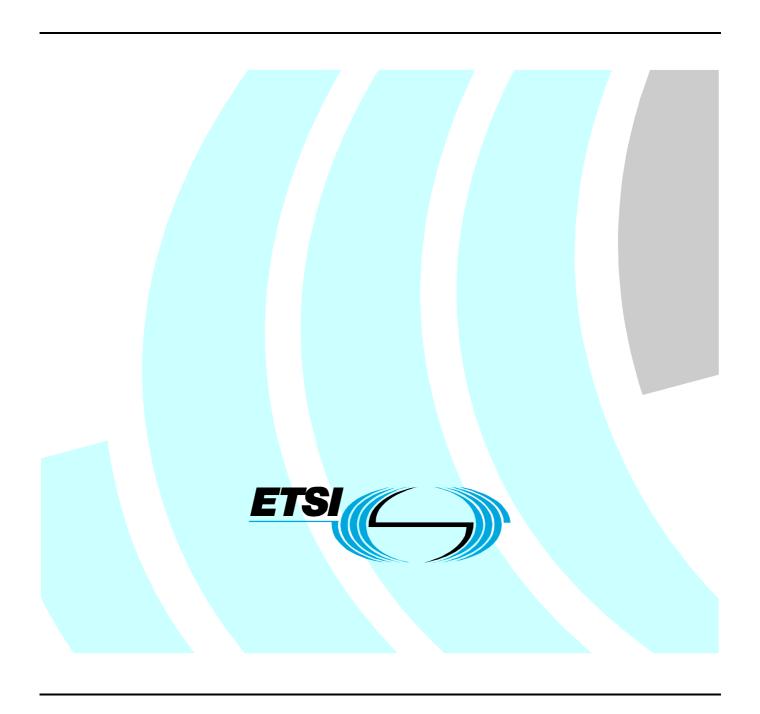
# ETSI TR 102 341 V1.1.1 (2004-07)

Technical Report

Access and Terminals (AT);
Short Message Service (SMS) for PSTN/ISDN;
Control Strings (service codes) for SMS functions and SMS
supplementary services



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#### **Foreword**

This Technical Report (TR) has been produced by ETSI Technical Committee Access and Terminals (AT).

An overview of the whole set of SMS documents can be found in TS 102 331 [1].

### Introduction

The Short Message Service (SMS) is a service that shall make it possible to offer seamless SMS over different networks (PSTN, ISDN, PLMN).

In the following of the present document it is assumed that both the sending and receiving Terminal Equipment (TE) have appropriate capabilities to send, receive, store, display and delete short messages. Further it is assumed that the Short Message Service Centre (SM-SC) is able to receive and process all or part of the control strings (service codes) in annex A.

The intention is to, eventually, replace the service provider specific keywords with service control strings as specified in the present document.

Concerning the service codes the ETSI documents ES 201 382 [3] and TR 102 083 [4] have been taken into account as far as possible, even though these documents are only relevant for supplementary service codes used for public network services.

### 1 Scope

The present document defines the control strings (service codes) for functions and supplementary services defined in the service description of the Short Message Service (SMS).

These SMS control strings can be used between a Short Message Terminal Equipment (SM-TE) and a Short Message Service Centre (SM-SC) to control both the SMS functions and the optional SMS supplementary services.

These SMS control strings can be used via ISDN and PSTN accesses as well as for the User Based Solution (UBS) and Network Based Solution (NBS).

The present document describes the method to implement SMS control strings only. Other SM-SC based methods may be possible.

The present document includes information applicable to service providers (SM-SC) and terminal equipment (SM-TE) manufacturers.

The present document describes only the SMS control strings to control the according functions and supplementary services in the SM-SC; any charging principles of those services are outside the scope of the present document.

There are no interactions relevant with telephony supplementary services.

Furthermore, conformance to the present document is met by conforming to the appropriate information sent and received by the SM-TE and the SM-SC. Therefore no method of testing is provided for the present document.

### 2 References

services".

For the purposes of this Technical Report (TR) the following references apply:

[1]	ETSI TS 102 331: "Access and Terminals (AT); Short Message Service (SMS) for PSTN/ISDN; Short Message Communication between a fixed network Short Message Terminal Equipment and a Short Message Service Centre: Overview of SMS for the User Based Solution and the Network Based Solution".
[2]	ETSI ES 201 986: "Services and Protocols for Advanced Networks (SPAN); Short Message Service (SMS) for PSTN/ISDN; Service description".
[3]	ETSI ES 201 382: "Human Factors (HF); Procedure for registering a supplementary service code".
[4]	ETSI TR 102 083: "Human Factors (HF); Supplementary service codes for use in public network

[5] ETSI TS 123 040: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Technical realization of Short Message Service (SMS) (3GPP TS 23.040 Release 5)".

### 3 Definitions and abbreviations

#### 3.1 Definitions

For the purposes of the present document, the terms and definitions given in ES 201 986 [2] and the following apply:

control string: number of defined characters which is a synonym for a specific control word

NOTE: It can be interpreted by a machine (e.g. in the SM-SC).

initiating user: user who has initiated a control SM which includes a control string

#### 3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

ASMR Anonymous SM Rejection

GSM Global System for Mobile communications

ISDN Integrated Services Digital Network

**ISMBL** Incoming SM Black List Incoming SM White List **ISMWL MSMID** Malicious SM IDentification **MSN** Multiple Subscriber Number **NBS** Network Based Solution **OSMBL** Outgoing SM Black List **OSMWL** Outgoing SM White List Personal Identification Number PIN **PLMN** Public Land Mobile Network **PSTN** Public Switched Telephone Network

SC Service Code
SM Short Message
SMDL SM Distribution List
SMF SM Forwarding
SMS Short Message Service

SMSUIR SM Sending User Identification Restriction

SM-SC Short Message Service Centre SM-TE Short Message Terminal Equipment

TE Terminal Equipment

TP-UD Terminal Portability - User Data

UBS User Based Solution

# 4 Description

The Short Message Service (SMS) enables a sending user to send a SM of a limited size to a receiving user via an SM-SC.

To realize this service it may optionally be necessary, depending on the network/service provider, that a subscriber who wants to send and/or receive SM has to register his/her telephone number (e.g. MSN) on the preferred SM-SC, first.

The registration procedure as well as further basic functions (e.g. erasure, activation and deactivation of SM reception, etc.) or SMS supplementary services (e.g. SMSUIR, SMF, MSMID, etc.) is done by sending a control string from the SM-TE to the SM-SC within an SM to a specific service number.

NOTE: All control strings described in the present document are to be contained in the user data field (TP-UD) in case of UBS1 and in the display information field in case of UBS2.

For the time being these keywords are different for each country and even for each service provider (SM-SC). Therefore the user has to know these keywords or the SM-TE which support the SMS in a comfortable way have to send the correct keyword to the relevant SM-SC. This fact requires an extensive memory and also an unnecessary configuration and/or selection in the terminal menu by the user.

The present document describes European harmonized control strings (service codes) for the known SMS functions and SMS supplementary services defined in the SMS service description [2] and defines a preferred specific service number where a control string shall be addressed to. Also, additional control strings are listed in the present document to control certain features in conjunction with an outgoing SM (e.g. sending an SM to a Telefax). Other new functions are for further study.

Most control strings defined in the present document are sent with a service code like for telephony supplementary services in PSTN/ISDN (e.g. \* <SC> # ). In some cases extra information is needed. The service centres should be able to recognize and process these control information. Besides these control string definitions, an SM-SC may support network/service provider specific keywords, too.

Each control process should be managed in the SM-SC which should react accordingly. Further, the SM-SC shall send back a response SM to the initiating SM-TE which contains a positive or negative acknowledgement about the previously submitted service request or the requested information in case of an interrogation.

The preparation of such a control SM as well as any necessary configurations in an SM-TE are outside the scope of the present document.

### 4.1 SM-SC functions

### 4.1.1 Information flow between SM-TE (SMS user) and SM-SC

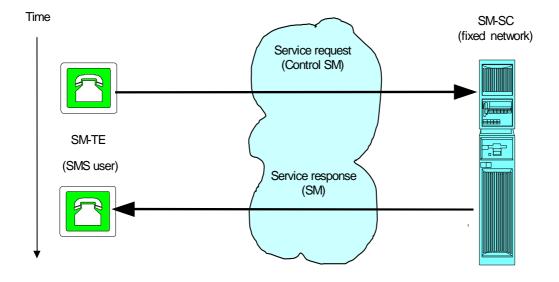


Figure 1: Information flow between SM-TE and SM-SC

Each control string is sent from an SM-TE to the SM-SC within an outgoing message (submit), but addressed to a specific service number. Some SMS supplementary services are invoked by an SM-TE to the SM-SC in conjunction with a normal outgoing message (e.g. SMSUIR); in this case the control string is transmitted in the very beginning of the SM text.

After the SM-SC has received any control string the SM-SC shall verify and process the received function and should respond with an acknowledgment or the desired data within an SM to the SM-TE (initiating user).

# 5 Control strings

Control strings are used to activate, deactivate or interrogate SMS functions or SMS supplementary services in the SM-SC. The list of SMS functions and SMS supplementary services with their control strings is given in annex A.

### 5.1 Syntax and semantics of control strings

### 5.1.1 Syntax

In the present document the syntax for all control strings is as follows:

<> Mandatory information is written in <brackets>

[] Optional information is written in [brackets]

{ } Repeated information is written in {braces}

::= means "is defined as"

means "exclusive OR"

; Remarks

#### 5.1.2 Semantics

In the present document the semantics of an SMS control string is as follows:

CONTROL INFORMATION ::= < \* | # | \*# > <SERVICE CODE> [{ <\*> < PARAMETER>}] <#>

SERVICE CODE ::= <NUMERIC STRING (SIZE(2...3))>

 $PARAMETER \\ \hspace*{1.5cm} ::= < NUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHANUMERIC \ STRING \ (SIZE(n)) > \\ | < ALPHA$ 

NUMERIC STRING  $::= \{0|1|2|3|4|5|6|7|8|9\}$ 

ALPHANUMERIC STRING  $::= \{A|B|C| .... |X|Y|Z|a|b|c| .... |x|y|z|0|...|9\}$ 

EMAIL STRING ::= Characters according to [5]

PIN ::= <ALPHANUMERIC STRING (SIZE(4...8))>

NOTE: <\*> and the parameters that follow are for registration and activation procedures;

<#> and the parameters that follow are for erasure and deactivation procedures;

it is also used as end of string indication.

<\*#> and the parameters that follow are for interrogation of data in the SMS user profile;

> is used if one of a set of parameters (except the last one) is not used or necessary;

(the last parameter can be left out without <\*\*> and can be replaced by #).

#### 5.2 Service codes

Control strings may consist of just a star and/or a hash followed by a service code <SC> and a hash. In some cases further information is necessary where each parameter is separated by a star or in some cases by a "blank" character. In all cases a hash is the last character (end of string). These strings are similar to those which are used for PSTN/ISDN supplementary services (e.g. keypad string: \*21 \*<DestNum> # = call forwarding to another destination number).

### 5.3 Service number

Outgoing messages containing control strings for SMS functions or supplementary services (e.g. activation or deactivation) which are not addressed to a certain destination number or address, are sent from an SM-TE to a specific service number within the SM-SC. To make it easier for TE designer and also for users, this service number should be the same in all SM-SCs.

This European harmonized service number should be:

ServiceNumber ::= 8888

# 6 Interworking requirements

There are no interworking requirements, except between the SM-TE and the SM-SC.

# 7 Interaction with supplementary services

There are no interactions with telephony supplementary services.

Interactions with other SMS supplementary services are described in the SMS service description [2].

# Annex A: Control strings

In the following, control strings are defined which facilitate the core features and optional features described in the service description [2]. These control strings are sent from the SM-TE to the SM-SC within the text field of an outgoing message.

The SMS functions (core features) and the SMS supplementary services (optional features) can be realized by using the:

- control strings with service codes sent to the service number;
- control strings with service codes sent to the destination number (before the actual text).

NOTE: In the following, the "DestinationAddress" is the address to which an SMS including a control string will be sent to. This can be the address of a receiving user in case of a normal SMS including an extra control information prior to the actual text or a specific address within the SM-SC to which SMS control strings shall be sent to.

### A.1 SMS functions

### A.1.1 Registration and erasure

For the optional registration and erasure procedures according to the service description [2], the following control strings apply:

Registration ::= \* <SC > [ \* <PIN > ] #

Erasure ::= # <SC> [ \* <PIN> ] #

InterrogationRegistration ::= \*# <SC> #

SC ::= 00

DestinationAddress ::= ServiceNumber

#### A.1.2 Activation and deactivation

For the optional activation and deactivation procedures according to the service description [2], the following control strings apply.

NOTE:

The activation and deactivation procedure has influence only on incoming messages. The deactivation time period can be chosen by setting the time parameters for start and end of the deactivation time. If the user provides only the start parameter, the deactivation phase starts on that time for an uncertain duration; in that case the SMS user has to activate the reception of incoming SM manually. If the time value of the DeactivationEnd parameter is less than the time value of the DeactivationStart parameter, the time of the DeactivationEnd should be interpreted as a time on next day (+ 24hours). An automatic repetition (e.g. every day) of this deactivation period is not foreseen.

Activation ::= \* <SC> [ \* <PIN> ] #

Deactivation ::= # <SC> [\* <DeactivationStart> \* [ <DeactivationEnd> ] ] [ \* <PIN> ] #

InterrogationActivation ::= \*# <SC> #

SC ::= 35

DeactivationStart ::= NUMERIC STRING (SIZE (4)) ; 0000 ... 2359 = Time (hhmm)

DeactivationEnd ::= NUMERIC STRING (SIZE (4)) ; 0000 ... 2359 = Time (hhmm)

DestinationAddress ::= ServiceNumber

# A.2 SMS supplementary services

### A.2.1 SM Sending User Identification Restriction (SMSUIR)

To allow an SM sending user to send an anonymous SM according to the service description [2], the temporary SM sending user identification restriction procedure is sent within an outgoing message before the actual SM text. Optionally the SMS user may activate and deactivate a permanent SMSUIR in the SM-SC. After activation of permanent SMSUIR all outgoing messages are sent as anonymous SM. The following control strings apply.

### A.2.1.1 SMSUIR permanent

SMSUIR\_activation\_perm. ::= \* <SC> #

SMSUIR\_deactivation ::= # <SC> #

SMSUIR\_interrogation ::= \*# <SC> #

SC ::= 31

DestinationAddress ::= ServiceNumber

### A.2.1.2 SMSUIR on a per-SM basis

SMSUIR\_activation\_temp. ::= \* <SC> # <text>

SC ::= 31

text ::= Short message text

DestinationAddress ::= Destination number (receiving user of the SM)

### A.2.2 SM Forwarding (SMF)

For the SM forwarding procedure according to the service description [2], the following control strings apply:

SMF\_activation ::= \* <SC> [ \* <ForwardingAddress> ] #

SMF\_deactivation ::= # <SC> #

SMF\_interrogation ::= \*# <SC> #

SC ::= 21

ForwardingAddress ::= ALPHANUMERIC STRING (SIZE (1...50)) or EMAIL STRING (SIZE (1...50));

e.g. Destination (Phone/Fax-) number or E-mail-Address: "xyz@domaine.xx"

DestinationAddress ::= ServiceNumber

### A.2.3 Anonymous SM Rejection (ASMR)

For the anonymous SM rejection procedure according to the service description [2], the following control strings apply:

ASMR\_activation ::= \* <SC> #

ASMR\_deactivation ::= # <SC> #

ASMR\_interrogation ::= \*# <SC> #

SC ::= 934

DestinationAddress ::= ServiceNumber

### A.2.4 Outgoing SM Black List / White List (OSMBL / OSMWL)

For the outgoing SM black list procedures or white list procedures according to the service description [2], the following control strings apply.

NOTE: The SMS user can decide whether he/she wants to use the OSMBL or the OSMWL; both services are mutually exclusive. This supplementary service can be activated and deactivated as well as modified and deleted by sending the respective control strings from the SM-TE to the SM-SC. The PIN parameter is mandatory for this service.

#### A.2.4.1 Insertion and deletion

NOTE: More than one entry may be inserted or deleted within an insertion or deletion control string ( { } means

repetition of these parameters possible). The entire black or white list may be deleted with a specific

control string.

OSMBL\_add\_entry ::= \* <SC1> \* <Entry.1> [ { <blank> <Entry.n> } ] \* <PIN> #

 $OSMBL\_delete\_entry \qquad ::= \ \# <SC1> \ ^* <Entry.1> [\ \{ \ <blank> <Entry.n> \} \ ] \ ^* <PIN> \ \# <Entry.n> \} \ ] \ ^* <PIN> \ \# <Entry.n> \} \ ] \ ^* <PIN> \ \# <Entry.n> \} \ ^* <PIN> \ \# <Entry.n> \} \ ^* <Entry.n> \} \ ^* <Entry.n> \ ^* <Entry.n>$ 

OSMWL\_add\_entry ::= \* <SC2> \* <Entry.1> [ { <blank> <Entry.n> } ] \* <PIN> #

OSMWL\_delete\_entry ::= # <SC2> \* <Entry.1> [ { <blank> <Entry.n> } ] \* <PIN> #

 $OSMBWL\_erase\_list$  ::= # <SC0> \* <PIN> #

SCO ::= 340 ; Black or White list

SC1 ::= 341 ; Black list SC2 ::= 342 ; White list

Entry ::= ALPHANUMERIC STRING (SIZE (1...50)) or EMAIL STRING (SIZE (1...50));

e.g. Destination (Phone/Fax-) number or E-mail-Address: "xyz@domaine.xx;

to avoid misinterpretation there should be no "blank" within an Entry

(see also the definition of alphanumeric string)!

blank ::= Blank character

DestinationAddress ::= ServiceNumber

#### A.2.4.2 Activation and deactivation

 $OSMBWL\_activation \qquad ::= \ \ ^* <\!\!SC\!\!> ^* <\!\!PIN\!\!> \#$ 

OSMBWL\_deactivation ::= # <SC> \* <PIN> #

OSMBWL interrogation ::= \*# <SC> #

SC ::= 34

DestinationAddress ::= ServiceNumber

### A.2.5 Incoming SM Black List / White List (ISMBL / ISMWL)

For the incoming SM black list procedures or white list procedures according to the service description [2], the following control strings apply.

NOTE: The SMS user can decide whether he/she wants to use the ISMBL or the ISMWL; both services are mutually exclusive. This supplementary service can be activated and deactivated as well as modified and deleted by sending the respective control strings from the SM-TE to the SM-SC. The PIN parameter is mandatory for this service.

#### A.2.5.1 Insertion and deletion

NOTE: More than one entry may be inserted or deleted within an insertion or deletion control string ( { } means

repetition of these parameters possible).

The entire black or white list may be deleted with a specific control string.

 $ISMBL\_add\_entry \qquad ::= * <SC1> * <Entry.1> [ { <blank> <Entry.n> } ] * <PIN> #$ 

ISMBL\_delete\_entry ::= # <SC1> \* <Entry.1> [ { <blank> <Entry.n> } ] \* <PIN> #

ISMWL\_add\_entry ::= \* <SC2> \* <Entry.1> [ { <blank> <Entry.n> } ] \* <PIN> #

ISMWL\_delete\_entry ::= # <SC2> \* <Entry.1> [ { <blank> <Entry.n> } ] \* <PIN> #

 $ISMBWL_erase_list$  ::= # <SC0> \* <PIN> #

SCO ::= 930 ; Black or White list

SC1 ::= 931 ; Black list SC2 ::= 932 ; White list

Entry ::= ALPHANUMERIC STRING (SIZE (1...50)) or EMAIL STRING (SIZE (1...50));

e.g. Destination (Phone/Fax-) number or E-mail-Address: "xyz@domaine.xx";

to avoid misinterpretation there should be no "blank" within an Entry

(see also the definition of alphanumeric string)!

blank ::= Blank character

DestinationAddress ::= ServiceNumber

#### A.2.5.2 Activation and deactivation

ISMBWL\_activation ::= \* <SC> \* <PIN> #

ISMBWL\_deactivation ::= # <SC> \* <PIN> #

ISMBWL interrogation ::= \*# <SC> #

SC ::= 93

DestinationAddress ::= ServiceNumber

### A.2.6 SM Distribution List (SMDL) (Multi Messaging)

For the SM distribution list procedure according to the service description [2], the following control strings apply.

NOTE: This supplementary service can be created and modified and deleted by sending the respective control strings from the SM-TE to the SM-SC. A distribution list is used by sending an SM to the SM-SC where the parameter "DestinationAddress" shall contain the SM-SC "Service Number". The selected distribution list is sent in the very beginning of the SM text. The number of distribution lists as well as the number of entries of each list is a service provider option.

#### A.2.6.1 Creation, modification and deletion

NOTE: More than one entry may be inserted or deleted within an insertion or deletion control string ( { } means

repetition of these parameters possible). A modification of an entry is done by deleting the actual one and

adding a new one.

SMDL\_add\_entry ::= \* <SC1> \* <ListName> \* Entry.1 [ { <blank> <Entry.n> } ] [ \* <PIN> ] #

 $SMDL\_delete\_entry \hspace{1cm} ::= \hspace{1cm} \# <SC1> \ ^* <ListName> \ ^* Entry.1 \ [ \ \{ <blank> <Entry.n> \} \ ] \ [ \ ^* <PIN> ] \ \#$ 

 $SMDL\_erase\_list \qquad ::= \ \# <SC0> \ ^* < ListName> [ \ ^* < PIN> ] \ \#$ 

SC0 ::= 710 SC1 ::= 711

ListName ::= ALPHANUMERIC STRING (SIZE (1...8));

to avoid misinterpretation there should be no "blank" within a ListName

(see also the definition of alphanumeric string)!

Entry ::= ALPHANUMERIC STRING (SIZE (1...50)) or EMAIL STRING (SIZE (1...50));

e.g. Destination (Phone/Fax-) number or E-mail-Address: "xyz@domaine.xx";

to avoid misinterpretation there should be no "blank" within an Entry

(see also the definition of alphanumeric string)!

blank ::= Blank character

DestinationAddress ::= ServiceNumber

### A.2.6.2 Interrogation

NOTE: The SMS user can interrogate the names of all distribution lists by sending the interrogation control string

without any specific list name or interrogate the list of entries of a specific distribution list by sending the interrogation control string containing a specific list name.

SMDL\_interrogation ::= \*# <SC0> [ \* <ListName> ] #

SC0 ::= 710

ListName ::= ALPHANUMERIC STRING (SIZE (1...8))

DestinationAddress ::= ServiceNumber

#### A.2.6.3 Invocation

An SM which is sent to an SM distribution list will be sent to the SM-SC ServiceNumber with the ListName in the beginning of the text as follows:

 $SMDL\_invocation \\ \hspace*{0.2cm} ::= \\ * < SC0 > * < ListName.1 > [ \\ \{ < blank > < ListName.n > \\ \} ] \\ \# < text > C0 > * < ListName.n > ] \\ | ( < blank > < ListName.n > ) \\ | ( < blank > < ListName.n > ) \\ | ( < blank > < ListName.n > ) \\ | ( < blank > < ListName.n > ) \\ | ( < blank > < ListName.n > ) \\ | ( < blank > < ListName.n > ) \\ | ( < blank > < ListName.n > ) \\ | ( < blank > < ListName.n > ) \\ | ( < blank > < ListName.n > ) \\ | ( < blank > < ListName.n > ) \\ | ( < blank > < ListName.n > ) \\ | ( < blank > < ListName.n > ) \\ | ( < blank > < ListName.n > ) \\ | ( < blank > < ListName.n > ) \\ | ( < blank > < ListName.n > ) \\ | ( < blank > < ListName.n > ) \\ | ( < blank > < ListName.n > ) \\ | ( < blank > < ListName.n > ) \\ | ( < blank > < ListName.n > ) \\ | ( < blank > < ListName.n > ) \\ | ( < blank > < ListName.n > ) \\ | ( < blank > < ListName.n > ) \\ | ( < blank > < ListName.n > ) \\ | ( < blank > < ListName.n > ) \\ | ( < blank > < ListName.n > ) \\ | ( < blank > < ListName.n > ) \\ | ( < blank > < ListName.n > ) \\ | ( < blank > < ListName.n > ) \\ | ( < blank > < ListName.n > ) \\ | ( < blank > < ListName.n > ) \\ | ( < blank > < ListName.n > ) \\ | ( < blank > < ListName.n > ) \\ | ( < blank > < ListName.n > ) \\ | ( < blank > < ListName.n > ) \\ | ( < blank > < ListName.n > ) \\ | ( < blank > < ListName.n > ) \\ | ( < blank > < ListName.n > ) \\ | ( < blank > ) \\ |$ 

SC0 ::= 710

ListName ::= ALPHANUMERIC STRING (SIZE (1...8));

to avoid misinterpretation there should be no "blank" within a ListName

(see also the definition of alphanumeric string)!

blank ::= Blank character

text ::= Short message text

DestinationAddress ::= ServiceNumber

### A.2.7 Personal Identification Number (PIN)

For some of the SM supplementary services a PIN is required. This PIN may be used for other functions, too. The first PIN which is provided by the service provider shall be "0000" (four times zero) and has to be changed by the user before using it for any procedures. For that reason the user needs a possibility to modify the PIN. The following control strings apply.

NOTE: Any restrictions on specific PINs (e.g. it should not be allowed to choose "1234" or "1111", etc.) is up to the service provider.

#### A.2.7.1 Modification of the PIN

NOTE 1: If the PIN has not been changed (default PIN = "0000") or is set to "0000" by the user, the relevant procedures where a PIN is mandatory may be rejected by the SM-SC.

NOTE 2: The new PIN has to be provided twice.

PIN\_change ::= \* <SC> \* <OldPin> \* <NewPin> \* <NewPin> #

SC ::= 03OldPin ::= PINNewPin ::= PIN

DestinationAddress ::= ServiceNumber

# Annex B: List of Service Codes used for SMS

SC	Service	Short description
00	REG / ERA	SMS registration, erasure and interrogation
03	PIN	PIN modification
21	SMF	Short Message Forwarding: Activation, deactivation and interrogation
31	SMSUIR	Short Message Sending User Identification Restriction: Activation, deactivation and interrogation
34	OSMWL / OSMBL	Outgoing SM White List / Black List: Activation, deactivation and interrogation
340	OSMWL / OSMBL	Erase list
341	OSMBL	Add entry / delete entry
342	OSMWL	Add entry / delete entry
35	ACT / DEACT	SMS activation and deactivation and interrogation
710	SMDL	Short Message Distribution List: Erase list / Interrogation / Invocation
711	SMDL	Add entry / delete entry
93	ISMWL / ISMBL	Incoming SM White List / Black List: Activation, deactivation and interrogation
930	ISMWL / ISMBL	Erase list
931	ISMBL	Add entry / delete entry
932	ISMWL	Add entry / delete entry
934	ASMR	Anonymous Short Message Rejection: Activation, deactivation and interrogation

# History

	Document history				
V1.1.1	July 2004	Publication			