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Foreword

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

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 the application of ETSs or I-ETSs, or which is immature and not yet suitable for formal adoption as an ETS or an I-ETS.

This ETR gives a general description of the Universal Personal Telecommunication (UPT) service for the UPT implementation phase 1 (the restricted UPT service scenario).

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1 Scope

This ETSI Technical Report (ETR) gives a general description of the Universal Personal Telecommunication (UPT) service for the UPT implementation phase 1 (the restricted UPT service scenario). Detailed specifications, for the UPT restricted service scenario are given in other ETSI ETRs.

A general service description of the long-term UPT service, irrespective of UPT implementation phase, is given in ETR 055-2 [1], where also the different UPT implementation phases are outlined.

Details on various service aspects of UPT for the restricted UPT service scenario (UPT phase 1), can be found in the following documents: ETR 213 [11]; .ETR 215 [12]; ETR 215 [13]; ETR 217 [14]; ETR 218 [15]; ETR 220 [17]; and ETR 221 [18].

2 References

This ETR incorporates by dated and undated reference, provisions from other publications. These 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 ETR only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

[1]   ETR 055-2: "Universal Personal Telecommunication (UPT); The service concept; Part 2: General service description".

[2]   ETR 055-3: "Universal Personal Telecommunication (UPT); The service concept; Part 3: Service aspects of charging, billing and accounting".

[3]   ETR 055-4: "Universal Personal Telecommunication (UPT); The service concept; Part 4: Service requirements on security mechanisms".

[4]   ETR 055-5: "Universal Personal Telecommunication (UPT); The service concept; Part 5: Types of UPT terminals and access devices".

[5]   ETR 055-6: Universal Personal Telecommunication (UPT); The service concept; Part 6: UPT subscriptions, service profiles and information model".

[6]   ETR 055-7: Universal Personal Telecommunication (UPT); The service concept; Part 7: User procedures and user states".

[7]   ETR 055-8: Universal Personal Telecommunication (UPT); The service concept; Part 8: Man-machine interface aspects".

[8]   ETR 055-9: Universal Personal Telecommunication (UPT); The service concept; Part 9: Service requirements on numbering, addressing and identification".

[9]   ETR 055-10: Universal Personal Telecommunication (UPT); The service concept; Part 10: Supplementary services".

[10]   ETR 055-11: Universal Personal Telecommunication (UPT); The service concept; Part 11: Service requirements on protection of third parties".

[11]   ETR 213: "Universal Personal Telecommunication (UPT); Service requirements on UPT numbering, addressing and identification; Phase 1 - restricted phase".

[12]   ETR 215: "Universal Personal Telecommunication (UPT); Phase 1: Service requirements on charging, billing and accounting".

[13]   ETR 216: "Universal Personal Telecommunication (UPT); Phase 1: UPT subscription and UPT service profiles".

[14]   ETR 217: "Universal Personal Telecommunication (UPT); Phase 1: UPT user procedures and user states".

[15]   ETR 218: "Universal Personal Telecommunication (UPT); Phase 1: Man-
                            machine interface aspects".

[16]   ETR 219: "Universal Personal Telecommunication (UPT); Phase 1 (restricted
                            UPT service scenario); Functional requirements for DTMF-Type UPT access
                            devices".

[17]   ETR 220: "Universal Personal Telecommunication (UPT); Phase 1: Service
                            requirements on security mechanisms".

[18]   ETR 221: "Universal Personal Telecommunication (UPT); Phase 1: UPT
                            supplementary services".

3   Abbreviations

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

DTMF   Dual Tone Multi-Frequency
ISDN   Integrated Services Digital Network
PIN   Personal Identification Number
PSTN   Public Switched Telephone Network
PUI   Personal User Identity
TAC   Transaction Authentication Code
UPT   Universal Personal Telecommunication

4   Summary of the restricted UPT service scenario

The restricted short-term UPT service scenario is a set of UPT features that can be implemented without
major changes to current technology, and is basically restricted to provision in Public Switched Telephone
Network (PSTN) and Integrated Services Digital Network (ISDN), with voice and telephony type services.

The restrictions applicable to phase 1 are commented in some detail for the various technical areas in the
following. It should be noted that the restrictions listed are a summary, and for further details it is referred
to the ETRs describing the long-term UPT service scenario and the ETRs describing the restricted UPT
service scenario (phase 1).

Service aspects of charging, billing and accounting (ETR 055-3 [2] and ETR 215 [12]):

-       call related signalling charges are not supported in phase 1;

-       separate default and temporary home locations of the UPT user are not supported in phase 1;

-       charging negotiations during call setup are not supported in phase 1;

-       optimized routeing is optional in phase 1.

Service requirements on security mechanisms (ETR 055-4 [3] and ETR 220 [17]):

-       user event control features are not supported for phase 1;

-       the use of Personal User Identity (PUI) for user identity confidentiality is optional for phase 1;

-       UPT service provider authentication is not supported in phase 1;

-       only one security level is essential for phase 1. This is obtained by using only simple sending in-
        band-type (e.g. Dual Tone Multi-Frequency (DTMF) type) UPT devices and a simple one-way
        authentication protocol with a fixed Personal Identification Number (PIN) and limitation on
        consecutive unsuccessful authentication attempts. In addition, an advanced one-way authentication
        protocol with variable Transaction Authentication Codes (TACs) may optionally be used;

-       the use of a second, longer PIN for deblocking of UPT user accounts is optional for phase 1;

- for protection of third parties, no active automatic procedures are essential for phase 1. Administrative procedures are, however, essential.

Types of UPT terminals and UPT access devices (ETR 055-5 [4] and ETR 219 [16]):

- only simple sending in-band-type (e.g. DTMF-type) UPT access devices are essential for phase 1. In addition, advanced one-way DTMF-type UPT access devices may optionally be used. No UPT terminals are specified.

UPT subscriptions and service profiles (ETR 055-6 [5] and ETR 216 [13]):

- only a limited set of UPT service profile data is specified for phase 1.

UPT user states and user procedures (ETR 055-7 [6] and ETR 217 [14]):

- in addition to the elementary procedures, only the following procedures are supported for phase 1:

    - InCall registration;
    - InCall deregistration;
    - Outgoing UPT call setup;
    - UPT service profile interrogation;
    - UPT service profile modification.

Man-Machine Interface aspects (ETR 055-8 [7] and ETR 218 [15]):

- only a simple one-way authentication protocol with fixed PIN is essential for phase 1. An advanced one-way protocol with a variable TAC is, however, optional;

- only manual user-network interactions and the use of in-band UPT devices are supported for phase 1, i.e. UPT access devices like magnetic strip cards and smart-cards are not supported for phase 1.

Service requirements on numbering, addressing and identification (ETR 055-9 [8] and ETR 213 [11]):

- only the UPT number is essential for identification of a UPT user in phase 1. However, the use of a PUI is optional.

Protection of third parties (ETR 055-11 [10]):

- the support of mechanisms for the protection of third parties is for further study.

UPT supplementary services (ETR 055-10 [9] and ETR 221 [18]):

- only the following UPT supplementary services are standardized for phase 1:

    - UPT call forwarding unconditional (only to a terminal);
    - UPT call forwarding on busy (only to a terminal);
    - UPT call forwarding on no answer (only to a terminal);
    - UPT call forwarding on not reachable (only to a terminal);
    - variable routeing.

5   Features of the restricted UPT service scenario

The UPT service for the restricted UPT service scenario (phase 1) is described by a set of service features. The following list of service features gives a general understanding of the restricted UPT service scenario, but is by no means exhaustive. It is not the intention of the features listed to give a complete description of the restricted UPT service scenario.

Essential and optional features of the restricted UPT service scenario (phase 1) are listed below. All essential UPT features listed are part of the core UPT features as defined in ETR 055-2 [1] for the long-term UPT service, and all optional UPT features are in a similar manner part of the additional UPT features.

5.1 Essential features

The restricted UPT service scenario (phase 1) includes the following essential UPT features:

- **InCall registration (registration for incoming calls):**

    InCall registration is a feature by which a UPT user registers from the current terminal access for incoming UPT calls to be presented to that terminal access. When registered, all incoming calls to the UPT user will be 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 will cancel the previous InCall registration of that UPT user. Several UPT users may be registered for incoming calls to the same terminal access simultaneously. The UPT user may also explicitly deregister for incoming calls.

- **remote InCall registration:**

    remote InCall registration is a feature by which a UPT user registers from any terminal access for incoming UPT calls to be presented to any specified terminal access.

- **UPT user identity authentication:**

    UPT user identity authentication is a feature by which the UPT service provider verifies 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 is a feature by which a UPT user can 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. Direct outgoing UPT calls can be made irrespective of any previous registrations by the UPT user.

- **UPT service profile interrogation:**

    UPT service profile interrogation is a feature by which the UPT user interrogates the current status of the UPT user's own UPT service profile (e.g. for location information, availability of services etc.).

- **UPT service profile modification:**

    UPT service profile modification is a feature by which the UPT user modifies the UPT user's own UPT service profile (e.g. for change of password, change of default UPT service profile parameters etc.).

- **global follow-on:**

    global follow-on is a feature by which a UPT user , when terminating a UPT procedure for which he has carried out a successful authentication procedure, before disconnecting completely, indicates a global follow-on activity. This allows further UPT procedures without further authentication.

- **OutCall follow-on:**

    OutCall follow-on is a feature by which a UPT user, when terminating an outgoing UPT call, before disconnecting completely, indicates 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 are a feature by which a set of UPT-specific user-friendly standard announcements or indications (e.g. for support of specific charging arrangements) is provided to the UPT users.

5.2   Optional features

The restricted UPT service scenario (phase 1) includes the following optional UPT features:

-    **access to groups of UPT service profiles:**

> access to groups of UPT service profiles is feature by which a UPT subscriber or authorized UPT users responsible for a group of UPT users may access, create, interrogate and modify their UPT service profiles using UPT service profile management procedures.

-    **variable routeing:**

> variable routeing is a feature by which the UPT user sets 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, calling party's identity etc. This matrix can be modified by the UPT user. This feature would enable a UPT user with a regular travel routine or schedule to set up a "timetable" matrix.

-    **operator-assisted services:**

> operator-assisted services are a feature by which a UPT user has a standardized way of contacting a UPT service centre in order to invoke UPT procedures in cases where automatic UPT procedures are unavailable or in cases of difficulty (e.g. by dialling a standardized access code in order to talk to a representative of the UPT service provider).

History

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