

ETSI TS 103 912 V1.3.1 (2003-12)

Technical Specification

**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
(Corrections to ES 201 912 V1.1.1)**



Reference

RTS/AT-030025

Keywords

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ETSI

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

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

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

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Foreword

This Technical Specification (TS) has been produced by ETSI Technical Committee Access and Terminals (AT).

1 Scope

The present document identifies corrections of the ES 201 912 V1.1.1 [1]. The intention is to incorporate these corrections into a new version of ES 201 912 [1].

2 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 and/or edition number or version number) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

Referenced documents which are not found to be publicly available in the expected location might be found at <http://docbox.etsi.org/Reference>.

- [1] ETSI ES 201 912 (V1.1.1): "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".

3 Abbreviations

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

APP	APPLICATION
CM	CONNECTION MANAGEMENT
DLC	DATA LINK CONTROL
DLL	DATA LINK LAYER
SM	SHORT MESSAGE(S)
SMS	SHORT MESSAGE SERVICE
SM-SC	SHORT MESSAGE-SERVICE CENTRE
SM-TE	SHORT MESSAGE-TERMINAL EQUIPMENT
TL	TRANSFER LAYER

4 General

Some necessary corrections and explanations have been found in the published version of ES 201 912 [1]. These corrections are given in the present document.

5 Corrections to clauses and annexes in version 1.1.1 of ES 201 912

The following corrections are necessary:

Clause 2

Replace the following specific references:

- [2] ETSI TS 100 900 (V7.2.0): "Digital cellular telecommunications system (Phase 2+) (GSM); Alphabets and language-specific information (GSM 03.38 version 7.2.0 Release 1998)".
- [3] ETSI TS 100 901 (V7.4.0): "Digital cellular telecommunications system (Phase 2+) (GSM); Technical realization of the Short Message Service (SMS) (GSM 03.40 version 7.4.0 Release 1998)".
- [5] ETSI TS 100 942 (V7.0.0): "Digital cellular telecommunications system (Phase 2+) (GSM); Point-to-Point (PP) Short Message Service (SMS) support on mobile radio interface (GSM 04.11 version 7.0.0 Release 1998)".
- [6] ETSI EN 300 659-1 (V1.3.1): "Access and Terminals (AT); Analogue access to the Public Switched Telephone Network (PSTN); Subscriber line protocol over the local loop for display (and related) services; Part 1: On-hook data transmission".
- [7] ETSI EN 300 659-2 (V1.3.1): "Access and Terminals (AT); Analogue access to the Public Switched Telephone Network (PSTN); Subscriber line protocol over the local loop for display (and related) services; Part 2: Off-hook data transmission".
- [8] ETSI EN 300 659-3 (V1.3.1): "Access and Terminals (AT); Analogue access to the Public Switched Telephone Network (PSTN); Subscriber line protocol over the local loop for display (and related) services; Part 3: Data link message and parameter codings".
- [10] ETSI EN 300 778-2 (V1.2.1): "Access and Terminals (AT); Analogue access to the Public Switched Telephone Network (PSTN); Protocol over the local loop for display and related services; Terminal Equipment requirements; Part 2: Off-hook data transmission".
- [11] ITU-T Recommendation V.25 (1996): "Automatic answering equipment and general procedures for automatic calling equipment on the general switched telephone network including procedures for disabling of echo control devices for both manually and automatically established calls".
- [12] ETSI EN 300 403-1 (V1.3.2): "Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1) protocol; Signalling network layer for circuit-mode basic call control; Part 1: Protocol specification [ITU-T Recommendation Q.931 (1993), modified]".
- [13] ETSI EN 300 090 (V1.2.1): "Integrated Services Digital Network (ISDN); Calling Line Identification Restriction (CLIR) supplementary service; Service description".

With the following non-specific references:

- [2] ETSI TS 123 038: "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); Alphabets and language-specific information (3GPP TS 23.038 version 5.y.z Release 5)".
- [3] 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 version 5.6.1 Release 5)".
- [5] ETSI TS 124 011: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Point-to-Point (PP) Short Message Service (SMS) Support on Mobile Radio Interface (3GPP TS 24.011 version 5.y.z Release 5)".

- [6] ETSI EN 300 659-1: "Access and Terminals (AT); Analogue access to the Public Switched Telephone Network (PSTN); Subscriber line protocol over the local loop for display (and related) services; Part 1: On-hook data transmission".
- [7] ETSI EN 300 659-2: "Access and Terminals (AT); Analogue access to the Public Switched Telephone Network (PSTN); Subscriber line protocol over the local loop for display (and related) services; Part 2: Off-hook data transmission".
- [8] ETSI EN 300 659-3: "Access and Terminals (AT); Analogue access to the Public Switched Telephone Network (PSTN); Subscriber line protocol over the local loop for display (and related) services; Part 3: Data link message and parameter codings".
- [10] ETSI ES 200 778-2: "Access and Terminals (AT); Analogue access to the Public Switched Telephone Network (PSTN); Protocol over the local loop for display and related services; Terminal Equipment requirements; Part 2: Off-hook data transmission".
- [11] ITU-T Recommendation V.25: "Automatic answering equipment and general procedures for automatic calling equipment on the general switched telephone network including procedures for disabling of echo control devices for both manually and automatically established calls".
- [12] ETSI EN 300 403-1: "Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1) protocol; Signalling network layer for circuit-mode basic call control; Part 1: Protocol specification [ITU-T Recommendation Q.931 (1993), modified]".
- [13] ETSI EN 300 090: "Integrated Services Digital Network (ISDN); Calling Line Identification Restriction (CLIR) supplementary service; Service description".

Clause 3.1

Add the following note at the end of the clause concerning SME Subaddress:

- NOTE: Because of different purposes, the subaddressing as described by the present document does not correspond to the subaddressing as defined by TS 123 040 [3]. Both are different mechanisms that just share the same name due to historical reasons.

Clause 3.2

Delete the following:

DLC Data Link Control

Clause 5.2.1

Replace the following single note:

- NOTE: This subaddressing is also possible when exchanging SM with GSM users, including the possibility of immediate reply from GSM to PSTN/ISDN including SME Subaddress.

With the following two notes:

- NOTE 1: This subaddressing is also possible when exchanging SM with GSM users, including the possibility of immediate reply from GSM to PSTN/ISDN including SME Subaddress.

- NOTE 2: Because of different purposes, the subaddressing as described by the present document does not correspond to the subaddressing as defined by TS 123 040 [3]. Both are different mechanisms that just share the same name due to historical reasons.

Clause 5.3.2.1

Replace the following text:

"The maximum payload of one Data Link Layer message is corresponding to the maximum message length of the Transfer Layer, which is 176 bytes. In case of Transfer Layer messages larger than 176 byte the Data Link Layer shall segment this messages using the mechanism of extension bits in the message type coding.

The Data Link Layer message format is similar to the message format of the off-hook caller ID information described in EN 300 659-2 [7]."

With:

"The maximum payload of one Data Link Layer message is corresponding to the maximum message length of the Transfer Layer, which is 176 bytes. In case of future Transfer Layer messages larger than 176 byte the Data Link Layer shall segment these messages using the mechanism of extension bits in the message type coding.

NOTE: See clause 5.3.3.1 for information about the Transfer Layer, TL Message lengths and TL features like the Short Message Concatenation which allows the transfer of "long" SMs with up to 39 015 characters.

The Data Link Layer message format is similar to the message format of the off-hook caller ID information described in EN 300 659-2 [7]."

Clause 5.3.3.1

Replace the following text:

"The SM-TL is used as specified by the ETSI document TS 100 901 [3].

NOTE: Besides the basic SM transfer, the TL specified in the present document also supports features like message concatenation allowing the transfer of "long" SMs with up to 39 015 characters, and is open to support new features like transfer of bitmaps, melodies, text styles and much more.

Because of the half duplex handshake transmission on the Physical Layer, every SMS_SUBMIT and every SMS_DELIVER message shall be confirmed by the receiver. A detailed description of the message flow and the internal structures of the Transfer Layer are given in the annex A."

With:

"The SM-TL is used as specified by the ETSI document TS 123 040 [3].

NOTE: Besides the basic SM transfer, the TL specified in TS 123 040 [3] also supports features like message concatenation allowing the transfer of "long" SMs with up to 39 015 characters, and is open to support new features like transfer of bitmaps, melodies, text styles and much more.

Because of the half duplex handshake transmission on the Physical Layer, every SMS_SUBMIT, SMS_DELIVER, SMS_COMMAND and SMS_STATUS_REPORT message shall be confirmed by the receiver. A detailed description of the message flow and the internal structures of the Transfer Layer are given in the annex A."

Clause 5.5.6

Replace the following text in table 3, second row, column "Incoming Call, Deliver Mode Identifier = 0":

"The SM-TE shall accept the call and reject the SM with the TL message SMS_SUBMIT_REPORT, failure cause "SIM SMS storage full" (see TS 100 901 [3], TP-FCS)."

With:

"The SM-TE shall accept the call and reject the SM with the TL message SMS_DELIVER_REPORT, failure cause "SIM SMS storage full" (see TS 123 040 [3], TP-FCS)."

Clause 5.5.7

Replace the following text:

"If there is a SM to submit, the SM-TE shall dial the number of the SM-SC which is stored in the SM-TE, extended by its own SME Subaddress and the digit "0"."

With:

"If there is an SM to submit, the SM-TE shall dial the basic number of the SM-SC which is stored in the SM-TE, extended by its own SME Subaddress and the digit "0"."

Clause 5.6

Replace the following last row of table 4:

E1	User Data with User Data Header not supported (Header Indicator = 1 not supported).	x	x
----	---	---	---

With:

E1 (obsolete)	User Data with User Data Header not supported (Header Indicator = 1 not supported). See note.	x	x
------------------	---	---	---

And add the following note in table 4:

NOTE: The Failure Cause "E1" is obsolete and should therefore not be used any more.

Clause 6.3.2.1

Replace the following text:

"The DLL_SMS_NACK, DLL_SMS_ENQ and DLL_SMS_REL messages do not have a Transfer Layer (DLC Message Length = 0) and therefore cannot be segmented."

With:

"The DLL_SMS_NACK, DLL_SMS_ENQ and DLL_SMS_REL messages do not have a Transfer Layer (DLL Message Length = 0) and therefore cannot be segmented."

Replace the following text:

"The Slave shall include the TL Confirmation or Rejection in the payload of the DLL_SMS_ACKx message, as soon as available."

With:

"The Slave shall include the TL Confirmation or Rejection in the payload of the DLL_SMS_ACKx message, as soon as available (after having received the complete TL message)."

Replace the following text:

"The Master uses the DLL_SMS_ENQ message to maintain active the DLL while waiting for the reception of a response from the TL, for a maximum of Nwait times.

On receiving a DLL_SMS_ENQ, the Slave shall send again the last acknowledgement sent, including the TL response in its payload, if available."

With:

"The Master uses the DLL_SMS_ENQ message to maintain active the DLL while waiting for the reception of a response from the TL, for a maximum of Nwait+1 times (afterwards, if also the Nwait+1 DLL_SMS_ENQ message is acknowledged by the Slave with a DLL_SMS_ACKx message with null payload, the Master shall send the DLL_SMS_REL message or hangs on).

On receiving a DLL_SMS_ENQ, the Slave shall send again the last positive acknowledgement sent, including the TL response in its payload, if available."

Clause 6.3.2.2

Replace the following text:

"In case the Master does not receive the expected acknowledgement (loss of frame) it sends the DLL_SMS_ENQ message to recover the error. Depending on the DLL_SMS_ACKx received the Master will understand if the frame lost was the message previously sent or the correspondent acknowledgement.

The connection shall be released by both entities if the error is still present after three consecutive recovery attempts (see Nretry counter in table 8)."

With:

"In case the Master does not receive the expected acknowledgement (loss of frame) it sends the DLL_SMS_ENQ message to recover the error. Depending on the DLL_SMS_ACKx received the Master will understand if the frame lost was the message previously sent or the correspondent acknowledgement.

In case the Master receives an out of sequence acknowledgement (i.e. a DLL_SMS_ACK0 when a DLL_SMS_ACK1 is expected or vice versa), it shall release the connection (hanging on).

The connection shall be released by the Master if the error is still present after two consecutive recovery attempts (see Nretry counter in table 8)."

Clause 6.3.2.3

Replace the following text in table 6, row "Tm5", column "Start":

"Reception of a positive acknowledgement without TL corresponding to a non extended info message or to a DLL_SMS_ENQ message sent to maintain active the Data Link layer."

With:

"Reception of a positive acknowledgement without TL corresponding to a non extended info message (or to the last segment of an extended info message) or to a DLL_SMS_ENQ message sent to maintain active the Data Link layer."

Clause 6.3.2.4

Replace table 8 with the following table:

Table 8: Counters

Name	Description	Value
Nretry	Maximum number of times a message negatively acknowledged shall be sent again. Maximum number of times a DLL_SMS_ENQ message or a DLL_SMS_REL message not receiving any DLL message in response or receiving an acknowledgement with DLL error shall be sent again.	2
Nwait	Maximum number of times an ENQ message shall be sent again to maintain the Data Link level active, in case there are no errors.	49

Clause 6.3.3.1

Add the following TL message:

"SM-TE_CAPABILITY used by the SM-TE for informing the SM-SC about its capabilities"

Replace the following parameter:

"1Ah - E mail Address (max length: 256)"

With:

"1Ah - Mail Address (max length: 256)"

Clause A.1

Add the following text, above clause A.1.1:

"The following clauses formally describe the transmission of short messages (SMS_SUBMIT) from SM-TE to SM-SC.

The handling of commands (SMS_COMMAND) is the same as of SMS_SUBMIT messages described in the following clauses. To derive the SMS_COMMAND message sequence charts from the SMS_SUBMIT message sequence charts, the following replacements shall be applied:

"SMS_SUBMIT" is to be replaced by "SMS_COMMAND"

"SMS message" is to be replaced by "Command"

It is also possible to transmit one or more SMS_COMMAND and/or one or more SMS_SUBMIT within the same session as described in clause A.1.2 "Send more than one (as example: two) SM in one session".

Add the following clause A.1.2, between clause A.1.1 and the previous clause A.1.2 (the previous clauses A.1.2, A.1.3, etc. have to be renamed as A.1.3, A.1.4, etc.).

A.1.2

Send more than one (as example: two) SM in one session

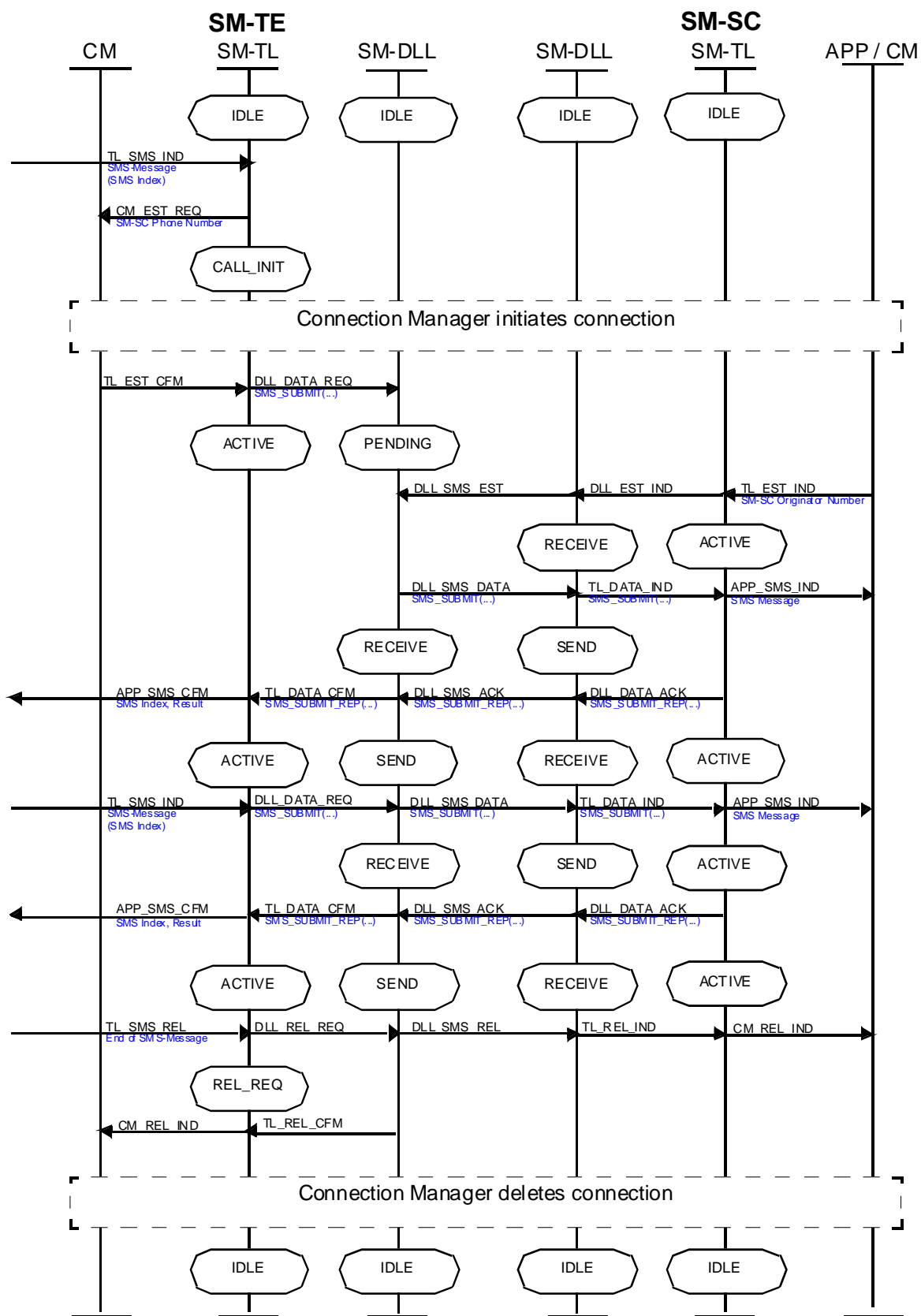


Figure A.1.2: Send more than one (as example: two) SM in one session

NOTE: In case that the second SM is not accepted by the SM-SC, the SM-TE should make at least one more submission attempt in a new session before considering the transmission of this SM failed.

Clause A.2

Add the following text, above clause A.2.1:

"The following clauses formally describe the transmission of short messages (SMS_DELIVER) from SM-SC to SM-TE.

The handling of status reports (SMS_STATUS_REPORT) is the same as of SMS_DELIVER messages described in the following clauses. To derive the SMS_STATUS_REPORT message sequence charts from the SMS_DELIVER message sequence charts, the following replacements shall be applied:

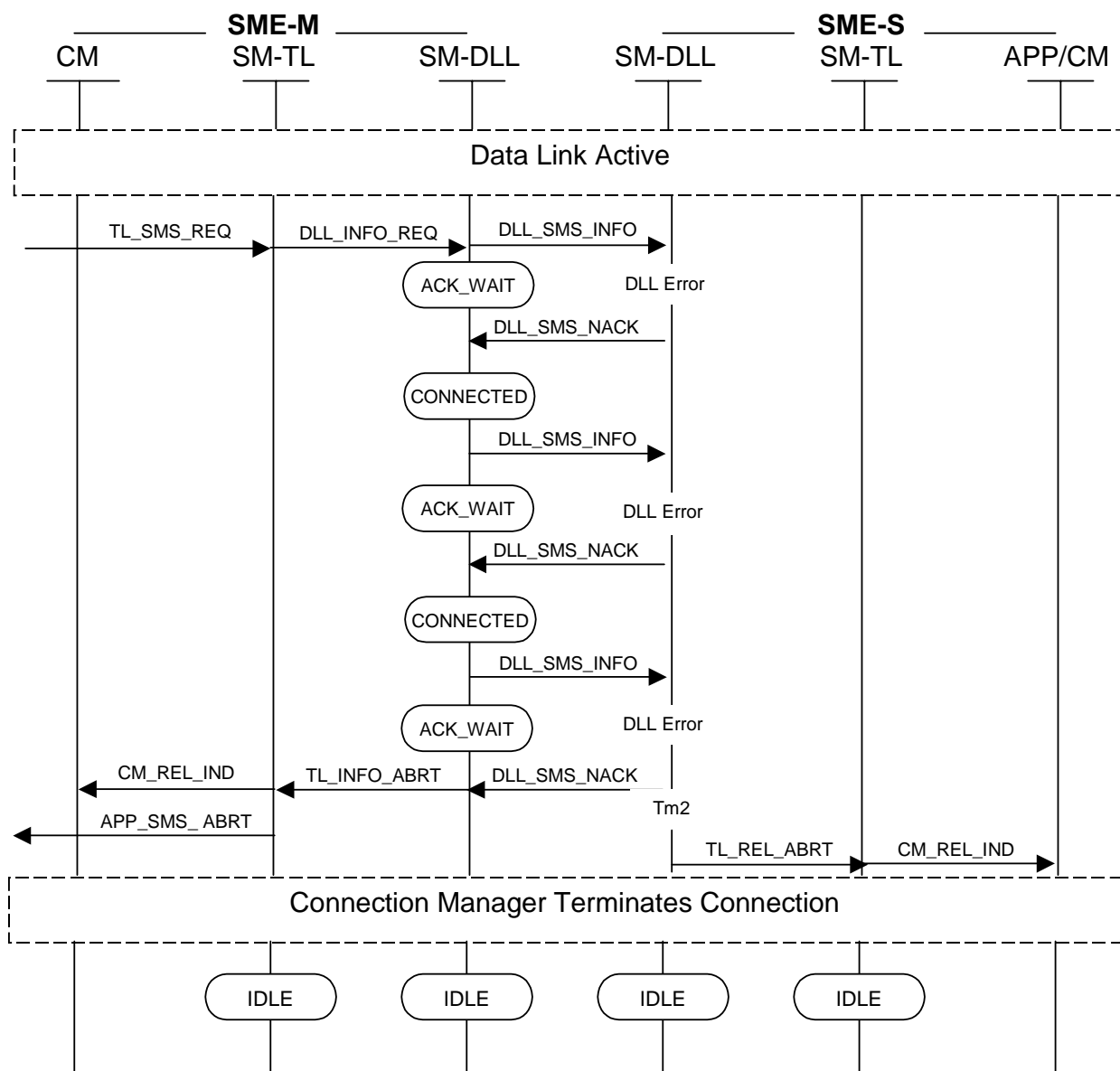
"SMS_DELIVER" is to be replaced by "SMS_STATUS_REPORT"

"SMS message" is to be replaced by "Status Report"

It is also possible to transmit one or more SMS_STATUS_REPORT and/or one or more SMS_DELIVER within the same session as described in clause A.2.3 "Send more than one (as example: two) SM in one session"."

Clause B.1.3.9

Replace figure B.1.3.9 with the following figure so that Tm2 is now included.



Clause B.2.1.3

Insert the following row above the last row of table B.2.10:

Calling Terminal Identity	Clause: Calling Terminal Identity Parameter Format.	Optional
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Clause Bibliography in Annex C (informative)

Replace the following specific references:

- ETSI ES 201 986 (V1.1.2): "Services and Protocols for Advanced Networks (SPAN); Short Message Service (SMS) for PSTN/ISDN; Service Description".
- ETSI TS 100 939 (V7.3.0): "Digital cellular telecommunications system (Phase 2+) (GSM); Mobile radio interface signalling layer 3; General aspects (GSM 04.07 version 7.3.0 Release 1998)".
- ETSI EN 300 778-1 (V1.2.1): "Access and Terminals (AT); Analogue access to the Public Switched Telephone Network (PSTN); Protocol over the local loop for display and related services; Terminal Equipment requirements; Part 1: On-hook data transmission".

With the following non-specific references:

- ETSI ES 201 986: "Services and Protocols for Advanced Networks (SPAN); Short Message Service (SMS) for PSTN/ISDN; Service Description".
- ETSI TS 124 007: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Mobile radio interface signalling layer 3; General Aspects (3GPP TS 24.007 version 5.y.z Release 5)".
- ETSI ES 200 778-1: "Access and Terminals (AT); Analogue access to the Public Switched Telephone Network (PSTN); Protocol over the local loop for display and related services; Terminal Equipment requirements; Part 1: On-hook data transmission".

History

Document history		
V1.1.1	August 2002	Publication (Withdrawn)
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