netflix did not have arrangements in place to deliver this massive amount of traffic to Verizon through connections that can handle it. Instead, Netflix tried to deliver that traffic to Verizon through a few third-party transit providers with limited capacity over connections specifically to be used only for balanced traffic flows.

At all times, Verizon was willing to negotiate reasonable commercial arrangements with Netflix or its transit providers to ensure a level of capacity that would accommodate Netflix's volume of traffic. In fact, in April 2014, Netflix and Verizon reached an agreement for direction interconnection paths capable of handling Netflix's unprecedented traffic volumes into Verizon's network. Those paths were implemented by the end of 2014. Verizon has similarly recently entered into a major interconnection agreement with Level3 Communications, further underscoring the fact that Internet service providers are negotiating business agreements that allow exchange of Internet traffic in a scalable, resilient manner. See <http://publicpolicy.verizon.com/blog/entry/level-3-and-verizon-enter-into-interconnection-agreement>.

II. Verizon Wireless' "Network Optimization" Practice is Different from "Throttling" and is Application Agnostic

On page 105 of the Consultation Paper, TRAI incorrectly states that in the US Verizon Wireless engages in "differentiated throttling" of the speeds of its unlimited data users based on the specific type of content they use. This is not correct — the practice at issue is different from throttling and is application agnostic.

The Consultation Paper refers to Verizon Wireless' "network optimization" practice. This practice, which has been in effect on our 3G wireless network for more than three years, uses sophisticated techniques to minimize the effects of congestion and ensure the equitable use of finite spectrum resources across our customer basis. This practice is narrowly tailored to apply (1) only at particular cell sites experiencing unusually high demand; (2) only for the duration of that high demand; and (3) only to a very small percentage of 3G customers who are heavy data users and are on plans that do not limit the amount of data they may use during the month without incurring added data charges (and otherwise have no incentive to limit usage during times of unusually high demand).

Verizon Wireless's network optimization practice is different from throttling. Whereas throttling slows traffic to some pre-determined maximum speed, Verizon's network optimization practice simply assigns proportionally fewer network resources to handle the traffic of the customers who are subject to network optimization when those customers are connected to a congested cell site. This can result in the data traffic of those customers queuing up, thus slowing speeds to some extent. The length of the queue, and the degree to which speeds will be slowed, will depend on how congested the cell site is at the moment, how many customers who are subject to network optimization are connected to the cell site at that time, and the data demands of those customers at that time.

In addition to being different from throttling, Verizon Wireless's network optimization practice is application-agnostic as opposed to application-based. Verizon Wireless's website clearly explains that

network optimization “manages data traffic without any identification, consideration or discrimination of any particular end-user application or content.”¹⁵

¹⁵ <http://www.verizonwireless.com/support/network-optimization/> (first paragraph under “Explanation of Network Optimization Practices for Customers with Unlimited Data Plans”).