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SERIES Q: SWITCHING AND SIGNALLING

**Technical Report TRQ.2130: Coordinated call
control and bearer control signalling
requirements for leaf initiated join service**

ITU-T Q-series Recommendations – Supplement 15

(Formerly CCITT Recommendations)

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SUPPLEMENT 15 TO ITU-T Q-SERIES RECOMMENDATIONS

TECHNICAL REPORT TRQ.2130: COORDINATED CALL CONTROL AND BEARER CONTROL SIGNALLING REQUIREMENTS FOR LEAF INITIATED JOIN SERVICE

Summary

This Supplement specifies the signalling requirements for the Leaf Initiated Join service capability. These signalling requirements cover the UNI and NNI interactions (exchange of information flows) and internal serving node procedure requirements for a serving node associated with a leaf and associated with the root of the connection(s). The signalling requirements include LIJ call creation and release, attachment of new parties by the root or by themselves ("leaf initiated join"), and detachment of parties by the root or by themselves.

Source

Supplement 15 to ITU-T Q-series Recommendations was prepared by ITU-T Study Group 11 (1997-2000) and was approved under the WTSC Resolution 5 procedure on 3 December 1999.

FOREWORD

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Supplement 15 to Q-series Recommendations

TECHNICAL REPORT TRQ.2130: COORDINATED CALL CONTROL AND BEARER CONTROL SIGNALLING REQUIREMENTS FOR LEAF INITIATED JOIN SERVICE

(Geneva, 1999)

1 Scope

This Supplement presents the procedures, information flows and Information Elements needed for supporting calls containing root screened and network screened leaf initiated join calls with point-to-multipoint connection(s).

2 References

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

- [1] ITU-T Q-series Recommendations – Supplement 7 (1999), *Technical Report TRQ.2001: General aspects for the development of unified signalling requirements.*
- [2] ITU-T Q-series Recommendations – Supplement 10 (1999), *Technical Report TRQ.2002: Information Flow Elements.*
- [3] ITU-T Q-series Recommendations – Supplement 12 (1999), *Technical Report TRQ.2100: Coordinated call control and bearer control signalling requirements – Root-Party coordinated call and bearer control.*

3 Definitions

These signalling requirements allow a leaf-party to join a call that contains one or more point-to-multipoint connections which have been designated leaf initiated join Connections and be added to these connections. This "Special Call Association" is called a leaf initiated join Call (LIJ Call); it is referenced by a leaf-party via a Unique "LIJ Call ID". The following three types of LIJ Calls are differentiated:

3.1 LIJ calls with root screening: The Root receives a leaf set-up request for every leaf that wishes to join the call, then either creates the call to the Leaf or adds the leaf to the ongoing call. The root has the option of rejecting any join attempt. When using this mode, the network never automatically joins leaves to the call.

3.2 LIJ calls network screening with root notification: The root creates the call as a leaf initiated join call, then the network automatically attempts to add all leaves to the call that request to be added. After each leaf completes joining the LIJ call, the root receives a notification about the event.

3.3 LIJ calls network screening without root notification: The root creates the call as a leaf initiated join call, then the network automatically attempts to add all leaves to the call that request to be added. In this case, the root gets no indication when leaves are added by the network.

4 Abbreviations

The Supplement uses the following abbreviations:

ATM	Asynchronous Transfer Mode
BC-N	Bearer Control (NNI)
BC-T	Bearer Control (UNI)
CC-N	Call Control (NNI)
CC-T	Call Control (UNI)
LIJ	Leaf Initiated Join
SN	Serving Node

5 Information flows used in this Supplement

Table 5-1 contains the leaf initiated join point-to-multipoint connection(s) information flow definitions that are used across the call control (CC-T to CC-N) and bearer control (BC-T to BC-N) interfaces specified in Supplement 7 [1]. These information flows are used to establish, modify, and release leaf initiated join calls and connections.

Table 5-1 – Information flows used for leaf initiated join point-to-multipoint Connection(s)

Information Flow	Begin	Ready	Commit	Cancel	Indication
Call-&-Bearer-Setup	✓	✓	✓	(Note)	
Call-Setup	✓	✓	✓	(Note)	
Add-Bearer-to-Call	✓	✓	✓	(Note)	
Attach-Party-to-Bearer	✓	✓	✓	(Note)	
Add-Party-&-Bearer-to-Call	✓	✓	✓	(Note)	
Join-Call-&-Bearer	✓	✓	✓	(Note)	
Detach-Party-from-Bearer		✓	✓	(Note)	
Release-Bearer		✓	✓	(Note)	
Release-Party-from-Call		✓	✓	(Note)	
Release-Call		✓	✓	(Note)	
Notify-Party-&-Bearer-Change					✓
Notify-Bearer-Change					✓

NOTE – The information flows in this Supplement show only successful operations; therefore, the "cancel" information flows are not used.

6 Leaf initiated call registration

A root-party has the capability of creating a leaf initiated call registration with its serving node and all leaf associated serving nodes. This registration illustrates its willingness to be a root of a call allowing another party to join this call and possibly be attached to its (their) associated connection(s). The root-party can register several call instances each of which may be associated with network handling options for future requests from other parties which wish to be added to the registered leaf initiated join call. The method of handling the leaf initiated join requests from other parties are specified as part of the registration for each call instance procedure. The methods of

handling the requests can be categorized into two classifications: root-party controlled actions, and network controlled actions. These two classifications are illustrated as follows.

6.1 Root-party controlled actions

If the LIJ call join or the LIJ call and bearer request contains a valid single party address, pass the request to the root for handling.

If multiple LIJ call join requests are received by the network for the same LIJ call and the call is not active, the network will queue all but the first request until the LIJ call has been established to the first request. Queued requests then will be sent to the root-party. LIJ call and bearer requests will also be queued if the set of bearers have not been established within the network.

6.2 Network controlled actions

6.2.1 Handling of LIJ call join requests when an active LIJ call has been established

If the LIJ call join request contains a valid single party address, and there is an active LIJ call, add the party to the call.

6.2.2 Handling of LIJ call and bearer requests when an active LIJ call and its set of bearers have been established

If the LIJ call and bearer request contains a valid single party address, and there is an active LIJ call and its set of associated bearers has been established, add the party to the call and attach the leaf-party to the set of bearers.

6.2.3 Handling of leaf join requests when no active LIJ call is in progress or a LIJ call is active but its set of bearers have not been established

If the LIJ call join request or the LIJ call and bearer request contains a valid single party address, pass the request to the root for handling.

If multiple LIJ call join requests are received by the network for the same LIJ call, the network will queue all but the first request until the LIJ call has been established to the first request. Queued requests will be handled according to the options specified under handling during active call subclause above.

If multiple LIJ call and bearer requests are received by the network for the same LIJ call, the network will queue all but the first request until the LIJ call associated bearers have been established to the first request. Queued requests will be handled according to the options specified under handling during active call and bearers subclause above.

6.2.4 Root-party notification options upon completion of join requests

There are notification two options that can be specified by the root-party as to the manner in which leaf-party join request should be handled by the root-party's associated serving node. These options are as follows:

- No notification is to be given to root-party when ever the network adds a leaf-party to a LIJ call.
- If the request contains a valid single party address, notify the root-party that the leaf-party has been added to or deleted from the LIJ call.

NOTE – The root serving node's information is also updated with this option.

6.3 Registration process for a root serving node

The registration process may be accomplished via several methods. These methods are described in the following list:

- 1) Call establishment request (begin or ready) with leaf initiated call registration: When a call establishment request is sent to the network, the root-party will provide the LIJ call ID and Service Characteristics to the network for the registration. The local call control segment ID will be associated with the LIJ call ID in order to provide trace-ability.
- 2) Call and bearer establishment request (begin or ready) with leaf initiated call registration: When a call and bearer establishment request is sent to the network, the root-party will provide the LIJ call ID, bearer characteristics, and service characteristics to the network for the registration. The local call control segment ID will be associated with the LIJ call ID in order to provide trace-ability.
- 3) Add bearer request (begin or ready) with leaf initiated call registration: When an add bearer request is sent to the network, the root-party will provide the LIJ call ID, bearer characteristics, and service characteristics to the network for the registration. The local call control segment ID will be associated with the LIJ call ID in order to provide trace-ability.
- 4) Add party request (begin or ready) with leaf initiated call registration: When an add party request is sent to the network, the root-party will provide the LIJ call ID, bearer characteristics, and service characteristics to the network for the registration. The local call control segment ID will be associated with the LIJ call ID in order to provide trace-ability.

6.4 Registration process for a leaf serving node

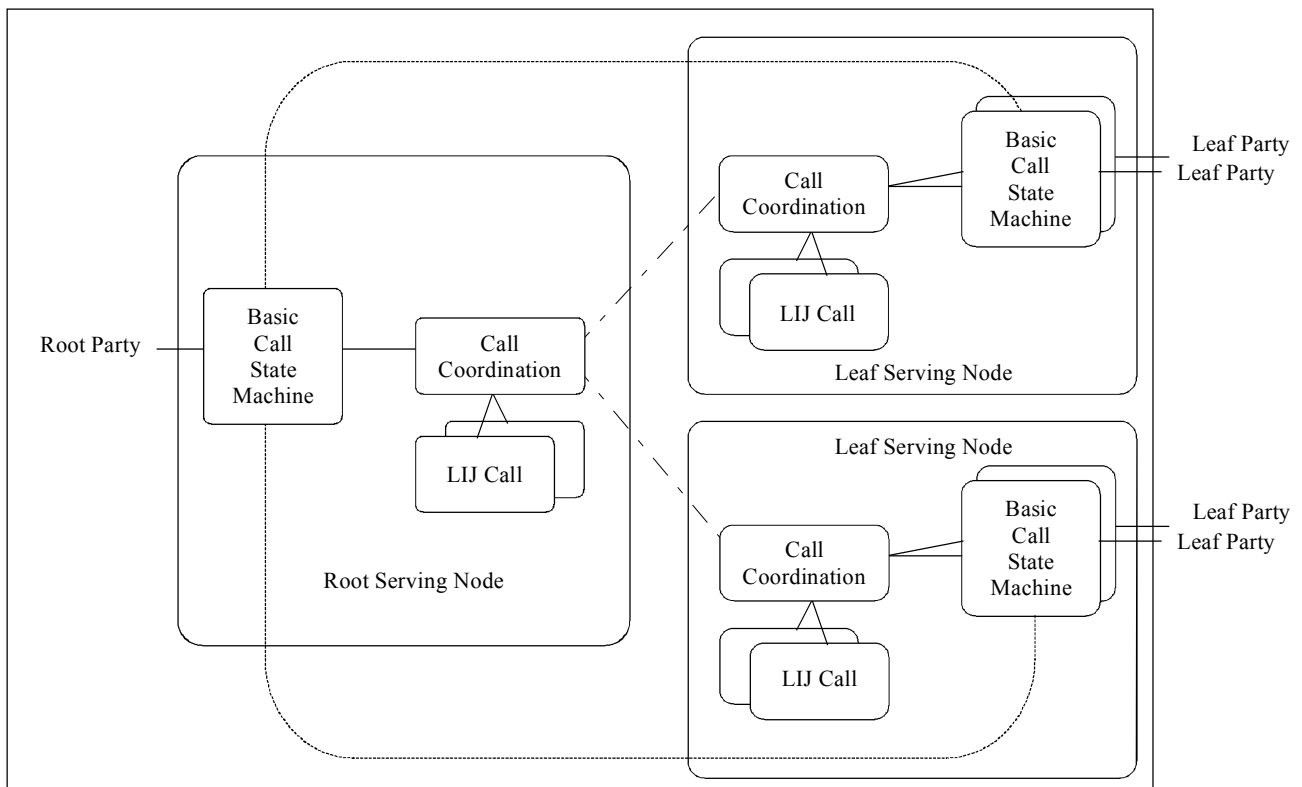
The registration process methods for a leaf serving node are as follows:

- 1) Call establishment acceptance (commit) with leaf initiated call registration: When a call establishment acceptance is received by the network from a leaf-party Basic Call State Machine (BCSM), the LIJ call ID and service characteristics received from the root serving node via the call establishment request will be used for the leaf serving node registration process. The local call control segment ID between the network and the leaf-party will be associated with the LIJ call ID in order to provide trace-ability.
- 2) Call and bearer establishment acceptance (commit) with leaf initiated call registration: When a call and bearer establishment acceptance is received by the network from a leaf-party BCSM, the LIJ call ID, bearer characteristics, and service characteristics received from the root serving node via the call and bearer establishment request will be used for the leaf serving node registration process. The local call control segment ID between the network and the leaf-party will be associated with the LIJ call ID in order to provide trace-ability.
- 3) Add bearer acceptance (commit) with leaf initiated call registration: When an add bearer acceptance is received by the network from a leaf-party BCSM, the LIJ call ID, bearer characteristics, and service characteristics received from the root serving node via the add bearer request will be used for the leaf serving node registration process. The local call control segment ID between the network and the leaf-party will be associated with the LIJ call ID in order to provide trace-ability.
- 4) Add party acceptance (commit) with leaf initiated call registration: When an add party acceptance is received by the network from a leaf-party BCSM, the LIJ call ID, bearer characteristics, and service characteristics received from the root serving node via the add party request will be used for the leaf serving node registration process. The local call control segment ID between the network and the leaf-party will be associated with the LIJ call ID in order to provide trace-ability.

7 Serving node LIJ procedures

The serving node procedures within the network can be separated into two types, root serving node procedures and leaf serving node procedures. In many cases, a physical serving node may contain both sets of procedures if both a root-party and one or more leaf-parties are connected to it. The following diagram attempts to illustrate these two categories of procedures.

NOTE – A call and bearer gateway at an entry point of a network with respect to the root-party can perform the similar procedures as a root serving node, and a call and bearer gateway at an exit point of a network with respect to the root-party can perform the similar procedures as a leaf serving node.



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8 Overview of Peer-to-Peer Functional Entity Actions

Stage 2 flows for each signalling capability is illustrated via a high level overview. The overview model does not illustrate all possible configurations which could exist within an actual instance of the service, however, the examples have been chosen in order to illustrate the general principles. The overview will employ the network configuration shown in Figure 8-1. The actions illustrated in this figure can be used to describe signalling control actions associated with establishment or release of calls.

Note that for the purpose of this overview, the information flows and actions illustrate the establishment of a two-party call by the joining of a party to a registered but non-active call.

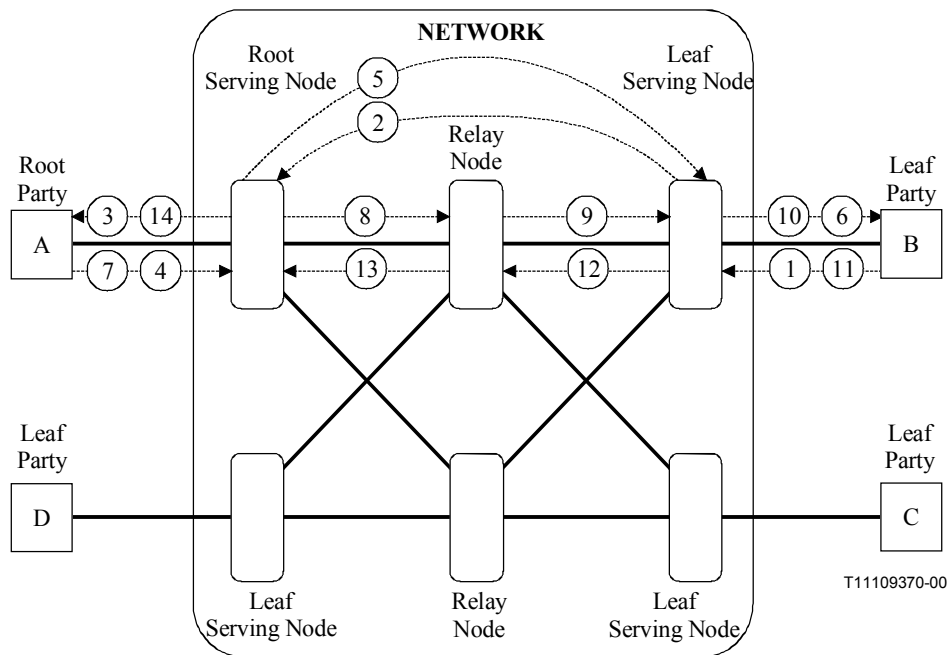


Figure 8-1 – Leaf-Party Request to Join LIJ Call and Bearer – No Active LIJ

The actions illustrated in Figure 8-1 are described as follows:

- 1) Signalling Service Request issued by service requestor: Receiving entity validates request, modifies internal state information, and then issues action 2 towards the initiator's serving node.
- 2) Relayed Signalling Service Request issued by requestor's serving node: Receiving entity validates request, modifies internal state information, and then issues action 3 towards the root-party.
- 3) Relayed Signalling Service Request issued by root serving node: Receiving entity validates request and requestor, modifies internal state information (record the establishment of the LIJ call and attachment of party B), and then issues response as action 4. In addition, call and bearer set-up is requested by issuing action 7 towards the root serving node.
- 4) Signalling Service Response issued by the call initiating party: Receiving entity validates response, modifies internal state information (records details about LIJ call), and then issues response as action 5.
- 5) Signalling Service Response issued by initiator's serving node: Receiving entity validates response, modifies internal state information (records details about LIJ call), and then relays response as action 6.
- 6) Signalling Service Response issued by requestor's serving node: Receiving entity records response, modifies internal state information, and then awaits the call and bearer set-up.
- 7) Signalling Service Request (call and bearer set-up) issued by root: Receiving entity validates request, modifies internal state information, and then issues action 8 towards the relay node.
- 8) Relayed Signalling Service Request issued by root serving node: Receiving entity validates request, modifies internal state information, and then issues action 9 towards the initiator's serving node.
- 9) Relayed Signalling Service Request issued by relay node: Receiving entity validates request, associates it with the LIJ call information received in action 5, modifies internal state information, and then issues action 9 towards the initiator's serving node.

- 10) Relayed Signalling Service Request issued by requestor's serving node: Receiving entity validates request, associates it with the LIJ call information received in action 6, modifies internal state information, notifies the user of the outcome of the requested service, and then issues response as action 11.
- 11) Signalling Service Response issued by service requestor: Receiving entity validates response, modifies internal state information, and then relays response as action 12.
- 12) Signalling Service Response issued by requestor's serving node: Receiving entity validates response, modifies internal state information, and then relays response as action 13.
- 13) Signalling Service Response issued by relay node: Receiving entity validates response, modifies internal state information, and then relays response as action 14.
- 14) Signalling Service Response issued by root serving node: Receiving entity records response, and modifies internal state information.

The purpose of this overview model is that it provides an end-to-end pictorial representation of the signalling capability in one figure. Again, note that the model does not present all possible network topologies, however, it illustrates the general configurations that would be encountered in intra-network operations. The extension to multiple networks can be extrapolated by replacing the serving nodes and relay nodes with logical serving networks and transit networks.

The following clauses will describe the basic call control signalling capabilities using this model.

9 Functional Entity Actions

9.1 LIJ Call Creation

The following subclauses describe the functional entity actions associated with the joining of an LIJ call only with or without associated bearers.

9.1.1 Root-Party Request to Create a LIJ Call and Bearer (without attachment of a Leaf-Party)

This signalling capability illustrates the information flows necessary to establish the initial LIJ call and its associated bearers. The call and bearer transition diagram for LIJ call creation is shown in Figure 9-1. Only the root-party is present in the resulting call and the type 2 network connection is established only between the root-party and its serving node. Upon the completion of the functional entity action, the serving node associated with the root-party A have created a LIJ call and bearer association.

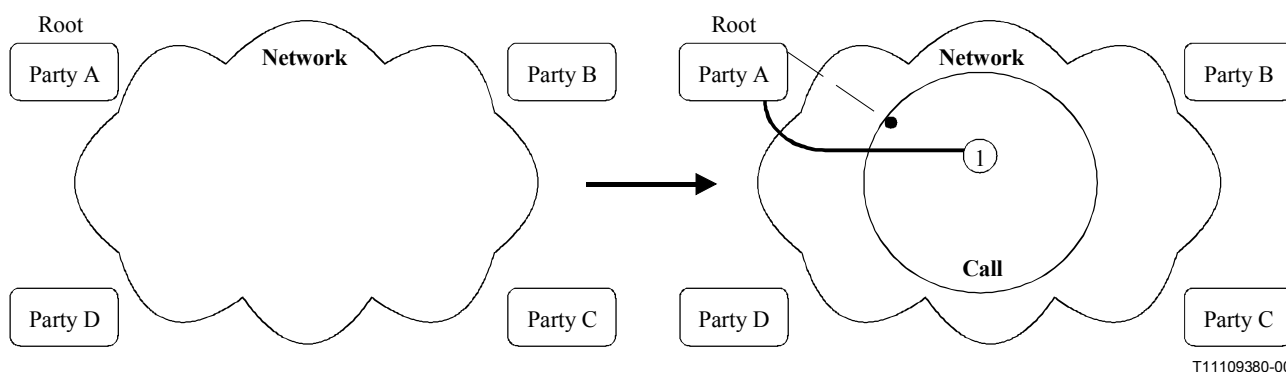


Figure 9-1 – Call and bearer transition diagram for LIJ call and bearer creation

The information flows are illustrated in Figure 9-2.

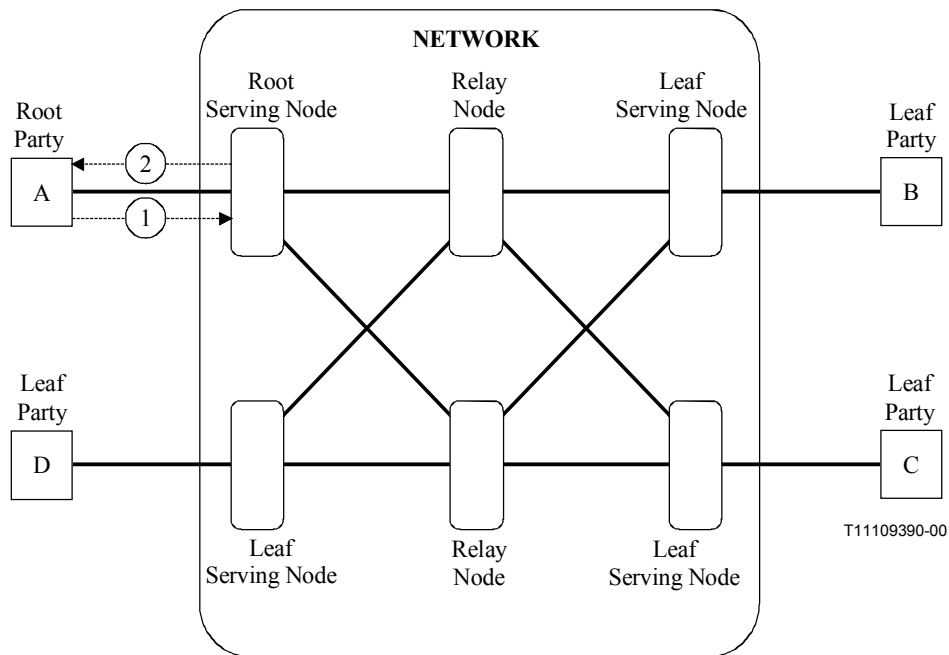


Figure 9-2 – Root-party request to create an LIJ call and bearer without attaching a leaf-party

1	Call-&-Bearer-Setup.ready	Party A to Serving Node A
<p>Resource information</p> <p>Session ID</p> <p>Resource 1 Resource 1 ID, Resource type, Parties communicating (PEP "A" ID, PEP "SN" ID) Addr. party's service comp. (PEP "SN" ID, Service component characteristics)</p>	<p>Call information</p> <p>LIJ call ID</p> <p>Call control segment ID</p> <p>Requesting party information [Party "A" Address, Call PEP "A" ID]</p> <p>Addressed party information [PEP "SN" ID, "SN address"]</p> <p>Additional LIJ information [Registration Parameter = root screening]</p>	<p>Bearer information</p> <p>Network connection 1 Bearer "1" ID, Bearer Type, Parties connected (PEP "A" ID, PEP "SN" ID), Addr. party's bearer branch information (PEP "SN" ID, Transit Network Selection, bearer branch characteristics), Addr. party's service module information (PEP "SN" ID, Service module characteristics), Service component list (Resource 1 ID)</p>

NOTE 1 – Depending on the LIJ type, the Registration Parameter may also be "network screening with root notification" or "network screening without root notification".

Initiation of information flow: The root-party requests that a LIJ call and its associated bearers be established between the root-party and its serving node without attaching a leaf-party.

Processing upon receipt: The serving node determines that there is no LIJ Call Instant within the leaf serving node and creates one. The bearer resources across the UNI are allocated.

Resource information**Session ID****Resource 1**

Resource 1 ID, Resource type,

Parties communicating

(PEP "A" ID, PEP "SN" ID)

Addr. party's service comp.

(PEP "A" ID, Service

component

characteristics)

Call information**LIJ call ID****Call Owner** PEP "A" ID,**Call control segment ID****Addressed party information**

[Party "A" Address, Call PEP "A" ID]

Bearer information**Network connection 1**

Bearer "1" ID, Bearer Type,

Parties connected

(PEP "A" ID, PEP "SN" ID),

Addr. party's bearer branch information

((PEP "A" ID, bearer branch characteristics,

branch owner: PEP "A" ID),

Addr. party's service module information

(PEP "A" ID, Service module

characteristics),

Service component list

(Resource 1 ID)

Processing upon receipt: When this information flow arrives at Party A, the requesting party knows that the requested composite action has been completed.

NOTE 2 – Party A is told what its bearer branch characteristic are by its associated serving node. If these characteristics are not acceptable, party A needs to release the bearer.

9.1.2 Root-Party Request to Create a LIJ Call and Bearer (with attachment of a Leaf-Party)

This signalling capability illustrates the information flows necessary to establish the initial LIJ call and its associated bearers. Only one bearer is illustrated. Upon the completion of the functional entity action, both the serving node associated with the leaf-party B and the serving node associated with the root-party A have created a LIJ call and bearer association.

Other than the carrying of the information elements necessary to convey the data to create the LIJ call and bearer association the information flows are identical to the ones where a root-party establishes a call and bearer with a type 2 network connection to a single leaf according to 7.3/Supplement 12 [3].

9.1.3 Leaf-Party Request to Join LIJ Call and Bearer (no active LIJ call exists)

- LIJ Calls with root screening.
- LIJ Calls network screening with root notification.
- LIJ Calls network screening without root notification.

This signalling capability illustrates the information flows necessary to establish the initial LIJ call and its associated bearers. The call and bearer transition diagram for leaf-party request to join LIJ call and bearer is shown in Figure 9-3. Only one bearer is illustrated, however, it is a simple extension to include an additional bearer. Upon the completion of the functional entity action, both the serving node associated with the leaf-party B and the serving node associated with the root-party A have created a LIJ call and bearer association. It should be noted that for the initial request from the leaf-party, the serving node associated with party B could be considered the requesting node, however, the choice of the designation of requesting serving node and addressed serving node was chosen from the perspective of the root-party, party A.

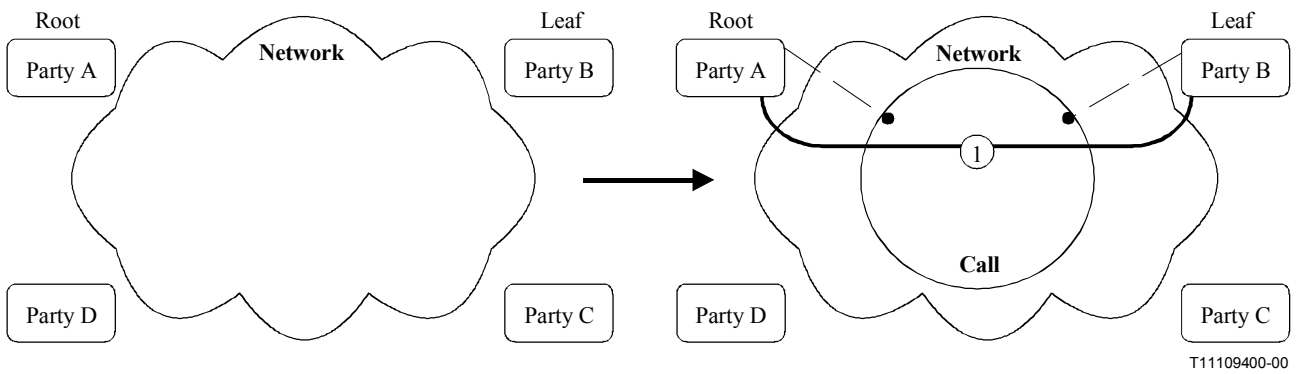


Figure 9-3 – Call and bearer transition diagram for leaf-party request to join LIJ call and bearer – No active call and bearer connection

The information flows are illustrated in Figure 9-4.

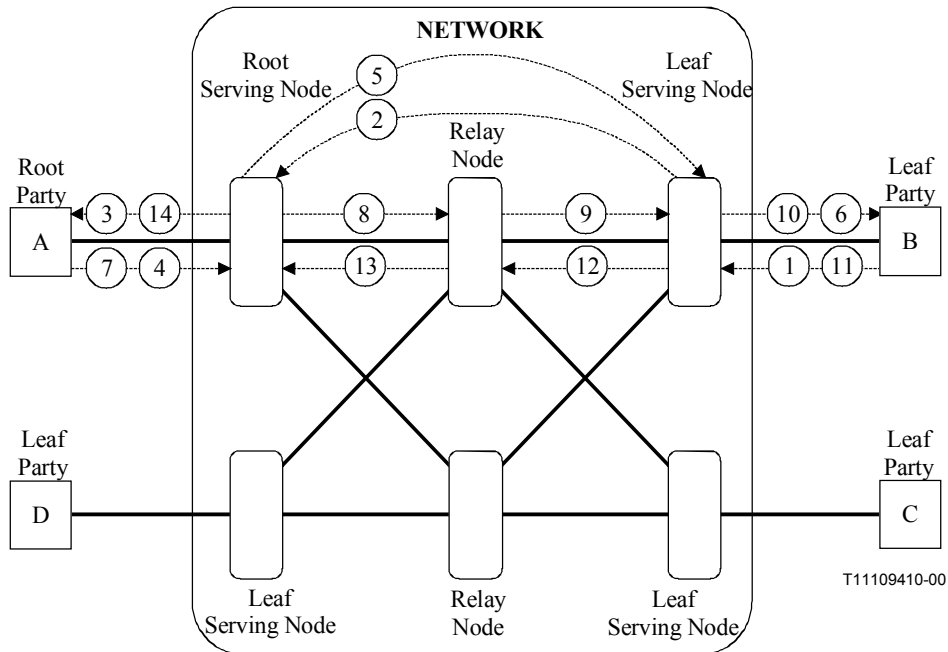


Figure 9-4 – Leaf-Party Request to Join LIJ Call and Bearer – No active call and bearer connection

1	Join-Call-&-Bearer.ready	Party B to Serving Node B
Resource information (None)	Call information LIJ call ID Call control segment ID Requesting party information [Party "B" Address, Call PEP "B" ID] Addressed party information [Party "A" Address, Call PEP "A" ID]	Bearer information (None)

Initiation of information flow: A leaf-party requests that it be permitted to join a LIJ call and its associated bearers.

Processing upon receipt: The serving node determines that there is no LIJ Call Instant within the leaf serving node and issues an Edge-to-Edge flow to the root serving node (information flow 2).

2 Join-Call-&-Bearer.ready Serving Node B to Serving Node A

Resource information (None)	Call information LIJ call ID Call control segment ID Requesting party information [Party "B" Address, Call PEP "B" ID] Addressed party information [Party "A" Address, Call PEP "A" ID]	Bearer information (None)
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Processing upon receipt: The root serving node determines that there is no LIJ call instant within the root serving node and issues a flow to the root-party (information flow 3).

3 Join-Call-&-Bearer.ready Serving Node A to Party A

Resource information (None)	Call information LIJ call ID Call control segment ID Requesting party information [Party "B" Address, Call PEP "B" ID] Addressed party information [Party "A" Address, Call PEP "A" ID]	Bearer information (None)
---------------------------------------	--	-------------------------------------

Processing upon receipt: The root-party decides to honour this request and acknowledges it (information flow 4) before issuing a call and bearer establishment request (information flow 7) containing the LIJ call ID value it received in the leaf join request. In addition, the registration parameters have been included in the information flow.

4 Join-Call-&-Bearer.commit Party A to Serving Node A

Resource information Session ID Resource 1 Resource 1 ID, Resource type, Parties communicating (PEP "B" ID, PEP "Group" ID) Addr. party's service comp. (PEP "A" ID, Service component characteristics)	Call information LIJ call ID Call control segment ID Requesting party information [Party "B" Address, Call PEP "B" ID] Addressed party information [Party "A" Address, Call PEP "A" ID] Additional LIJ information [Registration Parameter = root screening]	Bearer information (None)
---	--	-------------------------------------

NOTE 1 – Depending on the LIJ type, the Registration Parameter may also be "network screening with root notification" or "network screening without root notification".

Processing upon receipt: The serving node A passes this acknowledgement to serving node B (information flow 5).

5 Join-Call-&-Bearer.commit Serving Node A to Serving Node B

Resource information Session ID Resource 1 Resource 1 ID, Resource type, Parties communicating (PEP "B" ID, PEP "Group" ID) Addr. party's service comp. (PEP "A" ID, Service component characteristics)	Call information LIJ call ID Call Owner Call PEP "A" ID, Call control segment ID Requesting party information [Party "B" Address, Call PEP "B" ID] Addressed party information [Party "A" Address, Call PEP "A" ID] Additional LIJ information [Registration Parameter = root screening]	Bearer information (None)
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NOTE 2 – Depending on the LIJ type, the Registration Parameter may also be "network screening with root notification" or "network screening without root notification".

Processing upon receipt: The serving node B stores the information such that a correlation can be detected upon receipt of information flow 9. It then passes the acknowledgement to party B (information flow 6).

Resource information	Call information	Bearer information
Session ID	LIJ call ID	(None)
Resource 1 Resource 1 ID, Resource type,	Call Owner Call PEP "A" ID,	
Parties communicating (PEP "B" ID, PEP "Group" ID)	Call control segment ID	
Addr. party's service comp. (PEP "A" ID, Service component characteristics)	Requesting party information [Party "B" Address, Call PEP "B" ID]	
	Addressed party information [Party "A" Address, Call PEP "A" ID]	

Processing upon receipt: Party B notices the acknowledgement and awaits the call and bearer establishment.

Resource information	Call information	Bearer information
Session ID	LIJ call ID	Network connection 1
Resource 1 Resource 1 ID, Resource type,	Call control segment ID	Bearer "1" ID, Bearer Type,
Parties communicating (PEP "A" ID, PEP "B" ID)	Requesting party information [Party "A" Address, Call PEP "A" ID]	Parties connected (PEP "A" ID, PEP "B" ID),
Addr. party's service comp. (PEP "B" ID, Service component characteristics)	Addressed party information [Party "B" Address, Call PEP "B" ID]	Addr. party's bearer branch information (PEP "B" ID, Transit network selection, bearer branch characteristics),
	Additional LIJ information [Registration Parameter = root screening]	Addr. party's service module information (PEP "B" ID, Service module characteristics),
		Service component list (Resource 1 ID)

NOTE 3 – Depending on the LIJ type, the Registration Parameter may also be "network screening with root notification" or "network screening without root notification".

Initiation of information flow: Information flow 3 processed by party A

Processing upon receipt: When this information flow is received by the serving node A, it will issue information flow 8, "connect through" the bearer towards the root-party, and awaits appropriate responses. It also continues establishment of the call and bearer towards the relays node (information flow 8).

Resource information	Call information	Bearer information
Session ID	LIJ call ID	Network connection 1
Resource 1 Resource 1 ID, Resource type,	Call Owner PEP "A" ID,	Bearer "1" ID, Bearer Type,
Parties communicating (PEP "A" ID, PEP "B" ID)	Call control segment ID	Parties connected (PEP "A" ID, PEP "B" ID),
Addr. party's service comp. (PEP "B" ID, Service component characteristics)	Direct Call association (SN(A):ref.a – SN(B):----) ID,	Addr. party's bearer branch information (PEP "B" ID, Transit network selection, bearer branch characteristics),
	Requesting party information [Party "A" Address, Call PEP "A" ID] Party Owner: PEP "A" ID,	Addr. party's service module information (PEP "B" ID, Service module characteristics),
	Addressed party information [Party "B" Address, Call PEP "B" ID] Party Owner: PEP "A" ID,	Service component list (Resource 1 ID)
	Additional LIJ information [Registration Parameter = root screening]	

NOTE 4 – Depending on the LIJ type, the Registration Parameter may also be "network screening with root notification" or "network screening without root notification".

Processing upon receipt: When the relay node receives this information flow, it issues information flow 9 towards the serving node associated with Party B. The relay node "cuts through" the bearer in both the "backward" and "forward" direction. The relays node also creates a LIJ call and bearer association.

Resource information**Session ID****Resource 1**

Resource 1 ID, Resource type,
Parties communicating
 (PEP "A" ID, PEP "B" ID)
Addr. party's service comp.
 (PEP "B" ID, Service component characteristics)

Call information**LIJ call ID****Call Owner** PEP "A" ID**Call control segment ID****Direct Call association** (SN(A):ref.a – SN(B):----) ID,**Requesting party information**

[Party "A" Address, Call PEP "A" ID]

Party Owner: PEP "A" ID,

Addressed party information

[Party "B" Address, Call PEP "B" ID]

Party Owner: PEP "A" ID,

Additional LIJ information

[Registration Parameter = root screening]

Bearer information**Network connection 1**

Bearer "1" ID, Bearer Type,

Parties connected

(PEP "A" ID, PEP "B" ID),

Addr. party's bearer branch information

(PEP "B" ID, Transit network selection,
 bearer branch characteristics),

Addr. party's service module information

(PEP "B" ID, Service module characteristics),

Service component list

(Resource 1 ID)

NOTE 5 – Depending on the LIJ type, the Registration Parameter may also be "network screening with root notification" or "network screening without root notification".

Processing upon receipt: When the serving node associated with Party B receives the above information flow, the necessary information flow has been received to continue the coordinated action. The serving node then issues information flow 10 towards Party B. The serving node performs the "cut through" of the bearer in the "backward" direction.

10 Call-&-Bearer-Setup.ready**Serving Node B to Party B****Resource information****Session ID****Resource 1**

Resource 1 ID, Resource type,
Parties communicating
 (PEP "A" ID, PEP "B" ID)
Addr. party's service comp.
 (PEP "B" ID, Service component characteristics)

Call information**LIJ call ID****Call Owner** PEP "A" ID**Call control segment ID****Requesting party information**

[Party "A" Address, Call PEP "A" ID]

Addressed party information

[Party "B" Address, Call PEP "B" ID]

Bearer information**Network connection 1**

Bearer "1" ID, Bearer Type,

Parties connected

(PEP "A" ID, PEP "B" ID),

Addr. party's bearer branch information

(PEP "B" ID, Transit network selection,
 bearer branch characteristics),

Addr. party's service module information

(PEP "B" ID, Service module characteristics),

Service component list

(Resource 1 ID)

Processing upon receipt: When party B receives the above information flow, Party B recognizes the coordinated action and must accept the entire set of information flow. The terminal equipment offers the call to the user and when the user accepts the specified requests, issues information flow 11 towards its associated serving node. Since the incoming information flow contains the LIJ call ID transmitted in information flow 1, the leaf initiated call and bearer join request has been satisfied.

NOTE 6 – Party B does not have the option of changing its bearer branch characteristics.

When Party B receives the above information flow, Party B has been accepted in the call and the bearers have been allocated to the terminal equipment.

11 Call-&-Bearer-Setup.commit**Party B to Serving Node B****Resource information****Session ID****Resource 1**

Resource 1 ID

Call information**LIJ call ID****Call control segment ID****Requesting party information**

[Party "A" Address, Call PEP "A" ID]

Remote party information

[Party "B" Address, Call PEP "B" ID]

Bearer information**Network connection 1**

Bearer "1" ID

Processing upon receipt: When the serving node associated with party B receives this information flow, the serving node recognizes that party B has accepted the coordinated action and issues information flow 12 towards the requesting serving node. The serving node performs the "cut through" in the forward direction. The serving node also records the establishment of the LIJ Call and its associated bearers.

12 Call-&-Bearer-Setup.commit Serving Node B to Relay Node

Resource information	Call information	Bearer information
Session ID	LIJ call ID	Network connection 1
Resource 1 Resource 1 ID	Call control segment ID Direct Call association (SN(A):ref.a – SN(B):ref.b) ID, Remote party information [Party "B" Address, Call PEP "B" ID]	Bearer "1" ID

Processing upon receipt: When the relay node receives the above information flow, the relay node issues information flow 13 towards the requesting serving node. This information flow contains the bearer link characteristic that needs to be supported on the bearer link between the requesting serving node and the relay node.

13 Call-&-Bearer-Setup.commit Relay Node to Serving Node A

Resource information	Call information	Bearer information
Session ID	LIJ call ID	Network connection 1
Resource 1 Resource 1 ID	Call control segment ID Direct Call association (SN(A):ref.a – SN(B):ref.b) ID, Remote party information [Party "B" Address, Call PEP "B" ID]	Bearer "1" ID

Processing upon receipt: When the serving node receives the above information flow, the serving node recognizes that party B has accepted the coordinated action. It will modify the bearer characteristics of party A bearer branch, and "cut through" in the "forward" direction. The requesting serving node then issues information flow 14 containing the bearer characteristic for party A. The serving node also records the establishment of the LIJ call to the leaf serving node and its associated bearers and that this bearer and call has been accepted by Party B.

14 Call-&-Bearer-Setup.commit Serving Node A to Party A

Resource information	Call information	Bearer information
Session ID	LIJ call ID	Network connection 1
Resource 1 Resource 1 ID, Resource type, Parties communicating (PEP "A" ID, PEP "B" ID) Addr. party's service comp. (PEP "A" ID, Service component characteristics)	Call control segment ID Addressed party information [Party "A" Address, Call PEP "B" ID] Party Owner: PEP "A" ID,	Bearer "1" ID, Bearer Type, Parties connected (PEP "A" ID, PEP "B" ID), Addr. party's bearer branch information (PEP "A" ID, Transit network selection, bearer branch characteristics), Addr. party's service module information (PEP "A" ID, Service module characteristics), Service component list (Resource 1 ID)

Processing upon receipt: When this information flow arrives at party A, the root-party knows that the requested composite action has been completed.

NOTE 7 – Party A is told what its bearer branch characteristics are by its associated serving node. If these characteristics are not acceptable, party A needs to release the bearer.

NOTE 8 – The root-party is aware of the initial requesting leaf-party (party B).

9.2 Leaf-Party Request to Join Active LIJ Call and Bearer

The following subclauses describe the functional entity actions associated with the joining of a LIJ call and its associated bearers.

9.2.1 Leaf-Party Request to Join Active Call and Bearer in Root Serving Node – Root Screening

- Active LIJ call and bearer in root serving node with root screening.

This signalling capability illustrates the information flows necessary to add another party to a previously established LIJ call and its associated bearers. However, the leaf serving node has no record of this LIJ Call and Bearer. Only one bearer is illustrated, however, it is a simple extension to include an additional bearer. Upon the completion of the functional entity action, the serving node associated with the leaf-party B has created a LIJ call and bearer association.

NOTE – For the initial request from the leaf-party, the serving node associated with party B is considered the requesting node, however, the choice of the designation of requesting serving node and addressed serving node was chosen from the perspective of the root-party, party A.

The information flows are the same as in 9.1.3 with the exception of the following information flows:

Information flow	New information flow name	Information flow name in 8.1.3
7	Add-Party-and-Bearer-to-Call.ready	Call-and-Bearer-Setup.ready
14	Add-Party-and-Bearer-to-Call.commit	Call-and-Bearer-Setup.commit

If in addition, the bearer is already established between the serving node A and the relay node the following information flows also are different:

Information flow	New information flow name	Information flow name in 8.1.3
8	Add-Party-and-Bearer-to-Call.ready	Call-and-Bearer-Setup.ready
13	Add-Party-and-Bearer-to-Call.commit	Call-and-Bearer-Setup.commit

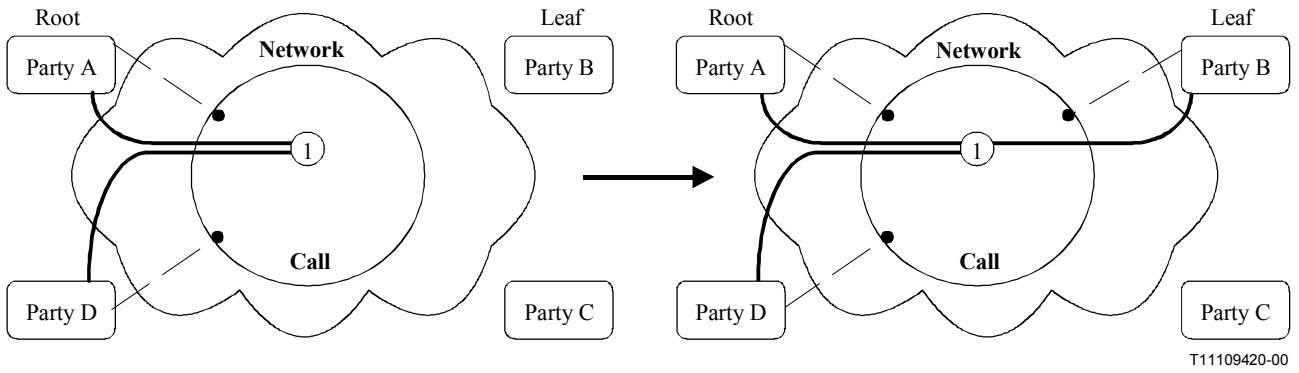
The parameters remain the same in all cases.

9.2.2 Leaf-Party Request to Join Active Call and Bearer in Root Serving Node – Network Screening

- Active LIJ calls and bearer in root serving node network screening with root notification.
- Active LIJ calls and bearer in root serving node network screening without root notification.

This signalling capability illustrates the information flows necessary to add another party to a previously established LIJ call and its associated bearers. However, the leaf serving node has no record of this LIJ call and bearer. The call and bearer transition diagram for call and bearer transition diagram for leaf-party request to join LIJ call and bearer is shown in Figure 9-5. Only one bearer is illustrated, however, it is a simple extension to include an additional bearer. Upon the completion of the functional entity action, the serving node associated with the leaf-party B has created a LIJ call and bearer association.

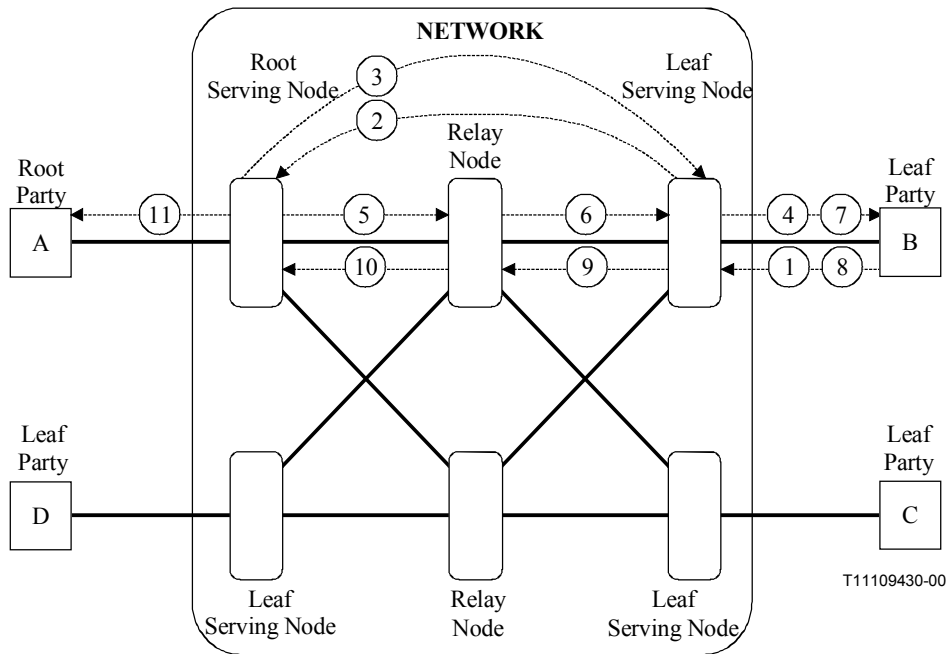
NOTE 1 – For the initial request from the leaf-party, the serving node associated with party B is considered the requesting node, however, the choice of the designation of requesting serving node and addressed serving node was chosen from the perspective of the root-party, party A.



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Figure 9-5 – Call and bearer transition diagram for leaf-party request to join LIJ call and bearer – Active LIJ call and bearer in root serving node – LIJ call not in leaf serving node

The information flows are illustrated in Figure 9-6.



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Figure 9-6 – Leaf-party request to join LIJ call and bearer – Active LIJ call and bearer in root serving node – LIJ call not in leaf serving node

1 Join-Call-&-Bearer.begin Party B to Serving Node B

Resource information (None)	Call information LIJ call ID Call control segment ID Requesting party information [Party "B" Address, Call PEP "B" ID] Addressed party information [Party "A" Address, Call PEP "A" ID]	Bearer information (None)
---------------------------------------	--	-------------------------------------

Initiation of information flow: A leaf-party requests that it be permitted to Join a LIJ call and its associated bearers.

Processing upon receipt: The serving node determines that there is no LIJ Call Instant within the leaf serving node and issues an Edge-to-Edge flow to the root serving node (information flow 2).

2 Join-Call-&-Bearer.ready Serving Node B to Serving Node A

Resource information (None)	Call information LIJ call ID Call control segment ID Requesting party information [Party "B" Address, Call PEP "B" ID] Addressed party information [Party "A" Address, Call PEP "A" ID]	Bearer information (None)
---------------------------------------	--	-------------------------------------

Processing upon receipt: The root serving node determines that the LIJ call exists within the root servicing node, honours this request and acknowledges it (information flow 3) and issues a call and bearer establishment request (information flow 5) containing the LIJ call ID value it received in the leaf join request. In addition, the registration parameters have been included in the information flow.

3 Join-Call-&-Bearer.commit Serving Node A to Serving Node B

Resource information Session ID Resource 1 Resource 1 ID, Resource type, Parties communicating (PEP "B" ID, PEP "Group" ID) Addr. party's service comp. (PEP "A" ID, Service component characteristics)	Call information LIJ call ID Call Owner Call PEP "A" ID, Call control segment ID Requesting party information [Party "B" Address, Call PEP "B" ID] Addressed party information [Party "A" Address, Call PEP "A" ID] Additional LIJ information [Registration Parameter = network screening with root notification]	Bearer information (None)
---	--	-------------------------------------

NOTE 2 – Depending on the LIJ type, the Registration Parameter may also be "network screening without root notification"

Processing upon receipt: When the above information flow arrives at the addressed serving node B, the serving node will determine that a coordinated action is to be performed. The serving node issues the acknowledgement to the requesting party B (information flow 4) and waits for the appropriate bearer information flows to arrive before proceeding with further actions.

4 Join-Call-&-Bearer.commit Serving Node B to Party B

Resource information Session ID Resource 1 Resource 1 ID, Resource type, Parties communicating (PEP "B" ID, PEP "Group" ID) Addr. party's service comp. (PEP "A" ID, Service component characteristics)	Call information LIJ call ID Call Owner Call PEP "A" ID, Call control segment ID Requesting party information [Party "B" Address, Call PEP "B" ID] Addressed party information [Party "A" Address, Call PEP "A" ID]	Bearer information (None)
---	---	-------------------------------------

Processing upon receipt: Party B notices the acknowledgement and awaits the call and bearer establishment.

NOTE 3 – If the Bearer is already established between the serving node A and the relay node, the information flow "Add-Party-and-Bearer-to-Call.ready" is used instead.

Resource information	Call information	Bearer information
Session ID	LIJ call ID	Network connection 1
Resource 1	Call Owner PEP "A" ID	Bearer "1" ID, Bearer Type,
Resource 1 ID, Resource type,	Call control segment ID	Parties connected
Parties communicating	Direct Call association (SN(A):ref.a – SN(B):----) ID,	(PEP "A" ID, PEP "B" ID),
(PEP "A" ID, PEP "B" ID)	Requesting party information [Party "A" Address, Call	Addr. party's bearer branch information
Addr. party's service comp.	PEP "A" ID]	(PEP "B" ID, Transit network selection,
(PEP "B" ID, Service component characteristics)	Party Owner: PEP "A" ID,	bearer branch characteristics),
	Addressed party information	Addr. party's service module information
	[Party "B" Address, Call PEP "B" ID]	(PEP "B" ID, Service module characteristics),
	Party Owner: PEP "A" ID,	Service component list
	Additional LIJ information	(Resource 1 ID)
	[Registration Parameter = network screening with root notification]	

NOTE 4 – Depending on the LIJ type, the Registration Parameter may also be "network screening without root notification".

Initiation of information flow: Information flow 2 processed by serving node A

Processing upon receipt: When the relay node receives the above information flow, it issues information flow 6 towards the serving node associated with party B. The relay node "cuts through" the bearer in both the "backward" and "forward" direction.

Resource information	Call information	Bearer information
Session ID	LIJ call ID	Network connection 1
Resource 1	Call Owner PEP "A" ID	Bearer "1" ID, Bearer Type,
Resource 1 ID, Resource type,	Call control segment ID	Parties connected
Parties communicating	Direct Call association (SN(A):ref.a – SN(B):----) ID	(PEP "A" ID, PEP "B" ID),
(PEP "A" ID, PEP "B" ID)	Requesting party information	Addr. party's bearer branch information
Addr. party's service comp.	[Party "A" Address, Call PEP "A" ID]	(PEP "B" ID, Transit network selection,
(PEP "B" ID, Service component characteristics)	Party Owner: PEP "A" ID,	bearer branch characteristics),
	Addressed party information	Addr. party's service module information
	[Party "B" Address, Call PEP "B" ID]	(PEP "B" ID, Service module characteristics),
	Party Owner: PEP "A" ID,	Service component list
	Additional LIJ information	(Resource 1 ID)
	[Registration Parameter = network screening with root notification]	

NOTE 5 – Depending on the LIJ type, the Registration Parameter may also be "network screening without root notification".

Processing upon receipt: When the serving node associated with party B receives the above information flow, the necessary information flow has been received to continue the coordinated action. The serving node then issues information flow 7 towards party B. The serving node performs the "cut through" of the bearer in the "backward" direction.

Resource information**Session ID****Resource 1**

Resource 1 ID, Resource type,
Parties communicating
(PEP "A" ID, PEP "B" ID)

Addr. party's service comp.
(PEP "B" ID, Service component characteristics)

Call information**LIJ call ID****Call Owner** PEP "A" ID**Call control segment ID****Requesting party information**

[Party "A" Address, Call PEP "A" ID]

Addressed party information

[Party "B" Address, Call PEP "B" ID]

Bearer information**Network connection 1**

Bearer "1" ID, Bearer Type,

Parties connected

(PEP "A" ID, PEP "B" ID),

Addr. party's bearer branch information

(PEP "B" ID, Transit network selection,
bearer branch characteristics),

Addr. party's service module information

(PEP "B" ID, Service module characteristics),

Service component list

(Resource 1 ID)

Processing upon receipt: When party B receives the above information flow, party B recognizes the coordinated action and must accept the entire set of information flow. The terminal equipment offers the call to the user and when the user accepts the specified requests, issues information flow 8 towards its associated serving node. Since the incoming information flow contains the LIJ call ID transmitted in information flow 1, the leaf initiated call and bearer join request has been satisfied.

NOTE 6 – Party B does not have the option of changing its bearer branch characteristics.

When party B receives the above information flow, party B has been accepted in the call and the bearers have been allocated to the terminal equipment.

Resource information**Session ID****Resource 1**

Resource 1 ID

Call information**LIJ call ID****Call control segment ID****Requesting party information**

[Party "A" Address, Call PEP "A" ID]

Remote party information

[Party "B" Address, Call PEP "B" ID]

Bearer information**Network connection 1**

Bearer "1" ID

Processing upon receipt: When the serving node associated with party B receives the above information flow, the serving node recognizes that party B has accepted the coordinated action and issues information flow 9 towards the requesting serving node. The serving node performs the "cut through" in the forward direction. The serving node also records the establishment of the LIJ call and its associated bearers.

Resource information**Session ID****Resource 1**

Resource 1 ID

Call information**LIJ call ID****Call control segment ID**

Direct Call association (SN(A):ref.a – SN(B):ref.b) ID,

Remote party information

[Party "B" Address, Call PEP "B" ID]

Bearer information**Network connection 1**

Bearer "1" ID

Processing upon receipt: When the relay node receives the above information flow, the relay node issues information flow 10 towards the requesting serving node. This information flow contains the bearer link characteristic that needs to be supported on the bearer link between the requesting serving node and the relay node.

NOTE 7 – If the bearer is already established between the serving node A and the relay node, the information flow "Add-Party-and-Bearer-to-Call.commit" is used instead.

Resource information	Call information	Bearer information
Session ID	LIJ call ID	Network connection 1
Resource 1	Call control segment ID	Bearer "1" ID
Resource 1 ID	Direct Call association (SN(A):ref.a – SN(B):ref.b) ID, Remote party information [Party "B" Address, Call PEP "B" ID]	

Processing upon receipt: When the serving node receives the above information flow, the serving node recognizes that party B has accepted the coordinated action. It performs "cut through" in the "forward" direction. The serving node also records the establishment of the LIJ call to the leaf serving node and its associated bearers and that this bearer and call has been accepted by party B.

If the registration parameter is "network screening without root notification" no further information flows are required. However, if the registration parameter is "network screening with root notification", the root serving node A issues information flow 11 as follows.

Resource information	Call information	Bearer information
Session ID	LIJ call ID	Network connection 1
Resource 1	Call control segment ID	Bearer "1" ID
Resource 1 ID	Added party information [Party "B" Address, Call PEP "B" ID]	Attached party (PEP "B" ID)

Initiation of information flow: Information flow 10 processed by serving node A and the registration parameter is "network screening with root notification".

Processing upon receipt: When this information flow arrives at party A, the root-party is informed about the fact that party B has been added to the LIJ call and its bearer.

9.2.3 Leaf-Party Request to Join Active Call and Bearer in Leaf Serving Node – Root Screening

– Active LIJ calls and bearer in leaf serving node with root screening.

This signalling capability illustrates the information flows necessary to add another party to a previously established LIJ call and its associated bearers. The leaf serving node has a record of this LIJ call and bearer. Only one bearer is illustrated, however, it is a simple extension to include an additional bearer. Upon the completion of the functional entity action, the serving node associated with the leaf-party B has created a LIJ call and bearer association.

NOTE – For the initial request from the leaf-party, the serving node associated with party B is considered the requesting node, however, the choice of the designation of requesting serving node and addressed serving node was chosen from the perspective of the root-party, party A.

The information flows are the same as in 8.1.3 with the exception of the following information flows:

Information flow	New information flow name	Information flow name in 8.1.3
7	Add-Party-and-Bearer-to-Call.ready	Call-and-Bearer-Setup.ready
8	Add-Party-and-Bearer-to-Call.ready	Call-and-Bearer-Setup.ready
9	Add-Party-and-Bearer-to-Call.ready	Call-and-Bearer-Setup.ready
12	Add-Party-and-Bearer-to-Call.commit	Call-and-Bearer-Setup.commit
13	Add-Party-and-Bearer-to-Call.commit	Call-and-Bearer-Setup.commit
14	Add-Party-and-Bearer-to-Call.commit	Call-and-Bearer-Setup.commit

The parameters remain the same in all cases.

9.2.4 Leaf-Party Request to Join Active LIJ Call and Bearer

- Active LIJ calls and bearer in leaf serving node network screening with root notification.
- Active LIJ calls and bearer in leaf serving node network screening without root notification.

This signalling capability illustrates the information flows necessary to add another party to a previously established LIJ call and its associated bearers. The leaf serving node has a record of this LIJ Call and Bearer. The call and bearer transition diagram for call and bearer transition diagram for leaf-party request to join LIJ call and bearer is shown in Figure 9-7. Only one bearer is illustrated, however, it is a simple extension to include an additional bearer. Upon the completion of the functional entity action, the serving node associated with the leaf-party B has created an LIJ Call and Bearer Association.

NOTE 1 – For the initial request from the leaf-party, the serving node associated with Party B is considered the requesting node, however, the choice of the designation of Requesting serving node and Addressed serving node was chosen from the perspective of the root-party, Party A.

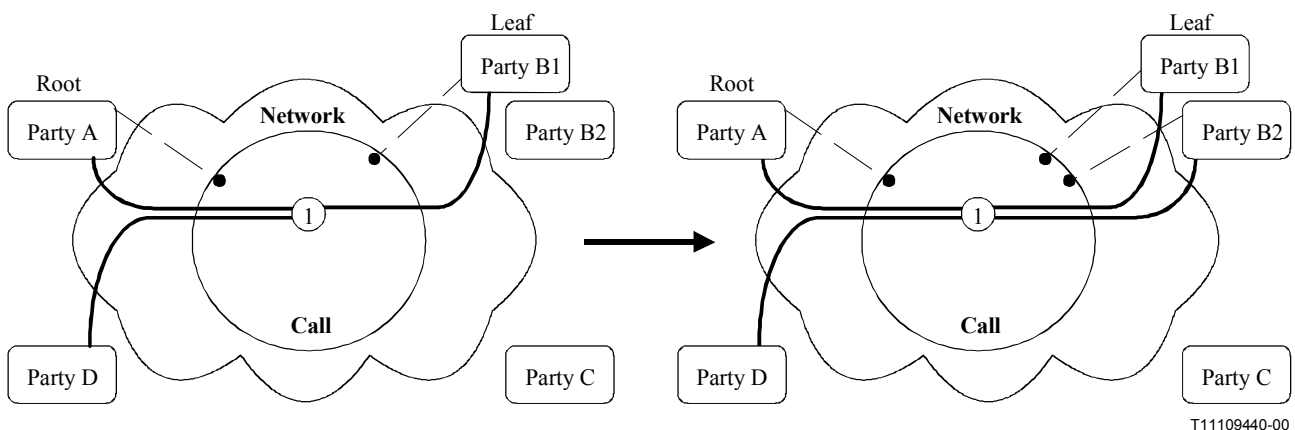


Figure 9-7 – Call and bearer transition diagram for leaf-party request to join LIJ call and bearer – Active LIJ call and bearer in leaf serving node

The information flows are illustrated in Figure 9-8.

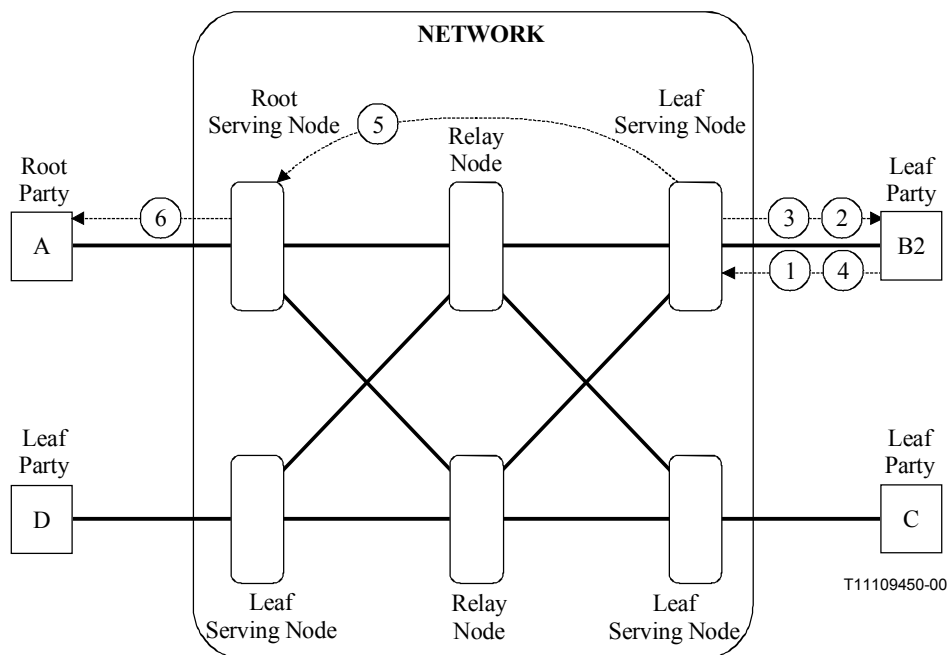


Figure 9-8 – Leaf-Party request to join LIJ call and bearer – Active LIJ call and bearer in leaf serving node

1 Join-Call-&-Bearer.ready Party B2 to Serving Node B

<p>Resource information (None)</p>	<p>Call information LIJ call ID Call control segment ID Requesting party information [Party "B" Address, Call PEP "B" ID] Addressed party information [Party "A" Address, Call PEP "A" ID]</p>	<p>Bearer information (None)</p>
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Initiation of information flow: A leaf-party requests that it be permitted to Join a LIJ call and its associated bearers.

Processing upon receipt: The serving node determines that there is a LIJ call instant within the leaf serving node and decides to honour this request by acknowledging it (information flow 2) before issuing a call and bearer establishment request (information flow 3) containing the LIJ call ID value it received in the leaf join request.

2 Join-Call-&-Bearer.commit Serving Node B to Party B2

<p>Resource information Session ID Resource 1 Resource 1 ID, Resource type, Parties communicating (PEP "B" ID, PEP "Group" ID) Addr. party's service comp. (PEP "A" ID, Service component characteristics)</p>	<p>Call information LIJ call ID Call Owner Call PEP "A" ID, Call control segment ID Requesting party information [Party "B" Address, Call PEP "B" ID] Addressed party information [Party "A" Address, Call PEP "A" ID]</p>	<p>Bearer information (None)</p>
--	---	---

Processing upon receipt: Party B2 notices the acknowledgement and awaits the call and bearer establishment.

3 Call-&-Bearer-Setup.ready**Serving Node B to Party B2****Resource information**

Session ID
Resource 1
Resource 1 ID, Resource type,
Parties communicating
(PEP "A" ID, PEP "B" ID)
Addr. party's service comp.
(PEP "B2" ID, Service component characteristics)

Call information

LIJ call ID
Call Owner PEP "A" ID
Call control segment ID
Requesting party information
[Party "A" Address, Call PEP "A" ID]
Addressed party information
[Party "B" Address, Call PEP "B2" ID]

Bearer information

Network connection 1
Bearer "1" ID, Bearer Type,
Parties connected
(PEP "A" ID, PEP "B2" ID),
Addr. party's bearer branch information
(PEP "B2" ID, Transit network selection, bearer branch characteristics),
Addr. party's service module information
(PEP "B2" ID, Service module characteristics),
Service component list
(Resource 1 ID)

Initiation of information flow: Information flow 1 processed by serving node B.

Processing upon receipt: When party B2 receives the above information flow, party B2 recognizes the coordinated action and must accept the entire set of information flow. The terminal equipment offers the call to the user and when the user accepts the specified requests issues information flow 4 towards its associated serving node. Since the incoming information flow contains the LIJ call ID transmitted in information flow 1, the leaf initiated call and bearer join request has been satisfied.

NOTE 2 – Party B2 does not have the option of changing its bearer branch characteristics.

When party B2 receives the above information flow, party B2 has been accepted in the call and the bearers have been allocated to the terminal equipment.

4 Call-&-Bearer-Setup.commit**Party B2 to Serving Node B****Resource information**

Session ID
Resource 1
Resource 1 ID

Call information

LIJ call ID
Call control segment ID
Requesting party information
[Party "A" Address, Call PEP "A" ID]
Remote party information
[Party "B2" Address, Call PEP "B" ID]

Bearer information

Network connection 1
Bearer "1" ID

Processing upon receipt: When the serving node associated with Party B2 receives the above information flow, the serving node recognizes that party B2 has accepted the coordinated action. The serving node performs the "cut through" in the forward direction. The serving node also records the establishment of the LIJ Call and its associated bearers to an additional party (party B2).

If the registration parameter is "network screening without root notification" no further information flows are required. However, if the registration parameter is "network screening with root notification", the serving node B issues information flow 5 towards the root serving node A.

5 Notify-Party-&-Bearer-Change.indication**Serving Node B to Serving Node A****Resource information**

Session ID
Resource 1
Resource 1 ID

Call information

LIJ call ID
Call control segment ID
Direct Call association (SN(A):ref.a – SN(B):ref.b) ID,
Added party information
[Party "B2" Address, Call PEP "B" ID]

Bearer information

Network connection 1
Bearer "1" ID
Attached party
(PEP "B2" ID)

Initiation of information flow: Information flow 4 processed by serving node B and the registration parameter is "network screening with root notification".

Processing upon receipt: When this information flow arrives at the root serving node, it is informed about the fact that party B2 has been added to the LIJ call and its bearer. In addition, the root serving node passes this information on to the root-party (information flow 6).

Resource information

Session ID

Resource 1

Resource 1 ID

Call information

LIJ call ID

Call control segment ID

Added party information

[Party "B2" Address, Call PEP "B" ID]

Bearer information

Network connection 1

Bearer "1" ID

Attached party

(PEP "B" ID)

Processing upon receipt: When this information flow arrives at party A the root-party is informed about the fact that party B2 has been added to the LIJ call and its bearer.

9.3 Removal of Leaf-Party from a LIJ Call and Bearer(s) Requested by the Root-Party

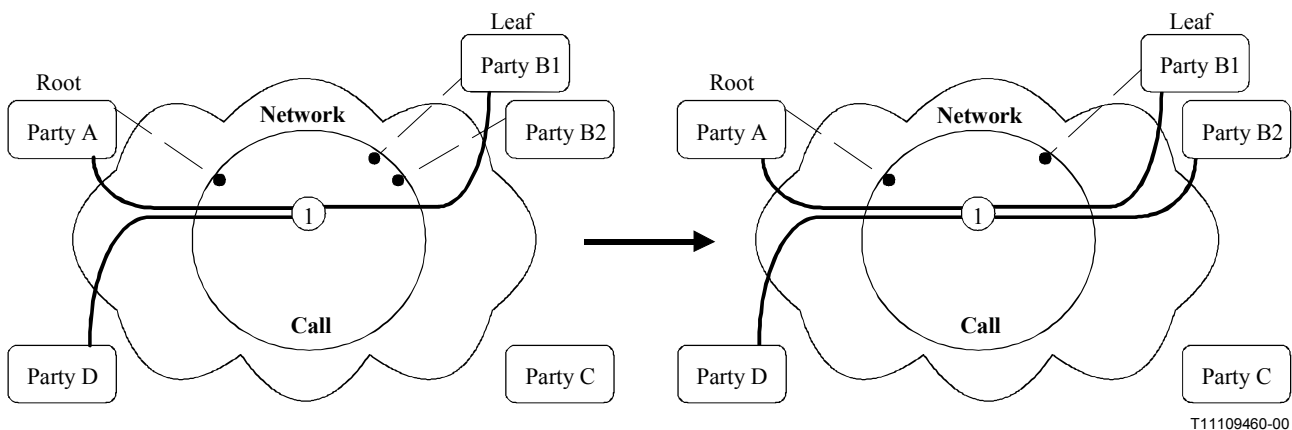
The following subclause describes the functional entity actions associated with the removal of a leaf-party associated with a LIJ call and its associated bearers by the root-party.

NOTE – If the LIJ call is of the type "network screening without root notification", the root in general has no knowledge about the attached parties and, hence, could not perform this operation. On the other hand, the root may have attached its own parties in addition to leaf joined parties; root attached parties are known to the root in all cases and may be removed by root actions.

9.3.1 Removal of leaf-party requested by root-party (multiple leaf-parties attached to bearer at leaf serving node)

- LIJ call with root screening.
- LIJ call network screening with root notification.
- LIJ call network screening without root notification.

This signalling capability illustrates the information flows necessary to remove a party and its associated bearers from an established LIJ call. The leaf serving node has a record of this LIJ call and bearer. The call and bearer transition diagram for call and bearer transition diagram for removal of leaf-party requested by root-party is shown in Figure 9-9. Only one bearer is illustrated, however, it is a simple extension to include an additional bearer. Upon the completion of the functional entity action, the serving node associated with the leaf-party B retains the LIJ call and bearer association as there exist further leaf-parties served by this node.



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Figure 9-9 – Call and bearer transition diagram for removal of leaf-party requested by root-party – Multiple leaf-parties attached to bearer at leaf serving node

The information flows are illustrated in Figure 9-10.

NOTE – This signalling capability is independent of the screening option selected; the only requirement is that the root-party have knowledge of party B2.

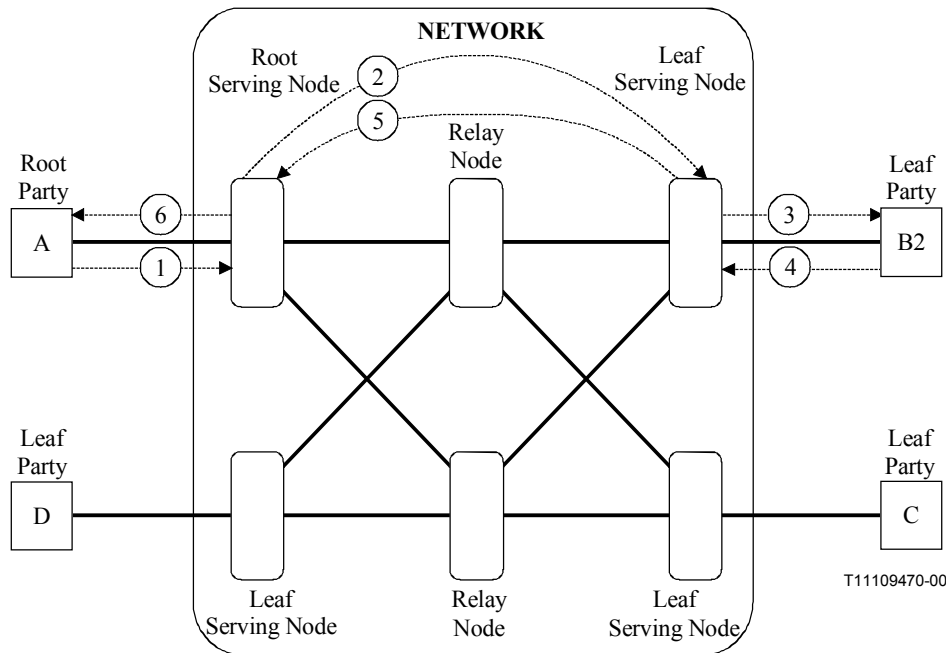


Figure 9-10 – Root-Party request to remove a leaf-party (call and bearer) – Multiple leaf-parties attached to bearer at leaf serving node

1 Release-Party-from-Call.ready Root-Party A to Serving Node A

Resource information (None)	Call information LIJ call ID Call control segment ID Addressed party information [Call PEP "B2" ID]	Bearer information (None)
---------------------------------------	--	-------------------------------------

Initiation of information flow: The root-party requests that a leaf-party is removed from an LIJ call and its associated bearers.

Processing upon receipt: When the above information flow arrives at the root serving node, the serving node forwards this request to the leaf serving node associated with party B2 (information flow 2).

2 Release-Party-from-Call.ready Serving Node A to Serving Node B

Resource information (None)	Call information LIJ call ID Call control segment ID Direct Call association (SN(A):ref.a – SN(B):ref.b) ID, Addressed party information [Call PEP "B2" ID]	Bearer information (None)
---------------------------------------	---	-------------------------------------

Processing upon receipt: When the leaf serving node receives the information flow, it determines that party B2 is attached to the bearer associated with the LIJ call. It therefore must remove the bearer and the call. The leaf-party is released from the call (information flow 3).

3 Release-Call.ready Serving Node B to Leaf-Party B2

Resource information (None)	Call information LIJ call ID Call control segment ID Addressed party information [Call PEP "B2" ID]	Bearer information (None)
---------------------------------------	--	-------------------------------------

Processing upon receipt: When party "B2" receives this flow, it will disconnect from the bearer and clears the LIJ call. It then issues information flow 4 towards the serving node.

4 Release-Call.commit Leaf-Party B2 to Serving Node B

Resource information (None)	Call information LIJ call ID Call control segment ID Remote party information [Call PEP "B2" ID]	Bearer information (None)
---------------------------------------	---	-------------------------------------

Processing upon receipt: When the information flow is received by the leaf serving node, it determines that this is not the last leaf-party attached to the bearer and this was not the last party associated with the LIJ call. It then issues information flows 5 towards the root serving node.

5 Release-Party-from-Call.commit Serving Node B to Serving Node A

Resource information (None)	Call information LIJ call ID Call control segment ID Direct Call association (SN(A):ref.a – SN(B):ref.b) ID, Remote party information [Call PEP "B2" ID]	Bearer information (None)
---------------------------------------	--	-------------------------------------

Processing upon receipt: When the root serving node receives this information flow, it is aware that the specified party has been removed from the LIJ call. It notifies the root-party that party B2 has been removed (information flow 6).

6 Release-Party-from-Call.commit Serving Node A to Root-Party A

Resource information (None)	Call information LIJ call ID Call control segment ID Remote party information [Call PEP "B2" ID]	Bearer information (None)
---------------------------------------	---	-------------------------------------

Processing upon receipt: When the root-party receives this flow, it notes that party B2 has been removed from the call.

9.3.2 Removal of leaf-party requested by root-party (single leaf-party attached to bearer at leaf serving node)

- LIJ call with root screening.
- LIJ call network screening with root notification.
- LIJ call network screening without root notification.

This signalling capability illustrates the information flows necessary to remove a party and its associated bearers from an established LIJ call. The leaf serving node has a record of this LIJ call and bearer. The call and bearer transition diagram for call and bearer transition diagram for removal of leaf-party requested by root-party is shown in Figure 9-11. Only one bearer is illustrated, however, it is a simple extension to include an additional bearer. Upon the completion of the functional entity

action, the serving node associated with the leaf-party B does not retain the LIJ call and bearer association as there exist no further leaf-parties served by this node.

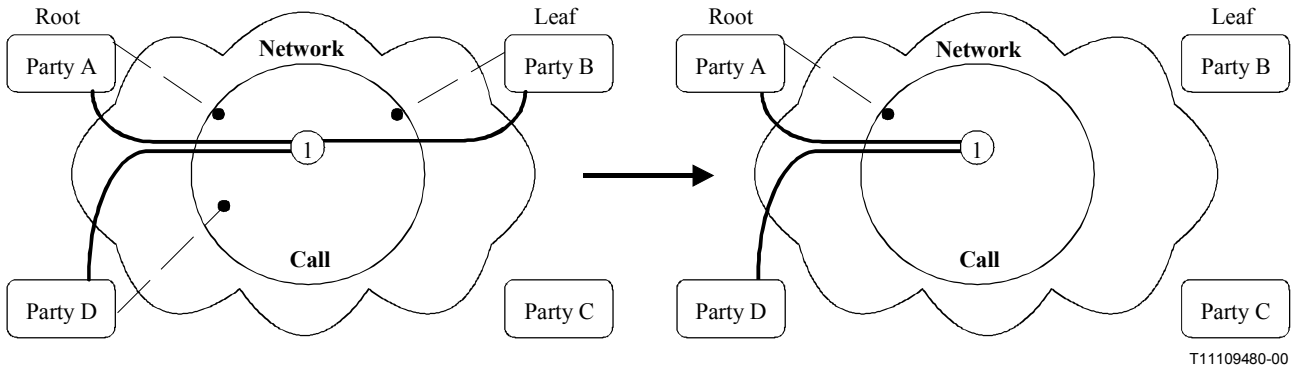


Figure 9-11 – Call and bearer transition diagram for removal of leaf-party requested by root-party – Single-leaf party attached to bearer at leaf serving node and any intermediate relay node

The information flows are illustrated in Figure 9-12.

NOTE 1 – This signalling capability is independent of the screening option selected; the only requirement is that the root-party has knowledge of party B2.

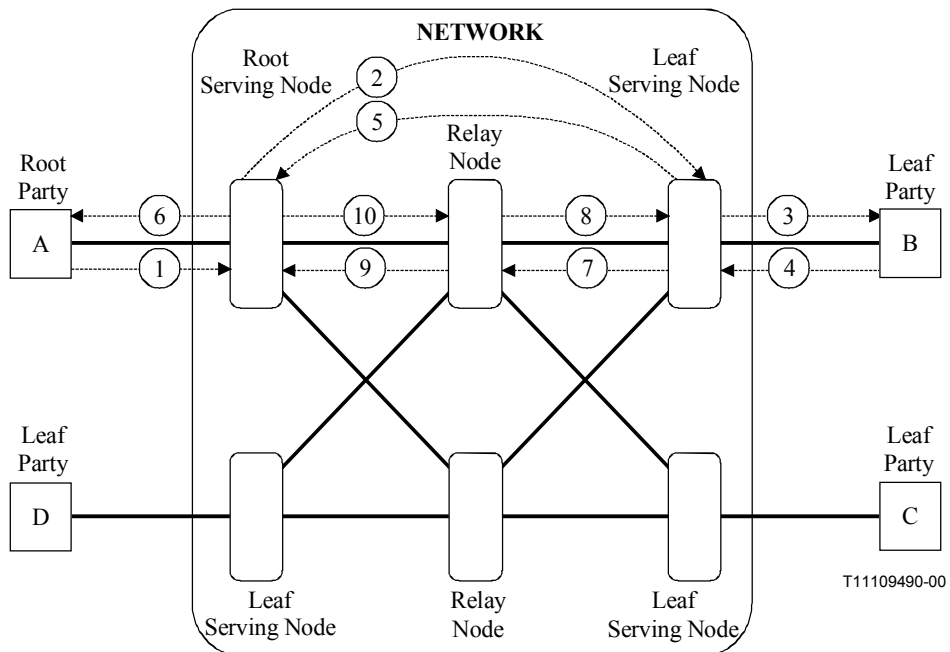


Figure 9-12 – Root-Party request to remove a leaf-party (call and bearer) – Single-leaf party attached to bearer at leaf serving node

1 Release-Party-from-Call.ready Root-Party A to Serving Node A

Resource information (None)	Call information LIJ call ID Call control segment ID Addressed party information [Call PEP "B" ID]	Bearer information (None)
---------------------------------------	---	-------------------------------------

Initiation of information flow: The root-party requests that a leaf-party be removed from an LIJ call and its associated bearers.

Processing upon receipt: When the above information flow arrives at the root serving node, the serving node forwards this request to the leaf serving node associated with party B (information flow 2).

2 Release-Party-from-Call.ready Serving Node A to Serving Node B

Resource information (None)	Call information LIJ call ID Call control segment ID Direct Call association (SN(A):ref.a – SN(B):ref.b) ID, Addressed party information [Call PEP "B" ID]	Bearer information (None)
---------------------------------------	--	-------------------------------------

Processing upon receipt: When the leaf serving node receives the information flow, it determines that party B is attached to the bearer associated with the LIJ call. It therefore must remove the bearer and the call. The leaf-party is released from the call (information flow 3).

3 Release-Call.ready Serving Node B to Leaf-Party B

Resource information (None)	Call information LIJ call ID Call control segment ID Addressed party information [Call PEP "B" ID]	Bearer information (None)
---------------------------------------	---	-------------------------------------

Processing upon receipt: When party B receives this flow, it will disconnect from the bearer and clears the LIJ call. It then issues information flow 4 towards the serving node.

4 Release-Call.commit Leaf-Party B to Serving Node B

Resource information (None)	Call information LIJ call ID Call control segment ID Remote party information [Call PEP "B" ID]	Bearer information (None)
---------------------------------------	--	-------------------------------------

Processing upon receipt: When the information flow is received by the leaf serving node, it determines that this is the last leaf-party attached to the bearer and this was the last party associated with the LIJ call. It then issues information flows 5 towards the root serving node. It also issues information flow 7 towards the relay node.

5 Release-Party-from-Call.commit Serving Node B to Serving Node A

Resource information (None)	Call information LIJ call ID Call control segment ID Direct Call association (SN(A):ref.a – SN(B):ref.b) ID, Remote party information [Call PEP "B" ID]	Bearer information (None)
---------------------------------------	---	-------------------------------------

Processing upon receipt: When the root serving node receives this information flow, it is aware that the specified party has been removed from the LIJ call. The serving node records that the LIJ call and its associated bearers no longer exist in the leaf serving node. It also notifies the root-party that party B has been removed (information flow 6).

6	Release-Party-from-Call.commit	Serving Node A to Root-Party A
Resource information (None)	Call information LIJ call ID Call control segment ID Remote party information [Call PEP "B" ID]	Bearer information (None)
Processing upon receipt: When the root-party receives this flow, it notes that party B has been removed from the call.		
7	Detach-Party-from-Bearer.ready	Serving Node B to Relay Node
Resource information (None)	Call information LIJ call ID Call control segment ID Direct Call association (SN(A):ref.a – SN(B):ref.b) ID, Remote party information [Call PEP "B" ID]	Bearer information Network connection 1 Bearer "1" ID
Initiation of information flow: Processing upon receipt of information flow 4		
Processing upon receipt: When the relay node receives this information flow, it notes that this is the last bearer link associated with the designated bearer and therefore issues the commit flow towards the Leaf serving node (information flow 8) and issues information flow 9 towards the root serving node requesting removal of the bearer link between the root serving node and the relay node.		
8	Detach-Party-from-Bearer.commit	Relay Node to Serving Node B
Resource information (None)	Call information LIJ call ID Call control segment ID	Bearer information Network connection 1 Bearer "1" ID
Processing upon receipt: When the Leaf serving node receives this information flow, it is aware that the relay node has acknowledged the removal of the bearer link between the relay node and the serving node. No further actions are required by the serving node at this point.		
NOTE 2 – When the relay node receives information flow 7 and notes that there are additional bearer links going to different leaf serving nodes or other relay nodes associated with the designated bearer it does not issue information flow 9 towards the root serving node.		
9	Detach-Party-from-Bearer.ready	Relay Node to Serving Node A
Resource information (None)	Call information LIJ call ID Call control segment ID Direct Call association (SN(A):ref.a – SN(B):ref.b) ID, Remote party information [Call PEP "B" ID]	Bearer information Network connection 1 Bearer "1" ID
Initiation of information flow: Processing upon receipt of information flow 7		
Processing upon receipt: When the root serving node receives this information flow, it notes that it has other leaf-parties (may be in other leaf serving nodes and served by other relay nodes) and therefore no bearer action toward the root-party should occur. Therefore, it only issues the commit information flow 10 towards the relay node.		
10	Detach-Party-from-Bearer.commit	Serving Node A to Relay Node
Resource information (None)	Call information LIJ call ID Call control segment ID	Bearer information Network connection 1 Bearer "1" ID
Processing upon receipt: When the relay node receives the information flow, it is aware that the bearer link between the root serving node and the relay node has been released.		

9.3.3 Removal of leaf-party requested by root-party (last leaf-party attached to LIJ call)

- LIJ call with root screening.
- LIJ call network screening with root notification.
- LIJ call network screening without root notification.

This signalling capability illustrates the information flows necessary to remove a party and its associated bearers from an established LIJ call. The leaf serving node has a record of this LIJ call and bearer. The call and bearer transition diagram for call and bearer transition diagram for removal of leaf-party requested by root-party is shown in Figure 9-13. Only one bearer is illustrated, however, it is a simple extension to include an additional bearer. Upon the completion of the functional entity action, the serving node associated with the leaf-party B does not retain the LIJ call and bearer association as there exist no further leaf-parties served by this node. In addition, if the LIJ is not configured such that the root-party maintains its call relationship and the network connection towards the root serving node even in the absence of any leaf-parties from call and bearer the complete LIJ call is released.

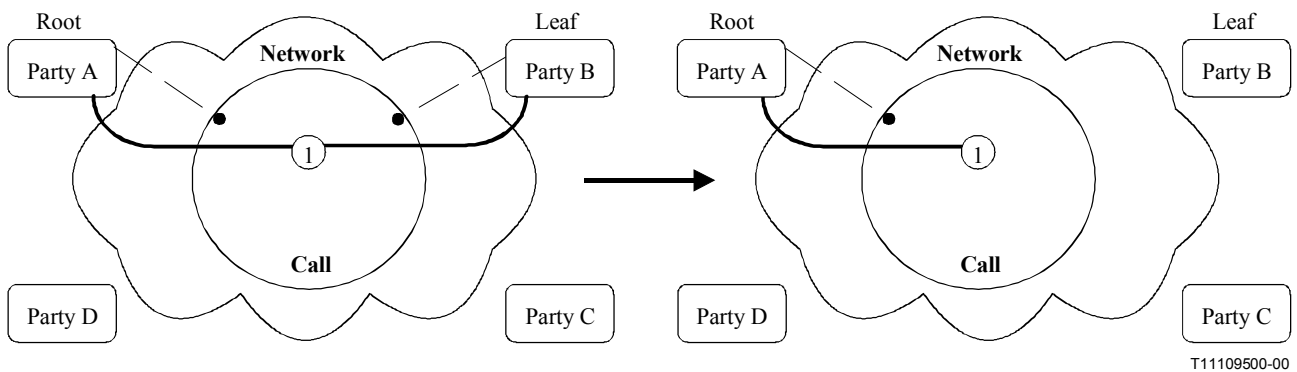


Figure 9-13 – Call and bearer transition diagram for removal of leaf-party requested by root-party – Last leaf-party attached to LIJ call and LIJ call retained

The information flows are illustrated in Figure 9-14.

NOTE – This signalling capability is independent of the screening option selected; the only requirement is that the root-party has knowledge of party B2.

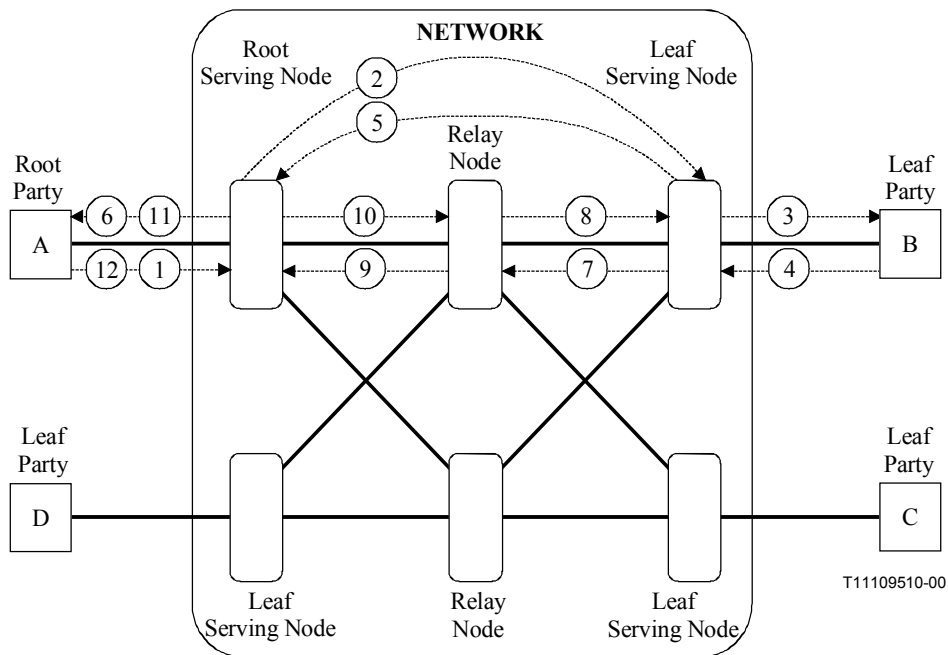


Figure 9-14 – Root-party request to remove a leaf-party (call and bearer) – Last leaf-party attached to LIJ call

1 Release-Party-from-Call.ready Root-Party A to Serving Node A

Resource information (None)	Call information LIJ call ID Call control segment ID Addressed party information [Call PEP "B" ID]	Bearer information (None)
---------------------------------------	---	-------------------------------------

Initiation of information flow: The root-party requests that a leaf-party be removed from an LIJ call and its associated bearers.

Processing upon receipt: When the above information flow arrives at the root serving node, the serving node forwards this request to the leaf serving node associated with party B (information flow 2).

2 Release-Party-from-Call.ready Serving Node A to Serving Node B

Resource information (None)	Call information LIJ call ID Call control segment ID Direct Call association (SN(A):ref.a – SN(B):ref.b) ID Addressed party information [Call PEP "B" ID]	Bearer information (None)
---------------------------------------	---	-------------------------------------

Processing upon receipt: When the leaf serving node receives the information flow, it determines that party B is attached to the bearer associated with the LIJ call. It therefore must remove the bearer and the call. The leaf-party is released from the call (information flow 3).

3 Release-Call.ready **Serving Node B to Leaf-Party B**

Resource information (None)	Call information LIJ call ID Call control segment ID Addressed party information [Call PEP "B" ID]	Bearer information (None)
---------------------------------------	---	-------------------------------------

Processing upon receipt: When party B receives this flow it will disconnect from the bearer and clears the LIJ call. It then issues information flow 4 towards the serving node.

4 Release-Call.commit **Leaf-Party B to Serving Node B**

Resource information (None)	Call information LIJ call ID Call control segment ID Remote party information [Call PEP "B" ID]	Bearer information (None)
---------------------------------------	--	-------------------------------------

Processing upon receipt: When the information flow is received by the leaf serving node, it determines that this is the last leaf-party attached to the bearer and this was the last party associated with the LIJ call. It then issues information flows 5 towards the root serving node. It also issues information flow 7 towards the relay node.

5 Release-Party-from-Call.commit **Serving Node B to Serving Node A**

Resource information (None)	Call information LIJ call ID Call control segment ID Direct Call association (SN(A):ref.a – SN(B):ref.b) ID Remote party information [Call PEP "B" ID]	Bearer information (None)
---------------------------------------	--	-------------------------------------

Processing upon receipt: When the root serving node receives this information flow, it is aware that the specified party has been removed from the LIJ call. It notifies the root-party that party B has been removed (information flow 6).

6 Release-Party-from-Call.commit **Serving Node A to Root-Party A**

Resource information (None)	Call information LIJ call ID Call control segment ID Remote party information [Call PEP "B" ID]	Bearer information (None)
---------------------------------------	--	-------------------------------------

Processing upon receipt: When the root-party receives this flow, it notes that party B has been removed from the call.

7 Release-Bearer.ready **Serving Node B to Relay Node**

Resource information (None)	Call information LIJ call ID Call control segment ID Direct Call association (SN(A):ref.a – SN(B):ref.b) ID, Remote party information [Call PEP "B" ID]	Bearer information Network connection 1 Bearer "1" ID
---------------------------------------	---	--

Initiation of information flow: Processing upon receipt of information flow 4

Processing upon receipt: When the relay node receives this information flow, it notes that this is the last bearer link associated with the designated bearer and therefore issues the commit flow towards the Leaf serving node (information flow 8) and issues information flow 9 towards the root serving node requesting removal of the bearer link between the root serving node and the relay node.

8 Release-Bearer.commit**Relay Node to Serving Node B****Resource information** (None) **Call information** (None)**Bearer information**
Network connection 1
Bearer "1" ID

Processing upon receipt: When the Leaf serving node receives this information flow, it is aware that the relay node has acknowledged the removal of the bearer link between the relay node and the serving node. No further actions are required by the serving node at this point.

9 Release-Bearer.ready**Relay Node to Serving Node A****Resource information** (None) **Call information** (None)**Bearer information**
Network connection 1
Bearer "1" ID

Initiation of information flow: Processing upon receipt of information flow 7

Processing upon receipt: When the root serving node receives this information flow, it issues the commit information flow 10 towards the relay node.

The root serving node also notes that it has no other leaf serving nodes or relay nodes attached and, therefore, the last party has been detached. If the LIJ call is configured such that the root-party does not maintain its call relationship and the network connection towards the root serving node in the absence of any leaf-parties from call and bearer, the call is released towards the root-party with information flow 11. Otherwise, the information flow 11 is not issued.

10 Release-Bearer.commit**Serving Node A to Relay Node****Resource information** (None) **Call information** (None)**Bearer information**
Network connection 1
Bearer "1" ID

Processing upon receipt: When the relay node receives the information flow, it is aware that the bearer link between the root serving node and the relay node has been released.

If the type 2 network connection between the root-party A and its serving node A is to be retained (similar as after the information flows described in 9.1.1) the information flows for this signalling capability terminate here. Otherwise, if the LIJ is configured such that the root-party does not maintain its call relationship and the network connection towards the root serving node in the absence of any leaf-parties from call and bearer, the complete LIJ call is released. The call and bearer transition diagram for call and bearer transition diagram for the release of the complete LIJ call is shown in Figure 9-15.

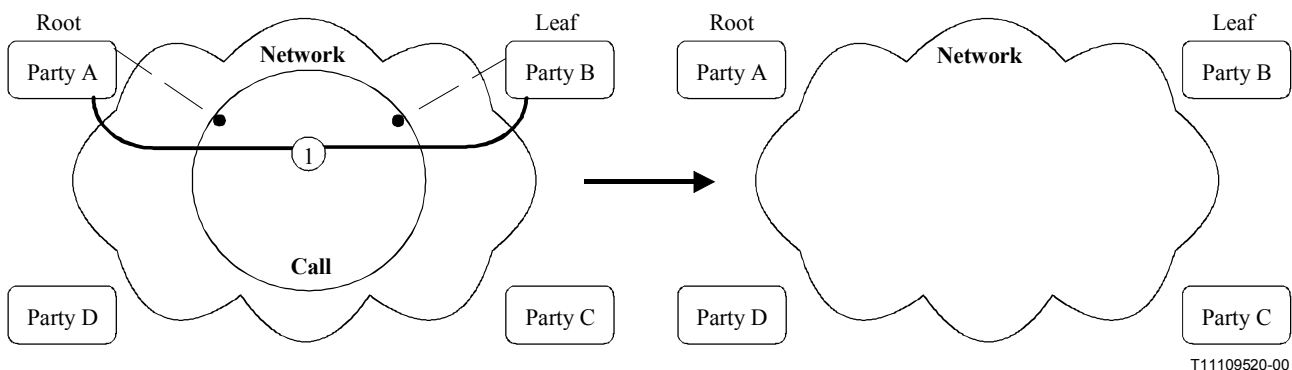


Figure 9-15 – Call and bearer transition diagram for removal of leaf-party requested by root-party – Last leaf-party attached to LIJ call and LIJ call release

11 Release-Call.ready**Serving Node A to Root-Party A**

Resource information (None)
Call information
LIJ call ID
Call control segment ID

Bearer information
Network connection 1
Bearer "1" ID

Initiation of information flow: Processing upon receipt of information flow 10 and the type 2 network connection between the root-party A and its serving node is not to be retained.

Processing upon receipt: When the root-party receives this information flow, it notes that it has no longer any leaf-parties attached. Therefore, the LIJ call is released. It issues the commit information flow 12 towards the root serving node.

12 Release-Call.commit**Root-Party A to Serving Node A**

Resource information (None)
Call information
LIJ call ID
Call control segment ID

Bearer information
Network connection 1
Bearer "1" ID

Processing upon receipt: The root serving node releases all knowledge about the LIJ call.

9.4 Leaf-Party Requests to be Released from the LIJ Call and Bearer(s)

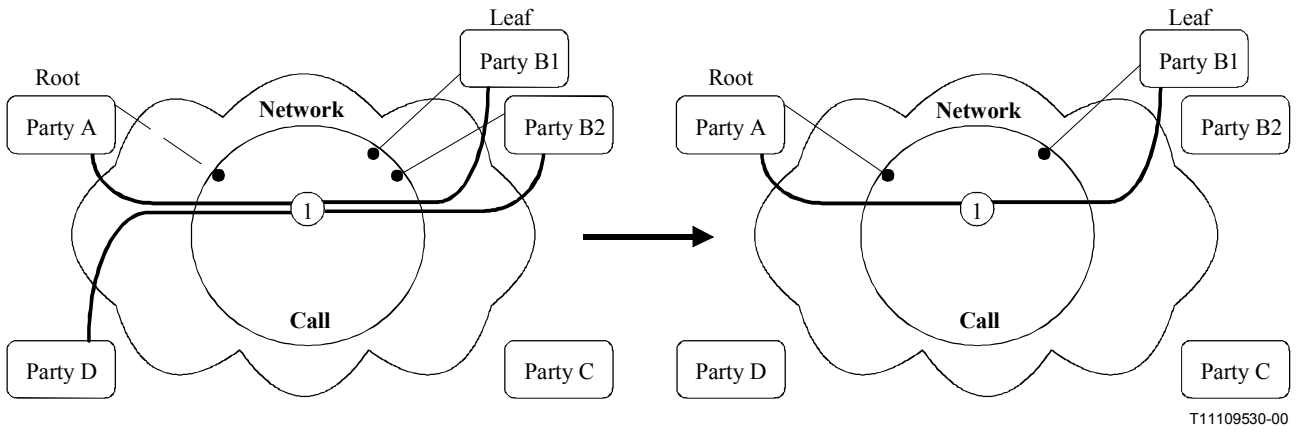
The following subclause describes the functional entity actions associated with the release of a leaf-party from a LIJ call and its associated bearers.

NOTE – If the LIJ call is of the type "network screening without root notification", the root, in general, has no knowledge about the attached parties and, hence, will not have to be informed about the release. On the other hand, the root may have attached its own parties in addition to leaf joined parties; parties attached by the root are known to the root in all cases and release by the leaf-party needs to be notified to the root-party. In order to inform the root-party appropriately, even in case of a "LIJ call network screening without root notification", the leaf serving node must remember whether the leaf attached itself or whether the root initiated the attachment.

9.4.1 Leaf-party release request (multiple leaf-parties attached to bearer at leaf serving node)

- LIJ call with root screening.
- LIJ call network screening with root notification.
- LIJ call network screening without root notification.

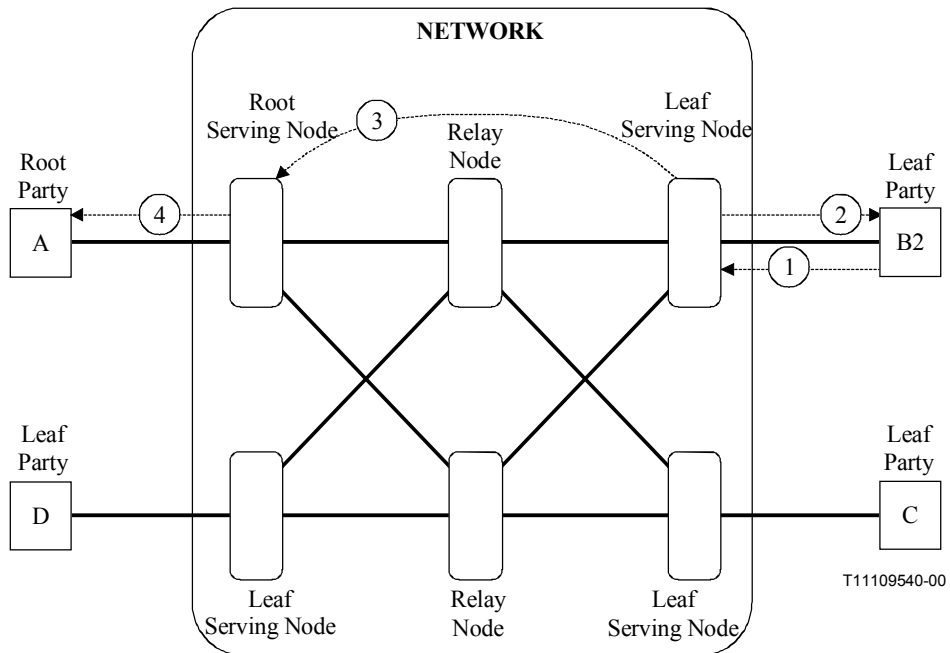
This signalling capability illustrates the information flows necessary for a party to remove itself and its associated bearer from an established LIJ call. The leaf serving node has a record of this LIJ call and bearer. The call and bearer transition diagram for call and bearer transition diagram for leaf-party release request is shown in Figure 9-16. Only one bearer is illustrated, however, it is a simple extension to include an additional bearer. Upon the completion of the functional entity action, the serving node associated with the leaf-party B retains the LIJ call and bearer association as there exist further leaf-parties served by this node.



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Figure 9-16 – Call and bearer transition diagram for leaf-party release request – Multiple leaf-parties attached to bearer at leaf serving node

The information flows are illustrated in Figure 9-17.



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Figure 9-17 – Leaf-party release request (call and bearer – Multiple leaf-parties attached to bearer at leaf serving node

1	Release-Party-from-Call.ready	Leaf-Party B to Serving Node B
----------	--------------------------------------	---------------------------------------

Resource information (None)	Call information LIJ call ID Call control segment ID Requesting party information [Call PEP "B2" ID]	Bearer information (None)
---------------------------------------	---	-------------------------------------

Initiation of information flow: The leaf-party requests to be removed from an LIJ call and its associated bearers.

Processing upon receipt: When the leaf serving node receives the information flow, it determines that party B2 is attached to the bearer associated with the LIJ call. It therefore must remove the bearer and the call. The leaf-party is released from the call (information flow 2). It also determines that this is not the last leaf-party attached to the bearer and this was not the last party associated with the LIJ call. It issues information flows 2 towards the leaf-party.

If the LIJ call is of the type "root screening" or "network screening with root notification", information flow 3 towards the root serving node is issued. On the other hand, if the LIJ call is of the type "network screening without root notification" and the leaf serving node noted that the leaf-party initiated the joining, which has not been notified towards the root, information flow 3 is not issued.

2	Release-Party-from-Call.commit	Serving Node B to Leaf-Party B
----------	---------------------------------------	---------------------------------------

Resource information (None)	Call information LIJ call ID Call control segment ID	Bearer information (None)
---------------------------------------	---	-------------------------------------

Processing upon receipt: When party B2 receives this information flow, it will disconnect from the bearer and clear the LIJ call.

3	Notify-Party-&-Bearer-Change.indication	Serving Node B to Serving Node A
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Resource information (None)	Call information LIJ call ID Call control segment ID Direct Call association (SN(A):ref.a – SN(B):ref.b) ID, Removed party information [Call PEP "B2" ID]	Bearer information Network connection 1 Bearer "1" ID
---------------------------------------	---	--

Initiation of information flow: Processing upon receipt of information flow 1 and the leaf serving node decided to inform the root-party.

Processing upon receipt: When the root serving node receives this information flow, it is aware that the specified party has been removed from the LIJ call. It notifies the root-party that party B2 has been removed (information flow 4).

4	Notify-Party-&-Bearer-Change.indication	Serving Node A to Root-Party A
----------	--	---------------------------------------

Resource information (None)	Call information LIJ call ID Call control segment ID Removed party information [Call PEP "B2" ID]	Bearer information Network connection 1 Bearer "1" ID
---------------------------------------	--	--

Processing upon receipt: When the root-party receives this flow, it notes that party B2 has been removed from the call.

NOTE – If the root-party did not retained knowledge about this leaf-party in the LIJ call, the information flow is ignored.

9.4.2 Leaf-party release request (single leaf-party attached to bearer at leaf serving node)

- LIJ call with root screening.
- LIJ call network screening with root notification.
- LIJ call network screening without root notification.

This signalling capability illustrates the information flows necessary for a party to remove itself and its associated bearer from an established LIJ call. The leaf serving node has a record of this LIJ call and bearer. The call and bearer transition diagram for call and bearer transition diagram for leaf-party release request is shown in Figure 9-18. Only one bearer is illustrated, however, it is a simple extension to include an additional bearer. Upon the completion of the functional entity action, the serving node associated with the leaf-party B does not retain the LIJ call and bearer association as there exist no further leaf-parties served by this node.

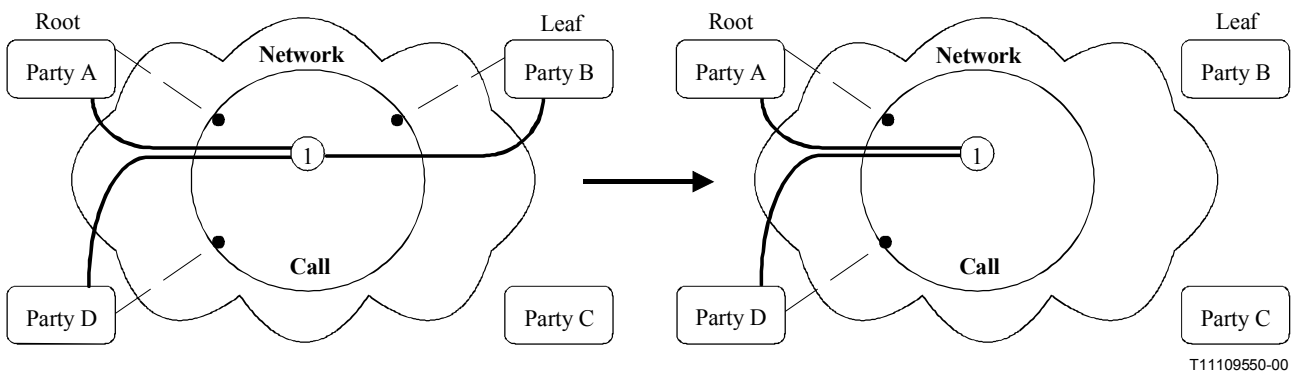


Figure 9-18 – Call and bearer transition diagram for leaf-party release request – Single leaf-party attached to bearer at leaf serving node and any intermediate relay node

The information flows are illustrated in Figure 9-19.

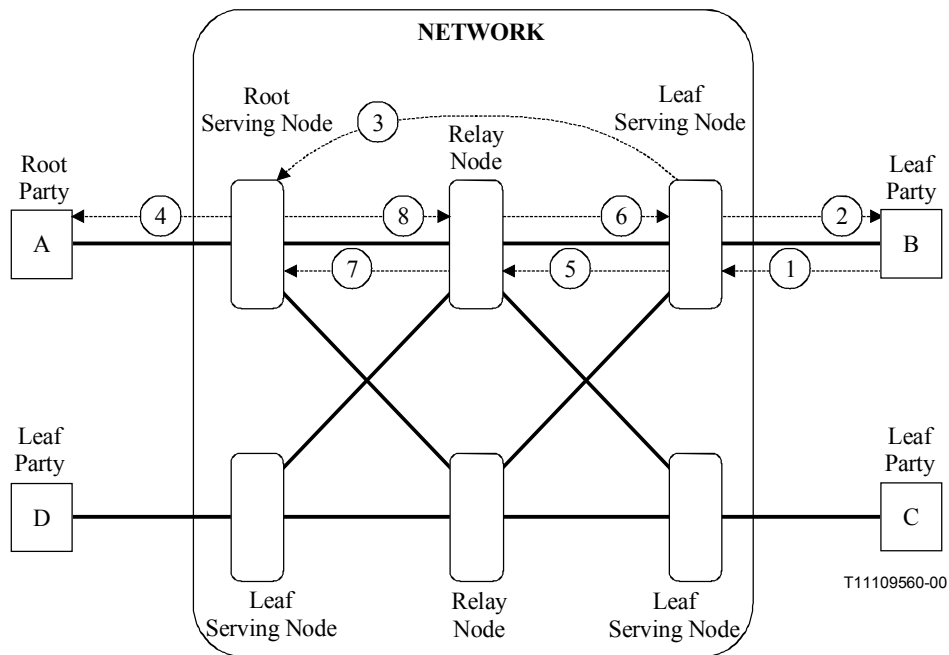


Figure 9-19 – Leaf-party release request (call and bearer) – Single leaf-party attached to bearer at leaf serving node

1	Release-Party-from-Call.ready	Leaf-Party B to Serving Node B
Resource information (None)	Call information LIJ call ID Call control segment ID Requesting party information [Call PEP "B" ID]	Bearer information (None)

Initiation of information flow: The leaf-party requests to be removed from an LIJ call and its associated bearers.

Processing upon receipt: When the leaf serving node receives the information flow, it determines that party B is attached to the bearer associated with the LIJ call. It therefore must remove the bearer and the call. The leaf-party is released from the call (information flow 2). It also determines that this is the last leaf-party attached to the bearer and this was the last party associated with the LIJ call. It then issues information flow 5 towards the relay node.

If the LIJ call is of the type "root screening" or "network screening with root notification", information flow 3 towards the root serving node is issued. On the other hand, if the LIJ call is of the type "network screening without root notification" and the leaf serving node noted that the leaf-party initiated the joining, which has not been notified towards the root, information flow 3 is not issued.

2 Release-Party-from-Call.commit **Serving Node B to Leaf-Party B**

Resource information (None)	Call information LIJ call ID Call control segment ID	Bearer information (None)
---------------------------------------	---	-------------------------------------

Processing upon receipt: When party B receives this information flow, it will disconnect from the bearer and clear the LIJ call.

3 Notify-Party-&-Bearer-Change.indication **Serving Node B to Serving Node A**

Resource information (None)	Call information LIJ call ID Call control segment ID Direct Call association (SN(A):ref.a – SN(B):ref.b) ID, Removed party information [Call PEP "B" ID]	Bearer information Network connection 1 Bearer "1" ID
---------------------------------------	--	--

Initiation of information flow: Processing upon receipt of information flow 1 and the leaf serving node decided to inform the root-party.

Processing upon receipt: When the root serving node receives this information flow, it is aware that the specified party has been removed from the LIJ call. It notifies the root-party that party B has been removed (information flow 4).

4 Notify-Party-&-Bearer-Change.indication **Serving Node A to Root-Party A**

Resource information (None)	Call information LIJ call ID Call control segment ID Removed party information [Call PEP "B" ID]	Bearer information Network connection 1 Bearer "1" ID
---------------------------------------	---	--

Processing upon receipt: When the root-party receives this flow, it notes that party B has been removed from the call.

NOTE 1 – If the root-party did not retained knowledge about this leaf-party in the LIJ call, the information flow is ignored.

5 Release-Bearer.ready **Serving Node B to Relay Node**

Resource information (None)	Call information LIJ call ID Call control segment ID Direct Call association (SN(A):ref.a – SN(B):ref.b) ID, Remote party information [Call PEP "B" ID(none)]	Bearer information Network connection 1 Bearer "1" ID
---------------------------------------	---	--

Initiation of information flow: Processing upon receipt of information flow 1.

Processing upon receipt: When the relay node receives this information flow, it notes that this is the last bearer link associated with the designated bearer and therefore issues the commit flow towards the leaf serving node (information flow 6) and issues information flow 7 towards the root serving node requesting removal of the bearer link between the root serving node and the relay node.

6 Release-Bearer.commit**Relay Node to Serving Node B****Resource information**
(None)**Call information**
LIJ call ID
Call control segment ID**Bearer information**
Network connection 1
Bearer "1" ID

Processing upon receipt: When the Leaf serving node receives this information flow, it is aware that the relay node has acknowledged the removal of the bearer link between the relay node and the serving node. No further actions are required by the serving node at this point.

NOTE 2 – When the relay node receives information flow 5 and notes that there exist additional bearer links going to different leaf serving nodes or other relay nodes associated with the designated bearer, information flows 7 and 8 are "Detach-Party-from-Bearer" instead of "Release-Bearer" (the parameters remain the same).

7 Release-Bearer.ready**Relay Node to Serving Node A****Resource information**
(None)**Call information**
LIJ call ID
Call control segment ID
Direct Call association (SN(A):ref.a – SN(B):ref.b) ID,
Remote party information
[Call PEP "B" ID]**Bearer information**
Network connection 1
Bearer "1" ID

Initiation of information flow: Processing upon receipt of information flow 5

Processing upon receipt: When the root serving node receives this information flow, it notes that it has other leaf-parties (may be in other leaf serving nodes and served by other relay nodes) and therefore no bearer action towards the root-party should occur. Therefore, it only issues the commit information flow 8 towards the relay node.

The serving node also records that the LIJ call and its associated bearers no longer exist in the leaf serving node.

8 Release-Bearer.commit**Serving Node A to Relay Node****Resource information**
(None)**Call information**
LIJ call ID
Call control segment ID**Bearer information**
Network connection 1
Bearer "1" ID

Processing upon receipt: When the relay node receives the information flow it is aware that the bearer link between the root serving node and the relay node has been released.

9.4.3 Leaf-party release request (last leaf-party attached to LIJ call)

- LIJ call with root screening.
- LIJ call network screening with root notification.
- LIJ call network screening without root notification.

This signalling capability illustrates the information flows necessary for a party to remove itself and its associated bearers from an established LIJ call. The leaf serving node has a record of this LIJ call and bearer. The call and bearer transition diagram for call and bearer transition diagram for leaf-party release request is shown in Figure 9-20. Only one bearer is illustrated, however, it is a simple extension to include an additional bearer. Upon the completion of the functional entity action, the serving node associated with the leaf-party B does not retain the LIJ call and bearer association as there exist no further leaf-parties served by this node. In addition, if the LIJ is not configured such that the root-party maintains its call relationship and the network connection towards the root serving node even in the absence of any leaf-parties from call and bearer, the complete LIJ call is released.

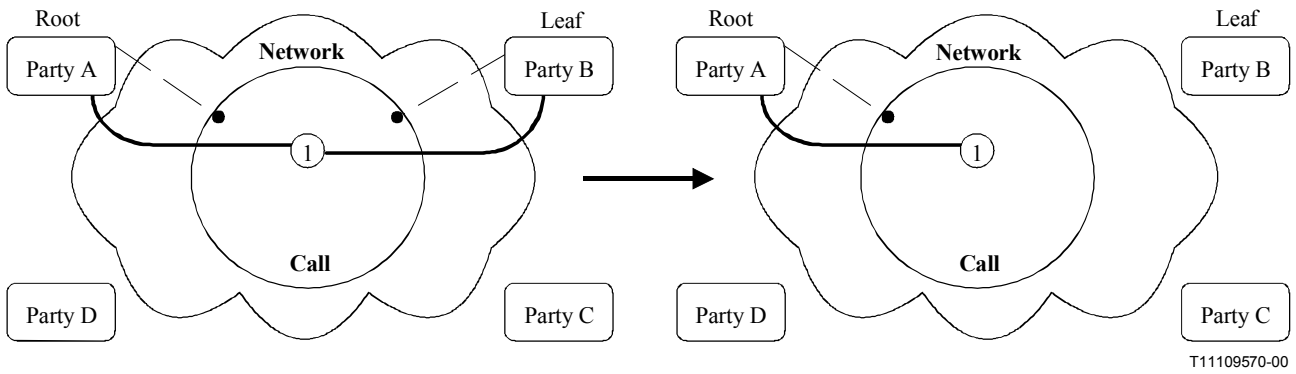


Figure 9-20 – Call and bearer transition diagram for leaf-party release request – Last leaf-party attached to LIJ call and LIJ call retained

The information flows are illustrated in Figure 9-21.

NOTE 1 – This signalling capability is independent of the screening option selected; the only requirement is that the root-party has knowledge of party B2.

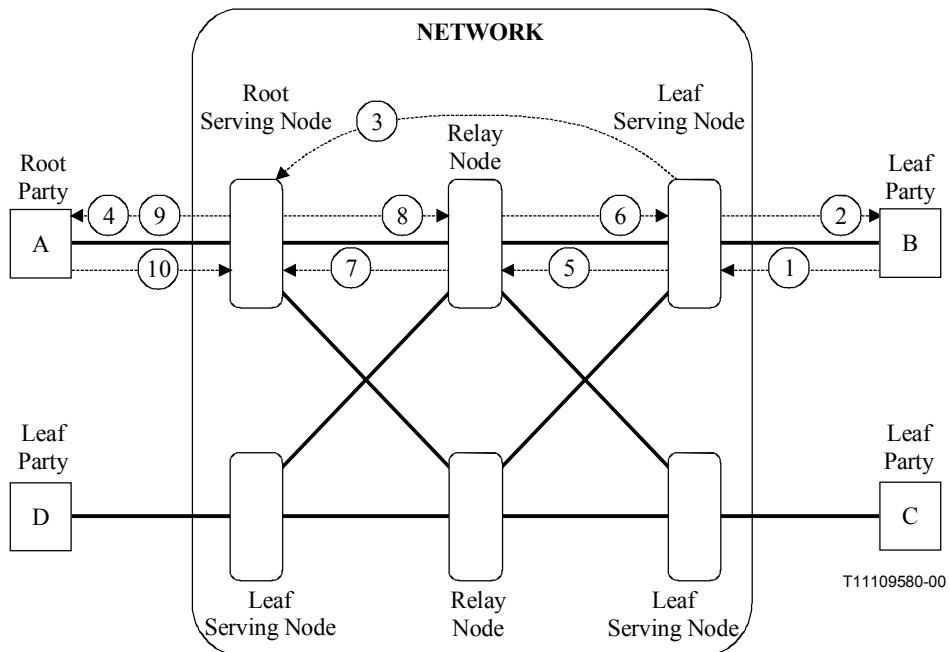


Figure 9-21 – Leaf-party release request (call and bearer) – Last leaf-party attached to LIJ call

1 Release-Call.ready Leaf-Party B to Serving Node B

Resource information (None)	Call information LIJ call ID Call control segment ID Requesting party information [Call PEP "B" ID]	Bearer information (None)
---------------------------------------	--	-------------------------------------

Initiation of information flow: The leaf-party requests to be removed from an LIJ call and its associated bearers.

Processing upon receipt: When the leaf serving node receives the information flow, it determines that party B is attached to the bearer associated with the LIJ call. It therefore must remove the bearer and the call. The leaf-party is released from the call (information flow 2). It also determines that this is the last leaf-party attached to the bearer and this was the last party associated with the LIJ call. It then issues information flows 3 towards the root serving node. It also issues information flow 5 towards the relay node.

NOTE 2 – If the LIJ call is of the type "network screening without root notification" and the leaf serving node noted that the leaf-party initiated the joining, which has not been notified towards the root, information flow 3 is not issued.

2 Release-Call.commit Serving Node B to Leaf-Party B

Resource information (None)	Call information LIJ call ID Call control segment ID	Bearer information (None)
---------------------------------------	---	-------------------------------------

Processing upon receipt: When party B receives this information flow, it will disconnect from the bearer and clear the LIJ call.

3 Notify-Party-&-Bearer-Change.indication Serving Node B to Serving Node A

Resource information (None)	Call information LIJ call ID Call control segment ID Direct Call association (SN(A):ref.a – SN(B):ref.b) ID, Removed party information [Call PEP "B" ID]	Bearer information Network connection 1 Bearer "1" ID
---------------------------------------	--	--

Initiation of information flow: Processing upon receipt of information flow 1 and the root-party may have retained knowledge about this leaf-party in the LIJ call.

Processing upon receipt: When the root serving node receives this information flow, it is aware that the specified party has been removed from the LIJ call. It notifies the root-party that party B has been removed (information flow 4).

4 Notify-Party-&-Bearer-Change.indication Serving Node A to Root-Party A

Resource information (None)	Call information LIJ call ID Call control segment ID Removed party information [Call PEP "B" ID]	Bearer information Network connection 1 Bearer "1" ID
---------------------------------------	---	--

Processing upon receipt: When the root-party receives this flow, it notes that party B has been removed from the call.

NOTE 3 – If the root-party did not retained knowledge about this leaf-party in the LIJ call, the information flow is ignored.

5 Release-Bearer.ready**Serving Node B to Relay Node****Resource information**

(None)

Call information

LIJ call ID

Call control segment ID

Direct Call association (SN(A):ref.a – SN(B):ref.b) ID,

Removed party information

[Call PEP "B" ID]

Bearer information

Network connection 1

Bearer "1" ID

Initiation of information flow: Processing upon receipt of information flow 1

Processing upon receipt: When the relay node receives this information flow, it notes that this is the last bearer link associated with the designated bearer and therefore issues the commit flow towards the leaf serving node (information flow 6) and issues information flow 7 towards the root serving node requesting removal of the bearer link between the root serving node and the relay node.

6 Release-Bearer.commit**Relay Node to Serving Node B****Resource information**

(None)

Call information

LIJ call ID

Call control segment ID

Bearer information

Network connection 1

Bearer "1" ID

Processing upon receipt: When the Leaf serving node receives this information flow, it is aware that the relay node has acknowledged the removal of the bearer link between the relay node and the serving node. No further actions are required by the serving node at this point.

7 Release-Bearer.ready**Serving Node B to Relay Node****Resource information**

(None)

Call information

LIJ call ID

Call control segment ID

Direct Call association (SN(A):ref.a – SN(B):ref.b) ID,

Removed party information

[Call PEP "B" ID]

Bearer information

Network connection 1

Bearer "1" ID

Initiation of information flow: Processing upon receipt of information flow 5

Processing upon receipt: When the root serving node receives this information flow, it notes that it has no other leaf serving nodes or relay nodes attached and, therefore, the last party has been detached. Therefore it issues the commit information flow 8 towards the relay node and releases the call towards the root-party with information flow 9.

NOTE 4 – The root serving node also notes that it has no other leaf serving nodes or relay nodes attached and, therefore, the last party has been detached. If the LIJ call is may be configured such that the root-party does not maintains its call relationship and the network connection towards the root serving node even in the absence of any leaf-parties from call and bearer, the call is released towards the root-party with information flow 9. Otherwise, the information flow 9 is not issued and executed in this case.

8 ReleaseDetach-Party-from-Bearer.commit**Relay Node to Serving Node B****Resource information**

(None)

Call information

LIJ call ID

Call control segment ID

Bearer information

Network connection 1

Bearer "1" ID

Processing upon receipt: When the relay node receives the information flow, it is aware that the bearer link between the root serving node and the relay node has been released.

If the type 2 network connection between the root-party A and its serving node A is to be retained (similar as after the information flows described in 9.1.1), the information flows for this signalling capability terminate here. Otherwise, if the LIJ is configured such that the root-party does not maintain its call relationship and the network connection towards the root serving node in the absence of any leaf-parties from call and bearer, the complete LIJ call is released. The call and bearer transition diagram for call and bearer transition diagram for the release of the complete LIJ call is shown in Figure 9-22.

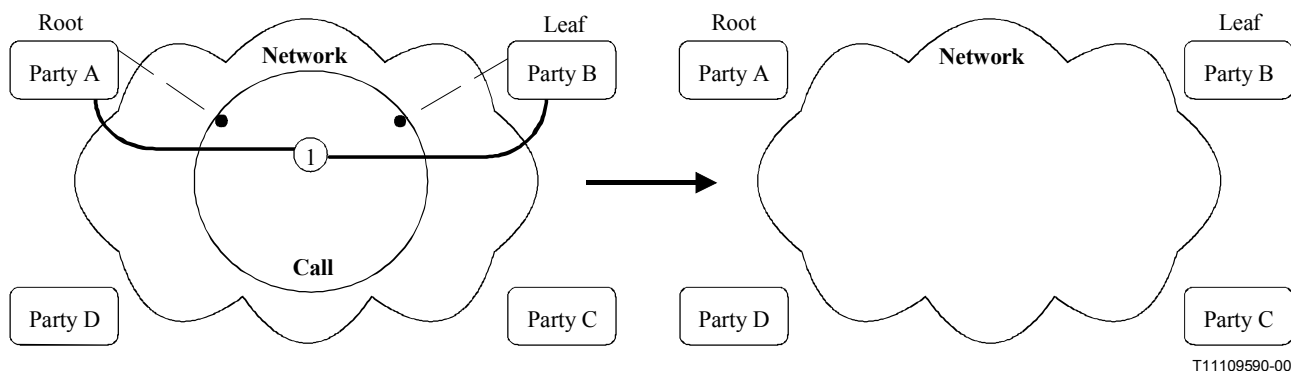


Figure 9-22 – Call and bearer transition diagram for removal of leaf-party requested by root-party – Last leaf-party attached to LIJ call and LIJ call release

9 Release-Call.ready Serving Node A to Root-Party A

Resource information (None)	Call information LIJ call ID Call control segment ID	Bearer information Network connection 1 Bearer "1" ID
---------------------------------------	---	--

Initiation of information flow: Processing upon receipt of information flow 7 and the type 2 network connection between the root-party A and its serving node is not to be retained.

Processing upon receipt: When the root-party receives this information flow, it notes that it has no longer any leaf-parties attached. Therefore, the LIJ call is released. It issues the commit information flow 10 towards the root serving node.

10 Release-Call.commit Root-Party A to Serving Node A

Resource information (None)	Call information LIJ call ID Call control segment ID	Bearer information Network connection 1 Bearer "1" ID
---------------------------------------	---	--

Processing upon receipt: The root serving node releases all knowledge about the LIJ call.

9.5 LIJ Call and Bearer Release by Root-Party

The following subclause describes the functional entity actions associated with the release of an LIJ call and its associated bearers by the root-party.

9.5.1 Root-Party Requests to Terminate LIJ Call (with no associated Leaf-Parties)

- LIJ call with root screening.
- LIJ call network screening with root notification.
- LIJ call network screening without root notification.

This signalling capability illustrates the information flows necessary for a root-party to remove itself and its associated bearers from an established LIJ call. No leaf serving node exists that has a record of this LIJ call and bearer. The call and bearer transition diagram for root-party release request is shown in Figure 9-23. Only one bearer is illustrated, however, it is a simple extension to include an additional bearer. Upon the completion of the functional entity action, the complete LIJ call and its associated bearers have been removed.

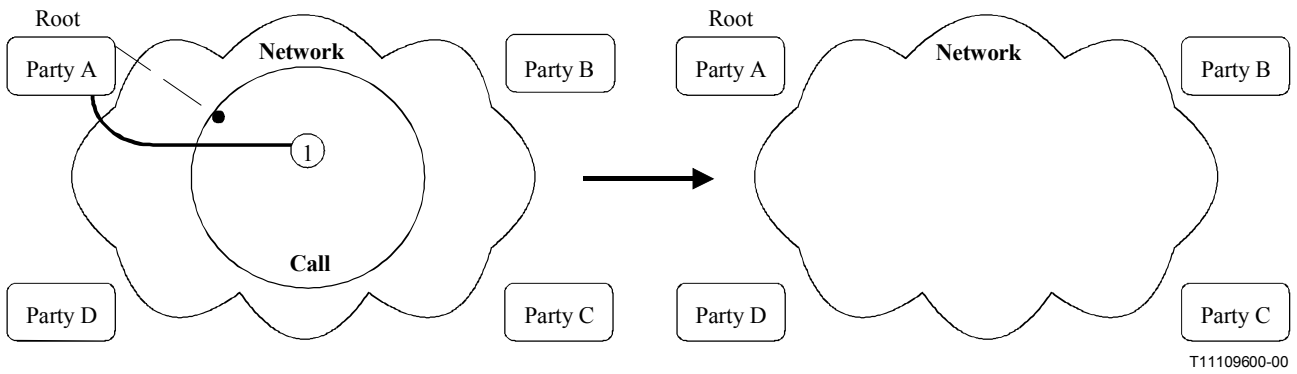


Figure 9-23 – Call and bearer transition diagram for root-party release request – No leaf-parties attached to LIJ call

The information flows are illustrated in Figure 9-24.

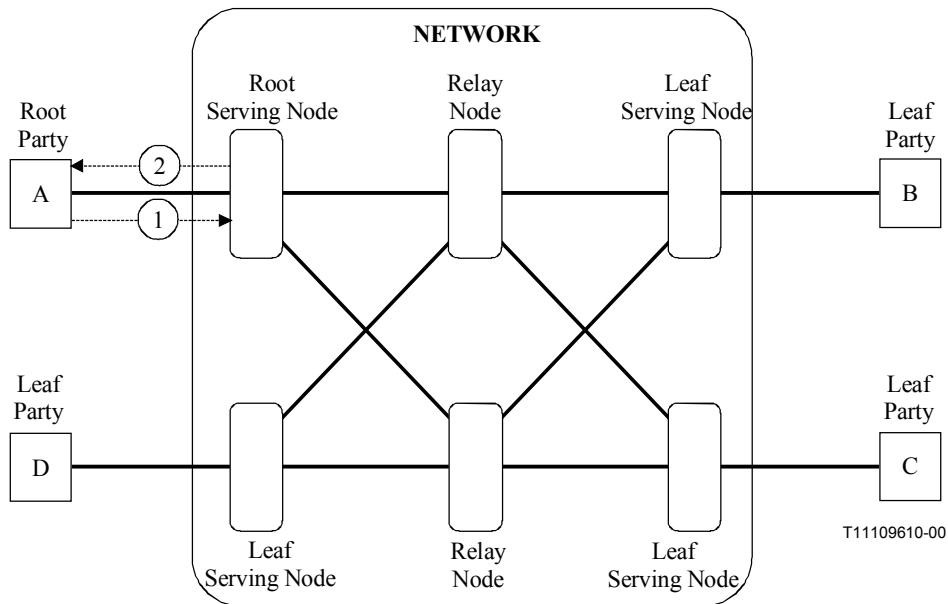


Figure 9-24 – Root-party release request (call and bearer) – No leaf-parties attached to LIJ call

<p>1</p> <p>Resource information (None)</p> <p>Call information LIJ call ID Call control segment ID Requesting party information [Call PEP "A" ID]</p>	<p>Release-Call.ready</p> <p>Leaf-Party A to Serving Node A</p> <p>Bearer information (None)</p>
---	---

Initiation of information flow: The root-party requests the release of an LIJ call and its associated bearers.

Processing upon receipt: When the root serving node receives the information flow, it removes the bearer and the call and all further knowledge about the LIJ call, i.e. the LIJ Instant. It further determines that party A is the only remaining party in the LIJ call and no further actions except issuing information flow 2 are required.

Resource information (None)
Call information
 LIJ call ID
 Call control segment ID

Bearer information
 (None)

Processing upon receipt: When this information flow arrives at Party A, the requesting party knows that the requested composite action has been completed.

9.5.2 Root-Party Requests to Terminate LIJ Call (with several Leaf SN associated with the LIJ Call)

- LIJ call with root screening.
- LIJ call network screening with root notification.
- LIJ call network screening without root notification.

This signalling capability illustrates the information flows necessary for a root-party to remove itself and its associated bearers from an established LIJ call. One or more leaf serving nodes exist with attached leaf-parties as well as a record of this LIJ call and bearer. The call and bearer transition diagram for root-party release request is shown in Figure 9-25. Only one bearer is illustrated, however, it is a simple extension to include an additional bearer. Upon the completion of the functional entity action, the complete LIJ call and its associated bearers have been removed.

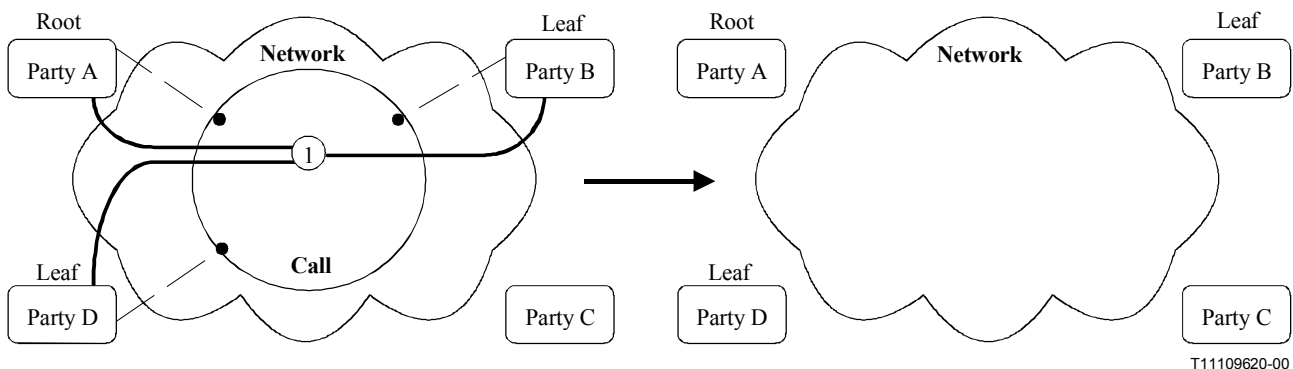
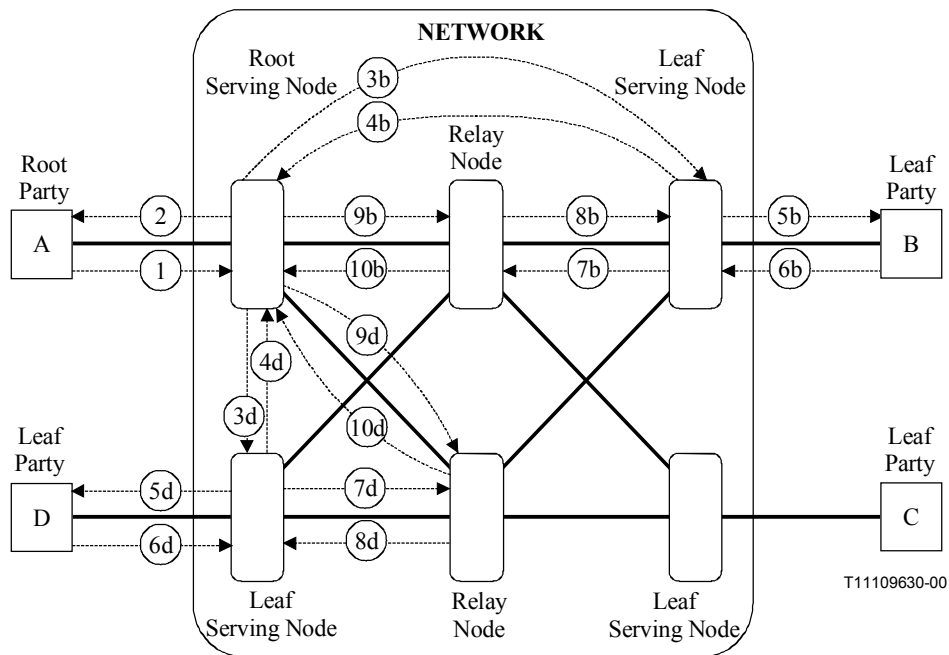


Figure 9-25 – Call and bearer transition diagram for root-party release request – One or more leaf-parties attached to LIJ call

The information flows are illustrated in Figure 9-26.



**Figure 9-26 – Root-Party release request (call and bearer) –
One or more leaf-parties attached to LIJ call**

1 Release-Call.ready Leaf-Party A to Serving Node A

<p>Resource information (None)</p>	<p>Call information LIJ call ID Call control segment ID Requesting party information [Call PEP "A" ID]</p>	<p>Bearer information (None)</p>
---	---	---

Initiation of information flow: The root-party requests the release of an LIJ call and its associated bearers.

Processing upon receipt: When the root serving node receives the information flow, it issues information flow 2 towards the root-party A, information flow 3 towards all leaf serving nodes, and information flows 9 along the branches towards the leaves of the point-to-multipoint bearer.

2 Release-Call.commit Serving Node A to Leaf-Party A

<p>Resource information (None)</p>	<p>Call information LIJ call ID Call control segment ID</p>	<p>Bearer information (None)</p>
---	--	---

Processing upon receipt: When this information flow arrives at Party A, the requesting party knows that the requested composite action has been completed.

3b	Release-Call.ready	Serving Node A to Serving Node B
3d	Release-Call.ready	Serving Node A to Serving Node D

Resource information (None)	Call information LIJ call ID Call control segment ID Direct Call association (SN(A):ref.a – SN(B):ref.b) ID, Requesting party information [Call PEP "A" ID]	Bearer information (None)
---------------------------------------	---	-------------------------------------

NOTE 1 – In the information flow 3d towards the leaf serving node D, the value of the "Direct Call association" is (SN(A):ref.a – SN(D):ref.d) ID.

Initiation of information flow: Processing upon receipt of information flow 1

Processing upon receipt: When the leaf serving node receives the information flow, it issues information flow 4 towards the root serving node, information flow 5 towards all known attached leaf-parties, and information flow 7 along the branches towards the root of the point-to-multipoint bearer.

4b	Release-Call.commit	Serving Node B to Serving Node A
4d	Release-Call.commit	Serving Node D to Serving Node A

Resource information (None)	Call information LIJ call ID Call control segment ID	Bearer information (None)
---------------------------------------	---	-------------------------------------

Enabling condition: This entity action is only performed upon receipt of all information flows 4 (if multiple information flows 3 to several serving nodes have been sent) and all information flows 10.

Processing upon receipt: When this information flow arrives at the root serving node, it removes the bearer and the call and all further knowledge about the LIJ call, i.e. the LIJ Instant.

5b	Release-Call.ready	Serving Node B to Leaf-Party B
5d	Release-Call.ready	Serving Node D to Leaf-Party D

Resource information (None)	Call information LIJ call ID Call control segment ID Addressed party information [Call PEP "B" ID]	Bearer information (None)
---------------------------------------	---	-------------------------------------

Processing upon receipt: When party B receives this flow, it will disconnect from the bearer and clear the LIJ call. It then issues information flow 6 towards the serving node.

6b	Release-Call.commit	Leaf-Party B to Serving Node B
6d	Release-Call.commit	Leaf-Party D to Serving Node D

Resource information (None)	Call information LIJ call ID Call control segment ID	Bearer information (None)
---------------------------------------	---	-------------------------------------

Enabling condition: This entity action is only performed upon receipt of all information flows 6 (if multiple information flows 5 to several parties have been sent) and information flow 8.

Processing upon receipt: When the information flow is received by the leaf serving node, it removes the bearer and the call and all further knowledge about the LIJ call.

7b	Release-Bearer.ready	Serving Node B to Relay Node
7d	Release-Bearer.ready	Serving Node D to Relay Node

Resource information (None)	Call information LIJ call ID Call control segment ID Direct Call association (SN(A):ref.a – SN(B):ref.b) ID, Removed party information [Call PEP "B" ID]	Bearer information Network connection 1 Bearer "1" ID
---------------------------------------	--	--

NOTE 2 – In the information flow 7d towards the leaf serving node D, the value of the "**Direct Call association**" is (SN(A):ref.a – SN(D):ref.d) ID.

Initiation of information flow: Processing upon receipt of information flow 3

Processing upon receipt: When the relay node receives this information flow, it notes that this is the last bearer link associated with the designated bearer and therefore issues the commit flow towards the leaf serving node (information flow 8).

8b	Release-Bearer.commit	Relay Node to Serving Node B
8d	Release-Bearer.commit	Relay Node to Serving Node D

Resource information (None)	Call information LIJ call ID Call control segment ID Removed party information [Call PEP "B" ID]	Bearer information Network connection 1 Bearer "1" ID
---------------------------------------	---	--

Enabling condition: This entity action is only performed upon receipt of all information flows 6 (if multiple information flows 5 to several parties have been sent) and information flow 8.

Processing upon receipt: When the information flow is received by the leaf serving node, it removes the bearer and the call and all further knowledge about the LIJ call.

9b	Release-Bearer.ready	Serving Node A to Relay Node
9d	Release-Bearer.ready	Serving Node A to Relay Node

Resource information (None)	Call information LIJ call ID Call control segment ID	Bearer information Network connection 1 Bearer "1" ID
---------------------------------------	---	--

Initiation of information flow: Processing upon receipt of information flow 1

Processing upon receipt: When the relay node receives this information flow, it notes that this is the last bearer link associated with the designated bearer and therefore issues the commit flow towards the root serving node (information flow 10).

10b	Release-Bearer.commit	Relay Node to Serving Node A
10d	Release-Bearer.commit	Relay Node to Serving Node A

Resource information (None)	Call information LIJ call ID Call control segment ID	Bearer information Network connection 1 Bearer "1" ID
---------------------------------------	---	--

Enabling condition: This entity action is only performed upon receipt of all information flows 4 (if multiple information flows 3 to several serving nodes have been sent) and all information flows 10 and 12.

Processing upon receipt: When this information flow arrives at the root serving node, it removes the bearer and the call and all further knowledge about the LIJ call, i.e. the LIJ Instant.

9.6 LIJ Call Leaf-Party detaches from Bearer

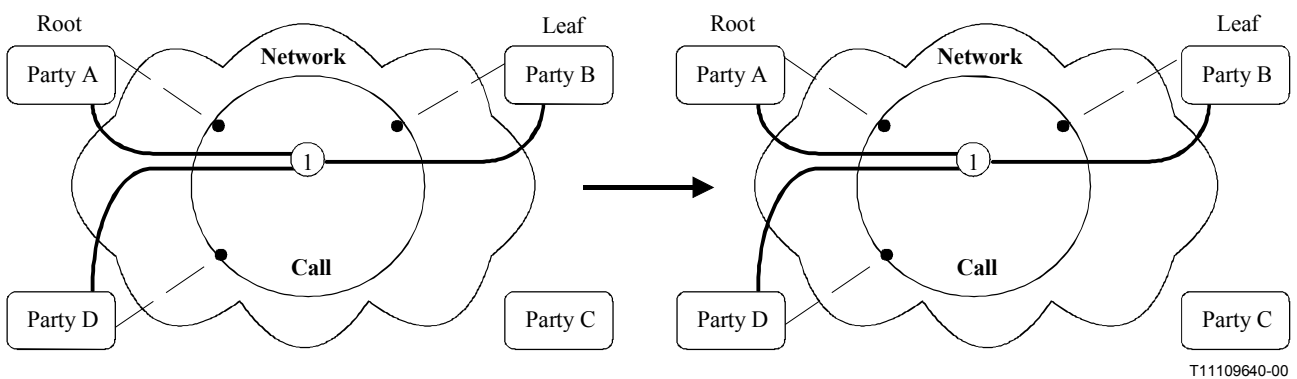
The following subclause describes the functional entity actions associated with the detachment of a leaf-party of an LIJ call from its associated bearers.

9.6.1 Leaf-Party Requests to Detach from Bearer

- LIJ call with root screening.

This signalling capability illustrates the information flows necessary for a leaf-party to detach itself from its associated bearers. The call and bearer transition diagram for leaf-party detach request is shown in Figure 9-27. Only one bearer is illustrated, however, it is a simple extension to include an additional bearer. Upon the completion of the functional entity action, the leaf-party of an LIJ call is detached from its associated bearers.

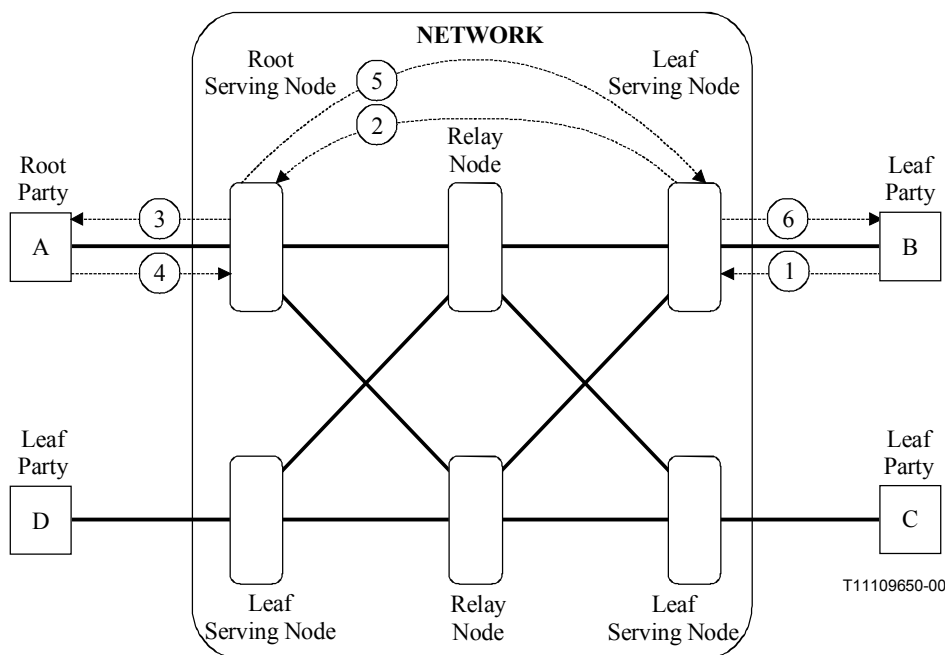
NOTE 1 – The (point-to-multipoint) bearer is maintained up to the serving node to assure proper release of all parties even in the case where the root serving node does not keep all party identities recorded (see 9.5 2).



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Figure 9-27 – Call and bearer transition diagram for leaf-party detach request

The information flows are illustrated in Figure 9-28.



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Figure 9-28 – Leaf-party detach request

1 Detach-Party-from-Bearer.ready Leaf-Party B to Serving Node B

Resource information (None)	Call information LIJ call ID Call control segment ID Requesting party information [Call PEP "B" ID]	Bearer information Network connection 1 Bearer "1" ID
---------------------------------------	--	--

Initiation of information flow: The leaf-party requests the detachment from a bearer of an LIJ call.

Processing upon receipt: When the leaf serving node receives the information flow, it determines that the LIJ call is of the type "LIJ call with root screening". It then issues information flow 2 towards the root serving node.

2 Detach-Party-from-Bearer.ready Serving Node B to Serving Node A

Resource information (None)	Call information LIJ call ID Call control segment ID Requesting party information [Call PEP "B" ID]	Bearer information Network connection 1 Bearer "1" ID
---------------------------------------	--	--

Processing upon receipt: When the root serving node receives the information flow, it issues information flow 3 towards the root-party.

3 Detach-Party-from-Bearer.ready Serving Node A to Root-Party A

Resource information (None)	Call information LIJ call ID Call control segment ID Direct Call association (SN(A):ref.a – SN(B):ref.b) ID, Requesting party information [Call PEP "B" ID]	Bearer information Network connection 1 Bearer "1" ID
---------------------------------------	---	--

Processing upon receipt: When the root-party receives the information flow, it determines that the request for detachment from a bearer can be granted. It then issues information flow 4 towards the root serving node.

4 Detach-Party-from-Bearer.commit Leaf-Party A to Serving Node A

Resource information (None)	Call information LIJ call ID Call control segment ID Requesting party information [Call PEP "B" ID]	Bearer information Network connection 1 Bearer "1" ID
---------------------------------------	--	--

Processing upon receipt: When this information flow arrives at the root serving node, it issues information flow 5.

5 Detach-Party-from-Bearer.commit Serving Node A to Serving Node B

Resource information (None)	Call information LIJ call ID Call control segment ID Requesting party information [Call PEP "B" ID]	Bearer information Network connection 1 Bearer "1" ID
---------------------------------------	--	--

Processing upon receipt: When this information flow arrives at the leaf serving node leaf-party "B" is detached from the bearer, and information flow 6 is issued.

NOTE 2 – No actions to release branches of the point-to-multipoint bearer are initiated.

Resource information
(None)

Call information
LIJ call ID
Call control segment ID
Requesting party information
[Call PEP "B" ID]

Bearer information
Network connection 1
Bearer "1" ID

Processing upon receipt: When this information flow arrives at Party B, the requesting party knows that the requested composite action has been completed.

9.6.2 Leaf-Party Requests to Detach from Bearer

- LIJ call network screening with root notification.
- LIJ call network screening without root notification.

This signalling capability illustrates the information flows necessary for a leaf-party to detach itself from its associated bearers. The call and bearer transition diagram for leaf-party detach request is shown in Figure 9-29. Only one bearer is illustrated, however, it is a simple extension to include an additional bearer. Upon the completion of the functional entity action, the leaf-party of an LIJ call is detached from its associated bearers.

NOTE 1 – The (point-to-multipoint) bearer is maintained up to the serving node to assure proper release of all parties even in the case where the root serving node does not keep all party identities recorded (see 9.5 2).

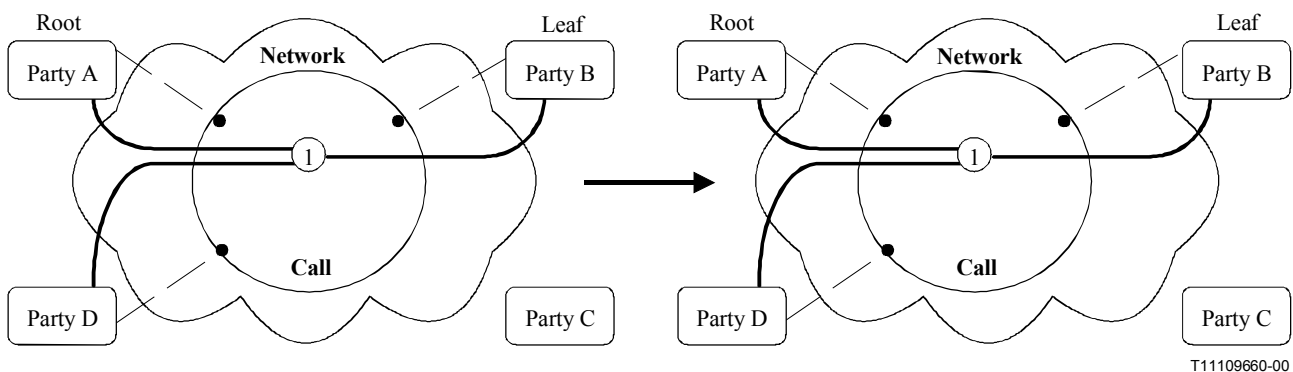


Figure 9-29 – Call and bearer transition diagram for leaf-party detach request

The information flows are illustrated in Figure 9-30.

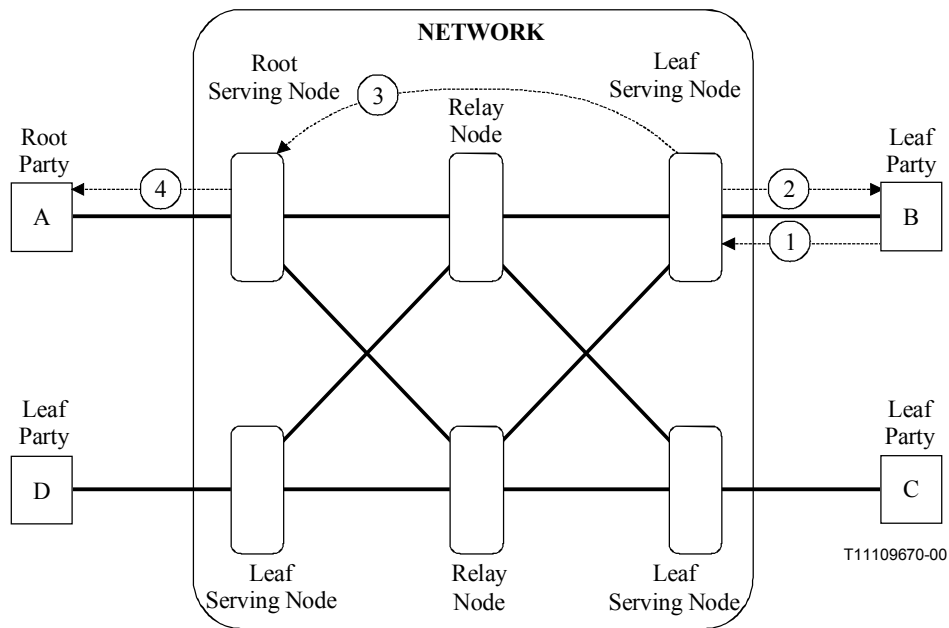


Figure 9-30 – Leaf-party detach request

1 Detach-Party-from-Bearer.ready Leaf-Party B to Serving Node B

Resource information
(None)

Call information
LIJ call ID
Call control segment ID
Requesting party information
[Call PEP "B" ID]

Bearer information
Network connection 1
Bearer "1" ID

Initiation of information flow: The leaf-party requests the detachment from a bearer of an LIJ call.

Processing upon receipt: When the leaf serving node receives the information flow, it determines that the LIJ call is not of the type "LIJ call with root screening". It then issues information flow 2 towards the leaf-party and information flow 3 towards the root serving node.

NOTE 2 – If the LIJ call is of the type "LIJ call network screening without root notification", information flow 3 is not issued.

2 Detach-Party-from-Bearer.commit Serving Node B to Leaf-Party B

Resource information
(None)

Call information
LIJ call ID
Call control segment ID
Requesting party information
[Call PEP "B" ID]

Bearer information
Network connection 1
Bearer "1" ID

Processing upon receipt: When this information flow arrives at Party B, the requesting party knows that the requested composite action has been completed.

3 Notify-Bearer-Change.indication**Serving Node B to Serving Node A****Resource information**

(None)

Call information

LIJ call ID

Call control segment ID

Direct Call association (SN(A):ref.a – SN(B):ref.b) ID,

Requesting party information

[Party "B" Address, Call PEP "B" ID]

Bearer information

Network connection 1

Bearer "1" ID

Initiation of information flow: Processing upon receipt of information flow 1 and the registration parameter is "network screening with root notification".

Processing upon receipt: When this information flow arrives at the root serving node, the root-party is informed (information flow 4) about the fact that party B has been detached from its bearer.

4 Notify-Bearer-Change.indication**Serving Node A to Party A****Resource information**

(None)

Call information

LIJ call ID

Call control segment ID

Requesting party information

[Party "B" Address, Call PEP "B" ID]

Bearer information

Network connection 1

Bearer "1" ID

Processing upon receipt: When this information flow arrives at party A, the root-party is informed about the fact that party B has been detached from its bearer.

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