

This specification describes the situation of the Belgacom network and services. It will be subject to modifications for corrections or when the network or the services will be modified. Please take into account that modifications can appear at any moment. Therefore, the reader is requested to check regularly with the most recent list of available specifications that the document in one's possession is the latest version.

Belgacom can't be held responsible for any damages due to the use of a version of this specification which is not included in the most recent list of available specifications (list always available with a request to the e-mail address mentioned in the underneath paragraph).

Whilst every care has been taken in the preparation and publication of **this document**, errors in content, typographical or otherwise, may occur. If you have remarks concerning its accuracy, please send a mail to the following address belgacom.uni.spec@belgacom.be and your remark will be transmitted to the right Belgacom department.

The User Network Interface Specifications published via Internet are available for your information but have no official value. The only documents with an official value are printed on a specific paper.

If you want **to get an official version of this User Network Interface Specification**, please order it by sending your request by mail to belgacom.uni.spec@belgacom.be

Subscriber Control Interface (SCI)

Table of Contents

0.	DOCUMENT HISTORY	1
1.	MAIN REFERENCE.....	2
2.	SCOPE AND VOCABULARY	3
3.	COMMAND DIALOGUE FORMAT	4
	3.1. Service code command	4
	3.2. Switching order command	4
	3.3. Abbreviated dialling command.....	5
	3.4. Alphanumeric command	5
4.	INTERACTIVE DIALOGUE FORMAT.....	6
5.	INFORMATION AFTER A CONTROL ACTION	7
ANNEX A	8
ANNEX B	10
ANNEX C	11
ANNEX D	12

0. Document history

Every update of this document results in a complete new version with new version number and release date.

Version	Date	Main or important changes since previous version
1.0	11 JAN 2000	<ul style="list-style-type: none">• First version
1.1	27 FEB 2001	<ul style="list-style-type: none">• Annex A: codes 42, 54 and 933
2.0	24 AUG 2001	<ul style="list-style-type: none">• Annex A: codes 31, 33 (removed), 34, 39 (removed)• Annex D
2.1	24 DEC 2002	<ul style="list-style-type: none">• Annex A and D (Password service): Clarification about the use of trivial PINs• Annex D (Interrogation procedure): Service code 933 has been added and service codes 001 and 94 has been removed

1. Main reference

ETS 300 738 (June 1997) is the "Minimum Man-Machine Interface (MMI) to public network based supplementary services" produced by the Human Factors (HF) Technical Committee of ETSI.

This standard replaces CEPT T/CAC 02 (formerly CEPT T/SF 2).

2. Scope and vocabulary

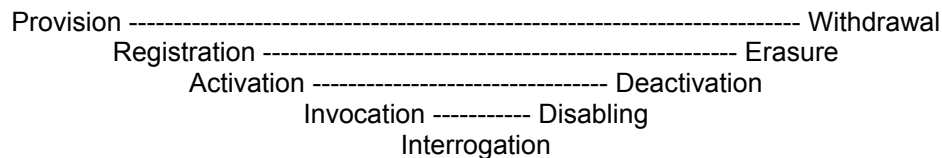
ETS 300 738 applies :

- to network based supplementary services provided by the PSTN and the ISDN (and also by PLMN's, TETRA, UMTS, etc.)
- to all telecommunications terminals that are intended to access the supplementary services provided within the public networks.

Main operations and notions addressed in this ETS are :

- activation / deactivation
- registration / erasure
- interrogation
- invocation
- disabling: operation on a per call basis to prevent the action of a supplementary service (e.g. CLIR control call per call)
- provision / withdrawal
- functional protocol / stimulus protocol (ISDN)
- register recall: "R" symbol
- service code (identifies a supplementary service): 2 or 3 digits string
- switching order (identifies a telecommunications order)
- separator: only star (*) symbol is recommended
- service prefix: 1 or 2 character string with * and # symbols
- service suffix: only square (#) symbol is recommended
- command dialogue format / interactive dialogue format

Hierarchical and reciprocal view of supplementary service functions:



Scope of the present interface specification: Belgacom PSTN and ISDN public lines.

3. Command dialogue format

Definition: a dialogue format which enables user commands to control a supplementary service by entering the complete string of information necessary to execute the required service function.

Different forms are:

- Service code command
- Switching order command
- Abbreviated dialling command
- Alphanumeric command

3.1. Service code command

START PX SC (SR SI) SX
or
PX SC (SR SI) SX FINISH

with respectively start command (off-hook or register recall), service prefix, service code, separator, supplementary information, service suffix, finish command (e.g. send).

Service prefixes are:

- * for activation
- *# for interrogation
- ** for registration without activation (*not used by Belgacom public users*)
- # for deactivation without erasure or for disabling
- ## for deactivation with erasure or for erasure (*not used by Belgacom*)

Belgacom allocation of service codes for PSTN is in annex A.

Belgacom allocation of service codes for ISDN (stimulus protocol) is in annex D.

3.2. Switching order command

START SO (SR SI)
or
SO (SR SI) FINISH

with respectively start command (e.g. register recall), switching order, separator, supplementary information, finish command.

Belgacom allocation of switching orders is in annex B.

3.3. Abbreviated dialling command

START AN SX
or
AN SX FINISH

with respectively start command, abbreviated number, service suffix, finish command.

Not used for Belgacom public users.

3.4. Alphanumeric command

START AS (SI)
or
A S (SI) FINISH

with respectively start command, alphanumeric string, supplementary information, finish command.

Not used for Belgacom public users.

4. Interactive dialogue format

Definition: a dialogue format which enables user commands to control a supplementary service by entering a sequence of information strings in response to prompts, from the terminal, network or supplementary service, to compile the full information necessary to execute a service function.

The interactive dialogue format used to gain access to and control a supplementary service takes the general form of repeated sequences of the two elements:

- control action (by the user)
- feedback and / or prompt information by the exchange

Within Belgacom, this format is used for advanced services supported by Intelligent Network entities and dedicated servers. Cf. annex C.

Concatenation of command sequences may be used.

The ETS contains no requirements for time-outs within interactive dialogues.

5. Information after a control action

- Information provided to support a command dialogue
- Information provided to support an interactive dialogue
- Information provided to support a third party user

For each case, the ETS gives recommendations for tones, announcements, indicator lights, character-based visual display, printed text, reaction on errors, etc. Particular attention has been paid to switching orders commands.

In the Belgacom network, following tones are used (cf. document: Information Tones – with ref. BGC_D_48_9807_30_04_E.DOC):

- Special confirmation tone: command accepted
- Congestion tone: command rejected (network congestion)
- Special information tone: command rejected (invalid command)

ANNEX A

Allocation of service codes for Belgacom PSTN

Service code	Service and commands
001	<p>General Deactivation (GD)</p> <p>This service gives the user the possibility to deactivate by one command some supplementary services which he has activated at his access.</p> <p>The following supplementary services, presently offered to customers, are deactivated by GD:</p> <ul style="list-style-type: none"> - Outgoing Call Barring (OCB) - Call Forwarding Unconditional (CFU) - Call Forwarding on Busy (CFB) - Call Forwarding No Reply (CFNR) - Anonymous Call Rejection (ACR) <p>Command: # 001 (* Password) #</p>
21	<p>Call Forwarding Unconditional (CFU)</p> <p>Commands :</p> <ul style="list-style-type: none"> - registration + activation: * 21 (* Password) * FTN # (FTN = Forwarded-To Number) - activation: * 21 (* Password) # - deactivation: # 21 (* Password) # <p>This service is part of the "Comfort" services.</p>
31	<p>Calling Line Identification Restriction (CLIR)</p> <ul style="list-style-type: none"> ▪ Invocation of CLIR when calling DN (independently of the default temporary value): * 31 * DN # ▪ Disabling of CLIR when calling DN (independently of the default temporary value): # 31 * DN # <p>DN = Directory Number of the called party.</p> <p>Remark: setting of default value of CLIR to "presentation restricted" or "presentation allowed" is not performed by *31# and #31#, but by calling the Belgacom Phone Manager application.</p>
34	<p>Outgoing Call Barring (OCB, subscriber <u>selected</u>)</p> <p>Commands:</p> <ul style="list-style-type: none"> - activation: * 34 * Password * N # (N = barring program reference) - deactivation: # 34 * Password # <p>Remarks:</p> <ul style="list-style-type: none"> ▪ Password is mandatory. ▪ When dialling * 34 * Password # , the latest used "N" barring program is activated.
37	<p>Call Completion on Busy Subscriber (CCBS) or Ring Back service</p> <p>Commands:</p> <ul style="list-style-type: none"> - activation: * 37 # (after Register Recall, acting as switching order) - deactivation: # 37 # <p>Procedure * 37 # is replaced during the first half of year 2001 by the switching order 5 (Cf. annex B).</p>

Service code	Service and commands
42	Voice Data Protection (VDP) Command: - invocation: * 42 * DN # (DN = Directory Number)
43	Call Waiting (CW) Commands: - activation: * 43 (* Password) # - deactivation: # 43 (* Password) # This service is part of the "Comfort" services.
53	Fixed Destination Call with Time-out (FDC-T) Commands: - activation: * 53 (* Password) * DN # (DN = Directory Number) - deactivation: # 53 (* Password) # This service is part of the "Comfort" services.
54	Automatic Recall service or "1919" service Command: - invocation: * 54 # This procedure is available in Belgacom switches because it is hard-coded in some Customer Premises Equipment, but the following standard procedure must be preferred: Command : - invocation : 1919
61	Call Forwarding on No Reply (CFNR) Commands: - registration + activation: * 61 (* Password) * FTN # (FTN = Forwarded-To Number) - activation: * 61 (* Password) # - deactivation: # 61 (* Password) # This service is part of the "Comfort" services.
67	Call Forwarding on Busy (CFB) Commands : - registration + activation: * 67 (* Password) * FTN # (FTN = Forwarded-To Number) - activation: * 67 (* Password) # - deactivation: # 67 (* Password) # This service is part of the "Comfort" services.
933	Anonymous Call Rejection (ACR) Commands: - activation: * 933 (* Password) # - deactivation: # 933 (* Password) #
94	Password modification Command: * 94 * Old password * New password * New password # Note: Trivial PINs (PIN existing of ascending, descending or equal digits) may not be used.

ANNEX B

Allocation of switching orders for Belgacom PSTN

Switching order digit(s)	Function
0	Terminate held call Reject incoming call
1	Terminate active call and switch to held or waiting call
2	Switch between active call and held or waiting call
3	Establish multi-party call or add new party to multi-party call
4	Invoke call transfer service and terminate active and transfer held call
5	Activation of a call completion service, e.g. Ring Back service

ANNEX C

Services for Belgacom PSTN users, with interactive dialogue format

Calling cards services

Phone manager

Wake-up service

Phone mail service

ANNEX D

Allocation of service codes for Belgacom ISDN (stimulus protocol)

Service code	Service and commands
001	<p>General Deactivation (GD)</p> <p>This service gives the user the possibility to deactivate by one command some supplementary services which he has activated at his access.</p> <p>The following supplementary services, presently offered to customers, are deactivated by GD:</p> <ul style="list-style-type: none"> - Outgoing Call Barring (OCB) - Call Forwarding Unconditional (CFU) - Call Forwarding on Busy (CFB) - Call Forwarding No Reply (CFNR) - Anonymous Call Rejection (ACR) <p>Command : # 001 (* Password) #</p>
21	<p>Call Forwarding Unconditional (CFU)</p> <p>Commands:</p> <ul style="list-style-type: none"> - registration + activation: * 21 (* Password) * FTN # (FTN = Forwarded-To Number) - activation: * 21 (* Password) # - deactivation: # 21 (* Password) #
34	<p>Outgoing Call Barring (OCB, subscriber <u>selected</u>)</p> <p>Commands:</p> <ul style="list-style-type: none"> - activation: * 34 * Password * N # (N = barring program reference) - deactivation: # 34 * Password # <p>Remarks :</p> <ul style="list-style-type: none"> ▪ Password is mandatory. ▪ When dialling * 34 * Password # , the latest used "N" barring program is activated.
53	<p>Fixed Destination Call with Time-out (FDC-T)</p> <p>Commands:</p> <ul style="list-style-type: none"> - activation: * 53 (* Password) * DN # (DN = Directory Number) - deactivation: # 53 (* Password) #
61	<p>Call Forwarding on No Reply (CFNR)</p> <p>Commands:</p> <ul style="list-style-type: none"> - registration + activation: * 61 (* Password) * FTN # (FTN = Forwarded-To Number) - activation: * 61 (* Password) # - deactivation: # 61 (* Password) #
67	<p>Call Forwarding on Busy (CFB)</p> <p>Commands:</p> <ul style="list-style-type: none"> - registration + activation: * 67 (* Password) * FTN # (FTN = Forwarded-To Number) - activation: * 67 (* Password) # - deactivation: # 67 (* Password) #

933	Anonymous Call Rejection (ACR) Commands: - activation: * 933 (* Password) # - deactivation: # 933 (* Password) #
94	Password modification Command: * 94 * Old password * New password * New password # Note: Trivial PINs (PIN existing of ascending, descending or equal digits) may not be used.

Interrogation procedure (with *# prefix) may be performed with the following service codes:

- 21
- 34
- 53
- 61
- 67
- 933