



TELENOR

SPECIFICATION

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Specification of the bearer services provided by the D-channel of the user access - basic and primary rate

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1 Scope

This specification describes the service aspects (stage one) of the ISDN Packet Mode Bearer Services (PMBS) provided at the D-channel of the user access. ETSI's stage one description is contained in prETS 300 049 [1].

This service description corresponds to case B (D-channel) of prETS 300 007 [2], where the stage three of the service is contained. Telenor Nett's stage three is contained in the Telenor Nett Specification A43-3 [3].

The Telenor Nett Specification A43 [4] together with the related Telenor Nett Specifications A43-x describe in total the technical characteristics of the ISDN Virtual Circuit Service.

2 References

2.1 Normative references

- [1] prETS 300 049 (1991): «Integrated Services Digital Network (ISDN); ISDN Packet Mode Bearer Services: ISDN Virtual Call (VC) and Permanent Virtual Call (PVC) bearer services provided by the D-channel of the user access - basic and primary rate».
- [2] prETS 300 007 (1991): «Integrated Service Digital Network (ISDN); Support of packet mode terminal equipment by an ISDN».
- [3] Telenor Nett Specification A43-3: «Specification of the support of packet-mode terminal equipment by an ISDN access – basic and primary rate».
- [4] Telenor Nett Specification A43: «Specification of the network side of the ISDN Virtual Circuit Service for ISDN Basic Access (BA) and Primary Rate Access (PRA)».

2.2 Informative references

- [5] ETS 300 402-1 (1995): «Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1) protocol; Data link layer; Part 1: General aspects. [ITU-T recommendation Q.920 (1993) modified].»
- [6] ETS 300 402-2 (1995): «Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1) protocol; Data link layer; Part 2: General protocol specification. [ITU-T recommendation Q.921 (1993) modified].»

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3 Definitions and abbreviations

3.1 Definitions

User: The DSS1 protocol entity at the user side of the user-network interface.

Network: The DSS1 protocol entity at the network side of the user-network interface.

3.2 Abbreviations

ETS: European Telecommunication Standard, issued by ETSI

ETSI : European Telecommunication Standards Institute

ISDN: Integrated Services Digital Network

PMBS: Packet Mode Bearer Services

DSS1: Digital Subscriber Signalling System No. one

4 Service aspects

The ISDN Packet Mode Bearer Service provided at the D-channel of the user access is implemented in accordance with the ETSI standard prETS 300 049 [1].

Annex 1 is an application document to prETS 300 049 [1] and select options applicable to the network of Telenor.

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5 HISTORY

Edition	Published	Comments
1.0	01.09.1990	First stable version
2.0	28.09.2000	- Annex A.1 "Standard service profile" modified - Annex B "User facilities" modified
3.0	15.12.2010	Template/header/footer updates



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ANNEX 1: Telenor Nett: Application of prETS 300 049

Foreword

This document comments every subclause in ETSI's stage 1 description, prETS 300 049, and thus describes the service provided by the D-channel.

1 Scope

Applicable.

2 Normative references

Applicable.

The Telenor Nett Specifications have precedence.

3 Definitions

Applicable.

4 Description

Applicable.

5 Procedures

5.1 Provision and withdrawal

Applicable.

The service is offered by prior arrangement.

5.2 Normal procedures

5.2.1 Activation, deactivation and registration

Applicable.

5.2.2 Invocation and operation

Applicable.

PVC is not supported.

5.2.2.1 Virtual call procedures

Applicable.

5.2.2.1.1 Layer 1 Activation

Applicable.

5.2.2.1.2 Layer 2 activation (logical link)

5.2.2.1.2.1 Method 1 - Semi-permanent layer 2

Applicable.

5.2.2.1.2.2 Method 2 - On demand layer 2 with fixed TEI values

Applicable.

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5.2.2.1.2.3 Method 3 - On demand layer 2 with dynamic TEI allocation

Not applicable.

5.2.2.1.3 Terminal selection and identification

5.2.2.1.3.1 Terminal interface identification - network to terminal

Applicable.

The called address extension facility field cannot be used for selection of a specific logical link.

5.2.2.1.3.2 Terminal interface identification - terminal to network

Applicable.

Dynamic assignment of TEIs is not supported.

5.2.2.1.4 Call establishment

Applicable.

No notification class is provided.

5.2.2.1.5 Data transfer

Applicable.

5.2.2.1.6 Terminating the call

Applicable.

5.2.2.1.7 Layer 2 deactivation

Applicable.

5.2.2.1.8 Layer 1 deactivation

Not applicable.

5.2.2.2 Permanent virtual circuit procedures

5.2.2.2.1 Layer 1 activation

Not applicable.

5.2.2.2.2 Layer 2 activation

Not applicable.

5.2.2.2.3 Terminal selection and identification

Not applicable.

5.2.2.2.4 Call establishment

Not applicable.

5.2.2.2.5 Data transfer

Not applicable.

5.2.2.2.6 Terminating the call

Not applicable.

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5.2.2.2.7 Layer 2 deactivation

Not applicable.

5.2.2.2.8 Layer 1 deactivation

Not applicable.

5.2.3 Interrogation and Editing

Applicable.

5.3 Exceptional procedures

5.3.1 Activation and deactivation and registration

Applicable.

5.3.2 Invocation and operation

5.3.2.1 Virtual call

Applicable.

5.3.2.2 Permanent virtual circuit

Not applicable.

5.3.3 Interrogation and editing

Applicable.

6 Network capabilities for charging

Applicable.

7 Interworking

7.1 Interworking between Public Networks

Applicable.

7.2 Interworking between Private and Public ISDNs

Applicable.

Further study is needed.

8 Interaction with supplementary services

Applicable.

9 Attributes and values of attributes (including the provision of individual bearer services)

9.1 Attributes and values

9.1.1 Information transfer mode

Applicable.

9.1.2 Information transfer rate

Applicable.

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9.1.3 Information transfer capability

Applicable.

9.1.4 Structure

Applicable.

9.1.5 Establishment of communication

Applicable.

9.1.6 Symmetry

Applicable.

9.1.7 Communication configuration

Applicable.

9.1.8 Access channel

Applicable.

9.1.9 Access protocol

9.1.9.1 Access protocol layer 1

Applicable.

9.1.9.2 ISDN signalling access protocol layer 2

Applicable.

9.1.9.3 ISDN signalling access protocol layer 3

Applicable.

9.1.9.4 ISDN PMBS protocol layer 2

Applicable.

9.1.9.5 ISDN PMBS signalling protocol layer 3

Applicable.

9.1.9.6 ISDN PMBS Information transfer protocol layer 3

Applicable.

9.1.10 Supplementary services and user facilities provided

Applicable.

9.2 Provision of individual bearer services

Applicable.

The individual bearer services are implemented as previously specified. Both demand and permanent establishment of communication are applicable.

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ANNEX A of prETS 300 049: SERVICE PROFILES

Annex A.1 - Standard service profile

Applicable as a subscription option.

Per ISDN number a predefined set of service data is allocated for a period of time. The subscriber needs to be registered, and part of his service data is still individual data. The non-individual part of this service data is selected at subscription time and is called standard service profile.

Single link procedure, modulo 128
Applicable.

Standard basic packet sequence numbering (modulo 8)
Applicable.

Incoming/outgoing calls allowed
Applicable.

Two-way logical channels: 2
Applicable.

Default maximum Packet Length: 128 octets
Applicable.

Default window size: 2
Applicable.

Fast select acceptance facility
Applicable.

Default Throughput class: A (9600 bits/s)
Applicable.

Throughput class negotiation facility available
Applicable.

Transit delay negotiation allowed
Applicable.

Packet retransmission
Applicable.

CCITT-specified DTE facilities
Applicable.

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Annex A.2 - Custom service profile

Applicable as a subscription option.

Per ISDN number a set of individual service data is allocated to a subscriber for a period of time in the Packet Handler. This data includes:

- ETS 300 007 related data (notification class, access types)
- CCITT recommendation X.2/X.25 related data
 - for B-channel access, individual layer 2 and 3 data
 - for D-channel access, individual layer 3 data
- Non-standardized user facilities (MAA)

Annex B states the applicable user facilities.

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ANNEX B of prETS 300 049: User facilities

Applicable.

Note! The structure and the numbering of facilities follow the Red Book version X.2 (1984). The numbers given in the leftmost column relate to the numbering in the Blue Book version X.2 (1988).

1 Optional user facilities assigned for an agreed contractual period

1988	1984		SVC	PVC
1.4	1.1	Extended packet sequence numbering (modulo 128)	-	-
1.12	1.2	Nonstandard default window sizes	X	-
1.11	1.3	Nonstandard default packet sizes		
		16, 32, 64, 256	X	-
		512, 1024, 2048, 4096	-	-
1.13	1.4	Default throughput class assignment	X	-
1.14	1.5	Flow control parameter negotiation	X	-
1.15	1.6	Throughput class negotiation	X	-
1.6	1.7	Packet retransmission	X	-
1.7	1.8	Incoming calls barred	X	-
1.8	1.9	Outgoing calls barred	X	-
1.9	1.10	One way logical channel outgoing	X	-
1.10	1.11	One way logical channel incoming	X	-
1.16	1.12	Closed user group (CUG)	-	-
1.17	1.13	Closed user group with outgoing access	-	-
1.18	1.14	Closed user group with incoming access	-	-
1.19	1.15	Incoming calls barred within a CUG	-	-
1.20	1.16	Outgoing calls barred within a CUG	-	-
1.21	1.17	Bilateral closed user group	-	-
1.22	1.18	Bilateral CUG with outgoing access	-	-
1.24	1.19	Reverse charging acceptance	X	-
1.23	1.20	Fast select acceptance	X	-
1.2	1.21	Multilink procedure	-	-

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1.28	1.22	Charging information	X	-
1.34	1.23	Direct call	-	-
1.30	1.24	Hunt group	-	-
1.3	1.25	On-line facility registration	-	-
1.5	1.26	D-bit modification	X	-
1.25	1.27	Local charging prevention	X	-
1.31	1.28	Call redirection	X	-
1.26	1.29	Network user identification	X	-
1.1	1.30	Extended frame sequence numbering	X	-
1.29	1.31	RPOA selection	X	-

2 Optional user facilities on a per-call basis

1988	1984		SVC	PVC
2.3	2.1	CUG selection	-	-
2.5	2.2	Bilateral CUG selection	-	-
2.6	2.3	Reverse charging	X	-
2.10	2.4	RPOA selection	X	-
2.1	2.5	Flow control parameter negotiation	X	-
2.7	2.6	Fast select	X	-
2.2	2.7	Throughput class negotiation	X	-
2.15	2.8	Abbreviated address calling	-	-
2.9	2.9	Charging information	X	-
2.14	2.10	Transit delay selection and indication	X	-
2.12	2.11	Call redirection or forwarding to alternate DTE	X	-
2.13	2.12	Called line address modified notification	X	-
2.8	2.13	Network user identification	X	-
2.4	2.14	CUG with outgoing access selection	-	-

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3 Additional features

1988	1984		SVC	PVC
	3.1	Extended interrupt	-	-
	3.2	CCITT-specified DTE facilities	X	-

4 New facilities from X.2 (Version 88)

1988	1984		SVC	PVC
1.32	4.1	Call deflection subscription	X	-
2.11	4.2	Call deflection selection	X	-
1.33	4.3	TOA/NPI address subscription	-	-
1.27	4.4	NUI override	-	-

Legend:

X Applicable

- Not applicable

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ANNEX C - Transition schemes for addressing and numbering

Applicable.