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European Standard (Telecommunications series)

Human Factors (HF); Human factors requirements for a European Telephony Numbering Space (ETNS)

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Contents

Intellectual Property Rights.....	4
Foreword	4
1 Scope.....	5
2 References.....	5
3 Definitions and abbreviations	6
3.1 Definitions	6
3.2 Abbreviations.....	6
4 Structure of ETNS service numbers.....	7
4.1 Numbering scheme	7
4.1.1 European Number (EN)	7
4.1.2 European Service Identity (ESI).....	7
4.1.3 European Subscriber Number (ESN)	8
5 Number formatting.....	8
5.1 User dialling difficulties.....	8
5.2 Number presentation.....	8
6 Migration to a global numbering scheme.....	9
7 Number portability issues	10
7.1 Consistent charging.....	10
7.2 No change for calling party.....	10
7.3 ETNS subscriber privacy	10
8 Identification of ETNS services.....	10
9 Identification of charging.....	11
10 Routeing delays.....	11
11 Handling languages within ETNS services.....	12
12 Usability testing	13
13 Compliance	14
History.....	16

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[SIST EN 301 104 V1.1.1:2003](https://standards.iteh.ai/catalog/standards/sist/e4370603-175b-4c14-aecd-dfb200b4ac98/sist-en-301-104-v1.1.1-2003)

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Foreword

This European Standard (Telecommunications series) has been produced by ETSI Technical Committee Human Factors (HF).

The intended users of the present document include:

Table 1: Intended users and potential benefits

	User	ES used for	Potential Benefit
1	Service designers	Development of the structure and presentation of ETNS services	Establish a minimum level of usability through adherence to the requirements in the present document.
2	ETNS service providers	To establish a basis for ensuring that their services will meet the needs of their users	Minimum level of usability of services
3	User groups	To identify problems within ETNS services	Increased awareness by user groups of the value of a minimum level of usability through adherence to human factors requirements
4	ETSI Technical Bodies	Development of ETNS standards that support users' minimum needs	Minimum level of usability of services by ensuring that basic user needs are met

National transposition dates

Date of adoption of this EN:	23 October 1998
Date of latest announcement of this EN (doa):	31 January 1999
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	31 July 1999
Date of withdrawal of any conflicting National Standard (dow):	31 July 1999

1 Scope

The present document specifies the Human Factors (HF) requirements related to all aspects of a European Telephony Numbering Space (ETNS). It describes the requirements to be met jointly by the ETNS service provider and the network operator enabling access to the ETNS service.

The present document applies to any ETNS service provided within an ETNS scheme based upon a European Country Code (CC) and provided for access from public and private telecommunications networks.

It covers those aspects of ETNS services that would be of importance to the users of those services and to other telephony users who may be affected by the introduction of an ETNS. Requirements cover:

- the formatting of the written presentation of ETNS numbers to enable users:
 - to identify an ETNS service;
 - to minimize dialling errors caused by difficulties in memorizing long digit strings;
- rules for migrating from an ETNS Service to a Global Service that will minimize difficulties for users;
- rules that ensure that called users receive appropriate Calling Line Identity (CLI) information when called from a European Number (EN);
- rules that ensure calling users are still able to determine call charges after a EN has been ported to a new provider;
- rules that ensure the minimization of user difficulties caused by call delays;
- rules to overcome the potential linguistic difficulties associated with ETNS services.

Mobility aspects of an ETNS are outside the scope of the present document. Only those aspects of an ETNS to which specific requirements can be attached are covered in the present document. Other Human Factors aspects of an ETNS are presented in TR 101 056 [1].

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2 References

References may be made to:

- a) specific versions of publications (identified by date of publication, edition number, version number, etc.), in which case, subsequent revisions to the referenced document do not apply; or
- b) all versions up to and including the identified version (identified by "up to and including" before the version identity); or
- c) all versions subsequent to and including the identified version (identified by "onwards" following the version identity); or
- d) publications without mention of a specific version, in which case the latest version applies.

A non-specific reference to an ETS shall also be taken to refer to later versions published as an EN with the same number.

- [1] TR 101 056: "Human Factors (HF); European Numbering Task Force (ENTF); Human Factors aspects of the European Telephony Numbering Space (ETNS)".
- [2] ITU-T Recommendation E.721: "Network grade of service parameters and target values for circuit-switched services in the evolving ISDN".
- [3] ITU-T Recommendation E.164: "The international public telecommunication numbering plan".
- [4] ITU-T Recommendation E.123: "Notation for national and international telephone numbers".
- [5] TR 101 073: "Number portability for pan-European services".

- [6] TR 101 041 Parts 1 and 2: "Human Factors (HF): European harmonization of network generated tones".
- [7] COM(96) 590 Commission of the European Communities: "Towards a European Numbering Environment: Green Paper on a Numbering Policy for Telecommunications Services in Europe".
- [8] D. MacDonald, S. Archambault, "Using Customer Expectation in Planning the Intelligent Network", The Fundamental Role of Teletraffic in the Evolution of Telecommunications Networks, Proc. of 14th ITC, Antibes Juan-les-Pins, France, June 1994, pp. 95-104.
- [9] ETR 116: "Human Factors (HF); Human factors guidelines for ISDN Terminal equipment design".
- [10] ETR 329: "Human Factors (HF); Guidelines for procedures and announcements in Stored Voice Services (SVS) and Universal Personal Telecommunication (UPT)".
- [11] ETO 96 09 94 04: "Second Interim Report on Numbering related to the topic of user-friendliness".

3 Definitions and abbreviations

3.1 Definitions

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

post-dialling delay: for ISDN calls the post-dialling delay is the post-selection delay (en-bloc sending). For non-ISDN calls the post-dialling delay is the time interval from the caller pressing the last dialled digit or pressing a key to send all the digits of the called number until a call disposition message or signal is received by the calling terminal.

Post-Selection Delay (EN-Bloc Sending): the time interval from the instant the first bit of the initial SETUP message containing all the selection digits is passed by the calling terminal to the access signalling system until the last bit of the first message indicating call disposition is received by the calling terminal (ALERTING message in case of successful call) (see ITU-T Recommendation E.721, [2]).

ETNS service: a service that has been assigned a European Service Identity (ESI).

ETNS service provider: an entity that provides one or more ETNS service(s) to its ETNS Subscribers on a contractual basis.

ETNS subscriber: an entity that requests a European Number from a ETNS Service Provider in order to offer access from a Calling Party to an ETNS service.

3.2 Abbreviations

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

CC	Country Code
CEC	Commission of the European Communities
CLI	Calling Line Identity
ECC	European Country Code
ECNA	European Corporate Network Access
EN	European Number
ENTF	European Numbering Task Force
ESC	European Service Code
ESI	European Service Identity
ESN	European Subscriber Number
ETNS	European Telephony Numbering Space
ETO	European Telecommunications Office
GSN	Global Service Number
HF	Human Factors
ITU-T	International Telecommunications Union - Telecommunications (formerly CCITT)

4 Structure of ETNS service numbers

4.1 Numbering scheme

The ETNS numbering scheme upon which the requirements in the present document are based assumes the use of a specific Country Code (CC) assigned to Europe (CC-388).

Subclauses 4.1.1 to 4.1.3 describe this scheme.

4.1.1 European Number (EN)

To implement the European Country Code (CC) scheme the allocation of a specific CC is required. The European CC is used to identify a set of ETNS services provided in two or more ETNS countries, instead of designating a specific country. Figure 1 describes the structure of the ETNS number.

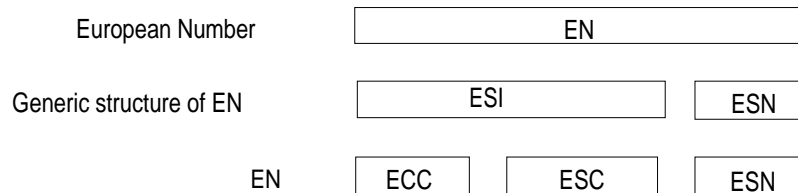


Figure 1: European Number Structure

The structure of the EN should not preclude evolution towards a global numbering scheme on a per service basis where this is a requirement.

ETNS shall be designed to have a minimum of 100 services and a potential of 10 million subscribers per service if required.

The total length of the number shall not exceed 15 digits.

4.1.2 European Service Identity (ESI)

An ESI is assigned to a service or a family of services in some specific cases.

An ESI shall begin with the CC allocated to the ETNS. The length of the ESC can vary between 1 and 4 digits.

Examples of ESIs are:

- 388 3;
- 388 25;
- 388 326;
- 388 5432.

The length of the ESIs can either vary with a minimum length of 4 digits (e.g. 388 2) and a maximum of 7 (e.g. (388 2345)). In this scheme, there is no problem to find a hundred ESCs.

There shall not be any indication of an ETNS service provider in the ESI.