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**Digital cellular telecommunications system (Phase 2+) (GSM);
Universal Mobile Telecommunications System (UMTS);
Technical realization of Completion of
Calls to Busy Subscriber (CCBS);
Stage 2
(3GPP TS 23.093 version 14.0.0 Release 14)**

3GPP A GLOBAL INITIATIVE
GSM® GLOBAL SYSTEM FOR MOBILE COMMUNICATIONS

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Foreword

This Technical Specification (TS) has been produced by ETSI 3rd Generation Partnership Project (3GPP).

This specification gives the stage 2 description of the Completion of Calls to Busy Subscriber (CCBS) supplementary service within the 3GPP system.

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of this TS, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version 3.y.z

where:

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y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.

z the third digit is incremented when editorial only changes have been incorporated in the specification;

1 Scope

This Technical Specification gives the stage 2 description of the Completion of Calls to Busy Subscriber (CCBS) supplementary service.

2 Normative 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 TR 21.905: "3G Vocabulary".

[2] 3GPP TS 22.030: "Man Machine Interface (MMI) of the Mobile Station (MS)".

[3] 3GPP TS 22.093: "Completion of calls to busy subscriber (CCBS) supplementary services - Stage 1".

[4] 3GPP TS 23.011: "Technical realization of supplementary services - General Aspects".

[5] 3GPP TS 23.018: "Basic Call Handling - Technical Realization".

[6] 3GPP TS 23.078: "Customised Applications for Mobile network Enhanced Logic (CAMEL) - Stage 2".

[7] 3GPP TS 23.079: "Support for Optimal Routeing (SOR) - Technical Realization".

[8] 3GPP TS 24.008: "Mobile radio interface layer 3 specification; Core Network Protocols Stage3".

[9] 3GPP TS 29.002: "Mobile Application Part (MAP) specification".

[10] ETSI ETS 300 358: "ISDN Completion of Calls to Busy Subscriber (CCBS) supplementary service; Functional capabilities and information flows".

3 Definitions and abbreviations

3.1 Definitions

Destination B: The entity addressed in the original call set up, which is busy when first called by subscriber A. Similarly, MSC B, VLR B and HLR B are the network elements pertaining to Destination B when Destination B is a GSM mobile.

Originating queue: The queue that manages CCBS requests for a subscriber, when that subscriber is the originator of those CCBS Requests.

SSAP: Supplementary Service Application Part. SSAP is the protocol used for CCBS procedures on the interface between the originating and destination network. Communication across this interface is performed using SCCP Connectionless Signalling (Refer to ETS 300 358).

Subscriber A: The user of MS A, requesting CCBS. Similarly, MSC A, VLR A and HLR A are the network elements pertaining to Subscriber A.