

Source: Vodafone
Title: Global Text Telephony Issues
Document for: Discussion and decision
Agenda Item: 7.2.3

Background

T1P1 asked SA2 to endorse an undocumented "transcoder based" solution for Global Text Telephony (GTT). No description of this functionality was provided by T1P1. Nortel found an ambiguous "two line architecture" description in SA 4's specification 26.226 (Cellular Text Telephone Modem, CTTM). However the description is unclear as to whether the "transcoder based" solution means swapping out/upgrading every transcoder or (more logically) uses some kind of transcoder pool, as has been described for several years in the GSM 08.08 'A' interface specification.

Vodafone remain to be convinced that the "transcoder based" solution will meet global regulatory requirements.

Vodafone notes that the US GSM 1900 MHz networks will almost certainly have less legacy equipment than GSM networks in the rest of the world. Hence there is a significant probability that a solution which **might** just be economically viable for the US market **will** be economically disastrous for operators in the rest of the world.

The solution has to be debated in 3GPP and has to be suitable for **Global** deployment.

Within SA2, ample meeting time has been made available for Release 4 features. However, since early September, there has been no input to SA 2 on GTT. This suggests that there is **no need for a GTT solution to be developed in a hurry**.

3GPP is a **Global** Standards body. It must not accept rushed solutions which can clearly damage the interests of operators in some parts of the world, and must reject a regional "option" for GTT.

Vodafone recommend that the SA 2 proposal to select a GTT solution at their next plenary meeting is adopted.

Issues which need to be studied

The following list of issues is not exhaustive. When the regulatory requirements are studied, it is likely that more issues will be discovered.

1) No Half Rate support

The CTTM description in 26.226 excludes the Half Rate codec. How will it work in those parts of the globe which use Half Rate coders for congestion relief?

2) MMI for Emergency Text Calls

Do **all** emergency centres (in the whole world) accept Text calls? Almost certainly not! Hence a global Text call emergency number is needed to avoid routing the text call to a voice only operator. What is the globally standardised MMI for this? This requires work in SA1 and changes to 22.030.

3) Charging

Text calls may need a different tariff from voice calls. How is this achieved with the transcoder based" solution?

4) US TTY user abroad

How are US text users handled when they roam to a network which has not got upgraded transcoders?

5) Has T2 specified the interface between phone and TTY device?

6) Can the CTTM modem be integrated with a mobile?

If not, why not? If so, then how are DTMF interactions solved (e.g. for MT calls between members of a family group containing only one hearing impaired user).

7) How is the functional split of the A interface impacted?

Where is the CR to GSM 08.02?

8) How do call hold, call wait and MPTY work?

Again DTMF can be an interesting problem.

9) What are the impacts on TFO?

There might not be any, but it needs to be carefully checked.

10) How does the transcoder based solution work with TrFO?

The transcoder based solution seems to totally prevent ALL deployments of TrFO. Wouldn't the adoption of this solution as a Globally standardised option mean that TrFO has to be scrapped as an R4 feature?

11) How does GTT work in UMTS?

Without a UMTS solution, how can this be called global?

12) How are (eg mid-call) tones and announcements suppressed?

13) What is the globally standardised MMI for "text to voice" and "voice to text" calls?