Source: **SA1**

Title: **Rel-4 CR to 22.135 Corrections on terminology**

Document for: **Approval**

Agenda Item: **7.1.3**

SA Doc	Spec	CR	Rev	Phase	Cat	Subject	Old Vers	New Vers	SA1 Doc
SP-020242	22.135	010		Rel-4	F	CR to 22.135 Corrections on terminology	4.0.0	4.1.0	S1-021077

<table>
<tr><td colspan="3" align="right">CR-Form-v4</td></tr>
<tr><td colspan="3" align="center"><h1>CHANGE REQUEST</h1></td></tr>
</table>

⌘   **22.135 CR 010** ⌘ ev **-** ⌘ Current version: **4.0.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ☐ ME/UE **X** Radio Access Network **X** Core Network **X**

Title: ⌘	CR to correct terms and references	
Source: ⌘	SA1	
Work item code: ⌘	CORRECT	***Date:*** ⌘ 12.05.2002
Category: ⌘	**F**	***Release:*** ⌘ REL-4

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)*

Reason for change: ⌘	With the deletion of 04.08, SA1 has undertaken a clean-up of its specifications to correct the references to all TSs and has normalised the terms used therein.
Summary of change: ⌘	References have been changed where necessary.
Consequences if not approved: ⌘	Illegal references will exist in the specification set.

Clauses affected: ⌘	Various
Other specs affected: ⌘	☐ Other core specifications ⌘ ☐ Test specifications ☐ O&M Specifications
Other comments: ⌘	Topic clarified with relevant other WGs.

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at:
http://www.3gpp.org/3G_Specs/CRs.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.

1 Scope

The present document presents describes Multicall supplementary service ~~for UMTS phase 1 release '99~~.

The general aspects, including definitions and recommended provision, of the description of the 3GPP Supplementary Services are given in 3GPP TS 22.004.

Multicall is only applicable for UTRAN.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TS 22.001: "Principles of circuit telecommunication services supported by a Public Land Mobile Network (PLMN)".

[2] 3GPP TS 22.004: "General on Supplementary Services".

[3] 3GPP TS 22.024: "Description of Charge Advice Information (CAI)".

[4] 3GPP TS 22.030: "Man-Machine Interface (MMI) of the Mobile Station (MS)".

[5] 3GPP TS 22.100: "UMTS Phase 1 Release 99".

[6] 3GPP TS 22.129: "Handover Requirement between UTRAN~~UMTS~~ and GERAN~~SM~~ or other Radio Systems".

[7] 3GPP TS 22.097: "Multiple Subscriber Profile (MSP) ".

4   Description

4.1   Description of multicall

The Multicall supplementary service enables a mobile subscriber to have several simultaneous CS calls, each call using its own dedicated bearer.

Only one CS bearer can used for speech at any one times.

A speech call is one of TS11 (Telephony), TS12 (Emergency Calls), and TS61 (Alternate speech/fax). If the bearer capability information is not available, e.g. the call is originated/transited by a PSTN, the basic service cannot be deduced and the network shall, for multicall purposes, handle the call as telephony.

A held call shall be regarded as using the bearer used while the call was active.

NOTE: The protocol architecture in GSM rel 99 and earlier allows several parallel CS calls, the limitation being that there is only one traffic channel, which the different CS calls share. This is facilitated by e.g. the Call Waiting, Call Hold, Call Transfer and Multiparty Supplementary Services. Call configurations related to GSM supplementary services are not considered as Multicall. See clause 7 for interaction.

It shall be possible for each CS call to use a dedicated bearer of independent traffic and performance characteristics. It shall be possible to release each active CS call independently of any other CS call.

4.2   Applicability to telecommunication services

The applicability of this Supplementary Service is defined in 3GPP TS 22.004.

8 Interaction with other network features and services

8.1 CAMEL

No impact.

8.2 IST

No impact.

8.3 ODB

No impact.

8.4 Emergency Calls

The network shall handle emergency call at first priority. When a user originates an emergency call, the ~~UMTS~~ network shall behave as follows:

- The ~~UMTS~~ network, which supports Multicall, shall accept the emergency call within the serving network capability regardless of Multicall subscription limitation to the user.

- The MS shall ensure that an emergency call setup request is acceptable to a serving network which does not support multicall, if necessary by releasing one or more existing call.

Annex B (informative): Cross Phase Compatibility

This section details the cross phase compatibility requirements relating to the service requirements in this document.

NOTE: When a change is introduced which affects the 3GPP specifications, it is said to be 'backward compatible' if existing equipment can continue to operate and perform correctly with equipment that conforms to the new implementation.

B.1 Compatibility With Existing Standards

Where the service and operational requirements in this document relate to core network functionality, compatibility is required.

Multicall mechanisms are not applicable for ~~GSM BSS~~GERAN.

B.2 Compatibility With Future Releases

It is envisaged that 3GPP standards will evolve in future releases~~beyond R99~~, for example with the addition of new service requirements. The standards which define the technical implementation of this release~~R99~~ should be developed in such a way that it is practical to add the requirements in this section in a backward compatible manner.

Following chapters include requirements that are foreseen for future release.

B.2.1 Multicall configuration

When having one active CS call and one held call on the same bearer. It shall be possible to create a new CS bearer and to move one of the calls to the new bearer, resulting both calls being active within the limits set by the operator/user and within the capability of the terminal. See figure 2: Split of bearer.

When having two calls (multicall) on the separate bearers. It shall be possible to join both calls to one of the two bearers, put the one of the calls to hold and to release unused CS bearer. It shall be possible to select which call to put on hold. See figure 2: Combination of bearers. *(Note: there is no clear end-user service requirement for this feature at time being).*

NOTE: Due to that only speech calls can be put on hold, so one of the two active Cs calls has to be a speech call.
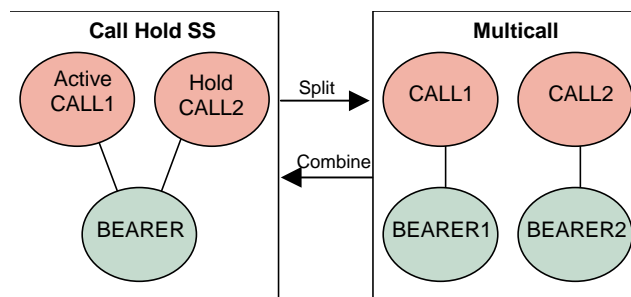
Figure 2: Illustration for split of bearer and combination of bearers

B.2.2 Several simultaneous speech calls / bearers

A Key requirements for multicall is to allow several simultaneous CS calls with dedicated bearers. The most important usage scenario is to allow several CS data bearers to be bind at application level resulting to higher than 64kbits/s data rates. Another important feature is to allow simultaneous speech and data calls.

It's been proposed that the multicall feature could be introduced in a phased manner; meaning that in the first phase, i.e. UMTS release 99 does only support one active speech call at a time. However, Call control should not prohibit a complete set of multiple speech bearer services in future releases and UTRAN shall be designed in a flexible way to support multiple speech bearers. The specific NDUB definition for speech call shall be removed when multiple speech call is supported. In release 99In this release, Supplementary Services Call Waiting, Multiparty and Call Hold are used to offer simultaneous speech calls to user.

N_{cs} may be extended in nextR00 or furtherfuture releases.

If multiple simultaneous speech calls are supported in the future then the Call Hold service may be used to reconfigure the number of bearers supporting speech calls if required during handover. e.g. in the case of handover to GERANSM where only one speech call can be active at a time. This requirement is dependent on the user subscribing to Call Hold.

B.2.3 CCBS

At release 1999 CCBS nNo enhancements for CCBS areis required.

In the future releases the definition of IDLE state of subscriber A and destination B should be modified in away that the IDLE state is reach even if there are active CS calls but the maximum limit of CS calls is not reached.