

Subject : Response to Amendment to the Standards of Quality of Service for Wireless Data Services Regulations, 2012

To,
Shri A. Robert J. Ravi,
Advisor (CA & QoS)
Telecom Regulatory Authority of India

Sir,
Please find my views below on consultation paper

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

At a time when Indian market is getting ready for 4G launches by telcos, it is an essential need of mobile broadband market to *atleast* offer reasonable consistent download speed to 3G/2G customers before they move to next frontier.

There exists no point jumping ladder in terms of technology jargon of 4G without providing actual basic experience to consumer of 2G/3G.

Benchmarks for minimum download speed can be provided into two buckets as recommended by TRAI in consultation paper.

To derive minimum download speed required for experiencing better internet access, we can analyze bandwidth need for applications using 2G or 3G.

Most commonly applications used today through 2G are Social Apps like WhatsApp, Videos driven mainly through Youtube, Social sites like Facebook, Twitter, Skype/Vibers for video calling and Websites for browsing.

This list gets further expanded by new applications like Gaming, streaming radio, etc

Below are internet speed suggested for various applications:

Skype recommend atleast 30kpbs for calling and 128kpbs for video calling

Call type	Minimum download / upload speed	Recommended download / upload speed
Calling	30kpbs / 30kpbs	100kpbs / 100kpbs
Video calling / Screen sharing	128kpbs / 128kpbs	300kpbs / 300kpbs
Video calling (high-quality)	400kpbs / 400kpbs	500kpbs / 500kpbs
Video calling (HD)	1.2Mbps / 1.2Mbps	1.5Mbps / 1.5Mbps
Group video (3 people)	512kpbs / 128kpbs	2Mbps / 512kpbs
Group video (5 people)	2Mbps / 128kpbs	4Mbps / 512kpbs
Group video (7+ people)	4Mbps / 128kpbs	8Mbps / 512kpbs

Source: Skype

For accessing quality video, speed of min 60 KB/PS download speed is required which goes upto min of 350kpbs for 720p videos

Below are few bandwidth requirements as suggested by American Regulator FCC

Email	0.5
Web browsing	
Web searching, navigating government websites	0.5
Interactive pages and short educational videos	1
Streaming audio	Less than 0.5
Fiber optic (VoIP)	Less than 0.8
Watching video	
Standard streaming videos	0.7
Streaming feature movies	1.5
HD-quality streaming movie or university lecture	4
Video conferencing	
Basic video conferencing	1
HD video conference and telepresence	4
Gaming	
Game console connecting to the internet	1
Two-way online gaming in HD	4

Source: FCC

If we analyze need for most commonly used applications, it is apparent that minimum of minimum of 1mbps for 3G internet users

India and Mobile internet target

Although India is one of the fastest growing mobile market in the world, however it should also be noted that India also has lowest average Internet speed in Asia-Pacific.

As per study from Akamai, India had the lowest rate of high broadband adoption among qualifying countries, at 0.4 percent, even after a 31 percent quarterly increase.

For India to achieve a target of 175 million broadband connections by 2017 and 600 million by 2020, it is important that telcos focus on improved customer experience through fast and consistent internet speed to provide an accelerated 'Pull-in' of prospective mobile broadband users.

Lack of a fast internet experience will be big deterrent in mobile internet adoption in India.

Countries like South Korea today are today providing speed of 200mbps whereas country like Singapore are also including speed test to be conducted for mobile internet at min speed of 50km/hr. At a time when India is benchmarking against global peers in terms of telecom market growth and revenue potential, it is also important to benchmark in customer experience and speed.

While Upload minimum speeds may also be important to few of users, download speed plays more importance to majority of users, therefore we can consider only download speed while prescribing minimum speed.

Recommendation:

Based on above market need, Indian mobile internet scenario and consumer interests, it is recommended that minimum mobile internet speed be as proposed by TRAI:

- CDMA 1X: 56 kbps
- CDMA HSD: 512 kbps with atleast 95% availability for 2G
- CDMA EVDO: 1mbps with atleast 95% availability for 3G
- GSM 2G: 56kbps
- GSM 3G: 1mbps with atleast 95% availability for 3G

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

Customer education is very important to ensure fair implementation of regulatory requirements. There is lot of confusion today in marketing message by telcos to the customers. Say, customer opting for 1mbps does not get minimum internet speed of even 512kbps leading to lower customer experience.

Marketing internet plans in a fair manner including minimum internet speed will help customer choose the 'right' plan based on applications used.

For example, UK's Office of Communications ("OFCOM") and Hong Kong's Office of the Telecommunications Authority ("OFTA") have introduced voluntary codes of practice for their ISPs to disclose the typical broadband Internet access speeds that they provide and the surfing conditions under which such speeds are likely to be achieved.

Second, all marketing brochures/pamphlets should be mandatory marked with minimum speed at all point of sale and customer should be clearly informed about the policy including FUP(Fair Usage Policy).

India has vast youth market segment who are active users of mobile internet and willing to experiment with new data services (and even pays for high value plans) but if they don't get right customer experience due to lack of minimum speed, it is only going to kill prospective business for telcos from this huge potential market segment.

Same is the case of high ARPU data users of corporate and private business world wherein recurring revenue potential is high for operators but if a minimum threshold speed is not provided, telcos are only putting a barrier to fast growth of data usage.

At a time when QoS is becoming an important benchmark for any organization, Telcos in India too should focus on right 'speed experience' to their customers using telecom quality standards like TL9000.

Priyank Chandra
Citizen of India