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**European digital cellular telecommunications system (Phase 2);
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(GSM 02.41)**

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Contents

Foreword	5
0. General.....	7
0.1 Scope.....	7
0.2 Normative references	7
0.3 Definitions and abbreviations.....	7
1. Not used	7
2. Description	7
3. Applicability to Basic Services (BS).....	7
4. Applicability to Supplementary Services (SS)	8
5. Normal procedure	8
6. Exceptional procedures.....	10
7. Alternate procedures	10
8. Interworking considerations.....	10
History.....	11

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Foreword

This European Telecommunication Standard (ETS) has been produced by the Special Mobile Group (SMG) Technical Committee (TC) of the European Telecommunications Standards Institute (ETSI).

This ETS defines the network feature of operator determined barring within the European digital cellular telecommunications system (phase 2).

This ETS corresponds to GSM technical specification GSM 02.41 version 4.5.2.

The specification from which this ETS has been derived was originally based on CEPT documentation, hence the presentation of this ETS may not be entirely in accordance with the ETSI/PNE rules.

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0. General

0.1 Scope

This specification describes the network feature Operator Determined Barring (ODB).

This allows the network operator or service provider to regulate, by means of an exceptional procedure, access by the subscribers to GSM services, by the barring of certain categories of outgoing or incoming calls or of roaming.

The purpose of this network feature is to be able to limit the service provider's financial exposure to new subscribers, or to those who have not promptly paid their bills. It may only be applied to the service provider's own subscribers.

0.2 Normative references

This ETS incorporates by dated and undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this ETS only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies.

- [1] GSM 01.04 (ETR 100): "European digital cellular telecommunication system (Phase 2); Definitions, abbreviations and acronyms".

0.3 Definitions and abbreviations

In addition to the following definitions, abbreviations used in this specification are listed in GSM 01.04.

Premium rate call:

A telecommunications network, possibly but not necessarily a PLMN, may make available certain services, for which the tariff is comparable to, or may exceed, International Call rates. Examples of such premium rate services might be information and entertainment services. The exact definition of what constitutes a premium rate call is the responsibility of the VPLMN operator, possibly subject to inter-operator agreements.

1. Not used

2. Description

Application of Operator Determined Barring is controlled by the Service Provider, by administrative interaction with the HLR; this interface is not standardised.

With the exception of the barring of roaming, the HLR effects Operator Determined Barring in a similar manner to Service Provider - activated use of the Call Barring Supplementary service. Consequently the VLR and MSC also execute the relevant Barring Conditions in similar manners. It is noted that there is no password usage. Roaming is barred by the HLR when the MS is in a PLMN other than the Home PLMN or not in the Home PLMN Country as applicable.

3. Applicability to Basic Services (BS)

This network feature is applied to all Teleservices and Bearer Services except as noted below. The Operator Determined Barring feature shall not be applied to Teleservice-Emergency Call. It is not possible to apply Operator Determined Barring independently to individual Basic Services.

4. Applicability to Supplementary Services (SS)

Operator Determined Barring is a network feature and hence applies to Supplementary Service aspects of subscriptions.

Operator Determined Barring is applied independently from Supplementary Services. Nevertheless the following interactions occur:

Call Barring:

Calls will be denied if either Operator Determined Barring or Subscriber Controlled Barring determine that the call should be barred.

If a call is barred due to both Operator Determined Barring and Subscriber Controlled Barring, then the message or notification returned towards the caller will be the same as if the barring was due solely to Operator Determined Barring (see Section 5).

There is no other interaction.

Call Forwarding:

If a call forwarding programme is in contravention of an Operator Determined Barring Category, when the latter is activated, then the activation shall result in making call forwarding quiescent. If the subscriber attempts to activate a new call forwarding programme in contravention of an Operator Determined Barring Category, then the activation shall be denied, and the subscriber informed of the denial. There is no other interaction.

Closed User Group:

CUG restrictions must be met in addition to Operator Determined Barring restrictions for a call to proceed.

If a call is barred due to both Operator Determined Barring and CUG restrictions, then the message or notification returned towards the caller will be the same as if the barring was due solely to Operator Determined Barring (see Section 5).

There is no other interaction.

Multi-Party, Advice of Charge, CLIP, CLIR, COLP, COLR, Call Transfer, Call Wait, Call Hold:

There is no interaction.

Call Completion to Busy Subscriber, User to User Signalling, Malicious Call Identification, Mobile Access Hunting:

For further study.

The application of a Barring of Roaming category (see sections 3.1 and 3.2 below) will, if the Mobile Station is roaming appropriately, prevent the Mobile Subscriber from undertaking any form of Supplementary Service management.

5. Normal procedure

The Service Provider may at any time activate this feature as described in the following categories:

Independently, one of:

- 1.1 Barring outgoing calls;
- or: 1.2 Barring outgoing international calls;
- or: 1.3 Barring outgoing international calls except those directed to the home PLMN country;
- or: 1.4 Barring of outgoing calls when roaming outside the home PLMN country;

and/or one of:

- 2.1 Barring incoming calls
- or: 2.2 Barring incoming calls when roaming outside the home PLMN country

and/or one of:

- 3.1 Barring of Roaming outside the home PLMN
- or: 3.2 Barring of Roaming outside the home PLMN country

and/or one or both of:

- 4.1 Barring of outgoing Premium Rate Calls (Information).
- 4.2 Barring of outgoing Premium Rate Calls (Entertainment).

and/or one or more of:

- 5.1 When registered in the HPLMN, Operator Specific Barring (Type 1).
- or: 5.2 When registered in the HPLMN, Operator Specific Barring (Type 2).
- or: 5.3 When registered in the HPLMN, Operator Specific Barring (Type 3).
- or: 5.4 When registered in the HPLMN, Operator Specific Barring (Type 4).

and/or

- 6.1 Barring of Supplementary Services Management, which prevents user control of any supplementary service (registration, erasure, activation, deactivation, user invocation, interrogation). However, this does not prevent invocation by other action - e.g. an existing call forwarding or barring state will remain.

"User invocation", as it relates to ODB, consists of the following action:

- invocation of the call hold supplementary service.

If a mobile subscriber attempts to use a mobile initiated service which is barred as described above (categories 1, 4, 5 and 6), an appropriate message shall be returned to the Mobile Station or alternatively (categories 1, 4, and 5), if located in the HPLMN, the mobile subscriber can be automatically connected to a destination address determined by the HPLMN operator. It is necessary for the message to indicate that the barring is due to Operator Determined Barring. It is not necessary to indicate the categories which are barred.

A notification (announcement or CCITT#7 cause value) may be returned to callers attempting to call a mobile subscriber who is appropriately barred incoming calls. It is not necessary to indicate to the called mobile station that an incoming call has been barred.

Only the HPLMN Operator can activate, change or deactivate application of this network feature.

In order to provide this feature securely when a subscriber roams to another network, the visited network needs to support the feature to ensure that the roaming subscriber cannot use a service which has been barred to him.

6. Exceptional procedures

None identified.

7. Alternate procedures

None identified.

8. Interworking considerations

None identified

History

Document history	
September 1994	First Edition
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