Response
to
Consultation Paper on Amendment to the Standards of Quality of Service for Wireless Data Services Regulations, 2012

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Question 1: What are your views on prescribing benchmarks for minimum download speed? Please give your comments with justification.

I submit to the Telecom Regulatory Authority of India (hereforth referred to as "Authority") that prescribing benchmarks for minimum download speed is **in the interest** of the Indian telecom end-user. It is **commendable** that the Authority is encouraging the **paradigm shift** from 'volume of data' guarantees to 'speed of data services' guarantee by TSPs.

Moreover, consistent with Section 2.4 for Chapter 2 of the Consultation Paper on Amendment to the Standards of Quality of Service for Wireless Data Services Regulations, 2012 (hereforth referred to as "Consultation Paper"), it is proposed that 'speed of data services' mandate should be accompanied by **'expected end-user experience'** benchmarks as well.

Justification: Following is the motivating factor for the above suggestion:
- *End users Expectations*: Internet-based applications (YouTube, Google, WhatsApp) are the most widely used applications by Indian mobile Internet users. Most telecom end users are concerned with how well Internet applications work on their mobile connections. They are not motivated by the number of bits (in millions) their TSP guarantees per second.

Proposed Framework: The following framework may be adopted by the Authority to mandate 'expected end-user experience' and not just 'minimum download speed':

- Nielsen India, in its October 2013 report (http://goo.gl/QF382v), ranks the following five Internet-based smartphone applications in order of their usage in India:
  1. WhatsApp
  2. Facebook
  3. Google Play Store
  4. Gmail
  5. YouTube
- In general, the entire set of Internet applications in use today can be categorized into:
  - video streaming
  - audio streaming
  - VoIP & messaging
  - social media & web browsing
  - file transfer

- Given the usage of the above applications, TSPs have launched special packs to the effect e.g. Airtel Facebook Pack, and RCOM WhatsApp plan.
    - These promotions can be perfect vehicles for the Authority & TSPs to encourage a *paradigm shift from 'volume of data' guarantees to 'experience of data services' guarantee*.
- Suggested Metrics:
    - Buffering instances while watching Standard Definition YouTube videos, in place of 'Minimum 1 Mbps speed' guarantee.
    - Maximum time to send camera-clicked picture messages on WhatsApp, in place of 'Minimum 1 Mbps speed' guarantee.
    - Webpage response times, in place of 'Minimum 1 Mbps speed' guarantee.

NOTE: It is recognised that primitive test measures that include download/upload of test files between test device & servers would prove insufficient for the purposes of QoS monitoring by the Authority. Specialized test softwares that enables the afore-suggested paradigm shift - from download speeds to user experience - would, therefore, need to be developed.

Question 2: Should the service provider be mandated to inform the minimum download speed to customers along with each tariff plan? Please give your comments with justification.

In light of the response to Question 1 above, I urge the Authority to consider mandating TSPs to inform customers about download speeds as well as expected user experience. TSPs should be mandated by the Authority to guarantee a minimum level of pleasant 'user experience' and not 'speeds', per se.

Promotional channels of the TSP should be expected to inform end-users of the expected experience of using most commonly used Internet applications on the lines of the suggested metrics listed in the 'Proposed Framework' section of the response to Question 1 above.