ITU-T

Q.734

TELECOMMUNICATION STANDARDIZATION SECTOR OF ITU (03/93)

SPECIFICATIONS OF SIGNALLING SYSTEM No. 7

# STAGE 3 DESCRIPTION FOR MULTIPARTY SUPPLEMENTARY SERVICES USING SIGNALLING SYSTEM No. 7

CLAUSE 1 - CONFERENCE CALLING CLAUSE 2 - THREE-PARTY SERVICE

# ITU-T Recommendation Q.734

(Previously "CCITT Recommendation")

# **FOREWORD**

The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of the International Telecommunication Union. 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, established the topics for study by the ITU-T Study Groups which, in their turn, produce Recommendations on these topics.

ITU-T Recommendation Q.734, clauses 1 and 2, was prepared by the ITU-T Study Group XI (1988-1993) and was approved by the WTSC (Helsinki, March 1-12, 1993).

#### **NOTES**

As a consequence of a reform process within the International Telecommunication Union (ITU), the CCITT ceased to exist as of 28 February 1993. In its place, the ITU Telecommunication Standardization Sector (ITU-T) was created as of 1 March 1993. Similarly, in this reform process, the CCIR and the IFRB have been replaced by the Radiocommunication Sector.

In order not to delay publication of this Recommendation, no change has been made in the text to references containing the acronyms "CCITT, CCIR or IFRB" or their associated entities such as Plenary Assembly, Secretariat, etc. Future editions of this Recommendation will contain the proper terminology related to the new ITU structure.

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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# STAGE 3 DESCRIPTION FOR MULTIPARTY SUPPLEMENTARY SERVICES USING SS No. 7

(Helsinki, 1993)

# 1 Conference calling

#### 1.1 Definition

**conference calling (CONF)** is an ISDN supplementary service which allows a user to communicate simultaneously with multiple parties, which may also communicate among themselves.

#### 1.2 Description

#### 1.2.1 General description

This supplementary service provides a user with the ability to have multi-connection call, i.e. a simultaneous communication between more than two parties.

When conference calling is invoked, the conference resources (e.g. a "bridge") are allocated to the served user and any calls indicated by the service request are allocated to the conference.

This description is only applicable in case the conference bridge is located at the local exchange of the served user.

Once a conference is active, parties may be added, dropped, isolated (i.e. prevented from communicating with the conference), reattached or split (i.e. removed from the conference but remain connected to the conference controller).

The controller can place her/his connection to the conference on hold, retrieve the conference, disconnect herself/himself from the conference and release the entire conference.

The stage 1 definition for the conference calling supplementary service is given in Recommendation I.254.1. The stage 2 description for the conference calling supplementary service is given in Recommendation Q.84.1. The stage 3 DSS 1 description is given in Recommendation Q.954.1. This stage 3 description of the conference calling supplementary service uses ISDN user part protocol as defined in Recommendations Q.761-Q.764 and Q.730.

# 1.2.2 Specific terminology

**Served user** – The user which requests the conference call. The served user will be the user controlling the conference call. The served user may also be referred to as user A.

**Conferee** – The users involved in the conference not controlling the conference, i.e. all participants except the served user are referred to as conferees or parties. The conferees may also be known as users B, C, ...

**Isolate** – An action at the access that restricts communication in both direction with a participant of the conference.

**Reattach** – An action at the access that re-establishes the communication with a participant of the conference.

**Split** – An action at the access that creates a private communication between the served user and a remote user. The private communication is a normal "two-party" call.

**Drop** – An action at the access that clears the connection to a remote party.

**Floating** – The situation where the conference calling supplementary service exist without the served user.

# 1.2.3 Qualifications on the applicability to telecommunication services

See stage 1 description, Recommendation I.254.1.

# 1.2.4 State definitions

No specific state definitions are identified.

# 1.3 Operational requirements

# 1.3.1 Provision/withdrawal

See stage 1 description, Recommendation I.254.1.

# 1.3.2 Requirements on the originating network side

Not applicable.

# 1.3.3 Requirements in the network

No specific requirements are needed in the network.

# 1.3.4 Requirements on the terminating network side

Not applicable.

# 1.4 Coding requirements

The call progress message containing the generic notification indicator parameter including the notification in Table 1-1 will be sent towards the remote user when appropriate.

TABLE 1-1/Q.734

Generic notification indicator parameter field

Bits 7654321	Description
1000010	Conference established
1000011	Conference disconnected
1000100	Other party added
1000101	Isolated
1000110	Reattached
1000111	Other party isolated
1001000	Other party reattached
1001001	Other party split
1001010	Other party disconnected
1001011	Conference floating

The event indicator shall be coded 0000010 "Progress".

The generic notification indicator parameter is accompanied by the parameter compatibility information parameter. The procedures for compatibility are defined in Recommendation Q.764.

2

# 1.5 Signalling requirements

The following ISUP procedures apply in case network option for user notifications is supported.

#### 1.5.1 Activation/deactivation/registration

Not applicable.

# 1.5.2 Invocation and operation

# 1.5.2.1 Actions at the originating local exchange

In this case, the originating exchange is the exchange where the service is controlled. The originating exchange for this service is not necessarily the originating exchange for basic call.

# 1.5.2.1.1 Normal operation

# 1.5.2.1.1.1 Requirements related to echo control

#### a) General

The originating local exchange where the conference bridge is located should have the capability to invoke echo control procedures. This is necessary in case the total propagation delay for two legs in the conference is above the value where echo control is necessary (ref. 2.6/Q.764).

The exchange must also have the capability of storing propagation delay information received either in a received IAM (for incoming calls) or in ANM/CON (for outgoing calls) until call release. This must be done for all legs included in the conference.

# b) Criteria to initiate echo control procedures

Upon adding a new call to the conference, the received propagation delay value related to this leg shall be added to each of the other legs to decide whether echo control apply for the legs concerned.

If echo control is necessary, the exchange will initiate echo control procedures for each of the legs concerned. (2.7/Q.764).

# 1.5.2.1.1.2 Requesting a conference from an active call and adding conferees

Upon successful request to begin the conference from an active call, user B participating in the active call will be added to the conference. A notification "conference established" shall be sent to user B informing that a connection to the conference is now established. The notification is conveyed in a call progress message (CPG).

Upon request to add a new conferee (user C) to the conference, a check is performed whether or not the maximum number of conferees is reached for that conference.

Upon the successful outcome of the add-on request, a notification "conference established" is sent to user C informing that connection to the conference is now established. The notification is conveyed in a CPG message. A notification "other party added" is sent in a CPG message towards all the non-affected conferees informing them that a new party is added to the conference call.

#### **1.5.2.1.1.3** Isolate a party

The conference controller may request to isolate one conferee from the conference. The conferee is still connected to the conference, but communication in either direction is impossible.

A notification "isolated" is sent to the affected conferee informing that he/she is isolated from the conference. The notification is conveyed in a CPG message.

A notification "other party isolated" is sent within a CPG message towards all the non-affected conferees informing them that one party is isolated from the conference.

#### **1.5.2.1.1.4** Reattach a party

The conference controller may request to reattach the isolated conferee to the conference.

A notification "reattached" is sent to the affected conferee informing that he/she is reattached to the conference. The notification is conveyed in a CPG message.

A notification "other party reattached" is sent within a CPG message towards all the non-affected conferees informing them that the isolated party is now reattached to the conference call.

#### 1.5.2.1.1.5 Split a party

The conference controller may request to create a private communication with one of the conferees (splitting).

A notification "conference disconnected" is sent to the affected conferee informing that he/she is connected to the conference controller only. The notification is conveyed in a ISUP CPG message.

A notification "other party disconnected" is sent within a CPG message towards all the non-affected conferees informing them that the conference controller has split off with another party.

# 1.5.2.1.1.6 Disconnect a party

The conference controller may request to disconnect (drop) one or more of the parties on a one at a time basis. Normal release procedures apply towards the dropped conferee(s).

A notification "other party disconnected" is sent within a CPG message towards all the non-affected conferees informing them that another party is dropped from the conference.

#### 1.5.2.1.1.7 Disconnect by a party

A conferee may request to be disconnected from the conference call. Normal release procedure apply for the leg between the conferee and the conference bridge.

A notification "Other party disconnected" is sent within a CPG message towards all the non-affected conferees informing them that another party has disconnected from the conference.

#### 1.5.2.1.1.8 Terminate the conference

The conference controller may request to release the conference. The conference resources shall be released and normal release procedures apply towards all the conferees.

# 1.5.2.1.1.9 Disconnect the served user

The conference controller may explicitly request to be disconnected from the conference. The conferees will still be connected to the conference.

A notification "conference floating" is sent within a CPG message towards all the conferees informing them that the conference is now within a floating state, i.e. no conference controller is connected to the conference.

The conference resources shall be released when only one conferee is connected to the bridge or requirements for charging cannot be met. Normal basic call release procedures apply towards the remaining conferee.

#### 1.5.2.1.1.10 Call clearing by served user

The conference controller may request to disconnect from the conference according to normal basic call procedure. If the conditions for floating are met the served user will be disconnected from the conference bridge, but the conference will still be connected to the conference.

A notification "conference floating" is sent within a call progress message towards all the conferees informing that the conference is now within a floating state, i.e. no conference controller is connected to the conference.

The conference resources shall be released when only one conferee is connected to the bridge or requirements for charging can not be met. Normal basic call release procedures apply towards the remaining conferee.

If conditions for floating are not met when the conference controller requests to disconnect from the conference, conference resources shall be released and normal call clearing shall apply towards all the conference.

# 1.5.2.1.2 Exceptional procedures

If the outcome of the procedures:

adding conferees;

isolate party;

reattach party;

split party;

disconnect party;

disconnect by a party;

disconnect the served user;

terminate conference,

is not successful due to any reason, the concerned call shall remain in the previous state (e.g. active or held).

Notifications shall neither be sent to the affected nor non-affected remote parties.

#### 1.5.2.2 Actions at the transit exchange

#### 1.5.2.2.1 Normal operation

The exchange shall transfer the messages related to the notification mechanism.

See also 1.5.2.1.1.1.

#### 1.5.2.2.2 Exceptional procedures

No exceptional procedures are identified.

# 1.5.2.3 Actions at the outgoing international gateway exchange

# 1.5.2.3.1 Normal operation

The exchange shall transfer the messages related to the notification mechanism.

See also 1.5.2.1.1.1.

# 1.5.2.3.2 Exceptional procedures

No exceptional procedures are identified.

# 1.5.2.4 Actions at the incoming international gateway exchange

# 1.5.2.4.1 Normal operation

The exchange shall transfer the messages related to the notification mechanism.

See also 1.5.2.1.1.1.

# 1.5.2.4.2 Exceptional procedures

No exceptional procedures are identified.

# 1.5.2.5 Actions at the destination local exchange

The destination exchange for this description is not necessarily the destination exchange for basic call.

#### 1.5.2.5.1 Normal operation

The exchange shall transfer the information related to the notification mechanism to the access signalling system.

See also 1.5.2.1.1.1.

# 1.5.2.5.2 Exceptional procedures

No exceptional procedures are identified.

# 1.6 Interactions with other supplementary services

# 1.6.1 Call waiting (CW)

No impact on ISUP.

#### 1.6.2 Call transfer services

No applicable interaction at this time.

# 1.6.3 Connected line identification presentation (COLP)

No impact on ISUP.

# 1.6.4 Connected line identification restriction (COLR)

No impact on ISUP.

# 1.6.5 Calling line identification presentation (CLIP)

No impact on ISUP.

# 1.6.6 Calling line identification restriction (CLIR)

No impact on ISUP.

# 1.6.7 Closed user group (CUG)

No impact on ISUP.

# 1.6.8 Conference calling (CONF)

No impact on ISUP.

# 1.6.9 Direct dialling-in (DDI)

No impact on ISUP.

#### 1.6.10 Call diversion services

# 1.6.10.1 Call forwarding busy (CFB)

No impact on ISUP.

#### 1.6.10.2 Call forwarding no reply (CFNR)

No impact on ISUP.

# ${\bf 1.6.10.3} \quad Call \ forwarding \ unconditional \ (CFU)$

No impact on ISUP.

# 1.6.10.4 Call deflection (CD)

No impact on ISUP.

#### 1.6.11 Line hunting (LH)

No impact on ISUP.

### 1.6.12 Three-party service (3 PTY)

No impact on ISUP.

#### 1.6.13 User-to-user signalling

# 1.6.13.1 User-to-user signalling, service 1 (UUS1)

No impact on ISUP.

# 1.6.13.2 User-to-user signalling, service 2 (UUS2)

No impact on ISUP.

# 1.6.13.3 User-to-user signalling, service 3 (UUS3)

No impact on ISUP.

# 1.6.14 Multiple subscriber number (MSN)

No impact on ISUP.

# 1.6.15 Call hold (HOLD)

No retrieve notification shall be sent to a user B put on hold and subsequently added to a conference call. The notification sent shall be "conference established".

No hold and retrieve notifications shall be sent to the conferees when the conference controller put the conference on hold and subsequently retrieves the conference.

Any conferee can put their connection to the conference bridge on hold and subsequently retrieve the connection. The conference controller shall be notified according to the call hold service. CPG messages containing hold notification shall not be sent towards the other (non-affected) conferees.

# 1.6.16 Advice of charge (AOC)

No impact on ISUP.

#### 1.6.17 Sub-addressing (SUB)

No impact on ISUP.

# 1.6.18 Terminal portability (TP)

No impact on ISUP.

# 1.6.19 Completion of calls to busy subscriber (CCBS)

No applicable interaction at this time.

# 1.6.20 Malicious call identification (MCID)

No impact on ISUP.

# 1.6.21 Reverse charging (REV)

No applicable interaction at this time.

# 1.6.22 Multi-level precedence and preemption (MLPP)

No impact on ISUP.

#### 1.6.23 Private numbering plan (PNP)

No applicable interaction at this time.

#### 1.6.24 International telecommunication charge card

No applicable interaction at this time.

#### 1.7 Interaction with other networks

No notification is passed to the conferees if they are located in PSTN.

No notification is passed to the conferees if they are connected via a network conforming to Recommendations Q.767 or Q.764 of the *Blue Book*.

If the exchange has knowledge that it is working as a gateway between a version supporting the sending of notifications towards a version which does not support the sending of notifications, the call progress message containing the notification indicator will be discarded.

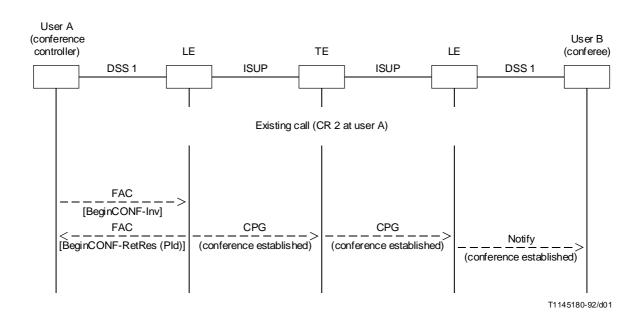
Upon receipt of notifications related to a conference bridge within an private ISDN, the network shall pass notifications as received from the private ISDN. The Quality of Service may be reduced due to reduced propagation delay calculation capabilities.

# 1.8 Signalling flows

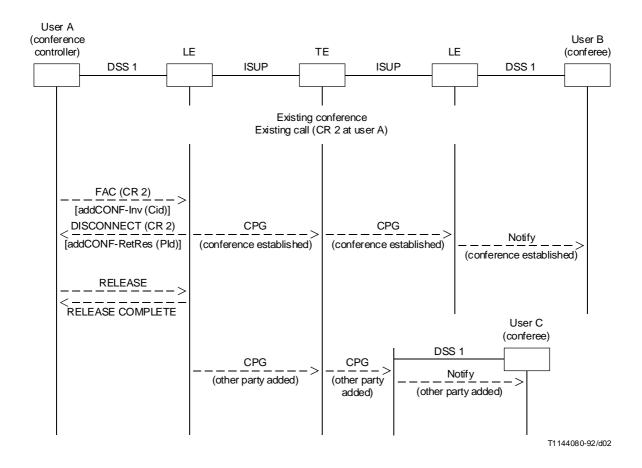
The signalling flows include indications of both DSS 1 and ISUP signalling flows. The DSS 1 messages are included for illustrative purposes only.

The contents of DSS 1 and ISUP messages is not complete. The contents of messages is only shown to the extent it has significance for the understanding of the procedures.

In all the flow diagrams CR 1 is used as the DSS 1 call reference for the connection to the conference bridge from the conference controller. Whenever other call references are used, they are related to connections between the conference controller and possible conferees.



 $\label{eq:FIGURE} FIGURE \ 1\text{-}1/Q.734$  Beginning the conference from an active call



The message flow is related to the existing call (CR 2 at user A).

 $FIGURE \ \ 1\text{-}2/Q.734$  Adding an existing incoming or outgoing call to a conference

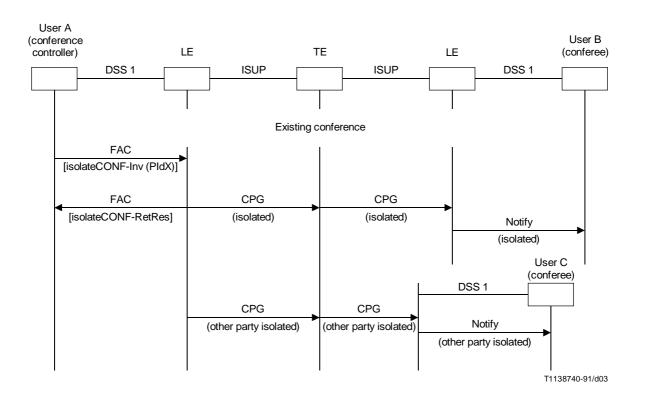


FIGURE 1-3/Q.734 Isolate a party from a conference

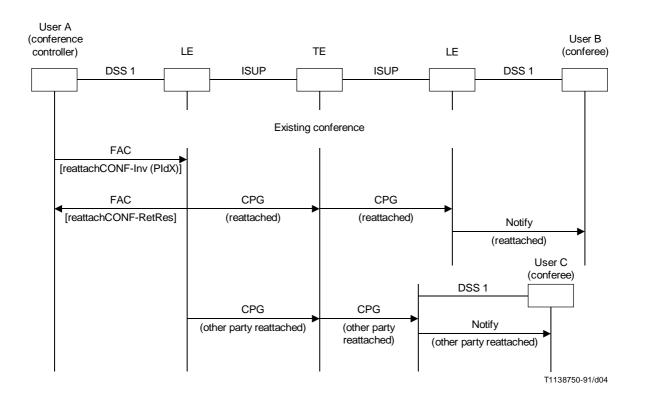


FIGURE 1-4/Q.734 **Reattach a party to a conference** 

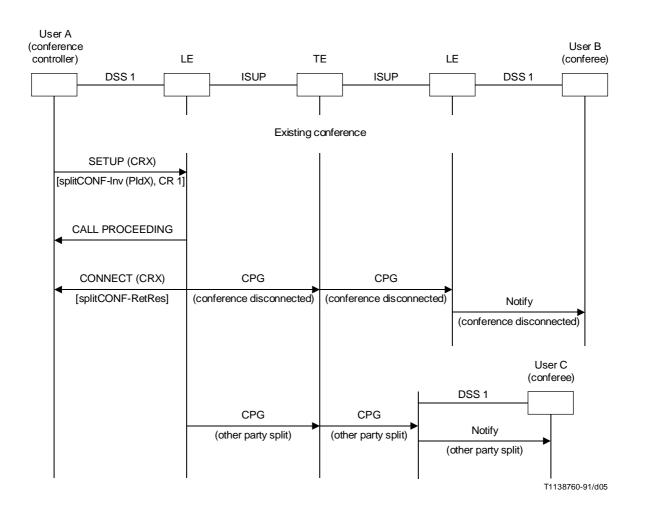


FIGURE 1-5/Q.734 **Split a party from a conference** 

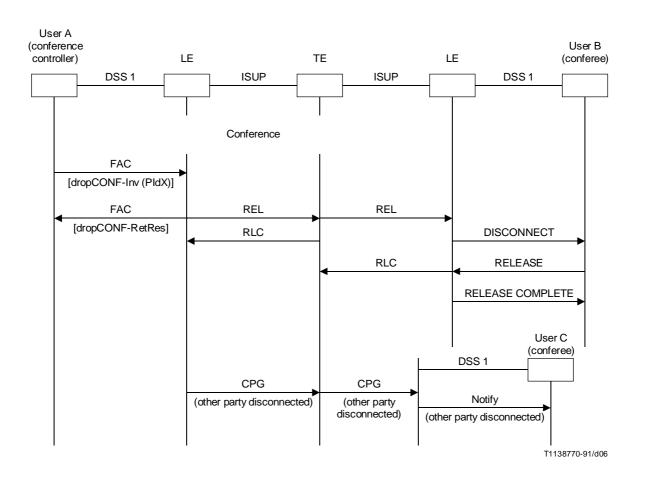


FIGURE 1-6/Q.734

Disconnect a party by served user

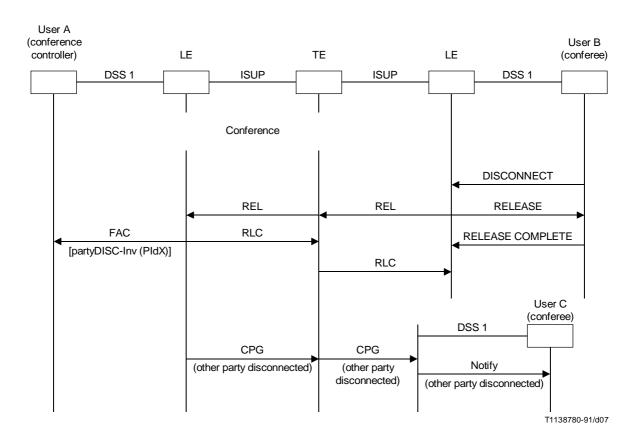


FIGURE 1-7/Q.734 **Disconnect by party** 

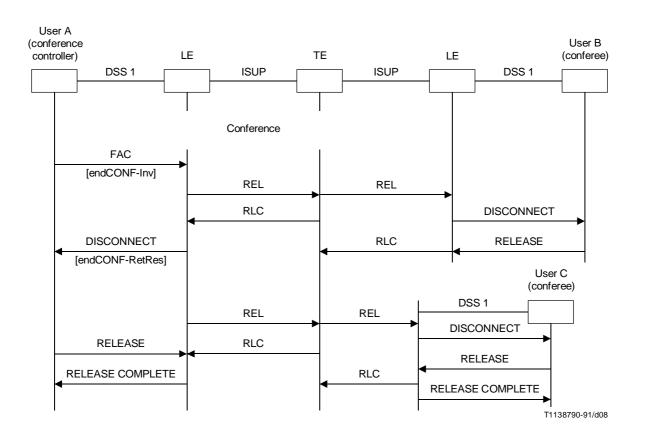
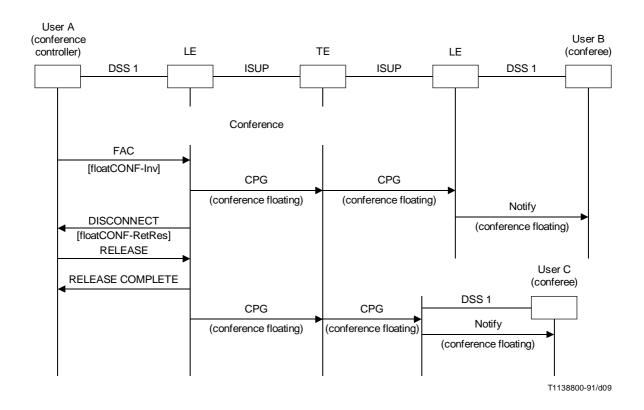


FIGURE 1-8/Q.734

Terminate the conference



 $FIGURE\ 1\mbox{-}9/Q.734$  Explicit request to disconnect the served user from the conference

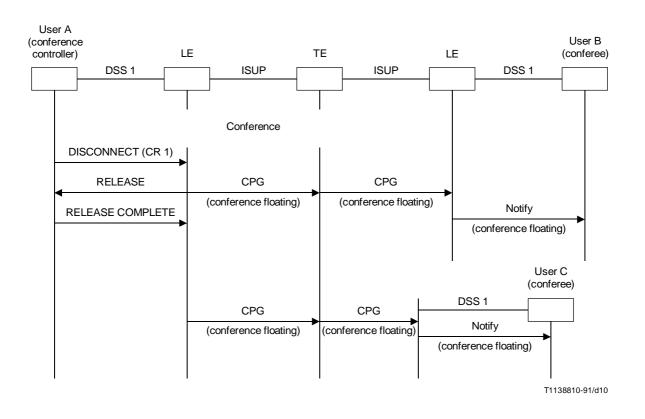


FIGURE 1-10/Q.734

Call clearing by served user when floating is allowed

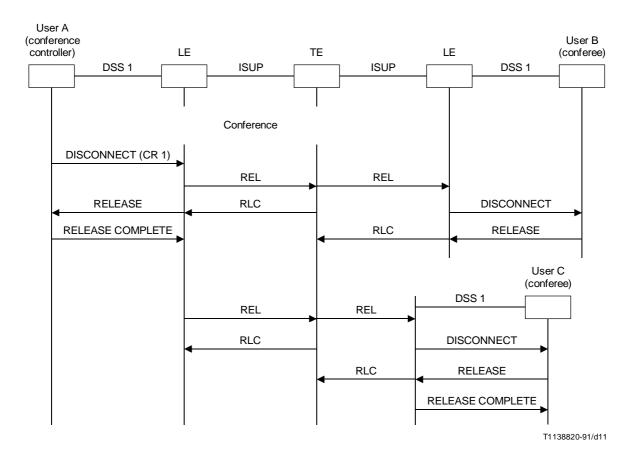


FIGURE 1-11/Q.734

Call clearing by served user when floating is not allowed

# 1.9 Parameter values (timers)

None identified.

# 1.10 Dynamic description

No dynamic descriptions (SDLs) are required.

# 2 Three party

# 2.1 Definition

The **three-party supplementary service** enables a user to establish a three-way conversation, i.e. a simultaneous communication between the served user and two other parties.

# 2.2 Description

# 2.2.1 General description

The served user A, who has an active call with user B, asks the network to put that call on hold (see Recommendation Q.733.2) and initiates a second call or accepts an incoming call.

For the original call, the served user may have been either the calling or the called party.

Once the call to the third party is answered user A can:

- a) alternate from one call to another as required;
- b) disconnect the active party;
- c) disconnect the held party;
- d) disconnect the entire call;
- e) request a three-way conversation.

During a three-way conversation user A can:

- a) terminate the three-way conversation;
- b) explicitly disconnect one of the remote parties;
- c) place its connection to the three-way conversation on hold;
- d) create a private conversation with one of the remote parties.

The stage 1 definitions for the three-party service is given in Recommendation I.254.2. The stage 2 description is given in Recommendation Q.84.2. The stage 3 DSS 1 description is given in Recommendation Q.954.2. This stage 3 description of the three-party service uses the ISDN user part protocol as defined in Recommendations Q.761-764 and Q.730.

# 2.2.2 Specific terminology

**Served user** (user A) – The user who has the service under his control during the invocation and the active phase.

**Remote parties** (user B and user C) – The parties involved in the two calls that are joined together into a three-way conversation.

# 2.2.3 Qualification on the applicability to telecommunication services

See Recommendation I.254.2.

#### 2.2.4 State definitions

No specific states are required.

# 2.3 Operational requirements

#### 2.3.1 Provision/withdrawal

See Recommendation I.254.2.

# 2.3.2 Requirements on the originating network side

This subclause is not applicable to SS No. 7.

# 2.3.3 Requirements in the network

No specific requirements are needed in the network.

# 2.3.4 Requirements on the terminating network side

This subclause is not applicable to SS No. 7.

# 2.4 Coding requirements

For the three-party supplementary service the call progress message, containing the generic notification indicator parameter, shall be used to send the appropriate notification towards the remote party.

The generic notification indicator is accompanied by the parameter compatibility information parameter. The procedures for compatibility are defined in 2.9.5/Q.764.

The event indicator is set to "Progress".

The following notification descriptions are used:

- conference established;
- conference disconnected.

The generic notification indicator parameter field shall be coded as shown in Table 2.1.

 $TABLE \ \ 2\text{-}1/Q.734$  Coding of the generic notification indicator parameter

Bits 7654321	Description
1000010	Conference established
1000011	Conference disconnected

# 2.5 Signalling requirements

# 2.5.1 Activation/deactivation/registration

This subclause is not applicable to SS No. 7.

#### 2.5.2 Invocation and operation

#### 2.5.2.1 Actions at the originating local exchange

The originating local exchange is the exchange where the service is controlled. The originating local exchange for this description is not necessarily the originating exchange for the basic call.

#### 2.5.2.1.1 Normal operation

# 2.5.2.1.1.1 Requirements related to echo control

#### a) General

When the conference bridge is located in the originating local exchange, this exchange should have the capability to invoke echo control procedures. This is necessary in the case the total propagation delay for the two legs of the three-party call is above the value where echo control is necessary. (ref. 2.6/Q.764)

The exchange must also have the capability of storing propagation delay information received either in a received IAM (for incoming calls) or in ANM/CON (for outgoing calls) until call release. This must be done for both legs included in the three-party call.

# b) Criteria to initiate echo control procedures

The originating local exchange has to sum up the propagation delay values of the calls A-B and A-C in order to determine the total value of propagation delay of the three-party call.

If echo control is necessary, the exchange will initiate echo control procedures for each of the legs concerned. (ref. 2.7/Q.764)

#### 2.5.2.1.1.2 Beginning the three-way conversation

Prior to the invocation of the three-party supplementary service, the served user (user A) must be involved in two calls, both in the answered state: one call (e.g. with user B) in a held state and the other one (e.g. with user C) in an active state.

When the three-party supplementary service is invoked the originating local exchange, to which the served user's equipment is connected, shall:

- a) join the two calls together in a three-way conversation;
- b) send a call progress message to each remote party, containing the generic notification indicator parameter with the notification "conference established".

#### NOTES

- 1 For an interim period of time, some networks might not support the sending of notifications to the remote parties.
- 2 Procedure a) doesn't have any impact on ISUP protocol.

# 2.5.2.1.1.3 Managing the three-way conversation

During the three-way conversation mode the served user shall be able to:

a) Split the three-way conversation

In this case the local exchange shall send a notification indication to the remote by means of a call progress message, including the notification "conference disconnected".

b) Disconnect one of the remote parties

When the served user or one of the remote parties disconnects the call, the originating local exchange shall send a notification indication to the remaining remote party by means of a call progress message, including the notification "conference disconnected".

No notification is sent to the disconnected party.

c) Disconnect the entire call

Each call shall be cleared according to the proper call control procedures.

One party shall be disconnected first, according to procedure b), followed by the normal disconnection of the remaining remote party.

#### 2.5.2.1.2 Exceptional procedures

No exceptional procedures are identified.

# 2.5.2.2 Actions at the transit exchange

# 2.5.2.2.1 Normal operation

The exchange shall transfer transparently the messages related to the notification mechanism.

See also 2.5.2.1.1.1.

#### 2.5.2.2.2 Exceptional procedure

No exceptional procedures are identified.

# 2.5.2.3 Actions at the outgoing international gateway exchange

#### 2.5.2.3.1 Normal operation

The exchange shall transfer transparently the messages related to the notification mechanism.

See also 2.5.2.1.1.1.

# 2.5.2.3.2 Exceptional procedures

No exceptional procedures are identified.

# 2.5.2.4 Actions at the incoming international gateway exchange

#### 2.5.2.4.1 Normal operation

The exchange shall transfer the messages related to the notification mechanism.

See also 2.5.2.1.1.1.

# 2.5.2.4.2 Exceptional procedure

No exceptional procedures are identified.

#### 2.5.2.5 Actions at the destination local exchange

The destination local exchange for this description is not necessarily the destination exchange for the basic call.

#### 2.5.2.5.1 Normal operation

The information contained in the call progress message related to the notification mechanism received by the destination local exchange where the remote party (user B or user C) is connected are passed along to the access signalling system.

See also 2.5.2.1.1.1.

# 2.5.2.5.2 Exceptional procedures

No exceptional procedures are identified.

# 2.6 Interactions with other supplementary services

#### 2.6.1 Call waiting (CW)

No impact on ISUP.

#### 2.6.2 Call transfer services

No applicable interaction at this time.

#### 2.6.3 Connected line identification presentation (COLP)

No impact on ISUP.

# 2.6.4 Connected line identification restriction (COLR)

No impact on ISUP.

# 2.6.5 Calling line identification presentation (CLIP)

No impact on ISUP.

# 2.6.6 Calling line identification restriction (CLIR)

No impact on ISUP.

# 2.6.7 Closed user group (CUG)

For the successful invocation of the three-party supplementary service, any CUG restrictions normally applied to individual CUG calls between users A-B, or A-C shall still apply when the three-party service is invoked, i.e. the CUG check procedure is only performed on each individual leg of the call.

NOTE – CUG restrictions cannot be guaranteed between users B and C.

#### 2.6.8 Conference calling (CONF)

No impact on ISUP.

# 2.6.9 Direct dialling-in (DDI)

No impact on ISUP.

# 2.6.10 Call diversion (call forwarding) services (CDIV)

# 2.6.10.1 Call forwarding busy (CFB)

No impact on ISUP.

#### 2.6.10.2 Call forwarding no reply (CFNR)

No impact on ISUP.

# 2.6.10.3 Call forwarding unconditional (CFU)

No impact on ISUP.

#### 2.6.10.4 Call deflection (CD)

No impact on ISUP.

# 2.6.11 Line hunting (LH)

No impact on ISUP.

# 2.6.12 Three-party service (3PTY)

Not applicable.

# 2.6.13 User-to-user signalling (UUS)

#### 2.6.13.1 Service 1 (UUS1)

No impact on ISUP.

# 2.6.13.2 Service 2 (UUS2)

No impact on ISUP.

#### 2.6.13.3 Service 3 (UUS3)

No impact on ISUP.

# 2.6.14 Multiple subscriber number (MSN)

No impact on ISUP.

# 2.6.15 Call hold ( HOLD)

In case of a hold request sent by a served user during the three-way conversation active phase, no notifications shall be sent toward the remote users.

# 2.6.16 Advice of charge (AOC)

No impact on ISUP.

# 2.6.17 Sub-addressing (SUB)

No impact on ISUP.

# 2.6.18 Terminal portability (TP)

No impact on ISUP.

# 2.6.19 Completion of call to busy subscriber (CCBS)

No applicable interaction at this time.

# 2.6.20 Malicious call identification (MCID)

No impact on ISUP.

#### 2.6.21 Reverse charging (REV)

No applicable interaction at this time.

# 2.6.22 Multi-level precedence and preemption (MLPP)

No impact on ISUP.

# 2.6.23 Private numbering plan (PNP)

No applicable interaction at this time.

# 2.6.24 International telecommunication charge card

No applicable interaction at this time.

# 2.7 Interactions with other networks

In case of interactions with networks which do not provide the notification procedure, the interaction exchange will discard the call progress message. However, the three-way conversation will be completed according to the proper basic call procedures as described in Recommendation Q.764.

# 2.8 Signalling flows

Information flows for the three-party supplementary service are shown in Figures 2-1 through Figure 2-4/Q.734.

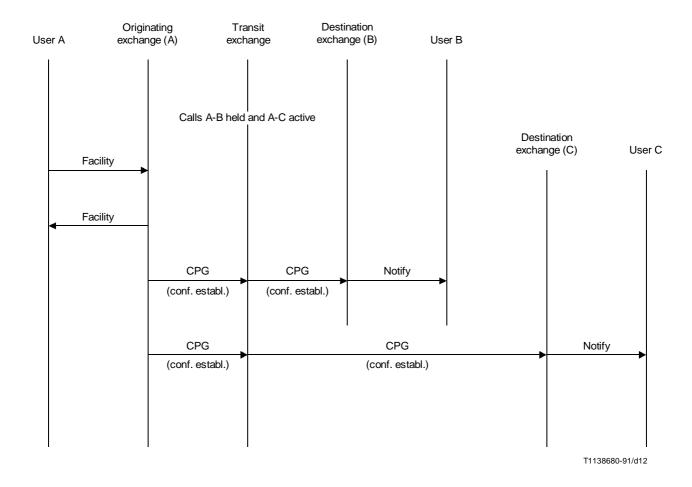


FIGURE 2-1/Q.734

Three-party service invocation

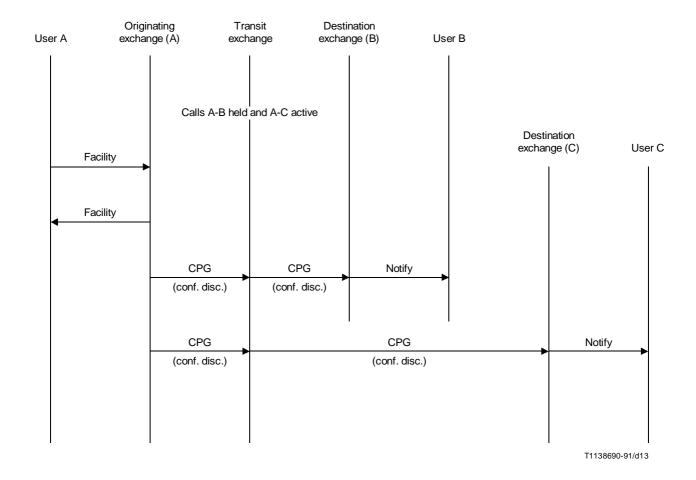
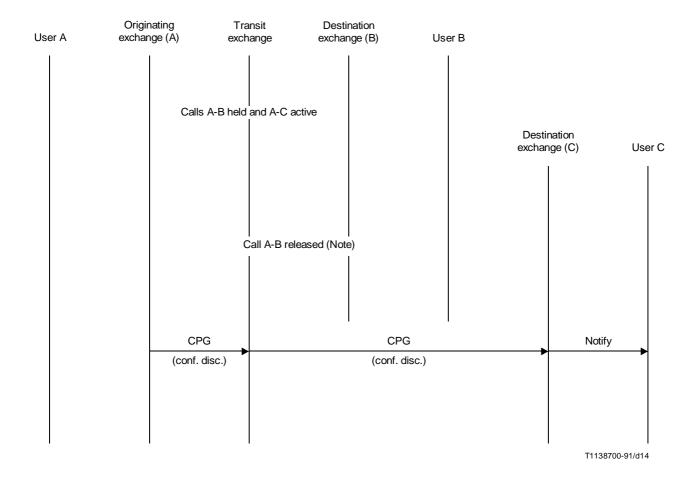
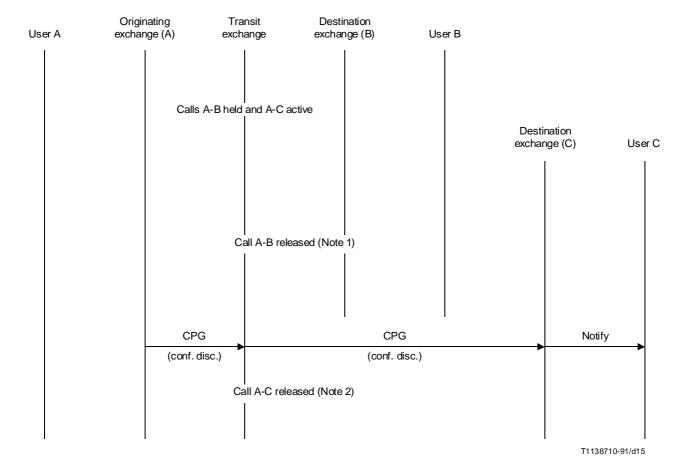


FIGURE 2-2/Q.734 Split of a three-way conversation



NOTE – The call between user A and user B may be released either by the served or by the remote party.

FIGURE 2-3/Q.734 **Disconnection of one remote party** 



#### **NOTES**

- $1 \qquad \text{The call between user A and user B is released by the served user according to the "disconnection of one remote party" procedure (see Figure 2-3).}$
- 2 The call between user A and user C is released by the served user according to the basic call procedures.

FIGURE 2-4/Q.734

# Disconnection of the entire three-party call

# 2.9 Parameter values (timers)

No specific timers are required.

# 2.10 Dynamic description

No dynamic description (SDLs) is required.