

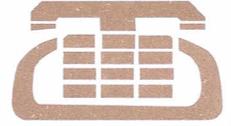
महानगर टेलीफोन निगम लि०

(भारत सरकार का उद्यम)

Mahanagar Telephone Nigam Ltd.

(A Government of India Enterprise)

CIN: L32101DL1986GOI023501



No: MTNL/RA/TRAI CP/CMTS-QoS/2016

Dated 16.09.2016

9/15

To

Pr. Advisor (NSL),

TRAI, New Delhi.

Sub: TRAI Consultation paper on " Review of network related Quality of Service standards for Cellular Mobile Telephone Service".

Sir,

Kindly find enclosed herewith MTNL's response on the consultation paper on "Review of network related Quality of Service standards for Cellular Mobile Telephone Service" as **Annexure-I**.

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DE(RA)

Encl: As above

Adn (QoS)
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SPR (QoS-5G)
TO (QoS)
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प्रधान सलाहकार (एन.एस.एल.)
डायरी सं. 1479
दिनांक 22/9/16

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22/9/16

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आप हमारे साथ हिन्दी में भी पत्राचार कर सकते हैं।

ANNEXURE-I

MTNL's response on consultation paper on " Review of network related Quality of Service standards for Cellular Mobile Telephone Service"

Q.1: In case QoS is mandated at a sub-service area level, which option (LDCA-wise or District Headquarter/ city/ town-wise or BTS-wise) you would recommend? Please comment with justifications.

Reply :

The QoS should be Licensed service area wise because a TSP is never specific to a district or a BTS and dividing LSA into sub- service area level will complicate the measurement of QoS:

Q.2: How should the call drop rate calculated – either at the Licensed service area level calculated during TCBH, or calculated during the Cell Bouncing Busy Hour (CBBH) at BTS level should be the benchmark? Please give your views on each parameter, with justification.

Reply:

TCBH measurement is network level which is basically the identical hours each day, during which highest average traffic is measured; whereas CBBH is cell level measurement for a particular day. Considering the fact that the busy hour may be different for the BTSs serving commercial & residential areas, in our opinion, the Time consistent busy Hour (TCBH) which is network level will give more realistic figure than the CBBH which may change daily for a particular Cell.

Q.3: How should the benchmark for the parameters be revised? Should it be licensed service area wise or district wise or BTS-wise or a combination? In such cases what should be the benchmarks? How should the benchmarks be measured? Please give your views on each parameter, with justification.

Reply:

The benchmark for the parameter should be Licensed service area wise. Various KPIs may be as per below:

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- I. **BTS outage in Hours:** BTS outage affects the signal coverage of intended coverage area and affect CSSR, DCR and provide poor customer experience. Present benchmark of <2% may be continued for better user experience.
- II. **Worst affected BTS having >24hrs outage:** As mentioned above this affect the KPIs in longer duration due to BTS outage more than 24hours in a month. Present benchmark of <2% is OK and same may be continued.
- III. All other parameters CSSR, SDCH blocking rate, Voice quality, TCH congestion may be continued with same benchmark.

Q.4: How could the network parameters be technology agnostic? What are the parameters and benchmarks that are required to be defined? Please give your views with justifications.

Reply:

Existing model should be continued instead of new model .A generic quality of service (QoS) model that is not dependent on network technology is used to support QoS for communication networks utilizing different network technologies. QoS parameters are exchanged with the serving network and are used while exchanging traffic with the serving network.

Q.5: Do you think it is essential to mandate the TSPs to set the RLT parameter? If so what should be the criteria to set the value and the value that needs to be set. Please comment with justifications.

Reply:

Radio Link Time-out (RLT) parameter enables recovery of Radio link of mobile handsets which are getting out of sync from the mobile network. This parameter is essential for mobility management in GSM, as the RF conditions of the mobile handset changes dynamically. While mobile is in the cell edge or experiencing sudden fading/with handset of poor Rx sensitivity, the cell RLT parameter configured by TSP provides few seconds time (as per network setting of the TSP) to sustain the call till RF conditions improve. Hence, in order to turn back the mobile handset to normal RF conditions, a TSP's sets a time-out value for the radio link to refresh and come back to working condition.

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RLT parameter depend upon Traffic , Urban / Rural area where traffic pattern is different.

As per existing arrangements, Telcos can increase or decreased the timeout value depending upon the requirement. Though the RLT value (time out value) is normally set up as per the network topology / configuration, setting up high values for the same leads to customer dissatisfaction & annoyance.

Accordingly, some optimum value may be suggested by TRAI for this parameter which can be followed by the TSPs.

Q.6: Do you think it will be appropriate to calculate call drop rate through CDR meta data analysis? If so, what should be the benchmarks for such call drop rates calculated? Please comment with justifications.

Reply:

CDRs are metadata (data about data) that capture information about subscribers usage data which inter alia includes an identification code, time & duration of call, location of the handset & mobile tower that routed the call for both caller and receiver etc. Further, Large operators collect billions of CDRs per day. As this accounts to be a huge volume of data handling for identification of faulty RF network element causing call drop, it may not be preferred.

Further, Call drop analysis using CDR will be of little help in identifying customers who experience call drop within short duration of establishment of call ,due to poor network coverage or having handset with poor receive sensitivity.

Q.7: Do you think calculation of customer satisfaction index will help in QoE of the consumer? If so elaborate the methodology of the calculation of such indexes. What are the latent variable that need to be defined and how are they to be calculated? Please comment with justifications.

Reply:

QOE (Quality of Experience) is often used nowadays to express the purely subjective nature of quality assessments in telecommunications and its focus on the user's perspective of the overall value of the service. In our opinion, in

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addition to offered QoS, the QoE largely depends on various other factors like the user's environment, his expectations, his income, social status, the nature of the content needed along with its importance, tariff of services offered, service delivery, etc. **Accordingly, the area of prime focus here should be the actual network performance with good QoS standards as per the benchmark.**

The QoE may be dealt separately and be seen in larger perspective as it involves other parameters also. **Further, the Existing methodology for measuring customer service quality index is fine & may be continued.**

Q.8: What are your views on introducing a graded financial disincentives based on performance and what should be such quantum of financial disincentives for various parameters? Please comment with justifications.

Reply:

The existing quantum and method of calculation for financial disincentives appear to be logical and we feel no need to modify the same.

*Chauhan 16/09/16
DE(PA)*
