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Annex D
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SERIES Q: SWITCHING AND SIGNALLING

Broadband ISDN – Common aspects of B-ISDN
application protocols for access signalling and network
signalling and interworking

AAL type 2 signalling protocol – Capability set 2

**Annex D: SDL definition of the AAL type 2
signalling protocol CS-2**

ITU-T Recommendation Q.2630.2 – Annex D

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ITU-T Recommendation Q.2630.2

AAL type 2 signalling protocol – Capability set 2

Annex D

SDL definition of the AAL type 2 signalling protocol CS-2

Summary

This new annex contains a comprehensive definition of the AAL type 2 signalling procedures in SDL. The data structures required for the SDL definition as well as the data structure for the messages in the main part of the Recommendation are specified in ASN.1.

Although, the SDL definitions contain more detail than the prose definition in clause 8, the definitions in clause 8 take precedence. Nevertheless, this new annex clearly indicates which part of the procedures specified in clause 8 are left to individual implementations and which part of the procedures must be implemented precisely for conformance with this Recommendation.

In addition, this new annex demonstrates that semi-formal definitions for signalling protocols are possible.

Source

Annex D to ITU-T Recommendation Q.2630.2 was prepared by ITU-T Study Group 11 (2001-2004) and approved under the WTSA Resolution 1 procedure on 13 April 2002.

FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications. The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of ITU. ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

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

NOTE

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

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As of the date of approval of this Recommendation, ITU had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementors are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database.

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AAL type 2 signalling protocol – Capability set 2

Annex D

SDL definition of the AAL type 2 signalling protocol CS-2

The SDL definitions may contain more detail than the prose definition in clause 8 of the main body of this Recommendation. Nevertheless, should there exist any technical difference between this Annex and clause 8, then the definitions in clause 8 take precedence.

D.1 Introduction

The SDL definitions of the AAL type 2 signalling protocol described in this Recommendation depend on the SDL system and block structure diagrams defined in this annex.

The SDL definition in this annex assumes that only a single event occurs at a given time, hence, no racing condition within the AAL type 2 signalling entity are considered; resolution of such collisions and racing conditions remains implementation dependent.

D.2 The SDL system diagram

The SDL system diagram is depicted in Figure B.1/Q.2630.1; it is unchanged from the definition in ITU-T Rec. Q.2630.1.

D.3 The SDL block structure diagram

The SDL block structure diagrams are depicted in Figure B.2/Q.2630.1 (parts 1 to 4 of 4); several signal lists are extended from the ones defined in ITU-T Rec. Q.2630.1.

NOTE 1 – The block USER and its process USER (not shown) are not part of the AAL type 2 signalling entity but used to indicate different served user entities.

NOTE 2 – The procedures located in process NodalF2 and called by the process NodalF1 are not elaborated further in this annex.

NOTE 3 – The procedure calls by the process NodalF1 to procedures located in process NodalF2 evoke an exchange of implicit signals between the processes NodalF1 and NodalF2.

NOTE 4 – One STI entity exists per signalling transport converter. These converters are known by nodal function 2 with their (SDL) ProcessID. The addition or removal of signalling relations together with the creation or destruction of the STI and STC processes is not shown in these SDL diagrams of this annex.

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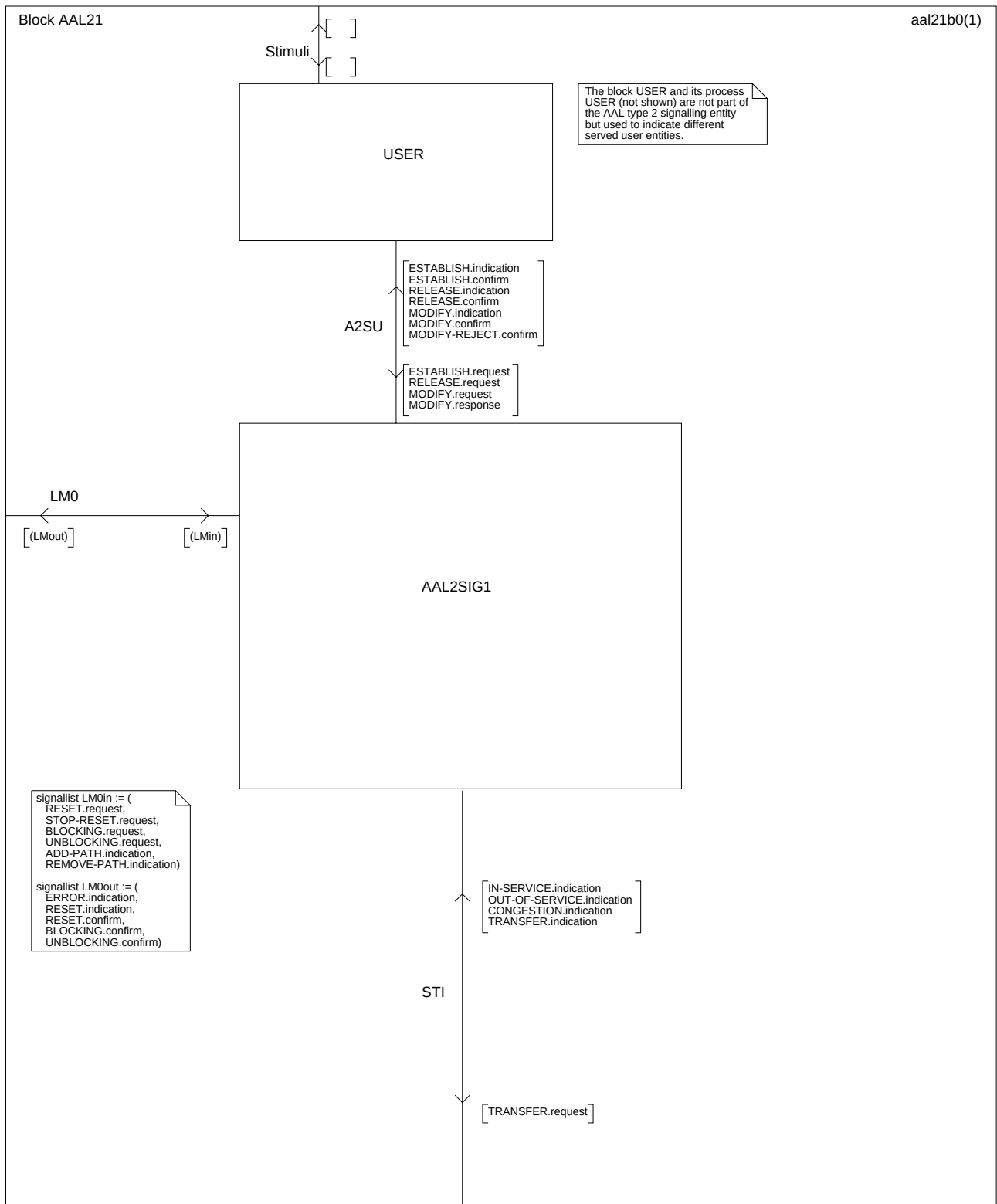


Figure D.2/Q.2630.2 – SDL block structure of the AAL type 2 signalling entity (*part 1 of 4*)

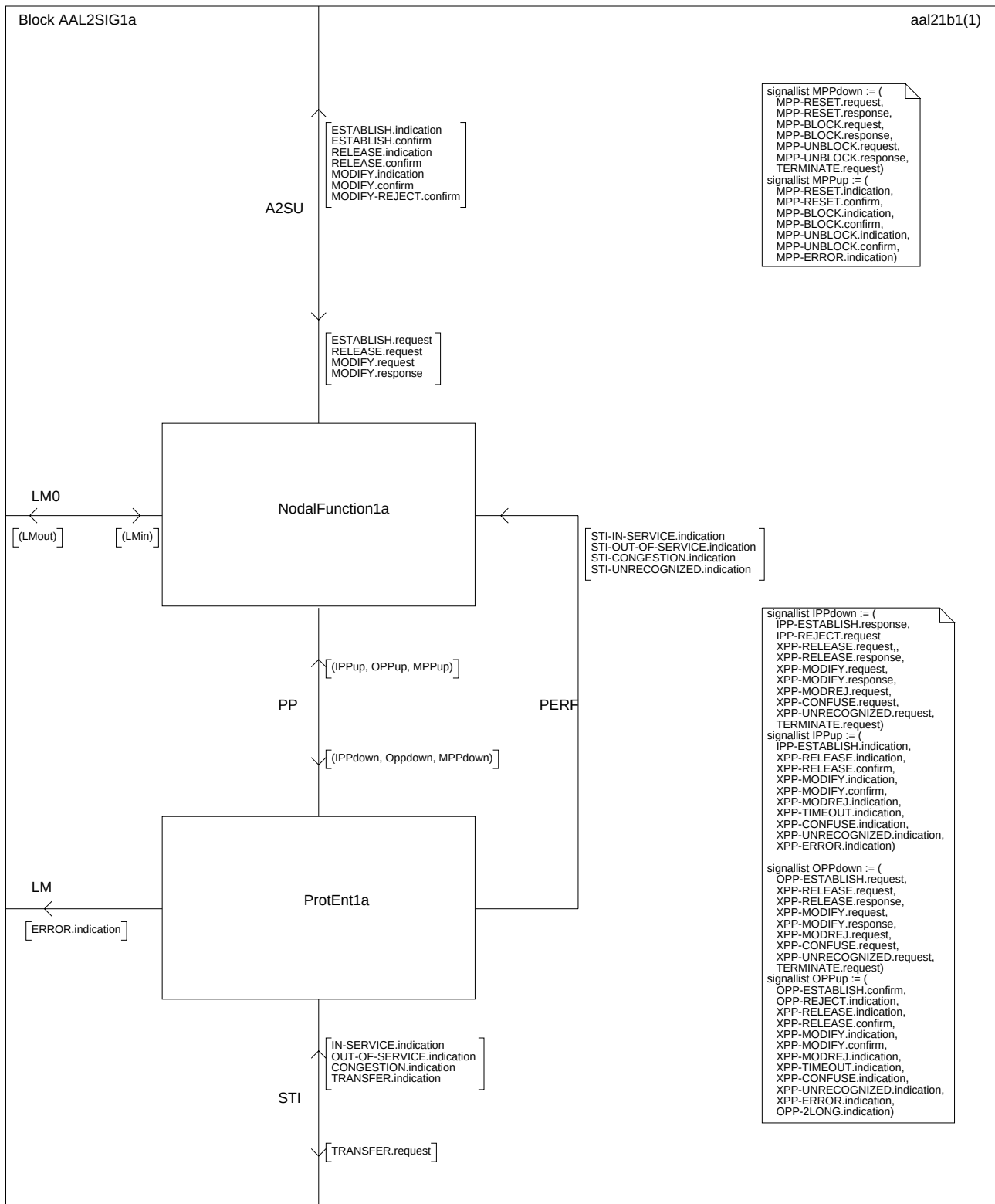


Figure D.2/Q.2630.2 – SDL block structure of the AAL type 2 signalling entity (part 2 of 4)

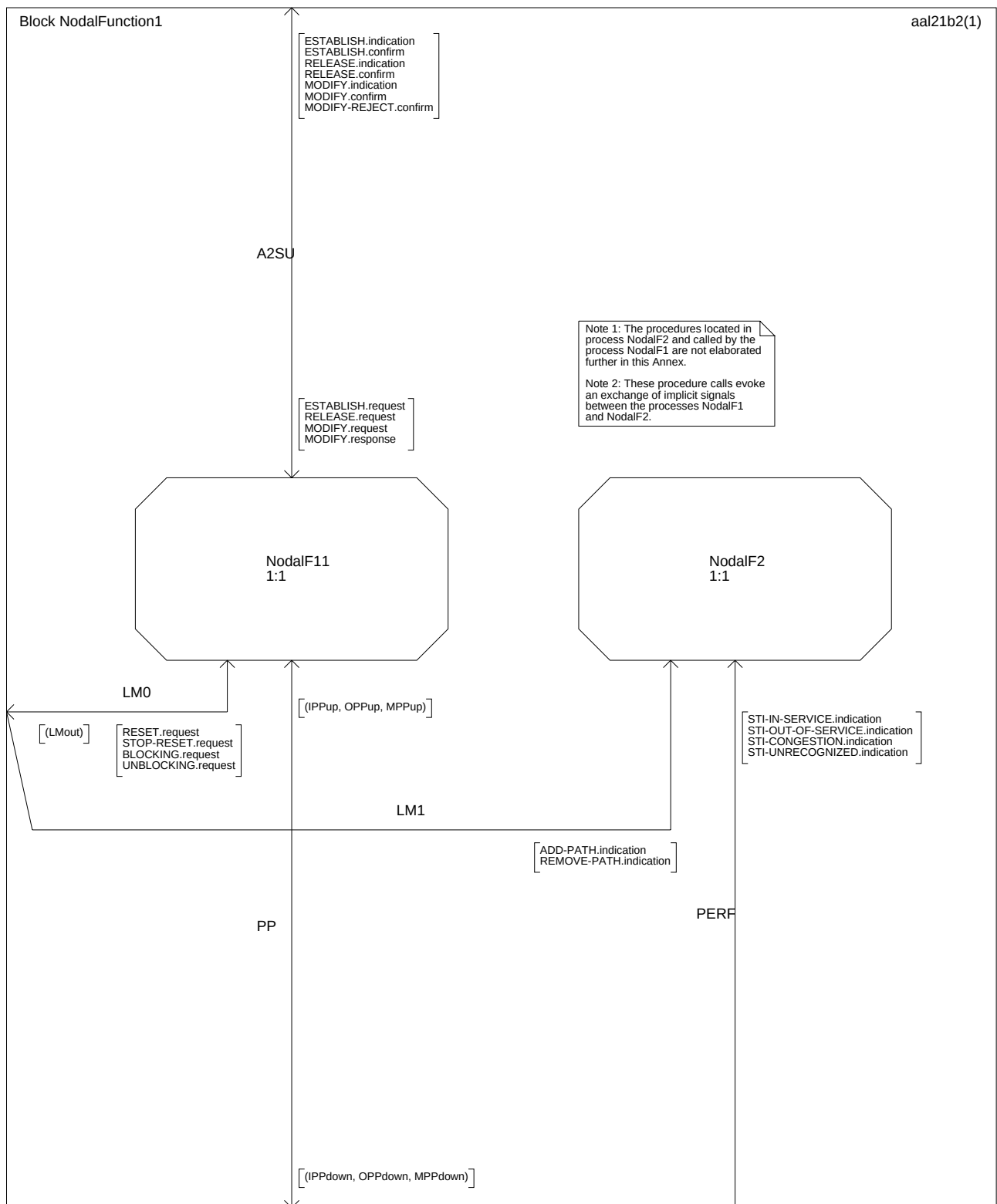


Figure D.2/Q.2630.2 – SDL block structure of the AAL type 2 signalling entity (part 3 of 4)

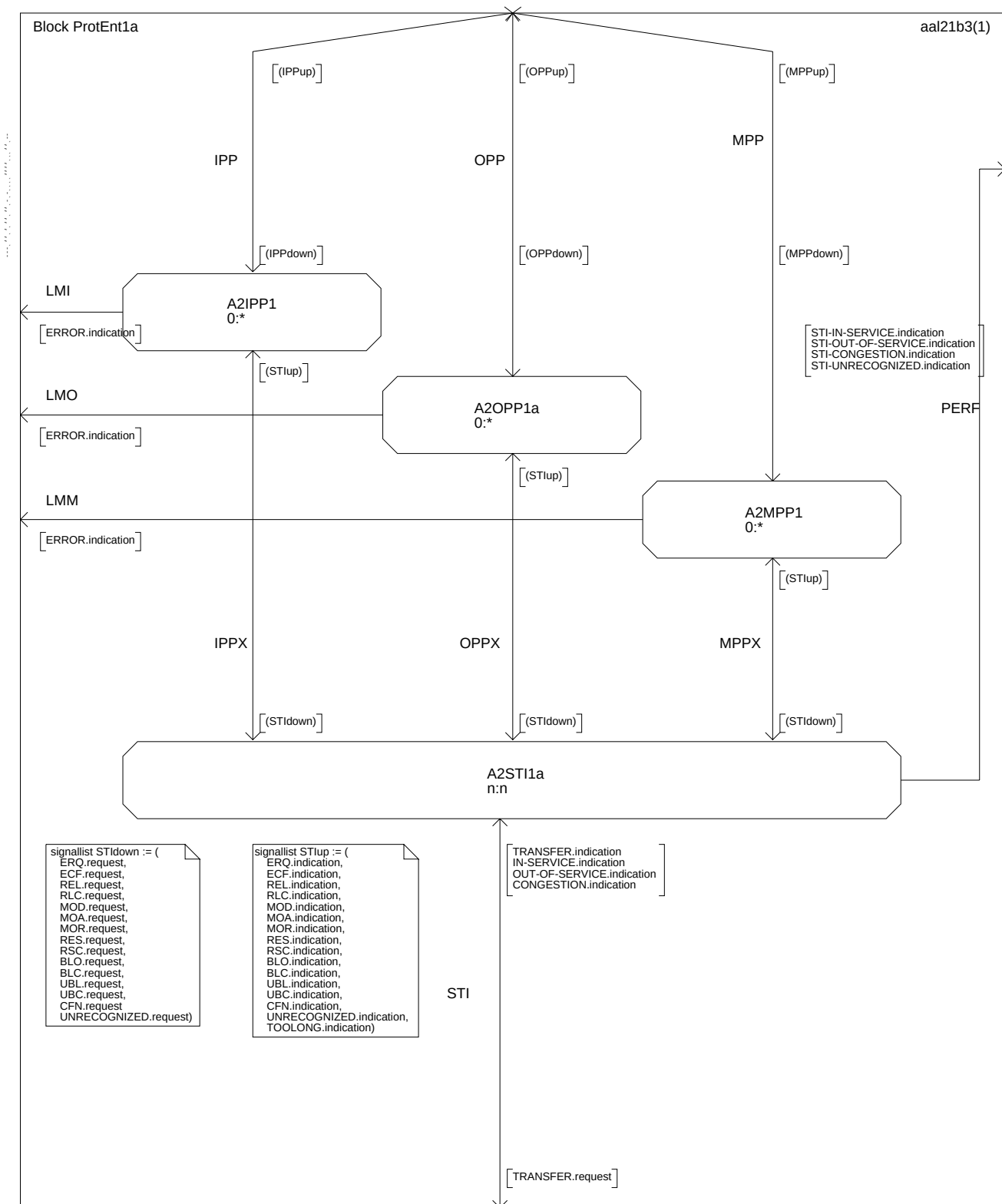


Figure D.2/Q.2630.2 – SDL block structure of the AAL type 2 signalling entity (part 4 of 4)

D.4 SDL specification for the nodal function

D.4.1 Introduction

B.4.1/Q.2630.1 applies, replacing any reference to subclauses, figures, or tables to Annex B by references to Annex D.

D.4.2 SDL diagrams for the nodal function 1

D.4.2.1 Data structures

B.4.2.1/Q.2630.1 applies, replacing any reference to subclauses, figures, or tables to Annex B by references to Annex D. Further, the following modifications are required:

Replace Table B.1/Q.2630.1 with Table D.1/Q.2630.2:

Table D.1/Q.2630.2 – Status values for CRec records

Description	Status Value	Incoming part describes	Outgoing part describes
Establishment Pending	2	preceeding link	succeeding link
	3	succeeding link	preceeding link
Connection established	4	preceeding link	succeeding link
	5	succeeding link	preceeding link
Release Pending	6	preceeding link	succeeding link
	7	succeeding link	preceeding link
Modify Pending	8	preceeding link	succeeding link
	9	succeeding link	preceeding link

The structure of the record of type "CRec" is defined in the ASN.1 fragment below:

```

CRec ::= SEQUENCE {
    status          CRecStatus,          -- connection status
    currenrce       CHOICE (              -- current allocated resource
        lc          LC,                  -- link characteristics
        ssis        SSIS },              -- SSCS information
    reqresrce       CHOICE {              -- requested resource
        lctype      SEQUENCE {
            lc       LC,                  -- link characteristics
            plc      LC OPTIONAL },      -- preferred link
            ssistype SEQUENCE {
                ssis  SSIS,                -- SSCS information
                pssis PSSIS } },          -- preferred SSCS information
        reqresrcetype ResourceType,      -- type of requested resource
        incoming     HRec,                -- details incoming link
        outgoing     HRec }               -- details outgoing link

SSIS ::= CHOICE {
    ssia            SSIA,                -- service specific
    ssiae           SSIAE,               -- information (audio)
    ssim            SSIA,                -- service specific info.
    ssime           SSIAE,               -- (multirate)
    ssisa           SSIA,                -- service specific info.
    ssisu           SSIA }               -- (SAR-assured)
    ssiae           SSIAE,               -- service specific info.
    ssime           SSIAE }               -- (SAR-unassured)
    ssiae           SSIAE,               -- preferred SSCS information
    ssime           SSIAE }               -- service specific
    ssiae           SSIAE,               -- information
    ssime           SSIAE }               -- (audio ext.)
    ssiae           SSIAE,               -- service specific info.
    ssime           SSIAE }               -- (multirate ext.)

```

```

HRec ::= SEQUENCE {
    peer            ENUMERATED {user,remote,none},
    ppus            PID,                  -- ID of protocol entity or user
    srid            PID,                  -- signalling relation identifier
    ceid            CEID }                -- is ID of signalling relation
    ceid            CEID }                -- connection element identifier

```

Add the following paragraph and Table D.2/Q.2630.2 after the definition of "CRec":

The type of requested resource is summarized in Table D.2.

Table D.2/Q.2630.2 – Type of requested resource

Requested Resource Type	Parameter in ERQ Message	Type Value	Modification
	Default	0	not permitted
Resource based on SSIS	Default	1	SSIS change permitted
Resource based on LC	Default	2	LC change permitted
Resource based on SSIS	SSIS	3	not permitted
Resource based on SSIS	SSIS, MSSSI	4	SSIS change permitted
Resource based on SSIS	SSIS, MSSSI, PSSIS	5	SSIS change permitted
Resource based on LC	LC	6	not permitted
Resource based on LC	LC, MSLC	7	LC change permitted
Resource based on LC	LC, MSLC, PLC	8	LC change permitted

Add the following paragraph and Table D.2/Q.2630.2 after the definition of "MRec":

The status values for MRec records is summarized in Table D.3.

Table D.3/Q.2630.2 – Status values for MRec records

Description	Status Value	Record describes	Preceding Link
Outgoing Block Pending	2	succeeding link	does not exist
Outgoing Unblock Pending	4	succeeding link	does not exist
Outgoing Reset Pending	6	succeeding link	does not exist

D.4.2.2 Primitives between Nodal Function 1 and the Protocol Entities

B.4.2.2/Q.2630.1 applies, replacing any reference to subclauses, figures, or tables to Annex B by references to Annex D. Further, the following modifications are required:

Replace Table B.2/Q.2630.1 with Table D.4/Q.2630.2:

Table D.4/Q.2630.2 – Primitives and parameters exchanged between the Nodal Function 1 entity and the Protocol Entities

Primitive Generic Name	Type			
	Request	Indication	Response	Confirm
IPP-ESTABLISH	Not defined	ERQmsg, sri	ECFmsg	Not defined
IPP-REJECT	RLCmsg	Not defined	Not defined	Not defined
OPP-ESTABLISH	ERQmsg	Not defined	Not defined	ECFmsg
OPP-REJECT	Not defined	RLCmsg	Not defined	Not defined
XPP-RELEASE	RELmsg	RELmsg	RLCmsg	RLCmsg
XPP-MODIFY	MODmsg	MODmsg	MOAmsg	MOAmsg
XPP-MODREJ	MORmsg	MORmsg	Not defined	Not defined
XPP-TIMEOUT	Not defined	–	Not defined	Not defined
XPP-CONFUSE	CNFmsg	CNFmsg	Not defined	Not defined
XPP-UNRECOGNIZED	msg	msg	Not defined	Not defined
MPP-BLOCK	BLOmsg, sqc	BLOmsg, sri	BLCmsg	BLCmsg
MPP-UNBLOCK	UBLmsg	UBLmsg, sri	UBCmsg	UBCmsg
MPP-RESET	RESmsg	RESmsg, sri	RSCmsg, sqc	RSCmsg
MPP-ERROR	Not defined	cause	Not defined	Not defined
TERMINATE	–	Not defined	Not defined	Not defined
– This primitive has no parameters				

Add the following items to the list:

n) **XPP-RELEASE**

An incoming or outgoing protocol entity is instructed to start modify procedures with a modify request (MOD) message, this message is conveyed to the protocol entity (with the request primitive). If an incoming or outgoing protocol entity receives such a modify request (MOD) message, this message is conveyed to nodal function 1 (with the indication primitive). After receipt of the modify request (MOD) message, the nodal function confirms a successful modify with a modify confirm (MOC) message; this message is conveyed to the protocol entity (with the response primitive). If an incoming or outgoing protocol entity receives a modify confirm (MOC) message, this message is conveyed to nodal function 1 (with the confirm primitive).

o) **XPP-MODREJ**

The nodal function indicates an unsuccessful modify with a modify reject (MOR) message; this message is conveyed to the protocol entity (with the request primitive). If an incoming or outgoing protocol entity receives a modify reject (MOR) message, this message is conveyed to nodal function 1 (with the indication primitive).

The reaction to input signal events is described in parts 1 to 21 (of 37) in Figure D.3/Q.2630.2. The following modifications were applied to the input signal processing in B.3/Q.2630.1:

In part 1 of Figure D.3/Q.2630.2 the declaration of variables for the new messages (MOD, MOA, and MOR) have been added.

Parts 2 to 7 (establishment procedure) have been amended to cater for the new but backward compatible CAC procedures. Also, Note 2 in part 7 was amended to permit the optional redirection procedure.

Parts 8 and 9 (Modify Request), parts 10 and 11 (Modify Acknowledge), and part 12 (Modify Reject) have been added.

Parts 8 and 9 of B.3/Q.2630.1 apply unmodified as parts 13 and 14 of Figure D.3/Q.2630.2.

From part 10 of Figure B.3/Q.2630.1, the specification for XPP-CONFUSE.indication and XPP-ERROR.indication applies unmodified as part 15 of D.3/Q.2630.2.

The timeout procedures from part 10 of B.3/Q.2630.1 are amended to cater for the timeout on the MOD (Modify Request) message in the established phase as part 16 of Figure D.3/Q.2630.2.

Part 11 of B.3/Q.2630.1 applies unmodified as part 17 of Figure D.3/Q.2630.2.

The management procedures in parts 12 to 15 of B.3/Q.2630.1 apply unmodified as parts 18 to 21 of Figure D.3/Q.2630.2.

D.4.2.3 Procedures

B.4.2.3/Q.2630.1 applies, replacing any reference to subclauses, figures, or tables to Annex B by references to Annex D. Further, the following modifications are required:

The procedures are described in parts 22 to 27 (of 37) in Figure D.3/Q.2630.2. The following modifications were applied to the procedures in B.3/Q.2630.1:

Parts 16, 17, 19, 20, and 21 of B.3/Q.2630.1 apply unmodified as parts 22, 23, 25, 26, and 27 of Figure D.3/Q.2630.2.

Part 18 of B.3/Q.2630.1 applies with the additional specification that a reset of a link may interrupt a modification procedure as part 24 of Figure D.3/Q.2630.2.

D.4.2.4 Macros

B.4.2.3/Q.2630.1 applies, replacing any reference to subclauses, figures, or tables to Annex B by references to Annex D. Further, the following modifications are required:

The macros are described in parts 28 to 37 (of 37) of Figure D.3/Q.2630.2.

The following macros already defined in ITU-T Rec. Q.2630.1 needed amendments as follows:

The macros "**Construct ERQmsg**" (in part 28 of Figure D.3/Q.2630.2), "**Construct ECFmsg**", "**Extract ECFparams**" (in part 29 of Figure D.3/Q.2630.2), and "**Extract ERQparams**" (in part 30 of Figure D.3/Q.2630.2), have been modified to allow the treatment of the new parameters.

The following macros are defined in addition to those in ITU-T Rec. Q.2630.1.

The macro "**ReturnModRej**" (in part 31 of Figure D.3/Q.2630.2) returns a MOR (Modify Reject) message towards the originator of the modify request.

The macro "**Construct MORmsg**" (in part 33 of Figure D.3/Q.2630.2) indicates that the respective message is constructed containing a cause (CAU) parameter.

The macro "**DetCACParam**" (in part 34 of Figure D.3/Q.2630.2) determines the desired CAC parameters based on the presence of the parameters LC, MSLC, and PLC (or, as a network option, SSIS, MSSIS, and PSSIS).

The macro "**AdjCACParam**" (in part 35 of Figure D.3/Q.2630.2) adjusts the CAC parameters based on the parameters in the ECF (Establish Confirm) or MOA (Modify Acknowledge) messages.

The macro "**Construct MODmsg**" (in part 36 of Figure D.3/Q.2630.2) provides the necessary details for the construction of the MOD (Modify) message. In particular, parameters are added to the message dependent on the parameters in the MODIFY.request primitive from the served user.

The macro "**Extract MODParams**" (in part 36 of Figure D.3/Q.2630.2) extracts the parameters for the MODIFY.indication primitive from the parameters of the MOD (Modify) message.

The macro "**Construct MOAmsg**" (in part 36 of Figure D.3/Q.2630.2) provides the necessary details for the construction of the MOA (Modify Acknowledge) message. In particular, parameters are added to the message dependent on the parameters in the MODIFY.response primitive from the served user.

The macro "**Extract MOAParams**" (in part 36 of Figure D.3/Q.2630.2) extracts the parameters for the MODIFY.confirm primitive from the parameters of the MOA (Modify Acknowledge) message.

The macro "**ModCACParam**" (in part 37 of Figure D.3/Q.2630.2).

The macro "**Construct MOAmsg**" (in part 31 of Figure D.3/Q.2630.2) indicates that the respective message is constructed without any parameters.

D.4.3 Procedures in the nodal function

B.4.2.3/Q.2630.1 applies, replacing any reference to subclauses, figures, or tables to Annex B by references to Annex D. Further, the following modifications are required:

Replace the definitions for the functions "PathRes", "SelectRoute", and "SwitchRoute" with the following definition:

The function "**PathRes**" performs a connection admission control followed by the resource reservation on an incoming link (the preceeding link) during connection establishment. It also performs a connection admission control followed by the resource reservation on an incoming or outgoing link during resource modification.

The function returns a value that is defined by the following ASN.1 structure:

PathRes ::= SEQUENCE {		-- return value of procedure
		-- PathResource
course	ENUMERATED {success, fail},	
cause	CAUSE }	-- cause if "course = fail"

NOTE 1 – The handling of Link Characteristics and SSCS Information is defined in Annex C.

NOTE 2 – Connection admission control and resource reservations are not specified in detail in this Recommendation.

The function "**SelectRoute**" performs a routing decision followed by the resource reservation on the outgoing link (the succeeding link) during connection establishment.

The nodal function analyses the routing information and selects a route with sufficient AAL type 2 path resources on a path with the requested path type to the succeeding AAL type 2 node. It then selects an AAL type 2 path from within that route which is able to accommodate the new connection.

Routing typically is based on:

- Addressing information;
- The Test Connection Indicator;
- Link Characteristics;
- Requested Path Type; and
- SSCS information (if Link Characteristics are not present).

This function returns a value that is defined by the following ASN.1 structure:

Route ::= SEQUENCE {		-- return value of procedure
		-- SelectRoute
course	ENUMERATED {remote,local,fail},	
ceid	CEID,	-- connection element
		-- identifier
sri	PID,	-- nodal signalling association
		-- identifier
cause	CAUSE }	-- cause if "fail"

NOTE 3 – The handling of Link Characteristics and SSCS Information is defined in Annex C.

The function "**SwitchRoute**" performs a routing decision followed by the resource reservation inside an AAL type 2 node.

This route is established between the requesting AAL type 2 served user or the incoming (preceeding) link on the one hand and the destination AAL type 2 served user or the outgoing link (succeeding) link on the other hand during connection establishment. It returns a value that is defined by the following ASN.1 structure:

Switch ::= SEQUENCE {		-- return value of procedure
		-- SwitchRoute
course	ENUMERATED {success,fail},	
cause	CAUSE }	-- cause if "fail"

NOTE 4 – The handling of Link Characteristics and SSCS Information is defined in Annex C.

NOTE 5 – Not all implementations require such internal path reservations; in such cases, "SwitchRes" is a null function that always returns the value "success".

The following procedures are defined in addition to those in ITU-T Rec. Q.2630.1.

The function "**SwitchRes**" performs a resource reservation inside an AAL type 2 node during resource modification. The resources reservation involves the path between the requesting AAL type 2 served user or the incoming link on the one hand and the destination AAL type 2 served user or the outgoing link on the other hand. It returns a value that is defined by the ASN.1 structure "Switch" above.

NOTE 6 – The handling of Link Characteristics and SSCS Information is defined in Annex C.

NOTE 7 – Not all implementations require such internal path reservations; in such cases, "SwitchRes" is a null function that always returns the value "success".

The procedure "**PathAdj**" is used to adjust resources on an incoming or outgoing link after situations where the "most demanding" resources had to be reserved during connection establishment or resource modification (see C.1).

The procedure "**SwitchAdj**" is used to adjust resources inside an AAL type 2 node after situations where the "most demanding" resources had to be reserved during connection establishment or resource modification (see C.1).

NOTE 8 – Not all implementations require such internal path reservations; in such cases, "SwitchAdj" is a null procedure without functionality.

D.4.4 Data structures of AAL type 2 signalling messages and parameters

The SDL diagrams make use of the following ASN.1 structure and definition of the AAL type 2 signalling messages and parameters:

D.4.4.1 General message and parameter structure

B.4.4.1/Q.2630.1 applies. Further, the following specifications need to be added:

mod	MessageID ::= '00001110'H	-- Modify request
moa	MessageID ::= '00001100'H	-- Modify acknowledgement
mor	MessageID ::= '00001101'H	-- Modify reject

D.4.4.2 Detailed parameter structure

B.4.4.2/Q.2630.1 applies. Further, the following specifications need to be added:

-- The following parameters are handled but never interpreted in the SDL -- definition, hence, no details are needed		
PT ::= OCTET STRING (SIZE (1))	-- definition of the essentials of the	-- PT parameter
SSIAE ::= OCTET STRING (SIZE (8))	-- definition of the essentials of the	-- SSIAE parameter
SSIME ::= OCTET STRING (SIZE (3))	-- definition of the essentials of the	-- SSIME parameter
LC ::= OCTET STRING (SIZE (12))	-- definition of the essentials of the	-- LC parameter
PLC ::= OCTET STRING (SIZE (12))	-- definition of the essentials of the	-- PLC parameter
MSLC ::= OCTET STRING (SIZE (0))	-- definition of the essentials of the	-- MSLC parameter
MSSSI ::= OCTET STRING (SIZE (0))	-- definition of the essentials of the	-- MSSSI parameter
SUCI ::= OCTET STRING (SIZE (1))	-- definition of the essentials of the	-- SUCI parameter

The parameter "ALC" is replaced by parameter "LC", therefore, the definition for "ALC" shall be deleted.

D.4.4.3 Detailed parameter list structure for the messages

B.4.4.3/Q.2630.1 applies. Further, the following modifications are required:

Replace the definition of the ERQ message with the following definition:

ERQmsg ::= SEQUENCE {	-- definition of the essentials of the ERQ message
ceid	CEID, -- connection element identifier
a2ea CHOICE {	-- AAL type 2 endpoint address
esea	ESEA, -- destination E.164 endpoint
nsea	NSEA }, -- destination NSAP endpoint
lc	LC OPTIONAL, -- link characteristics
plc	LC OPTIONAL, -- preferred link characteristics
mslc	MSLC OPTIONAL, -- modify support for link
msssi	MSSSI OPTIONAL, -- characteristics
osaid	OSAID, -- modify support for service
pt	PT OPTIONAL, -- specific info.
sugr	SUGR OPTIONAL, -- originating signalling
sut	SUT OPTIONAL, -- association ID
ssis	SSIS OPTIONAL, -- path type
pssis	PSSIS OPTIONAL, -- served user generated reference
tci	TCI OPTIONAL } -- serverd user transport
	-- SSIS information
	-- preferred SSIS information
	-- test connection indicator

Replace the definition of the ECF message with the following definition:

ECFmsg ::= SEQUENCE {				-- definition of the essentials of the ECF message
mslc	MSLC OPTIONAL,			-- modify support for link characteristics
msssi	MSSSI OPTIONAL,			-- modify support for service specific info.
osaid	OSAID }			-- originating signalling association ID

Replace the definition of the RLC message with the following definition:

RLCmsg ::= SEQUENCE {				-- definition of the essentials of the RLC message
cause	CAU OPTIONAL,			-- cause
ceid	CEID OPTIONAL }			-- connection element identifier

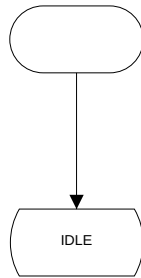
Add the definition of the MOD, MOA, and MOR messages as follows:

MODmsg ::= SEQUENCE {				-- definition of the essentials of the MOD message
lc	LC OPTIONAL,			-- link characteristics
ssis	CHOICE {			-- SSCS information
ssiae	SSIAE,			-- service specific information (audio ext.)
ssime	SSIAE } OPTIONAL,			-- service specific info. (multirate ext.)
suci	SUCI OPTIONAL }			-- served user correlation ID

MOAmsg ::= SEQUENCE {				-- definition of the essentials of the MOA message
suci	SUCI OPTIONAL }			-- served user correlation ID

MORmsg ::= SEQUENCE {				-- definition of the essentials of the MOR message
cause	CAU }			-- cause

NOTE – The optionality of the parameters of ERQ and MOD messages is indicated in Table 7-6/Q.2630.2 and specified in 8.2.1.1.1.1 and 8.2.1.1.5 as well as Annex C.



```

dcl
eRQmsg ERQmsg, /* Establish request */
eCFmsg ECFmsg, /* Establish confirm */
rELmsg RELmsg, /* Release request */
rLCmsg RLCmsg, /* Release confirm */
mODmsg MODmsg, /* Modify request */
mOAmg MOAmg, /* Modify acknowledge */
mORmsg MORmsg, /* Modify reject */
rESmsg RESmsg, /* Reset request */
rSCmsg RSCmsg, /* Reset confirm */
bLOmsg BLOmsg, /* Block request */
bLCmsg BLCmsg, /* Block confirm */
uBLmsg UBLmsg, /* Unblock request */
uBCmsg UBCmsg, /* Unblock confirm */
cNFmsg CNFmsg, /* Confusion */
  
```

NOTE

At start-up, it is assumed that the STI (Signalling Transport Interfaces) to each existing STC (Signalling Transport Converter, there exists one per nodal signalling relation) are created. The addition or removal of nodal signalling relations together with the creation or destruction of the STI and STC processes is not shown in the SDL diagrams of this Annex.

Figure D.3/Q.2630.2 – SDL diagram of the nodal function 1 (*part 1 of 37*)

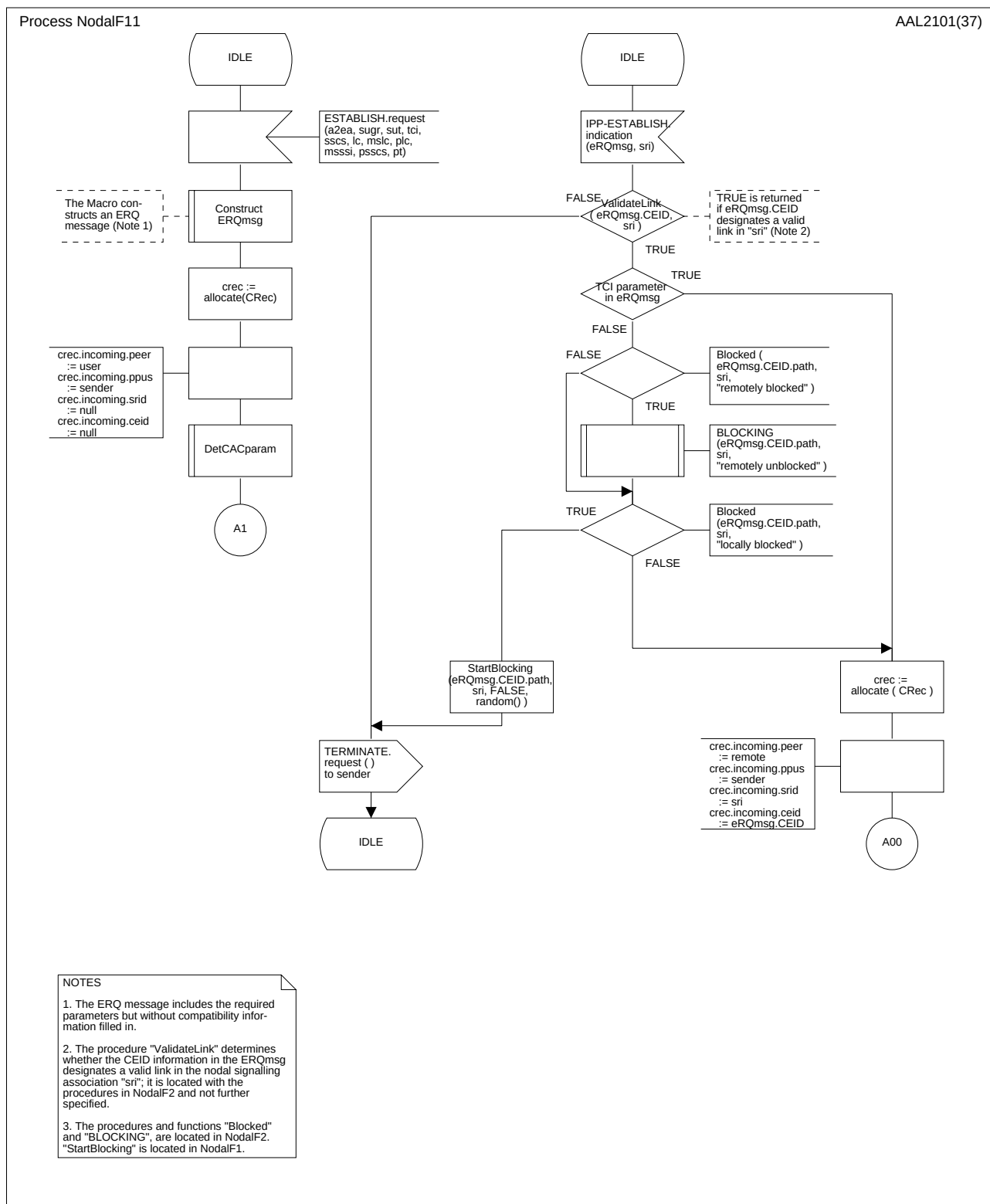


Figure D.3/Q.2630.2 – SDL diagram of the nodal function 1 (part 2 of 37)

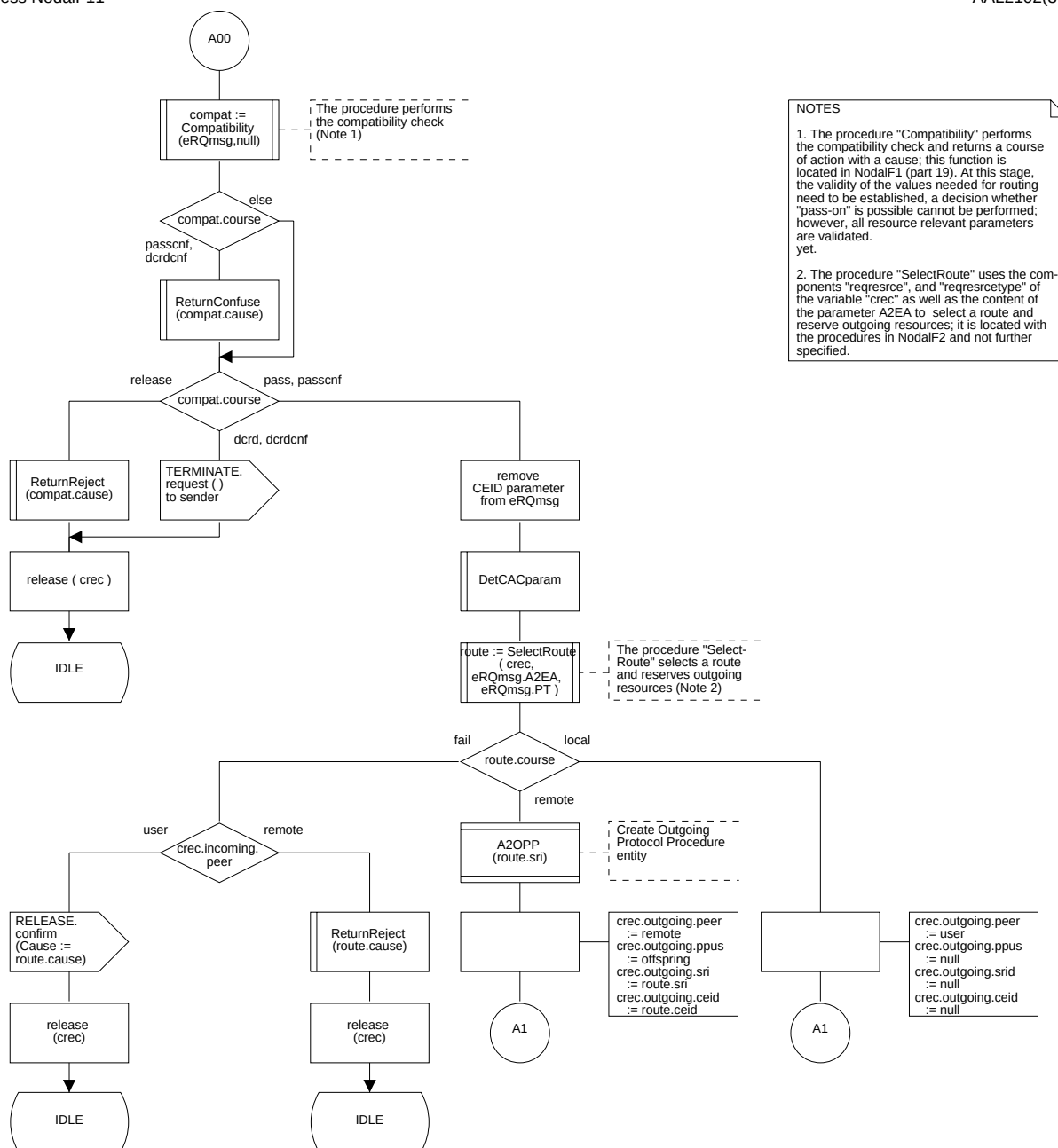


Figure D.3/Q.2630.2 – SDL diagram of the nodal function 1 (part 3 of 37)

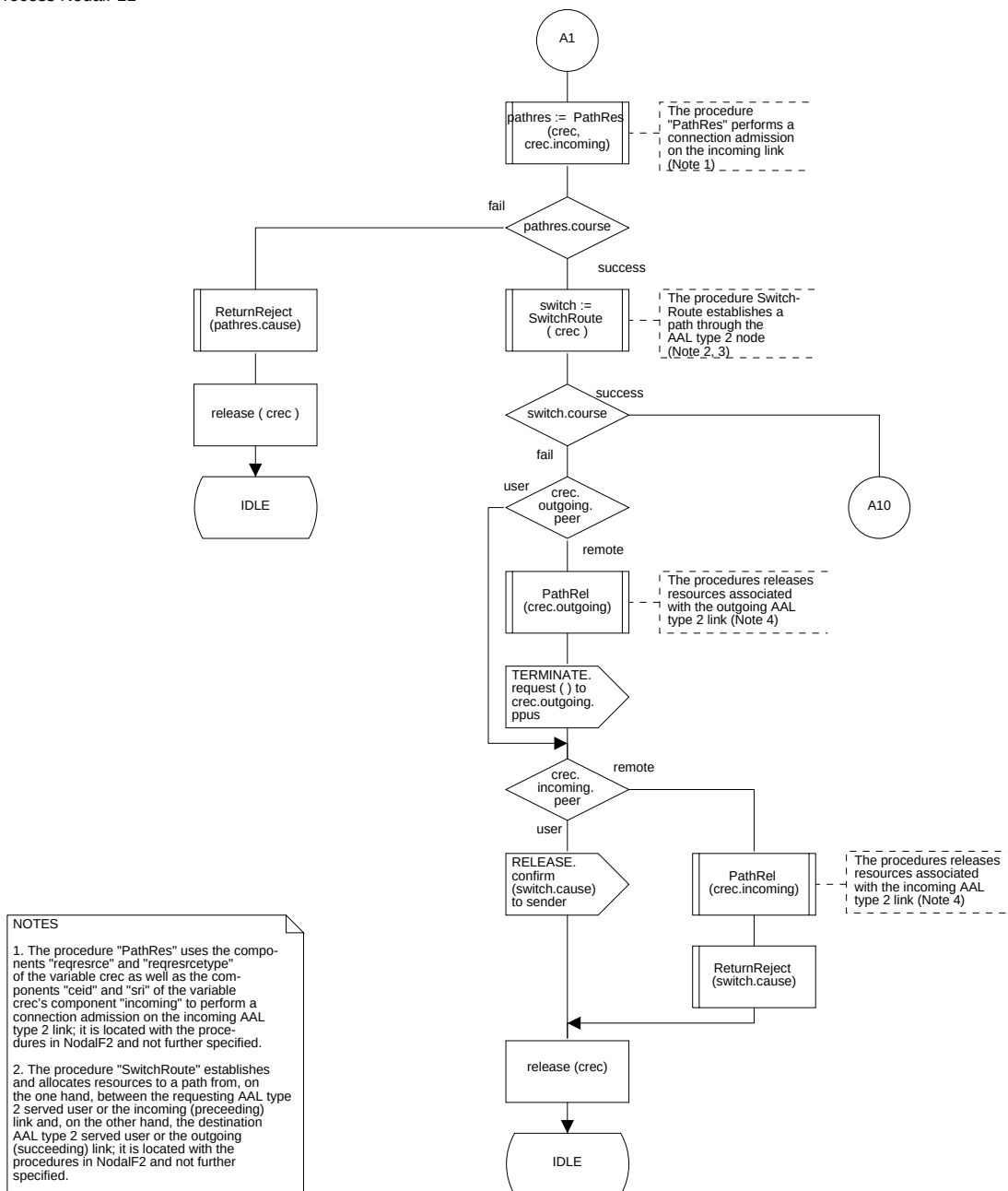


Figure D.3/Q.2630.2 – SDL diagram of the nodal function 1 (part 4 of 37)

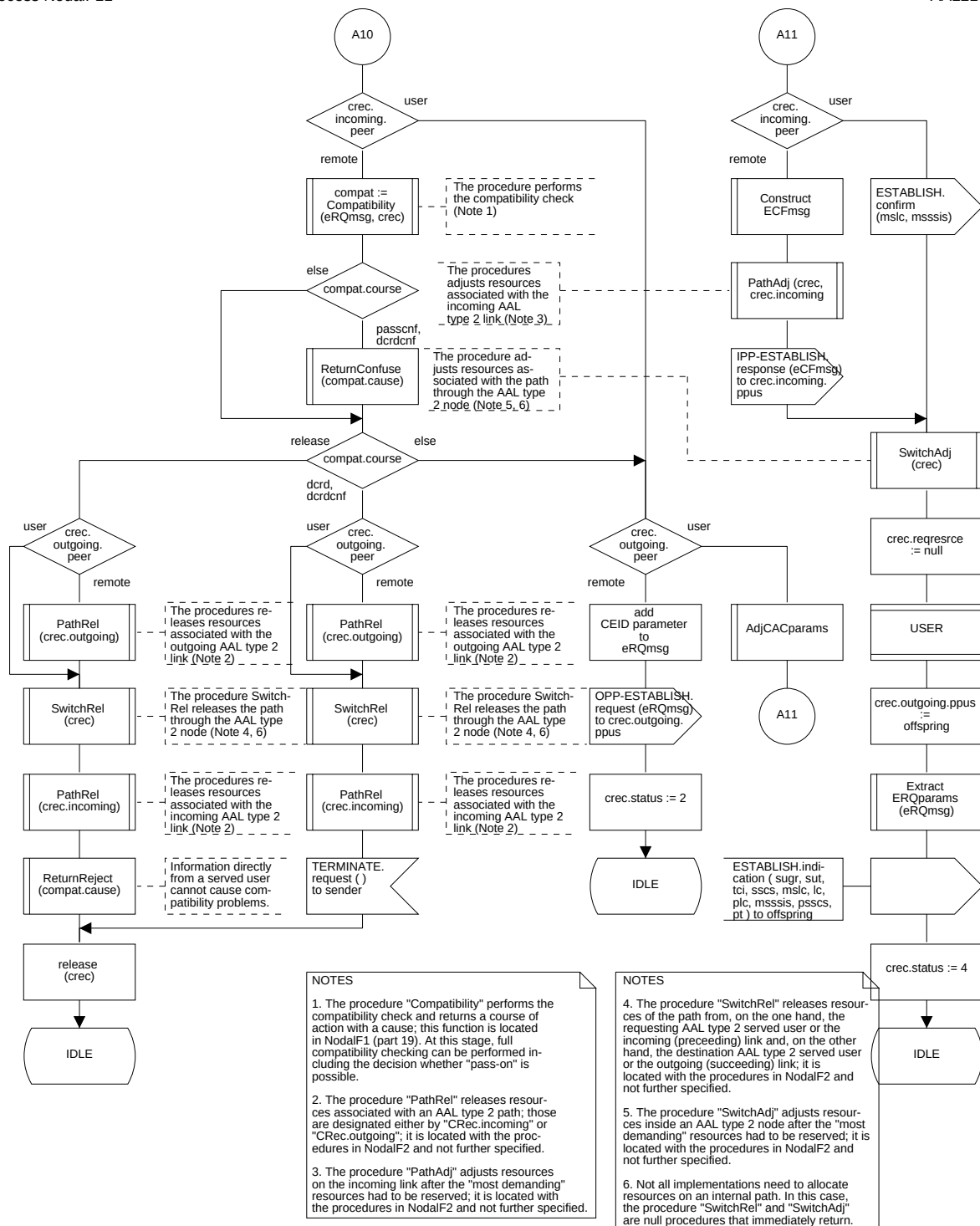


Figure D.3/Q.2630.2 – SDL diagram of the nodal function 1 (part 5 of 37)