GPRS - QUALITY OF SERVICE

Quality of Service QoS requirements of conventional mobile packet data applications are in assorted forms. The QoS is a vital feature of GPRS services as there are different QoS support requirements for assorted GPRS applications like realtime multimedia, web browsing, and e-mail transfer.

GPRS allows defining QoS profiles using the following parameters :

- Service Precedence
- Reliability
- Delay and
- Throughput

These parameters are described below:

Service Precedence

The preference given to a service when compared to another service is known as **Service Precedence**.This level of priority is classified into three levels called:

- high
- normal
- low

When there is network congestion, the packets of low priority are discarded as compared to high or normal priority packets.

Reliability

This parameter signifies the transmission characteristics required by an application.The reliability classes are defined which guarantee certain maximum values for the probability of loss, duplication, mis-sequencing, and corruption of packets.

Delay

The delay is defined as the end-to-end transfer time between two communicating mobile stations or between a mobile station and the GI interface to an external packet data network.

This includes all delays within the GPRS network, e.g., the delay for request and assignment of radio resources and the transit delay in the GPRS backbone network. Transfer delays outside the GPRS network, e.g., in external transit networks, are not taken into account.

Throughput

The throughput specifies the maximum/peak bit rate and the mean bit rate.

Using these QoS classes, QoS profiles can be negotiated between the mobile user and the network for each session, depending on the QoS demand and the available resources.

The billing of the service is then based on the transmitted data volume, the type of service, and the chosen QoS profile.

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