



19th May'2014

Vodafone's Response on Amendment to "The Standards of Quality of Service for Mobile Data Services Regulations, 2012"

The Authority in its Consultation Paper has raised the following issues:

Q1. What are your views on prescribing benchmarks for minimum download speed as above? Please give your comments with justification.

Q2. 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.

1. In this regard, we would first like to submit that the minimum download speed that is reported by the service providers in the quarterly reports, is measured in a stationary mode under controlled test conditions as per the measurement methodology and measurement setup as specified by the Authority in the Standards of Quality of Service for Wireless Data Services Regulations, 2012 (26 of 2012) on 4 December, 2012.

Under the above regulations, the TSPs are mandated to install a measurement set up comprising of servers and test probes to measure, inter alia, the minimum download speed being provided for each data plan offered by the TSPs in the licensed service area.

The download speed in these regulations is defined as the data transmission rate that is achieved for downloading a test file from a test server to a test device. Further, the minimum download speed should be calculated from test calls made according to the measurement set-up. Test calls are to be made to weigh the results according to the patterns of real traffic. Minimum download speed shall be the average of the lower 10% of all such test calls.

2. We submit that the reported data speed cannot be achieved/ensured in an uncontrolled environment on account of a variety of factors that are beyond the control of the service provider.
3. The most significant constraint that is faced by the operators is the **paucity of spectrum**, which is the most fundamental resource. The increased proliferation of smart phone devices is fuelling the growth in data services. However, with only one carrier of 2.1GHz spectrum and limited 900/1800MHz allocations, the TSPs are being constrained in making available adequate and ample capacity to provide assured minimum download speeds to



their consumers. We expect this spectrum constraint to become more acute as rich media content drives data traffic on the network.

4. Then there are a series of network and **user related factors** that are unique to the nature of wireless technologies that could have an impact of the download speeds that are experienced by the consumer.
 - a. **Variability in access environment** – user experience will vary whether the usage environment is indoor, outdoor, at a distance from or close to the BTS, etc. Unlike fixed data networks, in a mobile network that is used for voice and data, the end user is highly mobile, and hence his experience of speed is highly dependent on the radio conditions. As we know and understand, RF conditions vary significantly based on obstructions, height, vehicular traffic, indoor/outdoor penetration losses and other reasons, which are beyond the control of a service provider. Hence guaranteeing a minimum download speed for the user will not be possible.
 - b. **Network load** - Number of subscriber browsing internet at the same time, peak /off-peak experience will vary, type of data traffic, etc. In events of high user densities (stadiums, conferences, hotel events etc.), the capability of the network is stretched to the maximum, and even with significant capacity augmentation, it becomes very difficult to provide a minimum speed to the user.
 - c. **Device related constraints** –user experience is highly dependent on the capability of the handset used, applications running on the device, etc. On the same network, a user using two different handsets of different capability will experience the network differently. Hence specifying a generic minimum speed for the user will not be appropriate.
 - d. Both 2G and 3G networks are used simultaneously for voice and data. Voice being a real time service, is given priority in case there is a resource crunch, which will have an impact on the end user data experience. Hence guaranteeing a minimum speed is not viable
 - e. The end user data experience is also dependent on the content accessed and therefore the content provider setup (infrastructure, dimensioning of number of users accessing his page at the same time etc.). Hence it is difficult to specify a minimum speed for this user experience. For example, you will have certain websites (news portals during election results, cricket websites during important cricket matches, railway booking websites during morning hours etc.) which will be simultaneously accessed by a large number of people, which will affect the end user experience. The mobile network does not have a role to play in this affecting of the user experience.

All the above are user dependent variables and beyond the control of the service provider.



5. It may also be noted that there are **no standard ways in which customers' measure experienced throughputs**. Average throughput experienced by a customer (such as downloading a file, watching a HD video) is different to instantaneous throughput ([Speedtest.net](#) among others) measured by different tools.
6. Moreover, it may also be appreciated that **minimum download speeds are more relevant in case of fixed broadband services** where the access environment for the customer is static, and cannot be applied to mobile given the unique feature of wireless as noted above. It is reiterated that unlike fixed line connections, in the case of mobile data, the customers will be highly mobile and will be accessing data from multiple locations. Since, the mobility of the consumer cannot be restricted his experience of speed is highly dependent on the radio conditions and hence the data speed may fluctuate across locations and time (peak/non-peak hour) due to various factors which are beyond the control of the service providers.

In view of the above, we believe that it will **neither be possible nor desirable to prescribe a minimum download speed** and trying to specify the same **could only lead to misleading and confusing the customers**. It is submitted that if such speeds were to be prescribed, they would have to done with multiple disclaimers and caveats which will defeat the purpose of mentioning minimum throughput and only confuse customers.

For the same reasons, we submit that it will **not be desirable to mandate the service provider to inform the minimum download speed to customers along with each tariff plan**.

It is submitted that as per the current practice TSPs are **offering data speed on a best effort basis** to all customers. Throughput differences are **based on the bearer (2G/3G/4G) which are well understood by customers**. Mentioning speeds for each plan will push competing operators towards traffic management to offer better speeds on high value plans thus resulting in lower than currently experienced throughputs on other plans, since cell site level capacity will remain a constraint.

It may also be noted that **given the intense competition nature of the market**, TSPs are under severe **competitive pressure to maintain the QoS** not only to retain the existing subscriber, but also to attract new subscribers. We therefore believe that Quality of Service (QoS) **ought to continue to be driven by market forces rather than by Regulatory intervention**.

In view of the above, we request that the **Authority should not prescriber a minimum download speed and existing practice should be allowed to continue**.



New Delhi
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