

Products & Solutions
of
Value Added Services

SS7
Network Surveillance
System

Interconnection
Traffic & QoS
Measurement

TMN
Supervisory Control &
Data Acquisition
Network Management

Vertrieb:

AGT electronic GmbH
22159 Hamburg

Tel. : +49 (0)40 644 34 64
Fax. : +49 (0)40 644 61 33

Customers Support Service :

Tel. : +49 (0)40 644 60 52
e-mail :
tombers.agt@t-online.de



User manual

CTG ISDN & ANALOGUE CALL SIMULATOR

User description of Basic Scenarios

Contents

1.	General	7
1.1	Parameters common to all scenarios	7
1.2	Distribution of faults by category	7
2.	Description of digital scenarios	8
2.1	Basic scenarios	8
2.1.1	Naming rules	8
2.1.2	T2 User CGP (V6U_T2_R and E1U_T2_G).....	8
2.1.2.1	Scenario actions	8
2.1.2.2	Scenario parameters	9
2.1.3	T0 User CGP (V6U_T0_R and E1U_T0_G).....	10
2.1.3.1	Scenario actions	10
2.1.3.2	Scenario parameters	11
2.1.4	S0 User CGP (V6U_S0_R and E1U_S0_G)	11
2.1.4.1	Scenario actions	11
2.1.4.2	Scenario parameters	13
2.1.5	T2 Network CGP (V6R_T2_R and E1N_T2_G).....	14
2.1.5.1	Scenario actions	14
2.1.5.2	Scenario parameters	15
2.1.6	T0 Network CGP (V6R_T0_R and E1N_T0_G).....	15
2.1.6.1	Scenario actions	15
2.1.6.2	Scenario parameters	16
2.1.7	T2 User CDP (V6U_T2_E and E1U_T2_D).....	16
2.1.7.1	Scenario actions	16
2.1.7.2	Scenario parameters	17
2.1.8	T0 User CDP (V6U_T0_E and E1U_T0_D).....	17
2.1.8.1	Scenario actions	17
2.1.8.2	Scenario parameters	19
2.1.9	S0 User CDP (V6U_S0_E and E1U_S0_D).....	19
2.1.9.1	Scenario actions	19
2.1.9.2	Scenario parameters	21
2.1.10	T2 Network CDP (V6R_T2_E and E1N_T2_D).....	21
2.1.10.1	Scenario actions	21
2.1.10.2	Scenario parameters	23
2.1.11	T0 Network CDP (V6R_T0_E and E1N_T0_D).....	23
2.1.11.1	Scenario actions	23
2.1.11.2	Scenario parameters	24
2.2	Checking the validity of messages received.....	24
2.3	Protocol phase	25
2.3.1	General.....	25
2.3.2	USER simulation, CGP end	26
2.3.2.1	INIT state (INI)	26
2.3.2.2	State U1 (1)	26
2.3.2.3	State U2 (2)	28
2.3.2.4	State U3 (3)	30
2.3.2.5	State U4 (4)	31
2.3.2.6	State U10 (10)	32
2.3.2.7	State U11 (11)	33

2.3.2.8	State U12 (12)	34
2.3.2.9	State U19 (19)	34
2.3.2.10	Messages sent	35
2.3.2.10.1	Setup	35
2.3.2.10.2	Information	37
2.3.2.10.3	Connect acknowledge	37
2.3.2.10.4	Disconnect	38
2.3.2.10.5	Clearing	38
2.3.2.10.6	Release complete	38
2.3.2.11	Scenario parameters	39
2.3.3	USER simulation, CDP end	41
2.3.3.1	INIT state (INI)	41
2.3.3.2	State U6 (6)	42
2.3.3.3	State U7 (7)	42
2.3.3.4	State U8 (8)	43
2.3.3.5	State U10 (10)	43
2.3.3.6	State U11 (11)	44
2.3.3.7	State U12 (12)	45
2.3.3.8	State U19 (19)	45
2.3.3.9	Messages sent by the scenario	46
2.3.3.9.1	Alerting	46
2.3.3.9.2	Connect	46
2.3.3.9.3	Disconnect	46
2.3.3.9.4	Clearing	47
2.3.3.9.5	Release complete	47
2.3.3.10	Scenario parameters	47
2.3.4	USER S0 simulation, CDP end for compatible terminals other than the one running the scenario	48
2.3.4.1	INIT state (INI)	48
2.3.4.2	State U6 (6)	48
2.3.4.3	State U7 (7)	49
2.3.4.4	Messages sent by the scenario	49
2.3.4.4.1	Alerting	49
2.3.4.5	Scenario parameters	49
2.3.5	USER S0 simulation, CDP end for non-compatible terminals	49
2.3.5.1	INIT state (INI)	49
2.3.5.2	Messages sent by the scenario	50
2.3.5.3	Scenario parameters	50
2.3.6	NETWORK simulation, CGP end	50
2.3.6.1	INIT state (INI)	50
2.3.6.2	State N6 (1)	50
2.3.6.3	State N7 (7)	51
2.3.6.4	State N8 (8)	52
2.3.6.5	State N9 (9)	52
2.3.6.6	State N10 (10)	53
2.3.6.7	State N11 (11)	54
2.3.6.8	State N12 (12)	54
2.3.6.9	State N19 (19)	55
2.3.6.10	Messages sent	55
2.3.6.10.1	Setup	55
2.3.6.10.2	Connect acknowledge	58
2.3.6.10.3	Disconnect	58
2.3.6.10.4	Clearing	58
2.3.6.10.5	Release complete	59
2.3.6.11	Scenario parameters	59
2.3.7	NETWORK simulation, CDP end	61
2.3.7.1	INIT state (INI)	61
2.3.7.2	State N1 (1)	62
2.3.7.3	State N2 (2)	64
2.3.7.4	State N3 (3)	65
2.3.7.5	State N4 (4)	66
2.3.7.6	State N10 (10)	66

2.3.7.7	State N11 (11)	67
2.3.7.8	State N12 (12)	68
2.3.7.9	State N19 (19)	68
2.3.7.10	Messages sent	69
2.3.7.10.1	Setup acknowledge	69
2.3.7.10.2	Call proceeding	70
2.3.7.10.3	Alerting	70
2.3.7.10.4	Connect	71
2.3.7.10.5	Disconnect	71
2.3.7.10.6	Clearing	71
2.3.7.10.7	Release complete	72
2.3.7.11	Scenario parameters	72
2.4	Speech path phase	75
2.4.1	General process with frequency exchange	75
2.4.1.1	CGP send frequency first	75
2.4.1.2	CDP send frequency first	75
2.4.2	CGP end	76
2.4.2.1	START state (10.0)	76
2.4.2.2	SYNCHRONIZATION state (10.1)	77
2.4.2.3	START_DETECTION state (10.2)	77
2.4.2.4	DETECTION_16 state (10.3) or DETECTION state (10.4)	77
2.4.2.5	SPEECHPATH_PENDING state (10.5)	78
2.4.2.6	START_G821 state (10.6)	78
2.4.2.7	G821_DETECTION state (10.7)	78
2.4.2.8	SPEECHPATH-ENDED state (10.7)	79
2.4.3	Speechpath parameters, CGP end	79
2.4.4	CDP end	80
2.4.4.1	START state (10.0)	80
2.4.4.2	SENDING state (10.1)	82
2.4.4.3	DETECTION_16 state (10.2) or DETECTION state (10.3)	82
2.4.4.4	START_EMISSION state (10.4)	82
2.4.4.5	G821_TRANSMISSION state (10.5)	82
2.4.4.6	G821_DETECTION state (10.6)	83
2.4.4.7	SPEECHPATH_ENDED state (10.7)	83
2.4.5	Speechpath parameters, CGP end	83

3. Description of analogue scenarios 85

3.1	Calling scenario	85
3.1.1	INIT state	85
3.1.2	IMPEDANCE state (0)	85
3.1.3	REGULATION state (1)	86
3.1.4	OFF-HOOK state (2)	86
3.1.5	CURRENT state (3)	86
3.1.6	DIAL TONE state (4)	86
3.1.7	DIALLING state (5)	87
3.1.8	INTERMEDIATE state (6)	87
3.1.9	WAITING state (7)	88
3.1.10	FREQUENCY_TONE state (8)	88
3.1.11	RATE_TONE state (9)	89
3.1.12	DETECTION state (10)	89
3.1.13	SPEECHPATH_PENDING state (11)	90
3.1.14	SENDING state (12)	90
3.1.15	SPEECHPATH_ENDED state (13)	90
3.1.16	FREQUENCY_RELEASE state (15)	91
3.1.17	RATE_RELEASE state (16)	91
3.1.18	ON-HOOK state (17)	92
3.1.19	INTER-CALL state (18)	92
3.1.20	IMMEDIATE_STOP state (50)	92
3.1.21	FAULT state (51)	93

3.2	Calling scenario parameters.....	93
3.3	Called scenario.....	95
3.3.1	INIT state.....	95
3.3.2	IMPEDANCE state (0).....	95
3.3.3	REGULATION state (1).....	95
3.3.4	RINGING state (3).....	96
3.3.5	OFF-HOOK state (4).....	96
3.3.6	TRANSMISSION state (5).....	96
3.3.7	DETECTION state (6).....	96
3.3.8	SPEECHPATH_ENDED state (7).....	97
3.3.9	FREQUENCY_RELEASE state (8).....	97
3.3.10	RATE_RELEASE state (9).....	98
3.3.11	ON-HOOK state (9).....	98
3.3.12	INTER_CALL state (10).....	98
3.3.13	IMMEDIATE_STOP state (50).....	99
3.3.14	FAULT state (51).....	99
3.4	Called scenario parameters.....	99

1. General

1.1 Parameters common to all scenarios

N°	Name	Explanation	Type	Values
0	AccessNumMonitor	Number of the port for which the trace function is to be activated	List	No access All ACCESS x
1	ChannelNumMonitor	Number of the channel for which the trace function is to be activated This parameter is disabled in analogue scenarios	List	No channel All CHANNEL x
2	TimeMeasurements	Enables/disable time calculations to be performed in scenarios	List	No Yes
3	UnknownIEFaultMonitor	Transmission or non transmission of fault on detection of an information element not known to the CheckMessage() function	List	No Yes

1.2 Distribution of faults by category

N°	Message	Content
2	MESSAGE	Faults generated by the message validity check.
5	PROTOCOL	Faults generated by the protocol state machine (except for premature connection release situations).
6	RELEASE	Faults generated following premature release operations.
10	SPEECH	Faults generated by exchange of frequencies during the speechpath phase (except in analogue scenarios).
11	G.821	Faults generated by the G.821 sequence analysis.
15	LAPD	Faults generated by the interface between layer 3 and layer 2.
16	RESTART	Faults generated by receipt of a restart message.
17	SYSTEM	Faults generated by the scenario management function.
18	PASSIVE	Faults generated by the passive bus processing function.
20	ANALOGUE	Faults generated by the analogue scenarios.

2. Description of digital scenarios

2.1 Basic scenarios

2.1.1 Naming rules

The basic scenarios are all named as follows: <protocol><type>_<port>_<end>.

<protocol> can be set to **V6** (for the **VN6** protocol) or **E1** (for the **ETSI** protocol).

The events displayed by the scenarios are in French for the VN6 protocol scenarios and in English for the ETSI protocol scenarios.

In the case of the **VN6** protocol scenarios, the other fields can be set as follows:

<type> = **U** (for a **User** scenario) or **R** (for a **Network** scenario),

<port> = **T2**, **T0** or **S0**,

<end> = **R** (for a calling scenario, **DDR**) or **E** (for a called scenario, **DDE**).

For the **ETSI** protocol scenarios, the other fields can be set as follows:

<type> = **U** (for a **User** scenario) or **N** (for a **Network** scenario),

<port> = **T2**, **T0** or **S0**,

<end> = **G** (for a CallinG scenario) or **D** (for a CalleD scenario).

2.1.2 T2 User CGP (V6U_T2_R and E1U_T2_G)

2.1.2.1 Scenario actions

The following actions are carried out:

Event	Action
Start of scenario	Search for numbers to use Transmission of the event to the protocol management state machine
Immediate stop request	TERMINATION OF SCENARIO ON IMMEDIATE STOP REQUEST (the scenario is terminated in accordance with the protocol)
Receipt of a RESTART message for the channel assigned to this scenario	Transmission of a RESTART category (16) "Receiving RESTART message" fault SCENARIO ABORTED ON FAULT

Event	Action
Receipt of a layer 2 clearing indication	Transmission of an LAPD category (15) "Release because Layer 2 breakdown" fault SCENARIO ABORTED ON FAULT
Receipt of a layer 2 clearing confirmation	Display in the event window of the "Release because Layer 2 breakdown" message SCENARIO ABORTED ON FAULT
Receipt of a layer 2 setup indication	If the protocol is in state U2 (overlap numbering) Transmission of an LAPD category (15) " Receiving Layer 2 establishment" fault SCENARIO ABORTED ON FAULT Else, if the trace is activated on the port and the channel on which the scenario is running display in the event window of the "Receiving Layer 2 establishment" message ENDIF
Receipt of a layer 2 setup confirmation	If the trace is activated on the port and the channel on which the scenario is running display in the event window of the "Receiving confirmation of Layer 2 establishment" message ENDIF
Receipt of a layer 3 message	If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message received ENDIF Check on the message received according to the indications given in the protocol libraries If the message is considered valid Transmission of the message event to the protocol management state machine Else Transmission of the message to the protocol error treatment ENDIF
Protocol timer timed out	Transmission of the timeout event to the protocol management state machine
Speech channel events	If the protocol is in state U10 (speechpath phase) Transmission of the event to the speechpath phase management state machine Else, if the protocol is in state U1 (awaiting dial tone) or U4 (awaiting ringback tone) Transmission of the event to the protocol management state machine ENDIF
End of scenario	START INTERCALL TIMER according to the "InterCallTime" CPS.
Intercall timer timed out	EXIT FROM SCENARIO

2.1.2.2 Scenario parameters

N°	Name	Explanation	Type	Values
40	NsdOrSad	Type of dialling if the called line is an internal S0 port. This parameter is disregarded in all other cases.	List	NSD SAD
41	IntercallTime	Value of timer between two calls (ms)	Number	Default : 2 000 Min : 0 Max :1 200 000

2.1.3 T0 User CGP (V6U_T0_R and E1U_T0_G)

2.1.3.1 Scenario actions

The following actions are carried out:

Event	Action
Start of scenario	Search for numbers to use LAYER 2 SETUP REQUEST with supervision timer dependent on the "LAPDEstablishmentTimeout" CPS
Immediate stop request	TERMINATION OF SCENARIO ON IMMEDIATE STOP REQUEST (the scenario is terminated in accordance with the protocol)
Receipt of a RESTART message for the channel assigned to this scenario	Transmission of a RESTART category (16) "Receiving RESTART message" fault SCENARIO ABORTED ON FAULT
Receipt of a layer 2 clearing indication	If the protocol is in the INIT (initialization) state or in state U1 SCENARIO ABORTED on IMMEDIATE STOP command <i>(If there is a collision between the SETUP message and DISC frame, the connection is assumed not to have existed and will be repeated)</i> Else Transmission of an LAPD category (15) "Release because Layer 2 breakdown" fault SCENARIO ABORTED ON FAULT ENDIF
Receipt of a layer 2 clearing confirmation	Display in the event window of the "Release because Layer 2 breakdown" message SCENARIO ABORTED ON FAULT
Receipt of a layer 2 setup indication	If the protocol is in state U2 (overlap numbering) Transmission of an LAPD category (15) "Receiving Layer 2 establishment" fault Else, if the trace is activated on the port and the channel on which the scenario is running display in the event window of the "Receiving Layer 2 establishment" message ENDIF
Receipt of a layer 2 setup confirmation	If the trace is activated on the port and the channel on which the scenario is running display in the event window of the "Receiving confirmation of Layer 2 establishment" message ENDIF If the protocol is in the INIT (initialization) state Transmission of the "Start of scenario" event to the protocol management state machine ENDIF
Receipt of a layer 3 message	If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message received ENDIF Check on the message received according to the indications given in the protocol libraries If the message is considered valid Transmission of the message event to the protocol management state machine Else Transmission of the message to the protocol error treatment ENDIF

Event	Action
LAPD setup supervision timer timed out	Transmission of an LAPD category (15) "LAPD establishment unsuccessful" fault SCENARIO ABORTED ON FAULT
Protocol timer timed out	Transmission of the timeout event to the protocol management state machine
Speech channel events	If the protocol is in state U10 (speechpath phase) Transmission of the event to the speechpath phase management state machine Else, if the protocol is in state U1 (awaiting dial tone) or U4 (awaiting ringback tone) Transmission of the event to the protocol management state machine ENDIF
End of scenario	START OF INTERCALL TIMER according to the "InterCallTime" CPS.
Intercall timer timed out	EXIT FROM SCENARIO

2.1.3.2 Scenario parameters

N°	Name	Explanation	Type	Values
40	NsdOrSad	Type of dialling if the called line is an internal S0 port. This parameter is disregarded in all other cases.	List	NSD SAD
41	LAPDEstablishmentTimeout	Supervision of LAPD setup (ms)	Number	Default : 4 000 Min : 10 Max : 15 000
42	IntercallTime	Value of timer between two calls (ms)	Number	Default : 2 000 Min : 0 Max : 1 200 000

2.1.4 S0 User CGP (V6U_S0_R and E1U_S0_G)

2.1.4.1 Scenario actions

The following actions are carried out:

Event	Action
Start of scenario	Search for the numbers and the terminal to use LAYER 2 ESTABLISHMENT REQUEST for the selected terminal with a supervision timer dependent on the "LAPDEstablishmentTimeout" CPS.
Immediate stop request	TERMINATION OF SCENARIO ON IMMEDIATE STOP REQUEST (the scenario is terminated in accordance with the protocol)
Receipt of a RESTART message for the channel assigned to this scenario	Transmission of a RESTART category (16) "Receiving RESTART message" fault SCENARIO ABORTED ON FAULT

Event	Action
Receipt of a layer 2 clearing indication	<p>If the terminal concerned is the terminal on which the connection is set up If the protocol is in the INIT (initialization) state or in state U1 SCENARIO ABORTED on IMMEDIATE STOP command <i>(In the case of a collision between the SETUP message and a DISC frame, the connection is assumed not to have existed and will be repeated)</i></p> <p>Else Transmission of an LAPD category (15) "Release because Layer 2 breakdown" fault SCENARIO ABORTED ON FAULT</p> <p>ENDIF</p> <p>Else If the trace is activated on the port and the channel on which the scenario is running display in the event window of the "DISC for an other terminal" message</p> <p>ENDIF</p> <p>ENDIF</p>
Receipt of a layer 2 clearing confirmation	<p>If the terminal concerned is the terminal on which the connection is set up Display in the event window of the "Release because Layer 2 breakdown" message SCENARIO ABORTED ON FAULT</p> <p>Else If the trace is activated on the port and the channel on which the scenario is running display in the event window of the "DISC for an other terminal" message</p> <p>ENDIF</p> <p>ENDIF</p>
Receipt of a layer 2 setup indication	<p>If the protocol is in state U2 (overlap numbering) Transmission of an LAPD category (15) " Receiving Layer 2 establishment" fault SCENARIO ABORTED ON FAULT</p> <p>Else, if the trace is activated on the port and the channel on which the scenario is running display in the event window of the "Receiving Layer 2 establishment" message</p> <p>ENDIF</p>
Receipt of a layer 2 setup confirmation	<p>If the trace is activated on the port and the channel on which the scenario is running display in the event window of the "Receiving confirmation of Layer 2 establishment" message</p> <p>ENDIF</p> <p>If the terminal concerned is the terminal on which the connection is set up If the protocol is in the INIT (initialization) state Transmission of the "Start of scenario" event to the protocol management state machine</p> <p>ENDIF</p> <p>ENDIF</p>

Event	Action
Receipt of a layer 3 message	<p>If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message received ENDIF</p> <p>If the terminal concerned is the terminal on which the connection is set up Check on the message received according to the indications given in the protocol libraries If the message is considered valid Transmission of the message event to the protocol management state machine Else Transmission of the message to the protocol error treatment ENDIF</p> <p>Else Transmission of a SYSTEM category (17) "Receiving a message for an other terminal" fault ENDIF</p>
LAPD setup supervision timer timed out	Transmission of an LAPD category (15) "LAPD establishment unsuccessful" fault SCENARIO ABORTED ON FAULT
Protocol timer timed out	Transmission of the timeout event to the protocol management state machine
Speech channel events	<p>If the protocol is in state U10 (speechpath phase) Transmission of the event to the speechpath phase management state machine</p> <p>Else, if the protocol is in state U1 (awaiting dial tone) or U4 (awaiting ringback tone) Transmission of the event to the protocol management state machine ENDIF</p>
End of scenario	START OF INTERCALL TIMER according to the "InterCallTime" CPS.
Intercall timer timed out	EXIT FROM SCENARIO

2.1.4.2 Scenario parameters

N°	Name	Explanation	Type	Values
40	TerminalOriginNumber	Type of dialling for the calling terminal in the origin number	List	NSD SAD
41	NsdorCLDSad	Type of dialling if the called line is an internal S0 port. This parameter is disregarded in all other cases.	List	NSD SAD
42	LAPDEstablishmentTimeout	Supervision of LAPD setup (ms)	Number	Default : 4 000 Min : 10 Max : 15 000
43	IntercallTime	Value of timer between two calls (ms)	Number	Default : 2 000 Min : 0 Max : 1 200 000

2.1.5 T2 Network CGP (V6R_T2_R and E1N_T2_G)

2.1.5.1 Scenario actions

The following actions are carried out:

Event	Action
Start of scenario	Search for numbers to use Transmission of the event to the protocol management state machine
Immediate stop request	TERMINATION OF SCENARIO ON IMMEDIATE STOP REQUEST (the scenario is terminated in accordance with the protocol)
Receipt of a RESTART message for the channel assigned to this scenario	Transmission of a RESTART category (16) "Receiving RESTART message" fault SCENARIO ABORTED ON FAULT
Receipt of a layer 2 clearing indication	Transmission of an LAPD category (15) "Release because Layer 2 breakdown" fault SCENARIO ABORTED ON FAULT
Receipt of a layer 2 clearing confirmation	Display in the event window of the "Release because Layer 2 breakdown" message SCENARIO ABORTED ON FAULT
Receipt of a layer 2 setup indication	If the trace is activated on the port and the channel on which the scenario is running display in the event window of the "Receiving Layer 2 establishment" message ENDIF
Receipt of a layer 2 setup confirmation	If the trace is activated on the port and the channel on which the scenario is running display in the event window of the "Receiving confirmation of Layer 2 establishment" message ENDIF
Receipt of a layer 3 message	If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message received ENDIF Check on the message received according to the indications given in the protocol libraries If the message is considered valid Transmission of the message event to the protocol management state machine Else Transmission of the message to the protocol error treatment ENDIF
Protocol timer timed out	Transmission of the timeout event to the protocol management state machine
Speech channel events	If the protocol is in state U10 (speechpath phase) Transmission of the event to the speechpath phase management state machine ENDIF
End of scenario	START OF INTERCALL TIMER according to the "InterCallTime" CPS.
Intercall timer timed out	EXIT FROM SCENARIO

2.1.5.2 Scenario parameters

N°	Name	Explanation	Type	Values
40	NsdOrSad	Type of dialling if the called line is an internal S0 port. This parameter is disregarded in all other cases.	List	NSD SAD
41	IntercallTime	Value of timer between two calls (ms)	Number	Default : 2 000 Min : 0 Max :1 200 000

2.1.6 T0 Network CGP (V6R_T0_R and E1N_T0_G)

2.1.6.1 Scenario actions

The following actions are carried out:

Event	Action
Start of scenario	Search for numbers to use Transmission of the event to the protocol management state machine
Immediate stop request	TERMINATION OF SCENARIO ON IMMEDIATE STOP REQUEST (the scenario is terminated in accordance with the protocol)
Receipt of a RESTART message for the channel assigned to this scenario	Transmission of a RESTART category (16) "Receiving RESTART message" fault SCENARIO ABORTED ON FAULT
Receipt of a layer 2 clearing indication	Transmission of an LAPD category (15) "Release because Layer 2 breakdown" fault SCENARIO ABORTED ON FAULT
Receipt of a layer 2 clearing confirmation	Display in the event window of the "Release because Layer 2 breakdown" message SCENARIO ABORTED ON FAULT
Receipt of a layer 2 setup indication	If the trace is activated on the port and the channel on which the scenario is running display in the event window of the "Receiving Layer 2 establishment" message ENDIF
Receipt of a layer 2 setup confirmation	If the trace is activated on the port and the channel on which the scenario is running display in the event window of the "Receiving confirmation of Layer 2 establishment" message ENDIF
Receipt of a layer 3 message	If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message received ENDIF Check on the message received according to the indications given in the protocol libraries If the message is considered valid Transmission of the message event to the protocol management state machine Else Transmission of the message to the protocol error treatment ENDIF
LAPD setup supervision timer timed out	Transmission of an LAPD category (15) "LAPD establishment unsuccessful" fault SCENARIO ABORTED ON FAULT

Event	Action
Protocol timer timed out	Transmission of the timeout event to the protocol management state machine
Speech channel events	If the protocol is in state U10 (speechpath phase) Transmission of the event to the speechpath phase management state machine ENDIF
End of scenario	LAPD RELEASE REQUEST START OF INTERCALL TIMER according to the "InterCallTime" CPS.
Intercall timer timed out	EXIT FROM SCENARIO

2.1.6.2 Scenario parameters

N°	Name	Explanation	Type	Values
40	NsdOrSad	Type of dialling if the called line is an internal S0 port. This parameter is disregarded in all other cases.	List	NSD SAD
41	IntercallTime	Value of timer between two calls (ms)	Number	Default : 2 000 Min : 0 Max :1 200 000

2.1.7 T2 User CDP (V6U_T2_E and E1U_T2_D)

2.1.7.1 Scenario actions

The following actions are carried out:

Event	Action
Start of scenario	Start of a message wait supervision timer
Immediate stop request	TERMINATION OF SCENARIO ON IMMEDIATE STOP REQUEST (the scenario is terminated in accordance with the protocol)
Receipt of a RESTART message for the channel assigned to this scenario	Transmission of a RESTART category (16) "Receiving RESTART message" fault SCENARIO ABORTED ON FAULT
Receipt of a layer 2 clearing indication	Transmission of an LAPD category (15) "Release because Layer 2 breakdown" fault SCENARIO ABORTED ON FAULT
Receipt of a layer 2 clearing confirmation	Display in the event window of the "Release because Layer 2 breakdown" message SCENARIO ABORTED ON FAULT
Receipt of a layer 2 setup indication	If the trace is activated on the port and the channel on which the scenario is running display in the event window of the "Receiving Layer 2 establishment" message ENDIF
Receipt of a layer 2 setup confirmation	If the trace is activated on the port and the channel on which the scenario is running display in the event window of the "Receiving confirmation of Layer 2 establishment" message ENDIF If the protocol is in state U6 Transmission of the "Layer 2 establishment successful" event to the protocol management state machine ENDIF

Event	Action
Receipt of a layer 3 message	If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message received ENDIF Check on the message received according to the indications given in the protocol libraries If the message is considered valid Cancellation of the message wait supervision timer Transmission of the message event to the protocol management state machine Else Transmission of the message to the protocol error treatment ENDIF
Message wait supervision timer timed out	SCENARIO ABORTED ON IMMEDIATE STOP COMMAND <i>(This scenario is assumed not to have been executed)</i>
Protocol timer timed out	Transmission of the timeout event to the protocol management state machine
Speech channel events	If the protocol is in state U10 (speechpath phase) Transmission of the event to the speechpath phase management state machine ENDIF
End of scenario	If the CGP is external EXIT FROM SCENARIO Else START INTERCALL TIMER according to the "InterCallTime" CPS. ENDIF
Intercall time end	EXIT FROM SCENARIO

2.1.7.2 Scenario parameters

N°	Name	Explanation	Type	Values
40	IntercallTime	Value of timer between two calls (ms)	Number	Default : 2 000 Min : 0 Max : 1 200 000

2.1.8 T0 User CDP (V6U_T0_E and E1U_T0_D)

2.1.8.1 Scenario actions

The following actions are carried out:

Event	Action
Start of scenario	Start of a message wait supervision timer
Immediate stop request	TERMINATION OF SCENARIO ON IMMEDIATE STOP REQUEST (the scenario is terminated in accordance with the protocol)
Receipt of a RESTART message for the channel assigned to this scenario	Transmission of a RESTART category (16) "Receiving RESTART message" fault SCENARIO ABORTED ON FAULT

Event	Action
Receipt of a layer 2 clearing indication	If the protocol is in state U6 or state U7 SCENARIO ABORTED on LAPD_COLLISION <i>(In the case of a collision between the ALERTING message and a DISC frame, the connection is aborted and restarted immediately to handle repetition of the ESTABLISHMENT message that the network will send)</i> Else Transmission of an LAPD category (15) "Release because Layer 2 breakdown" fault SCENARIO ABORTED ON FAULT ENDIF
Receipt of a layer 2 clearing confirmation	Display in the event window of the "Release because Layer 2 breakdown" message SCENARIO ABORTED ON FAULT
Receipt of a layer 2 setup indication	If the trace is activated on the port and the channel on which the scenario is running display in the event window of the "Receiving Layer 2 establishment" message ENDIF
Receipt of a layer 2 setup confirmation	If the trace is activated on the port and the channel on which the scenario is running display in the event window of the "Receiving confirmation of Layer 2 establishment" message ENDIF If the protocol is in state U6 Transmission of the "Layer 2 establishment successful" event to the protocol management state machine ENDIF
Receipt of a layer 3 message	If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message received ENDIF Check on the message received according to the indications given in the protocol libraries If the message is considered valid Cancellation of the message wait supervision timer Transmission of the message event to the protocol management state machine Else Transmission of the message to the protocol error treatment ENDIF
Message wait supervision timer timed out	SCENARIO ABORTED ON IMMEDIATE STOP COMMAND <i>(This scenario is assumed not to have been executed)</i>
LAPD setup supervision timer timed out	Transmission of an LAPD category (15) "LAPD establishment unsuccessful" fault SCENARIO ABORTED ON FAULT
Protocol timer timed out	Transmission of the timeout event to the protocol management state machine
Speech channel events	If the protocol is in state U10 (speechpath phase) Transmission of the event to the speechpath phase management state machine ENDIF
End of scenario	If the CGP is external EXIT FROM SCENARIO Else START INTERCALL TIMER according to the "InterCallTime" CPS. ENDIF
Intercall time end	EXIT FROM SCENARIO

2.1.8.2 Scenario parameters

N°	Name	Explanation	Type	Values
40	IntercallTime	Value of timer between two calls (ms)	Number	Default : 2 000 Min : 0 Max : 1 200 000

2.1.9 S0 User CDP (V6U_S0_E and E1U_S0_D)

2.1.9.1 Scenario actions

The following actions are carried out:

Event	Action
Start of scenario	Start of a message wait supervision timer
Immediate stop request	TERMINATION OF SCENARIO ON IMMEDIATE STOP REQUEST (the scenario is terminated in accordance with the protocol)
Receipt of a RESTART message for the channel assigned to this scenario	Transmission of a RESTART category (16) "Receiving RESTART message" fault SCENARIO ABORTED ON FAULT
Receipt of a layer 2 clearing indication or confirmation	<p>If the protocol of the terminal concerned is in state U6 or U7 If the trace is activated on the port and the channel on which the scenario is running display in the event window of the "Layer 2 disconnect in alerting phase" message ENDIF</p> <p>If the terminal concerned is the selected terminal SCENARIO ABORTED on LAPD_COLLISION <i>(In the case of a collision between the ALERTING message and the DISC frame, the connection is aborted and restarted immediately to handle repetition of the ESTABLISHMENT message that the network will send)</i></p> <p>Else SCENARIO ABORTED for the TERMINAL CONCERNED ENDIF</p> <p>Else, if the protocol of the terminal concerned is in neither the INIT (initialization) state nor state U1 Transmission of an LAPD category (15) "Release because Layer 2 breakdown" fault SCENARIO ABORTED for the TERMINAL CONCERNED ENDIF</p>
Receipt of a layer 2 setup indication	<p>If the trace is activated on the port and the channel on which the scenario is running display in the event window of the "Receiving Layer 2 establishment" message ENDIF</p>

Event	Action
Receipt of a layer 2 setup confirmation	If the trace is activated on the port and the channel on which the scenario is running display in the event window of the "Receiving confirmation of Layer 2 establishment" message ENDIF If the protocol of the terminal concerned is in state U6 Transmission of the "Layer 2 establishment successful" event to the protocol management state machine ENDIF
Receipt of a layer 3 open message (SETUP or RESTART)	If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message received ENDIF Check on the message received according to the indications given in the protocol libraries If the message is considered valid Cancellation of the message wait supervision timer Extraction of information used to select a terminal (teleservice, destination number, sub-address) according to the "NsdOrSad" and "NsdNumberofDigits" CPSs Search for compatible terminals based on this information If no terminal is found Transmission of an LAPD category (15) "Release because Layer 2 breakdown" fault SCENARIO ABORTED for the TERMINAL CONCERNED Else Selection of the protocol state machines concerned Transmission of the message event to the protocol management state machine for the selected terminal, to run the scenario Start of a 100 ms timer for staggering responses to the open message ENDIF Else Transmission of the message to the protocol error treatment ENDIF
Receipt of a layer 3 message other than an open message	If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message received ENDIF Check on the message received according to the indications given in the protocol libraries If the message is considered valid Cancellation of the message wait supervision timer Transmission of the message event to the protocol management state machine for the terminal concerned Else Transmission of the message to the protocol error treatment ENDIF
Message wait supervision timer timed out	SCENARIO ABORTED ON IMMEDIATE STOP COMMAND <i>(This scenario is assumed not to have been executed)</i>
LAPD setup supervision timer timed out	Transmission of an LAPD category (15) "LAPD establishment unsuccessful" fault SCENARIO ABORTED ON FAULT

Event	Action
Timer for staggering responses to the open message timed out	Transmission of the open message event to the protocol management state machine for the terminal concerned If all the terminals have not been processed If the next terminal is a compatible terminal Restart of the timer for staggering responses to the open message according to the "CompatibleTerminalDelay" CPS Else Restart of a zero timer for staggering responses to the open message ENDIF ENDIF
Protocol timer timed out	Transmission of the timeout event to the protocol management state machine
Speech channel events	If the protocol is in state U10 (speechpath phase) Transmission of the event to the speechpath phase management state machine ENDIF
End of scenario	Transmission of a "Forced termination" event to the protocol management state machines of the other compatible terminals that are in state U7 If the CGP is external EXIT FROM SCENARIO Else START INTERCALL TIMER according to the "InterCallTime" CPS. ENDIF
Intercall time end	EXIT FROM SCENARIO

2.1.9.2 Scenario parameters

N°	Name	Explanation	Type	Values
40	NsdOrSad	Type of dialling used by the terminal	List	Not checked NSD SAD
41	NsdNumberofDigits	In the case of NSD dialling, number of digits needed to retrieve the NSD information. This parameter is not used in other cases.	Number	Default : 4 Min : 0 Max : 20
42	CompatibleTerminalDelay	Delay for response to the setup message between the various compatible terminals connected to the bus	Number	Default : 100 Min : 0 Max : 200
43	IntercallTime	Value of timer between two calls (ms)	Number	Default : 2 000 Min : 0 Max : 1 200 000

2.1.10 T2 Network CDP (V6R_T2_E and E1N_T2_D)

2.1.10.1 Scenario actions

The following actions are carried out:

Event	Action
Start of scenario	Start of a message wait supervision timer

Event	Action
Immediate stop request	TERMINATION OF SCENARIO ON IMMEDIATE STOP REQUEST (the scenario is terminated in accordance with the protocol)
Receipt of a RESTART message for the channel assigned to this scenario	Transmission of a RESTART category (16) "Receiving RESTART message" fault SCENARIO ABORTED ON FAULT
Receipt of a layer 2 clearing indication	Transmission of an LAPD category (15) "Release because Layer 2 breakdown" fault SCENARIO ABORTED ON FAULT
Receipt of a layer 2 clearing confirmation	Display in the event window of the "Release because Layer 2 breakdown" message SCENARIO ABORTED ON FAULT
Receipt of a layer 2 setup indication	If the protocol is in state U2 (overlap numbering) Transmission of an LAPD category (15) " Receiving Layer 2 establishment " fault Else, if the trace is activated on the port and the channel on which the scenario is running display in the event window of the "Receiving Layer 2 establishment" message ENDIF
Receipt of a layer 2 setup confirmation	If the trace is activated on the port and the channel on which the scenario is running display in the event window of the "Receiving confirmation of Layer 2 establishment" message ENDIF
Receipt of a layer 3 message	If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message received ENDIF Check on the message received according to the indications given in the protocol libraries If the message is considered valid Cancellation of the message wait supervision timer Transmission of the message event to the protocol management state machine Else Transmission of the message to the protocol error treatment ENDIF
Message wait supervision timer timed out	SCENARIO ABORTED ON IMMEDIATE STOP COMMAND <i>(This scenario is assumed not to have been executed)</i>
Protocol timer timed out	Transmission of the timeout event to the protocol management state machine
Speech channel events	If the protocol is in state U10 (speechpath phase) Transmission of the event to the speechpath phase management state machine ENDIF
End of scenario	If the CGP is external EXIT FROM SCENARIO Else START INTERCALL TIMER according to the "InterCallTime" CPS. ENDIF
Intercall time end	EXIT FROM SCENARIO

2.1.10.2 Scenario parameters

N°	Name	Explanation	Type	Values
40	IntercallTime	Value of timer between two calls (ms)	Number	Default : 2 000 Min : 0 Max : 1 200 000

2.1.11 T0 Network CDP (V6R_T0_E and E1N_T0_D)

2.1.11.1 Scenario actions

The following actions are carried out:

Event	Action
Start of scenario	Start of a message wait supervision timer
Immediate stop request	TERMINATION OF SCENARIO ON IMMEDIATE STOP REQUEST (the scenario is terminated in accordance with the protocol)
Receipt of a RESTART message for the channel assigned to this scenario	Transmission of a RESTART category (16) "Receiving RESTART message" fault SCENARIO ABORTED ON FAULT
Receipt of a layer 2 clearing indication	Transmission of an LAPD category (15) "Release because Layer 2 breakdown" fault SCENARIO ABORTED ON FAULT
Receipt of a layer 2 clearing confirmation	Display in the event window of the "Release because Layer 2 breakdown" message SCENARIO ABORTED ON FAULT
Receipt of a layer 2 setup indication	If the protocol is in state U2 (overlap numbering) Transmission of an LAPD category (15) " Receiving Layer 2 establishment " fault Else, if the trace is activated on the port and the channel on which the scenario is running display in the event window of the "Receiving Layer 2 establishment" message ENDIF
Receipt of a layer 2 setup confirmation	If the trace is activated on the port and the channel on which the scenario is running display in the event window of the "Receiving confirmation of Layer 2 establishment" message ENDIF
Receipt of a layer 3 message	If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message received ENDIF Check on the message received according to the indications given in the protocol libraries If the message is considered valid Cancellation of the message wait supervision timer Transmission of the message event to the protocol management state machine Else Transmission of the message to the protocol error treatment ENDIF
Message wait supervision timer timed out	SCENARIO ABORTED ON IMMEDIATE STOP COMMAND (This scenario is assumed not to have been executed)
Protocol timer timed out	Transmission of the timeout event to the protocol management state machine

Event	Action
Speech channel events	If the protocol is in state U10 (speechpath phase) Transmission of the event to the speechpath phase management state machine ENDIF
End of scenario	LAPD RELEASE REQUEST If the CGP is external EXIT FROM SCENARIO Else START INTERCALL TIMER according to the "InterCallTime" CPS. ENDIF
Intercall time end	EXIT FROM SCENARIO

2.1.11.2 Scenario parameters

N°	Name	Explanation	Type	Values
40	IntercallTime	Value of timer between two calls (ms)	Number	Default : 2 000 Min : 0 Max : 1 200 000

2.2 Checking the validity of messages received

The following checks are based on information contained in the protocol library for checking the validity of messages received (the tests continue until the message is considered valid):

Event	Action
Protocol discriminator value	Transmission of a MESSAGE category (2) "Wrong protocol discriminator" fault Invalid message
Unknown message type	Transmission of a MESSAGE category (2) "Wrong message type" fault Invalid message
Mandatory information element out of sequence	Transmission of a MESSAGE category (2) "IE out of sequence" fault Invalid message
Optional information element out of sequence	Transmission of a MESSAGE category (2) "IE out of sequence" fault Valid message
Mandatory information element repeated too many times	Transmission of a MESSAGE category (2) "Mandatory IE too repeated" fault Invalid message
Optional information element repeated too many times	Transmission of a MESSAGE category (2) "Optional IE too repeated" fault Valid message
Mandatory information element missing	Transmission of a MESSAGE category (2) "Mandatory IE missing" fault Invalid message
Unknown information element	If the " UnknownIEFaultMonitor " parameter == "Yes" Transmission of a MESSAGE category (2) "Unknown IE" fault ENDIF Valid message
Mandatory information element wrong length	Transmission of a MESSAGE category (2) "Wrong mandatory IE" fault Invalid message
Optional information element wrong length	Transmission of a MESSAGE category (2) "Wrong optional IE" fault Valid message

In case the message is not correct these followings actions are made :

Error	Action
Unknown message type	Transmission of a « STATUS » MESSAGE with the current state of protocol automate and a cause value 97 (we stay in the same state)
Mandatory information element missing or out of sequence in « Setup » or « release » message	Transmission of a « RELEASE COMPLETE » MESSAGE with the cause value 96 SCENARIO ABORTED ON FAULT
Mandatory information element missing or out of sequence in « Disconnect » message	Transmission of a « RELEASE » MESSAGE with the cause value 96 SCENARIO ABORTED ON FAULT (conforming to the protocol)
Mandatory information element missing or out of sequence in « Release complete » message	SCENARIO ABORTED ON FAULT
Mandatory information element missing or out of sequence in an other type of message	Transmission of a « STATUS » MESSAGE with the current state of protocol automate and a cause value 96 (we stay in the same state)
Mandatory information element with wrong contents in « Setup » or « release » message	Transmission of a « RELEASE COMPLETE » MESSAGE with the cause value 101 SCENARIO ABORTED ON FAULT
Mandatory information element with wrong contents in « Deconnex » message	Transmission of a « RELEASE » MESSAGE with the cause value 101 SCENARIO ABORTED ON FAULT (conforming to the protocol)
Mandatory information element with wrong contents in « Release complete » message	SCENARIO ABORTED ON FAULT
Mandatory information element with wrong contents in an other type of message	Transmission of a « STATUS » MESSAGE with the current state of protocol automate and a cause value 101 (we stay in the same state)

2.3 Protocol phase

2.3.1 General

The following actions are carried out in all states:

Event	Action
Receipt of an "Information" message	no action (The same state is maintained)
Receipt of a "Status" message	no action (The same state is maintained)

Event	Action
Unexpected protocol event	display in the event window of the "Unexpected event" message, specifying the category and type of the event received. If the event is receipt of a protocol message from the line display in the event window of the first bytes of the message received ENDIF If the "CallprogramstopifUnexpectedEvent" CPS == "Yes" SCENARIO TERMINATED ON FAULT (the scenario is terminated in accordance with the protocol) Else if the event concern a message reception Transmission of a « STATUS » MESSAGE with the current state of protocol automate and a cause value 98 ENDIF (The same state is maintained) ENDIF

2.3.2 USER simulation, CGP end

2.3.2.1 INIT state (INI)

If the trace is activated on the port and the channel on which the scenario is running
 display in the event window of the "Initialization state" message
 ENDIF

Event	Action
Start of scenario	Completion of the "Establishment" message according to the parameters set by the operator (see "Description of messages used"). TRANSMISSION OF THE "ESTABLISHMENT" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF TIMER T303 STARTED according to the "SetupResponseTimeout(T303)" CPS

2.3.2.2 State U1 (1)

If the trace is activated on the port and the channel on which the scenario is running
 display in the event window of the "U1 state" message
 ENDIF

Event	Action
Timer T303 timed out	Transmission of a PROTOCOL category (5) "SetupResponseTimeout" fault SCENARIO TERMINATED ON FAULT (the scenario is terminated in accordance with the protocol)

Event	Action
<p>Receipt of the "Setup acknowledge" message</p>	<p>TIMER T303 STOPPED Storage of the channel number in the "Setup acknowledge" message TIMER T304 STARTED according to the "SetupAckInfoResponseTimeout(T304)" CPS If the "DiallingType" CPS == "Overlap all digits" If the "DialToneTest" CPS == "Yes" and if the message contains a "Progress" information element set to 8 (tones available) TEST FOR PRESENCE OF DIAL TONE of frequency dependent on the CPS "DialToneFrequency" with a threshold dependent on the CPS "DetectionThreshold" and with a supervision timer dependent on the "DialToneDetectionTimeout" CPS. (The same state is maintained) Else, if the "DialToneTest" CPS == "Yes (progress IE must be present)" Transmission of a TONES category (7) "Dial tone test: no progress IE" fault START OF TIMER BETWEEN "INFORMATION" messages according to the "InterDigitTime" CPS Switch to state U2 Else START OF TIMER BETWEEN "INFORMATION" messages according to the "InterDigitTime" CPS Switch to state U2 ENDIF Else START OF TIMER BETWEEN "INFORMATION" messages according to the "InterDigitTime" CPS Switch to state U2 ENDIF</p>
<p>Detection of dial tone</p>	<p>Supervision timer stopped START OF TIMER BETWEEN "INFORMATION" messages according to the "InterDigitTime" CPS Switch to state U2</p>
<p>Supervision timer awaiting dial tone timed out</p>	<p>Transmission of a TONES category (7) "Dial tone not detected" fault SCENARIO TERMINATED ON FAULT (the scenario is terminated in accordance with the protocol)</p>
<p>Receipt of the "Call proceeding" message</p>	<p>TIMER T303 STOPPED Storage of the channel number in the "Call proceeding" message TIMER T310 STARTED according to the "AfterCallProceedingTimeout(T310)" CPS Switch to state U3</p>
<p>Receipt of the "Alerting" message</p>	<p>TIMER T303 STOPPED Storage of the channel number in the "Alerting" message TIMER T301 STARTED according to the "TimeBetweenAlertingConnect" CPS If the "RingbackToneTest" CPS == "Yes" and if the message contains a "Progress" information element set to 8 (tones available) TEST FOR PRESENCE OF RINGBACK TONE with a frequency dependent on the "RingbackFrequency" CPS, with a threshold dependent on the "ToneDetectionThreshold" CPS and with a supervision time-delay dependent on the "RingbackToneDetectionTimeout" CPS. Else, if the "RingbackToneTest" CPS == "Yes (progress IE must be present)" Transmission of a TONES category (7) "Ringback tone test : no progress IE" fault ENDIF Switch to state U4</p>

Event	Action
Receipt of the "Connect" message	TIMER T303 STOPPED Storage of the channel number in the "Connect" message If no reception of channel number Transmission of a PROTOCOL category (5) "No reception of channel before conversation" fault End of scenario on fault else If the "ConnectAckSending" CPS == "Yes" TRANSMISSION OF THE "CONNECT ACKNOWLEDGE" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF ENDIF START OF SPEECHPATH PHASE Switch to state U10 ENDIF
Receipt of the "Clearing" message	TIMER T303 STOPPED Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault TRANSMISSION OF THE "RELEASE COMPLETE" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF End of scenario on fault
Receipt of the "Release complete" message	TIMER T303 STOPPED Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault End of scenario on fault

2.3.2.3 State U2 (2)

If the trace is activated on the port and the channel on which the scenario is running
 display in the event window of the "State U2" message
 ENDIF

Event	Action
Timer T304 timed out	TIMER BETWEEN "INFORMATION" MESSAGES STOPPED Transmission of a PROTOCOL category (5) "SetupResponseTimeout" fault SCENARIO TERMINATED ON FAULT (the scenario is terminated in accordance with the protocol)

Event	Action
Timer between "Information" messages timed out	<p>TIMER T304 STOPPED Completion of the "Information" message according to the parameter set by the operator (see "Description of messages used").</p> <p>TRANSMISSION OF THE "INFORMATION" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent</p> <p>ENDIF</p> <p>TIMER T304 RESTARTED according to the "SetupAckInfoResponseTimeout(T304)" CPS If the destination number tone has not yet been sent</p> <p>INTER-DIGIT TIMER STARTED according to the "InterDigitDelay" CPS</p> <p>ENDIF</p> <p>(The same state is maintained)</p>
Receipt of the "Call proceeding" message	<p>TIMER T304 STOPPED TIMER BETWEEN "INFORMATION" MESSAGES STOPPED Storage of the channel number in the "Call proceeding" message</p> <p>TIMER T310 STARTED according to the "AfterCallProceedingTimeout(T310)" CPS</p> <p>Switch to state U3</p>
Receipt of the "Alerting" message	<p>TIMER T303 STOPPED TIMER BETWEEN "INFORMATION" MESSAGES STOPPED Storage of the channel number in the "Alerting" message</p> <p>TIMER T301 STARTED according to the "TimeBetweenAlertingConnect" CPS If the "RingbackToneTest" CPS == "Yes" and if the message contains a "Progress" information element set to 8 (tones available)</p> <p>TEST FOR PRESENCE OF RINGBACK TONE with a frequency dependent on the "RingbackToneFrequency" CPS, with a threshold dependent on the "ToneDetectionThreshold" CPS and with a supervision timer dependent on the "RingbackToneDetectionTimeout" CPS.</p> <p>Else, if the "RingbackToneTest" CPS == "Yes (progress IE must be present)" Transmission of a TONES category (7) "Ringback tone test : no progress IE"</p> <p>fault</p> <p>ENDIF</p> <p>Switch to state U4</p>
Receipt of the "Connect" message	<p>TIMER T303 STOPPED TIMER BETWEEN "INFORMATION" MESSAGES STOPPED Storage of the channel number in the "Connect" message</p> <p>If no reception of channel number Transmission of a PROTOCOL category (5) "No reception of channel before conversation" fault End of scenario on fault</p> <p>else</p> <p>If the "ConnectAckSending" CPS == "Yes"</p> <p>TRANSMISSION OF THE "CONNECT ACKNOWLEDGE" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent</p> <p>ENDIF</p> <p>ENDIF</p> <p>START OF SPEECHPATH PHASE Switch to state U10</p> <p>ENDIF</p>

Event	Action
Receipt of the "Progress" message	Storage of the channel number in the "Progress" message (The same state is maintained)
Receipt of the "Disconnect" message	TIMER T304 STOPPED TIMER BETWEEN "INFORMATION" MESSAGES STOPPED Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault Switch to state U12 with "Clearing request"
Receipt of the "Clearing" message	TIMER T304 STOPPED TIMER BETWEEN "INFORMATION" MESSAGES STOPPED Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault TRANSMISSION OF THE "RELEASE COMPLETE" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF End of scenario on fault
Receipt of the "Release complete" message	TIMER T304 STOPPED TIMER BETWEEN "INFORMATION" MESSAGES STOPPED Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault End of scenario on fault

2.3.2.4 State U3 (3)

If the trace is activated on the port and the channel on which the scenario is running
display in the event window of the "State U3" message

ENDIF

Event	Action
Timer T310 timed out	Transmission of a PROTOCOL category (5) "ALERTING timeout (T310)" fault SCENARIO TERMINATED ON FAULT (the scenario is terminated in accordance with the protocol)
Receipt of the "Alerting" message	TIMER T310 STOPPED Storage of the channel number in the "Alerting" message TIMER T301 STARTED according to the "TimeBetweenAlertingConnect" CPS If the "RingbackToneTest" CPS == "Yes" and if the message contains a "Progress" information element set to 8 (tones available) TEST FOR PRESENCE OF RINGBACK TONE with a frequency dependent on the "RingbackToneFrequency" CPS, with a threshold dependent on the "ToneDetectionThreshold" CPS and with a supervision timer dependent on the "RingbackToneDetectionTimeout" CPS. Else, if the "RingbackToneTest" CPS == "Yes (progress IE must be present)" Transmission of a TONES category (7) "Ringback tone test : no progress IE" fault ENDIF Switch to state U4

Event	Action
Receipt of the "Connect" message	<p>TIMER T310 STOPPED Storage of the channel number in the "Connect" message If no reception of channel number Transmission of a PROTOCOL category (5) "No reception of channel before conversation" fault End of scenario on fault else If the "ConnectAckSending" CPS == "Yes" TRANSMISSION OF THE "CONNECT ACKNOWLEDGE" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF ENDIF START OF SPEECHPATH PHASE Switch to state U10 ENDIF</p>
Receipt of the "Progress" message	<p>Storage of the channel number in the "Progress" message (The same state is maintained)</p>
Receipt of the "Disconnect" message	<p>TIMER T310 STOPPED Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault Switch to state U12 with "Clearing request"</p>
Receipt of the "Clearing" message	<p>TIMER T310 STOPPED Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault TRANSMISSION OF THE "RELEASE COMPLETE" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF End of scenario on fault</p>
Receipt of the "Release complete" message	<p>TIMER T310 STOPPED Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault End of scenario on fault</p>

2.3.2.5 State U4 (4)

If the trace is activated on the port and the channel on which the scenario is running
 display in the event window of the "State U4" message
 ENDIF

Event	Action
Timer T301 timed out	<p>Transmission of a PROTOCOL category (5) "CONNECT timeout (T301)" fault SCENARIO TERMINATED ON FAULT (the scenario is terminated in accordance with the protocol)</p>
Detection of ringback tone	<p>Supervision timer stopped (The same state is maintained)</p>
Supervision timer awaiting ringback tone timed out	<p>Transmission of a TONES category (7) "Ringback tone not detected" fault (The same state is maintained)</p>

Event	Action
Receipt of the "Connect" message	Supervision timer awaiting ringback tone stopped TIMER T310 STOPPED Storage of the channel number in the "Connect" message If no reception of channel number Transmission of a PROTOCOL category (5) "No reception of channel before conversation" fault End of scenario on fault else If the "ConnectAckSending" CPS == "Yes" TRANSMISSION OF THE "CONNECT ACKNOWLEDGE" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF ENDIF START OF SPEECHPATH PHASE Switch to state U10 ENDIF
Receipt of the "Progress" message	Storage of the channel number in the "Progress" message (The same state is maintained)
Receipt of the "Disconnect" message	Supervision timer awaiting ringback tone stopped TIMER T310 STOPPED Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault Switch to state U12 with "Clearing request"
Receipt of the "Clearing" message	Supervision timer awaiting ringback tone stopped TIMER T310 STOPPED Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault TRANSMISSION OF THE "RELEASE COMPLETE" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF End of scenario on fault
Receipt of the "Release complete" message	Supervision timer awaiting ringback tone stopped TIMER T310 STOPPED Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault End of scenario on fault

2.3.2.6 State U10 (10)

The content of the speechpath phase is described in section "2.2 - Speechpath phase"

If the trace is activated on the port and the channel on which the scenario is running
display in the event window of the "State U10" message

ENDIF

Event	Action
End of speechpath phase	TRANSMISSION OF THE "DISCONNECT" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF TIMER T305 STARTED according to the "DisconnectResponseTimeout (T305)" CPS Switch to state U11
Receipt of the "Disconnect" message	Switch to state U12 with "Clearing request"
Receipt of the "Clearing" message	Transmission of a CLEARING category (6) "Call clearing message in connection phase" fault TRANSMISSION OF THE "RELEASE COMPLETE" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF End of scenario on fault
Receipt of the "Release complete" message	Transmission of a CLEARING category (6) "Call clearing message in connection phase" fault End of scenario on fault

2.3.2.7 State U11 (11)

If the trace is activated on the port and the channel on which the scenario is running
display in the event window of the "State U11" message

ENDIF

Event	Action
Timer T305 timed out	Transmission of a PROTOCOL category (5) "DISCONNECT response timeout (T305)" fault TRANSMISSION OF THE "CLEARING" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF TIMER T308 STARTED according to the "ReleaseResponseTimeout(T308)" CPS Switch to state U19
Receipt of the "Disconnect" message	TIMER T305 STOPPED TRANSMISSION OF THE "CLEARING" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF TIMER T308 STARTED according to the "ReleaseResponseTimeout(T308)" CPS Switch to state U19

Event	Action
Receipt of the "Clearing" message	TIMER T305 STOPPED TRANSMISSION OF THE "RELEASE COMPLETE" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF Scenario completed successfully
Receipt of the "Release complete" message	TIMER T305 STOPPED Scenario completed successfully

2.3.2.8 State U12 (12)

If the trace is activated on the port and the channel on which the scenario is running
 display in the event window of the "State U12" message
 ENDIF

Event	Action
Clearing request	TRANSMISSION OF THE "CLEARING" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF TIMER T308 STARTED according to the "ReleaseResponseTimeout(T308)" CPS Switch to state U19
Receipt of the "Clearing" message	TRANSMISSION OF THE "RELEASE COMPLETE" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF End of scenario (successful if state U12 has been reached after U10, defective otherwise)
Receipt of the "Release complete" message	End of scenario (successful if state U12 has been reached after U10, defective otherwise)

2.3.2.9 State U19 (19)

If the trace is activated on the port and the channel on which the scenario is running
 display in the event window of the "State U19" message
 ENDIF

Event	Action
Timer T308 timed out for the first time	Transmission of a PROTOCOL category (5) "RELEASE response 1st timeout (T308)" fault RETRANSMISSION OF THE "CLEARING" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF START OF TIMER T308 according to the "ReleaseResponseTimeout(T308)" CPS (The same state is maintained)
Timer T308 timed out for the second time	Transmission of a PROTOCOL category (5) "RELEASE response timeout (T308)" fault SCENARIO TERMINATED ON FAULT (the scenario is terminated in accordance with the protocol)

Event	Action
Receipt of the "Disconnect" message	no action (The same state is maintained)
Receipt of the "Clearing" message	TIMER T308 STOPPED Scenario completed successfully
Receipt of the "Release complete" message	TIMER T308 STOPPED Scenario completed successfully

2.3.2.10 Messages sent

2.3.2.10.1 Setup

Content								Explanations
0	0	0	0	1	0	0	0	PROTOCOL DISCRIMINATOR in ISDN messages
0	0	0	0	0	0	X	X	Length of CALL REFERENCE (XX = 01 in basic access mode, XX = 10 in primary rate access mode)
0	X	X	X	X	X	X	X	Value of CALL REFERENCE
X	X	X	X	X	X	X	X	Second byte of value of CALL REFERENCE (this byte is not included in the case of a basic access port)
0	0	0	0	0	1	0	1	Type of message (SETUP)
0	0	0	0	0	1	0	0	Type of information element BEARER OPERATING MODE
0	0	0	0	0	0	1	1	Length of BEARER OPERATING MODE information element
			X	X	X	X	X	Information transfer capability (according to the "InformationTransferCapability" CPS) in byte 3 of the BEARER OPERATING MODE information element
	0	0						ITU-T encoding standard in byte 3 of the BEARER OPERATING MODE information element
1								Extension bit in byte 3 of the BEARER OPERATING MODE information element
			X	X	X	X	X	Information transfer rate (according to the "InformationTransferRate" CPS) in byte 4 of the BEARER OPERATING MODE information element
	0	0						CIRCUIT transfer mode in byte 4 of the BEARER OPERATING MODE information element
1								Extension bit in byte 4 of the BEARER OPERATING MODE information element
			0	0	0	1	1	Layer protocol encoded according to Recommendation G.711 law A in byte 5 of the BEARER OPERATING MODE information element
	0	1						Layer 1 identification in byte 5 of the BEARER OPERATING MODE information element
1								Extension bit in byte 5 of the BEARER OPERATING MODE information element
0	1	1	0	1	1	0	0	Type of information element ORIGIN NUMBER <i>This information element is included only if an origin number was specified at man/machine interface level</i>
0	0	0	X	X	X	X	X	Length of content of the ORIGIN NUMBER information element
				X	X	X	X	Unknown numbering plan in byte 3 of the ORIGIN NUMBER information element
	X	X	X					Unknown number type in byte 3 of the ORIGIN NUMBER information element
1								Extension bit in byte 3 of the ORIGIN NUMBER information element
0	X	X	X	X	X	X	X	Digits of the origin number in bytes 4 et seq of the ORIGIN NUMBER information element
.	
0	X	X	X	X	X	X	X	
0	1	1	0	1	1	0	1	Information element type ORIGIN SUBADDRESS <i>This information element is included only if the caller is a passive bus and if the subaddress numbering mode was selected for that caller</i>

Content								Explanations
0	0	0	X	X	X	X	X	Length of content of the ORIGIN SUBADDRESS information element
					0	0	0	Spare bits in byte 3 of the ORIGIN SUBADDRESS information element
				0				Even parity in byte 3 of the ORIGIN SUBADDRESS information element
	0	0	0					ISO subaddress type in byte 3 of the ORIGIN SUBADDRESS information element
1								Extension bit in byte 3 of the ORIGIN SUBADDRESS information element
0	X	X	X	X	X	X	X	Digits of the origin subaddress in bytes 4 et seq of the ORIGIN SUBADDRESS information element
.	
0	X	X	X	X	X	X	X	
0	1	1	1	0	0	0	0	Type of information element: DESTINATION NUMBER <i>In this case of en bloc dialling, this information element contains all of the destination number</i> <i>In the case of digit by digit overlap dialling, this information element contains the first digit of the destination number</i> <i>In the case of grouped overlap dialling, this information element is not included</i>
0	0	0	X	X	X	X	X	Length of content of the DESTINATION NUMBER information element
				X	X	X	X	Numbering plan (according to the "NumberingPlanIdentification" CPS) in byte 3 of the DESTINATION NUMBER information element
	X	X	X					Type of number (according to the "TypeofNumber" CPS) in byte 3 of the DESTINATION NUMBER information element
1								Extension bit in byte 3 of the DESTINATION NUMBER information element
0	X	X	X	X	X	X	X	Digits of destination number in bytes 4 et seq of the DESTINATION NUMBER information element
.	
0	X	X	X	X	X	X	X	
0	1	1	1	0	0	0	1	Type of information element DESTINATION SUBADDRESS <i>This information element is included only if the called party is a passive bus and if the dialling by subaddress mode was selected for that called party</i>
0	0	0	X	X	X	X	X	Length of content of the DESTINATION SUBADDRESS information element
					0	0	0	Spare bits in byte 3 of the DESTINATION SUBADDRESS information element
				0				Even parity in byte 3 of the DESTINATION SUBADDRESS information element
	0	0	0					ISO subaddress type in byte 3 of the DESTINATION SUBADDRESS information element
1								Extension bit in byte 3 of the DESTINATION SUBADDRESS information element
0	X	X	X	X	X	X	X	Digits of the destination subaddress in bytes 4 et seq of the DESTINATION SUBADDRESS information element
.	
0	X	X	X	X	X	X	X	
0	1	1	1	1	1	0	1	Type of information element HIGHER LAYER COMPATIBILITY
0	0	0	0	0	0	1	0	Length of content of the HIGHER LAYER COMPATIBILITY information element
						0	1	Higher layer profile presentation method (without attribute specifications) in byte 3 of the HIGHER LAYER COMPATIBILITY information element
			X	X	X			Interpretation of the higher layer compatibility (according to the "Interpretation" CPS) in byte 3 of the HIGHER LAYER COMPATIBILITY information element
	0	0						ITU-T encoding standard in byte 3 of the HIGHER LAYER COMPATIBILITY information element
1								Extension bit in byte 3 of the HIGHER LAYER COMPATIBILITY information element
	X	X	X	X	X	X	X	Identification of the higher layer characteristics (teleservice) (according to the "TeleserviceType" CPS) in byte 4 of the HIGHER LAYER COMPATIBILITY information element

Content								Explanations
1								Extension bit in byte 4 of the HIGHER LAYER COMPATIBILITY information element
1	0	1	0	0	0	0	1	Type of information element SENDING COMPLETE <i>In the case of overlap dialling, this information element is not included</i>
0	1	1	1	1	1	1	0	Type of information element USER-TO-USER INFORMATION <i>This information element is present only if the "UUIselection" parameter requests insertion of UUI</i>
X	X	X	X	X	X	X	X	Length of content of the USER-TO-USER INFORMATION information element
X	X	X	X	X	X	X	X	Protocol discriminator (according to the "UUIdiscriminator" CPS) in byte 3 of the USER-TO-USER INFORMATION element
0	X	X	X	X	X	X	X	Text in bytes 4 et seq of the USER-TO-USER INFORMATION information element
.	
0	X	X	X	X	X	X	X	

2.3.2.10.2 Information

Content								Explanations
0	0	0	0	1	0	0	0	PROTOCOL DISCRIMINATOR in ISDN messages
0	0	0	0	0	0	X	X	Length of CALL REFERENCE (XX = 01 in basic access mode, XX = 10 in primary rate access mode)
0	X	X	X	X	X	X	X	Value of CALL REFERENCE
X	X	X	X	X	X	X	X	Second byte of value of CALL REFERENCE (this byte is not included in the case of a basic access port)
0	1	1	1	1	0	1	1	Type of message (INFORMATION)
0	1	1	1	0	0	0	0	Type of information element: DESTINATION NUMBER <i>In the case of digit by digit overlap dialling, this information element contains one of the digits of the destination number</i> <i>In the case of grouped overlap dialling, this information element contains all the destination number</i>
0	0	0	X	X	X	X	X	Length of content of the DESTINATION NUMBER information element
				X	X	X	X	Numbering plan (according to the "NumberingPlanIdentification" CPS) in byte 3 of the DESTINATION NUMBER information element
	X	X	X					Type of number (according to the "TypeofNumber" CPS) in byte 3 of the DESTINATION NUMBER information element
1								Extension bit in byte 3 of the DESTINATION NUMBER information element
0	X	X	X	X	X	X	X	Digits of destination number in bytes 4 et seq of the DESTINATION NUMBER information element
.	
0	X	X	X	X	X	X	X	
1	0	1	0	0	0	0	1	Type of information element SENDING COMPLETE <i>This information element is included only if the last digit of the destination number is sent via this message</i>

2.3.2.10.3 Connect acknowledge

Content								Explanations
0	0	0	0	1	0	0	0	PROTOCOL DISCRIMINATOR in ISDN messages
0	0	0	0	0	0	X	X	Length of CALL REFERENCE (XX = 01 in basic access mode, XX = 10 in primary rate access mode)
0	X	X	X	X	X	X	X	Value of CALL REFERENCE
X	X	X	X	X	X	X	X	Second byte of value of CALL REFERENCE (this byte is not included in the case of a basic access port)

Content								Explanations
0	0	0	0	1	1	1	1	Type of message (CONNECT ACKNOWLEDGE)

2.3.2.10.4 Disconnect

Content								Explanations
0	0	0	0	1	0	0	0	PROTOCOL DISCRIMINATOR in ISDN messages
0	0	0	0	0	0	X	X	Length of CALL REFERENCE (XX = 01 in basic access mode, XX = 10 in primary rate access mode)
0	X	X	X	X	X	X	X	Value of CALL REFERENCE
X	X	X	X	X	X	X	X	Second byte of value of CALL REFERENCE (this byte is not included in the case of a basic access port)
0	1	0	0	0	1	0	1	Type of message (DISCONNECT)
0	0	0	0	1	0	0	0	Type of information element CAUSE
0	0	0	0	0	0	1	0	Length of content of CAUSE information element
				0	0	0	0	User location in byte 3 of the CAUSE information element
			0					Spare bit in byte 3 of the CAUSE information element
	0	0						ITU-T encoding standard in byte 3 of the CAUSE information element
1								Extension bit in byte 3 of the CAUSE information element
	X	X	X	X	X	X	X	Cause depends of disconnection reason in byte 4 of the CAUSE information element
1								Extension bit in byte 4 of the CAUSE information element

2.3.2.10.5 Clearing

Content								Explanations
0	0	0	0	1	0	0	0	PROTOCOL DISCRIMINATOR in ISDN messages
0	0	0	0	0	0	X	X	Length of CALL REFERENCE (XX = 01 in basic access mode, XX = 10 in primary rate access mode)
0	X	X	X	X	X	X	X	Value of CALL REFERENCE
X	X	X	X	X	X	X	X	Second byte of value of CALL REFERENCE (this byte is not included in the case of a basic access port)
0	1	1	0	0	1	0	1	Type of message (CLEARING)
0	0	0	0	1	0	0	0	Type of information element CAUSE <i>This element is present only on the first message of communication release sequence.</i>
0	0	0	0	0	0	1	0	Length of content of CAUSE information element
				0	0	0	0	User location in byte 3 of the CAUSE information element
			0					Spare bit in byte 3 of the CAUSE information element
	0	0						ITU-T encoding standard in byte 3 of the CAUSE information element
1								Extension bit in byte 3 of the CAUSE information element
	X	X	X	X	X	X	X	Cause depends of disconnection reason in byte 4 of the CAUSE information element
1								Extension bit in byte 4 of the CAUSE information element

2.3.2.10.6 Release complete

Content								Explanations
0	0	0	0	1	0	0	0	PROTOCOL DISCRIMINATOR in ISDN messages
0	0	0	0	0	0	X	X	Length of CALL REFERENCE (XX = 01 in basic access mode, XX = 10 in primary rate access mode)
0	X	X	X	X	X	X	X	Value of CALL REFERENCE

Content								Explanations
X	X	X	X	X	X	X	X	Second byte of value of CALL REFERENCE (this byte is not included in the case of a basic access port)
0	1	1	1	1	0	1	0	Type of message (RELEASE COMPLETE)
0	0	0	0	1	0	0	0	Type of information element CAUSE <i>This element is present only on the first message of communication release sequence.</i>
0	0	0	0	0	0	1	0	Length of content of CAUSE information element
				0	0	0	0	User location in byte 3 of the CAUSE information element
			0					Spare bit in byte 3 of the CAUSE information element
	0	0						ITU-T encoding standard in byte 3 of the CAUSE information element
1								Extension bit in byte 3 of the CAUSE information element
	X	X	X	X	X	X	X	Cause depends of disconnection reason in byte 4 of the CAUSE information element
1								Extension bit in byte 4 of the CAUSE information element

2.3.2.11 Scenario parameters

N°	Name	Explanation	Type	Values
5	SetupResponseTimeout(T303)	T303 timer value Cause of startup = Transmission of Setup Stop = Receipt of Alerting, Connect, Setup acknowledge, Call proceeding or Release complete (ms)	Number	Default : 4 000 Min : 10 Max : 60 000
6	SetupAckInfoResponseTimeout(T304)	T304 timer value Cause of startup = Receipt of Setup acknowledge Restart = Transmission of Information Stop = Receipt of Alerting, Connect, Call proceeding or Disconnect (ms)	Number	Default :30 000 Min : 10 Max : 120 000
7	AfterCallProceedingTimeout(T310)	T310 timer value Cause of startup = Receipt of call proceeding Stop = Receipt of Alerting, Connect, Disconnect or Progress (ms)	Number	Default :60 000 Min : 10 Max : 80 000
8	TimeBetweenAlertingConnect	T301 timer value Cause of startup = Receipt of Alerting Stop = Receipt of Connect (ms)	Number	Default :30 000 Min : 10 Max : 240 000
9	DisconnectResponseTimeout(T305)	T305 timer value Cause of startup = Transmission of Disconnect Stop = Receipt of Clearing or Disconnect (ms)	Number	Default : 4 000 Min : 10 Max : 60 000

N°	Name	Explanation	Type	Values
10	ReleaseResponseTimeout(T308)	T308 timer value Cause of startup = Transmission of Clearing Stop = Receipt of Clearing or Disconnect (ms)	Number	Default : 4 000 Min : 10 Max : 10 000
11	DiallingType	Type of dialling required	List	Bloc Overlap digit by digit Overlap all digits
12	InformationTransferCapability	Transfer capability (byte 3 of the Bearer operating mode information element)	List	Speech Unrestricted digital information Restricted digital information 3.1 kHz audio 7 kHz audio Video
13	InformationTransferRate	Transfer rate (byte 4 of the Bearer operating mode information element)	List	64 kBits/s 2 x 64 kBits/s 384 kBits/s 1536 kBits/s 1920 kBits/s
14	NumberingPlanIdentification	Numbering plan (byte 3 of the Destination number information element)	List	Unknown ISDN/Telephony numbering plan Data numbering plan Telex numbering plan National standard numbering plan Private numbering plan
15	TypeofNumber	Type of number (byte 3 of the Destination number information element)	List	Unknown International National Network specific Subscriber Abbreviated Reserved for extension
16	Interpretation	Type of interpretation (byte 3 of the Higher layer compatibility information element)	List	First HL characteristics (octet 4) National
17	TeleserviceType	Type of teleservice (byte 4 of the Higher layer compatibility information element)	List	Telephony Recommendation F182 Recommendation F184 Recommendation F230 and F184 Recommendation F220 Recommendation F200 Recommendation F300 and T101 Recommendation F 60 Recommendation X400 series Recommendation X200 series
18	UIselection	Request to insert User-to-user information and selection of the text to insert in the User- to-user information element	List	No user information User information = CLEMESY

N°	Name	Explanation	Type	Values
19	UUIdiscriminator	UUI discriminator (byte 3 of the User-to-user information information element)	List	User specific OSI X244 IA5 CCITT recommendation V120 Q931
20	ConnectAckSending	Request to send the Connect acknowledge message	List	No Yes
21	InterDigitDelay	Time between Information messages corresponding to each of the digits in overlap dialling (ms)	Number	Default : 500 Min : 10 Max : 1 000
22	CallprogramstopifUnexpectedEvent	Request to stop the connection on receipt of an unexpected protocol event	List	No Yes
23	ToneDetectionThreshold	Dial tone and ringback tone detection threshold	Number	Default : 340 (-34 dBm) Min : 0 (0 dBm) Max : 340 (-34 dBm)
24	DialToneTest	Request to test dial tone	List	No Yes (only if progress IE is present) Yes (progress IE must be present)
25	DialToneFrequency	Dial tone frequency	Number	Default : 440 Min : 300 Max : 3 400
26	DialToneDetectionTimeout	Supervision for detection of dial tone (ms)	Number	Default : 500 Min : 10 Max : 60 000
27	RingbackToneTest	Request to test ringback tone	List	No Yes (only if progress IE is present) Yes (progress IE must be present)
28	RingbackToneFrequency	Ringback tone frequency	Number	Default : 440 Min : 300 Max : 3 400
29	RingbackToneDetectionTimeout	Supervision for detection of ringback tone (ms)	Number	Default : 500 Min : 10 Max : 60 000

2.3.3 USER simulation, CDP end

2.3.3.1 INIT state (INI)

If the trace is activated on the port and the channel on which the scenario is running display in the event window of the "Initialization state" message
ENDIF

Event	Action
Receipt of the "Setup" message	Storage of the channel number in the "Setup" message LAPD SETUP REQUEST If the port type is T0 or S0 Start of LAPD setup supervision timer according to the "LAPDEstablishmentTimeout" CPS ENDIF Switch to state U6

2.3.3.2 State U6 (6)

If the trace is activated on the port and the channel on which the scenario is running
display in the event window of the "State U6" message
ENDIF

Event	Action
LAPD setup successful	TRANSMISSION OF THE "ALERTING" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF Start of timer between the "Alerting" and "Connect" messages according to the "TimeBetweenAlertingConnect" CPS Switch to state U7
Receipt of the "Disconnect" message	Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault Switch to state U12 with "Clearing request"
Receipt of the "Clearing" message	Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault TRANSMISSION OF THE "RELEASE COMPLETE" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF End of scenario on fault
Receipt of the "Release complete" message	Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault End of scenario on fault

2.3.3.3 State U7 (7)

If the trace is activated on the port and the channel on which the scenario is running
display in the event window of the "State U7" message
ENDIF

Event	Action
Timer between "Alerting" and "Connect" messages timed out	TRANSMISSION OF THE "CONNECT" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF TIMER T313 STARTED according to the "ConnectResponseTimeout" CPS Switch to state U8
Receipt of the "Disconnect" message	Cancellation of the timer between "Alerting" and "Connect" messages Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault Switch to state U12 with "Clearing request"
Receipt of the "Clearing" message	Cancellation of the timer between "Alerting" and "Connect" messages Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault TRANSMISSION OF THE "RELEASE COMPLETE" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF End of scenario on fault

Event	Action
Receipt of the "Release complete" message	Cancellation of the timer between "Alerting" and "Connect" messages Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault End of scenario on fault

2.3.3.4 State U8 (8)

If the trace is activated on the port and the channel on which the scenario is running display in the event window of the "State U8" message

ENDIF

Event	Action
Timer T313 timed out	Transmission of a PROTOCOL category (5) "CONNECT ACKNOWLEDGE time-out (T313)" fault SCENARIO TERMINATED ON FAULT (the scenario is terminated in accordance with the protocol)
Receipt of the "Connect acknowledge" message	TIMER T313 STOPPED Storage of the channel number in the "Connect" message If no reception of channel number Transmission of a PROTOCOL category (5) "No reception of channel before conversation" fault End of scenario on fault else START OF SPEECHPATH PHASE Switch to state U10 ENDIF
Receipt of the "Disconnect" message	TIMER T313 STOPPED Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault Switch to state U12 with "Clearing request"
Receipt of the "Clearing" message	TIMER T313 STOPPED Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault TRANSMISSION OF THE "RELEASE COMPLETE" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF End of scenario on fault
Receipt of the "Release complete" message	TIMER T313 STOPPED Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault End of scenario on fault

2.3.3.5 State U10 (10)

The content of the speechpath phase is described in section "2.2 - Speechpath phase"

If the trace is activated on the port and the channel on which the scenario is running
display in the event window of the "State U10" message

ENDIF

Event	Action
End of speechpath phase	TRANSMISSION OF THE "DISCONNECT" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF TIMER T305 STARTED according to the "DisconnectResponseTimeout (T305)" CPS Switch to state U11
Receipt of the "Disconnect" message	Switch to state U12 with "Clearing request"
Receipt of the "Clearing" message	Transmission of a CLEARING category (6) "Call clearing message in connection phase" fault TRANSMISSION OF THE "RELEASE COMPLETE" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF End of scenario on fault
Receipt of the "Release complete" message	Transmission of a CLEARING category (6) "Call clearing message in connection phase" fault End of scenario on fault

2.3.3.6 State U11 (11)

If the trace is activated on the port and the channel on which the scenario is running
display in the event window of the "State U11" message

ENDIF

Event	Action
Timer T305 timed out	Transmission of a PROTOCOL category (5) "DISCONNECT response timeout (T305)" fault TRANSMISSION OF THE "CLEARING" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF TIMER T308 STARTED according to the "ReleaseResponseTimeout(T308)" CPS Switch to state U19
Receipt of the "Disconnect" message	TIMER T305 STOPPED TRANSMISSION OF THE "CLEARING" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF TIMER T308 STARTED according to the "ReleaseResponseTimeout(T308)" CPS Switch to state U19

Event	Action
Receipt of the "Clearing" message	TIMER T305 STOPPED TRANSMISSION OF THE "RELEASE COMPLETE" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF Scenario completed successfully
Receipt of the "Release complete" message	TIMER T305 STOPPED Scenario completed successfully

2.3.3.7 State U12 (12)

If the trace is activated on the port and the channel on which the scenario is running
 display in the event window of the "State U12" message
 ENDIF

Event	Action
Clearing request	TRANSMISSION OF THE "CLEARING" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF TIMER T308 STARTED according to the "ReleaseResponseTimeout(T308)" CPS Switch to state U19
Receipt of the "Clearing" message	TRANSMISSION OF THE "RELEASE COMPLETE" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF End of scenario (successful if state U12 has been reached after U10, defective otherwise)
Receipt of the "Release complete" message	End of scenario (successful if state U12 has been reached after U10, defective otherwise)

2.3.3.8 State U19 (19)

If the trace is activated on the port and the channel on which the scenario is running
 display in the event window of the "State U19" message
 ENDIF

Event	Action
Timer T308 timed out for the first time	Transmission of a PROTOCOL category (5) "RELEASE response 1st timeout (T308)" fault RETRANSMISSION OF THE "CLEARING" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF TIMER T308 RESTARTED according to the "ReleaseResponseTimeout(T308)" CPS (The same state is maintained)
Timer T308 timed out for the second time	Transmission of a PROTOCOL category (5) "RELEASE response timeout (T308)" fault SCENARIO TERMINATED ON FAULT (the scenario is terminated in accordance with the protocol)

Event	Action
Receipt of the "Disconnect" message	no action (The same state is maintained)
Receipt of the "Clearing" message	TIMER T308 STOPPED Scenario completed successfully
Receipt of the "Release complete" message	TIMER T308 STOPPED Scenario completed successfully

2.3.3.9 Messages sent by the scenario

2.3.3.9.1 Alerting

Content								Explanations
0	0	0	0	1	0	0	0	PROTOCOL DISCRIMINATOR in ISDN messages
0	0	0	0	0	0	X	X	Length of CALL REFERENCE (XX = 01 in basic access mode, XX = 10 in primary rate access mode)
0	X	X	X	X	X	X	X	Value of CALL REFERENCE
X	X	X	X	X	X	X	X	Second byte of value of CALL REFERENCE (this byte is not included in the case of a basic access port)
0	0	0	0	0	0	0	1	Type of message (ALERTING)

2.3.3.9.2 Connect

Content								Explanations
0	0	0	0	1	0	0	0	PROTOCOL DISCRIMINATOR in ISDN messages
0	0	0	0	0	0	X	X	Length of CALL REFERENCE (XX = 01 in basic access mode, XX = 10 in primary rate access mode)
0	X	X	X	X	X	X	X	Value of CALL REFERENCE
X	X	X	X	X	X	X	X	Second byte of value of CALL REFERENCE (this byte is not included in the case of a basic access port)
0	0	0	0	0	1	1	1	Type of message (CONNECT)

2.3.3.9.3 Disconnect

Content								Explanations
0	0	0	0	1	0	0	0	PROTOCOL DISCRIMINATOR in ISDN messages
0	0	0	0	0	0	X	X	Length of CALL REFERENCE (XX = 01 in basic access mode, XX = 10 in primary rate access mode)
1	X	X	X	X	X	X	X	Value of CALL REFERENCE
X	X	X	X	X	X	X	X	Second byte of value of CALL REFERENCE (this byte is not included in the case of a basic access port)
0	1	0	0	0	1	0	1	Type of message (DISCONNECT)
0	0	0	0	1	0	0	0	Type of information element CAUSE
0	0	0	0	0	0	1	0	Length of content of CAUSE information element
				0	0	0	0	User location in byte 3 of the CAUSE information element
			0					Spare bit in byte 3 of the CAUSE information element
	0	0						ITU-T encoding standard in byte 3 of the CAUSE information element
1								Extension bit in byte 3 of the CAUSE information element
	X	X	X	X	X	X	X	Cause depends of disconnection reason in byte 4 of the CAUSE information element
1								Extension bit in byte 4 of the CAUSE information element

2.3.3.9.4 Clearing

Content								Explanations
0	0	0	0	1	0	0	0	PROTOCOL DISCRIMINATOR in ISDN messages
0	0	0	0	0	0	X	X	Length of CALL REFERENCE (XX = 01 in basic access mode, XX = 10 in primary rate access mode)
1	X	X	X	X	X	X	X	Value of CALL REFERENCE
X	X	X	X	X	X	X	X	Second byte of value of CALL REFERENCE (this byte is not included in the case of a basic access port)
0	1	1	0	0	1	0	1	Type of message (CLEARING)
0	0	0	0	1	0	0	0	Type of information element CAUSE <i>This element is present only on the first message of communication release sequence.</i>
0	0	0	0	0	0	1	0	Length of content of CAUSE information element
				0	0	0	0	User location in byte 3 of the CAUSE information element
			0					Spare bit in byte 3 of the CAUSE information element
	0	0						ITU-T encoding standard in byte 3 of the CAUSE information element
1								Extension bit in byte 3 of the CAUSE information element
	X	X	X	X	X	X	X	Cause depends of disconnection reason in byte 4 of the CAUSE information element
1								Extension bit in byte 4 of the CAUSE information element

2.3.3.9.5 Release complete

Content								Explanations
0	0	0	0	1	0	0	0	PROTOCOL DISCRIMINATOR in ISDN messages
0	0	0	0	0	0	X	X	Length of CALL REFERENCE (XX = 01 in basic access mode, XX = 10 in primary rate access mode)
1	X	X	X	X	X	X	X	Value of CALL REFERENCE
X	X	X	X	X	X	X	X	Second byte of value of CALL REFERENCE (this byte is not included in the case of a basic access port)
0	1	1	1	1	0	1	0	Type of message (RELEASE COMPLETE)
0	0	0	0	1	0	0	0	Type of information element CAUSE <i>This element is present only on the first message of communication release sequence.</i>
0	0	0	0	0	0	1	0	Length of content of CAUSE information element
				0	0	0	0	User location in byte 3 of the CAUSE information element
			0					Spare bit in byte 3 of the CAUSE information element
	0	0						ITU-T encoding standard in byte 3 of the CAUSE information element
1								Extension bit in byte 3 of the CAUSE information element
	X	X	X	X	X	X	X	Cause depends of disconnection reason in byte 4 of the CAUSE information element
1								Extension bit in byte 4 of the CAUSE information element

2.3.3.10 Scenario parameters

N°	Name	Explanation	Type	Values
5	DisconnectResponseTimeout (T305)	T305 timer value Cause of startup = Transmission of Disconnect Stop = Receipt of Clearing or Disconnect (ms)	Number	Default : 4 000 Min : 10 Max : 60 000

N°	Name	Explanation	Type	Values
6	ConnectResponseTimeout	T313 timer value Cause of startup = Transmission of Connect Stop = Receipt of Connect acknowledge (ms)	Number	Default : 4 000 Min : 10 Max : 80 000
7	ReleaseResponseTimeout(T308)	T308 timer value Cause of startup = Transmission of Clearing Stop = Receipt of Clearing or Disconnect (ms)	Number	Default : 4 000 Min : 10 Max : 8 000
8	LAPDEstablishmentTimeout	Supervision of LAPD setup (ms)	Number	Default : 4 000 Min : 10 Max : 60 000
9	TimeBetweenAlertingConnect	Time between transmission of Alerting and Connect messages	Number	Default : 100 Min : 10 Max : 240 000
10	CallprogramstopifUnexpectedEvent	Request to stop the connection on receipt of an unexpected protocol event	List	No Yes

2.3.4 USER S0 simulation, CDP end for compatible terminals other than the one running the scenario

2.3.4.1 INIT state (INI)

If the trace is activated on the port and the channel on which the scenario is running
display in the event window of the "Initialization state" message
ENDIF

Event	Action
Receipt of the "Setup" message	LAPD SETUP REQUEST Switch to state U6

2.3.4.2 State U6 (6)

If the trace is activated on the port and the channel on which the scenario is running
display in the event window of the "State U6" message
ENDIF

Event	Action
LAPD setup successful	TRANSMISSION OF THE "ALERTING" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF Switch to state U7

2.3.4.3 State U7 (7)

If the trace is activated on the port and the channel on which the scenario is running
display in the event window of the "State U7" message
ENDIF

Event	Action
Forced termination	TRANSMISSION OF THE "RELEASE COMPLETE" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF END OF EXECUTION OF THIS STATE MACHINE
Receipt of the "Clearing" message	TRANSMISSION OF THE "RELEASE COMPLETE" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF END OF EXECUTION OF THIS STATE MACHINE
Receipt of the "Release complete" message	END OF EXECUTION OF THIS STATE MACHINE

2.3.4.4 Messages sent by the scenario

2.3.4.4.1 Alerting

Content								Explanations
0	0	0	0	1	0	0	0	PROTOCOL DISCRIMINATOR in ISDN messages
0	0	0	0	0	0	X	X	Length of CALL REFERENCE (XX = 01 in basic access mode, XX = 10 in primary rate access mode)
1	X	X	X	X	X	X	X	Value of CALL REFERENCE
X	X	X	X	X	X	X	X	Second byte of value of CALL REFERENCE (this byte is not included in the case of a basic access port)
0	0	0	0	0	0	0	1	Type of message (ALERTING)

2.3.4.5 Scenario parameters

This protocol state machine has no specific parameters.

2.3.5 USER S0 simulation, CDP end for non-compatible terminals

2.3.5.1 INIT state (INI)

Event	Action
Receipt of an open message (Setup or Restart)	If the trace is activated on the port and the channel on which the scenario is running display in the event window of the "Receipt of an open message for a non-compatible terminal" message ENDIF
Receipt of a message other than an open message	Transmission of a PASSIVE category (18) "Receipt of a message for a non-compatible terminal" fault

2.3.5.2 Messages sent by the scenario

This state machine generates no specific messages.

2.3.5.3 Scenario parameters

This protocol state machine has no specific parameters.

2.3.6 NETWORK simulation, CGP end

2.3.6.1 INIT state (INI)

If the trace is activated on the port and the channel on which the scenario is running
display in the event window of the "Initialization state" message

ENDIF

Event	Action
Start of scenario	Completion of the "Setup" message according to the parameters set by the operator (see "Description of messages used"). TRANSMISSION OF THE "SETUP" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF TIMER T303 STARTED according to the "SetupResponseTimeout(T303)" CPS Switch to state N6

2.3.6.2 State N6 (1)

If the trace is activated on the port and the channel on which the scenario is running
display in the event window of the "State N6" message

ENDIF

Event	Action
Timer first T303 timed out	Retransmission of « setup » message If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF TIMER T303 RESTARTED according to the "SetupResponseTimeout(T303)" CPS We stay in the same state
Timer second T303 timed out	Transmission of a PROTOCOL category (5) "SetupResponseTimeout" fault SCENARIO TERMINATED ON FAULT (the scenario is terminated in accordance with the protocol)
Receipt of the "Call proceeding" message	TIMER T303 STOPPED TIMER T310 STARTED according to the "AfterCallProceedingTimeout(T310)" CPS Switch to state N9
Receipt of the "Alerting" message	TIMER T303 STOPPED TIMER T301 STARTED according to the "TimeBetweenAlertingConnect" CPS Switch to state N7
Receipt of the "Connect" message	TIMER T303 STOPPED Switch to state N8 with "Request to send connect acknowledge"

Event	Action
Receipt of the "Disconnect" message	TIMER T303 STOPPED Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault Switch to state N11 with "Clearing request"
Receipt of the "Clearing" message	TIMER T303 STOPPED Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault TRANSMISSION OF THE "RELEASE COMPLETE" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF End of scenario on fault
Receipt of the "Release complete" message	TIMER T303 STOPPED Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault End of scenario on fault

2.3.6.3 State N7 (7)

If the trace is activated on the port and the channel on which the scenario is running
display in the event window of the "State N7" message
ENDIF

Event	Action
Timer T301 timed out	Transmission of a PROTOCOL category (5) "CONNECT timeout (T301)" fault SCENARIO TERMINATED ON FAULT (the scenario is terminated in accordance with the protocol)
Receipt of the "Connect" message	TIMER T303 STOPPED Switch to state N8 with "Request to send connect acknowledge"
Receipt of the "Disconnect" message	TIMER T310 STOPPED Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault Switch to state N11 with "Clearing request"
Receipt of the "Clearing" message	TIMER T310 STOPPED Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault TRANSMISSION OF THE "RELEASE COMPLETE" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF End of scenario on fault
Receipt of the "Release complete" message	TIMER T310 STOPPED Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault End of scenario on fault

2.3.6.4 State N8 (8)

If the trace is activated on the port and the channel on which the scenario is running
display in the event window of the "State N8" message
ENDIF

Event	Action
Request to send connect acknowledge	TRANSMISSION OF THE "CONNECT ACKNOWLEDGE" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF START OF SPEECHPATH PHASE Switch to state N10
Receipt of the "Disconnect" message	TIMER T310 STOPPED Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault Switch to state N11 with "Clearing request"
Receipt of the "Clearing" message	TIMER T310 STOPPED Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault TRANSMISSION OF THE "RELEASE COMPLETE" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF End of scenario on fault
Receipt of the "Release complete" message	TIMER T310 STOPPED Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault End of scenario on fault

2.3.6.5 State N9 (9)

If the trace is activated on the port and the channel on which the scenario is running
display in the event window of the "State N9" message
ENDIF

Event	Action
Timer T310 timed out	Transmission of a PROTOCOL category (5) "ALERTING timeout (T310)" fault SCENARIO TERMINATED ON FAULT (the scenario is terminated in accordance with the protocol)
Receipt of the "Alerting" message	TIMER T310 STOPPED TIMER T301 STARTED according to the "TimeBetweenAlertingConnect" CPS Switch to state N7
Receipt of the "Connect" message	TIMER T303 STOPPED Switch to state N8 with "Request to send connect acknowledge"
Receipt of the "Disconnect" message	TIMER T310 STOPPED Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault Switch to state N11 with "Clearing request"

Event	Action
Receipt of the "Clearing" message	TIMER T310 STOPPED Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault TRANSMISSION OF THE "RELEASE COMPLETE" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF End of scenario on fault
Receipt of the "Release complete" message	TIMER T310 STOPPED Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault End of scenario on fault

2.3.6.6 State N10 (10)

The content of the speechpath phase is described in section "2.2 - Speechpath phase"

If the trace is activated on the port and the channel on which the scenario is running
 display in the event window of the "State N10" message

ENDIF

Event	Action
End of speechpath phase	TRANSMISSION OF THE "DISCONNECT" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF TIMER T305 STARTED according to the "DisconnectResponseTimeout (T305)" CPS Switch to state N12
Receipt of the "Disconnect" message	Switch to state N11 with "Clearing request"
Receipt of the "Clearing" message	Transmission of a CLEARING category (6) "Call clearing message in connection phase" fault TRANSMISSION OF THE "RELEASE COMPLETE" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF End of scenario on fault
Receipt of the "Release complete" message	Transmission of a CLEARING category (6) "Call clearing message in connection phase" fault End of scenario on fault

2.3.6.7 State N11 (11)

If the trace is activated on the port and the channel on which the scenario is running
display in the event window of the "State N11" message

ENDIF

Event	Action
Clearing request	TRANSMISSION OF THE "CLEARING" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF TIMER T308 STARTED according to the "ReleaseResponseTimeout(T308)" CPS Switch to state N19
Receipt of the "Clearing" message	TRANSMISSION OF THE "RELEASE COMPLETE" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF End of scenario (successful if state N11 reached from state N10, defective otherwise)
Receipt of the "Release complete" message	End of scenario (successful if state N11 reached from state N10, defective otherwise)

2.3.6.8 State N12 (12)

If the trace is activated on the port and the channel on which the scenario is running
display in the event window of the "State N12" message

ENDIF

Event	Action
Timer T305 timed out	Transmission of a PROTOCOL category (5) "DISCONNECT response timeout (T305)" fault TRANSMISSION OF THE "CLEARING" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF TIMER T308 STARTED according to the "ReleaseResponseTimeout(T308)" CPS Switch to state N19
Receipt of the "Disconnect" message	TIMER T305 STOPPED TRANSMISSION OF THE "CLEARING" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF TIMER T308 STARTED according to the "ReleaseResponseTimeout(T308)" CPS Switch to state N19

Event	Action
Receipt of the "Clearing" message	TIMER T305 STOPPED TRANSMISSION OF THE "RELEASE COMPLETE" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF Scenario completed successfully
Receipt of the "Release complete" message	TIMER T305 STOPPED Scenario completed successfully

2.3.6.9 State N19 (19)

If the trace is activated on the port and the channel on which the scenario is running
display in the event window of the "State N19" message
ENDIF

Event	Action
Timer T308 timed out for the first time	Transmission of a PROTOCOL category (5) "RELEASE response 1st timeout (T308)" fault RETRANSMISSION OF THE "CLEARING" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF TIMER T308 RESTARTED according to the "ReleaseResponseTimeout(T308)" CPS (The same state is maintained)
Timer T308 timed out for the second time	Transmission of a PROTOCOL category (5) "RELEASE response timeout (T308)" fault SCENARIO TERMINATED ON FAULT (the scenario is terminated in accordance with the protocol)
Receipt of the "Disconnect" message	no action (The same state is maintained)
Receipt of the "Clearing" message	TIMER T308 STOPPED Scenario completed successfully
Receipt of the "Release complete" message	TIMER T308 STOPPED Scenario completed successfully

2.3.6.10 Messages sent

2.3.6.10.1 Setup

Content								Explanations
0	0	0	0	1	0	0	0	PROTOCOL DISCRIMINATOR in ISDN messages
0	0	0	0	0	0	X	X	Length of CALL REFERENCE (XX = 01 in basic access mode, XX = 10 in primary rate access mode)
0	X	X	X	X	X	X	X	Value of CALL REFERENCE
X	X	X	X	X	X	X	X	Second byte of value of CALL REFERENCE (this byte is not included in the case of a basic access port)
0	0	0	0	0	1	0	1	Type of message (SETUP)
1	0	1	0	0	0	0	1	Type of information element SENDING COMPLETE
0	0	0	0	0	1	0	0	Type of information element BEARER OPERATING MODE
0	0	0	0	0	0	1	1	Length of BEARER OPERATING MODE information element

Content								Explanations
			X	X	X	X	X	Information transfer capability (according to the "InformationTransferCapability" CPS) in byte 3 of the BEARER OPERATING MODE information element
	0	0						ITU-T encoding standard in byte 3 of the BEARER OPERATING MODE information element
1								Extension bit in byte 3 of the BEARER OPERATING MODE information element
			X	X	X	X	X	Information transfer rate (according to the "InformationTransferRate" CPS) in byte 4 of the BEARER OPERATING MODE information element
	0	0						CIRCUIT transfer mode in byte 4 of the BEARER OPERATING MODE information element
1								Extension bit in byte 4 of the BEARER OPERATING MODE information element
			0	0	0	1	1	Layer protocol encoded according to Recommendation G.711 law A in byte 5 of the BEARER OPERATING MODE information element
	0	1						Layer 1 identification in byte 5 of the BEARER OPERATING MODE information element
1								Extension bit in byte 5 of the BEARER OPERATING MODE information element
0	0	0	1	1	0	0	0	Type of information element CHANNEL
0	0	0	0	0	0	X	X	Length of the CHANNEL information element (XX = 01 in basic access mode, XX = 11 in primary rate access mode)
						X	X	Number of the channel selected in byte 3 of the CHANNEL information element (XX = 01 for channel B1 in basic access mode, XX = 10 for channel B2 in basic access mode, XX = 01 in primary rate access mode)
					0			Non-D channel indicator in byte 3 of the CHANNEL information element
				X				Channel selection type (according to the « ChannelSelection »CPS) in byte 3 of the CHANNEL information element
			0					Spare bit in byte 3 of the CHANNEL information element
		X						Type of interface in byte 3 of the CHANNEL information element (X = 0 in basic access mode, X = 1 in primary rate access mode)
	0							Interface implicitly identified in byte 3 of the CHANNEL information element
1								Extension bit in byte 3 of the CHANNEL information element
				0	0	1	1	Channel identified by a B channel number in byte 3.2 of the CHANNEL information element <i>This byte is included only for primary rate access</i>
			0					Channel identified by its number in byte 3.2 of the CHANNEL information element <i>This byte is included only for primary rate access</i>
	0	0						ITU-T encoding standard in byte 3.2 of the CHANNEL information element <i>This byte is included only for primary rate access</i>
1								Extension bit in byte 3.2 of the CHANNEL information element <i>This byte is included only for primary rate access</i>
X	X	X	X	X	X	X	X	Channel number in byte 3.3 of the CHANNEL information element <i>This byte is included only for primary rate access</i>
0	1	1	0	1	1	0	0	Type of information element ORIGIN NUMBER <i>This information element is included only if an origin number was specified at man/machine interface level</i>
0	0	0	X	X	X	X	X	Length of content of the ORIGIN NUMBER information element
				X	X	X	X	Unknown numbering plan in byte 3 of the ORIGIN NUMBER information element
	X	X	X					Unknown number type in byte 3 of the ORIGIN NUMBER information element
1								Extension bit in byte 3 of the ORIGIN NUMBER information element

Content								Explanations
0	X	X	X	X	X	X	X	Digits of the origin number in bytes 4 et seq of the ORIGIN NUMBER information element
.	
0	X	X	X	X	X	X	X	
0	1	1	1	0	0	0	0	Type of information element: DESTINATION NUMBER <i>In this case of en bloc dialling, this information element contains all of the destination number</i> <i>In the case of digit by digit overlap dialling, this information element contains the first digit of the destination number</i> <i>In the case of grouped overlap dialling, this information element is not included</i>
0	0	0	X	X	X	X	X	Length of content of the DESTINATION NUMBER information element
				X	X	X	X	Numbering plan (according to the "NumberingPlanIdentification" CPS) in byte 3 of the DESTINATION NUMBER information element
	X	X	X					Type of number (according to the "TypeofNumber" CPS) in byte 3 of the DESTINATION NUMBER information element
1								Extension bit in byte 3 of the DESTINATION NUMBER information element
0	X	X	X	X	X	X	X	Digits of destination number in bytes 4 et seq of the DESTINATION NUMBER information element
.	
0	X	X	X	X	X	X	X	
0	1	1	1	0	0	0	1	Type of information element DESTINATION SUBADDRESS <i>This information element is included only if the called party is a passive bus and if the dialling by subaddress mode was selected for that called party</i>
0	0	0	X	X	X	X	X	Length of content of the DESTINATION SUBADDRESS information element
					0	0	0	Spare bits in byte 3 of the DESTINATION SUBADDRESS information element
				0				Even parity in byte 3 of the DESTINATION SUBADDRESS information element
	0	0	0					ISO subaddress type in byte 3 of the DESTINATION SUBADDRESS information element
1								Extension bit in byte 3 of the DESTINATION SUBADDRESS information element
0	X	X	X	X	X	X	X	Digits of the destination subaddress in bytes 4 et seq of the DESTINATION SUBADDRESS information element
.	
0	X	X	X	X	X	X	X	
0	1	1	1	1	1	0	1	Type of information element HIGHER LAYER COMPATIBILITY
0	0	0	0	0	0	1	0	Length of content of the HIGHER LAYER COMPATIBILITY information element
						0	1	Higher layer profile presentation method (without attribute specifications) in byte 3 of the HIGHER LAYER COMPATIBILITY information element
			X	X	X			Interpretation of the higher layer compatibility (according to the "Interpretation" CPS) in byte 3 of the HIGHER LAYER COMPATIBILITY information element
	0	0						ITU-T encoding standard in byte 3 of the HIGHER LAYER COMPATIBILITY information element
1								Extension bit in byte 3 of the HIGHER LAYER COMPATIBILITY information element
	X	X	X	X	X	X	X	Identification of the higher layer characteristics (teleservice) (according to the "TeleserviceType" CPS) in byte 4 of the HIGHER LAYER COMPATIBILITY information element
1								Extension bit in byte 4 of the HIGHER LAYER COMPATIBILITY information element
0	1	1	1	1	1	1	0	Type of information element USER-TO-USER INFORMATION <i>This information element is present only if the "UUIselection" parameter requests insertion of UUI</i>
X	X	X	X	X	X	X	X	Length of content of the USER-TO-USER INFORMATION information element

Content								Explanations
X	X	X	X	X	X	X	X	Protocol discriminator (according to the "UIIdiscriminator" CPS) in byte 3 of the USER-TO-USER INFORMATION element
0	X	X	X	X	X	X	X	Text in bytes 4 et seq of the USER-TO-USER INFORMATION information element
.	
0	X	X	X	X	X	X	X	

2.3.6.10.2 Connect acknowledge

Content								Explanations
0	0	0	0	1	0	0	0	PROTOCOL DISCRIMINATOR in ISDN messages
0	0	0	0	0	0	X	X	Length of CALL REFERENCE (XX = 01 in basic access mode, XX = 10 in primary rate access mode)
0	X	X	X	X	X	X	X	Value of CALL REFERENCE
X	X	X	X	X	X	X	X	Second byte of value of CALL REFERENCE (this byte is not included in the case of a basic access port)
0	0	0	0	1	1	1	1	Type of message (CONNECT ACKNOWLEDGE)

2.3.6.10.3 Disconnect

Content								Explanations
0	0	0	0	1	0	0	0	PROTOCOL DISCRIMINATOR in ISDN messages
0	0	0	0	0	0	X	X	Length of CALL REFERENCE (XX = 01 in basic access mode, XX = 10 in primary rate access mode)
0	X	X	X	X	X	X	X	Value of CALL REFERENCE
X	X	X	X	X	X	X	X	Second byte of value of CALL REFERENCE (this byte is not included in the case of a basic access port)
0	1	0	0	0	1	0	1	Type of message (DISCONNECT)
0	0	0	0	1	0	0	0	Type of information element CAUSE
0	0	0	0	0	0	1	0	Length of content of CAUSE information element
				0	0	0	0	User location in byte 3 of the CAUSE information element
			0					Spare bit in byte 3 of the CAUSE information element
	0	0						ITU-T encoding standard in byte 3 of the CAUSE information element
1								Extension bit in byte 3 of the CAUSE information element
	X	X	X	X	X	X	X	Cause depends of disconnection reason in byte 4 of the CAUSE information element
1								Extension bit in byte 4 of the CAUSE information element

2.3.6.10.4 Clearing

Content								Explanations
0	0	0	0	1	0	0	0	PROTOCOL DISCRIMINATOR in ISDN messages
0	0	0	0	0	0	X	X	Length of CALL REFERENCE (XX = 01 in basic access mode, XX = 10 in primary rate access mode)
0	X	X	X	X	X	X	X	Value of CALL REFERENCE
X	X	X	X	X	X	X	X	Second byte of value of CALL REFERENCE (this byte is not included in the case of a basic access port)
0	1	1	0	0	1	0	1	Type of message (CLEARING)
0	0	0	0	1	0	0	0	Type of information element CAUSE <i>This element is present only on the first message of communication release sequence.</i>
0	0	0	0	0	0	1	0	Length of content of CAUSE information element

Content								Explanations
				0	0	0	0	User location in byte 3 of the CAUSE information element
			0					Spare bit in byte 3 of the CAUSE information element
	0	0						ITU-T encoding standard in byte 3 of the CAUSE information element
1								Extension bit in byte 3 of the CAUSE information element
	X	X	X	X	X	X	X	Cause depends of disconnection reason in byte 4 of the CAUSE information element
1								Extension bit in byte 4 of the CAUSE information element

2.3.6.10.5 Release complete

Content								Explanations
0	0	0	0	1	0	0	0	PROTOCOL DISCRIMINATOR in ISDN messages
0	0	0	0	0	0	X	X	Length of CALL REFERENCE (XX = 01 in basic access mode, XX = 10 in primary rate access mode)
0	X	X	X	X	X	X	X	Value of CALL REFERENCE
X	X	X	X	X	X	X	X	Second byte of value of CALL REFERENCE (this byte is not included in the case of a basic access port)
0	1	1	1	1	0	1	0	Type of message (RELEASE COMPLETE)
0	0	0	0	1	0	0	0	Type of information element CAUSE <i>This element is present only on the first message of communication release sequence.</i>
0	0	0	0	0	0	1	0	Length of content of CAUSE information element
				0	0	0	0	User location in byte 3 of the CAUSE information element
			0					Spare bit in byte 3 of the CAUSE information element
	0	0						ITU-T encoding standard in byte 3 of the CAUSE information element
1								Extension bit in byte 3 of the CAUSE information element
	X	X	X	X	X	X	X	Cause depends of disconnection reason in byte 4 of the CAUSE information element
1								Extension bit in byte 4 of the CAUSE information element

2.3.6.11 Scenario parameters

N°	Name	Explanation	Type	Values
5	AfterCallProceedingTimeout(T310)	T310 timer value Cause of startup = Receipt of Call proceeding Stop = Receipt of Alerting, Connect, Disconnect or Progress (ms)	Number	Default : 60 000 Min : 10 Max : 80 000
6	DisconnectResponseTimeout (T305)	T305 timer value Cause of startup = Transmission of Disconnect Stop = Receipt of Clearing or Disconnect (ms)	Number	Default : 4 000 Min : 10 Max : 60 000
7	TimeBetweenAlertingConnect (T301)	T301 timer value Cause of startup = Receipt of Alerting Stop = Receipt of Connect (ms)	Number	Default : 30 000 Min : 10 Max : 240 000

N°	Name	Explanation	Type	Values
8	ReleaseResponseTimeout(T308)	T308 timer value Cause of startup = Transmission of Clearing Stop = Receipt of Clearing or Disconnect (ms)	Number	Default : 4 000 Min : 10 Max : 10 000
9	InformationTransferCapability	Transfer capability (byte 3 of the Bearer operating mode information element)	List	Speech Unrestricted digital information Restricted digital information 3,1 kHz audio 7 kHz audio Video
10	InformationTransferRate	Transfer rate (byte 4 of the Bearer operating mode information element)	List	64 kBits/s 2 x 64 kBits/s 384 kBits/s 1536 kBits/s 1920 kBits/s
11	NumberingPlanIdentification	Numbering plan (byte 3 of the Destination number information element)	List	Unknown ISDN/Telephony numbering plan Data numbering plan Telex numbering plan National standard numbering plan Private numbering plan
12	TypeOf Number	Type of number (byte 3 of the Destination number information element)	List	Unknown International National Network specific Subscriber Abbreviated Reserved for extension
13	Interpretation	Type of interpretation (byte 3 of the Higher layer compatibility information element)	List	First HL characteristics (octet 4) National
14	TeleserviceType	Type of teleservice (byte 4 of the Higher layer compatibility information element)	List	Telephony Recommendation F182 Recommendation F184 Recommendation F230 and F184 Recommendation F220 Recommendation F200 Recommendation F300 and T101 Recommendation F 60 Recommendation X400 series Recommendation X200 series
15	UIselection	Request to insert User-to-user information and selection of the text to insert in the User- to-user information element	List	No user information User information = CLEMESSY
16	UIDiscriminator	UII discriminator (byte 3 of the User-to-user information information element)	List	User specific OSI X244 IA5 CCITT recommendation V120 Q931

N°	Name	Explanation	Type	Values
17	AfterCallProceedingTimeout(T310)	T310 timer value Cause of startup = Receipt of call proceeding Stop = Receipt of Alerting, Connect, Disconnect or Progress (ms)	Number	Default :60 000 Min : 10 Max : 80 000
18	CallprogramstopifUnexpectedEvent	Request to stop the connection on receipt of an unexpected protocol event	List	No Yes
18	ChannelSelection	Channel selection type to use.	List	Exclusive Preferred

2.3.7 NETWORK simulation, CDP end

2.3.7.1 INIT state (INI)

If the trace is activated on the port and the channel on which the scenario is running display in the event window of the "Initialization state" message
ENDIF

Event	Action
Receipt of the "Setup" message	<p>If the " channel " information element is present in the message with a demand concerning an unavailable channel</p> <p style="padding-left: 20px;">If it's an exclusive demand</p> <p style="padding-left: 40px;">Transmission of a PROTOCOL category (5) "Exclusif channel already allocated" fault</p> <p style="padding-left: 40px;">SCENARIO TERMINATED ON FAULT (the scenario is terminated in accordance with the protocol)</p> <p style="padding-left: 20px;">Else</p> <p style="padding-left: 40px;">Transmission of a "Exclusif channel already allocated" message</p> <p style="padding-left: 40px;">Memorisation of no channel selection</p> <p style="padding-left: 20px;">ENDIF</p> <p>Else if, the " channel " information element is present in the message with a demand concerning an available channel</p> <p style="padding-left: 20px;">Selection of the requested channel</p> <p style="padding-left: 20px;">Memorisation of the channel selection</p> <p>Else</p> <p style="padding-left: 20px;">Memorisation of no channel selection</p> <p>ENDIF</p> <p>If the "Sending complete" information element is not included in the message</p> <p style="padding-left: 20px;">If the "Destination number" information element is not included in the message, or is included but does not contain any digits</p> <p style="padding-left: 40px;">Switch to state N1 with "Setup received in overlap mode with tone to send"</p> <p style="padding-left: 20px;">Else</p> <p style="padding-left: 40px;">Switch to state N1 with "Setup received in overlap mode without tone to send"</p> <p style="padding-left: 20px;">ENDIF</p> <p>Else</p> <p style="padding-left: 20px;">Switch to state N1 with "Setup received in en bloc mode"</p> <p>ENDIF</p>

2.3.7.2 State N1 (1)

If the trace is activated on the port and the channel on which the scenario is running
display in the event window of the "State N1" message

ENDIF

Event	Action
Setup received in en bloc mode	If the channel is already stored TRANSMISSION OF THE "CALL PROCEEDING" message with the "Channel select" including the channel previously selected Else Search for free channel TRANSMISSION OF THE "CALL PROCEEDING" message with the "Channel select" including the free channel selected ENDIF If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF Timer between Call proceeding" and "Alerting" messages started according to the "TimeBetweenCallProceedingAlerting" CPS Switch to state N3
Setup received in overlap mode without tone to send	If the channel is already stored TRANSMISSION OF THE "SETUP ACKNOWLEDGE" message with the "Channel select" including the channel previously selected Else Search for free channel TRANSMISSION OF THE "SETUP ACKNOWLEDGE" message with "Progress" information element including the free channel selected ENDIF If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF TIMER T302 STARTED according to the "InformationTimeout(T302)" CPS Switch to state N2

Event	Action
Setup received in overlap mode with tone to send	<p>If the channel is already stored</p> <p>TRANSMISSION OF THE " CALL PROCEEDING " message with the "Channel select" including the channel previously selected</p> <p>If the "ToneSending" CPS == "Yes"</p> <p>Completion of the "Progress" information element according to the "Location" CPS</p> <p>TRANSMISSION OF THE " SETUP ACKNOWLEDGE" MESSAGE with the "Progress" information element including the channel previously selected</p> <p>Else</p> <p>TRANSMISSION OF THE " SETUP ACKNOWLEDGE" MESSAGE without "Progress" information element</p> <p>ENDIF</p> <p>Else</p> <p>Search for free channel</p> <p>If the "ToneSending" CPS == "Yes"</p> <p>Completion of the "Progress" information element according to the "Location" CPS</p> <p>TRANSMISSION OF THE " SETUP ACKNOWLEDGE" MESSAGE with the "Progress" information element including the channel selected</p> <p>Else</p> <p>TRANSMISSION OF THE " SETUP ACKNOWLEDGE" MESSAGE without "Progress" information element including the channel selected</p> <p>ENDIF</p> <p>If the trace is activated on the port and the channel on which the scenario is running</p> <p>display in the event window of the first bytes of the message sent</p> <p>ENDIF</p> <p>TIMER T302 STARTED according to the "InformationTimeout(T302)" CPS</p> <p>If the "ToneSending" CPS == "Yes"</p> <p>TRANSMISSION OF DIAL TONE, with a frequency dependent on the "DialToneFrequency" CPS, and a level dependent on the "DialToneLevel" CPS</p> <p>ENDIF</p> <p>Switch to state N2</p>
Receipt of the "Disconnect" message	<p>Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault</p> <p>Switch to state N11 with "Clearing request"</p>
Receipt of the "Clearing" message	<p>Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault</p> <p>TRANSMISSION OF THE "RELEASE COMPLETE" MESSAGE</p> <p>If the trace is activated on the port and the channel on which the scenario is running</p> <p>display in the event window of the first bytes of the message sent</p> <p>ENDIF</p> <p>End of scenario on fault</p>
Receipt of the "Release complete" message	<p>Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault</p> <p>End of scenario on fault</p>

2.3.7.3 State N2 (2)

If the trace is activated on the port and the channel on which the scenario is running
display in the event window of the "State N2" message

ENDIF

Event	Action
Timer T302 timed out	Transmission of a PROTOCOL category (5) "Timeout for receiving INFORMATION (T302)" fault SCENARIO TERMINATED ON FAULT (the scenario is terminated in accordance with the protocol)
Receipt of the "Information" message	Cancellation of timer T302 TRANSMISSION OF DIAL TONE STOPPED If the "Sending complete" information element is included in the message TRANSMISSION OF THE "CALL PROCEEDING" message without "Channel select" information element If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF Timer between "Call proceeding" and "Alerting" messages started according to the "TimeBetweenCallProceedingAlerting" CPS Switch to state N3 Else If the "Destination number" information element is included in the message If the "stop after some digits" function is activated If the digits number is already received TRANSMISSION OF THE "CALL PROCEEDING" message without "Channel select" information element If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF Timer between "Call proceeding" and "Alerting" messages started according to the "TimeBetweenCallProceedingAlerting" CPS Switch to state N3 Else TIMER T302 RESTARTED according to the "InformationTimeout(T302)" CPS ENDIF Else TIMER T302 RESTARTED according to the "InformationTimeout(T302)" CPS ENDIF Else TIMER T302 RESTARTED according to the "InformationTimeout(T302)" CPS ENDIF ENDIF
Receipt of the "Disconnect" message	Cancellation of timer T302 Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault Switch to state N11 with "Clearing request"

Event	Action
Receipt of the "Clearing" message	Cancellation of timer T302 Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault TRANSMISSION OF THE "RELEASE COMPLETE" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF End of scenario on fault
Receipt of the "Release complete" message	Cancellation of timer T302 Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault End of scenario on fault

2.3.7.4 State N3 (3)

If the trace is activated on the port and the channel on which the scenario is running
 display in the event window of the "State N3" message
 ENDIF

Event	Action
Timer between "Call proceeding" and "Alerting" messages timed out	If the "ToneSending" CPS == "Yes" TRANSMISSION OF RINGBACK TONE , of a frequency dependent on the "RingbackToneFrequency" CPS, level dependent on the "RingbackLevel" CPS, interrupt rate according to the "RingbackOnTime" and "RingbackOffTime" CPSs Completion of the "Progress" information element according to the "Location" CPS TRANSMISSION OF THE "ALERTING" message with "Progress" information element If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF Else TRANSMISSION OF THE "ALERTING" MESSAGE without "Progress" information element If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF ENDIF Timer between "Alerting" and "Connect" messages started according to the "TimeBetweenAlertingConnect" CPS Switch to state N4
Receipt of the "Disconnect" message	Cancellation of the timer between "Call proceeding" and "Alerting" messages Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault Switch to state N11 with "Clearing request"

Event	Action
Receipt of the "Clearing" message	Cancellation of the timer between "Call proceeding" and "Alerting" messages Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault TRANSMISSION OF THE "RELEASE COMPLETE" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF End of scenario on fault
Receipt of the "Release complete" message	Cancellation of the timer between "Call proceeding" and "Alerting" messages Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault End of scenario on fault

2.3.7.5 State N4 (4)

If the trace is activated on the port and the channel on which the scenario is running
display in the event window of the "State N4" message

ENDIF

Event	Action
Timer between "Alerting" and "Connect" messages timed out	TRANSMISSION OF RINGBACK TONE STOPPED TRANSMISSION OF THE "CONNECT" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF START OF SPEECHPATH PHASE Switch to state N10
Receipt of the "Disconnect" message	Cancellation of the timer between "Alerting" and "Connect" messages Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault Switch to state N11 with "Clearing request"
Receipt of the "Clearing" message	Cancellation of the timer between "Alerting" and "Connect" messages Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault TRANSMISSION OF THE "RELEASE COMPLETE" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF End of scenario on fault
Receipt of the "Release complete" message	Cancellation of the timer between "Alerting" and "Connect" messages Transmission of a CLEARING category (6) "Premature call clearing mes. (before connection)" fault End of scenario on fault

2.3.7.6 State N10 (10)

The content of the speechpath phase is described in section "2.2 - Speechpath phase"

If the trace is activated on the port and the channel on which the scenario is running
display in the event window of the "State N10" message

ENDIF

Event	Action
End of speechpath phase	TRANSMISSION OF THE "DISCONNECT" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF TIMER T305 STARTED according to the "DisconnectResponseTimeout (T305)" CPS Switch to state N12
Receipt of the "Connect acknowledge" message	no action (The same state is maintained)
Receipt of the "Disconnect" message	Switch to state N11 with "Clearing request"
Receipt of the "Clearing" message	Transmission of a CLEARING category (6) "Call clearing message in connection phase" fault TRANSMISSION OF THE "RELEASE COMPLETE" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF End of scenario on fault
Receipt of the "Release complete" message	Transmission of a CLEARING category (6) "Call clearing message in connection phase" fault End of scenario on fault

2.3.7.7 State N11 (11)

If the trace is activated on the port and the channel on which the scenario is running
display in the event window of the "State N11" message

ENDIF

Event	Action
Clearing request	TRANSMISSION OF THE "CLEARING" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF TIMER T308 STARTED according to the "ReleaseResponseTimeout(T308)" CPS Switch to state N19
Receipt of the "Clearing" message	TRANSMISSION OF THE "RELEASE COMPLETE" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF End of scenario (successful if state N11 reached from state N10, defective otherwise)
Receipt of the "Release complete" message	End of scenario (successful if state N11 reached from state N10, defective otherwise)

2.3.7.8 State N12 (12)

If the trace is activated on the port and the channel on which the scenario is running
display in the event window of the "State N12" message

ENDIF

Event	Action
Timer T305 timed out	Transmission of a PROTOCOL category (5) "DISCONNECT response timeout (T305)" fault TRANSMISSION OF THE "CLEARING" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF TIMER T308 STARTED according to the "ReleaseResponseTimeout(T308)" CPS Switch to state N19
Receipt of the "Disconnect" message	TIMER T305 STOPPED TRANSMISSION OF THE "CLEARING" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF TIMER T308 STARTED according to the "ReleaseResponseTimeout(T308)" CPS Switch to state N19
Receipt of the "Clearing" message	TIMER T305 STOPPED TRANSMISSION OF THE "RELEASE COMPLETE" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF Scenario completed successfully
Receipt of the "Release complete" message	TIMER T305 STOPPED Scenario completed successfully

2.3.7.9 State N19 (19)

If the trace is activated on the port and the channel on which the scenario is running
display in the event window of the "State N19" message

ENDIF

Event	Action
Timer T308 timed out for the first time	Transmission of a PROTOCOL category (5) "RELEASE response 1st timeout (T308)" fault RETRANSMISSION OF THE "CLEARING" MESSAGE If the trace is activated on the port and the channel on which the scenario is running display in the event window of the first bytes of the message sent ENDIF TIMER T308 RESTARTED according to the "ReleaseResponseTimeout(T308)" CPS (The same state is maintained)
Timer T308 timed out for the second time	Transmission of a PROTOCOL category (5) "RELEASE response timeout (T308)" fault SCENARIO TERMINATED ON FAULT (the scenario is terminated in accordance with the protocol)

Event	Action
Receipt of the "Disconnect" message	no action (The same state is maintained)
Receipt of the "Clearing" message	TIMER T308 STOPPED Scenario completed successfully
Receipt of the "Release complete" message	TIMER T308 STOPPED Scenario completed successfully

2.3.7.10 Messages sent

2.3.7.10.1 Setup acknowledge

Content								Explanations	
0	0	0	0	1	0	0	0	PROTOCOL DISCRIMINATOR in ISDN messages	
0	0	0	0	0	0	X	X	Length of CALL REFERENCE (XX = 01 in basic access mode, XX = 10 in primary rate access mode)	
1	X	X	X	X	X	X	X	Value of CALL REFERENCE	
X	X	X	X	X	X	X	X	Second byte of value of CALL REFERENCE (this byte is not included in the case of a basic access port)	
0	0	0	0	1	1	0	1	Type of message (SETUP ACKNOWLEDGE)	
0	0	0	1	1	0	0	0	Type of information element CHANNEL	
0	0	0	0	0	0	X	X	Length of the CHANNEL information element (XX = 01 in basic access mode, XX = 11 in primary rate access mode)	
						X	X	Number of the channel selected in byte 3 of the CHANNEL information element (XX = 01 for channel B1 in basic access mode, XX = 10 for channel B2 in basic access mode, XX = 01 in primary rate access mode)	
					0			Non-D channel indicator in byte 3 of the CHANNEL information element	
				X				Channel selection type indicator (according to "ChannelSelection" CPS) in byte 3 of the CHANNEL information element	
			0					Spare bit in byte 3 of the CHANNEL information element	
		X						Type of interface in byte 3 of the CHANNEL information element (X = 0 in basic access mode, X = 1 in primary rate access mode)	
	0							Interface implicitly identified in byte 3 of the CHANNEL information element	
1								Extension bit in byte 3 of the CHANNEL information element	
				0	0	1	1	Channel identified by a B channel number in byte 3.2 of the CHANNEL information element <i>This byte is included only for primary rate access</i>	
			0					Channel identified by its number in byte 3.2 of the CHANNEL information element <i>This byte is included only for primary rate access</i>	
	0	0						ITU-T encoding standard in byte 3.2 of the CHANNEL information element <i>This byte is included only for primary rate access</i>	
1								Extension bit in byte 3.2 of the CHANNEL information element <i>This byte is included only for primary rate access</i>	
X	X	X	X	X	X	X	X	Channel number in byte 3.3 of the CHANNEL information element <i>This byte is included only for primary rate access</i>	
0	0	0	1	1	1	1	0	Type of information element PROGRESS <i>This information element is included only if tone transmission was requested and if the setup message received indicated overlap dialling and no digit had yet been received</i>	
0	0	0	0	0	0	1	0	Length of content of the PROGRESS information element	
				0	0	0	0	Location (according to the "Location" CPS) in byte 3 of the PROGRESS information element	
			0					Spare bit in byte 3 of the PROGRESS information element	

Content								Explanations
	0	0						ITU-T encoding standard in byte 3 of the PROGRESS information element
1								Extension bit in byte 3 of the PROGRESS information element
	0	0	0	1	0	0	0	In-band tone progress in byte 4 of the PROGRESS information element
1								Extension bit in byte 4 of the PROGRESS information element

2.3.7.10.2 Call proceeding

Content								Explanations
0	0	0	0	1	0	0	0	PROTOCOL DISCRIMINATOR in ISDN messages
0	0	0	0	0	0	X	X	Length of CALL REFERENCE (XX = 01 in basic access mode, XX = 10 in primary rate access mode)
1	X	X	X	X	X	X	X	Value of CALL REFERENCE
X	X	X	X	X	X	X	X	Second byte of value of CALL REFERENCE (this byte is not included in the case of a basic access port)
0	0	0	0	0	0	1	0	Type of message (CALL PROCEEDING)
0	0	0	1	1	0	0	0	Type of information element CHANNEL <i>This information element is included only in the case of en bloc dialling. In other cases, the channel number was sent in the setup acknowledge</i>
0	0	0	0	0	0	X	X	Length of the CHANNEL information element (XX = 01 in basic access mode, XX = 11 in primary rate access mode)
						X	X	Number of the channel selected in byte 3 of the CHANNEL information element (XX = 01 for channel B1 in basic access mode, XX = 10 for channel B2 in basic access mode, XX = 01 in primary rate access mode)
					0			Non-D channel indicator in byte 3 of the CHANNEL information element
				X				Channel selection type indicator (according to "ChannelSelection" CPS) in byte 3 of the CHANNEL information element
			0					Spare bit in byte 3 of the CHANNEL information element
		X						Type of interface in byte 3 of the CHANNEL information element (X = 0 in basic access mode, X = 1 in primary rate access mode)
	0							Interface implicitly identified in byte 3 of the CHANNEL information element
1								Extension bit in byte 3 of the CHANNEL information element
				0	0	1	1	Channel identified by a B channel number in byte 3.2 of the CHANNEL information element <i>This byte is included only for primary rate access</i>
			0					Channel identified by its number in byte 3.2 of the CHANNEL information element <i>This byte is included only for primary rate access</i>
	0	0						ITU-T encoding standard in byte 3.2 of the CHANNEL information element <i>This byte is included only for primary rate access</i>
1								Extension bit in byte 3.2 of the CHANNEL information element <i>This byte is included only for primary rate access</i>
X	X	X	X	X	X	X	X	Channel number in byte 3.3 of the CHANNEL information element <i>This byte is included only for primary rate access</i>

2.3.7.10.3 Alerting

Content								Explanations
0	0	0	0	1	0	0	0	PROTOCOL DISCRIMINATOR in ISDN messages
0	0	0	0	0	0	X	X	Length of CALL REFERENCE (XX = 01 in basic access mode, XX = 10 in primary rate access mode)
1	X	X	X	X	X	X	X	Value of CALL REFERENCE

Content								Explanations
X	X	X	X	X	X	X	X	Second byte of value of CALL REFERENCE (this byte is not included in the case of a basic access port)
0	0	0	0	0	0	0	1	Type of message (ALERTING)
0	0	0	1	1	1	1	0	Type of information element PROGRESS <i>This information element is included only if tone transmission was requested</i>
0	0	0	0	0	0	1	0	Length of content of the PROGRESS information element
				0	0	0	0	Location (according to the "Location" CPS) in byte 3 of the PROGRESS information element
			0					Spare bit in byte 3 of the PROGRESS information element
	0	0						ITU-T encoding standard in byte 3 of the PROGRESS information element
1								Extension bit in byte 3 of the PROGRESS information element
	0	0	0	1	0	0	0	In-band tone progress in byte 4 of the PROGRESS information element
1								Extension bit in byte 4 of the PROGRESS information element

2.3.7.10.4 Connect

Content								Explanations
0	0	0	0	1	0	0	0	PROTOCOL DISCRIMINATOR in ISDN messages
0	0	0	0	0	0	X	X	Length of CALL REFERENCE (XX = 01 in basic access mode, XX = 10 in primary rate access mode)
1	X	X	X	X	X	X	X	Value of CALL REFERENCE
X	X	X	X	X	X	X	X	Second byte of value of CALL REFERENCE (this byte is not included in the case of a basic access port)
0	0	0	0	0	1	1	1	Type of message (CONNECT)

2.3.7.10.5 Disconnect

Content								Explanations
0	0	0	0	1	0	0	0	PROTOCOL DISCRIMINATOR in ISDN messages
0	0	0	0	0	0	X	X	Length of CALL REFERENCE (XX = 01 in basic access mode, XX = 10 in primary rate access mode)
1	X	X	X	X	X	X	X	Value of CALL REFERENCE
X	X	X	X	X	X	X	X	Second byte of value of CALL REFERENCE (this byte is not included in the case of a basic access port)
0	1	0	0	0	1	0	1	Type of message (DISCONNECT)
0	0	0	0	1	0	0	0	Type of information element CAUSE
0	0	0	0	0	0	1	0	Length of content of CAUSE information element
				0	0	0	0	User location in byte 3 of the CAUSE information element
			0					Spare bit in byte 3 of the CAUSE information element
	0	0						ITU-T encoding standard in byte 3 of the CAUSE information element
1								Extension bit in byte 3 of the CAUSE information element
	X	X	X	X	X	X	X	Cause depends of disconnection reason in byte 4 of the CAUSE information element
1								Extension bit in byte 4 of the CAUSE information element

2.3.7.10.6 Clearing

Content								Explanations
0	0	0	0	1	0	0	0	PROTOCOL DISCRIMINATOR in ISDN messages
0	0	0	0	0	0	X	X	Length of CALL REFERENCE (XX = 01 in basic access mode, XX = 10 in primary rate access mode)

Content								Explanations
1	X	X	X	X	X	X	X	Value of CALL REFERENCE
X	X	X	X	X	X	X	X	Second byte of value of CALL REFERENCE (this byte is not included in the case of a basic access port)
0	1	1	0	0	1	0	1	Type of message (CLEARING)
0	0	0	0	1	0	0	0	Type of information element CAUSE <i>This information element is present only in the first message of call release procedure.</i>
0	0	0	0	0	0	1	0	Length of content of CAUSE information element
				0	0	0	0	User location in byte 3 of the CAUSE information element
			0					Spare bit in byte 3 of the CAUSE information element
	0	0						ITU-T encoding standard in byte 3 of the CAUSE information element
1								Extension bit in byte 3 of the CAUSE information element
	X	X	X	X	X	X	X	Cause depends of disconnection reason in byte 4 of the CAUSE information element
1								Extension bit in byte 4 of the CAUSE information element

2.3.7.10.7 Release complete

Content								Explanations
0	0	0	0	1	0	0	0	PROTOCOL DISCRIMINATOR in ISDN messages
0	0	0	0	0	0	X	X	Length of CALL REFERENCE (XX = 01 in basic access mode, XX = 10 in primary rate access mode)
1	X	X	X	X	X	X	X	Value of CALL REFERENCE
X	X	X	X	X	X	X	X	Second byte of value of CALL REFERENCE (this byte is not included in the case of a basic access port)
0	1	1	1	1	0	1	0	Type of message (RELEASE COMPLETE)
0	0	0	0	1	0	0	0	Type of information element CAUSE <i>This information element is present only in the first message of call release procedure.</i>
0	0	0	0	0	0	1	0	Length of content of CAUSE information element
				0	0	0	0	User location in byte 3 of the CAUSE information element
			0					Spare bit in byte 3 of the CAUSE information element
	0	0						ITU-T encoding standard in byte 3 of the CAUSE information element
1								Extension bit in byte 3 of the CAUSE information element
	X	X	X	X	X	X	X	Cause depends of disconnection reason in byte 4 of the CAUSE information element
1								Extension bit in byte 4 of the CAUSE information element

2.3.7.11 Scenario parameters

N°	Name	Explanation	Type	Values
9	DisconnectResponseTimeout (T305)	T305 timer value Cause of startup = Transmission of Disconnect Stop = Receipt of Clearing or Disconnect (ms)	Number	Default : 4 000 Min : 10 Max : 60 000

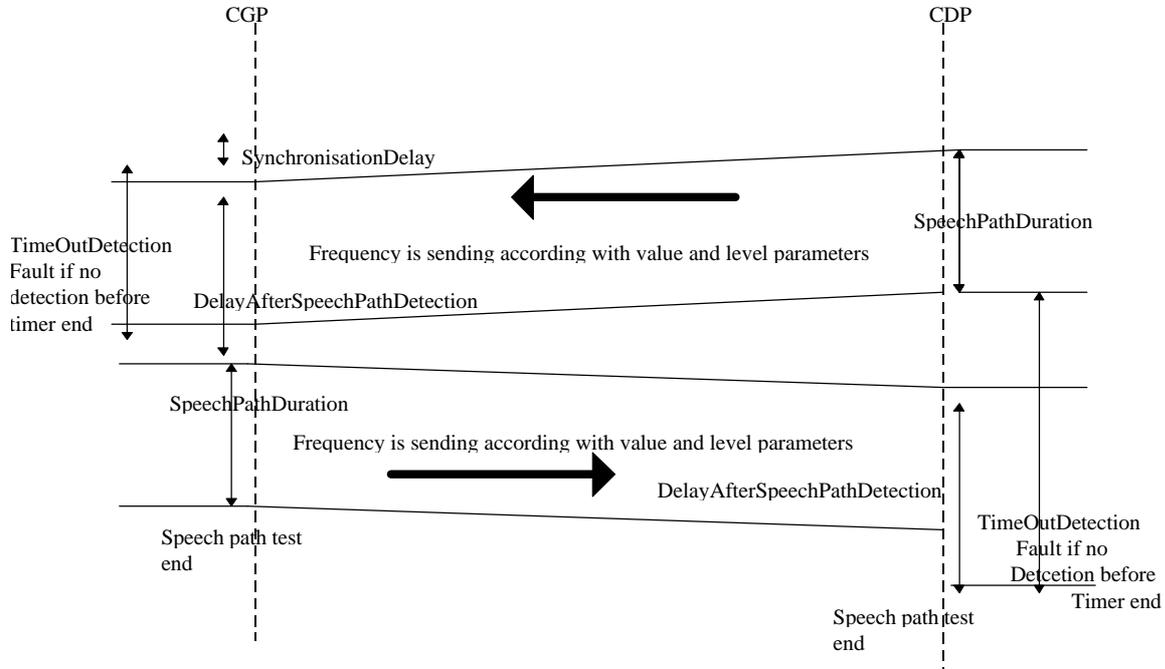
N°	Name	Explanation	Type	Values
6	ReleaseResponseTimeout(T308)	T308 timer value Cause of startup = Transmission of Clearing Stop = Receipt of Clearing or Disconnect (ms)	Number	Default : 4 000 Min : 10 Max : 8 000
7	TimeBetweenCallProceedingAlerting	Time between transmission of Call proceeding and Alerting messages	Number	Default : 10 Min : 10 Max : 3 000
8	TimeBetweenAlertingConnect	Time between transmission of Alerting and Connect messages	Number	Default : 100 Min : 10 Max : 240 000
9	CallprogramstopifUnexpectedEvent	Request to stop the connection on receipt of an unexpected protocol event	List	No Yes
10	InformationTimeout(T302)	T302 timer value Cause of startup = Transmission of setup acknowledge Stop = Receipt of Information Restarted if the Information message contains no "Sending complete" information element (ms)	Number	Default :10 000 Min : 10 Max : 20 000
11	ToneSending	Request to send dial and ringback tones	List	No Yes
12	DialToneFrequency	Dial tone frequency	Number	Default : 440 Min : 300 Max : 3 400
13	DialToneLevel	Dial tone sending level	Number	Default : 35 (-3,5 dBm) Min : 0 (0 dBm) Max : 340 (-34 dBm)
14	RingbackToneFrequency	Ringback tone frequency	Number	Default : 440 Min : 300 Max : 3 400
15	RingbackLevel	Ringback tone sending level	Number	Default : 80 (-8 dBm) Min : 0 (0 dBm) Max : 340 (-34 dBm)
16	RingbackOnTime	Ringback tone on time	Number	Default : 1 500 Min : 100 Max : 10 000
17	RingbackOffTime	Ringback tone off time	Number	Default : 3 500 Min : 100 Max : 10 000
18	Location	Progress location (byte 3 of the Progress information element)	List	User Private network local Public network local Public network remote Private network local International Interworking

N°	Name	Explanation	Type	Values
19	NumberOfDigits	Maximum number of digits for the destination number	List	Not activated 1 Digit 2 Digits 3 Digits 4 Digits 5 Digits 6 Digits 7 Digits 8 Digits 9 Digits 10 Digits 11 Digits 12 Digits 13 Digits 14 Digits 15 Digits 16 Digits 17 Digits 18 Digits 19 Digits 20 Digits
20	ChannelSelection	Channel selection type to use	List	Preferred Exclusive

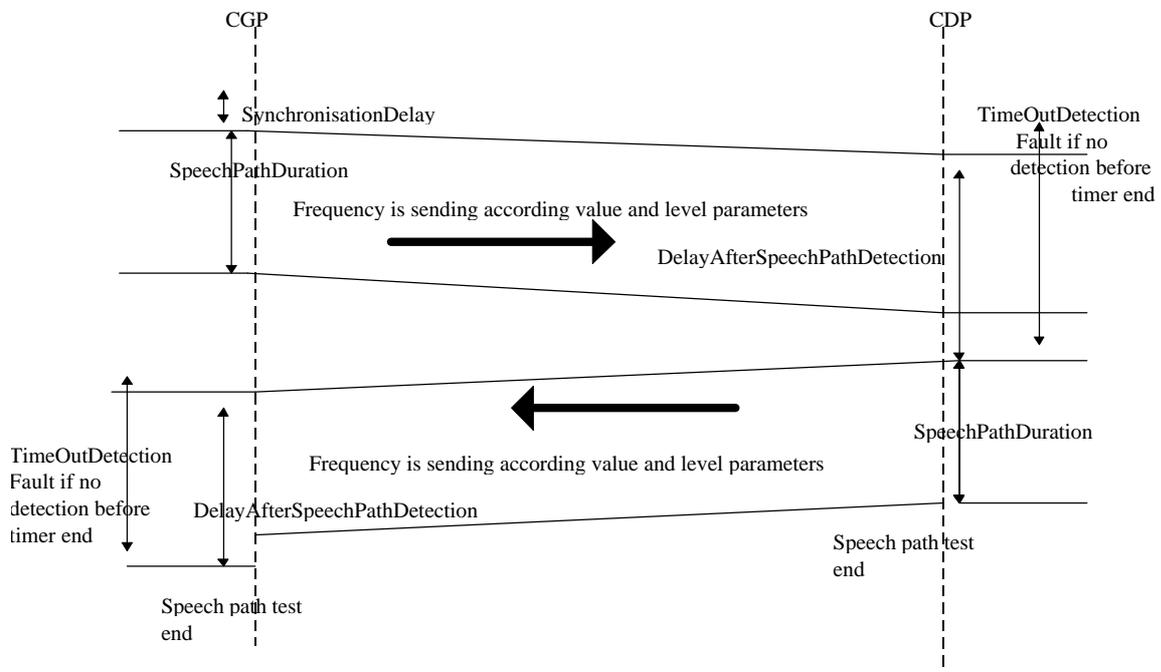
2.4 Speech path phase

2.4.1 General process with frequency exchange

2.4.1.1 CGP send frequency first



2.4.1.2 CDP send frequency first



2.4.2 CGP end

2.4.2.1 START state (10.0)

If the trace is activated on the port and the channel on which the scenario is running display in the event window of the "Speech Start State" message

ENDIF

Event	Action
Start of state U10 or N10	<p>If the "SpeechPathConfirmationType" CPS == "No speechpath" End of speechpath phase</p> <p>Else, if one of the two ends of the connection is on a PRA board with no associated channel board</p> <p> If the "SpeechPathConfirmationType" CPS == "Delay" or if the "SpeechPathConfirmationType" CPS == "Sending and detection of frequency" or if the "SpeechPathConfirmationType" CPS == "G821Testing"</p> <p> TIMER STARTED according to the "SpeechPathDuration" CPS Switch to the SPEECHPATH_ENDED state (10.8)</p> <p> ENDIF</p> <p>Else, if neither of the two ends of the connection is on a PRA board with no associated channel board and if the called end is an analogue port</p> <p> If the "SpeechPathConfirmationType" CPS == "Delay" or if the "SpeechPathConfirmationType" CPS == "G821Testing"</p> <p> TIMER STARTED according to the "SpeechPathDuration" CPS Switch to the SPEECHPATH_ENDED state (10.8)</p> <p> Else, if the "SpeechPathConfirmationType" CPS == "Sending and detection of frequency"</p> <p> TIMER STARTED according to the "SynchronizationDelay" CPS Switch to the SYNCHRONIZATION state (10.8)</p> <p> ENDIF</p> <p>Else</p> <p> If the "SpeechPathConfirmationType" CPS == "Delay"</p> <p> TIMER STARTED according to the "SpeechPathDuration" CPS Switch to the SPEECHPATH_ENDED state (10.8)</p> <p> Else, if the "SpeechPathConfirmationType" CPS == "Sending and detection of frequency"</p> <p> TIMER STARTED according to the "SynchronizationDelay" CPS Switch to state SYNCHRONIZATION (10.1)</p> <p> Else, if the "SpeechPathConfirmationType" CPS == "G821Testing"</p> <p> TIMER STARTED according to the "SynchronizationDelay" CPS Switch to the START_G821 state (10.6)</p> <p> ENDIF</p> <p>ENDIF</p>

2.4.2.2 SYNCHRONIZATION state (10.1)

If the trace is activated on the port and the channel on which the scenario is running
display in the event window of the "Speech Synchronization State" message
ENDIF

Event	Action
Timer timed out	<p>If "SpeechDirection" CPS == "Called party sending first"</p> <p>DETECTION OF THE SPEECHPATH FREQUENCY sent by the called end, with a frequency dependent on the "SpeechPathFrequency" CPS, with a threshold dependent on the "SpeechPathDetectionThreshold" CPS and with a supervision timer dependent on the "SpeechPathDetectionDuration" CPS</p> <p>Switch to the DETECTION_16 state (10.3) or DETECTION state (10.4), depending on whether the scenario is running on a 16 BRA board or otherwise</p> <p>Else</p> <p>SPEECH PATH FREQUENCY TRANSMISSION, with a frequency dependent on the "SpeechPathFrequency" CPS, with a level dependent on the "SpeechPathTransmitLevel" CPS and for a time dependent on the "SpeechPathDuration" CPS</p> <p>Switch to the SPEECHPATH_ENDED state (10.2)</p> <p>ENDIF</p>

2.4.2.3 START_DETECTION state (10.2)

If the trace is activated on the port and the channel on which the scenario is running
display in the event window of the "Speech Start Detction State" message
ENDIF

Event	Action
Timer timed out	<p>SPEECH PATH FREQUENCY TRANSMISSION STOP</p> <p>DETECTION OF THE SPEECHPATH FREQUENCY sent by the called end, with a frequency dependent on the "SpeechPathFrequency" CPS, with a threshold dependent on the "SpeechPathDetectionThreshold" CPS and with a supervision timer dependent on the "SpeechPathDetectionDuration" CPS</p> <p>Switch to the DETECTION_16 state (10.3) or DETECTION state (10.4), depending on whether the scenario is running on a 16 BRA board or otherwise</p>

2.4.2.4 DETECTION_16 state (10.3) or DETECTION state (10.4)

If the trace is activated on the port and the channel on which the scenario is running
display in the event window of the "Speech Detection State" message
ENDIF

Event	Action
Supervision timer timed out	<p>Transmission of a SPEECH category (10) "Speechpath frequency not detected" fault</p> <p>End of speechpath phase on error</p>
Detection of speechpath frequency	<p>Supervision timer stopped</p> <p>TIMER STARTED according to the "DelayAfterSpeechPathDetection" CPS</p> <p>If "SpeechDirection" CPS == "Called party Sending First"</p> <p>Switch to the SPEECHPATH_PENDING state (10.5)</p> <p>Else</p> <p>Switch to the SPEECHPATH_ENDED state (10.8)</p> <p>ENDIF</p>

2.4.2.5 SPEECHPATH_PENDING state (10.5)

If the trace is activated on the port and the channel on which the scenario is running
display in the event window of the "Speech Pending State" message
ENDIF

Event	Action
Timer timed out	TRANSMISSION OF THE SPEECHPATH FREQUENCY , with a frequency dependent on the "SpeechPathFrequency" CPS, with a level dependent on the "SpeechPathTransmitLevel" CPS and for a time dependent on the "SpeechPathDuration" CPS Switch to the SPEECHPATH_ENDED state (10.8)

2.4.2.6 START_G821 state (10.6)

If the trace is activated on the port and the channel on which the scenario is running
display in the event window of the "Speech Start G821 State" message
ENDIF

Event	Action
Timer timed out	START OF G821 ANALYSIS START OF G821 TRANSMISSION START OF TRANSMISSION TIMER , the time of which = "SynchronizationDelay" CPS + "SpeechPathDuration" CPS + 500 ms ANALYSIS TIMER STARTED according to the "SpeechPathDuration" CPS Switch to the G821_DETECTION state (10.7)

2.4.2.7 G821_DETECTION state (10.7)

If the trace is activated on the port and the channel on which the scenario is running
display in the event window of the "Speech G821 Reception State" message
ENDIF

Event	Action
Analysis timer timed out	G.821 ANALYSIS STOPPED
Analysis timer timed out	G.821 ANALYSIS STOPPED G821 TRANSMISSION STOPPED End of speechpath phase
Output of G821 results	If at least one Errored Second has been detected Transmission of a G821 category (11) "ES = XX" fault ENDIF If at least one Severely Errored Second has been detected Transmission of a G821 category (11) "SES = XX" fault ENDIF If at least one erroneous bit has been detected Transmission of a G821 category (11) "EB = XX" fault ENDIF If at least one slip has been detected Transmission of a G821 category (11) "SL = XX" fault ENDIF If at least one loss of synchronization has been detected Transmission of a G821 category (11) "LS = XX" fault ENDIF

2.4.2.8 SPEECHPATH-ENDED state (10.7)

If the trace is activated on the port and the channel on which the scenario is running display in the event window of the "Speech Final State" message
ENDIF

Event	Action
Timer timed out	TRANSMISSION OF SPEECHPATH TONE STOPPED End of speechpath phase

2.4.3 Speechpath parameters, CGP end

N°	Name	Explanation	Type	Values
30	SpeechPathConfirmationType	Type of test run during the speechpath phase In case of analog interworking, it is necessary to perform a frequency exchange during speech path state.	List	Delay No speechpath Sending and detection of frequency G821Testing
31	SpeechPathFrequency	Frequency used to test the speechpath	Number	Default : 852 Min : 300 Max : 3 400
32	SpeechPathTransmitLevel	Speechpath frequency transmission level	Number	Default : 20 (-2 dBm) Min : 0 (0 dBm) Max : 340 (-34 dBm)
33	SpeechPathDetectionThreshold	Threshold for detecting the speechpath frequency	Number	Default : 340 (-34 dBm) Min : 0 (0 dBm) Max : 340 (-34 dBm)
34	SynchronizationDelay	For an exchange of frequencies, timer before the start of the search for the speechpath frequency. For a G821 test, timer used to be sure that the G821 analysis begins after transmission from the far-end. (ms)	Number	Default : 200 Min : 10 Max : 30 000
35	SpeechPathDuration	For a time-delay, duration of the speechpath phase. For an exchange of frequencies, time for which speechpath frequency is sent. For a G821 test, the actual analysis time. (ms)	Number	Default : 2 000 Min : 100 Max : 86 400 000
36	SpeechPathDetectionTimeOut	Supervision for the detection of speechpath frequency (ms)	Number	Default : 1 000 Min : 10 Max : 30 000
37	DelayAfterSpeechPathDetection	Time-delay after detection of the speechpath frequency sent by the CGP (ms)	Number	Default : 1 500 Min : 10 Max : 86 400 000

N°	Name	Explanation	Type	Values
38	SpeechDirection	Speech path test direction during the frequency exchange of conversation. In case of analog interworking, it is necessary that CDP sending first.	List	Called party sending first Calling party sending first

2.4.4 CDP end

2.4.4.1 START state (10.0)

If the trace is activated on the port and the channel on which the scenario is running display in the event window of the "Speech Start State" message

ENDIF

Event	Action
Start of state U10 or N10	<p>If the "SpeechPathConfirmationType" CPS == "No speechpath" End of speechpath phase</p> <p>Else, if one of the two ends of the connection is on a PRA board with no associated channel board</p> <p>If the "SpeechPathConfirmationType" CPS == "Delay" or if the "SpeechPathConfirmationType" CPS == "Sending and detection of frequency" or if the "SpeechPathConfirmationType" CPS == "G821Testing"</p> <p>TIMER STARTED according to the "SpeechPathDuration" CPS Switch to the SPEECHPATH_ENDED state (10.7)</p> <p>ENDIF</p> <p>Else, if neither of the two ends of the connection is on a PRA board with no associated channel board and if the calling end is an analogue port</p> <p>If the "SpeechPathConfirmationType" CPS == "Delay" or if the "SpeechPathConfirmationType" CPS == "G821Testing"</p> <p>TIMER STARTED according to the "SpeechPathDuration" CPS Switch to the SPEECHPATH_ENDED state (10.7)</p> <p>Else, if the "SpeechPathConfirmationType" CPS == "Sending and detection of frequency"</p> <p>If "SpeechDirection" CPS == "Called party sending first"</p> <p>TRANSMISSION OF THE SPEECHPATH FREQUENCY, with a frequency dependent on the "SpeechPathFrequency" CPS, with a level dependent on the "SpeechPathTransmitLevel" CPS and for a time dependent on the "SpeechPathDuration" CPS Switch to the SENDING state (10.1)</p>

Event	Action
Start of state U10 or N10	<pre> Else DETECTION OF SPEECHPATH FREQUENCY sent by the CGP, with a frequency dependent on the "SpeechPathFrequency" CPS, with a threshold dependent on the "SpeechPathDetectionThreshold" CPS and with a supervision timer dependent on the "SpeechPathDetectionDuration" CPS Switch to the DETECTION_16 state (10.2) or DETECTION state (10.3) depending on whether the scenario is running on a 16 BRA board or otherwise ENDIF ENDIF Else If the "SpeechPathConfirmationType" CPS == "Delay" TIMER STARTED according to the "SpeechPathDuration" CPS Switch to the SPEECHPATH_ENDED state (10.7) Else, if the "SpeechPathConfirmationType" CPS == "Sending and detection of frequency" If "SpeechDirection" CPS == "Called party sending first" TRANSMISSION OF THE SPEECHPATH FREQUENCY, with a frequency dependent on the "SpeechPathFrequency" CPS, with a level dependent on the "SpeechPathTransmitLevel" CPS and for a time dependent on the "SpeechPathDuration" CPS Switch to the SENDING state (10.1) Else DETECTION OF SPEECHPATH FREQUENCY sent by the CGP, with a frequency dependent on the "SpeechPathFrequency" CPS, with a threshold dependent on the "SpeechPathDetectionThreshold" CPS and with a supervision timer dependent on the "SpeechPathDetectionDuration" CPS Switch to the DETECTION_16 state (10.2) or DETECTION state (10.3) depending on whether the scenario is running on a 16 BRA board or otherwise ENDIF Else, if the "SpeechPathConfirmationType" CPS == "G821Testing" START OF G821 TRANSMISSION START OF A TRANSMISSION TIMER, the duration of which = "SynchronizationDelayG821" CPS + "SpeechPathDuration" CPS + 500 ms TIMER STARTED according to the "SynchronizationDelayG821" CPS Switch to the START_G821 state (10.4) ENDIF ENDIF ENDIF </pre>

2.4.4.2 SENDING state (10.1)

If the trace is activated on the port and the channel on which the scenario is running
display in the event window of the "Speech Sending State" message

ENDIF

Event	Action
Timer timed out	TRANSMISSION OF SPEECHPATH FREQUENCY STOPPED DETECTION OF SPEECHPATH FREQUENCY sent by the CGP , with a frequency dependent on the "SpeechPathFrequency" CPS, with a threshold dependent on the "SpeechPathDetectionThreshold" CPS and with a supervision timer dependent on the "SpeechPathDetectionDuration" CPS Switch to the DETECTION_16 state (10.2) or DETECTION state (10.3) depending on whether the scenario is running on a 16 BRA board or otherwise

2.4.4.3 DETECTION_16 state (10.2) or DETECTION state (10.3)

If the trace is activated on the port and the channel on which the scenario is running
display in the event window of the "Speech Detection State" message

ENDIF

Event	Action
Supervision timer timed out	Transmission of a SPEECH category (10) "Speechpath frequency not detected" fault End of speechpath phase with error
Detection of speechpath frequency	Supervision timer stopped TIMER STARTED according to the "DelayAfterSpeechPathDetection" CPS If "SpeechDirection" CPS == "Called party sending first" Switch to the SPEECHPATH_ENDED state (10.7) Else Switch to the START_EMISSION state (10.4)

2.4.4.4 START_EMISSION state (10.4)

If the trace is activated on the port and the channel on which the scenario is running
display in the event window of the "Speech Start emission State" message

ENDIF

Event	Action
Supervision timer timed out	TRANSMISSION OF THE SPEECH PATH FREQUENCY , with a frequency dependent on the "SpeechPathFrequency" CPS, with a level dependent on the "SpeechPathTransmitLevel" CPS and for a time dependent on the "SpeechPathDuration" CPS Switch to the SPEECHPATH_ENDED state (10.7)

2.4.4.5 G821_TRANSMISSION state (10.5)

If the trace is activated on the port and the channel on which the scenario is running
display in the event window of the "Speech G821 Transmission State" message

ENDIF

Event	Action
Synchronisation timer G821 timed out	START OF G821 ANALYSIS ANALYSIS TIMER STARTED according to the "SpeechPathDuration" CPS Switch to the G821_DETECTION state (10.6)

2.4.4.6 G821_DETECTION state (10.6)

If the trace is activated on the port and the channel on which the scenario is running display in the event window of the "Speech G821 Reception State" message
ENDIF

Event	Action
Analysis timer timed out	G.821 ANALYSIS STOPPED
Transmit timer timed out	G.821 ANALYSIS STOPPED G821 TRANSMISSION STOPPED End of speechpath phase
Output of G821 results	If at least one errored second has been detected Transmission of a G821 category (11) "ES = XX" fault ENDIF If at least one severely errored second has been detected Transmission of a G821 category (11) "SES = XX" fault ENDIF If at least one erroneous bit has been detected Transmission of a G821 category (11) "EB = XX" fault ENDIF If at least one slip has been detected Transmission of a G821 category (11) "SL = XX" fault ENDIF If at least one loss of synchronization has been detected Transmission of a G821 category (11) "LS = XX" fault ENDIF

2.4.4.7 SPEECHPATH_ENDED state (10.7)

If the trace is activated on the port and the channel on which the scenario is running display in the event window of the "Final Speech State" message
ENDIF

Event	Action
Timer timed out	TRANSMISSION OF SPEECHPATH FREQUENCY STOPPED End of speechpath phase

2.4.5 Speechpath parameters, CGP end

N°	Name	Explanation	Type	Values
30	SpeechPathConfirmationType	Type of test run during the speechpath phase In case of analog interworking, it is necessary to perform a frequency exchange during speech path test.	List	Delay No speechpath Sending and detection of frequency G821Testing
31	SpeechPathFrequency	Frequency used to test the speechpath	Number	Default : 852 Min : 300 Max : 3 400
32	SpeechPathTransmitLevel	Speechpath frequency transmission level	Number	Default : 20 (-2 dBm) Min : 0 (0 dBm) Max : 340 (-34 dBm)
33	SpeechPathDetectionThreshold	Threshold for detecting the speechpath frequency	Number	Default : 340 (-34 dBm) Min : 0 (0 dBm) Max : 340 (-34 dBm)

N°	Name	Explanation	Type	Values
34	SpeechPathDuration	For a timer, duration of the speechpath phase. For an exchange of frequencies, time for which speechpath frequency is sent. For a G821 test, the actual analysis time. (ms)	Number	Default : 2 000 Min : 100 Max : 86 400 400
35	SpeechPathDetectionTimeOut	Supervision for the detection of speechpath frequency (ms)	Number	Default : 1 000 Min : 10 Max : 30 000
36	DelayAfterSpeechPathDetection	Time-delay after detection of the speechpath frequency sent by the CGP (ms)	Number	Default : 1 500 Min : 10 Max : 86 400 000
37	SynchronizationDelayG821	In the case of a G821 test, timer used to be sure that the G821 analysis begins after transmission from the far-end (ms)	Number	Default : 200 Min : 10 Max : 30 000
38	SpeechDirection	Speech path test direction during the frequency exchange of conversation. In case of analog interworking, it is necessary that CDP sending first.	List	Called party sending first Calling party sending first

3. Description of analogue scenarios

3.1 Calling scenario

To have a good work of analog call program, it is necessary to respect at least one of this two following conditions :

- Speech path frequency immediate detection (numeric called call program, with "CONNEXION" message transmission immediately after "ALERTING" message.
- Minimum two ring back tone half pulse detection (analog called call program with ringing tone adequate time detection, or numeric called call program with an adequate timer duration between "ALERTING" and "CONNEXION" message transmission.

In case of interworking with a called numeric call program, it is necessary to perform a frequency exchange during speech path test with called side transmission first.

3.1.1 INIT state

Event	Action
Start of scenario	IMPEDANCE MATCHING according to the "ImpedanceMatching" CPS Switch to the IMPEDANCE state (0)

3.1.2 IMPEDANCE state (0)

Event	Action
Immediate stop requested by the operator	ON-HOOK Switch to the IMMEDIATE_STOP state (50)
Impedance matching successful	If the trace is activated on the port on which this scenario is running display in the event window of the "IMPEDANCE MATCHING" message ENDIF LINE REGULATION according to the "ImpedanceMatching" CPS (PSTN => 30 mA / PABX => 20 mA) Switch to the REGULATION state (1)

3.1.3 REGULATION state (1)

Event	Action
Immediate stop requested by the operator	ON-HOOK Switch to the IMMEDIATE_STOP state (50)
Line regulation successful	If the trace is activated on the port on which this scenario is running display in the event window of the "LINE REGULATION" message ENDIF OFF-HOOK Switch to the OFF-HOOK state (2)

3.1.4 OFF-HOOK state (2)

Event	Action
Immediate stop requested by the operator	ON-HOOK Switch to the IMMEDIATE_STOP state (50)
Off-hook successful	Storage of time H1 If the trace is activated on the port on which this scenario is running display in the event window of the "OFF HOOK" message ENDIF POWER SUPPLY TEST with a 500 ms supervision timer Switch to the CURRENT state (3)

3.1.5 CURRENT state (3)

Event	Action
Immediate stop requested by the operator	ON-HOOK Switch to the IMMEDIATE_STOP state (50)
Supervision timer timed out	Transmission of an ANALOGUE category (20) "No power supply" fault ON-HOOK Switch to the FAULT state (51)
Line current detected	Supervision timer stopped If the trace is activated on the port on which this scenario is running display in the event window of the "POWER SUPPLY TEST" message ENDIF TEST FOR PRESENCE OF DIAL TONE with a frequency dependent on the "DialToneFrequency" CPS, with the threshold dependent on the "DialToneDetectionLevel" CPS and with a supervision timer dependent on the "DialToneDetectionTimeout" CPS. Switch to the DIAL TONE state (4)

3.1.6 DIAL TONE state (4)

Event	Action
Immediate stop requested by the operator	ON-HOOK Switch to the IMMEDIATE_STOP state (50)
Supervision timer timed out	Transmission of an ANALOGUE category (20) "No Dial Tone" fault ON-HOOK Switch to the FAULT state (51)

Event	Action
Dial tone detected	<p>Supervision timer stopped</p> <p>If the trace is activated on the port on which this scenario is running display in the event window of the "DIAL TONE TEST: Level = XX" message</p> <p>ENDIF</p> <p>Storage of time H2</p> <p>If the time measurement is enabled calculation of incoming response delay (H2 - H1) and display in the event window</p> <p>ENDIF</p> <p>TRANSMISSION OF DIALLING with dialling type dependent on the "DiallingType" CPS and with the times for each digit and between digits respectively dependent on the "Q23DigitTime" and "InterDigitTime" CPSs (in "DECADIC PULSE" dialling, the "33 / 66" standard is used, so there is no "Q23DigitTime" CPS) (in "Q23" dialling, the low frequency is sent at -8 dB and the high frequency at -6 dB)</p> <p>Switch to the DIALLING state (5)</p>

3.1.7 DIALLING state (5)

Event	Action
Immediate stop requested by the operator	<p>ON-HOOK</p> <p>Switch to the IMMEDIATE_STOP state (50)</p>
Dialling successful	<p>If the trace is activated on the port on which this scenario is running display in the event window of the "DIALLING" message</p> <p>ENDIF</p> <p>IF dialling is not finished</p> <p> IF the "IntermediateToneTest" CPS == "YES"</p> <p> TEST FOR PRESENCE OF INTERMEDIATE TONE of "IntermediateToneFrequency", with a threshold dependent on the "IntermediateToneDetectionLevel" CPS and with a supervision timer dependent on the "IntermediateToneDetectionTimeout" CPS</p> <p> Switch to the INTERMEDIATE state (6)</p> <p> Else</p> <p> TIMER STARTED according to the "DiallingTimer" CPS</p> <p> Switch to the WAITING state (7)</p> <p> ENDIF</p> <p>Else</p> <p> Storage of time H3</p> <p> WAIT FOR PRESENCE OF A SIGNAL with a threshold dependent on the "BusyToneRingingToneDetectionLevel" CPS and with a supervision timer awaiting called party answer dependent on the "SpeechPathDetectionDuration" CPS</p> <p> Switch to the FREQUENCY_TONE state (8)</p> <p>ENDIF</p>

3.1.8 INTERMEDIATE state (6)

Event	Action
Immediate stop requested by the operator	<p>ON-HOOK</p> <p>Switch to the IMMEDIATE_STOP state (50)</p>

Event	Action
Supervision timer timed out	Transmission of an ANALOGUE category (20) "No Intermediate tone" fault ON-HOOK Switch to the FAULT state (51)
Intermediate tone detected	Supervision timer stopped If the trace is activated on the port on which this scenario is running display in the event window of the "DIALLING : Level = XX" message ENDIF TRANSMISSION OF THE REST OF THE DIALLING with dialling type dependent on the "DiallingType" CPS and with the times of each digit and between digits respectively dependent on the "Q23DigitTime" and "InterDigitTime" CPSs (in "DECADIC PULSE" dialling, the "33 / 66" standard is used, so there is no "Q23DigitTime" CPS) (in "Q23" dialling, the low frequency is sent at -8 dB and the high frequency at -6 dB) Return to the DIALLING state (5)

3.1.9 WAITING state (7)

Event	Action
Immediate stop requested by the operator	ON-HOOK Switch to the IMMEDIATE_STOP state (50)
Timer timed out	If the trace is activated on the port on which this scenario is running display in the event window of the "DIALLING - WAIT" message ENDIF TRANSMISSION OF THE REST OF THE DIALLING with dialling type dependent on the "DiallingType" CPS and with the times of each digit and between digits respectively dependent on the "Q23DigitTime" and "InterDigitTime" CPSs (in "DECADIC PULSE" dialling, the "33 / 66" standard is used, so there is no "Q23DigitTime" CPS) (in "Q23" dialling, the low frequency is set at -8 dB and a high frequency at -6 dB) Return to the DIALLING state (5)

3.1.10 FREQUENCY_TONE state (8)

Event	Action
Immediate stop requested by the operator	ON-HOOK Switch to the IMMEDIATE_STOP state (50)
Supervision timer awaiting called party answer timed out	Transmission of an ANALOGUE category (20) "No response from called party" fault ON-HOOK Switch to the FAULT state (51)
Detection of speechpath frequency (dependent on the "SpeechPathFrequency" CPS)	WAIT FOR SIGNAL PRESENCE STOPPED Supervision timer stopped If the trace is activated on the port on which this scenario is running display in the event window of the "RESPONSE TONE OR 852HZ : Level = XX" message ENDIF TIMER STARTED according to the "DelayAfterSpeechPathDetection" CPS Switch to the SPEECHPATH_PENDING state (11)

Event	Action
Detection of busy or ring back tone frequency (dependent on the "BusyToneRingingTone-Frequency" CPS)	<p>WAIT FOR SIGNAL PRESENCE STOPPED</p> <p>If the trace is activated on the port on which this scenario is running display in the event window of the "BUSY TONE TEST : Level = XX" message</p> <p>ENDIF</p> <p>TEST FOR TONE INTERRUPT RATE based on the first off state of the signal on a number of half-pulses dependent on the "NumberBusyHalfPulse" CPS, with a threshold dependent on the "BusyToneRingingToneDetectionLevel" CPS and with a supervision timer for analyzing the interrupt rate dependent on the "BusyRateDetectTimeout" CPS</p> <p>Switch to the RATE_TONE state (9)</p>

3.1.11 RATE_TONE state (9)

Event	Action
Immediate stop requested by the operator	<p>ON-HOOK</p> <p>Switch to the IMMEDIATE_STOP state (50)</p>
Supervision timer awaiting called party answer timed out	<p>Transmission of an ANALOGUE category (20) "No response from called party" fault</p> <p>ON-HOOK</p> <p>Switch to the FAULT state (51)</p>
Supervision timer for analyzing interrupt rate timed out	<p>Transmission of an ANALOGUE category (20) "No response from called party" fault</p> <p>ON-HOOK</p> <p>Switch to the FAULT state (51)</p>
Detection of half-pulses not corresponding to the busy tone (dependent on the "NumberBusyHalfPulse", "MinBusyHalfPulse" and "MaxBusyHalfPulse" CPSs)	<p>Supervision timer for analyzing interrupt rate stopped</p> <p>If the trace is activated on the port on which this scenario is running display in the event window of the "BUSY TONE TEST : T2 =XX" message</p> <p>ENDIF</p> <p>Storage of time H4</p> <p>If the time measurement is enabled calculation of the selection time (H4 - H3) and display in the event window</p> <p>ENDIF</p> <p>CALLED PARTY ANSWER TEST: search for speechpath frequency dependent on the "SpeechPathFrequency" CPS sent by the CDP, with a threshold dependent on the "SpeechPathDetectionThreshold" CPS</p> <p>Switch to the DETECTION state (10)</p>
Detection of half-pulses of the busy tone (dependent on the "NumberBusyHalfPulse", "MinBusyHalfPulse" and "MaxBusyHalfPulse" CPSs)	<p>Supervision timer for analyzing interrupt rate stopped</p> <p>If the trace is activated on the port on which this scenario is running display in the event window of the "BUSY TONE TEST : T2 =XX" message</p> <p>ENDIF</p> <p>Transmission of an ANALOGUE category (20) "Busy tone after dialling" fault</p> <p>ON-HOOK</p> <p>Switch to the FAULT state (51)</p>

3.1.12 DETECTION state (10)

Event	Action
Immediate stop requested by the operator	<p>ON-HOOK</p> <p>Switch to the IMMEDIATE_STOP state (50)</p>

Event	Action
Supervision timer awaiting called party answer timed out	Transmission of an ANALOGUE category (20) "No response from called party" fault ON-HOOK Switch to the FAULT state (51)
Detection of speechpath frequency (dependent on the "SpeechPathFrequency" CPS)	Supervision timer stopped If the trace is activated on the port on which this scenario is running display in the event window of the "RESPONSE TONE OR 852HZ : Level = XX" message ENDIF TIMER STARTED according to the "DelayAfterSpeechPathDetection" CPS Switch to the SPEECHPATH_PENDING state (11)

3.1.13 SPEECHPATH_PENDING state (11)

Event	Action
Immediate stop requested by the operator	ON-HOOK Switch to the IMMEDIATE_STOP state (50)
Timer timed out	If the trace is activated on the port on which this scenario is running display in the event window of the "SPEECHPATH - PENDING" message ENDIF TRANSMISSION OF THE SPEECHPATH FREQUENCY , with a frequency dependent on the "SpeechPathFrequency" CPS, with a level dependent on the "SpeechPathTransmitLevel" CPS and for a time dependent on the "SpeechPathDuration" CPS Switch to the SENDING state (12)

3.1.14 SENDING state (12)

Event	Action
Immediate stop requested by the operator	ON-HOOK Switch to the IMMEDIATE_STOP state (50)
Transmission timer timed out	If the trace is activated on the port on which this scenario is running display in the event window of the "SPEECHPATH - SENDING" message ENDIF TRANSMISSION OF SPEECHPATH TONE STOPPED Switch to the SPEECHPATH_ENDED state (13)

3.1.15 SPEECHPATH_ENDED state (13)

Event	Action
Immediate stop requested by the operator	ON-HOOK Switch to the IMMEDIATE_STOP state (50)

Event	Action
Transmission stopped	<p>If the "ReleaseType" CPS == "Release by called party"</p> <p>Storage of time H5</p> <p>TEST FOR BUSY TONE with a frequency dependent on the "BusyToneRingingToneFrequency" CPS, with a threshold dependent on the "BusyToneRingingToneDetectionLevel" CPS and with a supervision timer dependent on the "BusyTimeout" CPS</p> <p>Switch to the FREQUENCY_RELEASE state (15)</p> <p>Else</p> <p>ON-HOOK</p> <p>Switch to the ON-HOOK state (17)</p> <p>ENDIF</p>

3.1.16 FREQUENCY_RELEASE state (15)

Event	Action
Immediate stop requested by the operator	<p>ON-HOOK</p> <p>Switch to the IMMEDIATE_STOP state (50)</p>
Supervision timer timed out	<p>Transmission of an ANALOGUE category (20) "No tone on called party on hook" fault</p> <p>ON-HOOK</p> <p>Switch to the FAULT state (51)</p>
Detection of frequency	<p>Supervision timer stopped</p> <p>If the trace is activated on the port on which this scenario is running</p> <p>display in the event window of the "CDP RELEASE => BUSY TONE TEST : Level = XX" message</p> <p>ENDIF</p> <p>TEST FOR TONE INTERRUPT RATE based on the first off state of the signal over three half-pulses, with a threshold dependent on the "BusyToneRingingToneDetectionLevel" CPS and with a supervision timer dependent on the "BusyRateDetectTimeout" CPS</p> <p>Switch to the RATE_RELEASE state (16)</p>

3.1.17 RATE_RELEASE state (16)

Event	Action
Immediate stop requested by the operator	<p>ON-HOOK</p> <p>Switch to the IMMEDIATE_STOP state (50)</p>
Supervision timer timed out	<p>Transmission of an ANALOGUE category (20) "No tone on called party on hook" fault</p> <p>ON-HOOK</p> <p>Switch to the FAULT state (51)</p>
Detection of three busy tone half-pulses (second and third half-pulses of a duration between the "MinBusyHalfPulse" and "MaxBusyHalfPulse" CPSs)	<p>Supervision timer stopped</p> <p>If the trace is activated on the port on which this scenario is running</p> <p>display in the event window of the "CDP RELEASE => BUSY TONE TEST : T2 =XX T3=YY" message</p> <p>ENDIF</p> <p>Storage of time H6</p> <p>If the time measurement is enabled</p> <p>calculate clearing time (H6 - H5) and display it in the event window</p> <p>ENDIF</p> <p>ON-HOOK</p> <p>Switch to the ON-HOOK state (17)</p>

Event	Action
Detection of three half-pulses not corresponding to busy tone (dependent on the "MinBusyHalfPulse" and "MaxBusyHalfPulse" CPSs)	Supervision timer stopped If the trace is activated on the port on which this scenario is running display in the event window of the "CDP RELEASE => BUSY TONE TEST : T2 =XX T3=YY" message ENDIF Transmission of an ANALOGUE category (20) "Unknown tone after called party on hook" fault ON-HOOK Switch to the FAULT state (51)

3.1.18 ON-HOOK state (17)

Event	Action
Immediate stop requested by the operator	ON-HOOK Switch to the IMMEDIATE_STOP state (50)
On-hook successful	If the trace is activated on the port on which this scenario is running display in the event window of the "ON HOOK" message ENDIF TIMER STARTED according to the "InterCallTime" CPS Switch to the INTER_CALL state (18)

3.1.19 INTER-CALL state (18)

Event	Action
Immediate stop requested by the operator	ON-HOOK Switch to the IMMEDIATE_STOP state (50)
Timer timed out	If the trace is activated on the port on which this scenario is running display in the event window of the "INTERCALL TIME" message ENDIF CALL SUCCESSFUL INDICATION If the trace is activated on the port on which this scenario is running display in the event window of the "End of call program PSTN calling party" message ENDIF Effective end of scenario

3.1.20 IMMEDIATE_STOP state (50)

Event	Action
On-hook successful	IMMEDIATE CALL STOP INDICATION If the trace is activated on the port on which this scenario is running display in the event window of the "End of call program PSTN calling party" message ENDIF Effective end of scenario

3.1.21 FAULT state (51)

Event	Action
On-hook successful	CALL FAILURE INDICATION If the trace is activated on the port on which this scenario is running display in the event window of the "End of call program PSTN calling party" message ENDIF Effective end of scenario

3.2 Calling scenario parameters

N°	Name	Explanation	Type	Values
5	ImpedanceMatching	Impedance matching	List	PSTN (600 Ohms) PSTN (1200 Ohms) PABX1 (R1=180 Ohms / R2=910 Ohms / C=150 nF) PABX2 (R1=215 Ohms / R2=1000 Ohms / C=137 nF)
6	DialToneFrequency	Dial tone frequency to be detected (Hz)	Number	Default : 440 Min : 300 Max : 3 400
7	DialToneDetectionLevel	Dial tone detection threshold (absolute value, in tenths of a dBm)	Number	Default : 340 (-34 dBm) Min : 0 (0 dBm) Max : 340 (-34 dBm)
8	DialToneDetectionTimeout	Supervision timer for detection of dial tone (ms)	Number	Default : 5 000 Min : 1 000 Max : 20 000
9	DiallingType	Type of dialling	List	Q23 Decimal
10	Q23DigitTime	Time for each digit (ms) only in Q.23 dialling	Number	Default : 100 Min : 10 Max : 5 000
11	InterDigitTime	Time between two digits (ms)	Number	Default : 100 Min : 10 Max : 1 000
12	IntermediateToneTest	Activation or non-activation of the intermediate tone test	List	No Yes
13	IntermediateToneFrequency	Intermediate tone frequency to be detected (Hz)	Number	Default : 440 Min : 300 Max : 3 400
14	IntermediateToneDetectionLevel	Detection threshold of intermediate tone to be detected	Number	Default : 340 (-34 dBm) Min : 0 (0 dBm) Max : 340 (-34 dBm)
15	IntermediateToneDetectionTimeout	Supervision timer for detection of intermediate tone	Number	Default : 5 000 Min : 500 Max : 30 000

N°	Name	Explanation	Type	Values
16	DiallingTimer	Timer implemented on dialling when the "resume control" scenario, in other words a "-" character, is included in the subscriber number, and there has been no request to test for intermediate tone (ms)	Number	Default : 500 Min : 10 Max : 5 000
17	BusyToneRingingToneFrequency	Busy tone or ringback tone frequency to be detected	Number	Default : 440 Min : 300 Max : 3 400
18	BusyToneRingingToneDetectionLevel	Threshold for detection of busy or ringback tone to be detected	Number	Default : 340 (-34 dBm) Min : 0 (0 dBm) Max : 340 (-34 dBm)
19	BusyTimeout	Supervision timer for detection of busy tone frequency (ms)	Number	Default :15 000 Min : 500 Max : 30 000
20	MinBusyHalfPulse	Minimum duration for a half-pulse of the busy tone (ms). There is no way of specifying separate times for tone on and tone off states.	Number	Default : 450 Min : 200 Max : 700
21	MaxBusyHalfPulse	Maximum time for a half-pulse of the busy tone interrupt rate (ms). There is no way of specifying separate times for tone on and tone off states.	Number	Default : 550 Min : 200 Max : 700
22	BusyRateDetectTimeout	Supervision timer for detection of busy or ringback tone interrupt rate (ms)	Number	Default : 1 500 Min : 500 Max : 10 000
23	SpeechPathFrequency	Frequency used to test the speechpath	Number	Default : 852 Min : 300 Max : 3 400
24	SpeechPathDetectionThreshold	Threshold for detection of the speechpath frequency	Number	Default : 340 (-34 dBm) Min : 0 (0 dBm) Max : 340 (-34 dBm)
25	CLDAnswerTimeOut	Supervision timer for detection of speechpath frequency from CDP (tone detection in the same time) (ms)	Number	Default :30 000 Min : 10 Max : 120 000
26	SpeechPathTransmitLevel	Speechpath frequency transmission level	Number	Default : 20 (-2 dBm) Min : 0 (0 dBm) Max : 340 (-34 dBm)
27	DelayAfterSpeechPathDetection	Time-delay after detection of the speechpath frequency sent by the CGP (ms)	Number	Default : 1 500 Min : 10 Max :3 600 000
28	SpeechPathDuration	Speechpath frequency transmission time (ms)	Number	Default : 1 500 Min : 10 Max :3 600 000
29	ReleaseType	Release type required	List	Release by calling party Release by called party

N°	Name	Explanation	Type	Values
30	InterCallTime	Minimum time-delay between two calls (ms)	Number	Default : 2 000 Min : 0 Max : 1 200 000
31	InDiallingTerminalNumber	In dialling terminal number in case of S0 internal bus	List	NO YES
32	NumberBusyHalfPulse	Number of the half pulse to test for the busy tone	Number	Default : 2 Min : 2 Max : 5

3.3 Called scenario

In case of interworking with a calling numeric call program, it is necessary to perform a frequency exchange during speech path test with called side transmission first.

3.3.1 INIT state

Event	Action
Start of scenario	IMPEDANCE MATCHING according to the "ImpedanceMatching" CPS Switch to the IMPEDANCE state (0)

3.3.2 IMPEDANCE state (0)

Event	Action
Immediate stop requested by the operator	ON-HOOK Switch to the IMMEDIATE_STOP state (50)
Impedance matching successful	If the trace is activated on the port on which this scenario is running display in the event window of the "IMPEDANCE MATCHING" message ENDIF LINE REGULATION according to the "ImpedanceMatching" CPS (PSTN => 30 mA / PABX => 20 mA) Switch to the REGULATION state (1)

3.3.3 REGULATION state (1)

Event	Action
Immediate stop requested by the operator	ON-HOOK Switch to the IMMEDIATE_STOP state (50)
Line regulation successful	If the trace is activated on the port on which this scenario is running display in the event window of the "LINE REGULATION" message ENDIF DETECTION OF RINGING CURRENT without answer, over a number of half-pulses dependent on the "RingingCurrentNumberHalfPulse" CPS and with a supervision timer dependent on the "RingingCurrentDetectionTimeout" CPS Switch to the OFF-HOOK state (3)

3.3.4 RINGING state (3)

Event	Action
Immediate stop requested by the operator	ON-HOOK Switch to the IMMEDIATE_STOP state (50)
Supervision timer timed out	Transmission of an ANALOGUE category (20) "No ringing current" fault ON-HOOK Switch to the FAULT state (51)
Detection of the number of ringing current half-pulses expected	If the trace is activated on the port on which this scenario is running display in the event window of the "RINGING CURRENT DETECTION : 1st half pulse = XX" message ENDIF OFF-HOOK Switch to the OFF-HOOK state (4)

3.3.5 OFF-HOOK state (4)

Event	Action
Immediate stop requested by the operator	ON-HOOK Switch to the IMMEDIATE_STOP state (50)
Off-hook successful	If the trace is activated on the port on which this scenario is running display in the event window of the "OFF HOOK" message ENDIF TRANSMISSION OF THE SPEECHPATH FREQUENCY , with a frequency dependent on the "SpeechPathFrequency" CPS, with a level dependent on the "SpeechPathTransmitLevel" CPS and for a time dependent on the "SpeechPathDuration" CPS Switch to state EMISSION (5)

3.3.6 TRANSMISSION state (5)

Event	Action
Immediate stop requested by the operator	ON-HOOK Switch to the IMMEDIATE_STOP state (50)
Transmission time timed out	If the trace is activated on the port on which this scenario is running display in the event window of the "SYNCHRO. WITH CALLING PARTY" message ENDIF TRANSMISSION OF SPEECHPATH TONE STOPPED DETECTION OF SPEECHPATH FREQUENCY sent by the CGP with a frequency dependent on the "SpeechPathFrequency" CPS, with a threshold dependent on the "SpeechPathDetectionThreshold" CPS and with a supervision timer dependent on the "SpeechPathDetectionDuration" CPS Switch to state DETECTION (6)

3.3.7 DETECTION state (6)

Event	Action
Immediate stop requested by the operator	ON-HOOK Switch to the IMMEDIATE_STOP state (50)

Event	Action
Supervision timer timed out	Transmission of an ANALOGUE category (20) "Speechpath frequency not detected" fault ON-HOOK Switch to the FAULT state (51)
Detection of speechpath frequency (dependent on the "SpeechPathFrequency" CPS)	Supervision timer stopped If the trace is activated on the port on which this scenario is running display in the event window of the "SPEECHPATH TEST : LEVEL = XX" message ENDIF TIMER STARTED according to the "DelayAfterSpeechPathDetection" CPS Switch to the SPEECHPATH_ENDED state (7)

3.3.8 SPEECHPATH_ENDED state (7)

Event	Action
Immediate stop requested by the operator	ON-HOOK Switch to the IMMEDIATE_STOP state (50)
Timer timed out	IF the "ReleaseType" CPS == "Release by calling party" Storage of time H5 TEST FOR BUSY TONE with a frequency dependent on the "BusyToneRingingToneFrequency" CPS, with a threshold dependent on the "BusyToneRingingToneDetectionLevel" CPS and with a supervision timer dependent on the "BusyTimeout" CPS Switch to the FREQUENCY_RELEASE state (8) Else ON-HOOK Switch to state ON-HOOK (10) ENDIF

3.3.9 FREQUENCY_RELEASE state (8)

Event	Action
Immediate stop requested by the operator	ON-HOOK Switch to the IMMEDIATE_STOP state (50)
Supervision timer timed out	Transmission of an ANALOGUE category (20) "No tone on calling party on hook" fault ON-HOOK Switch to the FAULT state (51)
Detection of frequency	Supervision timer stopped If the trace is activated on the port on which this scenario is running display in the event window of the "CGP RELEASE => BUSY TONE TEST : Level = XX" message ENDIF TEST FOR TONE INTERRUPT RATE based on the first signal off state over three half-pulses, with a threshold dependent on the "BusyToneRingingToneDetectionLevel" CPS and with a supervision timer dependent on the "BusyRateDetectTimeout" CPS Switch to the RATE_RELEASE state (9)

3.3.10 RATE_RELEASE state (9)

Event	Action
Immediate stop requested by the operator	ON-HOOK Switch to the IMMEDIATE_STOP state (50)
Supervision timer timed out	Transmission of an ANALOGUE category (20) "No tone on calling party on hook" fault ON-HOOK Switch to the FAULT state (51)
Detection of three half-pulses of busy tone (three half-pulses of a duration between the "MinBusyHalfPulse" and "MaxBusyHalfPulse" CPSs)	Supervision timer stopped If the trace is activated on the port on which this scenario is running display in the event window of the "CGP RELEASE => BUSY TONE TEST : T2 =XX T3=YY" message ENDIF ON-HOOK Switch to the ON-HOOK state (10)
Detection of three half-pulses not corresponding to busy tone (dependent on the "MinBusyHalfPulse" and "MaxBusyHalfPulse" CPSs)	Supervision timer stopped If the trace is activated on the port on which this scenario is running display in the event window of the "CGP RELEASE => BUSY TONE TEST : T2 =XX T3=YY" message ENDIF Transmission of an ANALOGUE category (20) "Unknown tone after calling party on hook" fault ON-HOOK Switch to the FAULT state (51)

3.3.11 ON-HOOK state (9)

Event	Action
Immediate stop requested by the operator	ON-HOOK Switch to the IMMEDIATE_STOP state (50)
On-hook successful	If the trace is activated on the port on which this scenario is running display in the event window of the "ON HOOK" message ENDIF If the CGP is external CALL SUCCESSFUL INDICATION If the trace is activated on the port on which this scenario is running display in the event window of the "End of call program PSTN called party" message ENDIF Effective end of scenario else TIMER STARTED according to the "InterCallTime" CPS Switch to the INTER_CALL state (10) ENDIF

3.3.12 INTER_CALL state (10)

Event	Action
Immediate stop requested by the operator	ON-HOOK Switch to the IMMEDIATE_STOP state (50)

Event	Action
Timer timed out	<p>If the trace is activated on the port on which this scenario is running display in the event window of the "INTERCALL TIME" message</p> <p>ENDIF</p> <p>CALL SUCCESSFUL INDICATION</p> <p>If the trace is activated on the port on which this scenario is running display in the event window of the "End of call program PSTN called party" message</p> <p>ENDIF</p> <p>Effective end of scenario</p>

3.3.13 IMMEDIATE_STOP state (50)

Event	Action
On-hook successful	<p>IMMEDIATE CALL STOP INDICATION</p> <p>If the trace is activated on the port on which this scenario is running display in the event window of the "End of call program PSTN called party" message</p> <p>ENDIF</p> <p>Effective end of scenario</p>

3.3.14 FAULT state (51)

Event	Action
On-hook successful	<p>CALL FAILURE INDICATION</p> <p>If the trace is activated on the port on which this scenario is running display in the event window of the "End of call program PSTN called party" message</p> <p>ENDIF</p> <p>Effective end of scenario</p>

3.4 Called scenario parameters

N°	Name	Explanation	Type	Values
5	ImpedanceMatching	Impedance matching	List	PSTN (600 Ohms) PSTN (1200 Ohms) PABX1 (R1=180 Ohms / R2=910 Ohms / C=150 nF) PABX2 (R1=215 Ohms / R2=1000 Ohms / C=137 nF)
6	RinginCurrentNumberHalfPulse	Number of half-pulses used to detect ringing current	Number	Default : 3 Min : 1 Max : 8
7	RinginCurrentDetectionTimeout	Supervision timer for detection of ringing current (ms)	Number	Default :20 000 Min : 10 Max : 60 000
8	BusyToneRingingToneFrequency	Busy or ringback tone frequency to be detected	Number	Default : 440 Min : 300 Max : 3 400

N°	Name	Explanation	Type	Values
9	BusyToneRingingToneDetectionLevel	Threshold for detection of busy or ringback tone	Number	Default : 340 (-34 dBm) Min : 0 (0 dBm) Max : 340 (-34 dBm)
10	BusyTimeout	Supervision timer for detection of busy or ringback tone frequency	Number	Default :15 000 Min : 500 Max : 30 000
11	MinBusyHalfPulse	Minimum duration for a half-pulse of the busy tone interrupt rate (ms). There is no way of specifying separate times for tone on and tone off states.	Number	Default : 450 Min : 200 Max : 700
12	MaxBusyHalfPulse	Maximum time for a half-pulse of the busy tone interrupt rate (ms). There is no way of specifying separate times for tone on and tone off states.	Number	Default : 550 Min : 200 Max : 700
13	BusyRateDetectTimeout	Supervision timer for detection of busy or ringback tone (ms)	Number	Default : 2 000 Min : 500 Max : 10 000
14	SpeechPathFrequency	Frequency used to test the speechpath	Number	Default : 852 Min : 300 Max : 3 400
15	SpeechPathDetectionThreshold	Threshold for detection of the speechpath frequency	Number	Default : 340 (-34 dBm) Min : 0 (0 dBm) Max : 340 (-34 dBm)
16	SpeechPathTransmitLevel	Speechpath frequency transmission level	Number	Default : 20 (-2 dBm) Min : 0 (0 dBm) Max : 340 (-34 dBm)
17	SpeechPathDetectionTimeOut	Supervision timer for the detection of speechpath frequency (ms)	Number	Default : 1 000 Min : 10 Max : 30 000
18	SpeechPathDuration	Speechpath frequency transmission time	Number	Default : 1 500 Min : 10 Max :3 600 000
19	DelayAfterSpeechPathDetection	Time-delay after detection of the speechpath frequency sent by the CGP (ms)	Number	Default : 1 500 Min : 10 Max :3 600 000
20	ReleaseType	Release type required	List	Release by called party Release by calling party
21	InterCallTime	Minimum time-delay between two calls (ms)	Number	Default : 10 Min : 0 Max : 1 200 000