3GPP TSG-T (Terminals) Meeting #20 ***TP-030144***
Hämeenlinna, Finland
4 - 6 June, 2003

Agenda Item: 5.3.2 Questions for advice and decisions on T3 issues

Source: Nokia

Title: inconsistency between stage 1 and stage 3 on Emergency call procedures

Document for: Decision

The problem

In the present R99+ there is an inconsistency between the requirements in TS 22.101 on the emergency call procedures and the stage 3 implementation of the procedures in TS 11.14 (and TS 31.111). As emergency calls is an important topic Nokia are seeking a consistent solution from R99 and onwards.

According to TS 22.101 the emergency numbers are checked either against the EF-ECC on the SIM (USIM) or in case this is not present or empty default numbers stored in the ME.

In TS 11.14 (and TS 31.111) two separate cases exist, one for the toolkit issuing a SETUP CALL command and the CALL CONTROL feature:

SETUP CALL

(Quote from TS 11.14 8.13.0 ch 6.4.13) " It is possible for the SIM to request the ME to set up an emergency call by supplying the number "112" as called party number. If the SIM supplies a number stored in EF_{ECC}, this shall not result in an emergency call."

From the quote above it is clear that this is not in line with TS 22.101 as "112" is always and the only emergency number if the number originates from the toolkit. Furthermore only EF-ECC is mentioned, i.e. there is nothing said about the case where there is no EF-ECC in the SIM (USIM). The text also contains a contradiction on how to handle the situation where the toolkit calls "112" and it is in the EF-ECC list?

CALL CONTROL

(Quote from TS 11.14 8.13.0 ch 9.1.1) "

- For all call set-up attempts (even those resulting from a SET UP CALL proactive SIM command, from the Bearer Independant Protocol proactive SIM commands where CSD is selected, or those occurring when another call is already in progress), the ME shall first pass the call set-up details (dialled digits and associated parameters) to the SIM, using the ENVELOPE (CALL CONTROL) command defined below. SIM applications should take into account the following two exceptions:
  - when the ME is managing automatic redial attempts, the ME may pass the call set-up details to the SIM for the first attempt only. The SIM can identify MEs which send ENVELOPE (CALL CONTROL) each time during redial attempts by evaluating the indication "Envelope Call Control always sent to the SIM during automatic redial mode" in the TERMINAL PROFILE. If the ME is sending ENVELOPE (CALL CONTROL) as part of a redial attempt, the call setup details shall be the same as the first with the exception of "Location Information" which shall be the current information;
  - *when the user is dialling "112" or an emergency call code stored in EF_{ECC}, for which the ME sets up an emergency call instead of passing the call set-up details to the SIM.*
- If the SIM responds with '90 00', the ME shall set up the call with the dialled digits and other parameters as sent to the SIM.
- If the SIM responds with '93 00', the ME shall not set up the call and may retry the command.

- If the SIM responds with '9F XX', the ME shall use the GET RESPONSE command to get the response data. The response data from the SIM shall indicate to the ME whether to set up the call as proposed, not set up the call, set up a call using the data supplied by the SIM, or instead send a supplementary service or USSD operation using the data supplied by the SIM. It is mandatory for the ME to perform the call set-up request and the supplementary service or USSD operation in accordance with the data from the SIM, if it is within the ME's capabilities to do so. If the SIM requires a call set-up or supplementary service or USSD operation that is beyond the ME's capabilities (e.g. the SIM maps a speech call to a data call, and the ME does not support data calls), then the ME shall not perform the call set-up request or supplementary service or USSD operation at all. *It is possible for the SIM to request the ME to set up an emergency call by supplying the number "112" as the response data. If the SIM supplies a number stored in EF_{ECC}, this shall not result in an emergency call.*

"

In the quote above the relevant text is marked in *italics*. Both marked sections have the same inconsistencies as the SETUP CALL case.

Proposed solution

At TSG-T3 plenary #27 Nokia proposed a solution that would in effect prevent the toolkit from making any emergency calls as such but rather let all toolkit originated call attempts result in a normal call (the CR to TS 11.14 R99 inn T3-030382 is attached to the present document). It will thus be the responsibility of the serving network to route a call to the emergency centre in case the toolkit has modified the number.

Nokia believes that the proposed solution is the better one provides the provides the best possible alignment between TS 22.101 and TS 11.14 and will result in a minimum of unnecessary emergency calls made by roaming users with "local" toolkit applications using service numbers that are emergency numbers in the current network

The use-cases below illustrate the new behaviour of the ME.

A) EF-ECC contains 111 and the **user** is making a call to "111". **no call control**.
In this case the ME setup an **emergency** call to the network

B) EF-ECC contains 111 and the **user** is making a call to "111". **call control active**.
In this case the ME setup an **emergency** call (in fact call control is disabled for emergency calls)

C) EF-ECC contains 111 and the **user** is making a call to "10203040". **call control active**.
In this case the call control modifies the number to "111" and the ME setup an **normal** call to "111"

D) EF-ECC contains 111 and the toolkit is making a call to "111". **call control active** (has no impact).
In this case the ME setup an **normal** call with called party number set to "111". In this case it will be the responsibility of the network to route the call to an emergency center.

Actions to T

Nokia ask T to consider outlined problem and suggest approving the attached CR.

3GPP TSG-T3 Meeting #27
Sapporo, Japan, 20-23 May 2003

Tdoc ⌘T3-030382

CR-Form-v7

CHANGE REQUEST

⌘ **11.14** **CR** **CRNum** ⌘**rev** **-** ⌘ Current version: **8.13.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ [X] ME [X] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Alignment and clarification of TS 11.14 to TS 22.101 on emergency call numbers
Source:	⌘	Nokia
Work item code:	⌘	TEI
Date:	⌘	09/05/2003
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	The current text in TS 11.14 is contradictory to TS 22.101 on which numbers are to be treated as emergency numbers
Summary of change:	⌘	The reference to "112" as the only emergency number is replaced by a reference to the definitions in TS 22.101. To safeguard all numbers set-up by the card result in normal calls.
Consequences if not approved:	⌘	Contradictions between the service requirements (as defined in TS 22.101) and the stage 3 implementation in TS 11.14

Clauses affected:	⌘	6.4.13, 9.1.1

	Y	N			
Other specs affected:		X	Other core specifications	⌘	TS 11.10-4
	X		Test specifications		
		X	O&M Specifications		

Other comments:	⌘	

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm.
Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

6.4.13 SET UP CALL

Three types are defined:

- set up a call, but only if not currently busy on another call;
- set up a call, putting all other calls (if any) on hold;
- set up a call, disconnecting all other calls (if any) first.

For each of these types, the SIM may request the use of an automatic redial mechanism according to TS 02.07 [19]. The SIM may also request an optional maximum duration for the redial mechanism. The ME shall attempt at least one call set-up.

In addition to the called party number, the command may contain capability configuration parameters (giving the bearer capability to request for the call) and the called party subaddress. The ME shall use these in its call set-up request to the network, if supported by the ME. The command may also include DTMF digits, which the ME shall send to the network after the call has connected. The ME shall not locally generate audible DTMF tones and play them to the user.

NOTE: On the downlink audio, DTMF tones reflected by the network may be heard.

~~It is possible for the SIM to request the ME to set up an emergency call by supplying the number "112" as called party number.~~ If the SIM supplies an ~~number stored in EF_{ECC}~~ emergency number as defined in TS 22.101, this shall not result in an emergency call, but a normal call.

[….]

9 Call Control and MO SMS control by SIM

9.1 Call Control by SIM

9.1.1 Procedure for mobile originated calls

If the service "call control" is allocated and activated in the SIM Service Table (see TS 11.11 [20]), then the ME shall follow the procedure below:

- For all call set-up attempts (even those resulting from a SET UP CALL proactive SIM command, from the Bearer Independant Protocol proactive SIM commands where CSD is selected, or those occurring when another call is already in progress), the ME shall first pass the call set-up details (dialled digits and associated parameters) to the SIM, using the ENVELOPE (CALL CONTROL) command defined below. SIM applications should take into account the following two exceptions:
  - when the ME is managing automatic redial attempts, the ME may pass the call set-up details to the SIM for the first attempt only. The SIM can identify MEs which send ENVELOPE (CALL CONTROL) each time during redial attempts by evaluating the indication "Envelope Call Control always sent to the SIM during automatic redial mode" in the TERMINAL PROFILE. If the ME is sending ENVELOPE (CALL CONTROL) as part of a redial attempt, the call setup details shall be the same as the first with the exception of "Location Information" which shall be the current information;
  - when the user is dialling ~~"112" or~~ an emergency call code ~~stored in EF_{ECC}~~ as defined in TS 22.101, for which the ME sets up an emergency call instead of passing the call set-up details to the SIM.
- If the SIM responds with '90 00', the ME shall set up the call with the dialled digits and other parameters as sent to the SIM.
- If the SIM responds with '93 00', the ME shall not set up the call and may retry the command.

- If the SIM responds with '9F XX', the ME shall use the GET RESPONSE command to get the response data. The response data from the SIM shall indicate to the ME whether to set up the call as proposed, not set up the call, set up a call using the data supplied by the SIM, or instead send a supplementary service or USSD operation using the data supplied by the SIM. It is mandatory for the ME to perform the call set-up request and the supplementary service or USSD operation in accordance with the data from the SIM, if it is within the ME's capabilities to do so. If the SIM requires a call set-up or supplementary service or USSD operation that is beyond the ME's capabilities (e.g. the SIM maps a speech call to a data call, and the ME does not support data calls), then the ME shall not perform the call set-up request or supplementary service or USSD operation at all. ~~It is possible for the SIM to request the ME to set up an emergency call by supplying the number "112" as the response data.~~ If the SIM supplies an emergency number ~~stored in EF_{ECC}~~ as defined in TS 22.101, this shall not result in an emergency call, but in a normal.