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Foreword

ETSI Technical Reports (ETRs) are informative documents resulting from ETSI studies which are not appropriate for European Telecommunication Standard (ETS) or Interim-European Telecommunication Standard (I-ETS) status. An ETR may be used to publish material which is either of an informative nature, relating to the use or application of ETSs or I-ETSs, or which is immature and not yet suitable for formal adoption as an ETS or I-ETS.

This ETR describes the service requirements on Universal Personal Telecommunication (UPT) numbering, addressing and identification.

This ETR constitutes Part 9 of a multi-part ETR, with the following titles:

ETR 055-1:	"Universal Personal Telecommunication (UPT); The service concept Part 1: Principles and objectives".
ETR 055-2:	"Universal Personal Telecommunication (UPT); The service concept Part 2: General service description".
ETR 055-3:	"Universal Personal Telecommunication (UPT); The service concept Part 3: Service aspects of charging, billing and accounting".
ETR 055-4:	"Universal Personal Telecommunication (UPT); The service concept Part 4: Service requirements on security mechanisms".
ETR 055-5:	"Universal Personal Telecommunication (UPT); The service concept Part 5: UPT terminals and UPT access devices".
ETR 055-6:	"Universal Personal Telecommunication (UPT); The service concept Part 6: UPT subscription and service profile".
ETR 055-7:	"Universal Personal Telecommunication (UPT); The service concept Part 7: User procedures and user states".
ETR 055-8:	"Universal Personal Telecommunication (UPT); The service concept Part 8: Man-machine interface aspects".
ETR 055-9:	"Universal Personal Telecommunication (UPT); The service concept Part 9: Service requirements on numbering, addressing and identification".
ETR 055-10:	"Universal Personal Telecommunication (UPT); The service concept Part 10: Supplementary services".

An additional part (Part 11) which details the requirements on the protection of third parties, is due for publication in 1993.

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1 Scope

This ETSI Technical Report (ETR) describes the service requirements on Universal Personal Telecommunication (UPT) numbering, addressing and identification, i.e. the requirements from the user's perspective. The detailed UPT numbering, addressing and identifications plans are, however, defined in other ETRs, taking into account all CCITT Recommendations (see NOTE).

NOTE: All "UPT Access Code" should read "UPT (service) Access Code".
All "UPT Access Number" should read "UPT (service) Access Number".
All "UPT Access Address" should read "UPT (service) Access Address".

2 References

The following references are used from within this ETR.

[1] CCITT Recommendation E.164: "Numbering plan for the ISDN era".

[2] CCITT Recommendation E.163: "Numbering plan for the international telephone service".

[3] CCITT Recommendation X.121: "International numbering plan for public data networks".

3 Abbreviations

For the purposes of this ETR, the following abbreviations apply.

PIN	Personal Identification Number
PUI	Personal User Identity
UPT	Universal Personal Telecommunication
UPT-AA	UPT-Access Address
UPT-AC	UPT-Access Code
UPT-AN	Universal Personal Telecommunication Access Number

4 Service requirements

4.1 General requirements

From a service point of view, the following general requirements should apply to UPT numbering, addressing and identification.

Issues related to the caller:

- the dialled number to reach a UPT user should be easily recognisable and should be distinguishable from a non-UPT number. This informs the calling user that he may be subject to specific arrangements (e.g. for charging);

- the dialled UPT number should be as short as practicable;

- the UPT number should be diallable from any terminal in any telecommunication network;

- the UPT number should not increase the likelihood of misdialling;

- the UPT user should ideally be able to keep the same UPT number, even when changing address or service provider;

- any evolution of the UPT numbering plan should minimise changes to user numbers and terminal equipments;

- it is desirable that the UPT prefix(es), if required, used for dialling a UPT number, are the same national and/or international prefix(es) in all networks.

Issues related to the UPT user:

- it is desirable that the UPT Access Number (UPT-AN) used for accessing UPT procedures in a specific UPT service entity, has significance across national and international boundaries;

- it is desirable that the UPT Access Code (UPT-AC) used for accessing UPT procedures, if any, is the same across national and international boundaries, amongst UPT service providers and across networks;

- it is desirable that the various types of UPT-ACs are as few as possible, and as short as possible, if they need to be dialled.

4.2 Specific UPT numbers and identities

The following numbers and identities are used by the UPT service to identify the UPT users:

1) a UPT number;

2) a Personal User Identity (PUI).

In addition, some numbers and identities must be used by the UPT user in order to access the UPT service:

3) a Personal Identification Number (PIN) code, if applicable;

4) a UPT-AC;

5) a UPT-AN;

6) a UPT-AA;

7) a UPT prefix(es) (national, international).

It should be noted that, from a network point of view, there may also be other numbers and identities associated with a UPT call. These are, however, purely of interest to the network and are discussed in other technical specifications.

4.2.1 The UPT number

A UPT number uniquely and unambiguously identifies each UPT user. It is used by a calling party to reach the UPT user.

This number is independent of the terminal, network or service used and must conform to CCITT Recommendation E.164 [1].

4.2.2 The personal user identity

The PUI is the identity by which a user is known to the UPT service providers and networks supporting UPT, and identifies a UPT user unambiguously. The PUI is not used by the calling subscribers and does not need to be known to the UPT users or to any third parties.

The UPT number and PUI are different numbers/identities in order to allow for a more flexible network evolution, e.g. in case of numbering plan change. If, for instance, the PUI is implemented in some user equipment, the administration of a numbering plan change can be considerably facilitated by the separation of UPT number and PUI.

Conversely, the combination of a UPT number and a PUI may offer a UPT user the opportunity of use of the same UPT number, even in case of changing the UPT users PUI (e.g. by change of UPT service provider).

The use of a non-public PUI will also increase the UPT user's general security.

The UPT number and the PUI will, although being different numbers/identities, normally have a one-to-one relationship.

4.2.3 The personal identification number code

Whenever a UPT user authenticates himself to the UPT service entity, this authentication procedure may involve the use of a PIN code.

4.2.4 UPT access addressing

The UPT service may be accessed by two numbers, a UPT-AC, or a UPT-AN. These numbers address UPT service entities, which may be managed by UPT service providers or network operators.

4.2.4.1 The UPT access code

To access the facilities of the UPT service from any communications terminal (e.g. registration), in a network supporting the UPT service, a UPT-AC may be used (e.g. when using a plain telephone, the UPT user would dial a service access code). UPT-specific service access codes of global significance would be preferred.

The use of a UPT-AC implies that the originating network supports the functionality to access a UPT service entity, which in turn is able to gain access to the UPT user's UPT service profile from the home UPT service provider's database.

This service access code may be used to access UPT facilities generally, or different UPTACs may be used for different purposes. Whether to allow the use of one, or several, UPTACs is for further study.

4.2.4.2 The UPT access number

The UPT-AN is a CCITT Recommendation E.164 [1] number used by a UPT user to access a specific UPT service entity under the control of a specific UPT service provider.

The use of UPT-AC(s) may not always be possible, or the caller may not know them or wish to use them. This specific access number enables the UPT user to directly access the services of the home UPT service provider (e.g. to receive announcements in their native tongue, or provide improved data security).

This method of access will allow UPT users to access the UPT service from within networks which cannot fully support the UPT service. This may be used to directly access specific UPT procedures, or to invoke a dialogue with the UPT service entity.

4.2.4.3 The UPT access address

The more general term UPT-AA is for further study.

This term may relate to a CCITT Recommendation E.164 [1] number, which includes the use of number ranges to specifically access UPT procedures within the addressed UPT service entity. This may be of greater importance when coupled with the use of intelligent UPT devices.

Also, the term UPT-AA, may relate to the use of a CCITT Recommendation X.121 [3] number and address. Which may be advantageous in the support of advanced interrogation and modification of the UPT service profile which itself is for further study.

4.2.5 International UPT prefix

The use of an international UPT prefix within a dialling plan may be required (e.g. when using a plain telephone, the user would dial an international prefix followed by the international UPT number, see CCITT Recommendation E.163 [2]). It would be preferable to have an international UPT prefix of global significance. However the establishment of such a prefix is for further study.

The issue of a specific UPT prefix for national and international UPT calls is for further study.

5 Administration

The following principles apply to the administration of the UPT dialling and numbering plan:

- should not be too complex;
- should not cause long delays getting individual numbers into use;
- has to be reliable (e.g. shall prevent double allocations);
- shall not be too expensive.

History

Document history	
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