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The following comments are submitted to TRAI by Citizen consumer and civic Action Group (CAG) on Consultation Paper on Data Speed under Wireless Broadband Plans

Q.1 Is the information on wireless broadband speeds currently being made available to consumers transparent enough for making informed choices?

Ans.: No, the information on wireless broadband speeds currently being made available to consumers is not transparent enough for consumers to make informed choices. While on the one hand the Quality of Service parameters are too technical for consumers to comprehend, on the other, use of misleading terms like “upto” when theoretical speeds are rarely delivered, “unlimited” for data limits are confusing and create dissatisfaction among consumers.

Thus, information asymmetry should be dealt with by providing accurate information in a simple and transparent manner so that consumers are empowered to make informed decisions while opting for a broadband plan.

Q.2 If it is difficult to commit to a minimum download speed, then could average speed be specified by the service providers? What should be the parameters for calculating average speed?

Ans.: Considering India’s vast and varying topography, the dynamic environment of wireless data transfer mode and the very design of 2G/3G/4G standards, a minimum download speed for a wireless broadband consumer at any particular time may be a challenge for TSPs/ISPs to commit.

However, calculating an aggregate average download speed across consumers within a specific geographic region and at varying times is surely a feasible option. TSPs/ISPs would anyways be having these numbers so as to work on both adequate Backhaul and Radio Access Network (RAN) capacities and provide a certain predictable average speed to consumers based on the statistical multiplexing of connections. Two benchmark measurement sets may be explored to assess the speeds being offered:

- a. Upper-Bound: TSPs/ISPs may conduct their own measurements by downloading data on a long-lived Transmission Control Protocol (TCP) connection as specified in the measurement methodology prescribed by the 2012 Wireless Data Service Regulations issued by TRAI. These speeds, observed over multiple tests and across multiple locations, will give an upper bound to the speeds offered because such measurements in controlled test environment ensure that server or user device are not bottlenecks. Thus, speeds attained are entirely dependent on the combined effect of Backhaul and RAN network capacity.

Trustees

Mr. Sriram Panchu (*Senior Advocate*)
Dr. Arjun Rajagopalan (*Surgeon*)
Dr. R. Hema (*Associate Professor*)

Dr. Suchitra Ramkumar (*Doctor and Teacher*)
Dr. George Thomas (*Orthopaedic Surgeon*)
Dr. C. Rammanohar Reddy (*Economist and Editor*)
Mr. Keshav Desiraju (*IAS, Retd.*)

Advisors

Ms. Tara Murali (*Architect*)
Mr. N.L. Rajah (*Advocate*)



- b. Lower-Bound: TSPs/ISPs may measure the speeds experienced by different consumers by instrumenting the data downloaded during active times of the connection. This information is already collected by them for billing and traffic shaping purposes as per the location-specific plans purchased by consumers. These speeds will give a lower bound to the speeds offered because user device, server bandwidth or application requirements may not utilize the network in full capacity, thus, projecting an estimate lower than what the network infrastructure may provide.

For both measurements, distribution may be considered in the form of deciles¹ or quartiles², rather than just the average. Difference between the two distributions will give some sense of a measure of unused capacity, which may ideally differ by more than a 50% ratio. With such a measurement technique, a reasonable commitment from providers may be taken to rationalise values. It may be noted that such commitments may not be evaluated on per-consumer or per-connection basis, but may be averaged-out across consumers and across times.

Q.3 What changes can be brought about to the existing framework on wireless broadband tariff plans to encourage better transparency and comparison between plans offered by different service providers?

Ans.: Labelling of broadband services and disclosure of comprehensive information about products being sold are the two best ways to improve transparency.

Labelling will help in bridging the information gap between consumers and service providers and educate consumers on the conditions of broadband services. It will encourage competition for better services among providers. It is important that labels are designed to offer information in a simple, standard format so that consumers are educated and are able to make informed choices.

Service providers must disclose complete information to consumers about mobile internet services, at the time of sales as well as on their websites. Stringent rules and penalties must be imposed against misleading advertisements by service providers. The reported performance must be compared with the performance that was originally advertised to understand the differences arising between promised and achieved performance.

In addition, performance ranking system may be introduced in order to instill competition and thus enhance quality of service. Certain ranking parameters may be fixed and the values mentioned on the labels. Ranks may be presented as star ratings for each service provider.

Q.4 Is there a need to include/delete any of the QoS parameters and/or revise any of the benchmarks currently stipulated in the Regulations?

¹Decile - Each of ten equal groups into which a population can be divided according to the distribution of values of a particular variable.

²Quartile - Each of four equal groups into which a population can be divided according to the distribution of values of a particular variable.



Ans.: There is no need to delete any of the QoS parameters currently stipulated in the regulations.

Q.5 Should disclosure of average network performance over a period of time or at peak times including through broadband facts/labels be made mandatory?

Ans.: Disclosure of said information shall be made mandatory so that consumers can be made aware of actual network performance and make rational decisions and selections based on such information. They can also compare the advertised QoS with actuals.

Pilot projects may also be considered by TRAI and operators to assess the effectiveness and efficiency of such labels. It is extremely important to get a buy-in of all the relevant stakeholders i.e. industry and consumers. Pilot projects would provide TRAI with this opportunity to be able to receive their responses/concerns and accordingly, be able to finalise the strategy for implementation of the labels.

Q.6 Should standard application/websites be identified for mandating comparable disclosures about network speeds?

Ans.: Yes, but use of existing platforms like TRAI Website, TRAI MySpeed App, brochure inserts in sim-card packs, social and television media commercials by service providers, could be used to mandate comparable disclosures about network speeds, as this would help consumers to understand better and make informed decisions.

Q.7 What are the products/technologies that can be used to measure actual end-user experience on mobile broadband networks? At what level should the measurements take place (e.g., on the device, network node)?

Ans.: According to the paper, M-lab has developed a tool called `MobiPerf` which measures network performance on mobile platforms. Through this open source platform, a user can measure the network's throughput and latency, as well as other useful network measurements. Also, Whitebox by SamKnows³ is a prominent solution used by many regulators and consumers globally to capture QoS experienced by consumers. TRAI may explore this option to measure user experience.

The tools developed to identify the traffic management practices deployed by service providers range from checking differentiation based on application in use (e.g. Chkdif, Glasnost) to content and routing-based differentiations in backbone (as opposed to access) ISPs (e.g. Net Police).

Reporting Level: The spatial granularity for existing QoS reports must be increased to allow for good comparisons. Currently these reports are prepared at circle-level and expanding them to district, city and taluk levels, categorically separated into rural/urban areas, should provide greater information to consumers specific to their geographies.

³ SamKnows - A global broadband measurement performance provider that allows consumers to measure and improve the quality of their Internet experience. Accessible at <<https://samknows.com/products>>



Q.8 Are there any legal, security, privacy or data sensitivity issues with collecting device level data? If so, how can these issues be addressed? Do these issues create a challenge for the adoption of any measurement tools?

Ans.: Privacy and security issues may arise in collecting device level data. There are no security or privacy issues in reporting user performance in aggregate, measured through the network. However, it should be ensured that consumer consent is taken into account while sourcing user-level information to protect privacy and maintain transparency in the system. Also, there might be applications collecting sensitive data than required. Thus, it is important to ensure that such applications are not used.

Q.9 What measures can be taken to increase awareness among consumers about wireless broadband speeds, availability of various technological tools to monitor them and any potential concerns that may arise in the process?

Ans.: Exclusive training and awareness programmes oriented towards importance, benefits and usage of broadband services, data speeds, broadband labels, various technological tools, etc. must be organised for consumers by TSPs/ISPs, TRAI, Department of Telecom (DoT), and Consumer Action Groups as recognised by TRAI pan India. TSPs/ISPs may proactively incorporate labels at the point of sale, place detailed information on their websites, send regular alerts to users, etc. to not only bring transparency but also help consumers build an understanding about different performance parameters, billing details, etc. TRAI may strategize promotional campaigns to build awareness.

Q.10 Any other issue related to the matter of Consultation.

Ans.: **Speedy & Seamless Grievance Redressal:** It has been repeatedly voiced by TRAI and consumer groups that the quantum of grievance related to data speeds and the time-effort taken to resolve the grievance is not cost-effective and unfavourable towards consumers as per current mechanism, leading to high dissatisfaction and negative experience. Hence, broadband labels may be provisioned and implemented in such a manner that speeds up the grievance redressal mechanism and consumers are able to transact seamlessly to resolve their complaints and concerns.

Periodic Review of Labels: It is also vital to maintain standards and quality once the label is introduced. It is important to note that technology is evolving rapidly. Thus, to keep pace with the changes, the labelled wireless broadband service should be regularly assessed to determine if an increase in efficiency criterion is required, along with monitoring quality features and evaluation of QoS parameters.