



TELENOR

SPECIFICATION

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**ETSI standardised supplementary
services supported in the public ISDN
of Telenor;
Basic Access (BA) and Primary Rate
Access (PRA)**

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1 Scope

This document states to what extent the network of Telenor fulfils the corresponding ISDN supplementary service as specified by ETSI at stage 3 (DSS1 protocol). The commercial offer of ISDN supplementary services may differ from what is technically possible in System 12 NP5 and AXE AS20. The technical implementations may also differ between the two exchange systems. For that reason the ETSI conformance of the supplementary services in System 12 NP5 and AXE AS20 are described in separate chapters.

For each supplementary service, it is stated whether the network of Telenor conforms to the ETS or not. If there are any deviations from the ETS, this is explicitly specified. The ETS sections not mentioned shall be interpreted as compliant.

In no event shall Telenor be liable to other parties for any direct, indirect, special, incidental, or consequential damages resulting from errors or defects in these specifications.

2 References

For most of the services the list of references consists only of ETSI stage three documents, since the stage three document has reference to the stage one document.

- [1] prETS 300 359 (Apr 1994): "Integrated Services Digital Network (ISDN); Completion of Calls to Busy Subscriber (CCBS) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".
- [1-b] ETS 300 359 (Nov 1995): "Integrated Services Digital Network (ISDN); Completion of Calls to Busy Subscriber (CCBS) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".
- [2] ETS 300 207 (Dec. 1994): "Integrated Services Digital Network (ISDN); Diversion supplementary services; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".
- [3] ETS 300 141 (May 1992): "Integrated Services Digital Network (ISDN); Call Hold (HOLD) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".
- [4] ETS 300 058 (Oct. 1991): "Integrated Services Digital Network (ISDN); Call Waiting (CW) supplementary service; Digital subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".
- [5] ETS 300 092 (Mar 1992): "Integrated Services Digital Network (ISDN); Calling Line Identification Presentation (CLIP) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".

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- [6] ETS 300 093 (Mar 1992): "Integrated Services Digital Network (ISDN); Calling Line Identification Restriction (CLIR) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".
- [7] ETS 300 138 (May 1992): "Integrated Services Digital Network (ISDN); Closed User Group (CUG) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".
- [8] ETS 300 185-1, (Apr 1993): "Integrated Services Digital Network (ISDN); Conference call, add-on (CONF) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".
- [8-b] ETS 300 185 (Apr 1993): "Integrated Services Digital Network (ISDN); Conference call, add-on (CONF) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification" + Corrigendum September 1993.
- [9] ETS 300 097 (Mar 1992): "Integrated Services Digital Network (ISDN); Connected Line Identification Presentation (COLP) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".
- [9-b] ETS 300 097 (Feb 1998): "Integrated Services Digital Network (ISDN); Connected Line Identification Presentation (COLP) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".
- [10] ETS 300 098 (Mar 1992): "Integrated Services Digital Network (ISDN); Connected Line Identification Restriction (COLR) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".
- [10-b] ETS 300 098 (May 1992): "Integrated Services Digital Network (ISDN); Connected Line Identification Restriction (COLR) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".
- [11] ETS 300 064 (Oct 1991): "Integrated Services Digital Network (ISDN); Direct Dialling In (DDI) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".
- [11-b] ETS 300 064 (Feb 1998): "Integrated Services Digital Network (ISDN); Direct Dialling In (DDI) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".
- [12] ETS 300 369 (May 1995): "Integrated Services Digital Network (ISDN); Explicit Call Transfer (ECT) supplementary service Digital Subscriber Signalling System No. one (DSS1) protocol Part 1: Protocol specification".
- [13] ETS 300 130 (May 1992): "Integrated Services Digital Network (ISDN); Malicious Call Identification (MCID) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".

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- [14] ETS 300 052 (Mar 1991): "Integrated Services Digital Network (ISDN); Multiple Subscriber Number (MSN) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".
- [14-b] ETS 300 052 (Feb 1998): "Integrated Services Digital Network (ISDN); Multiple Subscriber Number (MSN) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".
- [15] ETS 300 061 (Oct. 1991): "Integrated Services Digital Network (ISDN); Subaddressing (SUB) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".
- [15-b] ETS 300 061 (Feb 1998): "Integrated Services Digital Network (ISDN); Subaddressing (SUB) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".
- [16] ETS 300 055 (Mar 1991): "Integrated Services Digital Network (ISDN); Terminal Portability (TP) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".
- [16-b] ETS 300 055 (Feb 1998): "Integrated Services Digital Network (ISDN); Terminal Portability (TP) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".
- [17] ETS 300 188 (Aug 1993): "Integrated Services Digital Network (ISDN); Three-Party (3PTY) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".
- [18] ETS 300 286 (Feb 1996): Integrated Services Digital Network (ISDN); User-to-User Signalling (UUS) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".
- [19] ETS 300 180 (Oct. 1992): "Integrated Services Digital Network (ISDN); Advice of Charge: charging information at the end of the call (AOC-E); Service description".
- [20] ETS 300 182 (Apr 1993): "Integrated Services Digital Network (ISDN); Advice of Charge (AOC) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".
- [21] ETS 300 102-1 (Dec. 1990): "Integrated Services Digital Network (ISDN); User-network interface layer 3; Specifications for basic call control".
- [22] Telenor Nett Specification A41-3: "Specification of the network side of the user-network interface for ISDN Basic Access (BA) - network layer (layer 3)".
- [23] Telenor Nett Specification A41-4: "Specification of the network's handling of number information, Basic Access (BA)".
- [24] Telenor Nett Specification A44-1: "DSS1 generic keypad protocol".

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[25] Telenor Nett Specification A44-4: “Supplementary services defined by Telenor and supported in the public ISDN of Telenor; Basic Access (BA) and Primary Rate Access (PRA)”.

3 Definitions and abbreviations

For the purpose of this document the following terminology applies:

Compliant: The network of Telenor fully conforms to the ETS. Options are specially stated. Additional text provided describes additional functions not in conflict with the ETS.

Partially compliant: The network of Telenor partially conforms to the relevant section in the ETS.

Compliant as follows: This comment is used in cases where the ETSI text seems ambiguous and therefore doesn't fit under the comment "compliant", but needs further explanation about how it is interpreted in the network of Telenor.

Not compliant: The network of Telenor does not fulfil the relevant section in the ETS.

Not applicable: A statement explaining why this requirement is not applicable always follows this comment.

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4 OVERVIEW OF SUPPLEMENTARY SERVICES

In the table below, the ETSI versions of the different supplementary services implemented in each exchange system is listed:

Supplementary service	S12 NP5: Compliant with ETSI	AXE AS20: Compliant with ETSI
Advice Of Charge (AOC)	ETS 300 182 Apr.1993	Not offered
Call Completion on Busy Subscriber (CCBS)	prETS 300 359, April 1994	ETS 300 359, November 1995
Call Forwarding supplementary services (CFU, CFB, CFNR, and CD)	ETS 300 207, December 1994	
Call Hold (HOLD)	ETS 300 141, May 1992	
Call Waiting (CW)	ETS 300 058, October 1991	
Calling Line Identification Presentation (CLIP)	ETS 300 092, March 1992	
Calling Line Identification Restriction (CLIR)	ETS 300 093, March 1992	
Closed User Group (CUG)	ETS 300 138, May 1992	

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Conference call, add on (CONF)	ETS 300 185 Apr 1993+corrigendum Sept 1993	ETS 300 185-1, April 1993
Connected Line Identification Presentation (COLP)	ETS 300 097, March 1992	ETS 300 097, February 1998
Connected Line Identification Restriction (COLR)	ETS 300 098, May 1992	
Direct Dialling In (DDI)	ETS 300 064, Oct 1991	ETS 300 064, February 1998
Explicit Call Transfer (ECT)	ETS 300 369, May 1995	
Malicious Call Identification (MCID)	ETS 300 130, May 1992	
Multiple Subscriber Number (MSN)	ETS 300 052, October 1991	ETS 300 052, February 1998
Subaddressing (SUB)	ETS 300 061, October 1991	ETS 300 061, February 1998
Terminal Portability (TP)	ETS 300 055, October 1991	ETS 300 055, February 1998
Three-Party (3PTY)	ETS 300 188, August 1993	
User to User Signalling (UUS)	ETS 300 286, February 1996	

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5 ETSI CONFORMANCE to SUPPLEMENTARY SERVICES

5.1 Advice of charge (AOC)

5.1.1 Characteristics of AXE AS20 implementation

Not offered.

5.1.2 Characteristics of S12 NP5 implementation

Compliant with ETS 300 182 [20]

The AOC-E supplementary service applies both to the basic access and to the primary rate access.

Section 6.1

The AOC-E supplementary service is provided by prior arrangement with the administration.

The subscription option “Provision of service”, is supported.

Section 6.2

If the served user suspends a call, then the originating network retains the charging information for the suspended call as long as the network retains the call identity of the suspended call of the served user. (Network option).

Section 9.2.3.1

If the AOC-E supplementary service is provided, the network gives charging information based on currency units. (Network option).

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5.2 Completion of Calls to Busy Subscriber (CCBS)

5.2.1 Characteristics of AXE AS20 implementation

Partially compliant to ETS 300 359 [1-b].

5.2.1.1 Comments to prETS 300 359

Section 6.1

Compliant.

For the recall mode subscription option, “Global recall” is the default value.

For the network option “Check for identical calls”, “Yes” is the default value. (Identical calls: The criteria for identical calls are that the called and calling party address is already stored in the CCBS queue.)

For the network option “CCBS request retention”, “Yes” is the default value.

Section 9.4.4.1

Compliant.

The network-initiated deactivation does not deactivate the entire CCBS supplementary service. Instead the deactivation is always performed on a specific CCBS request.

Section 9.5.2.1

Network option: Maximum number of CCBS requests to a given destination is 5.

Section 9.5.4.2

Partially compliant.

The CCBS request will not be deactivated if the network does not receive an indication that a compatible terminal exists.

The status request procedure not supported is the default setting

Section 13 Parameter values

Compliant

T-RETENTION	30 seconds
T-CCBS2 (CCBS service duration)	45 minutes
T-CCBS3 (CCBS recall timer)	15 seconds
T-CCBS4 (CCBS destination B idle guard timer)	10 seconds

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Section 14

Compliant.

SDL diagram:

NOTE:

The SDL's describes a destination queue B having only one request. In reality the queue B may incorporate multiple requests.

5.2.2 Characteristics of S12 NP5 implementation

Partially compliant to prETS 300 359 [1].

5.2.2.1 Comments to prETS 300 359

Section 3 Definitions

Compliant.

Queue A: The maximum length at network A is 5

Queue B: The maximum length at network B is 5, the queue can be adjusted pr. user/access

Section 6.1

Compliant.

Subscription option:

Recall mode, both “Global recall” and “Specific recall” supported with “Global recall” as the default value.

Network options:

- “Check for identical calls” set to “Yes”
- “CCBS request retention” set to “Yes”

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Section 9.1.1 Normal operation

Compliant

CCBS is only possible when the called user does not prohibit CCBS (returned as 'CCBS not possible' to network A)

User busy is for a point-to-multipoint configuration returned when:

- Network determined busy, i.e. all B-channels busy or all resources allocated to the access busy, or;
- User determined busy, i.e. user busy returned by called user

User busy is for a pt-to-pt configuration returned when

- User determined busy, i.e. user busy returned by called user and the T-CCBS available invoke component returned in the clearing message.

Section 9.1.2 Exceptional procedure

Compliant

The network will check the following information elements if received

- Bearer capability
- High layer capability
- Low layer capability
- Calling party address
- Called party address

to verify if an identical call is queued at network A. If the outgoing call is identical to a call stored in the network A-queue and the outgoing call meets user busy, no CallInfoRetain information element is returned to the calling user in the DISCONNECT message

Section 9.5.3.1 B queue processing

Compliant

B queue processing starts when a busy or reserved B-channel becomes free both for the subscription 'status request procedure not supported for existing services' and 'status request procedure supported for existing services'

The term 'reserved B-channel becomes free' is:

- The network reserves a B-channel when the network enters the call present N6 state. B-queue processing for a reserved B-channel that becomes free, is not started unless the call

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controlling the reserved B-channel has reached either the Call Received (N7), Connect Request (N8), Incoming Call Proceeding (N9) or Active state (N10).

Section 9.5.1 Determination that CCBS available

Compliant

The user B can inhibit CCBS being booked against his access by the subscription option Inhibit CCBS activation. The default value of Inhibit CCBS activation is 'No Inhibit of CCBS'.

Section 13 Parameter values

Compliant

T-RETENTION	20 seconds
T-CCBS2 (CCBS service duration)	45 minutes
T-CCBS3 (CCBS recall timer)	15 seconds
T-CCBS4 (CCBS destination B idle guard timer)	10 seconds

Annex B: Provision of status request procedures

Compliant

Subscription option:

Status request procedure, both "status request procedure are not supported for existing services" and "status request procedure are supported for existing services" are supported with "status request procedure are not supported for existing services" as the default value.

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5.3 Diversion supplementary services

The diversion supplementary services specified in ETS 300 207-1 [2] consist of:

1. Call forwarding unconditional (CFU)
2. Call forwarding on busy (CFB)
3. Call forwarding on no reply (CFNR)
4. Call deflection (CD).

Telenor provides all these four services.

Telenor uses ETS 300 207-1 [2] as a base document for implementation of the mentioned services. Beside the functional procedures for activation/deactivation/interrogation of the services as described in ETS 300 207-1 [2], Telenor has also specified keypad procedures for the call forwarding services; CFU, CFB and CFNR. The keypad procedures are described in this document.

5.3.1 Characteristics of AXE AS20 implementation

Partially compliant to ETS 300 207 [2].

5.3.1.1 Comments to ETS 300 207

Section 5:

Compliant.

Network provider options chosen in the Telenor network:

- The diversion supplementary service is provided on a per ISDN number basis.
- The call forwarding supplementary services may be subscribed to for each basic service of which the user(s) of the number subscribes.
- An indication that a call forwarding supplementary service is activated on a number, is given to the forwarding user whom has forwarding activated, each time an outgoing call is made.

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Section 6.1 Provision and withdrawal

Default values for subscription options:

Announcement to calling user that call will be forwarded	No
Notify A: Notification to calling user of forwarding	No
Notify B: Notification to served user that a call has been forwarded	Yes
Served user's ISDN number is released to the forwarded-to user	Yes
Reminder notification to served user on outgoing calls that forwarding is currently activated	Yes
KeyWord : Served user gives keyword when activating or deactivating service with a subscriber. Procedure	No
Barring program	Normal destination dependent restriction
Partial rerouting allowed	Yes
Length of no reply condition timer (TCFNR)	Default value 20s

Served user call retention on invocation of diversion (CFNR, CD)	Late release: Retain call until alerting begins at the diverted-to user.
Maximum number of diversions for a single call	5
Maximum length of the forwarded to SUB address	20

Section 10.6:

Partially compliant.

Activation and deactivation requests not containing the indication "for all numbers" will not be rejected. These activation and deactivation requests will be handled as normal activation and deactivation requests. See ETS 300 207 [2], section 9.1.1 and 9.1.2.

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5.3.2 Characteristics of S12 NP5 implementation

Partially compliant to ETS 300 207 [2].

5.3.2.1 Comments to ETS 300 207

Section 5:

Compliant.

Network provider options chosen in the Telenor network:

- The diversion supplementary service is provided on a per ISDN number basis.
- The call forwarding supplementary services may be subscribed to for each basic service of which the user(s) of the number subscribes.
- An indication that a call forwarding supplementary service is activated on a number, is given to the forwarding user whom has forwarding activated, each time an outgoing call is made.
- Maximum number of diversions for each call is 5.

5.3.2.2 Keypad procedures for diversion services

5.3.2.2.1 Coding requirements

For detailed information about coding requirements, see Telenor Nett Specification A44-1 [24].

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5.3.2.2.2 Signalling procedures for service requests

Keypad procedure for a service request

To activate, deactivate or interrogate a call forwarding service, the user sends a SETUP message carrying a Keypad facility information element (no Called party number information element). The Keypad facility information element contains the CFU / CFB / CFNR request for activation / deactivation / interrogation. See Table 1.

Type of Request	Keypad procedure
Activation	* service code * FTN { * (SUB) [* (SUN) (* BS)] } #
Deactivation	# service code [* (SUN) (* BS)] #
Interrogation	* # service code [* (SUN) (* BS)] #

Table 1: Keypad procedures for the call forwarding services.

Service codes: CFU = 21
CFB = 67
CFNR = 61

Abbreviations: FTN = Forwarded to number
SUB = Subaddress
SUN = Served user number, in case of MSN.
BS = Basic service, see note1.

Note1:

BS = 0 indicates "all basic services".

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Response to a request :

For more information about the content of the mentioned Display message numbers or the announcement numbers, see Telenor Nett Specification A44-4, Annex 2 [25].

Type of Request	Display message number
Activation	#17 and #8
Deactivation	#18
Interrogation	#17 and #8
	#17, #8 and possibly #57
	#2
	#17, #31, #57 and #1

Response to exceptional procedures:

For more information about the content of the mentioned Display message numbers or the announcement numbers, see Telenor Nett Specification A44-4 [25].

Type of Request	Cause value in DISCONNECT	Display message number	Announcement no. for speech type
Activation / Deactivation attempt, when the service is not subscribed to.	#50	-	38
Activation, when wrong procedure is used.	#29	#13	7
		#14	41
		#28	25
Deactivation, when wrong procedure is used.	#29	#13	7
Interrogation, when not subscribed to.	#50	-	38

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5.4 Call Hold (HOLD)

5.4.1 Characteristics of AXE AS20 implementation

Compliant to ETS 300 141 [3].

5.4.1.1 Comments to ETS 300 141

Section 9

It is possible for user A at the originating side to hold a call in state U4 Call Delivered (after receiving the ALERTING message). (Network option.)

Section 9.1.1

The optional explicit channel reservation function is not implemented.

Section 9.1.2

If the Bearer service is “3.1 kHz” or “speech”, a warning tone is given to User B (held user) in addition to the out of band notification. This tone is provided from the served users exchange.

5.4.2 Characteristics of S12 NP5 implementation

Compliant to ETS 300 141 [3].

5.4.2.1 Comments to ETS 300 141

Section 9

It is possible for user A at the originating side to hold a call in state U4 Call Delivered (after receiving the ALERTING message). (Network option.)

Section 9.1.1

The optional explicit channel reservation function is not implemented.

Section 9.1.2

If the Bearer service is “3.1 kHz” or “speech”, a warning tone is given to User B (held user) in addition to the out of band notification. This tone is provided from the served user’s exchange.

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5.5 Call Waiting (CW)

5.5.1 Characteristics of AXE AS20 implementation

Compliant to ETS 300 058 [4].

5.5.1.1 Comments to ETS 300 058

Section 6.1

The CW supplementary service is provided by prior arrangement with Telenor.

Section 9.5.1.1

The timer T-CW is used instead of the basic call timer T301.

The expiry time of the timer T-CW is 20 sec.

The subscription option “Calling user receives notification that his/her call is waiting” is supported.

5.5.2 Characteristics of S12 NP5 implementation

Compliant to ETS 300 058 [4].

5.5.2.1 Comments to ETS 300 058

Section 6.1

The CW supplementary service is provided by prior arrangement with Telenor.

Section 9.5.1.1

The subscription option “Calling user receives notification that his/her call is waiting” is supported.

5.5.3 Call Waiting with Keypad procedure

In addition to the functional procedures, the network can also support user activation, deactivation and interrogation of the Call Waiting service with use of keypad procedures.

In order to activate, deactivate or interrogate the service in this way, the user sends a SETUP message carrying a Keypad facility information element and no Called party number information element.

The Keypad facility information element contains the user request by means of an IA5 character string containing the service code (SC) corresponding to the requested procedure.

Note: Both keypad and functional procedures are possible in parallel over one and the same access.

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Type of Request	Keypad procedure
Activation	* 43 #
Deactivation	# 43 #
Interrogation	* # 43 #

Keypad procedures for the “Call waiting” service.

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5.6 Calling Line Identification Presentation (CLIP)

5.6.1 Characteristics of AXE AS20 implementation

Compliant to ETS 300 092 [5].

5.6.1.1 Comments to ETS 300 092

Section 5

The SUB-address is delivered, if provided by the calling user. (Network option.)

Section 6.1

The CLIP supplementary service is provided on a subscription basis. This service will be withdrawn at the customer's request or for administrative reasons.

Section 9.3.1

For details about the number structure of calling party number, see Telenor Nett Specification A41-4 [23].

Section 9.5.1

For details about the number structure of calling party number, see Telenor Nett Specification A41-4 [23].

Annex B

The Two Calling Party Information Elements delivery option is supported.

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5.6.2 Characteristics of S12 NP5 implementation

Compliant to ETS 300 092 [5].

5.6.2.1 Comments to ETS 300 092

Section 5

The SUB-address is delivered, if provided by the calling user. (Network option.)

Section 6.1

The CLIP supplementary service is provided on a subscription basis. This service will be withdrawn at the customer's request or for administrative reasons.

Section 9.3.1

For details about the number structure of calling party number, see Telenor Nett Specification A41-4 [23].

Section 9.5.1

For details about the number structure of calling party number, see Telenor Nett Specification A41-4 [23].

Annex B

The Two Calling Party Information Elements delivery option **is** supported.

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5.7 Calling Line Identification Restriction (CLIR)

5.7.1 Characteristics of AXE AS20 implementation

Compliant to ETS 300 093 [6].

5.7.1.1 Comments to ETS 300 093

Section 6.1

The CLIR supplementary service is provided after pre-arrangement with Telenor. The service is offered with subscription options. The options apply separately to each ISDN-number.

Subscription options for CLIR:

- Permanent mode (restriction active for all calls)
- Temporary mode (restrictions specified by user per call).

For the temporary mode the user can choose whether “presentation restricted” or “presentation not restricted” shall be the default value. If the network from the calling party does not receive the presentation indicator, the default value will be used.

5.7.2 Characteristics of S12 NP5 implementation

Compliant to ETS 300 093 [6].

5.7.2.1 Comments to ETS 300 093

Section 6.1

The CLIR supplementary service is provided after pre-arrangement with Telenor. The service is offered with several subscription options. The options apply separately to each ISDN-number.

Subscription options for CLIR:

- Permanent mode (restriction active for all calls)
- Temporary mode (restrictions specified by the user on a “per call” basis).

For the temporary mode the user can choose whether “presentation restricted” or “presentation not restricted” shall be the default value. If the network from the calling party does not receive the presentation indicator, the default value will be used.

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5.8 Closed User Group (CUG)

5.8.1 Characteristics of AXE AS20 implementation

Partially compliant to ETS 300 138 [7].

5.8.1.1 Comments to ETS 300 138

Section 6.1

Compliant.

The CUG supplementary service is offered with all the subscription options defined.

When CUG is subscribed to for a number of basic services, subscription options are set individually for each basic service and not for the entire set of basic services at the same time.

Section 9.2.4.1

Compliant as follows:

If the internal checks defined in table 5 (including notes) result in a requirement for a CUG call to the called user, then the incoming SETUP message will include a Display information element in addition to the Facility information element which contains a cUGCall invoke component. The Display information element contains display message no. 23 to inform the user that this call is a CUG call. Display message no.23 also includes the CUG index associated with this call.

In case a SETUP message has been sent via the broadcast data link, the network will retain a possibly received return error value along with the cause retained according to basic call control procedures. The return error component contained in the message with the highest priority cause, according to basic call control, will be sent to the originating exchange via the cause parameter in ISUP.

In case no return error component was received in the message with the highest priority cause, then no return error component will be sent to the originating exchange.

At the originating exchange, the return error component (as represented by the cause parameter received via ISUP) will be returned to the calling user together with cause #29 "facility rejected".

Note that the same information, i.e. cause and return error values, will be returned to the calling user irrespective of whether the call is an inter-exchange or intra-exchange call.

If a cUGCall return error component with value inconsistencyInDesignatedFacilityAndSubscriberClass is received, according to 2) of ETSI paragraph 9.2.4.1, the destination network will use the cause, which was received together with this error component, when clearing is initiated towards the originating exchange.

The rest of this section is compliant.

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Section 9.2.4.2

Compliant as follows:

If the cUGCall return error component is absent in the clearing message received from the user on a point-to-point configuration, the destination network will initiate normal clearing towards the originating exchange. The ISUP cause parameter will then contain the cause value received from the terminating user, in order to fulfil basic call control procedures.

At the originating exchange a cUGCall return error component indicating "basicServiceNotProvided" will be generated, if appropriate, and sent towards the originating user together with the cause value received.

Note that the same information, i.e. cause and return error values, will be returned to the calling user irrespective of whether the call is an inter-exchange or intra-exchange call.

In case no cUGCall return error component is received by the destination network during an unsuccessful call offering process, i.e. the clearing message containing the highest priority cause does not contain an error component, the destination network will initiate call clearing towards the originating exchange. The ISUP cause parameter will then contain the highest priority cause received, according to basic call control procedures.

Section 9.2.5

Compliant as follows:

As regards "NOTE 1" to table 5, the following is valid: The cases where the IC does not exist for the called user (RE value=f "userNotMemberOfCUG") and where the IC exists but is not appropriate to the requested basic service (RE value=c "requestedBasicServiceViolatesCUGConstraints") will not be distinguished from each other. In both cases RE value=f "userNotMemberOfCUG" will be returned.

The reason for this is that ISUP is not capable of sending both these values, but only cause #87 "user not a member of CUG" (via the cause parameter) and that the same solution will be used for inter-exchange and intra-exchange calls.

Section 11

Compliant.

If the cause parameter received via ISUP contains a diagnostic indicating that the rejection concerns the CUG supplementary service the cUGCall return error component is sent as specified.

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5.8.2 Characteristics of S12 NP5 implementation

Compliant to ETS 300 138 [7].

5.8.2.1 Comments to ETS 300 138

Section 6.1

Compliant.

The CUG supplementary service is offered with all the subscription options defined.

When CUG is subscribed to for a number of basic services, subscription options are set individually for each basic service and not for the entire set of basic services at the same time.

Section 9.2.4.1

Compliant as follows:

When the destination exchange has performed the CUG checks, the call shall be presented to the called user as a CUG call. The SETUP message shall contain a cUGCall invoke component and Display message #23 «Lukket brukerguppe: nbr» to inform the called user that it is a CUG call.

Section 9.2.5

Compliant as follows

ETSI checks shall be performed at the originating side. This means that each originating call is either a CUG call or an outgoing access (OA) call, i.e., a normal (non-CUG) call. The two possibilities are mutually exclusive, i.e., CUG with OA indication shall not be used in the IAM or SETUP sent towards the terminating side.

ITU checks shall be performed at the terminating side, i.e., a call shall not be rejected at the terminating side because it is a CUG call with OA indication. If the Interlock code matches the code for one of the terminating subscriber's CUG's, then the call shall be treated as a CUG call. If the call cannot be completed as a CUG call, then the call shall be treated as a normal call at the terminating side. Even though the ITU check is performed at the terminating side, the resulting call is either a CUG call or a normal (non CUG) call in the SETUP sent to the terminating user, i.e., CUG call with OA indication shall not be sent to the terminating subscriber.

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5.8.3 Keypad protocol

The generic keypad protocol for the support of supplementary services is described in Telenor Nett Specification A44-1 [24].

Keypad Procedures

CUG invocation request:

Invocation	*01[*CUG-index] # CUG-index=0 - 999 Where 0 means request for “Outgoing request”
-------------------	--

Display information element

The Display information element is used on the destination side to inform the called user that the call is a CUG call. On the originating side the Display information element are used to inform the calling user about the reason for call failure if the call was requested using the keypad protocol.

The coding of the Display information element is according to ETS 300 102-1 [21], subclause 4.5.15.

Keypad facility information element

To invoke the CUG supplementary service, the Keypad facility information element will be used to convey the CUG invocation request from the user. The coding will be according to Telenor Nett Specification A41-3 [22] and the contents will be as above under subclause “Keypad Procedures”.

Cause information element

If as a result of the checks relevant to either the originating or destination network, the network cannot allow the call to proceed for a CUG supplementary service related reason, then the network will initiate call clearing using one of the following causes:

- #87 “user not a member if this CUG” if the called user is not a member of the CUG.
- #29 “facility rejected” in the case of all other CUG supplementary service related reasons.

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5.9 Conference Call, Add-On (CONF)

5.9.1 Characteristics of AXE AS20 implementation

Compliant to ETS 300 185-1 [8].

5.9.1.1 Comments to ETS 300 185

The CONF supplementary service is provided on a subscription basis. The maximum value of N, number of conferees, is 10.

Section 5

The CONF supplementary service can be invoked either from the idle state or (network option) from an existing active call.

Section 9.2.1.2

If the received SETUP message includes a BeginCONF operation and, additionally, a called party number or called party subaddress information, then the request to set-up a conference is rejected. The return error component indicates "notAvailable".

Section 9.2.2.2

In addition, if the original call was an incoming call and the CONF attachment facility "incoming calls are not allowed" is valid, then the request will be rejected. The served user will receive a BeginCONF return error component indicating "notAvailable" in a FACILITY message.

Section 9.2.4.2

Note: When the served user requests the isolation of an already isolated remote user, the response to that operation (IsolateCONF return result component) will be sent only to the served user (i.e. none of the remote users will receive any NOTIFY message).

Section 9.2.4.2

Note: When the served user requests the reattachment of a remote user which has not been isolated, the response to that operation (ReattachCONF return result component) will be sent only to the served user (i.e. none of the remote users will receive any NOTIFY message)

Section 9.2.6.2

If the received SETUP message includes a SplitCONF operation and, additionally, a called party number or called party subaddress information then the request to setup a conference is rejected. The return error component indicates "illegal party Id".

If the served user requests the SplitCONF operation, and there are no resources available to establish the second call, (i.e. the call between the served user and the splitted remote user), the request will be rejected with either cause 34 "no circuit/channel available" or cause 44 "requested circuit/channel not available" in an appropriate basic call release message.

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5.9.2 Characteristics of S12 NP5 implementation

Compliant to ETS 300 185-1 and Corrigendum September 1993 [8-b].

5.9.2.1 Comments to ETS 300 185

The CONF supplementary service is provided on a subscription basis. The maximum value of N, number of conferees, is 5.

An incoming call on which the connection has already been established can be added to the conference.

Chaining of conferences is allowed.

Section 5

The CONF supplementary service can be invoked either from the idle state or from an existing active call.

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5.10 Connected Line Identification Presentation (COLP)

5.10.1 Characteristics of AXE AS20 implementation

Compliant to ETS 300 097 [9-b].

5.10.1.1 Comments to ETS 300 097

No comments

Section 7.1

For details about the number structure of connected number, see Telenor Nett Specification A41-4 [23].

5.10.2 Characteristics of S12 NP5 implementation

Compliant to ETS 300 097 [9].

5.10.2.1 Comments to ETS 300 097

No comments

Section 7.1

For details about the number structure of connected number, see Telenor Nett Specification A41-4 [23].

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5.11 Connected Line Identification Restriction (COLR)

5.11.1 Characteristics of AXE AS20 implementation

Compliant to ETS 300 098 [10-b].

5.11.1.1 Comments to ETS 300 098

Section 6.1

The subscription options apply separately to each ISDN-number.

Section 7

For details about the number structure of connected number, see Telenor Nett Specification A41-4 [23].

5.11.2 Characteristics of S12 NP5 implementation

Compliant to ETS 300 098 [10].

5.11.2.1 Comments to ETS 300 098

Section 6.1

The subscription options apply separately to each ISDN-number

Section 7

For details about the number structure of connected number, see Telenor Nett Specification A41-4 [23].

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5.12 Direct Dialling In (DDI)

The supplementary service Direct Dialling In is only valid for point-to-point configurations.

5.12.1 Characteristics of AXE AS20 implementation

Compliant to ETS 300 064 [11-b].

5.12.1.1 Comments to ETS 300 064

The DDI supplementary service is provided on a subscription basis.

Section 5

The DDI number is always sent en-bloc from the exchange to the called user. (Network option.)

Section 6.3

The en-bloc receiving procedure is used to transfer the number information to the called user. (Network option.)

Section 9

In AXE the DDI supplementary service is defined not to be applicable at an S/T reference point.

Section 10.2.1

The DDI number will always be the full ISDN-number.

The network will set the “type of number” to “national” and the “numbering plan indicator” to “E.164”.

If the DDI supplementary service is used in connection with the PNP supplementary service, then the network will set the “numbering plan indicator” to “private numbering plan” and the “type of number” to “unknown”.

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5.12.2 Characteristics of S12 NP5 implementation

5.12.2.1 Comments to ETS 300 064

The DDI supplementary service is provided on a subscription basis.

Section 5

The whole ISDN number is passed on to the user.

Section 6.3

The en-bloc receiving procedure is used to transfer the number information to the called user. (Network option.)

Section 10.2.1

The DDI number will always be the full ISDN-number.

The network will set the “type of number” to “national”, and the “numbering plan indicator” to “E.164”.

If the DDI supplementary service is used in connection with the PNP supplementary service, then the network will set the “numbering plan indicator” to “private numbering plan” and the “type of number” to “unknown”.

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5.13 Explicit Call Transfer (ECT)

5.13.1 Characteristics of AXE AS20 implementation

Partly compliant with ETS 300 369 [12].

5.13.1.1 Comments to ETS 300 369

The ECT supplementary service is provided on a subscription basis.

Section 5

Compliant as follows:

The Explicit Call Transfer (ECT) supplementary service enables a user to transform two of that users calls (an active and a held call), one of them must be incoming (Telenor requirement), into a new call between the other parties in the two calls.

The outgoing call can be either alerting or answered. (Network option.) The alerting call is, in this case, in the Call Delivered state i.e. it is an outgoing call.

Section 6.2

Compliant.

The Telenor network allows the transfer of an alerting call. (Network option.)

Section 9.2

Compliant.

The Telenor network allows the use of explicit linkage mechanism. (Network option.)

Section 9.3

Partially compliant.

In table 5 the alerting alternative is not applicable in any of the three cases. This is because one of the calls has to be incoming if the user shall be allowed to invoke ECT. In table 5 the call A-B is said to be outgoing (user B is called party). The network option ECT in the alerting phase is only applicable for outgoing calls.

In addition, since one of the calls has to be an incoming call, user A must be the called user in the call A-B in table 4 and table 6.

Section 10.1.1

Loop prevention procedure is not supported

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5.13.2 Characteristics of S12 NP5 implementation

Partly compliant with ETS 300 369 [12].

5.13.2.1 Comments to ETS 300 369

The ECT supplementary service is provided on a subscription basis.

Section 5

Compliant as follows:

The Explicit Call Transfer (ECT) supplementary service enables a user to transform two of that users calls (an active and a held call), one of them must be incoming (Telenor requirement), into a new call between the other parties in the two calls.

The outgoing call can be either alerting or answered. (Network option.) The alerting call is, in this case, in the Call Delivered state i.e. it is an outgoing call.

Section 6.2

Compliant.

The Telenor network allows the transfer of an alerting call. (Network option.)

Section 9.2

Compliant.

The Telenor network allows the use of explicit linkage mechanism. (Network option.)

Section 9.3

Partially compliant.

In table 5 the alerting alternative is not applicable in any of the three cases. This is because one of the calls has to be an incoming call if the user shall be allowed to invoke ECT. In table 5 the call A-B is said to be outgoing (user B is called party). The network option ECT in the alerting phase is only applicable for outgoing calls.

In addition, since one of the calls has to be an incoming call, user A must be the called user in the call A-B in table 4 and table 6.

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5.14 Malicious Call Identification (MCID)

5.14.1 Characteristics of AXE AS20 and S12 NP5 implementation

Compliant to ETS 300 130 [13].

Telenor has specified a keypad procedure as an additional alternative procedure to the functional protocol specified in the ETS.

Both the functional protocol and the alternative keypad facility protocol are applicable for AXE AS20 and S12 NP5.

5.14.1.1 Comments to ETS 300 130

Section 3

The calling party subaddress will be contained in the call information if provided by the calling user. (Network option.)

5.14.1.2 Keypad protocol

The generic keypad protocol for the support of supplementary services is described in Telenor Nett Specification A44-1 [24].

Operation

The user must have prearranged with the network provider for activation of the MCID supplementary service.

To invoke MCID, the user shall send an INFORMATION message carrying the MCID invoke request in the Keypad facility information element to the network. The keypad information may be sent en block or by using overlap sending.

Type of request	Type of message	Keypad procedure
Invocation	INFORMATION	*39#

This message can only be received at the network side in the Active state (N10) or in the Disconnect indication state (N12).

The network will return an INFORMATION message containing a Display information element with display message no.17 to indicate that the MCID invocation was accepted.

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Exceptional procedures

MCID invoked from state	Condition	Result
Other than N10,N12,N0	Incoming call	INF: C#29"Facility rejected", DispM#13
Other than N0	Outgoing call	INF: C#29"Facility rejected", DispM#13
N0		RLC: C#81"Invalid call reference value"
N10,N12	MCID not subscribed	INF: C#50"requested facility not subscribed"
N10,N12	Network unable to register	INF: C#63"service or option not available, unspecified"
N10,N12	Conflicting supplementary service	INF: C#29"Facility rejected", DispM#14
N10,N12	Multiple invocations	INF: DispM#17, but only registered first time (once)
N10,N12	RELEASE sent before acknowledge	Network will proceed normally with MCID request

INF=	INFORMATION message
RLC=	RELEASE COMPLETE message
DispM=	Display Message text
C=	Cause value

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5.15 Multiple Subscriber Number (MSN)

5.15.1 Characteristics of AXE AS20 implementation

Compliant to ETS 300 052 [14-b].

5.15.1.1 Comments to ETS 300 052

Section 5

MSN will only be provided for Basic Access on a point-to-multipoint configuration.

With the MSN supplementary service, the full national ISDN number will be sent to the user network interface.

There is always one number (default number) identifying the access from the network point of view.

Section 6.2

If the access has subscribed to the MSN supplementary service, the network will be able to use the information in the Calling party number information element to identify the calling terminal and, if necessary, assign the appropriate basic or supplementary service. (Network option.)

Section 6.3

When the multiple subscriber number is provided to the called user, the network will send the complete called party number en-bloc in the SETUP message.

Section 9.2.1 and 9.3.1

The multiple subscriber number sent to the called user is always the full ISDN-number.

The network will set the “type of number” to “National” and the “numbering plan indicator” to “E.164”.

If the MSN supplementary service is used in connection with the Private Number Plan (PNP) supplementary service, then the network will set the “numbering plan indicator” to “private numbering plan” and the “type of number” to “unknown”.

Section 10

Based on agreements with the user, AXE always knows what type of equipment is connected to the access or group of accesses, (i.e. a private network at a T reference point or terminals at an S/T reference point).

In AXE the MSN supplementary service is defined not to be applicable at a T reference point.

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5.15.2 Characteristics of S12 NP5 implementation

Compliant to ETS 300 052 [14].

5.15.2.1 Comments to ETS 300 052

Section 5

MSN will only be provided for Basic Access on a point-to-multipoint configuration.

With the MSN supplementary service, the full national ISDN number will be sent to the user network interface.

There is always one number (default number) identifying the access from the network point of view.

Section 6.2

If the access has subscribed to the MSN supplementary service, the network will be able to use the information in the Calling party number information element to identify the calling terminal and, if necessary, assign the appropriate basic or supplementary service. (Network option.)

Section 6.3

When the multiple subscriber number is provided to the called user, the network will send the complete called party number en-bloc in the SETUP message.

Section 9.2.1 and 9.3.1

The multiple subscriber number sent to the called user is always the full ISDN-number.

The network will set the “type of number” to “National” and the “numbering plan indicator” to “E.164”.

Section 10

If the MSN supplementary service is used in connection with the Private Number Plan (PNP) supplementary service, then the network will set the “numbering plan indicator” to “private numbering plan” and the “type of number” to “unknown”.

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5.16 Subaddressing (SUB)

5.16.1 Characteristics of AXE AS20 implementation

Compliant to ETS 300 061 [15-b].

5.16.1.1 Comments to ETS 300 061

Section 5

The maximum length of the subaddress is 20 octets.

Section 6.1

Subaddressing requires prior arrangement with the service provider.

5.16.2 Characteristics of S12 NP5 implementation

Compliant to ETS 300 061 [15].

5.16.2.1 Comments to ETS 300 061

Section 5

The maximum length of the subaddress is 20 octets.

Section 6.1

Subaddressing requires prior arrangement with the service provider.

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5.17 Terminal Portability (TP)

5.17.1 Characteristics of AXE AS20 implementation

Compliant to ETS 300 055 [16-b].

5.17.1.1 Comments to ETS 300 055

Section 6.1

The Terminal Portability Supplementary service is generally available (BA, point-to-multipoint) i.e. the provision of this supplementary service is included in the basic subscription.

Section 9

The network supports the sending of notifications to the remote user.

5.17.2 Characteristics of S12 NP5 implementation

Compliant to ETS 300 055 [16].

5.17.2.1 Comments to ETS 300 055

Section 6.1

The Terminal Portability Supplementary service is generally available, (BA, point-to-multipoint) i.e. the provision of this supplementary service is included in the basic subscription.

Section 9

The network supports the sending of notifications to the remote user.

TELENOR SPECIFICATION

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5.18 Three-Party (3PTY)

5.18.1 Characteristics of AXE AS20 implementation

Compliant to ETS 300 188 [17].

5.18.1.1 Comments to ETS 300 188

Section 6.1

The 3PTY service is not applicable on a point-to-point configuration.

The 3PTY supplementary service is generally available, i.e. the provision of this supplementary service is included in the basic subscription, and a 3PTY subscription also includes the subscription for the Call Hold supplementary service.

Section 11

Outband notifications are not sent to PSTN users, while inband notifications may be sent.

5.18.2 Characteristics of S12 NP5 implementation

Compliant to ETS 300 188 [17].

5.18.2.1 Comments to ETS 300 188

Section 6.1

The 3PTY service is not applicable on a point-to-point configuration.

The 3PTY supplementary service is generally available, i.e. the provision of this supplementary service is included in the basic subscription, and a 3PTY subscription also includes the subscription for the Call Hold supplementary service.

Section 11

Outband notifications are not sent to PSTN users, while inband notifications may be sent.

TELENOR SPECIFICATION

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5.19 User-to-User Signalling (UUS)

5.19.1 Characteristics of AXE AS20 implementation

Compliant to ETS 300 286 [18].

5.19.1.1 Comments to ETS 300 286

Section 3

Comment to the definition of the “served user”;
For Service 3 the served user is the calling user.

Section 5

The Telenor network supports the sending of User-User Information element with up to 128 octets with user information (131 octets including header).

Telenor supports all the UUS services (Service 1, 2 and 3).

Section 5.1

UUI can also be sent from the called user when answering the call.

Clarification to ETSI: The first ALERTING message received is sent further towards the calling side. This message may contain UUI. Subsequent ALERTING messages, possibly containing UUI, is discarded. The first CONNECT message received, possibly containing UUI, is sent further to the calling side.

Section 5.2

For service 2, both users may send UUI after the alerting indication has been sent/received and until the connect information has been sent/received.

Network option chosen by Telenor: The network can deliver the UUI to the called user after the connection has been established.

Section 6.1

Service 1, 2 and 3 must be individually subscribed to by the calling user. (Network option chosen by Telenor.)

TELENOR SPECIFICATION

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Section 7.3.3

The maximum number of octets for the User-to-User is 131.

Norwegian characters:

To ensure that the Norwegian characters ('Æ', 'Ø', 'Å', 'æ', 'ø', and 'å') are supported in a standardised manner on CPEs, (Customer Premises Equipment) Telenor recommends the use of the IA5 character set as defined in ITU-T recommendation T.50 Table 5, with the following modifications:

position 5/11 '[' represents 'Æ'

position 5/12 '\' represents 'Ø'

position 5/13 ']' represents 'Å'

position 7/11 '{' represents 'æ'

position 7/12 '|' represents 'ø'

position 7/13 '}' represents 'å'

Section 9.1.2.2.1

In AXE the option to send a PROGRESS message will not be used. Instead the sending of a DISCONNECT message will be delayed, in order to allow for provision of possible in-band information towards the calling user.

Section 9.2.2.1

The Telenor network supports the option: As a network option, the calling network shall accept the USER INFORMATION messages from the calling user and the called network shall deliver them to the called user after the calling and called network have entered the

Active (N10) call state. This situation may occur due to crossing of a USER INFORMATION and the CONNECT message. (Network option).

Section 9.3.1

The called user will not be allowed to activate Service 3.

Section 9.3.1.2.2

Since the called user is not allowed to activate Service 3, collision of Service 3 requests will not occur.

If the called user requests Service 3 activation, the network responds with a Facility information element in a FACILITY message. The Facility information element will include a Return error component with the value "rejected by the network".

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5.19.2 Characteristics of S12 NP5 implementation

Compliant to ETS 300 286 [18].

5.19.2.1 Comments to ETS 300 286[18]

Section 3

Comment to the definition of the “served user”;
For Service 3 the served user is the calling user.

Section 5

The Telenor network supports the sending of User-User Information element with up to 128 octets with user information (131 octets including header).

Telenor supports all the UUS services (Service 1,2 and 3).

Section 5.1

UUI can also be sent from the called user when answering the call.

Clarification to ETSI: The first ALERTING message received is sent further towards the calling side. This message may contain UUI. Subsequent ALERTING messages, possibly containing UUI, is discarded. The first CONNECT message received, possibly containing UUI, is sent further to the calling side.

Section 5.2

Network option chosen by Telenor: The network can deliver the UUI to the called user after the connection has been established.

Section 6.1

Service 1, 2 and 3 must be individually subscribed to by the calling user. (Network option chosen by Telenor.)

The maximum number of octets for the User-to-User is 131.

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Section 7.3.3

The maximum number of octets for the User-to-User is 131.

Additional information concerning coding of Norwegian characters:

To ensure that the Norwegian characters ('Æ', 'Ø', 'Å', 'æ', 'ø', and 'å ') are supported in a standardised manner on CPEs, (Customer Premises Equipment), Telenor recommends the use of the IA5 character set as defined in ITU-T recommendation T.50 Table 5, with the following modifications:

position 5/11 '[' represents 'Æ'

position 5/12 '\' represents 'Ø'

position 5/13 ']' represents 'Å'

position 7/11 '{' represents 'æ'

position 7/12 '|' represents 'ø'

position 7/13 '}' represents 'å'

Section 9.2.2.1

The Telenor network accepts USER INFORMATION messages sent from the calling user and delivers them to the called user after the Active Call State has been entered. This situation may occur due to crossing of a USER INFORMATION and the CONNECT message. (Network option).

Section 9.3.1

The called user will not be allowed to activate Service 3.

Section 9.3.1.2.2

Since the called user is not allowed to activate Service 3, collision of Service 3 requests will not occur.

If the called user requests Service 3 activation, the network responds with a Facility information element in a FACILITY message. The Facility information element will include a Return error component with the value "rejected by the network".

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6 HISTORY

Edition	Published	Comments
1.0	25.06.1999	Information about AXE AS18 only
2.0	14.03.2000	Information about S12 NP5 is added
2.0	31.05.2000	UUS – Additional info concerning Norwegian characters in Comments of section 7.3.3
3.0	29.09.2000	Information about AXE AS20 is added.
4.0	15.12.2010	Template/header/footer updates



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