

Source: TSG SA

Destination: TSG-RAN, TSG-CN, TSG-T, all sub working groups

Title: LS on Principles for Bearer services and Quality of service

Document for: Information

Agenda Item: -

There has been some confusion about the meaning of the phrase "Quality of Service". This has been used to denote two concepts:

1. QoS as perceived by the user relating to end-to-end communications services
2. QoS as provided within the UMTS access and/or core network for a given data communications link between UMTS nodes.

To avoid any confusion following definition shall be used:

Quality of Service is the quality of a requested service (Teleservice or Bearer Service or any other service, e.g. customer care) as perceived by the customer (ITU-T M.xxxx). QoS is always meant end-to-end. Network Performance of several network elements of the originating and terminating network(s) contribute to the QoS as perceived by the customer including terminals and terminal attachments. In order to offer the customer a certain QoS the serving network need to take into account network performance components of their network, reflect the performance of the terminal and ad sufficient margin for the terminating networks in case network performance requirements cannot be negotiated. As far as the QoS to 3rd Generation subscribers is concerned 3G network elements have to provide sufficient performance (reflecting possible performance constraints in terminating networks) that 3G networks cannot be considered as a bottleneck.

TSG-S1 will define requirements 'end to end QoS', regarding UMTS as a part of a communications link which may in general consist of UMTS, one or more transit networks, and a terminating network.

TSG-S2, TSG-RAN and TSG-CN will elaborate the network performance parameters of specific communications link within the UMTS system in order that end to end QoS requirements can be achieved. Primary responsibility for co-ordinating this is TSG-S2.

To be flexible for all future service and application requirements TSG S1 decided not to define any new bearer service with fixed capabilities and attributes to serve dedicated application rather a method of a general bearer service with negotiable attributes, capabilities end QoS shall be used. The suitable parameters will be defined in TS 22.05.

Due to the fact that the majority of data applications will be based on Internet/IP the methods defined by IETF for QoS in the internet environment shall be used were appropriate. This includes the definition of parameters for QoS negotiation on application level as well as the low level NNI negotiations towards IP.