SIS - Standardiseringskommissionen i Sverige

Handläggande organ

ITS, Informationstekniska standardiseringen

SVENSK STANDARD SS 63 63 60

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1993-02-17	1	1 (1 + 8)

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Europeiskt digitalt mobiltelesystem, GSM — Signaleringskrav för fysisk anslutning till Televerkets telefonnät — Meddelandeöverföringsdelen (MTP)

Anslutning till det allmänna telenätet har tidigare reglerats genom specifikationer från Televerket. Sedan den 1 juli 1992 sker reglering genom Telestyrelsen.

Telestyrelsens mandat och arbetssätt innebär hänvisning till internationell, europeisk och svensk standard.

Ett antal specifikationer från Televerket kommer därför att överföras till svensk standard.

I denna utgåva av standarden överförs televerksspecifikation 8211-A 304 oförändrad. I nästa utgåva kommer en granskning av det tekniska innehållet och en anpassning till redigeringsreglerna för svensk standard att ske.

European digital cellular telecommunications system, GSM — Signalling requirements for physical connection to the telephone network of "Televerket" Message Transfer Part (MTP)

Connection to the public switched telephone network has formerly been regulated by specifications issued by "Televerket". Since July 1, 1992 "Telestyrelsen" is the Swedish regulating authority.

The mandate and way of working of "Telestyrelsen" implies references to International, European and Swedish standards.

Several specifications from "Televerket" will therefore be transferred to Swedish standards.

In this version of the standard the specification 8211-A 304 from "Televerket" is transferred unchanged. In the second version a review of the technical content and an adjustment to the editing rules for Swedish standards will be performed.

Standarder kan beställas hos SIS som även lämnar allmänna upplysningar om svensk och utländsk standard.
Postadress: SIS, Box 3295, 103 66 STOCKHOLM
Telefon: 08 - 613 52 00. *Telefax*: 08 - 11 70 35

Upplysningar om **sakinnehållet** i standarden lämnas av ITS.
Telefon: 08 - 793 90 00. *Telefax*: 08 - 751 53 63

Prisgrupp K

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SIS TRYCKERI, STOCKHOLM

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TVT-STANDARD SPECIFICATION

Uppgjord – Prepared	Faktaansvarig – Subject responsible	Nr – No.			
1991 Nsn AHe	NsC			8211-A 304 Uen	
Dokumentansvarig/Godkänd – Document responsible/Approved		Datum – Date	Rev	File/Tillhör	S-klass
NsC		1991-02-07	A		S1

Signalling requirements for public land mobile networks according to the paneuropean digital system, GSM, connected to the public switched telephone network. CCITT signalling system no.7 Message Transfer Part (MTP)

1 ADOPTION DATE

This standard shall take effect 1991-03-01.

2 SCOPE

This standard covers requirements concerning signalling for public land mobile networks according to the paneuropean digital system, GSM, connected to the public switched telephone network (PSTN).

Note: This standard is provided in english only.

3 OTHER RELATED STANDARDS

See CCITT Recommendations Q.701-707, red book.

4 GENERAL

The Message Transfer Part (MTP) is used to transfer signalling messages as defined by TVT-STANDARD 8211-A305 and 8211-A306. The MTP functions shall be in accordance with CCITT Recommendation Q.701-Q.707, as defined in section 5.1-5.7 below.

A 710 4614/03 (1988-11) Sakäg Pru

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The specification below specifies a minimum set of functions applicable for associated mode of operation. It is allowed to use an implementation that complies with the full Q.701-707 of the 1984 years CCITT recommendations (red book). However the use of non associated mode in the interface requires bilateral agreements.

In the following sections comments are given to Rec's Q.701-707 of the 1984 years of CCITT recommendations (red book). Each section is given the same number as the concerned section to which the comment refers in the relevant recommendation.

It is possible to use a blue book (1988) implementation if the implementation takes into account interworking with a red book implementation.

5 MESSAGE TRANSFER PART (MTP)

5.1 RECOMMENDATION Q.701: FUNCTIONAL DESRIPTION OF THE MESSAGE TRANSFER PART

2.2 Functional levels

CCITT Signalling system No 7 International Telephone User Part (ITUP) in accordance with TVT-STANDARD 8211-A-305 and CCITT Signalling system No 7 Signalling Connection Control Part (SCCP) in accordance with TVT-STANDARD 8211-A-306 are the only users of MTP defined. The addition of new users requires bilateral agreement.

3.1.2 Signalling mode

Associated mode of signalling is applicable.

3.1.3 Signalling point modes

At the PLMN-PSTN network interface no STP working is allowed.

5.2 RECOMMENDATION Q 702: SIGNALLING DATA LINK

2 Signalling bit rate

Only 64 kbit/s digital signalling data links shall be used. The 64 kbit/s data link shall be a time slot in a PCM system. It shall be possible to use any time slot in a PCM system for the signalling data link.

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5 Digital Signalling data link

5.1 Signalling link derived from 2048 kbit/s digital path.

Applicable

5.2 Signalling link derived from 8448 kbit/s digital path.

Not applicable

5.2 Signalling link derived from 1544 kbit/s digital path

Not applicable

5.3-5.5 Not applicable

6 Analogue signalling data link

Not applicable

5.3 RECOMMENDATION Q.703: SIGNALLING LINK

2 Basic signal unit format

2.3.2 Flag

The implementation shall not require more than one flag between consecutive signal units, at the receiving side.

2.3.6 Signalling information field

A maximum signalling information length of 272 octets shall be accomodated.

3 Signalling unit delimitation

The implementation shall not require more than one flag between consecutive signal units, at the receiving side.

4 Acceptance procedure

Applicable

5 Basic error correction

Applicable

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6 Error correction by Preventive Cyclic Retransmission (PCR)

Not applicable

7 Initial alignment procedure

If only one link is working in a link-set emergency alignment procedure applies.

8 Processor outage

Applicable

9 Level 2 flow control

Applicable

10 Signalling link error monitoring

Applicable

11-12 Applicable

5.4 RECOMMENDATION Q.704 SIGNALLING NETWORK FUNCTIONS AND MESSAGES

1 INTRODUCTION

Applicable

2 Signalling message handling

2.1 General

Applicable

2.2 Routing label

Only standard label is applicable.

2.3 Message routing function

Routing is only based destination point code (DPC) and signalling link selection field.

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2.3.2 Load sharing

It shall be possible to load share within a link set.

It shall be possible, at a minimum, to have two active signalling links in a link set.

2.3.4 Handling of level 3 messages

Applicable

2.3.5 Handling of messages under signalling link congestion

Congestion priorities are not applicable.

2.4 Message discrimination and distribution functions

Applicable

3-3.3 Applicable

3.4 All are applicable except 3.4.3 Signalling route restricted.

3.5 All are required except 3.5.3 Signalling route restricted.

3.6 Signalling network congestion

Only local actions are required.

4 Signalling traffic managment

4.1 General

Applicable

4.2 Normal routing situation

Just one link-set is defined per destination.

4.3-4.6 Applicable

4.7 Signalling route restriction

Not applicable

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5 Changeover

5.1 General

Applicable

5.2 Network configurations for changeover

Only changeover between links in the same linkset applies

5.3-5.7 Applicable

6 Changeback

Applicable

7-8 Not applicable

9 Managment inhibiting

Applicable

10 Signalling traffic flow control

Only local actions are required

11 Signalling link management

Only the basic signalling link management functions (as specified in § 11.2) are required.

12 Signalling route managment

Since only associated signalling mode is allowed no signalling route managment functions are required at the interface. However, it shall still be possible to use all signalling route managment procedures at one end of the link independent of whether the other end has any signalling route managment functions.

12.2 Transfer prohibited

The transfer prohibited procedure is not required

12.3 Transfer allowed

The transfer allowed procedure is not required

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12.4 Signalling route-set test

Signalling route-set test is not required

12.5 Transfer-restricted

The transfer restricted procedure is not applicable.

12.6- 12.8 Transfer controlled

The transfer controlled procedure is not required

12.9 Signalling-route-set-congestion-test

The signalling route-set-congestion-test procedure is not applicable.

13 Common characteristics of message signal unit

13.1 General

Applicable

13.2 Service information octet

Applicable

13.2.1 Service infomation

The following codes apply

0011 SCCP
0100 Telephone User Part

13.2.2 Sub-service field

The network indicator is set to 11

13.3 Label

Applicable

14 Formats and codes of signalling network managment messages

The following messages are not required: Transfer prohibited, Transfer allowed, Signalling route-set test for prohited destinations, and Transfer controlled. Signalling route-set test for restricted destinations, Signalling route-set congestion-test and transfer restricted are not applicable.

15 State transition diagrams

Applicable, in accordance with comments given above.

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Annex A Not applicable

5.5 RECOMMEDATION Q.705: SIGNALLING NETWORK STRUCTURE

Applicable

5.6 RECOMMENDATION Q.706: MESSAGE TRANSFER PART SIGNALLING PERFORMANCE

Applicable

In terms of signalling messages per second, the signalling link shall, at a minimum, be capable of handling 150 typical Telephone User Part messages per second (in each direction). The target value is 200 messages per second.

5.7 RECOMMENDATION Q.707: TESTING AND MAINTENANCE

Applicable

An implementation shall be able to respond to a signalling link test message.

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