RedX Plan Questionnaire

The following questions pertain to 4G network only and data may be furnished for Delhi LSA and the month of June 2020, unless otherwise stated in the question.

1. You have mentioned that QCI 6 is being used to give priority and faster speed to RedX subscribers. However, 3GPP specifications TS 23.203 which are related to Policy and Charging Control Architecture, has a table for QCI defining their standardized characteristics, and a note of this table for QCI 6 indicates its purpose is for Multi-Media Priority Service (MPS). "Multi-Media Priority Service" (MPS) is defined in another specifications 3GPP TS 22.153 which indicates that purpose of providing priority is to subscribers whose role is of emergency responders during the disaster like situations. Will use of QCI 6 not violate this provision? Why QCI 6 is being used for commercial exploitation when its defined purpose is different?

2. Please provide international experiences where QCI 6 is being used to provide faster speed/priority on the network commercially?

3. What is the policy followed for LTE Radio Access Network (RAN) user plane congestion management in your mobile network? Here the RAN user plane congestion includes user plane congestion that occurs over the air interface (e.g. LTE Uu), in the radio node (e.g. eNB) and/or over the backhaul interface between RAN and CN (e.g. S1-u).

4. Please provide the following information: -
    a) Percentage of eNodeBs in the 4G network, which observed utilization of Physical Resource Blocks (PRBs) in a cell equal to or higher than 80% and 90% in last one month in Delhi LSA.

    b) Percentage of eNodeBs in the 4G network, which observed utilization of eNodeB-to-core network transport interface higher than 90% in last one month in Delhi LSA

    c) Percentage of eNodeBs in the 4G network, which observed utilization of processors in a eNodeB higher than 90% in last one month in Delhi LSA.

5. Please provide the following information related to the congestion in the network for Delhi LSA for a period of last one month :

    a. Whether any limit of maximum throughput has been configured for the RedX or non- RedX users of the network? If so, provide complete details.

    b. Whether any lower limit on the throughput has been prescribed particularly when network is congested beyond which data

connection is dropped or new requests to access the network are not entertained? Provide complete details.

6. Are you controlling the maximum throughput in your network for each subscriber for user services such as FTP, Video Streaming, Conversational Video etc. to regulate subscriber service abuse? If yes, then kindly provide the details of such controls for RedX and non- RedX subscribers.

7. Have you defined the Maximum Bit Rate (MBR) for Guaranteed Bit Rate (GBR) bearers and Aggregated Maximum Bit Rate (AMBR) for non-Guaranteed Bit Rate (non-GBR) bearers in your network? If yes, then kindly provide the details of such rates for RedX and non- RedX subscribers.

8. Have you kept Allocation and Retention Priority (ARP) and Service Data Flow (SDF) parameters same for RedX and non-RedX subscribers in your network? If yes, then kindly confirm. If no, then kindly elucidate the differences and the objectives of the same.

9. What is the set of policies followed for Core Network (CN) user plane congestion management in your network?

10. How do you define and monitor the congestion in 4G RAN and CN?

11. How much percentage of total 4G cell sites experienced RAN user plane congestion? Kindly provide the details for Delhi LSA for June 2020.

12. What is the average throughput achieved during the month of June 2020 for RedX and non- RedX subscribers, while doing the pilot testing? Kindly provide information for Delhi LSA and Maharashtra.

13. Kindly provide the location and total cell throughput details of top 10 LTE cell sites in Delhi and Maharashtra LSA, where the RedX subscribers' usage is highest. During the month of June 2020, what is the average throughput experienced on each of this cell site by RedX and non- RedX subscribers? What was the average throughput experienced on each of this cell site by subscribers just before implementation of priority network concept?

14. Kindly provide the location and total cell throughput details of top 10 congested LTE cell sites in Delhi and Maharashtra LSA. During the month of June 2020, what is the average throughput experienced on each of this cell site by RedX and non- RedX subscribers? What was the average throughput experienced on each of this cell site by subscribers just before implementation of priority network concept?

15. Please provide details about measures or special provisions made in the network for the RedX users other than assigning QCI 6 which might have been done to ensure that network configurations translate into a

faster 4G speed in all kinds of scenarios of different user distributions, traffic situations?

16. Distribution of RedX subscribers may not be uniform across the network. Obviously there may be more RedX subscribers in some area at given time based on their interest. Higher concentration of such RedX subscribers in few clusters of Node B is likely to have adverse impact both on RedX subscribers and non- RedX subscribers. In this regard, following may be explained:-

    i) Will services of RedX subscribers not deteriorate even with QCI 6 priority when the Node B is experiencing congestion?

    ii) Will non- RedX subscribers experience deterioration in their services without any specific remedy? How do you plan to ensure similar quality of service to such customers prior to launch of such RedX plan?

    iii) Will such deterioration in services for non- RedX subscribers induce such customers to opt for RedX plan to get access to internet and particularly crucial applications such as education of children, etc.?

17. What happens during congestion when a non-priority customer is surrounded by priority customers? Will his packets not be dropped?

18. What are the technical data which you can provide to support that services of non- RedX subscribers will not deteriorate even when Note B is congested and priority is given to RedX subscribers?

19. As per the information available in TRAI as filed by you, no wireless plan are committing any differential broadband speed. It is seen that RedX plan is not only providing priority on network but also committing higher speed on wireless network. Is it not a new type of service and therefore should have been informed separately so that different aspects could have been examined before such service is launched?

20. The telecom service is being sold by you as 4G LTE service. Do you confirm compliance to the download speeds defined in the 3GPP standards?

21. If answer is yes to above question, please provide details. If no, how can the speed be partitioned between RedX and non- RedX subscribers, when the network is not meeting the basic LTE download speed standards?

22. Does the network priority apply during congestion period alone? Please explain table 3 in your reply.

Note: In cases where the information sought through the above questionnaire is not available for the month of June 2020 due to any justifiable reasons, after stating the reason, the same information must be provided for the month of July 2020.