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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).

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This ETR introduces all the Universal Personal Telecommunication (UPT) supplementary services to which a UPT user can subscribe.

Introduction

The overall service environment in which UPT is provided includes the following supplementary services and users:

a)   line or terminal based supplementary services provided to terminal owners;

b)   UPT supplementary services provided to UPT users.

There may, in principle, be interactions between all these supplementary services and users. The interactions between line based supplementary services provided to terminal owners and the UPT service procedures is treated in general below. The various interactions between different UPT supplementary services provided to UPT users must be treated specifically for each UPT supplementary service.

> NOTE: Some of the UPT supplementary services that will be described in this ETR could have some restriction in their applicability or provisioning due to the rights of third parties (non UPT users). However, this topic is covered by ETR 055-11 [1] which deals with third party rights.

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1 Scope

This ETSI Technical Report (ETR) introduces all the Universal Personal Telecommunication (UPT) supplementary services to which a UPT user can subscribe.

The UPT supplementary services are a set of supplementary services to which a UPT user can subscribe to enhance the basic features of the UPT service. Furthermore, interactions between supplementary services (UPT or non-UPT) are described.

The availability of UPT supplementary services is restricted by the terminal, the network used and service provider.

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

3 Abbreviations

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

CFB   Call Forwarding on Busy
CFNA   Call Forwarding on No Answer
CFNR   Call Forwarding on Not Reachable
CFU   Call Forwarding Unconditional
UPT   Universal Personal Telecommunication

4 Interactions between UPT procedures and line based supplementary services

UPT is a person oriented service not a terminal oriented, so in principle a different behaviour is required from networks in order to provide the personal service desired by the UPT user.

Line based supplementary services also concern the user/subscriber of the terminal access, and not the UPT user/subscriber. Therefore, conflicts will occur in many cases.

Examples of conflicts between UPT and line based supplementary services subscribed by the user/subscriber of the concerned terminal access are:

1)   if a UPT user registers for incoming calls to a terminal where a call forwarding is activated (the network should then be able to distinguish between normal calls, which have to be forwarded, and UPT calls which must be presented to that terminal);

2)   if a UPT user wants to use a terminal where some restrictive supplementary services are active, for instance if a terminal belongs to a virtual private network (in this case, the UPT activities should not be restricted).

It is desirable for the UPT service that all activated line based supplementary services at a terminal access are suspended when a UPT call or activity is handled. The rights and privacy of third parties (e.g. terminal owners) must, however, also be protected.

However, for phase 1, most of the networks are not able to prevent any interactions between line based supplementary services and UPT procedures. So, in case of conflict, the UPT procedures will be overridden.

5 Interactions between UPT procedures and UPT supplementary services

The only interaction identified for phase 1 is between UPT Call Forwarding Unconditional (CFU) and InCall registration. In this case the UPT supplementary service takes precedence over the registration.

6 UPT supplementary services for phase 1

For UPT phase 1 the only UPT supplementary services foreseen are:

- UPT CFU (only to terminal numbers);

- UPT Call Forwarding on Busy (CFB) (only to terminal numbers);

- UPT Call Forwarding on No Answer (CFNA) (only to terminal numbers);

- UPT Call Forwarding on Not Reachable (CFNR) (only to terminal numbers);

- variable routeing.

    NOTE: In the case of UPT call forwarding to a terminal number, the supplementary service seems to have the same effects of a "remote registration". The difference between UPT call forwarding and remote registration is more evident in later phases of UPT implementation when also call forwarding to another UPT number (which is not allowed with a remote registration) will be possible.

At the moment the main difference is that remote registration is a more complete procedure which characterises the terminal in a deeper way than UPT Call Forwarding does. There also is a terminal personalization associated to the registration procedure (local or remote) which is, in principle, not necessary when invoking a UPT call forwarding.

Of course, UPT call forwarding takes priority over remote registration.

7 UPT CFU

7.1 Definition

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.

7.2 Procedures

7.2.1 Provision

UPT CFU is provided after pre-arrangement with the UPT service provider.

As subscription option a UPT user can decide:

- to receive notification that UPT call forwarding is activated;

- to receive notification that a call has been forwarded (notified on the terminal where he/she has registered for incoming calls);

- to notify the calling party about the forwarding.

There can be other optional parameters regarding, for instance, notification to the forwarded-to user of the UPT user number, but due to the still existing differences and lacks in the regulatory field they are, at least for UPT phase 1, left outside this ETR.

The forwarded-to user will receive an indication that the call has been forwarded with the cause.

7.2.2 Service customisation

A UPT user who has subscribed UPT CFU and who wants to invoke the service has to access his/her service profile, set the parameters related to the forwarded destination (number), the condition on which to forward and the activation status.

7.2.3 Activation/deactivation

A UPT user who want to invoke UPT CFU has to access his/her service profile and modify (if the case) at least:

- the forwarded destination number;

- the condition on which to forward (unconditionally in this case);

- the activation status of call forwarding service.

UPT call forwarding can be deactivated accessing the service profile and modifying the activation parameter.

7.2.4 Interrogation

Interrogation on the status of the service and on the destination number is possible by means of service profile interrogation.

7.2.5 Exceptional procedures

If the system cannot accept an activation request, the UPT user should receive notification that the activation was unsuccessful.

Possible causes of rejection include not allowed forwarded-to numbers.

7.3 Interactions

7.3.1 UPT CFU

Not applicable.

7.3.2 UPT CFB

UPT CFU takes precedence over UPT CFB.

7.3.3 UPT CFNA

UPT CFU takes precedence over UPT CFNA.

7.3.4 UPT CFNR

UPT CFU takes precedence over UPT CFNR.

7.3.5 Variable routeing

UPT CFU takes precedence over variable routeing.

8 UPT CFB

8.1 Definition

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.

8.2 Procedures

8.2.1 Provision

UPT CFB is provided after pre-arrangement with the UPT service provider.

As subscription option a UPT user can decide:

- to receive notification that UPT call forwarding is activated;

- to receive notification that a call has been forwarded (notified on the terminal where he/she has registered for incoming calls);

- to notify the calling party about the forwarding.

There can be other optional parameters regarding, for instance, notification to the forwarded-to user of the UPT user number, but due to the still existing differences and lacks in the regulatory field they are, at least for UPT phase 1, left outside this ETR.

The forwarded-to user will receive an indication that the call has been forwarded with the cause.

8.2.2 Service customisation

A UPT user who has subscribed UPT CFB and who wants to invoke the service has to access his/her service profile, set the parameters related to the forwarded destination (number), the condition on which to forward and the activation status.

8.2.3 Activation/deactivation

A UPT user who want to invoke UPT CFB has to access his/her service profile and modify (if the case) at least:

- the forwarded destination number;

- the condition on which to forward (busy in this case);

- the activation status of call forwarding service.

UPT call forwarding can be deactivated accessing the service profile and modifying the activation parameter.

8.2.4 Interrogation

Interrogation on the status of the service and on the destination number is possible by means of service profile interrogation.

8.2.5 Exceptional procedures

If the system cannot accept an activation request, the UPT user should receive notification that the activation was unsuccessful.

Possible causes of rejection include not allowed forwarded-to numbers.

8.3   Interactions

8.3.1   UPT CFU

UPT CFU takes precedence over UPT CFB.

8.3.2   UPT CFB

Not applicable.

8.3.3   UPT CFNA

No interactions.

8.3.4   UPT CFNR

No interactions.

8.3.5   Variable routeing

No interactions.

9   UPT CFNA

9.1   Definition

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

9.2   Procedures

9.2.1   Provision

UPT CFNA is provided after pre-arrangement with the UPT service provider.

As subscription option a UPT user can decide:

-        to receive notification that UPT call forwarding is activated;

-        to receive notification that a call has been forwarded (notified on the terminal where he/she has registered for incoming calls);

-        to notify the Calling party about the forwarding.

There can be other optional parameters regarding, for instance, notification to the forwarded-to user of the UPT user number, but due to the still existing differences and lacks in the regulatory field they are, at least for UPT phase 1, left outside this ETR.

The forwarded-to user will receive an indication that the call has been forwarded with the cause.

9.2.2   Service customisation

A UPT user who has subscribed UPT CFNA and who wants to invoke the service has to access his/her service profile, set the parameters related to the forwarded destination (number), the condition on which to forward and the activation status.

9.2.3 Activation/deactivation

A UPT user who want to invoke UPT CFNA has to access his/her service profile and modify (if the case) at least:

- the forwarded destination number;

- the condition on which to forward (no answering in this case);

- the activation status of call forwarding service;

and optionally:

- the value of the no replay condition timer.

UPT call forwarding can be deactivated accessing the service profile and modifying the activation parameter.

9.2.4 Interrogation

Interrogation on the status of the service and on the destination number is possible by means of service profile interrogation.

9.2.5 Exceptional procedures

If the system cannot accept an activation request, the UPT user should receive notification that the activation was unsuccessful.

Possible causes of rejection include not allowed forwarded-to numbers.

9.3 Interactions

9.3.1 UPT CFU

UPT CFU takes precedence over UPT CFNA.

9.3.2 UPT CFB

No interactions.

9.3.3 UPT CFNA

Not applicable.

9.3.4 UPT CFNR

No interactions.

9.3.5 Variable routeing

No interactions.

10 UPT CFNR

10.1 Definition

With this UPT supplementary service, the UPT user may forward incoming UPT calls to another line number or terminal access in case of not reachable condition of the termination where the UPT user is registered for incoming calls.

10.2 Procedures

10.2.1 Provision

UPT CFNR is provided after pre-arrangement with the UPT service provider.

As subscription option a UPT user can decide:

- to receive notification that UPT call forwarding is activated;

- to receive notification that a call has been forwarded (notified on the terminal where he/she has registered for incoming calls);

- to notify the calling party about the forwarding.

There can be other optional parameters regarding, for instance, notification to the forwarded-to user of the UPT user number, but due to the still existing differences and lackings in the regulatory field they are, at least for UPT phase 1, not included in left outside this ETR.

The forwarded-to user will receive an indication that the call has been forwarded with the cause.

10.2.2 Service customisation

A UPT user who has subscribed UPT CFNR and who wants to invoke the service has to access his/her service profile, set the parameters related to the forwarded destination (number), the condition on which to forward and the activation status.

10.2.3 Activation/deactivation

A UPT user who want to invoke UPT CFNA has to access his/her service profile and modify (if the case) at least:

- the forwarded destination number;

- the condition on which to forward (not reachable in this case);

- the activation status of call forwarding service.

UPT call forwarding can be deactivated accessing the service profile and modifying the activation parameter.

10.2.4 Interrogation

Interrogation on the status of the service and on the destination number is possible by means of service profile interrogation.

10.2.5 Exceptional procedures

If the system cannot accept an activation request, the UPT user should receive notification that the activation was unsuccessful.

Possible causes of rejection include not allowed forwarded-to numbers.

10.3   Interaction

10.3.1   UPT CFU

UPT CFU takes precedence over UPT CFNR.

10.3.2   UPT CFB

No interactions.

10.3.3   UPT CFNA

No interactions.

10.3.4   UPT CFNR

Not applicable.

10.3.5   Variable routeing

No interactions.

11   Variable routeing

11.1   Definition

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, calling party identity, etc.

11.2   Procedures

11.2.1   Provision

Variable routeing is provided after pre-arrangement with the UPT service provider.

11.2.2   Service customisation

A UPT user who has subscribed variable routeing and who wants to invoke the service has (at least for the first time) to access his/her service profile to specify the various destinations according to:

-        time of the day;

-        the day of the week;

-        specific days;

-        calling party identity; and

-        calling party geographic area.

11.2.3   Activation/deactivation

A UPT user who want to activate/deactivate variable routeing has to access his/her service profile and modify at least:

-        the activation status of variable routeing service.

11.2.4   Interrogation

Interrogation on the status of the service, on the destination numbers and different times is possible by means of service profile interrogation.

11.3 Exceptional procedures

If the system cannot accept a destination matrix or an activation request, the UPT user should receive notification that the request was unsuccessful.

Possible causes of rejection include not allowed destination numbers, non-existent days, etc.

11.4 Interactions

11.4.1 UPT CFU

UPT CFU takes precedence over variable routeing.

11.4.2 UPT CFB

No interactions.

11.4.3 UPT CFNA

No interactions.

11.4.4 UPT CFNR

No interactions.

11.4.5 Variable routeing

Not applicable.

History

Document history	
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