

Source: Matsushita Communications
Title: Discussion document on SMS over GPRS support in the network
Agenda item: 7.3 (GPRS)
Document for: DISCUSSION

We have had some difficulty trying to understand how a MS is to find out if the network supports SMS over GPRS. We are taking this issue to the CN plenary after it failed to get any response on the CN1 reflector, although we now understand that there are also other mobile terminal manufacturers who have the same problem.

From the specifications one gets the idea that support for SMS is mandatory in the MSC and the SGSN, so the MS can determine to send SMS via the MSC or SGSN depending on its registration status as specified.

Now it appears that many operators are installing SGSNs that do not support SMS, (or perhaps disable the SMS capabilities,) but there is no indication in the specifications as to how the lack of SMS support is indicated to the MS.

In practice different behaviour is observed in different networks ranging from no response to SMS over GPRS at all, to CP-ERROR messages and RP-ERROR messages containing a wide variety of cause codes.

The uncertainty about the response from the network results in long delays to the MS user when sending an SMS over GPRS. Also this adds unnecessarily to the traffic over the air interface, i.e. after failing to send an SMS over GPRS (via SGSN) the MS must now try and resend that SMS via the MSC.

In addition there may be situations or implementations that charge users for the GPRS data for an attempt to send an SMS over GPRS, while that SMS itself is never progressed past the SGSN.

In spite of the frozen status of most of the GPRS related specifications, it seems clarification on this issue is needed and that guidance is given, by CN plenary, on to how to progress this issue.

Possible ways to resolve the issue, include the option to indicate the non-support of SMS over GPRS through the SMS Radio Priority IE present in the Attach Accept, or to standardise the response of the SGSN to an SMS over GPRS in case the SGSN does not support it.