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INTEGRATED SERVICES DIGITAL NETWORK (ISDN)

SERVICE CAPABILITIES

TERMINAL PORTABILITY (TP) SUPPLEMENTARY SERVICE

ITU-T Recommendation I.258.1

(Previously "CCITT Recommendation")

FOREWORD

The ITU-T (Telecommunication Standardization Sector) is a permanent organ of the International Telecommunication Union (ITU). The ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Conference (WTSC), which meets every four years, establishes the topics for study by the ITU-T Study Groups which, in their turn, produce Recommendations on these topics.

The approval of Recommendations by the Members of the ITU-T is covered by the procedure laid down in WTSC Resolution No. 1 (Helsinki, March 1-12, 1993).

ITU-T Recommendation I.258.1 was prepared by ITU-T Study Group 1 (1993-1996) and was approved under the WTSC Resolution No. 1 procedure on the 3rd of October 1995.

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NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

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TERMINAL PORTABILITY (TP) SUPPLEMENTARY SERVICE

(Geneva, 1995)

1 Definition

The **terminal Portability (TP) supplementary service** allows a user to move a terminal from one socket to another within one given basic access during the active state of a call. It also allows a user to move a call from one terminal to another terminal within one given basic access during the active phase of the call.

The portability of a terminal during the idle state is part of the basic access capabilities and does not require any procedure.

The portability of a terminal in the call establishment and in the call clearing phases is not possible.

2 Description

2.1 General description

The TP supplementary service applies to the basic access.

A user engaged in an active call can suspend communication by an appropriate signalling procedure and resume the call at a later time. This procedure applies independently to calling and called users.

The TP supplementary service allows a user during the active phase of a call:

– to replace one terminal by another compatible terminal at the same socket;

– to move from one terminal to another compatible terminal within a basic access;

– to suspend the call and subsequently to resume it at the same terminal and the same socket;

– to move a terminal from one socket to another one within a basic access.

NOTE – In the cases involving physical disconnection and reconnection of terminals, or in moving from one terminal to another one, the user will be responsible for ensuring that compatibility with the suspended call is retained.

2.2 Specific terminology

Not applicable.

2.3 Applicability to telecommunication services

The TP supplementary service applies to some interactive circuit switched telecommunication services requiring the attendance of a human being, such as telephony, videotelephony, etc.

The TP supplementary service does not apply to non-interactive services such as facsimile, teletex, mixed-mode, etc.

However, the network will not take any actions to restrict its applicability.

It is a user's responsibility to resume the call with a terminal which is compatible both with the remote terminal and with the type of connection previously established.

3 Procedures

3.1 Provision/withdrawal

This service shall be either provided by prior arrangement with the service provider or be available on a general basis.

Withdrawal shall be at the request of the customer or for administrative reasons.

3.2 Normal procedures

3.2.1 Activation/deactivation/registration

Not applicable.

3.2.2 Erasure

Not applicable.

3.2.3 Invocation and operation

The TP supplementary service shall only be invoked in the active phase of a call.

A user wishing to invoke the TP supplementary service shall suspend the call by sending an appropriate request. This request may contain a call identity limited to two characters. On receipt of this request, the network shall:

– store the call identity value if specified (if no call identity is specified the network shall allocate a null value);

– preserve the B-channel involved in the connection until the call is resumed or the time-out expires. This time-out shall be from 2 to 15 minutes;

– preserve the connection; and

– send an acknowledgement to the controlling user and an indication to the remote user.

The terminal, upon receiving the acknowledgement, shall inform the user that the user can physically disconnect the terminal.

The user can resume the call within the time-out, by sending a request containing the call identity (if any) included in the suspension request. On receipt of the resumption request the network shall:

– re-establish the call;

– send an acknowledgement to the controlling user and an indication to the remote user.

NOTE – During an interim period of time, some networks may not support the sending of indications to the remote user.

3.2.4 Interrogation

Not applicable.

3.3 Exceptional procedures

3.3.1 Activation/deactivation/registration

Not applicable.

3.3.2 Erasure

Not applicable.

3.3.3 Invocation and operation

If the network cannot satisfy the user's request to suspend or resume the call, the network shall reject the request and shall send an appropriate indication to the user.

If the controlling user does not resume within the time-out, the network shall release the call. The network shall reject a subsequent resume request with an appropriate indication.

If the remote user releases the call while suspended, the network shall reject a subsequent resume request from the controlling user with an appropriate indication.

3.3.4 Interrogation

Not applicable.

4 Network capabilities for charging

This Recommendation does not cover charging. Future Recommendations in the D-Series are expected to contain that information. It shall be possible to charge the subscriber accurately for the service.

5 Interworking considerations

5.1 Interworking with non-ISDNs

The operation of this supplementary service shall not be affected by the nature (i.e. ISDN or non-ISDN) of the far end of the connection.

However, in some interworking situations, the time-out for the release of the suspended call may be shorter than the value implemented in the served user's network.

NOTE – If the distant user is a PSTN user, the notifications about the suspend request or the resume request of the call to that user may not be supported.

5.2 Interworking with private ISDNs

When a remote user is on a different network from the served user (e.g., one user on a private ISDN and the other user on a public ISDN), indications to the remote user shall be sent to the remote user's network for forwarding to the remote user.

6 Interaction with other supplementary services

6.1 Advice Of Charge services

While a call is suspended charging information shall not be sent to the user.

6.1.1 Charging information at call set-up time (AOC-S)

If the charging rate changes when a call is in the suspended state, the new charging rate shall be given when the call is resumed.

6.1.2 Charging information during the call (AOC-D)

At call suspension request, as a network option, the cumulative information (i.e. total charge incurred up to the moment when the call is suspended) can be given.

On resumption of the call, the sending of charging information shall continue as a network option, the updated cumulative charging information may be given.

If the call is cleared while the call is suspended at the calling user's access, and if the calling user attempts to resume the call within the timer, then, as a network option, advice of charge information may be given to that user at the time of the resume attempt.

6.1.3   Charging information at the end of the call (AOC-E)

If the call is cleared while the call is suspended at the calling user's access, and if the calling user attempts to resume the call within the timer, then, as a network option, advice of charge information may be given to the user at the time of the resume attempt.

6.2   Call Hold (HOLD)

A terminal cannot suspend an active call when a call is held at that terminal.

A held call shall not be suspended.

6.3   Call transfer services

6.3.1   Normal Call Transfer (NCT)

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

6.3.2   Explicit Call Transfer (ECT)

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

6.4   Call Waiting (CW)

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

> NOTE – A waiting call is not an active call and therefore cannot be suspended.

6.5   Closed User Group (CUG)

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

6.6   Completion of calls services

6.6.1   Completion of Calls on No Reply (CCNR)

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

> NOTE – In the case of disconnected terminals, Completion of Calls on No Reply (CCNR) recalls shall not be accepted upon expiry of the CCNR recall timer.

6.6.2   Completion of Calls to Busy Subscriber (CCBS)

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

> NOTE – In the case of disconnected terminals, Completion of Calls to Busy Subscriber (CCBS) recalls shall not be accepted upon expiry of the CCBS recall timer.

6.7 Conference services

6.7.1 Conference Calling (CONF)

When a terminal manages an add-on conference, the TP supplementary service shall not be available.

6.7.2 Meet-Me Conference (MMC)

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

6.7.3 Preset Conference Calling (PCC)

The network shall prevent the served user of the preset conference calling supplementary service from invoking the TP supplementary service.

6.7.4 Three-Party (3PTY)

The network shall prevent the served user of the three party supplementary service from invoking the TP supplementary service.

6.8 Diversion services

6.8.1 Call Deflection (CD)

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

6.8.2 Call Forwarding Busy (CFB)

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

6.8.3 Call Forwarding No Reply (CFNR)

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

6.8.4 Call Forwarding Unconditional (CFU)

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

6.8.5 Selective Call Forwarding (SCF)

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

6.9 Direct-Dialling-In (DDI)

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

6.10 In-call Modification (IM)

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

6.11 ISDN Freephone Service (IFS)

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

6.12 Line Hunting (LH)

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

6.13 Malicious Call Identification (MCID)

The called user cannot invoke the malicious call identification supplementary service for a call which is suspended by the called user.

If the calling user clears while the call has been suspended by the called user, the called user cannot resume the call and hence cannot invoke the malicious call identification supplementary service for that call.

6.14 Multi-Level Precedence and Preemption (MLPP)

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

6.15 Multiple Subscriber Number (MSN)

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

6.16 Name identification services

6.16.1 Calling Name Identification Presentation (CNIP)

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

6.16.2 Calling Name Identification Restriction (CNIR)

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

6.17 Number identification services

6.17.1 Calling Line Identification Presentation (CLIP)

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

6.17.2 Calling Line Identification Restriction (CLIR)

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

6.17.3 Connected Line Identification Presentation (COLP)

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

6.17.4 Connected Line Identification Restriction (COLR)

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

6.18 Outgoing Call Barring (OCB)

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

6.19 Reverse Charging (REV)

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

6.20 Sub-addressing (SUB)

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

6.21 Support of Private Numbering Plan (SPNP)

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

6.22 Terminal Portability (TP)

The TP supplementary service may be in operation at both the calling and called interfaces of a call.

6.23 User-to-User Signalling (UUS)

Not compatible, i.e. while a call is suspended user-to-user information cannot be transferred between the two users.

> NOTE – The network shall not store any user-to-user information while the call is suspended.

7 SDL description

For further sutdy.