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Foreword

This European Telecommunication Standard (ETS) has been produced by the Network Aspects (NA) Technical Committee of the European Telecommunications Standards Institute (ETSI).

Transposition dates	
Date of adoption:	19 September 1997
Date of latest announcement of this ETS (doa):	31 December 1997
Date of latest publication of new National Standard or endorsement of this ETS (dop/e):	30 June 1998
Date of withdrawal of any conflicting National Standard (dow):	30 June 1998

Introduction

Universal Personal Telecommunication (UPT) is a new service concept, aiming to provide personal mobility and a customized service through all the networks. UPT has to be provided taking into account the various network architectures, e.g. the Intelligent Network (IN).

In analogy with CCITT Recommendation I.130, the first stage of the following three level structure is used to describe the telecommunications service as provided by European public telecommunications operators.

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- Stage 1 is an overall service description, from the service subscriber's and user's standpoint;
 - stage 2 identifies the functional capabilities and information flows needed to support the service described in stage 1; and
 - stage 3 defines the signalling system protocols and switching functions needed to implement the service described in stage 1.

This ETS details the stage 1 aspects (overall service description) for the UPT service, taking into account the various network architectures, e.g. the Intelligent Network (IN).

The application of stage 2 and stage 3 may be different when the service is supported on an Intelligent Network (IN) environment.

The work on specification of standards has been arranged to correspond with the implementation phases of UPT which may be split into the following general phases:

- **Phase 1: restricted UPT service scenario**

The restricted UPT scenario has restrictions arising from the scope of the UPT specifications in relation to networks, services, security and user-friendliness. For this scenario, only a restricted number of features are specified and only Public Switched Telephone Network (PSTN) and Integrated Services Digital Network (ISDN) are considered for UPT provision.

- **Phase 2: basic UPT service scenario**

For the basic UPT scenario, more features are specified (e.g. registration for outgoing calls), the supporting networks include also mobile network and data network, and advanced security is foreseen (e.g. use of chip cards).

- **Phase 3: enhanced UPT service scenario**

This scenario is also indicated as long-term scenario, where a wide set of core features are provided, the support on other networks still not considered is granted and terminals at fixed networks include specific UPT functions.

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1 Scope

This European Telecommunication Standard (ETS) provides general guidelines to present UPT Phase 1. The service description is related primarily to the service subscriber's and user's point of view, but does not deal with the details of human interface itself. This ETS includes information applicable to network operators, service providers and terminal, switch and database manufacturers.

This ETS specifies the requirements where the service is provided to the user via a telecommunications network that is either the Pan-European Integrated Services Digital Network (ISDN) or a Public Switched Telephone Network (PSTN) as provided by European public telecommunications operators.

The requirements different from those of the basic call where the UPT service is provided to the user via a mobile network are outside of the scope of this ETS.

This ETS contains the core requirements for the UPT Phase 1 service, where it is provided a service that includes a subset of core and optional features foreseen in a long-term perspective.

This ETS also describes some additional requirements which may be implemented.

Furthermore, additional functionality not documented in this ETS may be implemented. This additional functionality may be on a network-wide basis, or particular to one or a group of users. Such additional functionality does not compromise conformance to the core requirements of the service.

Charging principles are outside the scope of this ETS, unless specific service indications are given.

Interaction with services/supplementary services not listed in clauses 7 and 8 are outside the scope of this ETS.

UPT enables access to telecommunication services while allowing personal mobility. It enables each UPT user to participate in a user-defined set of subscribed services and to initiate and receive calls on the basis of a personal, network-transparent UPT number across multiple networks on any fixed or mobile terminal, irrespective of geographical location, limited only by terminal and network capabilities and restrictions imposed by the network operator. Calls to UPT users may also be made by non-UPT users.

Access rights of the terminal owner may be guaranteed also in the case of registered UPT user on the same terminal.

UPT Phase 1 service is applicable to voice telecommunication services provided by ISDNs and PSTNs.

No method of testing is provided for this ETS.

2 Normative references

This ETS incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to, or revisions of any of these publications apply to this ETS only when incorporated in it by amendments or revision. For undated references, the latest edition of the publication referred to applies.

- [1] CCITT Recommendation Q.1290 (1992): "Intelligent Network, Vocabulary of terms".
- [2] ETS 300 345 (1994): "Integrated Services Digital Network (ISDN); Interworking between public ISDNs and private ISDNs for the provision of telecommunication services; General aspects".
- [3] CCITT Recommendation E.164 (1991): "Numbering plan for the ISDN era".
- [4] CCITT Recommendation I.112: "ISDN general structure vocabulary of terms for ISDN".

- [5] CCITT Recommendation I.114: "ISDN general structure vocabulary of terms for Universal Personal Telecommunication".
- [6] ETR 191: "Private Telecommunication Network (PTN); PTN mobility; Use of Universal Personal Telecommunication (UPT) Phase 1; General principles and service aspects".
- [7] ITU-T Recommendation E.168: "Application of E.164 numbering plan for UPT".
- [8] ETS 300 391-1: "UPT Phase 1, specification of the security architecture".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of this ETS, the following definitions apply:

calling user: Entity which originates a call to the service.

core service feature: See CCITT Recommendation Q.1290 [1].

destination user: Entity to which calls are directed.

network operator: Entity which provides the network operating elements and resources for the execution of the UPT service.

optional service feature: See CCITT Recommendation Q.1290 [1].

personal mobility: The ability of a user to access telecommunication services at any network and terminal on the basis of a unique personal identifier, and the capability of the network to provide those services according to the user's service profile.

NOTE 4: Clearly personal mobility may be limited by terminal and network capabilities. This is an alignment with the concept introduced in CCITT Recommendation I.114 [5].

Personal User Identity (PUI): The identity by which a user is known to the UPT service providers and networks supporting UPT, and is used for flexibility and security purposes. The PUI identifies a UPT user unambiguously. The PUI does not need to be known by users (except in case of manual procedure) or to third parties.

service feature: See CCITT Recommendation Q.1290 [1].

service: See CCITT Recommendation Q.1290 [1].

subscriber profile: A personalized data record, for each subscriber, detailing the services and listing the UPT users, set up between the UPT subscriber and a UPT service provider. This data is used for billing the UPT subscriber and is used by the UPT service provider.

NOTE 5: Normally, the UPT service profile has a one to one correspondence with the subscriber profile. However, one subscriber profile may relate to many UPT service profiles.

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 terminal, network or service used and shall conform to ITU-T Recommendation E.168 [7].

UPT service profile: A personalized data record, for each UPT user, set up between the UPT subscriber and a UPT service provider. The UPT service profile contains a list of the services/service features and facilities subscribed to, and a wide range of options. It is used to provide the UPT user with the UPT service.

UPT service profiles may be added or amended, when required, by agreement between the UPT subscriber and the UPT service provider. Both parties may make use of the data during the subscription.

UPT service provider: Entity which has overall responsibility on service operation and on database management. The UPT service provider commercially manages the service.

Specifically, the UPT service provider distributes UPT numbers and secret information to UPT subscribers and make arrangements for provision of the UPT service to the UPT user. It also manages the billing arrangements.

The service provider identification is provided in the Personal User Identity (PUI).

UPT service subscriber: A person or legal entity with a contractual relationship with a UPT service provider, on behalf of one or more UPT users, responsible for the payment of charges due to that service provider.

NOTE 1: This corresponds to the term **UPT customer** as used in CCITT Recommendation I.114 [5].

UPT user: A person who has been authorized by a UPT subscriber to use UPT facilities. The UPT user is associated with a unique UPT number.

NOTE 2: This is a special case of the definition of user introduced in CCITT Recommendation I.112 [4].

NOTE 3: Normally, the UPT user is identical to the UPT subscriber. However, the UPT subscriber may be a legal body mapped into many UPT users (e.g. UPT users belonging to a company where the subscription is with the company).

3.2 Abbreviations (standards.iteh.ai)

For the purposes of this ETS, the following abbreviations apply:

ARA	Access Registration Address
CLI	Calling Line Identity
IN	Intelligent Network
ISDN	Integrated Services Digital Network
PIN	Personal Identification Number
PSTN	Public Switched Telephone Network
PUI	Personal User Identity
UPT	Universal Personal Telecommunication

4 Description

UPT enables access to telecommunication services while allowing personal mobility. It enables each UPT user to participate in a user-defined set of subscribed services and to initiate and receive calls on the basis of a personal, network-transparent UPT number across multiple networks on any fixed or mobile terminal, irrespective of geographical location, limited only by terminal and network capabilities and restrictions imposed by the network operator. Calls to UPT users may also be made by non-UPT users.

4.1 Core requirements

This subclause supplies the core requirements applying to the core service features, as defined in CCITT Recommendation Q.1290 [1], a service feature fundamental to the service, i.e. in the absence of the feature, the service is not a viable service offering.