Source:	**T-Mobil**
Title:	**Comments to CR concerning QoS of TS22.05**
Document for:	**Discussion**
Agenda Item:	

Rational

S1 has made great progress in defining attributes, QoS parameter and suitable values to describe a bearer service and the requirements of any application on bearer services. The limitation of the validity of these bearer service attributes to the UMTS network is not acceptable.

Reasoning

The services group has decided not to define a certain number of dedicated bearer services for any kind of application rather it was decided to use a concept with a general bearer and qualify the capabilities of that bearer service through the usage of attributes and QoS parameters. This allows the specification of a system without a knowledge of any future service which will be use on top of this system. This is a very common method to system specification and guarantees a future proof systems.

The concept is more or less a change in paradigm for the telecommunications community, whereas up to now, all services (tele- and bearer services) have been defined in detail. So any application selecting a bearer service (through BC IE) is aware of the capabilities of that services and all the transit and terminating networks select the same (or appropriate) service (based on the BC IE). If the service is not available, an error or release cause is transferred back to the origin network and application.

The new concept of a general bearer qualified by attributes and QoS parameters requires that all networks and the application are informed about the possible bearer capabilities for a requested connection in order not to waste any network resources (by reservation of a high bandwidth in one network which can not be supported in another involved in this connection) or to release the connection (by the application) if these capabilities are not sufficient.

Most operator believe a major push for the mobile data usage will come from WWW /internet. TS22.00 clearly states that the UMTS will interconnect to the IP-world. The IETF has already recognised, that network limited QoS is not sufficient to serve for customer satisfaction (within an Intranet QoS is available today). IETF is working on the QoS issue and one can expect a standardised solution (such as Int. Serv, diff. serv, RSVP) soon.

The services group should not try to solve the technical detail how to implement such negotiation or parameter mapping with the different networks rather the group should define the requirements from a user and service perspective.

If the CR is accepted in the actual version, any application on the TE would not be aware of the overall capability of the offered bearer service. As a result of the negotiation there is only an information about the capabilities of the serving UMTS network. In any case where a transit or terminating network is not capable to offer the required capabilities, a communication might be useless (e.g. real time requirements for video which can not be supported by transit/terminating network). To set up a usefull communication link, an End-to-End QoS negotiation is required. The available amount of defined BC IE should not be enlarged, rather a mapping of these to the attributes and QoS parameter should be defined.

Furthermore it is not clear that the defined attributes are also available in case of MTC, meaning that the defined attributes are used at the network interface and a negotiation has to be done including the terminating terminal.

TSG S1 has two alternatives, go back to the old paradigm or continue the way forward. In the later one, T-Mobil proposes to change the CR to:

- cover the end-to-end capabilities with the defined attributes and QoS of a bearer service
- to clearly state the bearer attribute concept is used for MOC and MT

In any case, a closer look to IETF and IP has to be done in order to extent the WWW/Internet to the mobile networks and to provide the right bearer services.

Furthermore SA should send a LS to all TSG informing on the decision in the paradigm change (no new BC IE within UMTS).