



INTERNATIONAL TELECOMMUNICATION UNION

# ITU-T

TELECOMMUNICATION  
STANDARDIZATION SECTOR  
OF ITU

# Q.2971

**Corrigendum 1**  
(12/99)

SERIES Q: SWITCHING AND SIGNALLING

Broadband ISDN – B-ISDN application protocols for  
access signalling

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Digital subscriber signalling system No. 2 (DSS2) –  
User-Network Interface Layer 3 specification for  
point-to-multipoint Call/Connection Control

**Corrigendum 1**

ITU-T Recommendation Q.2971 – Corrigendum 1

(Previously CCITT Recommendation)

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## ITU-T Q-SERIES RECOMMENDATIONS

**SWITCHING AND SIGNALLING**

SIGNALLING IN THE INTERNATIONAL MANUAL SERVICE	Q.1–Q.3
INTERNATIONAL AUTOMATIC AND SEMI-AUTOMATIC WORKING	Q.4–Q.59
FUNCTIONS AND INFORMATION FLOWS FOR SERVICES IN THE ISDN	Q.60–Q.99
CLAUSES APPLICABLE TO ITU-T STANDARD SYSTEMS	Q.100–Q.119
SPECIFICATIONS OF SIGNALLING SYSTEMS No. 4 AND No. 5	Q.120–Q.249
SPECIFICATIONS OF SIGNALLING SYSTEM No. 6	Q.250–Q.309
SPECIFICATIONS OF SIGNALLING SYSTEM R1	Q.310–Q.399
SPECIFICATIONS OF SIGNALLING SYSTEM R2	Q.400–Q.499
DIGITAL EXCHANGES	Q.500–Q.599
INTERWORKING OF SIGNALLING SYSTEMS	Q.600–Q.699
SPECIFICATIONS OF SIGNALLING SYSTEM No. 7	Q.700–Q.849
DIGITAL SUBSCRIBER SIGNALLING SYSTEM No. 1	Q.850–Q.999
PUBLIC LAND MOBILE NETWORK	Q.1000–Q.1099
INTERWORKING WITH SATELLITE MOBILE SYSTEMS	Q.1100–Q.1199
INTELLIGENT NETWORK	Q.1200–Q.1699
SIGNALLING REQUIREMENTS AND PROTOCOLS FOR IMT-2000	Q.1700–Q.1799
BROADBAND ISDN	Q.2000–Q.2999
General aspects	Q.2000–Q.2099
Signalling ATM adaptation layer (SAAL)	Q.2100–Q.2199
Signalling network protocols	Q.2200–Q.2299
Common aspects of B-ISDN application protocols for access signalling and network signalling and interworking	Q.2600–Q.2699
B-ISDN application protocols for the network signalling	Q.2700–Q.2899
<b>B-ISDN application protocols for access signalling</b>	<b>Q.2900–Q.2999</b>

*For further details, please refer to ITU-T List of Recommendations.*

# **ITU-T RECOMMENDATION Q.2971**

## **DIGITAL SUBSCRIBER SIGNALLING SYSTEM No. 2 (DSS2) – USER-NETWORK INTERFACE LAYER 3 SPECIFICATION FOR POINT-TO-MULTIPOINT CALL/CONNECTION CONTROL**

### **CORRIGENDUM 1**

#### **Summary**

This Corrigendum is issued in order to correct editorial and minor technical errors contained in Recommendation Q.2971 (1995).

#### **Source**

Corrigendum 1 to ITU-T Recommendation Q.2971, was prepared by ITU-T Study Group 11 (1997-2000) and was approved under the WTSC Resolution No. 1 procedure on 3 December 1999.

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

The approval of Recommendations by the Members of the ITU-T is covered by the procedure laid down in WTSC Resolution No. 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

## NOTE

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

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## Recommendation Q.2971

### DIGITAL SUBSCRIBER SIGNALLING SYSTEM No. 2 (DSS2) – USER-NETWORK INTERFACE LAYER 3 SPECIFICATION FOR POINT-TO-MULTIPOINT CALL/CONNECTION CONTROL

#### CORRIGENDUM 1

*(Geneva, 1999)*

#### 1) Clause 2

- a) *Replace reference No. [6] ITU-T Recommendation Q.2610 (1995) with ITU-T Recommendation Q.2610 (1999).*
- b) *Replace reference No. [9] ITU-T Recommendation Q.2961 (1995) with ITU-T Recommendation Q.2961.1 (1995) and update all references in the Recommendation text accordingly.*

#### 2) Subclause 5.2

*In the first paragraph, replace 1.5/Q.2931 with 1.3/Q.2931.*

#### 3) Subclause 5.3

*Replace the fourth paragraph with:*

Multiple add party requests pending at the same time are allowed (e.g. the root does not need to wait for a response related to one add party request before issuing the next one).

#### 4) Subclause 8.1.2.1

*Replace Notes 1, 2 and 3 of Table 8-10 with:*

NOTE 1 – Included in the user-to-network direction when the calling user wants to pass ATM adaptation layer parameters information to the called user. Included in the network-to-user direction if the calling user included an AAL parameters information element in the ADD PARTY message. Must be the same as the one negotiated during the initial call setup, but is not checked by the network.

NOTE 2 – Included in the user-to-network direction when the calling user wants to pass broadband high layer information to the called user. Included in the network-to-user direction if the calling user included a Broadband high layer information information element in the ADD PARTY message. Must be the same as the one negotiated during the initial call setup, but is not checked by the network.

NOTE 3 – Included in the user-to-network direction when the calling user wants to pass broadband low layer information to the called user. Included in the network-to-user direction if the calling user included a Broadband low layer information information element in the ADD PARTY message. Must be the same as the one negotiated during the initial call setup, but is not checked by the network. Only one Broadband low layer information information element is permitted in the ADD PARTY message.

#### 5) Subclause 8.2.1

*Replace the first sentence with:*

The purpose of the Endpoint reference information element is to identify the individual endpoints of a point-to-multipoint call to which the particular message applies and can be used to indicate that parties other than the first party can not negotiate (see 9.1.1).

## 6) Subclause 8.2.1

Replace Figure 8-1 and its associated text by the following figure and table:

8	7	6	5	4	3	2	1	Octets
Endpoint reference information element identifier								
0	1	0	1	0	1	0	0	1
ext. 1	Coding Standard		Flag	Res.	IE instruction field IE Action Ind.			2
Length of endpoint reference contents								3
Length of endpoint reference contents (continued)								4
Endpoint reference type								5
0/1 Endpoint reference flag		Endpoint reference value						6
Endpoint reference value (continued)								6.1

**Figure 8-1/Q.2971 – Endpoint reference information element**

**Table 8-16/Q.2971 – Endpoint reference information element**

<i>Endpoint reference type (octet 5)</i>	
Bits	
<u>8 7 6 5 4 3 2 1</u>	
0 0 0 0 0 0 0 0	Locally defined integer
All other values are reserved.	
<i>Endpoint reference flag (octet 6)</i>	
Bit	
<u>8</u>	
0	The message is sent from the side that originated the endpoint reference
1	The message is sent from the side that originated the endpoint reference
<i>Endpoint reference value (octet 6, 6.1)</i>	
The endpoint reference is a 15-bit integer (coded in binary) to uniquely identify an endpoint.	

## 7) Subclause 8.2.2

Replace Figure 8-2 and its associated text by the following figure and table:

8	7	6	5	4	3	2	1	Octets
Endpoint state information element identifier								
0	1	0	1	0	1	0	1	1
ext. 1	Coding Standard		Flag	Res.	IE instruction field IE Action Ind.			2
Length of endpoint state contents								3
Length of endpoint state contents (continued)								4
Spare 0 0		Endpoint party state						5

**Figure 8-2/Q.2971 – Endpoint state information element**

**Table 8-17/Q.2971 – Endpoint state information element**

<i>Endpoint party state (octet 5)</i>	
Bits	
<u>6 5 4 3 2 1</u>	
0 0 0 0 0 0	Null
0 0 0 0 0 1	Add Party Initiated
0 0 0 1 0 0	Party Alerting Delivered
0 0 0 1 1 0	Add Party Received
0 0 0 1 1 1	Party Alerting Received
0 0 1 0 1 1	Drop Party Initiated
0 0 1 1 0 0	Drop Party Received
0 0 1 0 1 0	Active
All other values are reserved.	

**8) Subclause 8.2.3**

*Renumber Table 8-16, Additional multiparty message types as Table 8-18.*

**9) Subclause 8.2.4**

*a) Replace the title of this subclause with:*

**8.2.4 Cause values for the Cause information element**

*b) Delete the table showing the definitions for cause values #32 and #73.*

*c) Replace the first paragraph by:*

The cause values in 3.2/Q.2610 are applicable.

**10) Subclause 9.1.1**

*Add the following note at the end of the third paragraph:*

NOTE – The term "negotiation" in the context of this Recommendation relates to Broadband low layer negotiation according to Annex C/Q.2931 and ATM adaption layer parameters negotiation according to Annex F/Q.2931 only.

Other types of negotiation are outside the scope of this Recommendation.

**11) Subclause 9.1.2**

*Replace the last sentence of the first paragraph with:*

The user shall send an ADD PARTY message only if the link is in the Active link state or in the Call Delivered link state and negotiation with the first leaf is not allowed.

**12) Subclause 9.1.3**

*Replace the first sentence of the second paragraph with:*

Similarly, if the network determines that a requested service is not available, the network shall send an ADD PARTY REJECT message with one of the following causes following the procedures of 9.3.2:

**13) Subclause 9.2**

*Replace the title of this subclause with:*

**Subsequent party establishment at the destination side**

**14) Subclause 9.2**

*In the second paragraph, replace the second sentence with:*

The SETUP message shall contain the Endpoint reference information element and the Broadband bearer capability information element shall indicate "point-to-multipoint" in the user plane connection configuration field.

**15) Subclause 9.2**

*Replace the last two paragraphs of this subclause with:*

At the terminating interface, the ADD PARTY, ADD PARTY ACKNOWLEDGE, ADD PARTY REJECT, PARTY ALERTING, DROP PARTY, and DROP PARTY ACKNOWLEDGE messages shall not be used.

At the terminating interface, the receipt of an ADD PARTY, ADD PARTY ACKNOWLEDGE, ADD PARTY REJECT, PARTY ALERTING, DROP PARTY, or DROP PARTY ACKNOWLEDGE message shall be treated as an unrecognized or unexpected message.

**16) Subclause 9.3.3.1**

*Replace the text of this subclause with:*

In order to drop itself, the leaf shall send a RELEASE or RELEASE COMPLETE message according to the procedures of 5.4.2/Q.2931 and 5.4.3/Q.2931 and shall enter the Null party state.

**17) Subclause 9.3.3.2**

*In the first paragraph, delete the reference to subclause 9.3.2.*

**18) Subclause 9.3.3.2**

*In the fourth paragraph, replace the text of the 2nd bullet item with:*

- when all other parties associated with the call are in the Drop Party Initiated, or Drop Party Received party state, the network shall initiate procedures for dropping the party along the path to the remote user, send a RELEASE message to the user with cause #31, "normal, unspecified" and enter the Null party state.

**19) Subclause 9.3.3.2**

*In the fourth paragraph, 2nd bullet item, 5th paragraph, 6th paragraph 2nd bullet item and 7th paragraph, delete "Null," from the sequence of party states at all occurrences so that only the Drop Party Initiated and Drop Party Received party state remain.*

**20) Subclause 9.3.3.2**

*In the last paragraph, replace the text of the first bullet item with:*

- for any party in the Drop Party Initiated or Drop Party Received party state all party timers shall be stopped and the Null party state shall be entered; and

**21) Subclause 9.3.3.2**

*Delete Note 2 in the last paragraph.*

**22) Subclause 9.3.4.2**

*Replace the first paragraph with:*

Apart from the exception conditions identified in 9.3.2 and 9.5, the network shall initiate dropping a party at the root interface by sending a DROP PARTY or RELEASE message with the cause value received from the network or remote user.



**23) Subclause 9.3.4.2**

*In the fourth paragraph, 1st bullet item, 5th paragraph, 6th paragraph 2nd bullet item and 7th paragraph, delete "Null," from the sequence of party states at all occurrences so that only the Drop Party Initiated and Drop Party Received party state remain.*

**24) Subclause 9.3.4.2**

*In the fourth paragraph replace the text of the 1st bullet item with:*

- when all other parties associated with the call are in the Drop Party Initiated or Drop Party Received party state, the user shall send a RELEASE message with cause #31, "normal, unspecified" and enter the Null party state; or

**25) Subclause 9.3.4.2**

*Replace the last sentence of the last paragraph with:*

When the user receives a RELEASE message, for all parties (for this call) party timers shall be stopped and the Null party state shall be entered.

**26) Subclause 9.3.5**

*In the second paragraph, delete "Null," from the sequence of party states so that only the Drop Party Initiated and Drop Party Received party state remain.*

**27) Subclause 9.3.5**

*Replace the 2nd paragraph with:*

Similarly, upon receiving a DROP PARTY or ADD PARTY REJECT message while in the Drop Party Initiated party state, and while all parties associated with the call are in the Drop Party Initiated or Drop Party Received party state, the recipient shall stop timer T398, disconnect the bearer virtual channel, and send a RELEASE message with cause #31 "normal, unspecified".

**28) Subclause 9.3.6**

*Replace the first sentence of the first paragraph with:*

All parties of a call can be dropped by the root by sending a RELEASE message with an appropriate cause value according to Q.2610 to the network.

**29) Subclause 9.3.6**

*Replace the first sentence of the 2nd paragraph with:*

In order to initiate the dropping of all parties, while in the Active or Call Delivered link state, the network shall first send an ADD PARTY REJECT message with the cause value received from the network for each party in the Add Party Received party state and then shall send a RELEASE message with cause #31 "normal, unspecified".

**30) Subclause 9.5.3.2.1**

*In item d), replace 5.6.7.2/Q.2931 with 5.6.7.1/Q.2931.*

**31) Subclause 9.5.3.2.3**

*Replace the text of item a) with the following:*

- a) Whenever any message except SETUP, CALL PROCEEDING, ALERTING, CONNECT, STATUS, STATUS ENQUIRY, ADD PARTY, ADD PARTY REJECT, or DROP PARTY ACKNOWLEDGE is received by a signalling entity in the Null party state, the recipient shall send a DROP PARTY ACKNOWLEDGE message with cause #89, "invalid endpoint reference value" and shall remain in the Null party state.

**32) Subclause 9.5.3.2.3**

*In items b), e) and f), replace all occurrences of the term:*

"...is received for a party in the Null party state"

by:

"...is received by a signalling entity in the Null party state".

**33) Subclause 9.5.4**

*Replace the last sentence of the fourth paragraph with:*

If no parties remain in the Active, Add Party Initiated, Party Alerting Received, Party Alerting Delivered or Add Party Received party state on the call for the layer 3 entity when either side receives the DROP PARTY ACKNOWLEDGE message, then the side receiving the DROP PARTY ACKNOWLEDGE shall disconnect the bearer virtual channel and send a RELEASE message with cause #31 "normal, unspecified".

**34) Subclause 9.5.10**

*Remove the note from item c) and insert it after item b).*

**35) Subclause 9.5.12**

*In the second paragraph, item c), replace the last sentence with:*

If no other party of the call is in the Active, Add Party Initiated, Party Alerting Received, Party Alerting Delivered or Add Party Received party states, call clearing will be initiated with a RELEASE message with cause #31 "normal, unspecified".

**36) Subclause 10.2.2.6**

*Replace the first paragraph with:*

If timer T399 expires (i.e. the network has not yet received any response to the transmitted ADD PARTY message), then the network shall initiate party dropping procedures towards the calling user with cause #18, "no user responding" and if at least one party is remaining in the Active, Party Alerting Received or Add Party Initiated party states after dropping the party concerned, send a DROP PARTY message with cause #102 "Recovery on timer expiry" to the called user, enter the Drop Party Initiated party state for this party and start T398. If there are no remaining parties in the Active, Party Alerting Received or Add Party Initiated party states, then the network shall send a RELEASE message to the called user. The cause used in the RELEASE message is #31, "normal unspecified".

**37) Subclause 10.3.2**

*At the end of this subclause, add the following new item:*

- c) On receipt of an ADD PARTY REJECT message the recipient shall enter the Null party state. Optionally, if all parties associated with the call are in the Drop Party Initiated, or Drop Party Received party state the network may return a RELEASE message with cause #31, "normal, unspecified" at the destination side.

**38) Subclause 10.3.3**

*In the fourth paragraph, replace the text of the 2nd bullet item with:*

- when all other parties associated with the call are in the Drop Party Initiated, or Drop Party Received party state, the network shall initiate procedures for dropping the party along the path to the remote user, send a RELEASE message to the user with cause #31, "normal, unspecified" and enter the Null party state for that party.

**39) Subclause 10.3.3**

*In the fourth paragraph, 2nd bullet item, 5th paragraph, 6th paragraph 2nd bullet item and 7th paragraph, delete "Null," from the sequence of party states at all occurrences so that only the Drop Party Initiated and Drop Party Received party state remain.*

**40) Subclause 10.3.3**

*Replace the first bullet item of the last paragraph with:*

- for any party in the Drop Party Initiated or Drop Party Received party state all party timers shall be stopped and the Null party state shall be entered;

**41) Subclause 10.3.4**

*In the fourth paragraph, 1st bullet item, 5th paragraph, 6th paragraph 2nd bullet item and 7th paragraph, delete "Null," from the sequence of party states at all occurrences so that only the Drop Party Initiated and Drop Party Received party state remain.*

**42) Subclause 10.3.4**

*In the fourth paragraph, replace the text of the 1st bullet item with:*

- when all other parties associated with the call are in the Drop Party Initiated or Drop Party Received party state, the user shall send a RELEASE message to the network with cause #31, "normal, unspecified" and enter the Null party state; or

**43) Subclause 10.3.4**

*Replace the first bullet item of the last paragraph with:*

- for any party in the Drop Party Initiated or Drop Party Received party state all party timers shall be stopped and the Null party state shall be entered;

**44) Subclause 10.3.5**

*In the second paragraph, delete "Null," from the sequence of party states so that only the Drop Party Initiated and Drop Party Received party state remain.*

**45) Subclause 10.3.6**

*Replace the first sentence of the third paragraph with:*

The originating network, while in the Active or Call Delivered link state, or the destination user, while in the Call Received, Connect Request or Active link state may drop all parties on the local interface by first sending an ADD PARTY REJECT message for each party in the Add Party Received party state and then sending a RELEASE message with cause #31 "normal, unspecified". In the ADD PARTY REJECT message the destination user shall include an appropriate cause value according to Q.2610 and the originating network shall include the cause value received from the network, respectively.

**46) Subclause 13.1**

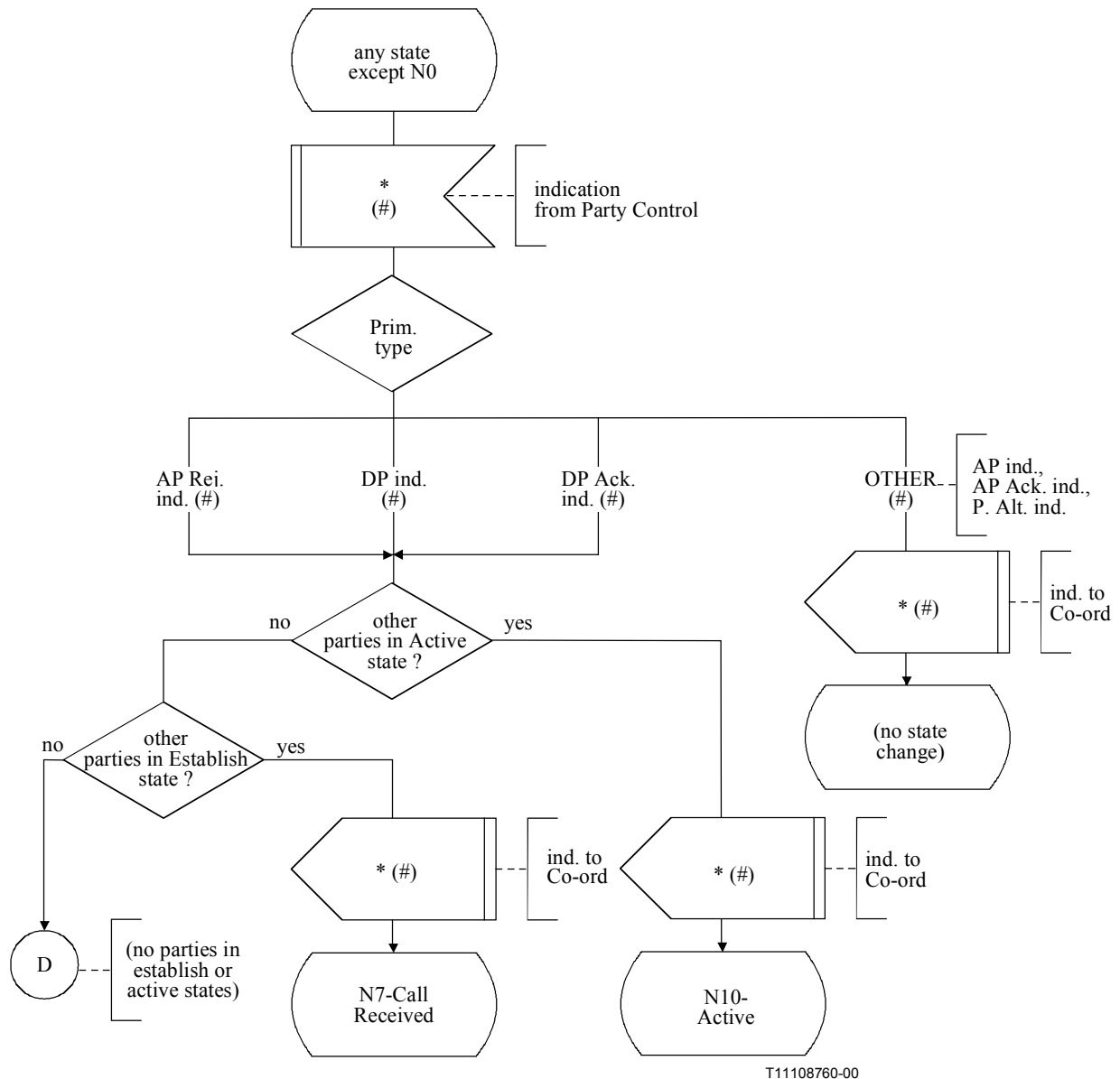
*In Table 13-1 in the column "Cause for Start" for Timer T397, replace ADD PARTY ALERTING by PARTY ALERTING.*

**47) Subclause 13.2**

- In Table 13-2, replace in the column "Cause for Start" for Timer T397, ADD PARTY ALERTING by PARTY ALERTING.*
- Insert in the column "Normal stop" for Timer T397 and Timer T399, CONNECT message.*

#### 48) Annex F

Replace SDL, Process Call-Control-N (Sheet 24 of 39) with the following:



#### 49) Annex F

In the SDL, Process Call-Control-N (Sheet 29 of 39), when  $CS = 0$  send a Release-conf primitive before process is terminated.

#### 50) Annex F

In the SDL, Process Call-Control-N (Sheet 31 of 39), when  $CS = 0$  send a Release-conf primitive before process is terminated.

#### 51) Annex F

In the SDL, Process Call-Control-U (Sheet 29 of 39), when  $CS = 0$  send a Release-conf primitive before process is terminated.

**52) Annex F**

*In the SDL, Process Call-Control-U (Sheet 30 of 39), when CS = 0 send a Release-conf primitive before process is terminated.*

**53) Appendix I**

*In Figure I.3/Q.2971, Party Dropping:*

*a) on the left side:*

*change drop party ind to drop party req*

*b) on the right side:*

*For network and user the party state P5/P6 terminates on transmission of RELEASE, delete P5/P6 move X (i.e. party process termination) up to transmission/receipt of RELEASE, and delete Release resp.*

**54) Appendix I**

*In Figure I.4/Q.2971, Party Leaves Call,*

*delete P5, move X (i.e. party process termination) up to transmission/receipt of RELEASE, delete RELEASE COMPL to party process, change Release compl ind to Release comp and it goes only to AP.*



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