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Title: QoS Requirements – Communication Schemes

Document for: Discussion

This text is proposed as the new section 5.2.1 "Communication Schemes" in TS 22.05.

5.2.1 Communication schemes

UMTS release ´99 shall support single- and multi-media N-ISDN applications and single- and multi-media IP applications. [UMTS 22.00]

End users' and applications' communications requirements are classified into the following four distinctly different communication schemes:

Background traffic:

This communication scheme is characterised by that the destination is not expecting the data within a certain time. The scheme is thus more or less delivery time insensitive. Another characteristic is that the content of the packets must be transparently transferred (with low bit error rate). A short slogan covering this scheme could be "whenever".

Interactive traffic:

This communication scheme is characterised by the request - response pattern of the end-user. At the message destination there is an entity expecting the message (response) within a certain time. Round trip delay time is therefore one of the key attributes. Another characteristic is that the content of the packets must be transparently transferred (with low bit error rate). A short slogan covering this scheme could be "request - response".

Real time streams:

This communication scheme is characterised by being a unidirectional stream with high continuous utilisation (i.e. having few idle/silent periods.) It is also characterised by that the time relations (variation) between information entities (i.e. samples, packets) within a flow must be preserved, although it does not have any requirements on low transfer delay. A short slogan covering this scheme could be "just listening".

Real time conversation:

This communication scheme is characterised by that the transfer time must be low because of the conversational nature of the scheme and at the same time that the time relation (variation) between information entities of the stream must be preserved in the same way as for real time streams. This is the only scheme where the required characteristics are strictly given by human perception (the senses). A short slogan covering this scheme could be "human perception".