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SERIES Q: SWITCHING AND SIGNALLING

**Specifications of Signalling System No. 7 – ISDN
supplementary services**

**Stage 3 description for call offering
supplementary services using Signalling
System No. 7: Explicit Call Transfer**

ITU-T Recommendation Q.732.7

(Previously CCITT Recommendation)

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ITU-T RECOMMENDATION Q.732.7

STAGE 3 DESCRIPTION FOR CALL OFFERING SUPPLEMENTARY SERVICES USING SIGNALLING SYSTEM No. 7: EXPLICIT CALL TRANSFER

Summary

This Recommendation defines the essential functions, procedures and messages of the ISUP protocol required for the provisioning to ISDN users of the Explicit Call Transfer supplementary service, which enables a user who has two calls, each of which can be an incoming call or an outgoing call to connect together the other users in the two calls into one call.

Source

ITU-T Recommendation Q.732.7 was prepared by ITU-T Study Group 11 (1993-1996) and was approved under the WTSC Resolution No. 1 procedure on the 9th of July 1996.

FOREWORD

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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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Recommendation Q.732.7

**STAGE 3 DESCRIPTION FOR CALL OFFERING SUPPLEMENTARY
SERVICES USING SIGNALLING SYSTEM No. 7:
EXPLICIT CALL TRANSFER**

(Geneva, 1996)

7 Explicit call transfer**7.1 Introduction****7.1.1 Scope**

The **explicit call transfer (ECT)** enables a user who has two calls, each of which can be an incoming call or an outgoing call, to connect together the other users in the two calls into one call.

7.1.2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; all users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published.

- [1] ITU-T Recommendation I.112 (1993), *Vocabulary of terms for ISDNs*.
- [2] CCITT Recommendation I.130 (1988), *Method for the characterization of telecommunication services supported by an ISDN and network capabilities of an ISDN*.
- [3] ITU-T Recommendation I.210 (1993), *Principles of telecommunication services supported by an ISDN and the means to describe them*.
- [4] CCITT Recommendation I.250 (1988), *Definition of supplementary services*.
- [5] CCITT Recommendation E.164 (1991), *Numbering plan for the ISDN era*.
- [6] ITU-T Recommendation I.252.7¹, *Call offering supplementary services: Explicit Call Transfer*.
- [7] ITU-T Recommendation Q.82.7 (1996), *Stage 2 description for call offering supplementary services: Explicit Call Transfer*.
- [8] ITU-T Recommendation Q.730 (1993), *ISDN supplementary services*.
- [9] ITU-T Recommendation Q.761 (1993), *Functional description of the ISDN user part of Signalling System No. 7*.
- [10] ITU-T Recommendation Q.762 (1993), *General function of messages and signals of the ISDN user part of Signalling System No. 7*.
- [11] ITU-T Recommendation Q.763 (1993), *Formats and codes of the ISDN user part of Signalling System No. 7*.

¹ Presently at the stage of draft.

- [12] ITU-T Recommendation Q.764 (1993), *ISDN user part signalling procedures*.
- [13] ITU-T Recommendation Q.952 (1993), *Stage 3 service description for call offering supplementary services using DSS 1 – Diversion supplementary services*.
- [14] ITU-T Recommendation Q.731 (1993), *Stage 3 description for number identification supplementary services using Signalling System No. 7*.
- [15] ITU-T Recommendation Q.737.1 (1993), *Stage 3 description for additional information transfer supplementary services using SS No. 7: User-to-User Signalling (UUS)*.

7.1.3 Terms and definitions

This Recommendation defines the following terms.

7.1.3.1 user A: The served user who invokes the ECT supplementary service.

7.1.3.2 user B: The other user in one of the user A's calls. By convention, in this Recommendation, it is considered that this user is the one involved in an answered call.

7.1.3.3 user C: The other user in another of user A's calls.

7.1.3.4 call A-B: The (answered) call between user A and user B.

7.1.3.5 call A-C: The (answered or alerting) call between user A and user C.

7.1.3.6 call B-C: The call between user B and user C, i.e. the call between the remote parties after ECT supplementary service has been completed.

7.1.3.7 remote party number: The number which identifies the remote party.

7.1.3.8 remote party's subaddress: The subaddress associated with the remote party.

7.1.3.9 subaddress: See clause 12/E.164 [5].

7.2 Description

7.2.1 General description

The ECT supplementary service enables a user (user A) to transform two of that user's calls, each of which can be an incoming call or an outgoing call, into a new call between user B and user C.

After the call transfer has occurred, each remote party involved may release the new call according to the basic call procedure as specified in 2.2/Q.764 [12].

NOTE – The new call between the remote users shall no longer be under user A's control since the served user is simultaneously disconnected (see clause 7/Q.952 [13]).

The request for ECT supplementary service shall be rejected if, as a network option (see 7.5.2.1.1.2.1), it can be determined that the resulting connection would lead into a loop in the network.

The stage 1 ITU-T definitions for the ECT supplementary service are given in Recommendation I.252.7 [6]. The stage 2 ITU-T description for the ECT supplementary service is given in Recommendation Q.82.7 [7]. The stage 3 DSS 1 ITU-T description for the ECT supplementary service is given in clause 7/Q.952 [13].

This stage 3 description of the ECT supplementary service uses ISDN User Part protocol as defined in Recommendations Q.761 [9], Q.764 [12] and Q.730 [8].

7.2.2 Specific terminology

See 7.1.3, Terms and definitions.

7.2.3 Qualifications on the applicability to telecommunication services

Qualifications on the applicability to telecommunication services can be found in 2.3/I.252.7 [6].

7.2.4 State definitions

No specific state definitions are required.

7.3 Operational requirements

7.3.1 Provision/withdrawal

Provision and withdrawal of the ECT supplementary service are specified in 3.1/I.252.7 [6].

7.3.2 Requirements on the originating network side

Not applicable.

7.3.3 Requirements in the network

The network supporting the ECT supplementary service procedures should have the capability to support the propagation delay and echo control procedures according to 2.6/Q.764 and 2.7/Q.764 [12], respectively.

7.3.4 Requirements on the destination network side

Not applicable.

7.4 Coding requirements

The ECT supplementary service requires the use of the following messages:

- Call progress (CPG);
- Facility (FAC); and
- Loop prevention (LOP).

The format and coding of the Facility and Call progress messages are given in Recommendation Q.763 [11], Table 45/Q.763 [11] and Table 23/Q.763 [11], respectively.

The Facility message is used according to the Service Activation procedure defined in 1.3.1/Q.730 [8]. Clause 3/Q.763 [11] gives the format of the Service activation parameter; for this description, the Feature code used in the Service activation parameter is given in Table 7-1. For this description, parameters which are relevant to the Facility message are:

- Service activation;
- Generic notification indicators;
- Call transfer number; and
- Access transport.

Table 7-1/Q.732.7 – Feature code assigned to the Service activation parameter

Value	Code
Call transfer	0 0 0 0 0 0 1

For this description, the Call progress message is used with the Event indicator subfield, in the Event information parameter (see clause 3/Q.763 [11]), set to "PROGRESS". For this description, parameters which are relevant to the Call progress message are:

- Generic notification indicators; and
- Call transfer number.

The Loop prevention message is sent in either direction when the loop prevention procedure is performed (see 7.5.2.1.1.2.1).

The message type code for the Loop prevention message is given in Table 7-2.

Table 7-2/Q.732.7 – Loop prevention message type code

Message type code	Code
Loop prevention	0 1 0 0 0 0 0

The format of the Loop prevention message is given in Table 7-3.

Table 7-3/Q.732.7 – Loop prevention message

Parameter	Type (octets)	Length
Message type	F	1
Loop prevention indicators	O	3
Call transfer reference	O	3
Message compatibility information	O	4
Parameter compatibility information	O	4-?
End of optional parameters	O	1

The Message compatibility information and Parameter compatibility information parameters are included in the Loop prevention message according to 6.2.1/Q.761 and 6.2.2/Q.761 [9], respectively.

The parameters which may be conveyed, when appropriate (see 7.5), by the Facility, Call progress and Loop prevention messages are the following:

- Generic notification indicator;
- Access transport;
- Call transfer number;
- Loop prevention indicators;
- Call transfer reference.

i) *Generic notification indicator parameter*

The Generic notification indicator parameter (see also clause 3/Q.763 [11]) is used to notify one remote user that the call is now transferred to another user; it also gives an indication on the state of the new call (i.e. answered or alerting). Table 7-4 shows the value used in the Notification indicator subfield of the Generic notification parameter, for this purpose.