

TSG-SA Working Group 1 (Services) meeting #3
Hampton Court, Surrey, UK 10th-12th May 1999

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Agenda Item: 6.9.3.5

Source: Mannemann Mobilfunk

Title: Adaptation of GSM SMS-CB Stage 1 to UMTS

Document for: Decision

Mannesmann Mobilfunk has studied the stage 1 description of the GSM SMS-CB service and has identified the necessity of adaptation for UMTS.

GSM SMS Cell Broadcast Service description (Stage 1)

(GSM 02.03 v5.3.2 Annex A.1.3.4 Section 4)

The cell broadcast is a Teleservice which enables an Information Provider to submit short messages for broadcasting to a specified area within the PLMN.

The cell broadcast service is characterised by the following aspects:

(i) No acknowledgement is sent from the MS.

(ii) The cell broadcast message is sent on control channels in a limited area, defined by the originator of the message, by agreement with the PLMN.

In TS S2.01 the logical channel CTCH (common traffic channel) is introduced. The selection of an appropriate transport channel is a study item.

MMO proposed to change “control channels” to “dedicated channels”. This allow the RAN group to select an appropriate channel.

(iii) An identifier is associated with each message. This identifier is received by the MS and used by the short message function of the MS not to store broadcast messages which are not wanted or which have already been received.

This requirement implies that there is a functionality in the UE allowing the user to get some control over the reception of SMS CB messages. The same method as in GSM will remain.

(iv) Reception is only possible in idle mode.

The term « idle mode » is related to the CS domain there the terminal stays the most time (about 95 %) in this mode. In UMTS this condition should be interpreted as follows : No speech or other connection oriented teleservice is active. (Opinion of SA1 is required.)

Working assumption : The UE should have the capability to receive SMS CB messages whenever it is possible. It is dependent on the UE class, the operational UE mode, etc..

(v) Generally, cell broadcast messages will be sent continuously, so that all such messages are sent in turn, and then repeated. The cycle time will need to be short enough for important messages to be received by travellers moving through a group of cells.

This requirement results in a SMS CB message stream per cell. The generation of these streams is outside the scope of RAN WG2.

(vi) Cell broadcast messages are MT only. The origination of these messages is outside the scope of GSM.

Working assumption : The CBC-RNC interface remains as it is specified in GSM.

(vii) The maximum length of each cell broadcast message will be 93 characters. GSM 03.41 describes a concatenation mechanism which allows up to 15 of these 93 character messages treated as segments of a longer message. These segments are then referred to as "pages".

Working assumption : A SMS CB message consists of up to 15 pages and will be broadcasted as one message within UMTS. At the NAS AP the SMS CB message should be partitioned into pages.

Will this cause problems in the MS?

MMO proposes to add to change the paragraph for UMTS: "In UMTS the concatenated broadcast messages (pages) will be transmitted in one message."

(viii) Cell broadcast DRX mode is defined to improve the battery life for Mobile Stations. This feature is optional.

Working assumption : This option remains. A scheme is necessary to inform the UE when individual SMS CB messages are transmitted in a cell.

(ix) The cell broadcast channel allowing the transfer of broadcast messages to the MS is divided into the basic channel and the extended channel. The transfer and scheduling of the messages on both channels shall be done independently. The support of the extended cell broadcast channel by a MS is optional. The reading of the extended SMSCB broadcast channel by the MS shall have low priority, i.e. if necessary the reading of broadcast messages on the extended channel can be interrupted.

This is a requirement applicable in GSM only and is a result of the low transmission capability of the CBCH (subslot of the SDCCH). Thus, it is not a requirement in UMTS and too detailed for a stage 1 description.

Working assumption : An overall capacity about 20 kbps is required on the radio interface.

MMO proposes to replace this section for UMTS by the capacity requirement.

Decision for S1:

- Shall the SMS-CB stage 1 be maintained in the GSM spec and adopted for UMTS?
- Shall this paragraph be transferred to a existing UMTS spec and adopted according the proposal?