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LS concerning the GSM/EDGE RAN

To: 3GPP SA
CC: S1, S2, SMG

The GSM/EDGE RAN is seen as one of the radio access technologies connected to the 3GPP core network.

High level requirements for the GSM/ EDGE RAN

As discussed in the SMG2 plenary session the evolvement of the GSM 200kHz radio access shall be referred to as GSM/EDGE RAN.

The following high level requirements have been initially identified for the GSM/EDGE RAN in responsibility of SMG2:

- All bearer classes (conversational, streaming, interactive and background) as defined for UTRAN shall be provided
- The same quality of service handling and bearer service attributes shall be supported as required for UTRAN (as specified in 22.105). Whether the same range of values of the service attributes as supported by UTRAN shall be supported by the GSM/EDGE RAN in release 2000 is for further study
- Support for multiple QoS profiles in parallel (question to 3GPP CN concerning status for release 99) shall be provided in the GSM/EDGE RAN.

Questions for clarification

With only access to a draft version of the technical report from S2 on the All-IP option the following questions arose in the discussion:

- The GSM/EDGE RAN will interface with the UMTS core network. Information is requested from TSG S1 and S2 if the GSM/EDGE RAN is required to map requested services from a circuit switched core network onto radio access bearers. Furthermore, should the GSM/EDGE RAN support evolution of services towards the circuit switched domain based around MSC equipment?
- It has been identified that there are several operator scenarios: Operators without any 200kHz radio access deployment, operators with 200kHz GPRS/EGPRS phase 1 deployment, operators with full GSM deployment with and without EDGE as well as operators with GSM and UMTS radio access. Depending on the relative occurrence of the different scenarios, requirements on the roll out, co-existence and support of legacy services may arise which would impact the work of SMG2. Therefore SMG2 and S1/S2 is asked to discuss the possible roadmap from release 1999 to release 2000 and the related deployment scenarios

With the discussion to support all bearer classes for the GSM/EDGE RAN the subgroup took a look at the technical specification on service capabilities from 3GPP(22.105, version 3.5.0). In this report the attributes for different classes are described. In the discussion it was impossible to derive the performance figures (delay, FER, rates) for the GSM/EDGE RAN as QoS is specified End to end including CN. It is planned to send a LS statement to TSG RAN and SA to get feedback on this issue. In principle the similar delay assumptions for UTRAN should be valid for the GSM/EDGE RAN.

Radio requirements for the GSM/EDGE RAN

Based on TDOC 1197/99 from AT&T a discussion on radio requirements for the GSM/EDGE RAN took place. The discussions resulted in a new document presented to SMG2 (TDOC 1461/99). This document is seen as a first draft and is currently incomplete, due to the open questions raised above. It is intended to refine the document on the next EDGE workshop.

In order to stabilize the radio requirements for the GSM/EDGE RAN input from S1 and S2 concerning services and architecture requirements is needed.

Collaboration with S1/S2 activities

Due to the strong correlation with S1 and S2 work concerning release 2000, it is proposed to invite S1 and S2 to one of the next workshops, when the GSM/EDGE RAN will be handled.