



EUROPEAN
TELECOMMUNICATION
STANDARD

FINAL DRAFT
pr **ETS 300 779**

July 1997

Source: ETSI TC-NA

Reference: DE/NA-010010

ICS: 33.020

Key words: UPT

**Network Aspects (NA);
Universal Personal Telecommunication (UPT);
Phase 1 - Service description**

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Foreword

This final draft European Telecommunication Standard (ETS) has been produced by the Network Aspects (NA) Technical Committee of the European Telecommunications Standards Institute (ETSI), and is now submitted for the Voting phase of the ETSI standards approval procedure.

Proposed transposition dates	
Date of latest announcement of this ETS (doa):	3 months after ETSI publication
Date of latest publication of new National Standard or endorsement of this ETS (dop/e):	6 months after doa
Date of withdrawal of any conflicting National Standard (dow):	6 months after doa

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.

- 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

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.

The restricted UPT service scenario (Phase 1) includes the following UPT core requirements:

Incall registration (registration for incoming calls):

Incall registration enables a UPT user to register from the current terminal access. This allows incoming UPT calls to be presented to that terminal access. When registered, all incoming calls to the UPT user are presented to the registered terminal access for the duration specified by the UPT user, or until a specified deregistration time. A UPT user's Incall registration shall cancel the previous Incall registration of that UPT user. Several UPT users may simultaneously be registered for incoming calls to the same terminal access. The UPT user may also explicitly deregister for incoming calls.

Remote Incall registration:

Remote Incall registration enables a UPT user to register from any terminal access. This allows incoming UPT calls to be presented to any specified terminal access.

UPT user identity authentication:

UPT user identity authentication enables the UPT service provider to verify that the identity of the UPT user is the one claimed. This feature may be used in most UPT procedures.

Direct outgoing UPT call:

Direct outgoing UPT call enables a UPT user to initiate, from any terminal access, a single outgoing UPT call which is charged to the UPT subscriber. This procedure includes authentication, which is valid for one call attempt only, and the authentication procedure has to be repeated for each outgoing UPT call attempt, except if an outcall follow-on is requested. Direct outgoing UPT calls can be made irrespective of any previous registrations by the UPT user.

UPT service profile interrogation:

UPT service profile interrogation enables the UPT user to interrogate the current status of the UPT user's own UPT service profile (e.g. for location information, availability of services etc.).

NOTE 1: No automatic procedure for UPT service profile interrogation is standardized in UPT Phase 1.

UPT service profile modification:

UPT service profile modification enables the UPT user to modify the UPT user's own UPT service profile (e.g. for change of password, change of default UPT service profile parameters etc.).

NOTE 2: No automatic procedure for UPT service profile modification is standardized in UPT Phase 1.

Global follow-on:

Global follow-on enables a UPT user, when terminating a UPT procedure for which he has carried out a successful authentication procedure, before disconnecting completely, to indicate a global follow-on activity. This allows further UPT procedures without further authentication.

Outcall follow-on:

Outcall follow-on enables a UPT user, when terminating an outgoing UPT call, before disconnecting completely, to indicate that another outgoing UPT call is to follow, without the need for further authentication or the use of the global follow-on feature.

UPT-specific indications:

UPT-specific indications enables a set of UPT-specific user-friendly standard announcements or indications (e.g. for support of specific charging arrangements) to be provided to the UPT users.

Flexible allocation of call charges:

Flexible allocation of call charges enables a UPT user to specify the part of the call charges applying to the calling user and/or the service subscriber, e.g. regular charging or split charging. The charging mechanism is decided at subscription time.

4.2 Optional requirements

The optional requirements contain functionalities additional to the core requirements, that customize the service according to specific service subscriber's needs. These additional parts may be offered either to all the service provider's customers, or to a group or even to a single customer.

Some possible optional service features are listed hereafter, but the service provider may offer other additional service feature.

The restricted UPT service scenario (Phase 1) includes the following optional UPT requirements and a set of UPT supplementary services:

Access to groups of UPT service profiles:

Access to groups of UPT service profiles enables a UPT subscriber or authorized UPT users responsible for a group of UPT users to access, create, interrogate and modify their UPT service profiles using UPT service profile management procedures.

NOTE: No automatic procedure for access to groups of UPT service profiles is standardized in UPT Phase 1.

Operator-assisted services:

Operator-assisted services enables a UPT user to contact an operator in a UPT service centre in order to invoke UPT procedures in cases where automatic UPT procedures are unavailable or in cases of difficulty.

4.3 Optional requirements: UPT supplementary services

The UPT supplementary services are a set of supplementary services to which a UPT user can subscribe to enhance the basic features of UPT service.

UPT call forwarding unconditional:

With this UPT supplementary service, the UPT user may unconditionally forward incoming UPT calls to another line number or terminal access, no matter what is the condition of the termination where the UPT user is registered for incoming calls.

UPT call forwarding on busy:

With this UPT supplementary service, the UPT user may forward incoming UPT calls to another line number or terminal access in case of busy condition of the termination where the UPT user is registered for incoming calls.

UPT call forwarding on no reply:

With this UPT supplementary service, the UPT user may forward incoming UPT calls to another line number or terminal access in case of no answer condition of the termination where the UPT user is registered for incoming calls.

Variable routing on time dependency:

With this UPT supplementary service the UPT user may set up a matrix of terminal accesses for incoming UPT calls, so that incoming UPT calls can be routed and handled differently according to time of day, day of week etc.

Variable routing on calling line identity:

With this UPT supplementary service the UPT user may set up a matrix of terminal accesses for incoming UPT calls, so that incoming UPT calls can be routed and handled differently according to calling party identity.

5 Procedures

The following basic categories of UPT procedures exist:

- 1) Personal mobility procedures;
- 2) UPT call handling procedures;
- 3) UPT service profile management procedures.

Each of these basic UPT procedures may involve some elementary procedures, which therefore are described separately. In addition, a set of exceptional procedures may exist for use in exceptional cases, none of which has been identified for Phase 1. All the UPT procedures relevant for Phase 1 are described in the following.

In all UPT procedures, some information shall have to be supplied by the UPT user, some of which is mandatory and some is optional. All optional information may be included in the UPT user's service profile as default parameters, or may be supplied on a case-by-case basis.

5.1 Elementary procedures

Elementary procedures have no significance on their own. These procedures are always carried out in connection with one of the basic UPT procedures, either before, or as part of, such a procedure, if required.

5.1.1 Access

An access procedure may be required before any UPT procedure can be carried out.

5.1.2 Identification

The identification procedure is used by the UPT user to identify himself to the UPT service provider.

The identification procedure may be required before, or as a part of, other UPT procedures.

For a UPT user to identify himself it is necessary to provide some identification information, i.e. Personal User Identity (PUI).

5.1.3 Authentication

The authentication procedure is used by the UPT service provider to ensure that the calling party or answering party is the UPT user claimed, as the UPT subscriber associated with the UPT user may have to pay part of the charges for the UPT calls.

The authentication procedure may be required before, or as a part of, other UPT procedures.

For the authentication procedure the mandatory information is the required authentication information.

The UPT user may have a choice between various authentication procedures.

The use of a strong authentication (one way authentication) procedure is recommended. Weak authentication (Personal Identification Number (PIN) code) is optional, see ETS 300 391-1 [8].

5.1.4 Global follow-on

The global follow-on procedure is used by the UPT user when terminating a UPT procedure, before disconnecting completely, in order to follow it by a new UPT procedure, without having to repeat the access, identification and authentication procedures.

For the global follow-on procedure, the mandatory information to be supplied by the UPT user is the new UPT procedure type only.

5.1.5 Outcall follow-on

The outcall follow-on procedure is used by the UPT user when terminating an outgoing UPT call (or in case of unsuccessful call), before disconnecting completely, in order to follow it by a new outgoing UPT call, without having to repeat the identification and authentication procedures, or using the global follow-on procedure.

For the outcall follow-on procedure, the mandatory information to be supplied by the UPT user is the request for a new outgoing UPT call.

5.2 Personal mobility procedures

Personal mobility procedures are UPT procedures relating to the personal, or discrete, mobility of the UPT user, used in order to ensure that the UPT user is able to receive or make UPT calls. The personal mobility procedures do not involve, however, actual making or receiving of calls.

5.2.1 Essential procedures

5.2.1.1 Incall registration (registration for incoming calls)

Registration for incoming calls is a means for a UPT user to indicate where incoming calls shall be presented. Such a registration shall override any previous incall registration.

The identification and authentication procedures shall have been successfully completed before, or as a part of, this procedure.

During this procedure, the UPT user shall supply the following information.

The mandatory information is:

- UPT procedure type.

The optional information includes:

- the duration of the registration, if needed;
- one Access Registration Address (ARA) if needed (e.g. if the user chooses to specify a terminal access other than the one he is currently using). If no address is specified, the address of the used terminal access is assumed;
- an indication of the telecommunication services to which the registration applies, if needed;
if no service is specified, the default services for registrations for incoming UPT calls, indicated in the UPT service profile, are assumed;
- an indication of any special conditions to be placed on the registration, if needed (e.g. a list of permitted callers).

The network shall indicate to the UPT user if the registration is accepted or give an appropriate announcement if not, and the procedure is terminated. Any rejection could depend on the authentication procedure, UPT service profile restrictions etc. Specifically, the registration shall be rejected if the ARA specified by the UPT user is a UPT number.

5.2.1.2 Incall deregistration (deregistration for incoming calls)

A registration for incoming calls can be deregistered (cancelled) in the following ways:

- a) the UPT user can explicitly deregister;
- b) the UPT user can register to another terminal access thus causing the previous registration to be overridden;
- c) the UPT service provider can specifically deregister the UPT user to terminate the registration;
- d) by timer expiry.

When a UPT registration for incoming calls has been deregistered, except when overridden by a new registration (case b), the presentation of incoming calls shall go to an appropriate default terminal access defined in the UPT service profile. Examples of default terminal accesses are a kind of mailbox, a paging network and also "no terminal access". Unless "no terminal access" is specified, the UPT user shall thus never be completely deregistered for incoming UPT calls.

The deregistration for incoming calls procedure is used in case a), when the UPT user explicitly deregisters.

The identification and authentication procedures shall have been successfully completed before, or as a part of, this procedure.

During this procedure, the UPT user shall supply the following information.

The mandatory information is:

- UPT procedure type.

The optional information includes:

- an indication of the telecommunication services to which the deregistration applies, if needed.

If no service is specified, all services for which the registration applied are assumed.

The network shall indicate to the UPT user if the deregistration is accepted or give an appropriate announcement if not, and the procedure is terminated. Any rejection could depend on e.g. the authentication procedure, ARA or service specified not in line with the registration, etc.

5.2.2 Optional procedures

None identified.

5.3 UPT call handling procedures

UPT call handling procedures are procedures relating to the actual making or receiving of UPT calls.

5.3.1 Essential procedures

5.3.1.1 Outgoing UPT Call Set-up

This procedure may be used by a UPT user in order to make a single outgoing UPT call independently of any previous registrations by himself or any other UPT user for incoming and/or outgoing calls to the used terminal access. No personal mobility state of any UPT user shall be affected by this procedure. The outgoing UPT call shall be charged to the UPT number.

The identification and authentication procedures shall have been successfully completed before, or as a part of, this procedure.

During this procedure, the UPT user shall supply the following information.

The mandatory information is:

- UPT procedure type;
- called party number.

No optional information is needed.

The network shall indicate to the UPT user if the outgoing UPT call set-up procedure is not accepted, and the procedure is terminated. Any rejection could depend on the authentication procedure, UPT service profile restrictions etc.

5.3.2 Optional procedures

None identified.

5.4 UPT service profile management procedures

UPT service profile management procedures are procedures used by the UPT user in order to manage his own accessible UPT service profile data.

UPT service profile management procedures are procedures which in many cases may be rather complicated, and which most successfully may be implemented in an interactive way on advanced terminals. This should not preclude, however, the use of such procedures with a single command and response on simple terminals.

5.4.1 Essential procedures

5.4.1.1 Profile interrogation

A UPT user uses the profile interrogation procedure to obtain information on the current status of the UPT user's own service profile.

The identification and authentication procedures shall have been successfully completed before, or as a part of, this procedure.

During this procedure, the UPT user shall supply the following information.

The mandatory information is:

- UPT procedure type.

The optional information includes:

- information concerning the type of UPT service profile information that is requested. Such information could include information like telecommunications services subscribed to, default parameters, activated supplementary services, current registrations for incoming or outgoing calls, etc.

The network shall respond with the wanted information to the UPT user if the information can be disclosed, and the procedure is terminated. Any rejection could depend on the authentication procedure, UPT service profile restrictions etc.

NOTE: No automatic procedure for UPT profile interrogation is standardized in UPT Phase 1.

5.4.1.2 Profile modification

The profile modification procedure is a procedure by which the UPT user can change appropriate UPT service profile parameters.

The identification and authentication procedures shall have been successfully completed before, or as a part of, this procedure.

During this procedure, the UPT user shall supply the following information.

The mandatory information is:

- UPT procedure type.

The optional information includes:

- information concerning the type of UPT service profile information that is wanted to be modified. Such information could concern activation or deactivation of supplementary services, change of various default parameters, etc.

NOTE 1: It is assumed that more fundamental modifications, e.g. modification of services subscribed to etc., are treated outside the scope of UPT, by administrative procedures, or as a part of the IN specifications, or otherwise.

The network shall indicate to the UPT user if the modification is accepted or give an appropriate announcement if not, and the procedure is terminated. Any rejection could depend on the authentication procedure, UPT service profile restrictions, etc.

NOTE 2: No automatic procedure for UPT profile modification is standardized in UPT Phase 1.

5.4.2 Optional procedures

None identified.

5.4.2.1 Change of Personal Identification Number (PIN)

This procedure is used by the UPT user in order to change the PIN used for weak authentication.

The identification and authentication procedures shall have been successfully completed before, or as a part of this procedure.

The mandatory information is:

- UPT procedure type;
- the new PIN (entered twice for verification).

No optional information is needed.

The network indicates to the UPT user if the change of the PIN is accepted or gives an appropriate announcement if not, and the procedure is terminated. Any rejection could depend on the authentication procedure, incorrectly verified new PIN, UPT service profile restrictions, etc. For security reasons, the rejection cause shall not be provided to the UPT user, in order to avoid to give error information to a potentially illegitimate user.

NOTE 1: It is assumed that in case the PUI is blocked for some reason, it can be unblocked by the authentication procedure being carried out using a special PIN (i.e. a long PIN).

NOTE 2: If weak authentication is used this procedure could be essential.

6 Interworking requirements

6.1 Interworking with ISDNs, PSTNs and mobile networks

UPT Phase 1 shall be supported among different Integrated Services Digital Networks (ISDNs) and Public Switched Telephone Networks (PSTNs) without additional requirements. UPT provision in mobile networks is not foreseen for Phase 1.

NOTE: Data network interworking is for further study.

6.2 Interworking with private networks

UPT Phase 1 shall be supported in a co-operative manner across the internetwork interface (i.e. public and private).

If UPT is provided by an ISDN, then interworking with private ISDNs shall include the requirements given in ETS 300 345 [2].

The interworking with Private Telecommunications Networks supplementary services is addressed in ETR 191 [6].

6.3 Co-operation between PSTN/ISDN service providers

No additional UPT service requirements are necessary over and above those for the basic call.

7 Interaction with ISDN supplementary services

Interactions between optional UPT service features and ISDN supplementary services have not been considered, unless specific indication is given.

From a long term perspective, for each call originated (terminated) at an access the supplementary services associated to the calling (called) user shall apply, i.e. the services of UPT user in case of a UPT call or the supplementary services subscribed by the access owner in case of a non-UPT call.

If the network of the access owner does not provide functionality to support interaction between UPT and ISDN, supplementary services subscribed to by the access owner apply both to UPT and non-UPT calls originated or terminated at this line.

7.1 Advice of charge services

7.1.1 Advice of charge - at call set-up

7.1.1.1 Incoming UPT call

Calling user:

No impact, i.e. neither service shall affect the operation of the other service.

Called user:

Advice of charges shall not be sent to the called user.

7.1.1.2 Outgoing UPT call

No impact, i.e. neither shall affect the operation of the other service.

The advice of charge shall apply to the access as normal: i.e. no additional information shall be given on the calls charged to the UPT number.

NOTE: Advice of charge - at call set up supplementary service operates independently from the presentation of charging information optional feature.

7.1.2 Advice of charge - during the call

7.1.2.1 Incoming UPT call

Calling user:

No impact, i.e. neither service shall affect the operation of the other service.

Called user:

Advice of charges shall not be sent to the called user.

7.1.2.2 Outgoing UPT call

No impact, i.e. neither service affects the operation of the other service.

The advice of charge shall apply to the access as normal: i.e. no additional information shall be given on the calls charged to the UPT number.

7.1.3 Advice of charge - at the end of the call

7.1.3.1 Incoming UPT call

Calling user:

No impact, i.e. neither service shall affect the operation of the other service.

Called user

Advice of charges shall not be sent to the called user.

7.1.3.2 Outgoing UPT call

No impact, i.e. neither service shall affect the operation of the other service.

The advice of charge shall apply to the access as normal: i.e. no additional information shall be given on the calls charged to the UPT number.

7.1.4 Advice of charge on request

7.1.4.1 Incoming UPT call

Calling user:

No impact, i.e. neither service shall affect the operation of the other service.

Called user:

Advice of charges shall not be sent to the called user.

7.1.4.2 Outgoing UPT call

No impact, i.e. neither service shall affect the operation of the other service.

The advice of charge shall apply to the access as normal: i.e. no additional information shall be given on the calls charged to the UPT number.

7.2 Call waiting

No impact, i.e. neither service shall affect the operation of the other service.

7.3 Call hold

No impact, i.e. neither service shall affect the operation of the other service.

7.4 Explicit call transfer

No impact, i.e. neither service shall affect the operation of the other service.

7.5 Number identification services

7.5.1 Calling line identification presentation

Incoming UPT call

No impact, i.e. neither service shall affect the operation of the other service.

Outgoing UPT call

The called user shall not receive information pertaining to the UPT user's registered location but he UPT number of the calling user

7.5.2 Calling line identification restriction

No impact, i.e. neither service shall affect the operation of the other service.

7.5.3 Connected line identification presentation

Incoming UPT call

Destination number: the connected line identity shall not be given to the calling user.

UPT number: the UPT number shall be given to the calling user.

NOTE 1: The UPT number of the called UPT user is presented to the calling user, since the UPT number is more significant to the calling user than the connected line number, or the called UPT user may not wish to reveal his location.

Outgoing UPT call

No impact, i.e. neither service shall affect the operation of the other service.

NOTE 2: If the UPT user is making an outgoing UPT call from an access where connected line identification presentation supplementary service is activated, the UPT user will gain a service which the UPT user does not subscribe to.

7.5.4 Connected line identification restriction

Incoming UPT call

Destination number: no impact, i.e. neither service shall affect the operation of the other service.

UPT number: it shall not be possible to restrict the presentation of the UPT number to the calling user.

Outgoing UPT call

No impact, i.e. neither service shall affect the operation of the other service.

7.6 Closed user group

No impact, i.e. neither service shall affect the operation of the other service.

NOTE: Restrictions applied by the closed user group supplementary service may block UPT calls.

7.7 Call completion services

7.7.1 Completion of calls to busy subscribers

A request for the completion of calls to busy subscribers supplementary service on a call to a UPT number shall be rejected.

NOTE: If the UPT user is registered to a terminal where completion of calls to busy subscribers is activated, calls could reach the not- interested party (e.g. a completion of calls to busy subscribers call related to the terminal owner could be answered by the UPT user and vice versa).

7.7.2 Completion of calls on no reply

A request for the completion of calls on no reply supplementary service on a call to a UPT number shall be rejected.

NOTE: If the UPT user is registered to a terminal where completion of calls on no replay is activated, calls could reach the not interested party (e.g. a completion of calls on no reply call related to the terminal owner could be answered by the UPT user and vice versa).

7.8 Conference services

7.8.1 Conference call, add-on

No impact, i.e. neither service shall affect the operation of the other service.

7.8.2 Meet-me conference

During the period the conference is active, participants use a special number to access the conference; UPT registration onto this number shall be prohibited.

7.9 Direct dialling in

No impact, i.e. neither service shall affect the operation of the other service.

7.10 Diversion services

7.10.1 Call forwarding unconditional

Incoming UPT calls shall override the call forwarding unconditional service, if activated.

7.10.2 Call forwarding busy

Incoming UPT calls shall override the call forwarding busy service, if activated.

7.10.3 Call forwarding no reply

Incoming UPT calls shall override the call forwarding no reply service, if activated.

7.10.4 Call deflection

Incoming UPT calls shall override the call deflection service, if activated.

7.10.5 Selective call forwarding

Incoming UPT calls shall override the call forwarding service, if activated.

7.10.6 Call forwarding unconditional to a service centre

Incoming UPT calls shall override the call forwarding unconditional to a service centre service, if activated.

7.11 Freephone

No impact, i.e. neither service shall affect the operation of the other service.

7.12 Malicious call identification

Incoming UPT call:

In addition to the number of the user to whom the UPT call is presented, the called UPT number shall be registered.

Outgoing UPT call:

In addition to the calling line identity, the UPT number of the calling UPT user shall be registered.

7.13 Multiple subscriber number

No impact, i.e. neither service shall affect the operation of the other service.

7.14 Subaddressing

No impact, i.e. neither service shall affect the operation of the other service.

7.15 Terminal portability

No impact, i.e. neither service shall affect the operation of the other service.

7.16 Three party service

No impact, i.e. neither service shall affect the operation of the other service.

7.17 User-to-user signalling

No impact, i.e. neither service shall affect the operation of the other service.

7.18 In-call modification

No impact, i.e. neither service shall affect the operation of the other service.

7.19 Hunting services

7.19.1 Line hunting

No impact, i.e. neither service shall affect the operation of the other service.

NOTE: Incoming UPT calls may be directed towards accesses where the UPT user is not available.

7.19.2 Trunk hunting

No impact, i.e. neither service shall affect the operation of the other service.

7.20 Support of private numbering plan

No impact, i.e. neither service shall affect the operation of the other service.

7.21 Call barring services

7.21.1 Fixed outgoing call barring

No impact, i.e. neither service shall affect the operation of the other service.

NOTE: Fixed outgoing call barring may apply to the CCITT Recommendation E.164 [3] number used for the access procedure. The restrictions of calling line applying to the destination to which a UPT call is placed are not taken into account.

7.21.2 User controlled outgoing call barring

No impact, i.e. neither service shall affect the operation of the other service.

NOTE: User controlled outgoing call barring may apply to the CCITT Recommendation E.164 [3] number used for the access procedure. The restrictions of calling line applying to the destination to which a UPT call is placed are not taken into account.

7.22 Remote control of supplementary services

No impact, i.e. neither service shall affect the operation of the other service.

7.23 Reverse charging at call set up time

A request for the reverse charging at call set up time on an UPT call shall be rejected with an appropriate reason.

8 Interaction with other services

Interaction between optional UPT service feature and other services have not been considered, unless specific indication is given.

8.1 Universal access number

No impact, i.e. neither service shall affect the operation of the other service.

8.2 Card calling services

The user may subscribe both the card calling services (charge card calling and virtual card calling) and UPT, but it shall not be possible to use both the UPT service and card services simultaneously.

8.3 Premium rate

A UPT user shall not be allowed to register for incoming calls on a PRM number.

8.4 Televoting

A UPT user shall not be allowed to register for incoming calls on televoting numbers.

8.5 UPT

Not applicable

Annex A (informative): Bibliography

- CCITT Recommendation I.130 (1988): "Method for the characterization of telecommunication services supported by ISDN and network capabilities of an ISDN".
- ITU-T Recommendation F.850: "Principles of Universal Personal Telecommunication (UPT)".
- ITU-T Recommendation F.851: "Universal Personal Telecommunication (UPT) - Service description (services set 1)".

History

Document history			
August 1996	Public Enquiry	PE 112:	1996-08-19 to 1996-12-13
July 1997	Vote	V 9737:	1997-07-15 to 1997-09-12