

ETSI TC SMG
Released by : ETSI PT12
Release date: February 1992

RELEASE NOTE

Recommendation GSM 04.88

**Mobile radio interface layer 3
Call restriction supplementary services
Specification**

Previously distributed version: 3.1.3 (updated release 1/90)
New released version Febr 1992: 3.1.3 (release 92, phase 1)

1. Reason for changes

No changes since the previously distributed version.



UDC: 621.396.21

Key words: European Digital Cellular Telecommunications System, Global System for Mobile Communications (GSM)

**European digital cellular
telecommunication system (phase 1);
Mobile Radio Interface Layer 3
Call Restriction Supplementary Services
Specification**

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PREFATORY NOTE

ETSI has constituted stable and consistent documents which give specifications for the implementation of the European Cellular Telecommunications System. Historically, these documents have been identified as "GSM recommendations".

Some of these recommendations may subsequently become Interim European Telecommunications Standards (I-ETSS) or European Telecommunications Standards (ETSS), whilst some continue with the status of ETSI-GSM Technical Specifications. These ETSI-GSM Technical Specifications are for editorial reasons still referred to as GSM recommendations in some current GSM documents.

The numbering and version control system is the same for ETSI-GSM Technical Specifications as for "GSM recommendations".

**Mobile radio interface layer 3
Call restriction supplementary services
Specification**

Date: 21 January 1991

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SECTION 0

GENERAL

This recommendation specifies the procedures used at the radio interface (reference point Um as defined in recommendation GSM 04.02) for normal operation, registration, erasure, activation, deactivation, invocation and interrogation of call offering supplementary services. Provision and withdrawal of supplementary services is an administrative matter between the mobile subscriber and the service provider and cause no signalling on the radio interface.

In recommendation GSM 04.10 the general aspects of the specification of supplementary services at the layer 3 radio interface are given.

Recommendation GSM 04.80 specifies the formats and coding for the supplementary services.

Definitions and descriptions of supplementary services are given in recommendations GSM 02.04 and GSM 02.81 to GSM 02.88.

Technical realization of supplementary services is described in recommendations GSM 03.11 and GSM 03.81 to GSM 03.88.

The procedures for Call Control, Mobility Management and Radio Resource management at the layer 3 radio interface are defined in recommendations GSM 04.07 and GSM 04.08.

The following supplementary services belong to the call restriction supplementary services and are described in this recommendation:

Barring of outgoing calls (section 1):

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

Barring of incoming calls (section 2):

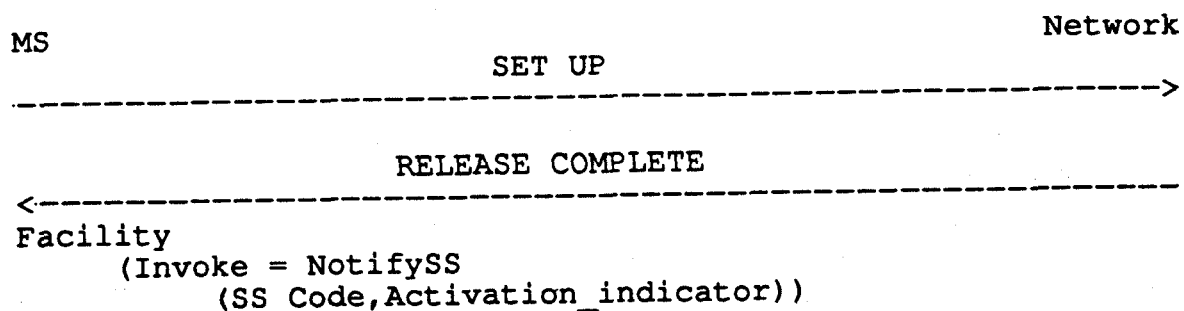
- Barring of all incoming calls (Barring program 1);
- Barring of incoming calls when roaming outside the home PLMN country (Barring program 2).

SECTION 1

BARRING OF OUTGOING CALLS

1.1 Normal operation

When a barring program relating to outgoing calls is active for a basic service, each call set up related to that basic service and not allowed by the barring program will be refused by the network. In this case the served mobile subscriber will receive a notification that the call is not permitted and has been barred, see figure 1.1.



Note : The SS_Code will be the common code for outgoing barring services

Figure 1.1/GSM 04.88

Notification to the served mobile subscriber that barring of outgoing calls is active

When a barring program is active, the ability of the served mobile subscriber to set up emergency calls is not affected, irrespective of the basic service to which the barring program applies.

When a barring program relating to outgoing calls is active, the ability of the served mobile subscriber to receive calls is not affected.

1.2 Registration

If the served mobile subscriber at provision time has selected the subscription option "control of barring service: by subscriber using password", the subscriber has to register a call barring password at provision time. Furthermore the served mobile subscriber can change the call barring password by a registration procedure at any time.

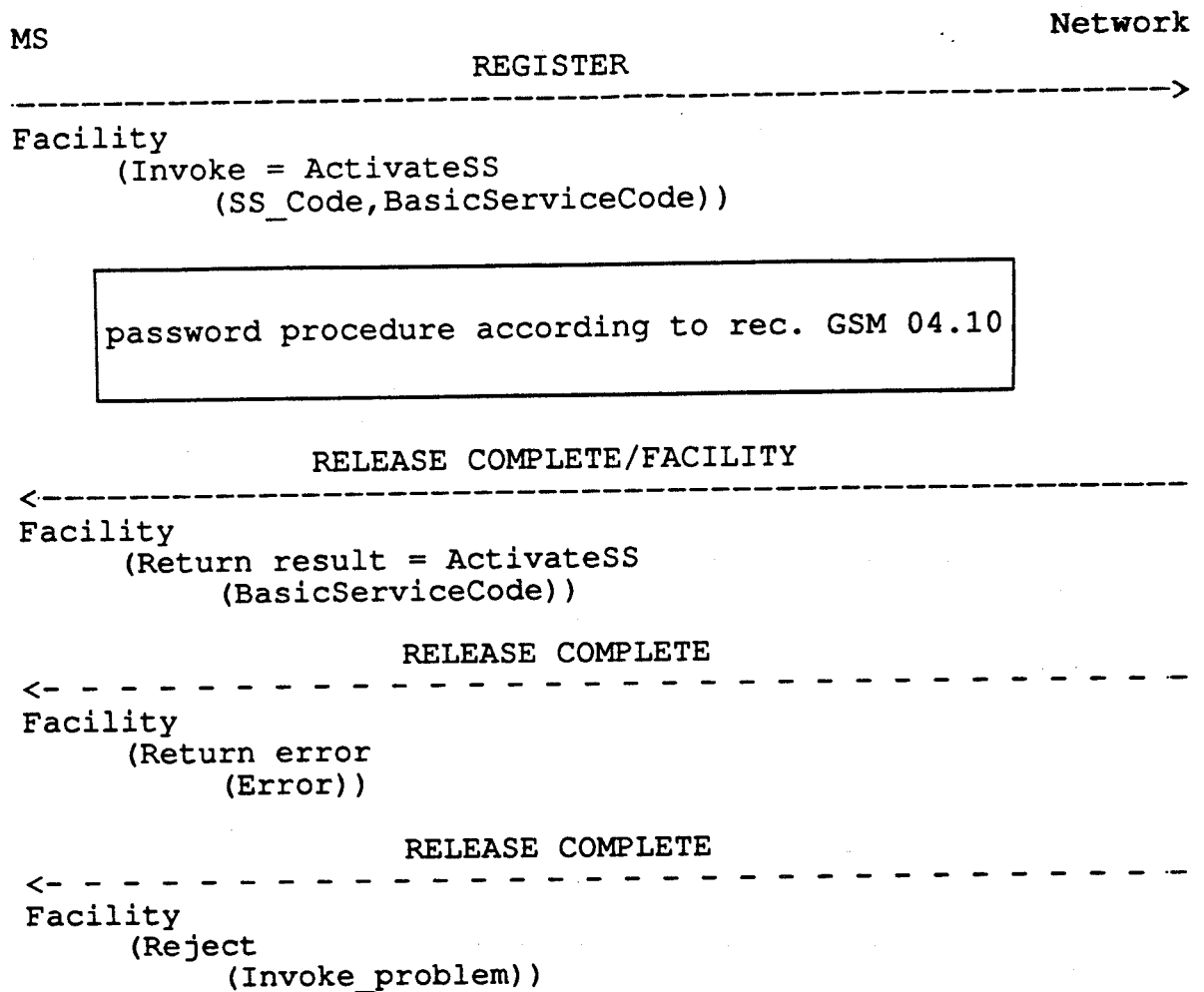
If the served mobile subscriber at provision time has selected the subscription option "control of barring service: by service provider", an attempt to register a new call barring password will be denied.

The procedure to register a new password is specified in Recommendation GSM 04.10

1.3 Activation

If the served mobile subscriber at provision time has selected the subscription option "control of barring service: by subscriber using password", the supplementary service is activated for a basic service if the subscriber has requested so by means of an activation procedure for that basic service. If the subscriber does not indicate a specific basic service, the activation applies to all basic services. The subscriber may use the call barring password at activation, see figure 1.2.

If the served mobile subscriber at provision time has selected the subscription option "control of barring service: by service provider", an attempt to activate the service will be denied and the served mobile subscriber receives an error indication, see figure 1.3. Error values are specified in Recommendation GSM 04.80.



Note : The SS_Code will be one of the specific outgoing barring codes.
 If BasicServiceCode is not included it applies to all basic services.

Figure 1.2/GSM 04.88
 Activation of a barring program

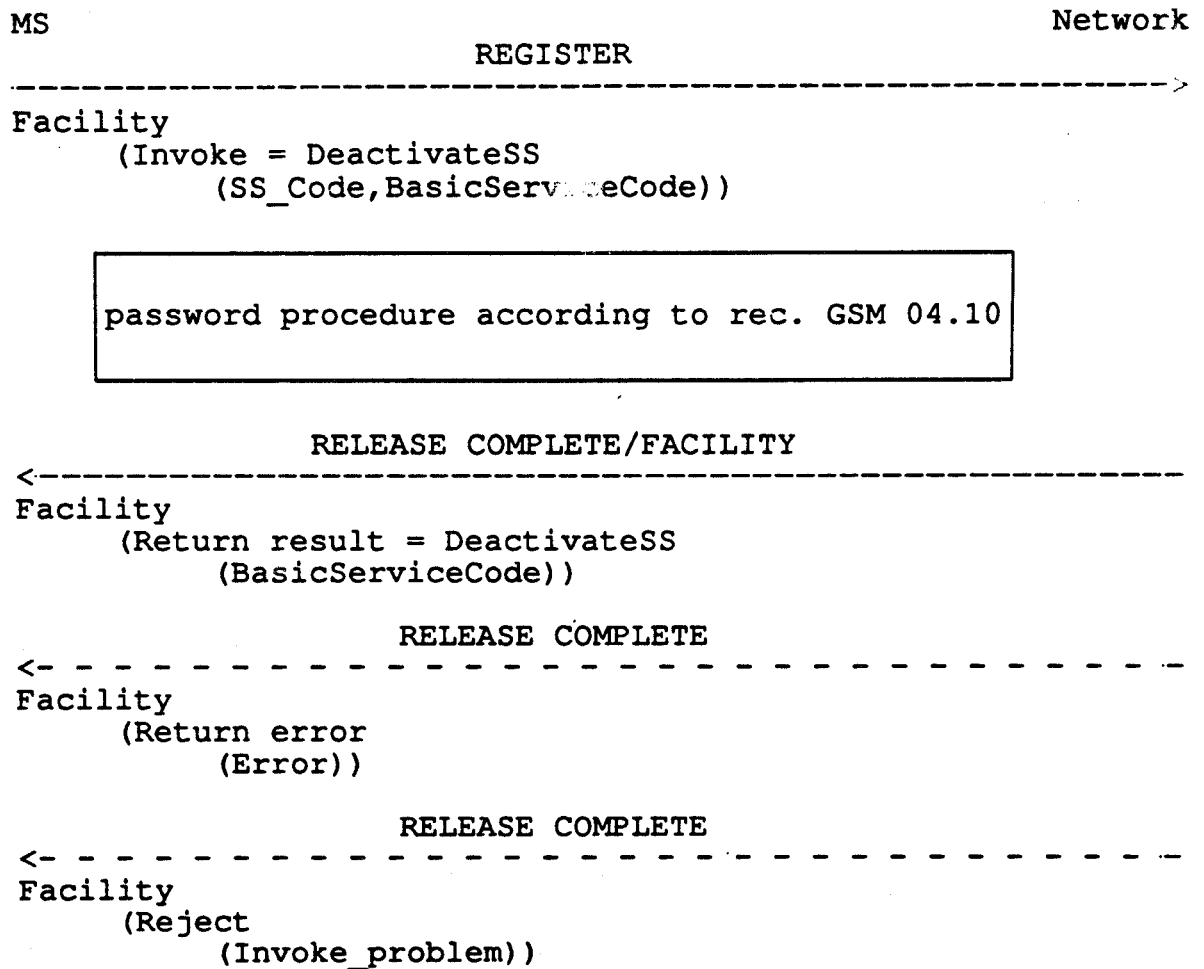
1.4 Deactivation

If the served mobile subscriber at provision time has selected the subscription option "control of barring service: by subscriber using password", the supplementary service is deactivated for a basic service if the subscriber has requested deactivation by means of a deactivation procedure for that basic service. The subscriber may use the call barring password at deactivation, see figure 1.3.

The deactivation request of a barring program may specify the basic service. If the subscriber does not indicate a specific basic service, the deactivation applies to all basic services, see figure 1.3.

If the served mobile subscriber at provision time has selected the subscription option "control of barring service: by service provider", an attempt to deactivate the supplementary service will be denied and the served mobile subscriber receives an error indication, see figure 1.3.

Error values are specified in recommendation GSM 04.80.

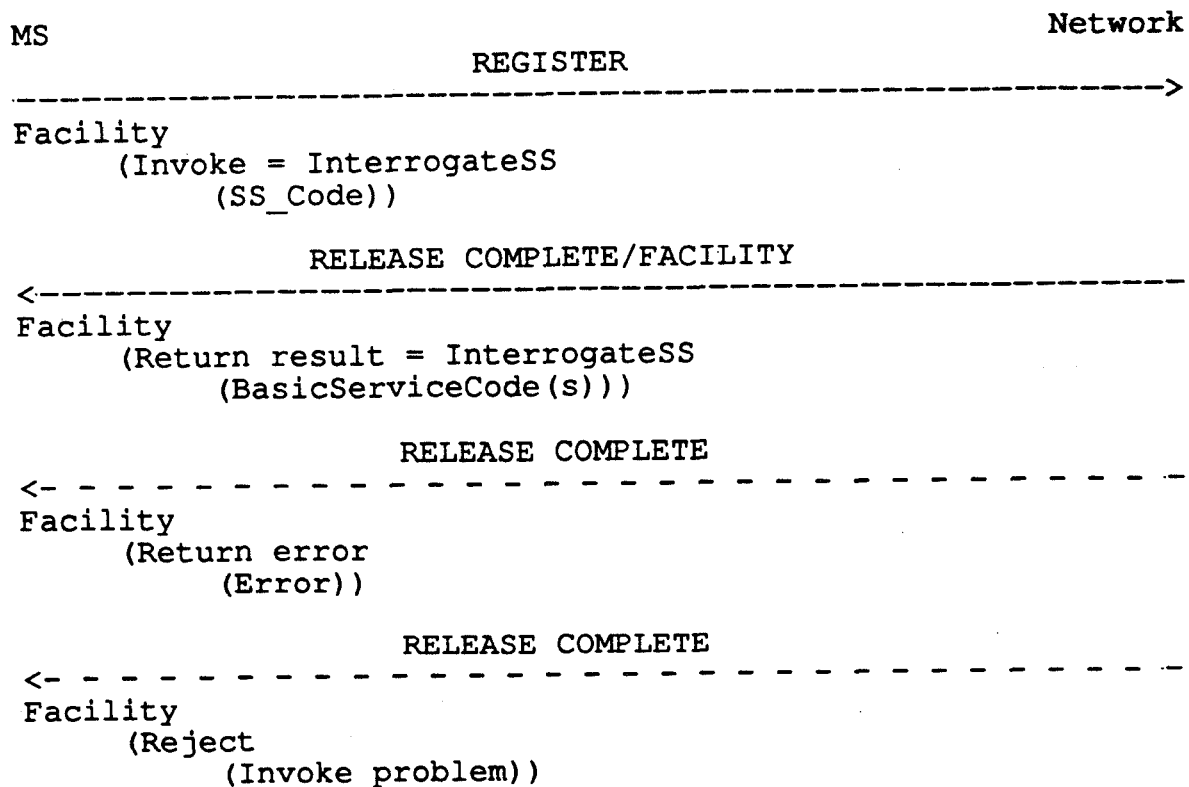


Note : The SS_Code will be the common code for outgoing barring services
 If BasicServiceCode is not included it applies to all basic services

Figure 1.3/GSM 04.88
 Deactivation of barring of outgoing calls

1.5 Interrogation

The interrogation procedure enables the mobile subscriber to obtain information about data stored in the PLMN. After having requested this procedure the network shall return a list of all basic services for which a barring program is active see figure 1.4.



Note : For this section the SS_Code will be one of the specific outgoing barring codes

FIGURE 1.4/GSM 04.88
Interrogation of a barring program

1.6 Invocation and erasure

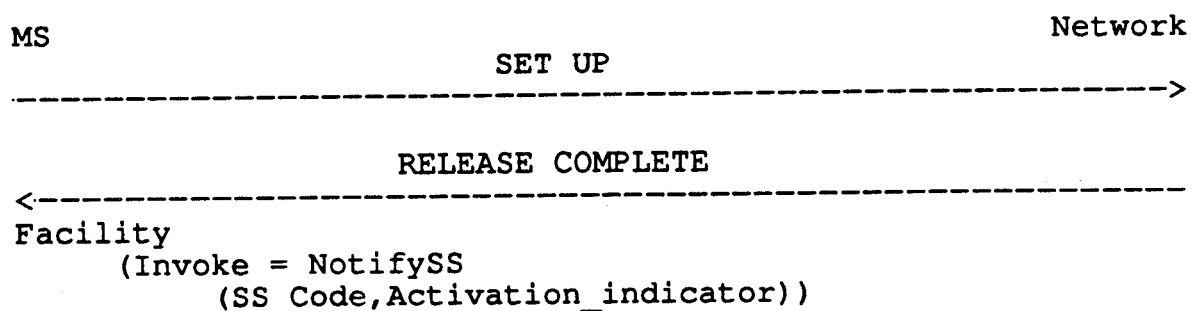
Invocation and erasure are not applicable to barring programs.

SECTION 2

BARRING OF INCOMING CALLS

2.1 Normal operation

When a barring program relating to incoming calls is active for a basic service, each incoming call set up related to that basic service and not allowed by the barring program will be refused by the network. In this case the calling mobile subscriber will receive a notification that the call is not permitted and has been barred, see figure 2.1.



Note : The SS_Code will be the common code for incoming barring services

Figure 2.1/GSM 04.88
 Notification to the calling mobile subscriber
 that at the called subscriber side barring is active

When barring of incoming calls is active, the ability of the served mobile subscriber to originate calls is not affected.

2.2 Registration

If the served mobile subscriber at provision time has selected the subscription option "control of barring service: by subscriber using password", the subscriber has to register a call barring password at provision time. Furthermore the served mobile subscriber can change the call barring password by a registration procedure at any time.

If the served mobile subscriber at provision time has selected the subscription option "control of barring service: by service provider", an attempt to register a new call barring password will be denied.

The procedure to register a new password is specified in recommendation GSM 04.10

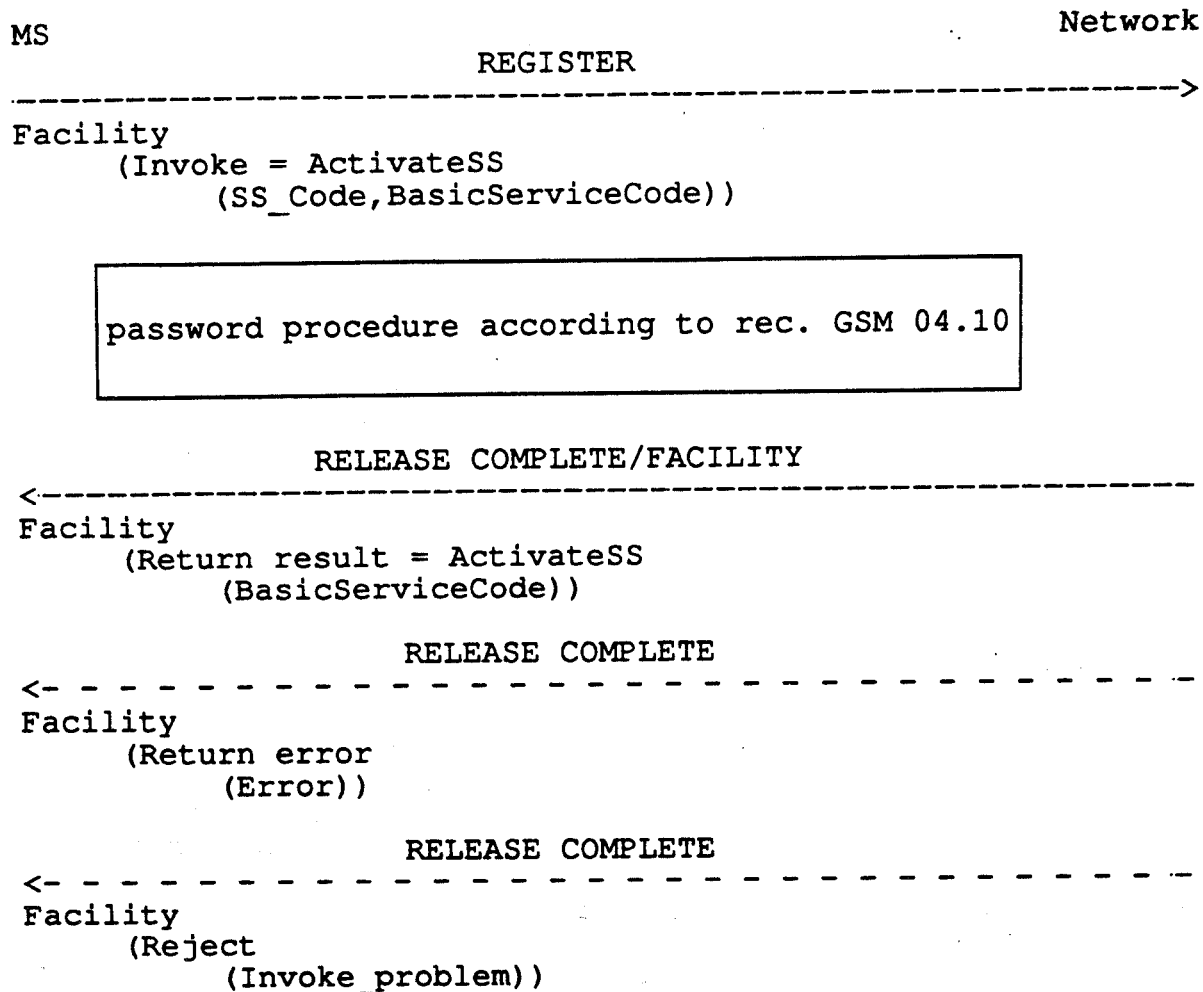
2.3 Activation

If the served mobile subscriber at provision time has selected the subscription option "control of barring service: by subscriber using password", the supplementary service is activated for a basic service if the subscriber has requested so by means of an activation procedure for that basic service. If the subscriber does not indicate a specific basic service, the activation applies to all basic services. The subscriber may use the call barring password at activation, see figure 2.2.

If the served mobile subscriber at provision time has selected the subscription option "control of barring service: by service provider", the supplementary service is activated for a basic service.

If the served mobile subscriber at provision time has selected the subscription option "control of barring service: by service provider", an attempt to activate the service will be denied and the served mobile subscriber receives an error indication, see figure 2.2.

Error values are specified in recommendation GSM 04.80.



Note : The SS_Code will be one of the specific incoming barring codes
 If BasicServiceCode is not included it applies to all basic services

Figure 2.2/GSM 04.88
 Activation of a barring program

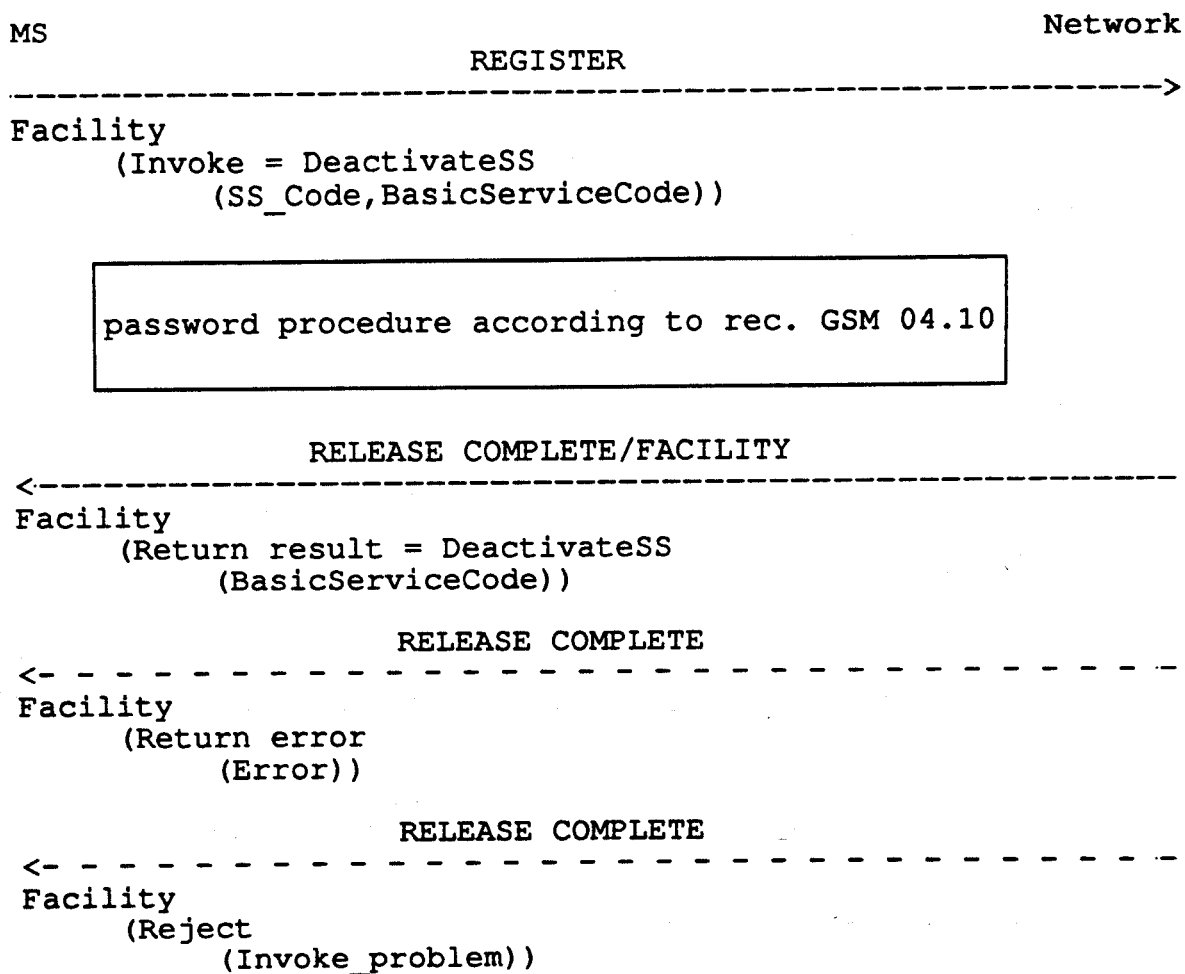
2.4 Deactivation

If the served mobile subscriber at provision time has selected the subscription option "control of barring service: by subscriber using password", the supplementary service is deactivated for a basic service if the subscriber has requested deactivation by means of a deactivation procedure for that basic service. The subscriber may use the call barring password at deactivation, see figure 2.3.

The deactivation request of a barring program may specify the basic service. If the subscriber does not indicate a specific basic service, the deactivation applies to all basic services, see figure 2.3.

If the served mobile subscriber at provision time has selected the subscription option "control of barring service: by service provider", an attempt to deactivate the supplementary service will be denied and the served mobile subscriber receives an error indication, see figure 2.3.

Error values are specified in recommendation GSM 04.80.

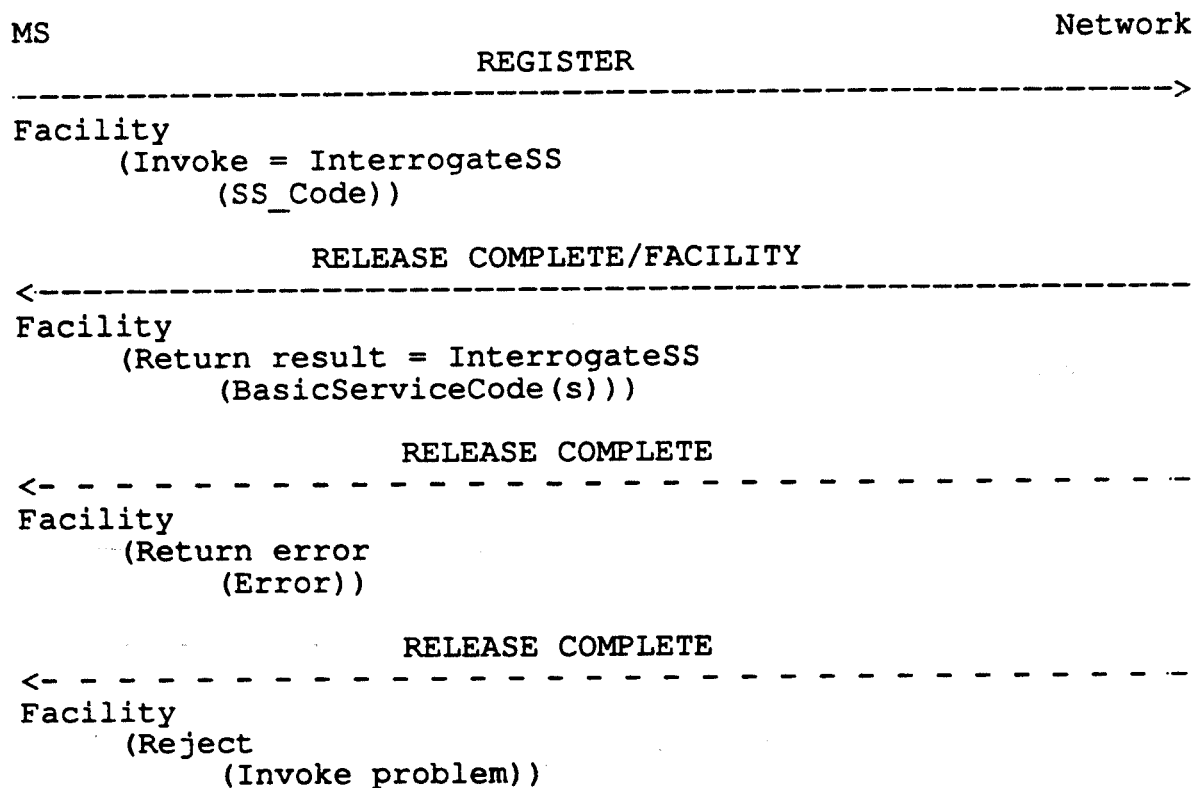


Note : The SS Code will be the common code for incoming barring services
 If BasicServiceCode is not included it applies to all basic services

Figure 2.3/GSM 04.88
 Deactivation of barring of incoming calls

2.5 Interrogation

The interrogation procedure enables the mobile subscriber to obtain information about the data stored in the PLMN. After having requested this procedure the network shall return a list of all basic services for which a barring program is active, see figure 2.4.



Note : The SS_Code will be one of the specific incoming barring codes

Figure 2.4/GSM 04.88
Interrogation of a barring program

2.6 Invocation and erasure

Invocation and erasure are not applicable to barring programs.