

# ETSI TS 122 088 V16.0.0 (2020-08)



**Digital cellular telecommunication system (Phase 2+) (GSM);  
Universal Mobile Telecommunications System (UMTS);  
Call Barring (CB) supplementary services;  
Stage 1  
(3GPP TS 22.088 version 16.0.0 Release 16)**



## Reference

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RTS/TSGS-0122088vg00

## Keywords

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GSM,UMTS

**ETSI**

650 Route des Lucioles  
F-06921 Sophia Antipolis Cedex - FRANCE

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Tel.: +33 4 92 94 42 00 - Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C  
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# Contents

Intellectual Property Rights .....	2
Legal Notice .....	2
Modal verbs terminology.....	2
Foreword.....	5
0 Scope .....	6
0.1 References .....	6
0.2 Abbreviations .....	7
1 Barring of outgoing calls .....	7
1.1 Definition .....	7
1.2 General description.....	7
1.2.1 Description.....	7
1.2.2 Applicability to telecommunication services .....	8
1.2.3 Terminology .....	8
1.3 Normal procedures with successful outcome .....	8
1.3.1 Provision.....	8
1.3.2 Withdrawal .....	9
1.3.3 Registration.....	9
1.3.4 Erasure .....	9
1.3.5 Activation .....	9
1.3.6 Deactivation.....	9
1.3.7 Invocation .....	10
1.3.8 Normal operation with successful outcome .....	10
1.3.11 Interrogation .....	10
1.4 Exceptional procedures or unsuccessful outcome .....	10
1.4.1 Provision.....	10
1.4.2 Registration.....	10
1.4.4 Activation .....	10
1.4.5 Deactivation.....	11
1.5 Alternate procedures.....	11
1.6 Interactions with other supplementary services.....	11
1.6.82.1 Call forwarding unconditional .....	11
1.6.82.2 Call forwarding on mobile subscriber busy .....	11
1.6.82.3 Call forwarding on no reply .....	11
1.6.82.4 Call forwarding on mobile subscriber not reachable.....	11
1.6.83.1 Call waiting .....	11
1.6.83.2 Call hold.....	12
1.6.84 MultiParty service.....	12
1.6.85.1 Closed user group.....	12
1.7 Interworking considerations .....	12
2 Barring of incoming calls .....	12
2.1 Definition .....	12
2.2 General description.....	12
2.2.1 Description.....	12
2.2.2 Applicability to telecommunication services .....	13
2.2.3 Terminology .....	13
2.3 Normal procedures with successful outcome .....	13
2.3.1 Provision.....	13
2.3.2 Withdrawal .....	13
2.3.3 Registration.....	14
2.3.4 Erasure .....	14
2.3.5 Activation .....	14
2.3.6 Deactivation.....	14
2.3.7 Invocation .....	15
2.3.8 Normal operation with successful outcome .....	15

2.3.11 Interrogation ..... 15

2.4 Exceptional procedures or unsuccessful outcome ..... 15

2.4.2 Registration..... 15

2.4.4 Activation ..... 15

2.4.5 Deactivation..... 15

2.5 Alternate procedures..... 16

2.6 Interactions with other supplementary services..... 16

2.6.82.1 Call forwarding unconditional ..... 16

2.6.82.2 Call forwarding on mobile subscriber busy ..... 16

2.6.82.3 Call forwarding on no reply ..... 16

2.6.82.4 Call forwarding on mobile subscriber not reachable..... 16

2.6.83.2 Call hold..... 16

2.6.81.1 Calling Line Identification ..... 16

2.6.84 MultiParty service..... 17

2.6.85.1 Closed user group..... 17

2.7 Interworking considerations ..... 17

**Annex A (informative): Change history .....18**

History .....19

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# Foreword

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# 0 Scope

The present document describes the supplementary services belonging to the group Call Restriction Supplementary Services.

The general aspects - including definitions and recommended provision - of the description of the supplementary services are given in 3GPP TS 22.004 [2].

The Call Restriction supplementary services allow the possibility for a mobile subscriber to have barring of certain categories of outgoing or incoming calls at the mobile subscribers access.

The group of Call Restriction Services includes two supplementary services:

- barring of outgoing calls;
- barring of incoming calls.

By use of subscription options, the mobile subscriber can at provision time select a set of one or more barring programs to determine the categories of calls to be barred. The following categories are defined:

- all outgoing calls;
- outgoing international calls;
- outgoing international calls except those directed to the home PLMN country;
- all incoming calls;
- incoming calls when roaming outside the home PLMN country.

NOTE 1: Each category (barring program) is handled as a single supplementary service.

NOTE 2: The call barring program "incoming calls when roaming outside the home PLMN country" is only relevant if as a general rule the called mobile subscriber pays the charges for the forwarded part of the call from his home PLMN country to any other country.

The barring services can be offered to a mobile subscriber with a password option allowing the activation and deactivation by the subscriber. One password per mobile subscriber is supported by the network for all barring services. For the definition of the password, the description of its use and its management, see 3GPP TS 22.004 [2].

## 0.1 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.
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- [1] 3GPP TS 22.905: "Vocabulary for 3GPP Specifications".
- [2] 3GPP TS 22.004: "General on supplementary services".
- [3] 3GPP TS 22.030: "Man-Machine Interface (MMI) of the Mobile Station (MS)".
- [4] 3GPP TS 22.082: "Call Forwarding (CF) supplementary services - Stage 1".
- [5] 3GPP TS 22.084: "MultiParty (MPTY) supplementary services - Stage 1".
- [6] 3GPP TS 22.081: "Line Identification supplementary services - Stage 1".

## 0.2 Abbreviations

Abbreviations used in the present document are listed in 3GPP TS 21.905 [1].

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# 1 Barring of outgoing calls

## 1.1 Definition

This service makes it possible for a mobile subscriber to have barring of certain categories of outgoing calls according to a barring program which is selected from a set of one or more barring programs chosen at provision time and is valid for all outgoing calls, or just those associated with a specific basic service group.

The ability of the served mobile subscriber to receive calls and to set-up emergency calls remains unaffected.

## 1.2 General description

### 1.2.1 Description

The mobile subscriber may determine by subscription of a set of one or more unique barring programs what kind of outgoing calls shall be barred.

The following barring programs are defined:

- 1) Barring of all outgoing calls;
- 2) Barring of outgoing international calls;
- 3) Barring of outgoing international calls except those directed to the home PLMN country.

The PLMN will ensure that only one of the barring programs is active per basic service group. The activation of one specific barring program will override an already active one (i.e. the old one will be permanently deactivated).

Description of contents of barring programs:

#### **Barring of all outgoing calls:**

With this barring program there are no outgoing set-up possibilities, except emergency calls.

#### **Barring of outgoing international calls:**

Outgoing call set-up possibilities exist only to subscribers of the PLMN(s) and the fixed network(s) of the country where the mobile subscriber is presently located. So the present PLMN may be the home PLMN or a visited PLMN, respectively the fixed network may be that of the home PLMN country or that of a visited PLMN country.

NOTE 1: This definition implies that mobile subscribers, subscribed to a PLMN in the country in which the served mobile subscriber roams, can be called irrespective where they roam. On the other hand, mobile subscribers, subscribed to any PLMN in another country than the one in which the served mobile subscriber roams, cannot be called even if they roam in the same PLMN area as the served mobile subscriber.

#### **Barring of all outgoing international calls except those directed to the home PLMN country:**

Outgoing call set-up possibilities exist only to subscribers of the PLMN(s) and the fixed network(s) of the country where the mobile subscriber is presently located or to mobile subscribers of the home PLMN country of the served mobile subscriber and to subscribers of the fixed network(s) in the home PLMN country. So the present PLMN may be the home PLMN or a visited PLMN, respectively the fixed network may be that of the home PLMN country or that of a visited PLMN country.



NOTE 2: This definition implies that mobile subscribers, subscribed to a PLMN in the country in which the served mobile subscriber roams or mobile subscribers subscribed to any PLMN in the same country as the served mobile subscriber home PLMN can be called irrespective where they roam. On the other hand, mobile subscribers, subscribed to any PLMN in another country than the one in which the served mobile subscriber roams and not belonging to the same country as the served mobile subscriber, cannot be called even if they roam in the same PLMN area as the served mobile subscriber or if they roam in the home PLMN country of the served mobile subscriber.

In the case of SMS, this barring program shall prevent the subscriber from sending Short Messages using a Service Centre Address that is not part of the subscriber's home PLMN country numbering plan.

## 1.2.2 Applicability to telecommunication services

The applicability of this supplementary service is defined in 3GPP TS 22.004 [2].

## 1.2.3 Terminology

A barring program defines the subscribed barring condition and will determine the categories of calls to be barred.

## 1.3 Normal procedures with successful outcome

### 1.3.1 Provision

The supplementary service will be provided after pre-arrangement with the service provider. At provision, subscription options should be selected by the served mobile subscriber.

The service can be offered with two subscription options.

The first subscription option is the definition of the barring condition by a set of one or more barring programs. This subscription option applies to all basic services subscribed. Only one value can be selected for the barring condition.

The second subscription option relates to the control of the call barring supplementary service(s). The subscriber may choose to have the control of the service(s) by use of a password, or may leave the control to the service provider. The value of this subscription option is valid collectively for all basic services and all call barring supplementary services to which the subscriber subscribes to.

Subscription options are summarized below:

Subscription option	Value
Barring condition	- barring program 1
	- barring program 2
	- barring program 3
	- barring program 1 and barring program 2
	- barring program 1 and barring program 3
	- barring program 2 and barring program 3
	- barring program 1 and barring program 2 and barring program 3
Control of barring services	- by subscriber using password
	- by the service provider

NOTE: A service provider needs not offer the option "control of barring services" to his subscribers. However, the support of the password facility is mandatory in the network for visiting subscribers.

### 1.3.2 Withdrawal

The service will be withdrawn at the subscriber's request or for administrative reasons.

### 1.3.3 Registration

If the served mobile subscriber at provision time has selected the subscription option "control of barring services by subscriber using password", the service provider has to register a password at provision time. Furthermore the served mobile subscriber can change the password at any time by an appropriate control procedure which is described in 3GPP TS 22.004 [2].

### 1.3.4 Erasure

If the served mobile subscriber at provision time has selected the subscription option "control of barring services by subscriber using password", a password can be erased as described in 3GPP TS 22.004.

### 1.3.5 Activation

Activation takes place with an appropriate control procedure by the subscriber or by the service provider. The activation of barring of outgoing calls does not affect any current communication. Only one barring program may be activated at a time for one basic service group.. The activation of a barring program will deactivate an already active one.

If the served mobile subscriber at provision time has selected the subscription option "control of barring services by subscriber using password", the supplementary service is activated if the subscriber provides the following information to the network:

- password;
- information as to whether all calls or calls of a specific basic service group should be barred.

NOTE: If no Basic Service code is inserted by the user this is interpreted as the group "All Basic Services".

- selected barring program.

If the served mobile subscriber at provision time has selected the subscription option "control of barring services by service provider", the supplementary service cannot be activated by the subscriber. The activation has to be performed by the service provider.

The activation status attached to different basic service groups can be modified separately.

### 1.3.6 Deactivation

Deactivation takes place by means of an appropriate control procedure by the subscriber, or by the service provider, or finally by activation of a new barring program for the same basic service group.

If the served mobile subscriber at provision time has selected the subscription option "control of barring services by subscriber using password", the supplementary service is deactivated if the subscriber provides the following information to the network:

- password;
- information as to whether barring of all calls or calls of a specific basic service group should be deactivated.

NOTE: If no Basic Service code is inserted by the user this is interpreted as the group "All Basic Services".

- selected barring program (i.e. the code for one specific Outgoing Barring program given in 3GPP TS 22.030) or selected barring supplementary service (i.e. the code for Outgoing Barring Service or the code for All Barring Services given in 3GPP TS 22.030).