```
System file            rw    C:\tau34\Q1228\Inap\inap.sdt

Source directory       rw    C:\tau34\Q1228\Inap\

Text readme                                               --    TCAP\readme.txt

Chapter ASN.1 Files

ASN.1 Text INCS2datatypes                                 rw    ASN1\incs2−dt.asn

ASN.1 Text INCS2SSFSCFopsargs                             rw    ASN1\ssf−scf.asn

ASN.1 Text INCS2BundleArg                                 rw    ASN1\incs2b.asn

ASN.1 Text INCS2Internals                                 rw    ASN1\cs2i.asn

Chapter IN CS−1 Specification

Package CS1_INAP                                          rw    CS1\cs1_inap.sun
    Depending on ASN.1 Text INCS2BundleArg
    Depending on ASN.1 Text INCS2datatypes
    Depending on ASN.1 Text INCS2Internals
    Depending on ASN.1 Text INCS2SSFSCFopsargs
    System Type CS1_INAP                                  rw    CS1\cs1_inap.sst
        Block Instance SSF_CCF_A : SSF_CCF
        Block Instance SSF_CCF_B : SSF_CCF
        Block Instance TCAP_Adapter : TCAP_Simulator
        Virtual Block Type SSF_CCF                        rw    CS1\ssf1.sbt
            Process Instance CS (0) : CallSegment
            Process Instance CSA (0) : CallSegmentAssociation
            Process Instance IH (1,1) : InterfaceHandler
            Process Instance O_BCSM (0) : OriginatingBCSM
            Process Instance SSF (0) : SSF_FSM
            Process Instance SSME (1,1) : SSME_FSM
            Process Instance T_BCSM (0) : TerminatingBCSM
            Virtual Process Type InterfaceHandler     rw   CS1\ih.spt
                Procedure AllocateCSAId           rw    CS1\alldid.spd
                Procedure AddCSAId                rw    CS1\adddid.spd
                Procedure GetCSAIdfromCSA          rw    CS1\getdid.spd
                Procedure GetCSAfromCSAId          rw    CS1\getcvd.spd
                Procedure GetCSAfromSigConId          rw   CS1\getcvu.spd
```

- Procedure SetSigConAssoc rw CS1\setsca.spd
- Procedure SetRemoteAssoc rw CS1\setrema.spd
- Procedure GetCSAfromRemoteId rw CS1\getlcsa.spd
- Procedure IsCSA rw CS1\iscsa.spd

Virtual Process Type CallSegmentAssociation rw CS1\csa.spt

- Procedure AddCS rw CS1\addcs.spd
- Procedure SetLegLocation rw CS1\setlegl.spd
- Procedure GetCSPtr rw CS1\getcsptr.spd
- Procedure GetLegLocation rw CS1\getlegl.spd
- Procedure ExistCS rw CS1\existcs.spd
- Procedure SetLegAssoc rw CS1\setlassc.spd
- Procedure IsCS rw CS1\iscs.spd
- Procedure GetLegIdfromRemoteLegId rw CS1\getlegrc.spd
- Procedure ExistLeg rw CS1\existleg.spd

Virtual Process Type CallSegment rw CS1\cv1.spt

- Procedure AddLeg rw CS1\addleg.spd
- Procedure RemoveLeg rw CS1\remleg.spd
- Procedure SetLegStatus rw CS1\setlstat.spd
- Procedure ReleaseAllLegs rw CS1\releasea.spd
- Procedure GetLegStatus rw CS1\getlstat.spd
- Procedure SetLegAssoc rw CS1\setlass.spd
- Procedure SetLegPtr rw CS1\setlptr.spd
- Procedure GetLegIdfromRemoteLegId rw CS1\getlegr.spd
- Procedure GetLegPtr rw CS1\getlptr.spd
- Procedure IsBCSM rw CS1\isbcsm.spd
- Procedure GetPassiveLegId rw CS1\getpl.spd
- Procedure MapConnectToBCSM rw CS1\mpcobcsm.spd
- Procedure MapSIToBCSM rw CS1\mpsibcsm.spd

Virtual Process Type SSF_FSM rw CS1\ssf_fsm.spt

- ***Virtual*** Procedure InitialiseDPTable rw CS1\initevl.spd
- Procedure ExistLeg rw CS1\exleg.spd
- Procedure AnyDPArmed rw CS1\anyevarm.spd
- Procedure IsDPArmed rw CS1\evarm.spd
- Procedure DisarmDPs rw CS1\disarm.spd
- Procedure DPArmed rw CS1\dparmed.spd
- Procedure CallInformationReportPending rw CS1\callinfo.spd
- Procedure ApplyChargingReportPending rw CS1\applycha.spd
- Procedure ArmTDPs rw CS1\armtdps.spd

- Procedure MatchingServiceFilteringCriteria rw CS1\msfc.spd
- Procedure CheckACG rw CS1\cacg.spd
- Procedure CallFiltered rw CS1\cf.spd
- Procedure ProcessApplyCharging rw CS1\process6.spd
- Procedure ProcessContinue rw CS1\proces12.spd
- Procedure ProcessRequestReportBCSMEvent rw CS1\prreqrep.spd
- Procedure ProcessAnalyseInformation rw CS2\procai.spd
- Procedure ProcessCallInformationRequest rw CS1\process7.spd
- Procedure ProcessDisconnectForwardConnection rw CS1\processd.spd
- Procedure ProcessSendChargingInformation rw CS1\procsci.spd
- Procedure ProcessSelectRoute rw CS2\procsr.spd
- Procedure ProcessCancel rw CS1\process8.spd
- Procedure ProcessEstablishTemporaryConnection rw CS1\processe.spd
- Procedure ProcessEventReportBCSM rw CS1\prevrep.spd
- Procedure ProcessSelectFacility rw CS2\procsf.spd
- Procedure ProcessCollectInformation rw CS1\process9.spd
- Procedure ProcessFurnishChargingInformation rw CS1\proces13.spd
- Procedure ProcessForwardConnectionReleased rw CS1\processf.spd
- Procedure ProcessConnect rw CS1\proces10.spd
- Procedure ProcessInitiateCallAttempt rw CS1\processi.spd
- Procedure ProcessInitialDP rw CS1\pridp.spd
- Procedure ProcessConnectToResource rw CS1\proces11.spd
- Procedure ProcessRequestNotificationChargingEvent rw CS1\proces16.spd
- ***Virtual*** Procedure ProcessDPSpecific rw CS1\ProcDPS.spd
- Procedure ConnnectAnalysis rw CS1\ERROR\conpa.spd

Virtual Process Type OriginatingBCSM rw CS1\ocs1.spt

- Procedure PIC_O_Null rw CS1\pic_o_nu.spd
- Procedure PIC_Analyse_Information rw CS1\pic_anal.spd
- ***Virtual*** Procedure PIC_Send_Call rw CS1\pic_send.spd
- ***Virtual*** Procedure PIC_O_Active rw CS1\pic_o_ac.spd
- Procedure PIC_Authorise_Origination_Attempt rw CS1\pic_auth.spd
- Procedure PIC_Select_Route rw CS1\pic_sele.spd
- ***Virtual*** Procedure PIC_O_Alerting rw CS1\pic_o_al.spd
- Procedure PIC_O_Abandon rw CS1\pic_o_ab.spd
- Procedure PIC_Collect_Information rw CS1\pic_coll.spd
- Procedure PIC_Authorise_Call_Setup rw CS1\pic_aut1.spd
- Procedure PIC_O_Answer rw CS1\pic_o_an.spd
- Procedure PIC_OException rw CS1\pic_oexc.spd
- Procedure PIC_Collect_NDigits rw CS1\pic_col1.spd

        - Procedure PIC_Collect_NDigits rw CS1\pic_coll.spd
        - ***Virtual*** Procedure DP_origAttemptAuthorised rw CS1\dp_origa.spd
        - ***Virtual*** Procedure DP_Route_Select_Failure rw CS1\dp_route.spd
        - ***Virtual*** Procedure DP_oCalledPartyBusy rw CS1\dp_ocall.spd
        - ***Virtual*** Procedure DP_oDisconnect rw CS1\dpdiscon.spd
        - ***Virtual*** Procedure DP_Collected_Info rw CS1\dp_colle.spd
        - ***Virtual*** Procedure DP_oAnswer rw CS1\dp_o_ans.spd
        - ***Virtual*** Procedure DP_oMidCall rw CS1\dp_omidc.spd
        - ***Virtual*** Procedure DP_Analysed_Information rw CS1\dp_analy.spd
        - ***Virtual*** Procedure DP_oNoAnswer rw CS1\dp_onoan.spd
        - ***Virtual*** Procedure DP_oAbandon rw CS1\dp_oaban.spd
        - Procedure MapToSIRArg rw CS1\maptosir.spd
        - Procedure MapToDP rw CS1\maptodp.spd
        - Procedure MapFromPIC rw CS1\mapfpic.spd
    - ***Virtual*** Process Type TerminatingBCSM rw CS1\tcs1.spt
        - Procedure PIC_T_Null rw CS1\pic_t_nu.spd
        - Procedure PIC_Select_Facility rw CS1\pic_sel1.spd
        - ***Virtual*** Procedure PIC_tActive rw CS1\pic_tact.spd
        - Procedure PIC_Authorize_Termination_Attempt rw CS1\pic_aut2.spd
        - ***Virtual*** Procedure PIC_Present_Call rw CS1\pic_pres.spd
        - Procedure PIC_TException rw CS1\pic_texc.spd
        - ***Virtual*** Procedure PIC_tAlerting rw CS1\pic_tale.spd
        - ***Virtual*** Procedure DP_termAttemptAuthorized rw CS1\dp_terma.spd
        - ***Virtual*** Procedure DP_tNoAnswer rw CS1\dp_tnoan.spd
        - ***Virtual*** Procedure DP_tDisconnect rw CS1\dp_disco.spd
        - ***Virtual*** Procedure DP_tBusy rw CS1\dp_tbusy.spd
        - ***Virtual*** Procedure DP_tMidCall rw CS1\dp_tmidc.spd
        - ***Virtual*** Procedure DP_tAnswer rw CS1\dp_tansw.spd
        - ***Virtual*** Procedure DP_tAbandon rw CS1\dp_taban.spd
    - ***Virtual*** Process Type SSME_FSM rw CS1\ssme_fsm.spt
        - Procedure ProcessActivateServiceFiltering rw CS1\procasf.spd
        - Procedure ProcessCallGap rw CS1\proccg.spd
        - ***Virtual*** Procedure InitialiseTDPTable rw CS1\inittdps.spd
        - Procedure Mgt_SetTriggerTable rw CS1\mgt_stt.spd
        - Procedure ArmTDPs rw CS1\armstati.spd
        - Procedure MatchingServiceFilteringCriteria rw CS1\matching.spd
        - ***Virtual*** Procedure CheckACG rw CS1\checkacg.spd
        - Procedure CallFiltered rw CS1\callfilt.spd
- ***Virtual*** Block Type TCAP_Simulator rw TCAP\tcaps.sbt

```
      Process Instance TCAP_D (0) : TCAP_Dialog
      Process Instance TCAP_IH (1,1) : TCAP_InterfaceHandler
      Virtual Process Type TCAP_InterfaceHandler     rw   TCAP\tcapi.spt
        Operator newDialog                     rw     TCAP\newd.sop
        Operator initDialogs                   rw     TCAP\initd.sop
        Operator getDialogID                   rw     TCAP\getd.sop
        Operator nextFreeDialogID              rw     TCAP\nextfd.sop
      Virtual Process Type TCAP_Dialog     rw   TCAP\tcapd.spt
        Operator newTCmessage                  rw     TCAP\newtcm.sop

Chapter IN CS−2 Specification

Package CS2_INAP                               rw     CS2\cs2.sun
  Depending on ASN.1 Text INCS2BundleArg
  Depending on ASN.1 Text INCS2datatypes
  Depending on ASN.1 Text INCS2Internals
  Depending on ASN.1 Text INCS2SSFSCFopsargs
  System Type CS2_INAP                         rw     CS2\cs2_inap.sst
    Block Instance SSF_CCF_A
    Block Instance SSF_CCF_B
    Block Instance TCAP_Adapter
    Redefined Block Type SSF_CCF               rw     CS2\ccf_ssf.sbt
      Process Instance CS
      Process Instance CSA
      Process Instance IH
      Process Instance O_BCSM
      Process Instance SSF
      Process Instance SSME
      Process Instance T_BCSM
      Redefined Process Type InterfaceHandler     rw   CS2\interfac.spt
        Procedure ProcessMoveCallSegments     rw   CS2\processm.spd
      Redefined Process Type CallSegmentAssociation     rw   CS2\csa2.spt
        Procedure NoOfSegments                 rw     CS2\noofsegm.spd
        Procedure ExportLeg                    rw     CS2\exportl1.spd
        Procedure ExportCS                     rw     CS2\exportcs.spd
        Procedure ImportLeg                    rw     CS2\importl1.spd
        Procedure ImportCS                     rw     CS2\importcs.spd
        Procedure RemoveLeg                    rw     CS2\removele.spd
        Procedure RemoveCS                     rw     CS2\removecs.spd
```

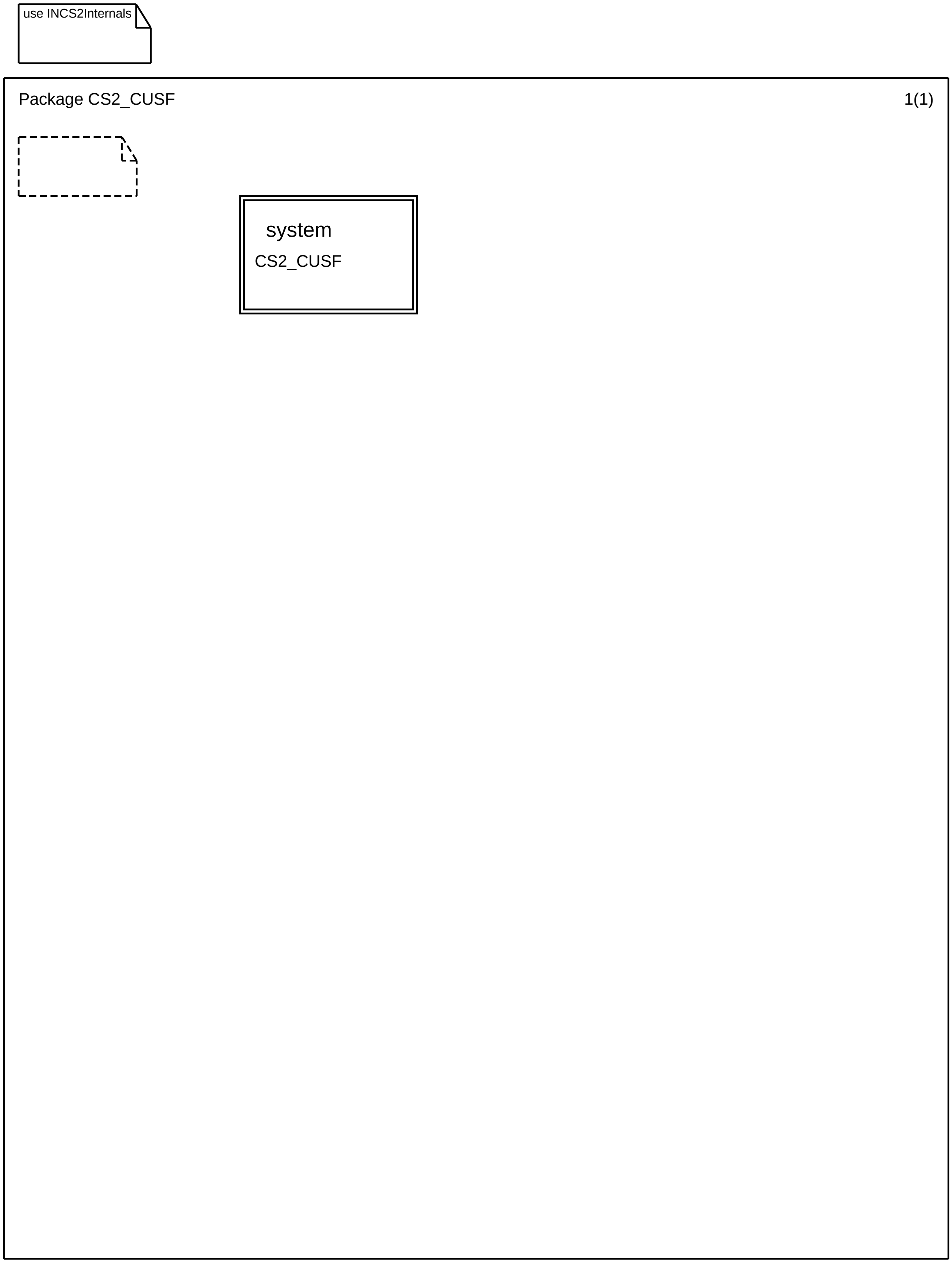
  - Procedure MoveLegs rw CS2\movelegs.spd
  - Procedure ExportControllingLeg rw CS2\expcl.spd
  - Procedure ProcessRRBE rw CS2\processr.spd
  - Procedure DisconnectControllingLeg rw CS2\dlc.spd
  - Procedure ProcessQueuedRRBE rw CS2\processq.spd
  - Procedure ReleaseCall rw CS2\release1.spd
- ***Redefined*** Process Type CallSegment rw CS2\cv2.spt
  - Procedure ImportLeg rw CS2\importle.spd
  - Procedure BroadcastToLegs rw CS2\broadcas.spd
  - Procedure ExportLeg rw CS2\exportle.spd
  - Procedure NoOfLegs rw CS2\nooflegs.spd
  - Procedure DPFiltering rw CS2\dpfil.spd
  - Procedure MapSFToBCSM rw CS2\msftbcsm.spd
  - Procedure DPFilteringUTSI rw CS2\dpfilter.spd
  - Procedure MapAIToBCSM rw CS2\maitbcsm.spd
  - Procedure MapSRToBCSM rw CS2\msrtbcsm.spd
- ***Redefined*** Process Type SSF_FSM rw CS2\ssf_fsm2.spt
  - Procedure ExportEventRecord rw CS2\expevl.spd
  - Procedure ProcessContinueWithArgument rw CS2\pcwa.spd
  - Procedure ProcessRequestReportUTSI rw CS2\process3.spd
  - Procedure ImportEventRecord rw CS2\impevl.spd
  - Procedure ProcessDisconnectLeg rw CS2\processd.spd
  - Procedure ProcessSendSTUI rw CS2\process4.spd
  - Procedure ProcessReportUTSI rw CS2\process5.spd
  - ***Redefined*** Procedure ProcessDPSpecific rw CS2\ProcDPS.spd
  - Procedure IsUTSIArmed rw CS2\isutsiar.spd
  - Procedure ProcessReportFacility rw CS2\prf.spd
  - Procedure ProcessRequestReportFacilityEvent rw CS2\prrfe.spd
  - Procedure IsFacilityArmed rw CS2\isfa.spd
  - Procedure ProcessSendFacility rw CS2\psf.spd
  - ***Redefined*** Procedure InitialiseDPTable rw CS2\initiali.spd
- ***Redefined*** Process Type SSME_FSM rw CS2\ssmefsm.spt
  - Procedure ProcessManageTriggerData rw CS2\procmtd.spd
  - ***Redefined*** Procedure CheckACG rw CS2\checkac1.spd
  - ***Redefined*** Procedure InitialiseTDPTable rw CS2\inittdp2.spd
- ***Redefined*** Process Type OriginatingBCSM rw CS2\ocs2.spt
  - ***Redefined*** Procedure PIC_O_Active rw CS2\pic_o_ac.spd
  - ***Redefined*** Procedure PIC_Send_Call rw CS2\pic_send.spd

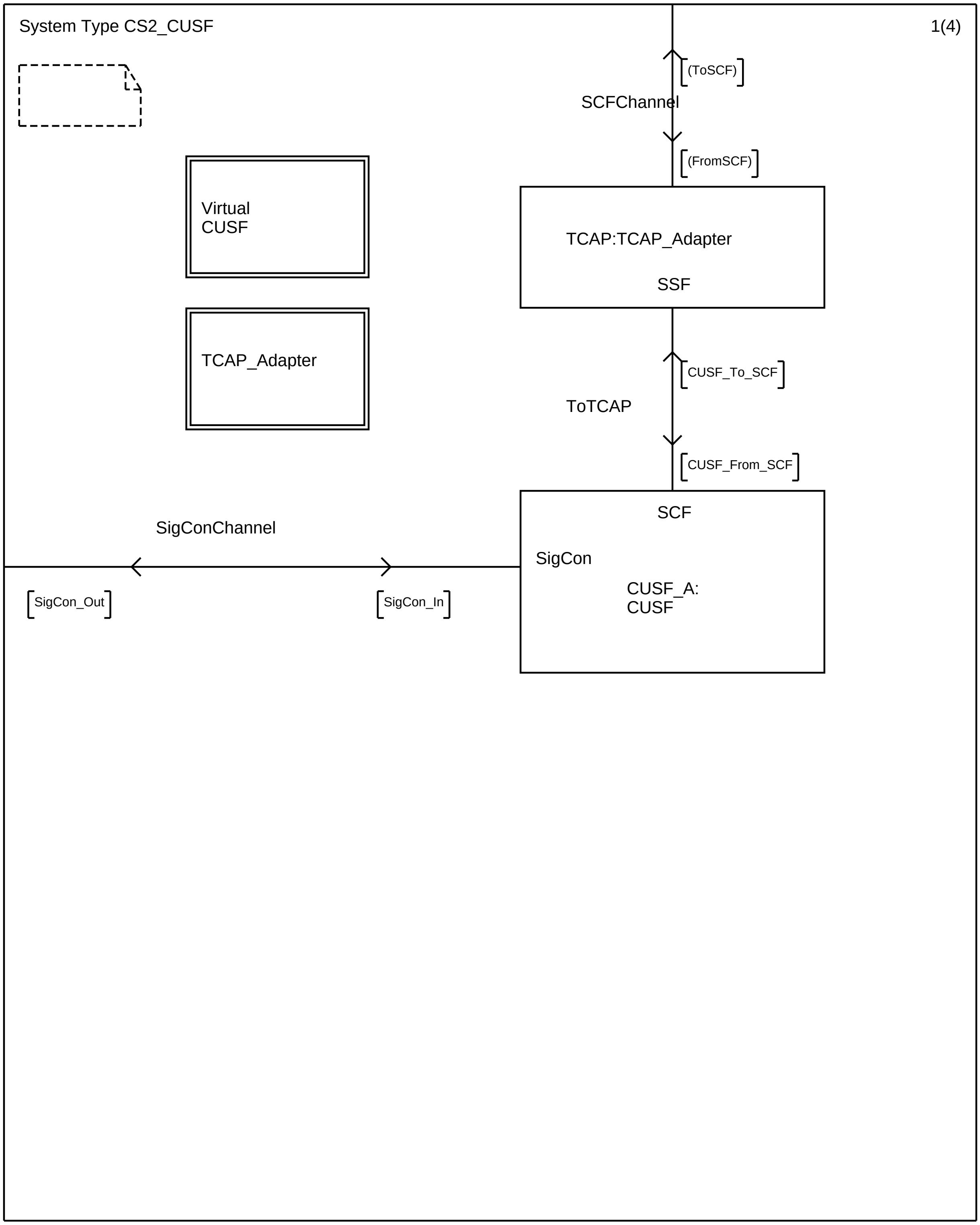
- - - Procedure PIC_O_Suspended rw CS2\pic_o_su.spd
    - Procedure PIC_O_Retention rw CS2\pic_o_re.spd
    - ***Redefined*** Procedure PIC_O_Alerting rw CS2\pic_o_al.spd
    - Procedure PIC_Disconnect rw CS2\pic_disc.spd
    - ***Redefined*** Procedure DP_origAttemptAuthorised rw CS2\dp_origa.spd
    - ***Redefined*** Procedure DP_oAnswer rw CS2\dp_oansw.spd
    - ***Redefined*** Procedure DP_oAbandon rw CS2\dp_oaban.spd
    - Procedure DP_oSuspended rw CS2\dp_osusp.spd
    - ***Redefined*** Procedure DP_Collected_Info rw CS2\dp_colle.spd
    - ***Redefined*** Procedure DP_oNoAnswer rw CS2\dp_onoan.spd
    - ***Redefined*** Procedure DP_oDisconnect rw CS2\dp_disco.spd
    - ***Redefined*** Procedure DP_Analysed_Information rw CS2\dp_analy.spd
    - ***Redefined*** Procedure DP_oCalledPartyBusy rw CS2\dp_ocall.spd
    - Procedure DP_oReanswer rw CS2\dp_orean.spd
    - ***Redefined*** Procedure DP_Route_Select_Failure rw CS2\dp_rout1.spd
    - ***Redefined*** Procedure DP_oMidCall rw CS2\dp_omid1.spd
    - Procedure DP_origAttempt rw CS2\dp_orig1.spd
    - Procedure DP_oTermSeized rw CS2\dp_oterm.spd
  - ***Redefined*** Process Type TerminatingBCSM rw CS2\tcs2.spt
    - ***Redefined*** Procedure PIC_Present_Call rw CS2\pic_pres.spd
    - Procedure PIC_Disconnect rw CS2\pic_dis2.spd
    - ***Redefined*** Procedure PIC_tAlerting rw CS2\pic_tale.spd
    - Procedure PIC_T_Suspended rw CS2\picts.spd
    - ***Redefined*** Procedure PIC_tActive rw CS2\picta.spd
    - ***Redefined*** Procedure DP_termAttemptAuthorized rw CS2\dp_terma.spd
    - ***Redefined*** Procedure DP_tMidCall rw CS2\dp_tmidc.spd
    - Procedure DP_termAttempt rw CS2\dpta.spd
    - Procedure DP_tReanswer rw CS2\dptr.spd
    - ***Redefined*** Procedure DP_tBusy rw CS2\dp_tbusy.spd
    - ***Redefined*** Procedure DP_tAbandon rw CS2\dp_taban.spd
    - Procedure DP_Facility_Selected_and_Available rw CS2\dpfsaa.spd
    - ***Redefined*** Procedure DP_tAnswer rw CS2\dp_tansw.spd
    - ***Redefined*** Procedure DP_tDisconnect rw CS2\dp_disc1.spd
    - Procedure DP_tSuspended rw CS2\dpts.spd
    - ***Redefined*** Procedure DP_tNoAnswer rw CS2\dp_tnoan.spd
    - Procedure DP_tCall_Accepted rw CS2\dp_tcall.spd
- ***Redefined*** Block Type TCAP_Simulator rw CS2\tcap.sbt
  - Process Instance TCAP_D
  - Process Instance TCAP_IH

```
        Process Instance TCAP_IH
        Redefined Process Type TCAP_InterfaceHandler     rw   CS2\tcapih.spt
        Redefined Process Type TCAP_Dialog     rw   CS2\tcapdia.spt

Package CS2_SRF                                     rw     SRF\geinapty.sun
  System Type CS2_SRF                               rw     SRF\gen_srf.sst
    x:y  Block Instance SRFunction : SRF
    Virtual Block Type SRF                          rw     SRF\srf.sbt
      x:y  Process Instance SRM (1,1) : SRFManager
      x:y  Process Instance SRSM (1,...) : SRFStateModel
      Process Type SRFManager                       rw     SRF\srm.spt
        Procedure DetermineIndex                    rw     SRF\detindex.spd
        Procedure GetPtrFromIndex                   rw     SRF\getptrin.spd
        Procedure GetIndexFromPtr                   rw     SRF\getinptr.spd
      Process Type SRFStateModel                    rw     SRF\srsm.spt
        Procedure SSF_EstablishConnection     rw   SRF\estconss.spd
        Procedure ProcessPlayAnnouncement     rw   SRF\procpa.spd
        Procedure ProcessEraseMessage              [unconnected]
        Procedure ProcessPromptAndCollectUserInformation     rw   SRF\procpacu.spd
        Procedure ProcessPromptAndReceiveMessage        [unconnected]
        Procedure ProcessScriptClose               [unconnected]
        Procedure ProcessScriptInformation         [unconnected]
        Procedure ProcessScriptRun                 [unconnected]
        Procedure ProcessCancel                    [unconnected]

Package CS2_Assisting                               rw     Assisting\cs2a.sun
  System Type AssistHandOffSSF                      --     TCAP\AssistHandOffSSF.sst
    Virtual Block Type AssistHandOffSSF             rw     Assisting\ahossf.sbt
      x:y  Process Instance AHSSF (0) : AssistHandOffSSF
      x:y  Process Instance IH (1,1) : InterfaceHandler
      Virtual Process Type InterfaceHandler         [unconnected]
      Virtual Process Type AssistHandOffSSF     rw   Assisting\ahossf.spt
        Procedure ProcessInapInstruction           [unconnected]

Package CS2_CUSF                               21   rw     CUSF\generife.sun
  System Type CS2_CUSF                         22   rw     CUSF\generife.sst
    x:y  Block Instance CUSF_A : CUSF
    x:y  Block Instance TCAP : TCAP_Adapter
    Virtual Block Type CUSF                    26   rw     CUSF\fe.sbt
      x:y  Process Instance BCUSM_A (1,...) : BCUSM
```

Process Instance CUSF (1,...) : CUSF_FSM			
Process Instance CUSFM : CUSFManager			
Virtual Process Type CUSFManager	28	rw	CUSF\manager.spt
Procedure AllocateIndex	34	rw	CUSF\alindex.spd
Procedure AddIndex	35	rw	CUSF\addindex.spd
Procedure GetIndexfromInstance	36	rw	CUSF\geixfrin.spd
Procedure GetInstancefromIndex	37	rw	CUSF\geinfrix.spd
Procedure GetIndexfromSigConId	38	rw	CUSF\geinfrsc.spd
Procedure SetSigConAssoc	39	rw	CUSF\sesicoas.spd
Procedure IsInstance			[unconnected]
Virtual Process Type CUSF_FSM	40	rw	CUSF\cusf_fsm.spt
Procedure ProcessActivateReceivedAndAuthorised			[unconnected]
Procedure ProcessAssociationReleaseRequested			[unconnected]
Procedure ProcessComponentReceived			[unconnected]
Procedure ProcessInitiateAssociation			[unconnected]
Procedure ProcessReleaseAssociation			[unconnected]
Procedure ProcessRequestReportBCUSMEvent			[unconnected]
Procedure InitialiseDPTable_A	53	rw	CUSF\inevlist.spd
Procedure ArmStaticDPs_A	54	rw	CUSF\armstadp.spd
Procedure AnyDPArmed_A	55	rw	CUSF\anevarmd.spd
Procedure IsDPArmed_A	56	rw	CUSF\isevarmd.spd
Procedure DisarmDPs_A	57	rw	CUSF\disarmdp.spd
Procedure DPArmed_A	58	rw	CUSF\dparmed_.spd
Procedure GetDPIndex_A	59	rw	CUSF\getevind.spd
Virtual Process Type BCUSM	60	rw	CUSF\bcusm.spt
Procedure MapFromPIA			[unconnected]
Procedure MapToDP			[unconnected]
Block Type TCAP_Adapter			[unconnected]
Chapter System Instantiations			
System CS1_INAP		rw	CS1\cs1.ssy
System CS2_INAP		rw	CS2\cs2_inap.ssy
Chapter CS−1 Examples			
MSC CI_Overview		rw	EXAMPLES\ciov.msc
MSC CI_Detailed		rw	EXAMPLES\cid.msc

MSC CO_Overview	rw	EXAMPLES\coov.msc
MSC CO_Detailed	rw	EXAMPLES\cod.msc
Chapter CPH Examples		
MSC 3Pty_Overview	rw	EXAMPLES\3ptyov.msc
MSC 3Pty_Detailed	rw	EXAMPLES\3ptyd.msc
MSC CF_Overview	rw	EXAMPLES\cfov.msc
MSC CF_Detailed	rw	EXAMPLES\cfd.msc
Chapter CS−1 Test Purposes		


use INCS2Internals
Package CS2_CUSF
1(1)
system
CS2_CUSF


System Type CS2_CUSF
1(4)
(ToSCF)
SCFChannel
(FromSCF)
Virtual
CUSF
TCAP:TCAP_Adapter
SSF
TCAP_Adapter
CUSF_To_SCF
ToTCAP
CUSF_From_SCF
SCF
SigConChannel
SigCon
CUSF_A:
CUSF
SigCon_Out
SigCon_In

System Type CS2_CUSF

2(4)

```
/****SIGNAL DEFINITIONS FOR THE COREINAP_CS2 SCF−CUSF OPERATIONS****/
```

```
SIGNAL
  ActivityTest(InvokeId),
  ActivityTestResult(InvokeID)
  ActiviationReceivedAndAuthorized(InvokeID,TransactionID,ActivatieReceivedAndAuthorisedArg),
  AssociationReleaseRequested(InvokeID,TransactionID,AssociationReleaseRequestedArg),
  ComponentReceived(InvokeID,TransactionID,ComponentReceivedArg),
  ConnectAssociation  (InvokeID,TransactionID,ConnectAssociationArg),
  ContinueAssociation (InvokeID,TransactionID,ContinueAssociationArg),
  EventReportBCUSM (InvokeID,TransactionID,EventReportBCUSMArg),
  InitialAssociationDP (InvokeID,TransactionID,InitialAssociationDPArg),
  InitiateAssociation (InvokeID,TransactionID,InitiateAssociationArg),
  ReleaseAssociation(InvokeID,TransactionID,ReleaseAssociationArg),
  ReportUTSI (InvokeID,TransactionID,ReportUTSIArg),
  RequestReportBCUSMEvent(InvokeID,TransactionID,RequestReportBCUSMEventArg),
  RequestReportUTSI (InvokeID,TransactionID,RequestReportUTSIArg),
  ResetTimer (InvokeID,TransactionID,ResetTimerArg),
  SendComponent(InvokeID,TransactionID,SendComponentArg),
  SendSTUI  (InvokeID,TransactionID,SendSTUIArg);
```

System Type CS2_CUSF 3(4)

```
/***SIGNAL/PRIMITIVE LIST DEFINITIONS FOR THE COREINAP CS2 SCF−CUSF INTERFACE***/
```

```
/*CUSF −> SCF */
SIGNALLIST  CUSF_TO_SCF=
  ActivityTestResult,
  ActiviationReceivedAndAuthorized,
  AssociationReleaseRequested,
  ComponentReceived,
  EventReportBCUSM ,
  InitialAssociationDP ,
  ReportUTSI;
```

```
/*SCF−> CUSF */
SIGNALLIST CUSF_FROM_SCF=

  ActivityTest,
  ConnectAssociation ,
  ContinueAssociation ,
  InitiateAssociation ,
  ReleaseAssociation,
  RequestReportBCUSMEvent,
  RequestReportUTSI ,
  ResetTimer ,
  SendComponent,
  SendSTUI ;
```

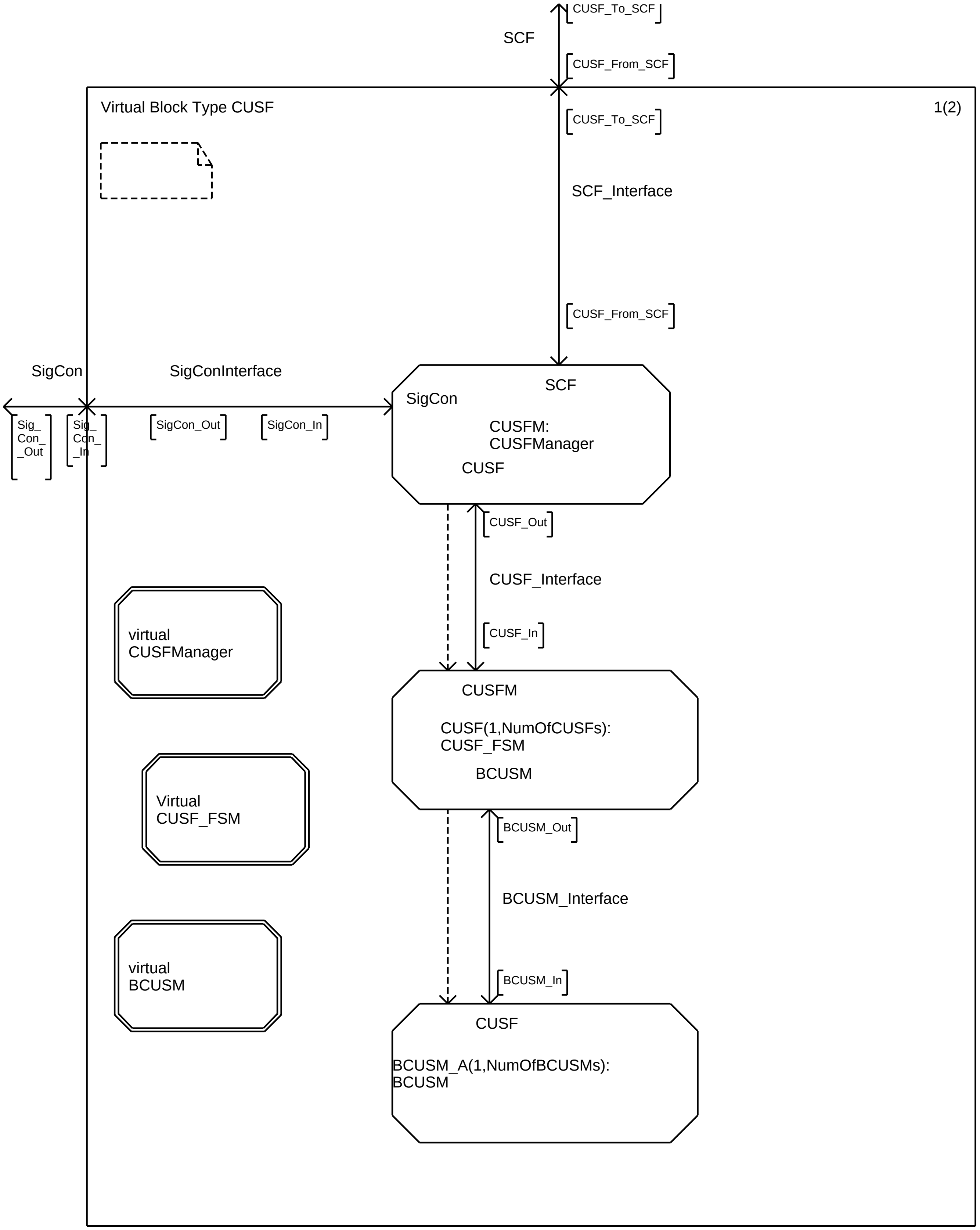
System Type CS2_CUSF 4(4)

```
/****DEFINITION OF THE TYPES AND PRIMITIVES OF THE SIGNALLING CONTROL INTERFACE****/
```

```
SIGNAL
 AssReleaseInd(AssReleaseType),
 AssReleaseReq(AssReleaseType),
 AssSetupInd(AssSetupIRType),
 AssSetupReq(AssSetupIRType),
 AssUserDataReq(AssUserDataType),
 AssDataInd(AssUserDataType),
 AssComponentReq(AssComponentType),
 AssComponentInd(AssComponentType);
```

```
/* From SigCon to BCUSM*/

SIGNALLIST SigCon_In=
  AssReleaseInd(AssReleaseType),
  AssSetupInd(AssSetupIRType),
  AssUserDataInd(AssUserDataType),
  AssComponentInd(AssComponentType);
```

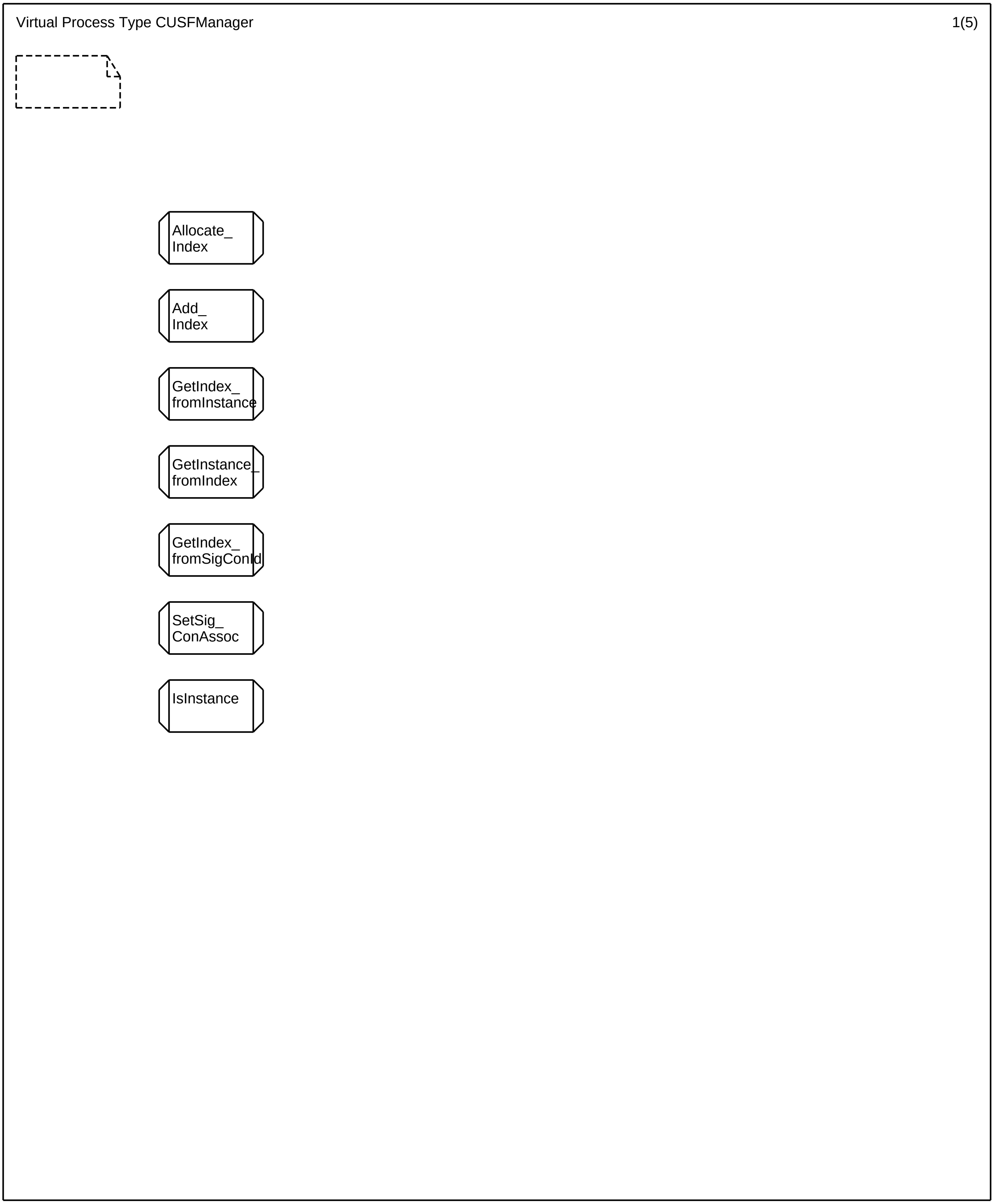
```
/*From BCUSM to Sig Con */

SIGNALLIST SigCon_Out
  AssReleaseReq(AssReleaseType),
  AssSetupReq(AssSetupIRType),
  AssUserDataReq(AssUserDataType),
  AssComponentReq(AssComponentType);
```

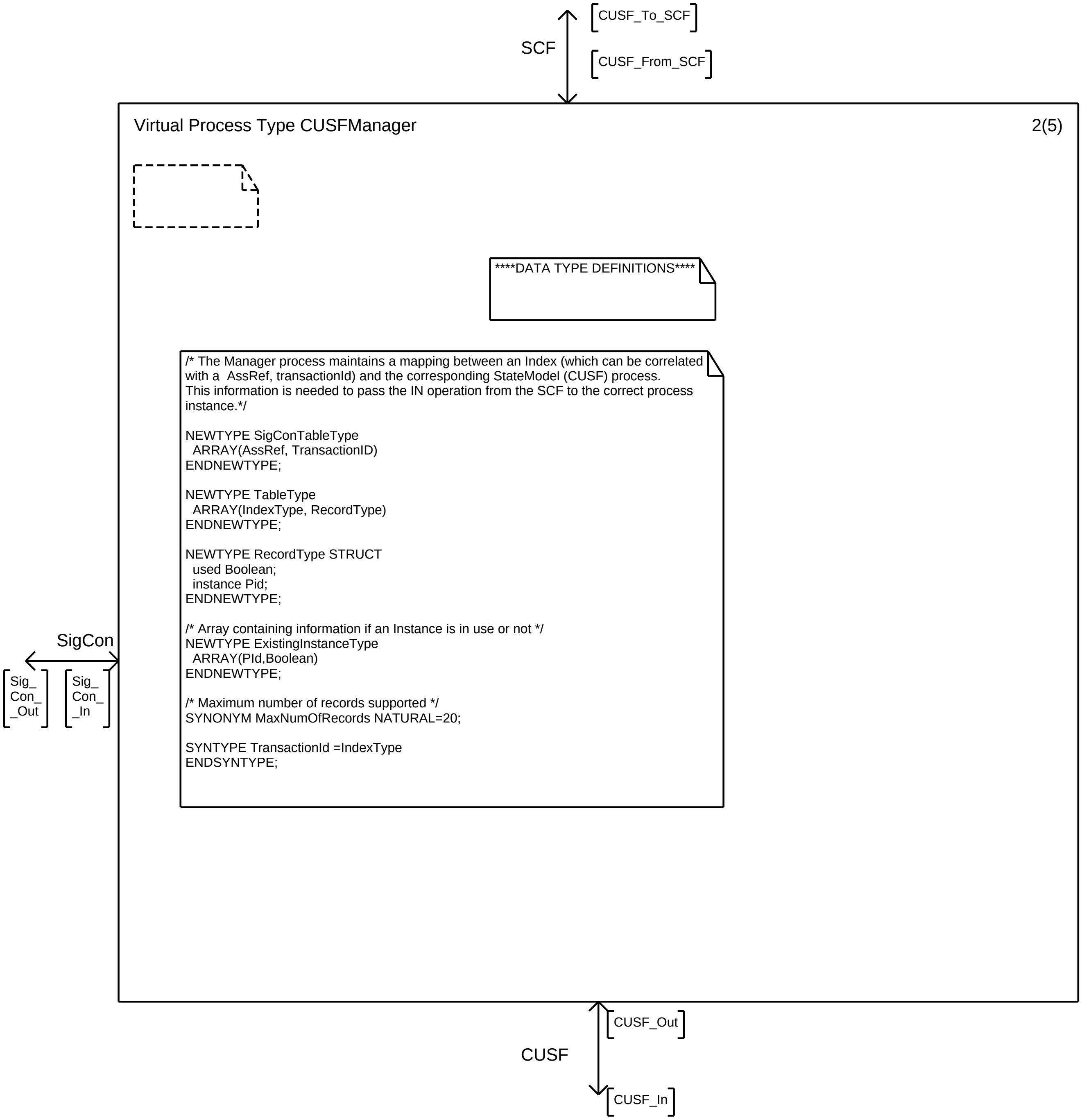

CUSF_To_SCF
SCF
CUSF_From_SCF
Virtual Block Type CUSF
1(2)
CUSF_To_SCF
SCF_Interface
CUSF_From_SCF
SigCon
SigConInterface
Sig_
Con_
_Out
Sig_
Con_
_In
SigCon_Out
SigCon_In
SCF
SigCon
CUSFM:
CUSFManager
CUSF
CUSF_Out
CUSF_Interface
CUSF_In
virtual
CUSFManager
CUSFM
CUSF(1,NumOfCUSFs):
CUSF_FSM
BCUSM
Virtual
CUSF_FSM
BCUSM_Out
BCUSM_Interface
virtual
BCUSM
BCUSM_In
CUSF
BCUSM_A(1,NumOfBCUSMs):
BCUSM

Virtual Block Type CUSF

2(2)

/***SIGNAL DEFINITIONS FOR DETECTION POINTS ***/


Virtual Process Type CUSFManager
1(5)
Allocate_ Index
Add_ Index
GetIndex_ fromInstance
GetInstance_ fromIndex
GetIndex_ fromSigConId
SetSig_ ConAssoc
IsInstance



```
/* The Manager process maintains a mapping between an Index (which can be correlated
with a  AssRef, transactionId) and the corresponding StateModel (CUSF) process.
This information is needed to pass the IN operation from the SCF to the correct process
instance.*/

NEWTYPE SigConTableType
  ARRAY(AssRef, TransactionID)
ENDNEWTYPE;

NEWTYPE TableType
  ARRAY(IndexType, RecordType)
ENDNEWTYPE;

NEWTYPE RecordType STRUCT
  used Boolean;
  instance Pid;
ENDNEWTYPE;

/* Array containing information if an Instance is in use or not */
NEWTYPE ExistingInstanceType
  ARRAY(PId,Boolean)
ENDNEWTYPE;

/* Maximum number of records supported */
SYNONYM MaxNumOfRecords NATURAL=20;

SYNTYPE TransactionId =IndexType
ENDSYNTYPE;
```

Virtual Process Type CUSFManager

3(5)

```
/*** VARIABLE DECLARATIOS ***/
```

```
DCL

/*INAP CS2 operation arguments*/
```

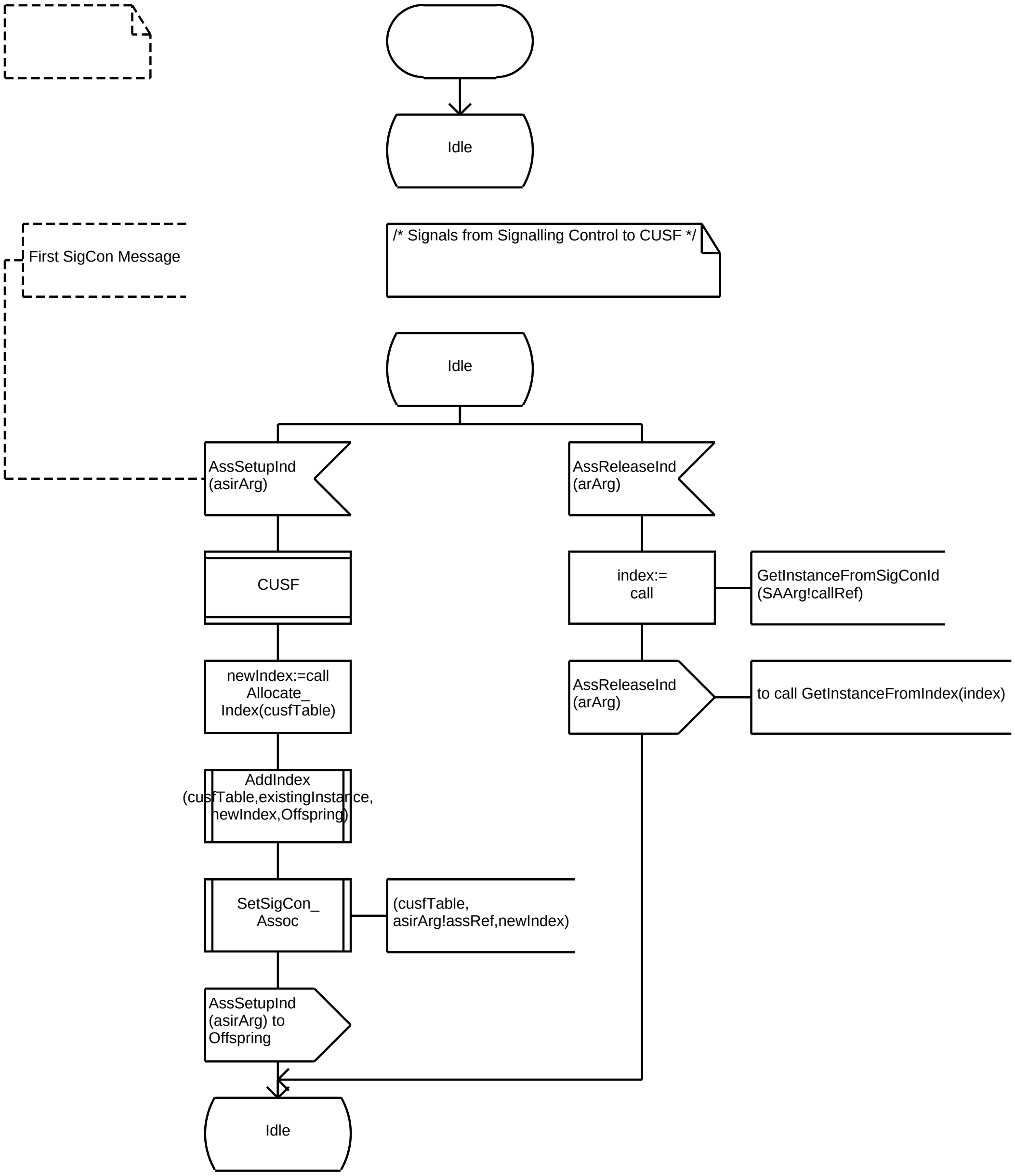
```
DCL
/* Routing tables*/
cusfTable TableType
existingInstance Exis
sigConTable SigCon
```

```
DCL

/*Signalling control primitive parameters*/

asirArg AssSetupIRType,
arArg AssReleaseType,
audArg AssUserDataType,
acArg AssComponentType;
```

Process Type CUSFManager

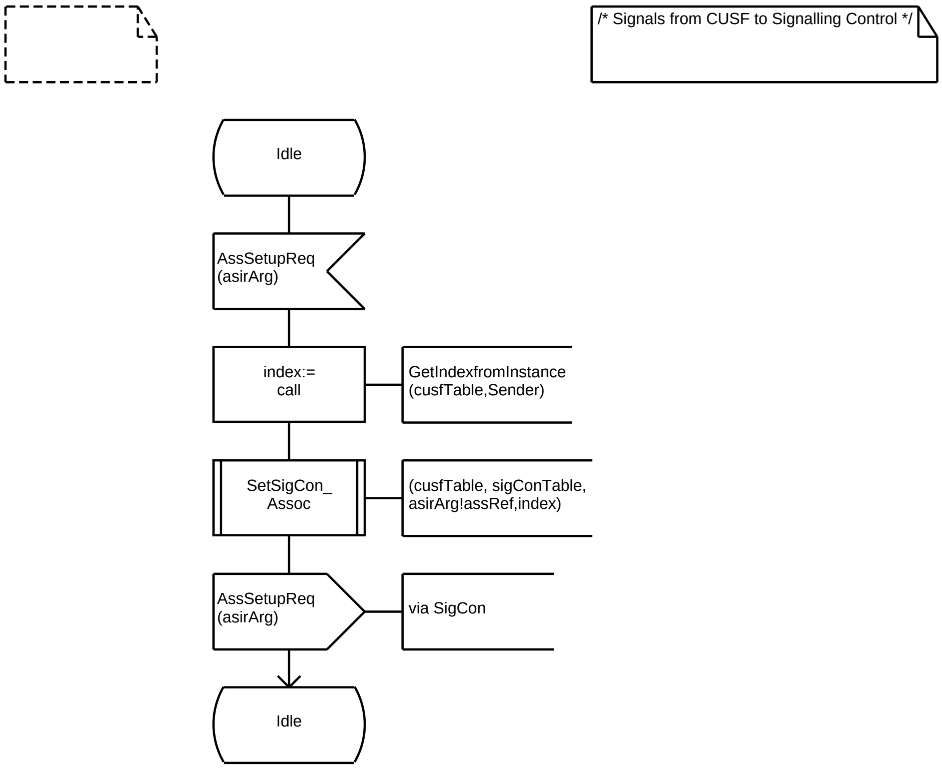
```
DCL
/* Routing tables*/
cusfTable TableType,
existingInstance ExistingInstanceType,
sigConTable SigControlTableType,

/*Other variables*/
cusf PId,
index, newindex TransactionID,
asirArg AssSetupIRType,
arArg AssReleaseType;
```

Virtual Process Type CUSFManager



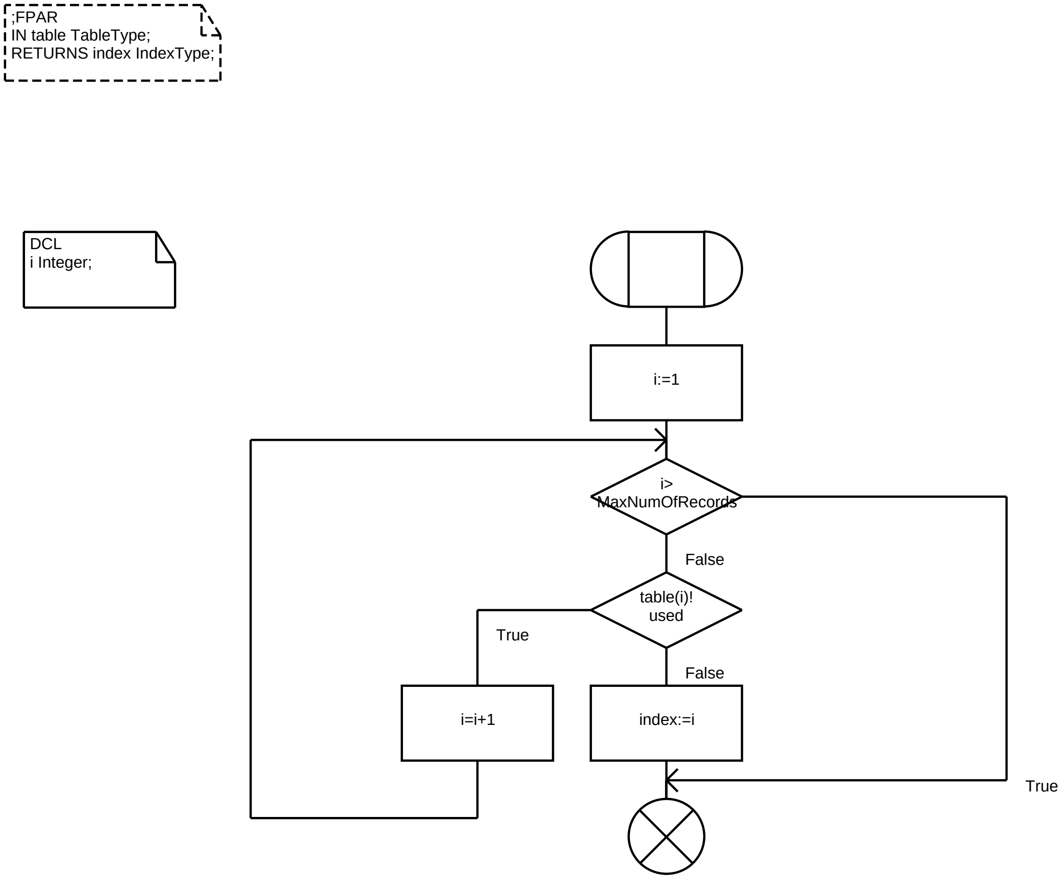
Virtual Process Type CUSFManager

5(5)



Procedure AllocateIndex

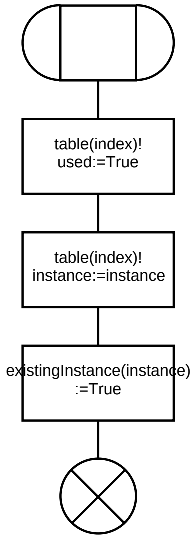
1(1)



Procedure AddIndex

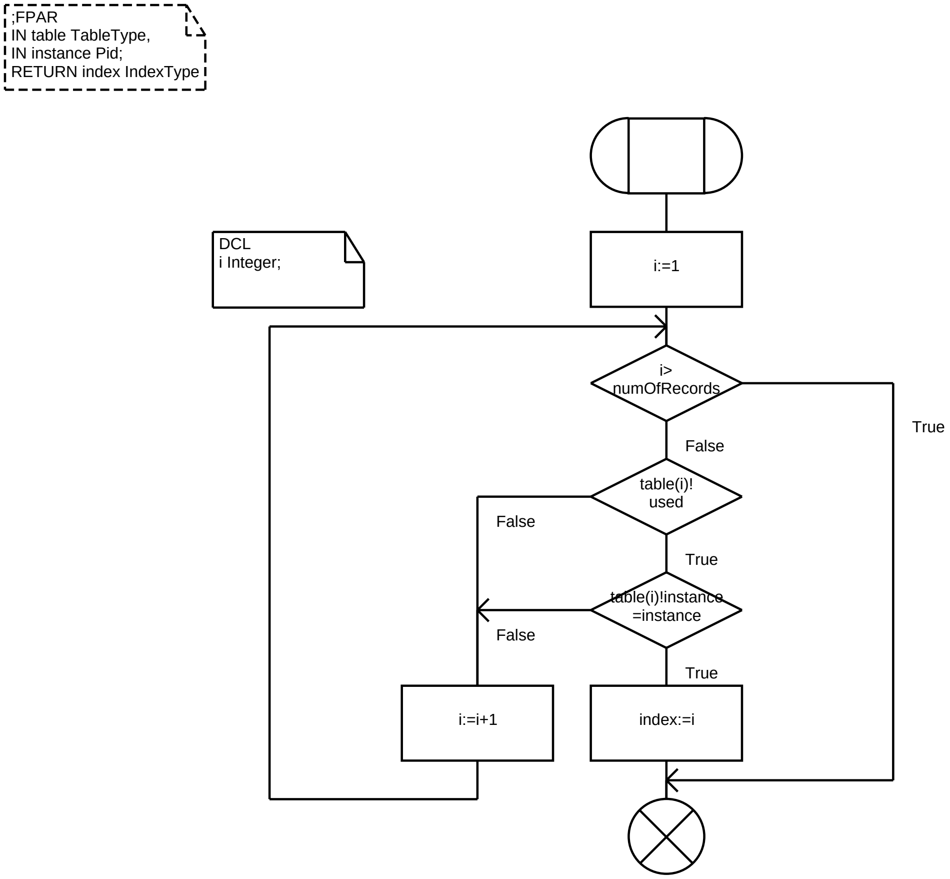
1(1)

```
;FPAR
IN table TableType,
IN existingInstance ExistingInstanceType,
IN index IndexType,
IN instance PID;
```



Procedure GetIndexfromInstance

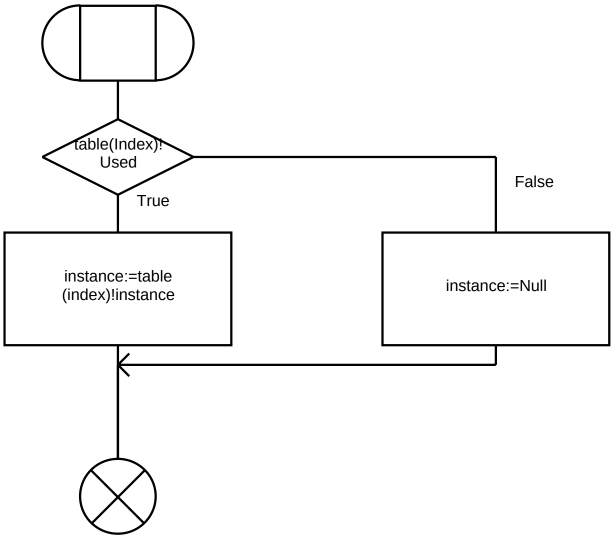
1(1)



Procedure GetInstancefromIndex

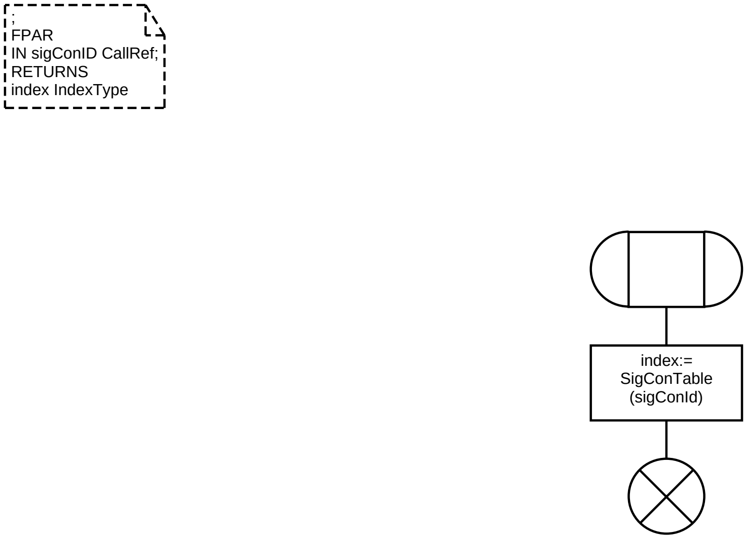
1(1)

```
;FPAR
IN table TableType,
IN index IndexType;
RETURNS instance Pid;
```



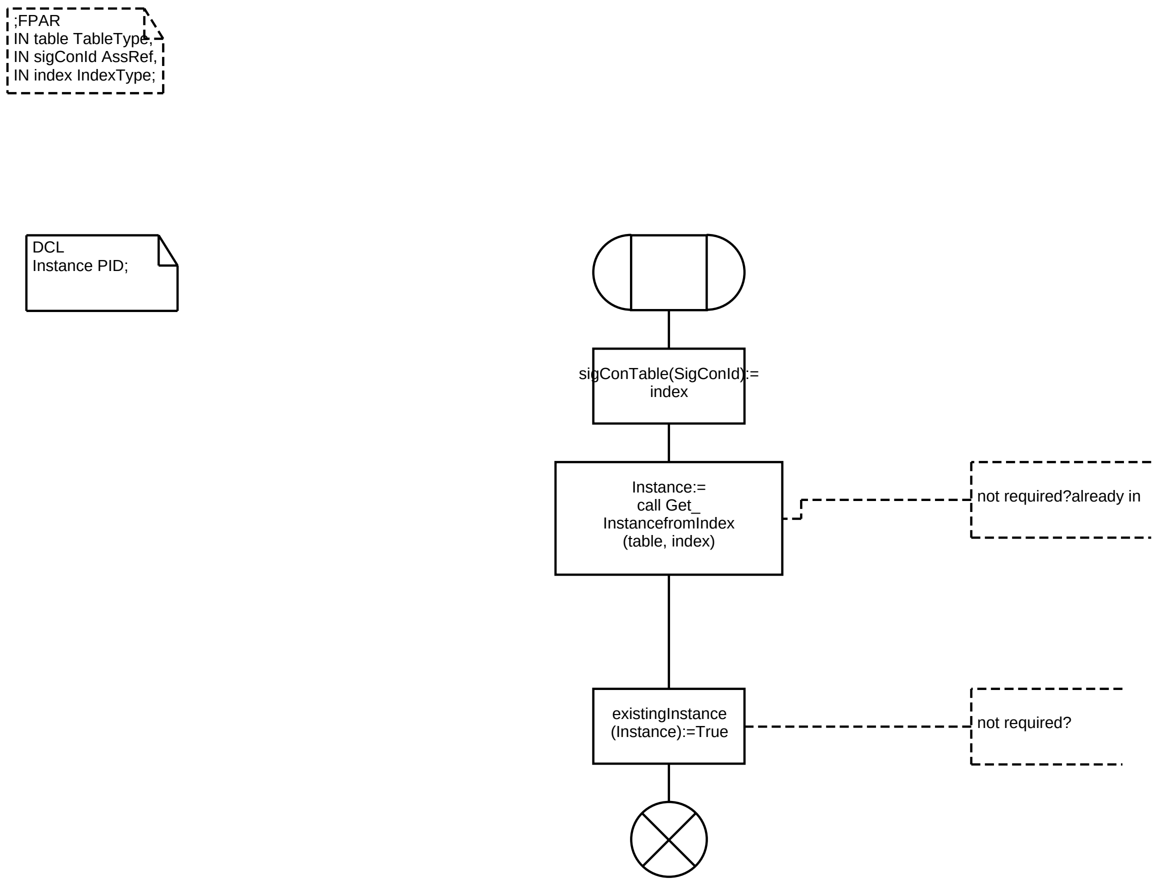
Procedure GetIndexfromSigConId

1(1)



Procedure SetSigConAssoc

1(1)



Virtual Process Type CUSF_FSM

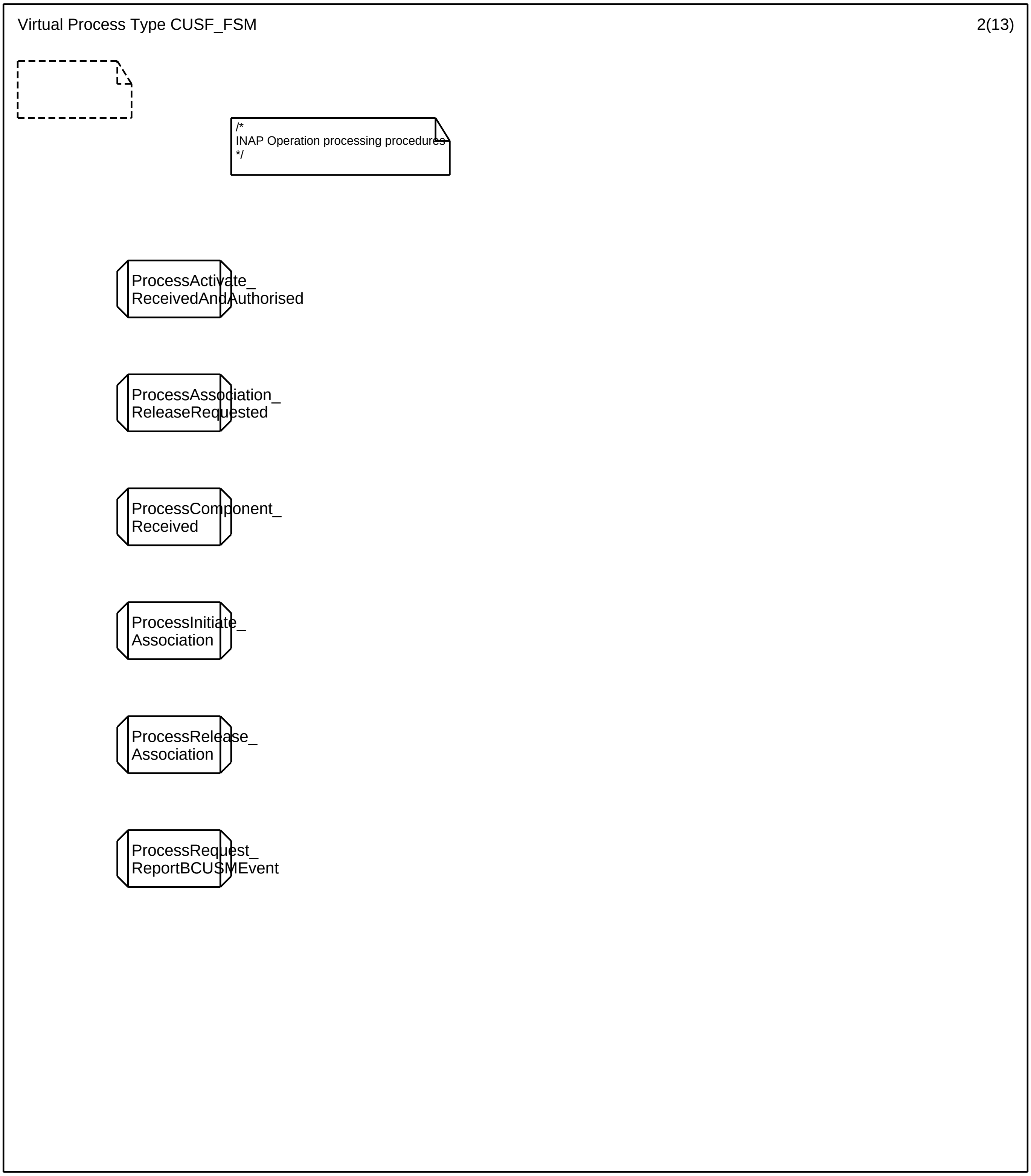
```
DCL
legId LegID_AType,
serviceKey ServiceKey_AType;
```

```
/* Variable Declarations*/
DCL
eventTable_A   EventList_AType,
eventTypeBCUSM EventTypeBCUSMType,
ApplicationActive BOOLEAN:=False,
InitialTcusfActive Boolean:= False,
DP_A DP_AArg,
PIA PIAArg;
```

```
/*Signal Parameter Declarations*/

DCL
RRBCUSMEArg RequestReportBCUSMEventType;
```

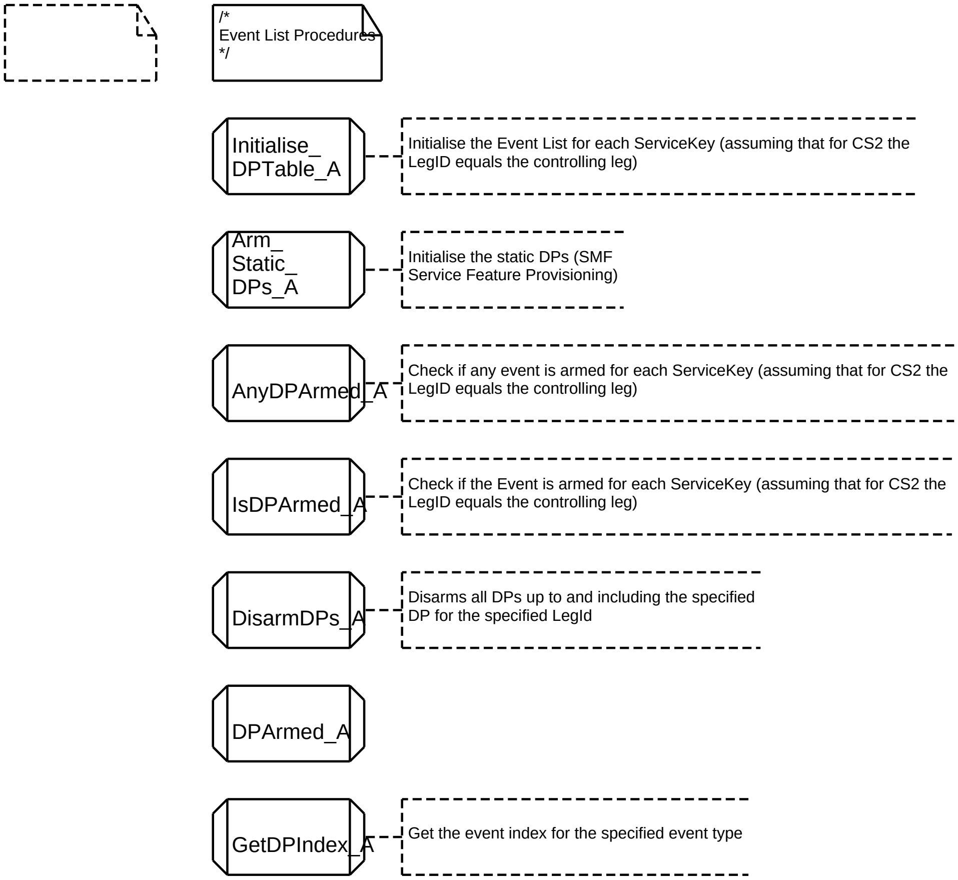
```
/* Timer Definitions */

/*
The timer TCUSF is used to prevent excessive call suspension time and to guard the association
between the CUSF and the SCF.
*/
TIMER Tcusf;

/*
The timer can have the following values

Tcusf_Duration1 − Sending an Association Trigger
Tcusf_Duration2 − Entering state Waiting_for_Instruction
*/

/* The Tcusf durations have been initialise to nomial values*/
DCL
Tcusf_Duration1 DURATION:=100,
Tcusf_Duration2 DURATION:=200,

Tcusf_Duration DURATION;

/* The following flags are used to control the operation of the timer Fcusf in Waiting_for_Instruction state.
*/

DCL
InitialTcusfActive BOOLEAN := False,
InitialTssfReset BOOLEAN := False;
```

```
ARAAArg ActivateReceivedAndAuthorisedArg,
ARRArg AssociationReleaseRequestedArg,
CRArg ComponentReceivedArg,
IAArg InitiateAssociationArg,
RAArg ReleaseAssociationArg,
RRBCUSMEArg RequestReportBCUSMEventArg;
```


Virtual Process Type CUSF_FSM
2(13)
/*
INAP Operation processing procedures
*/
ProcessActivate_
ReceivedAndAuthorised
ProcessAssociation_
ReleaseRequested
ProcessComponent_
Received
ProcessInitiate_
Association
ProcessRelease_
Association
ProcessRequest_
ReportBCUSMEvent

Virtual Process Type CUSF_FSM

3(13)



Initialise the Event List for each ServiceKey (assuming that for CS2 the LegID equals the controlling leg)

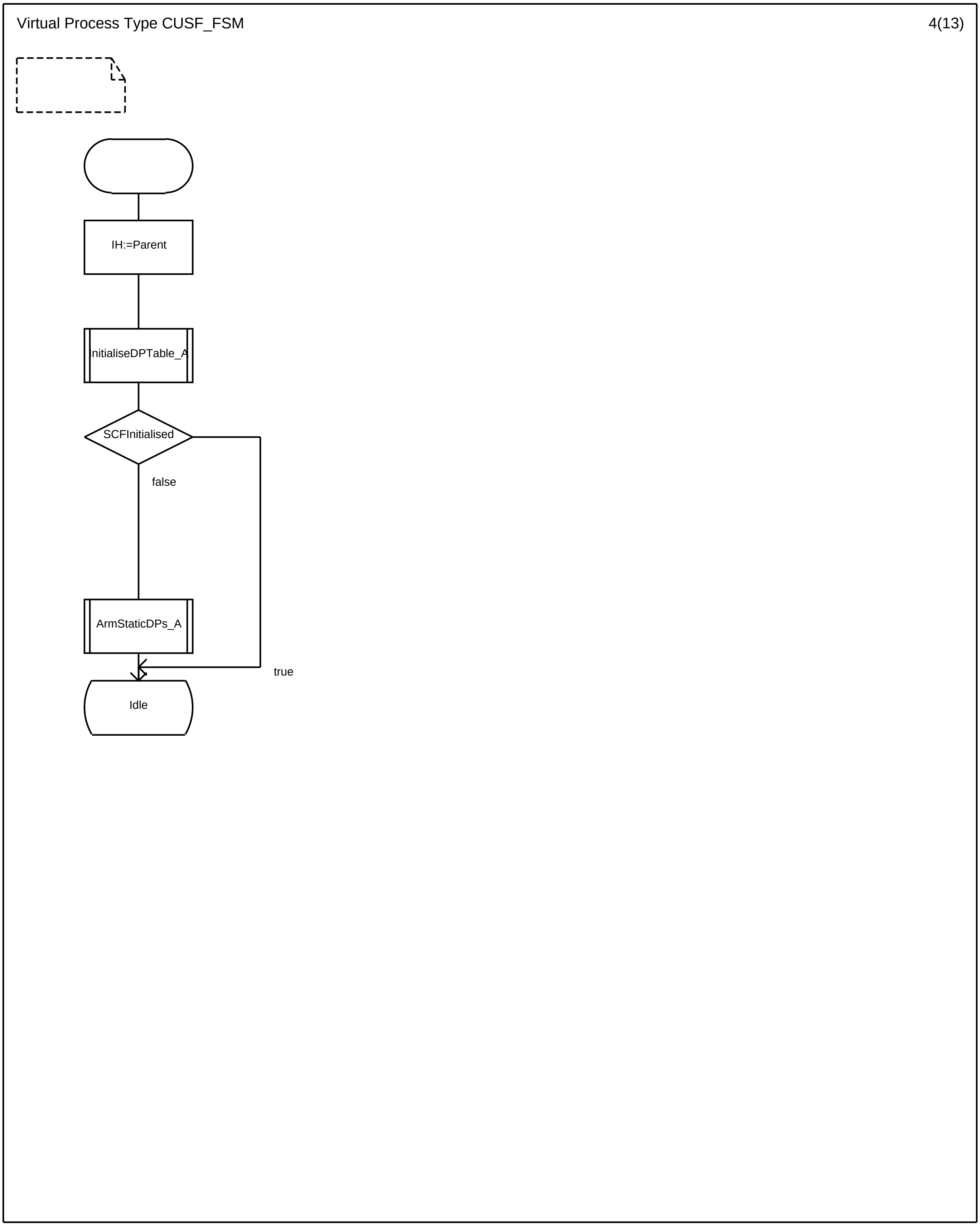
Initialise the static DPs (SMF Service Feature Provisioning)

Check if any event is armed for each ServiceKey (assuming that for CS2 the LegID equals the controlling leg)

Check if the Event is armed for each ServiceKey (assuming that for CS2 the LegID equals the controlling leg)

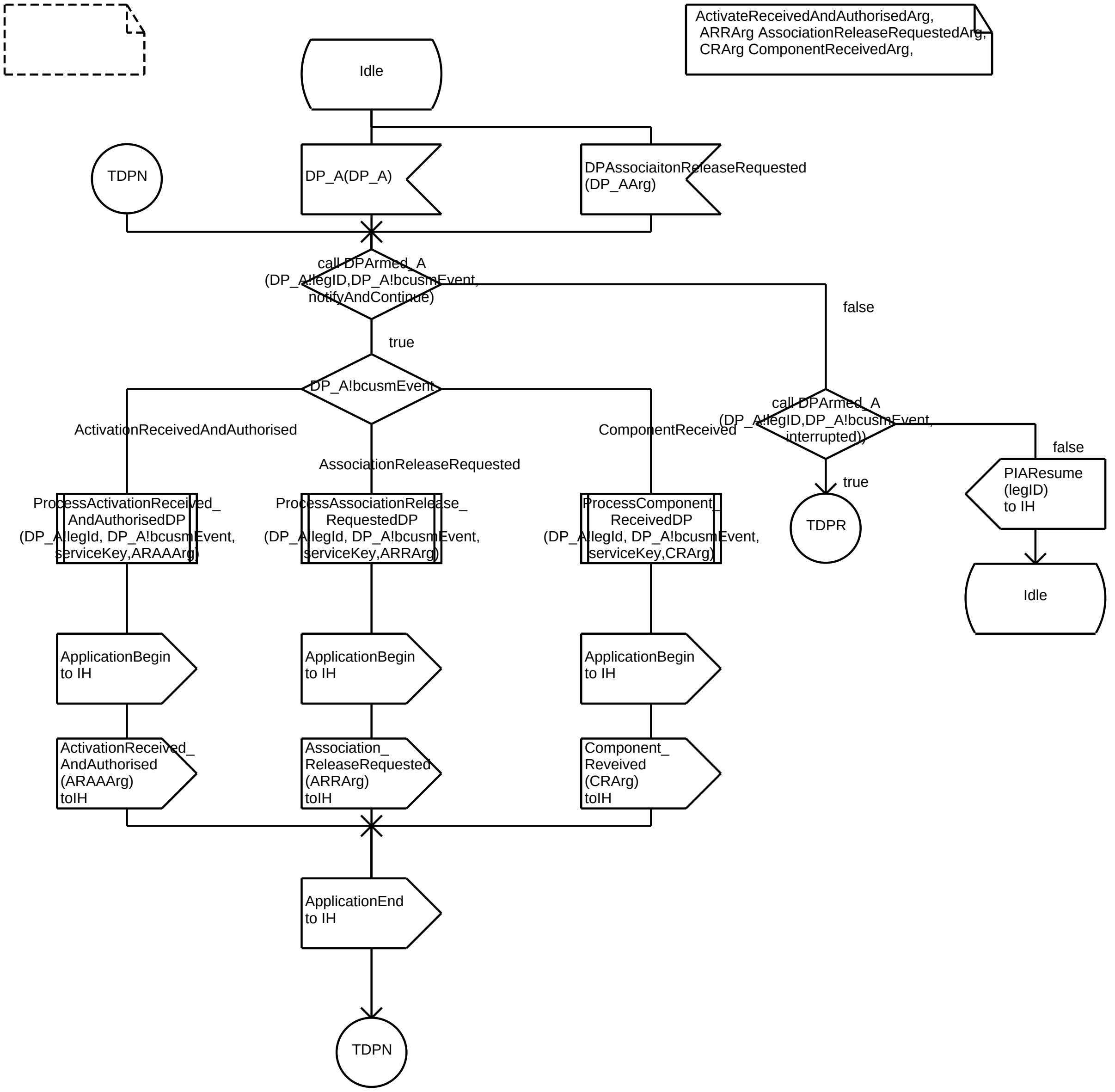
Disarms all DPs up to and including the specified DP for the specified LegId

Get the event index for the specified event type


Virtual Process Type CUSF_FSM
4(13)
IH:=Parent
nitialiseDPTable_A
SCFInitialised
false
true
ArmStaticDPs_A
Idle

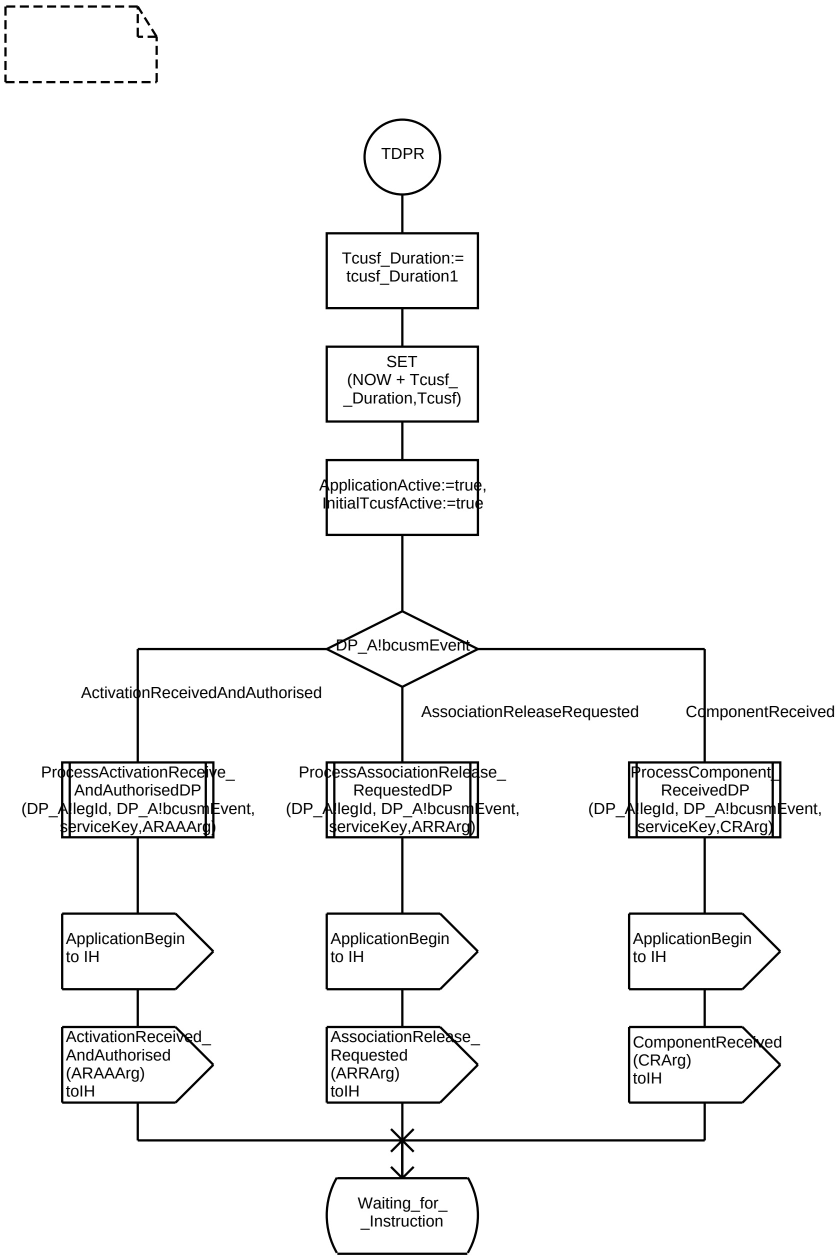
Virtual Process Type CUSF_FSM

5(13)



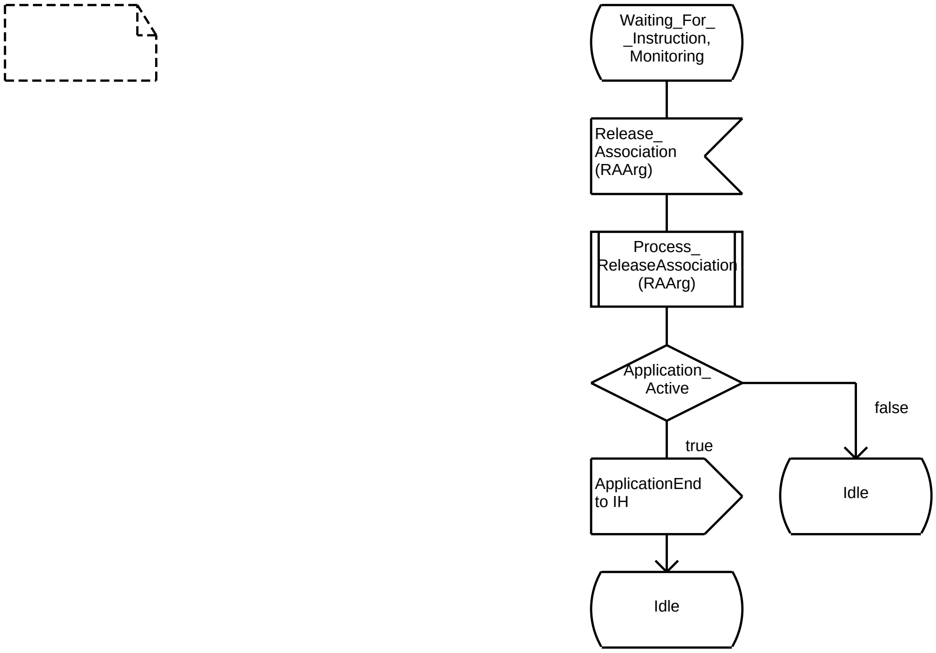
Virtual Process Type CUSF_FSM

6(13)



Virtual Process Type CUSF_FSM

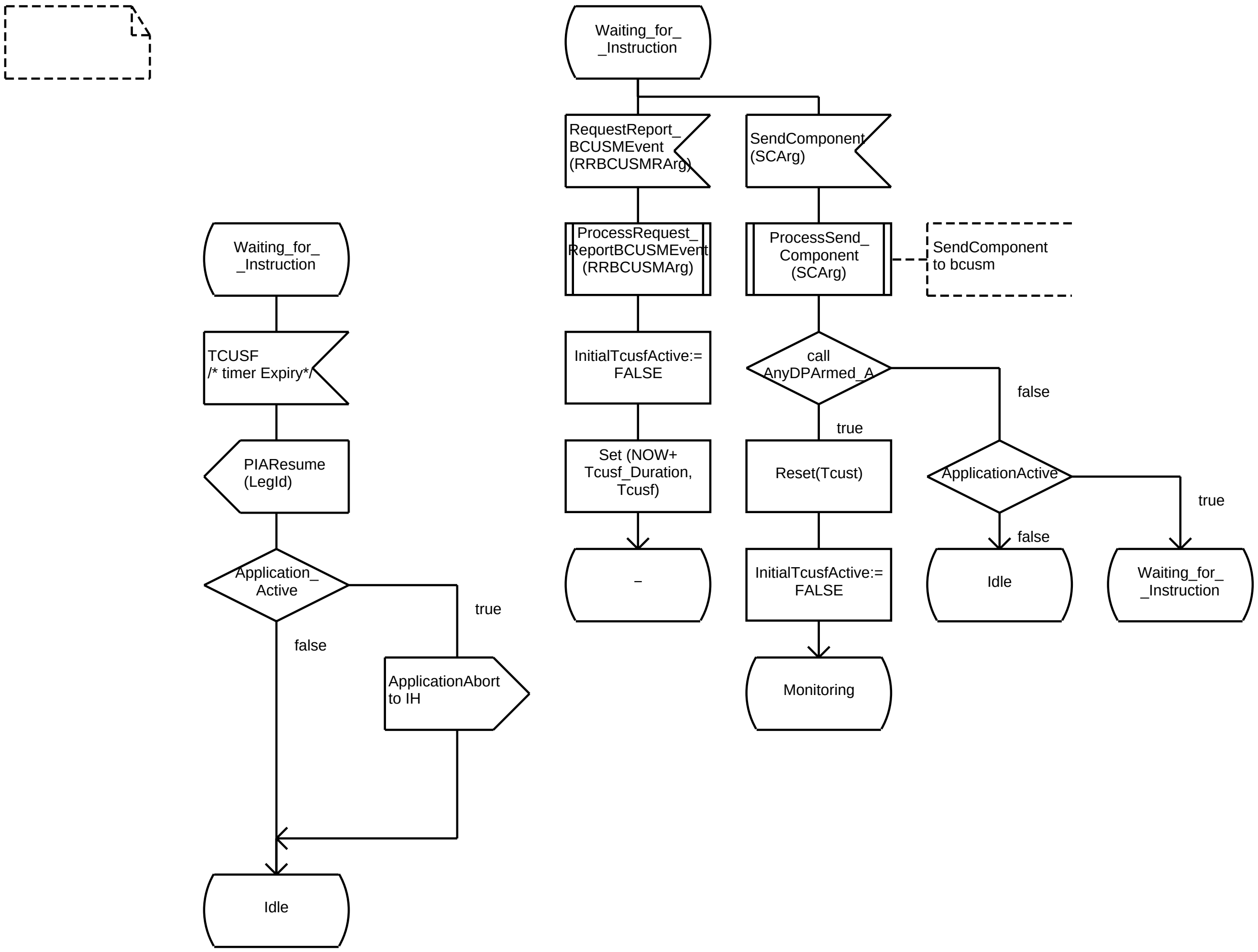
7(13)



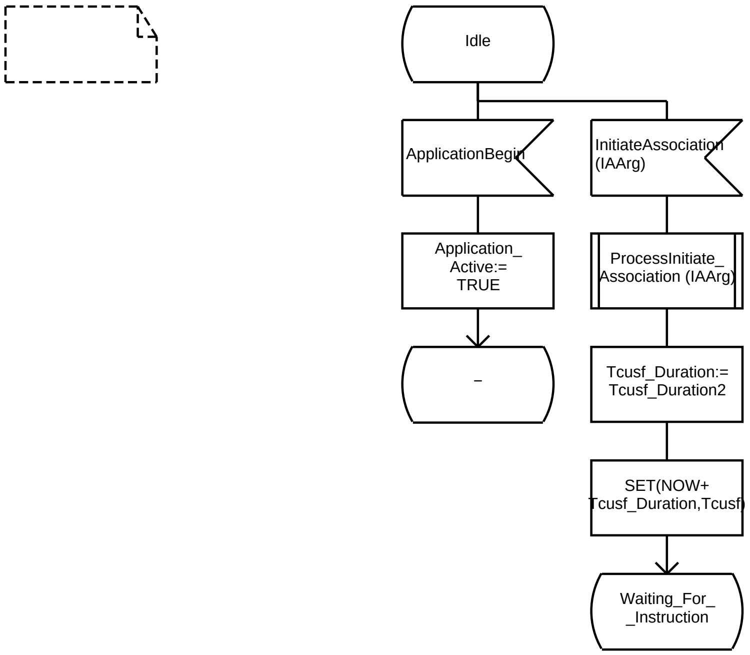
Waiting_For_ _Instruction, Monitoring
Release_ Association (RAArg)
Process_ ReleaseAssociation (RAArg)
Application_ Active
false
true
ApplicationEnd to IH
Idle
Idle

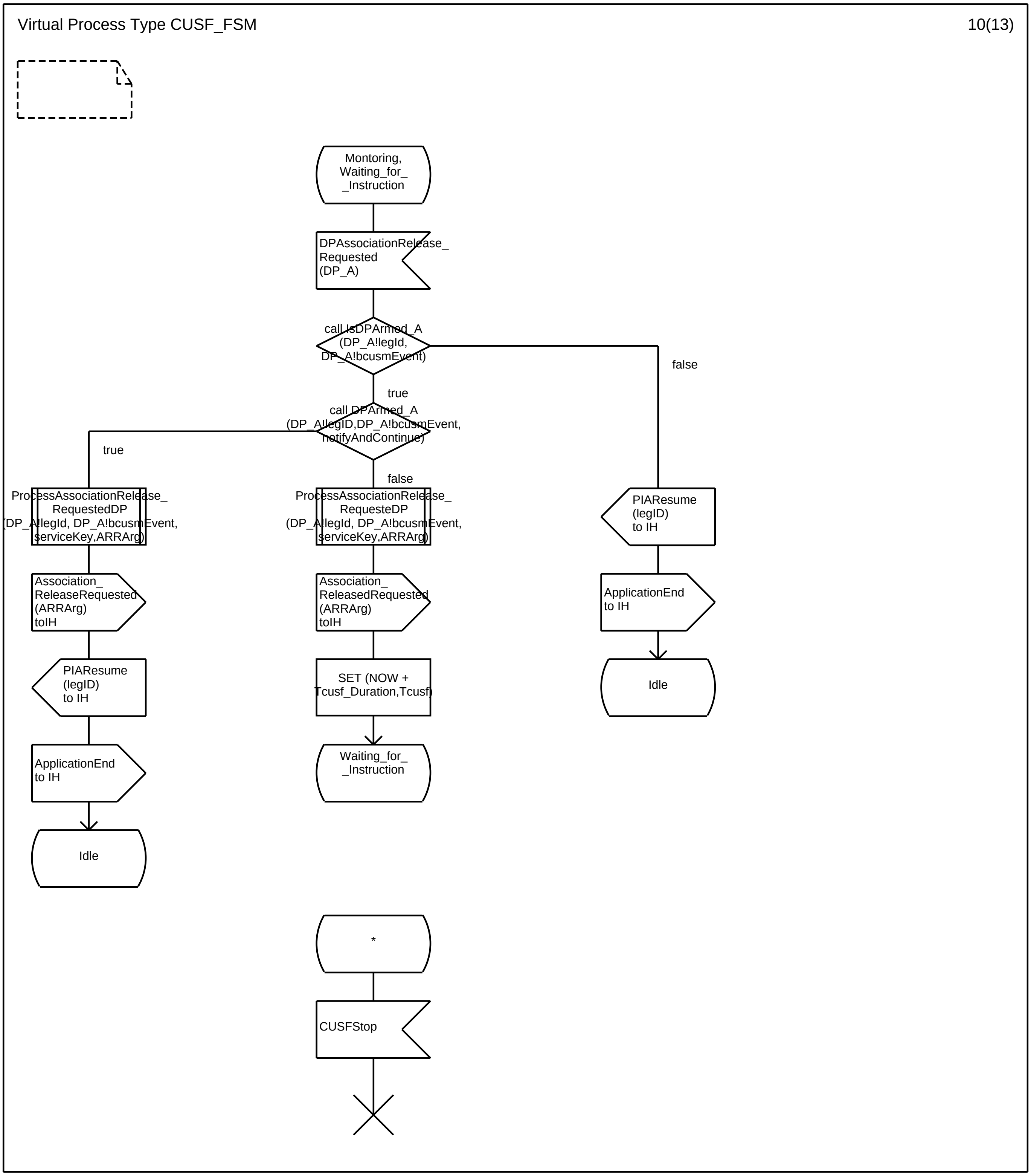
Virtual Process Type CUSF_FSM

8(13)

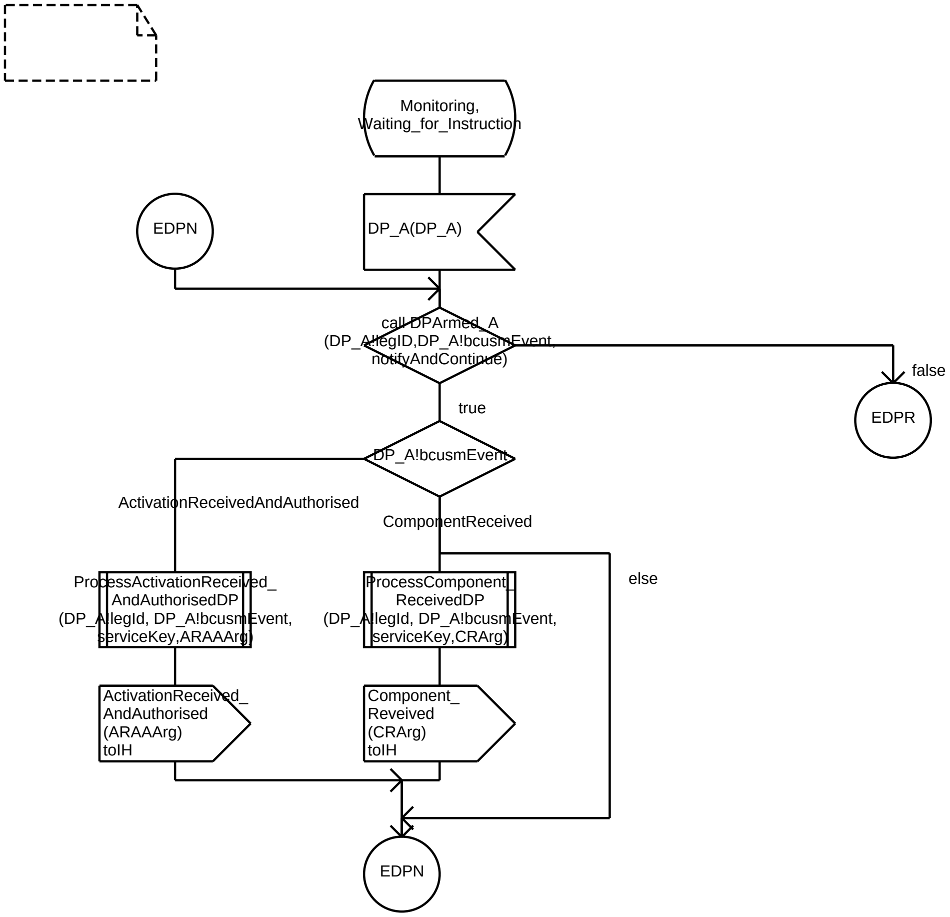


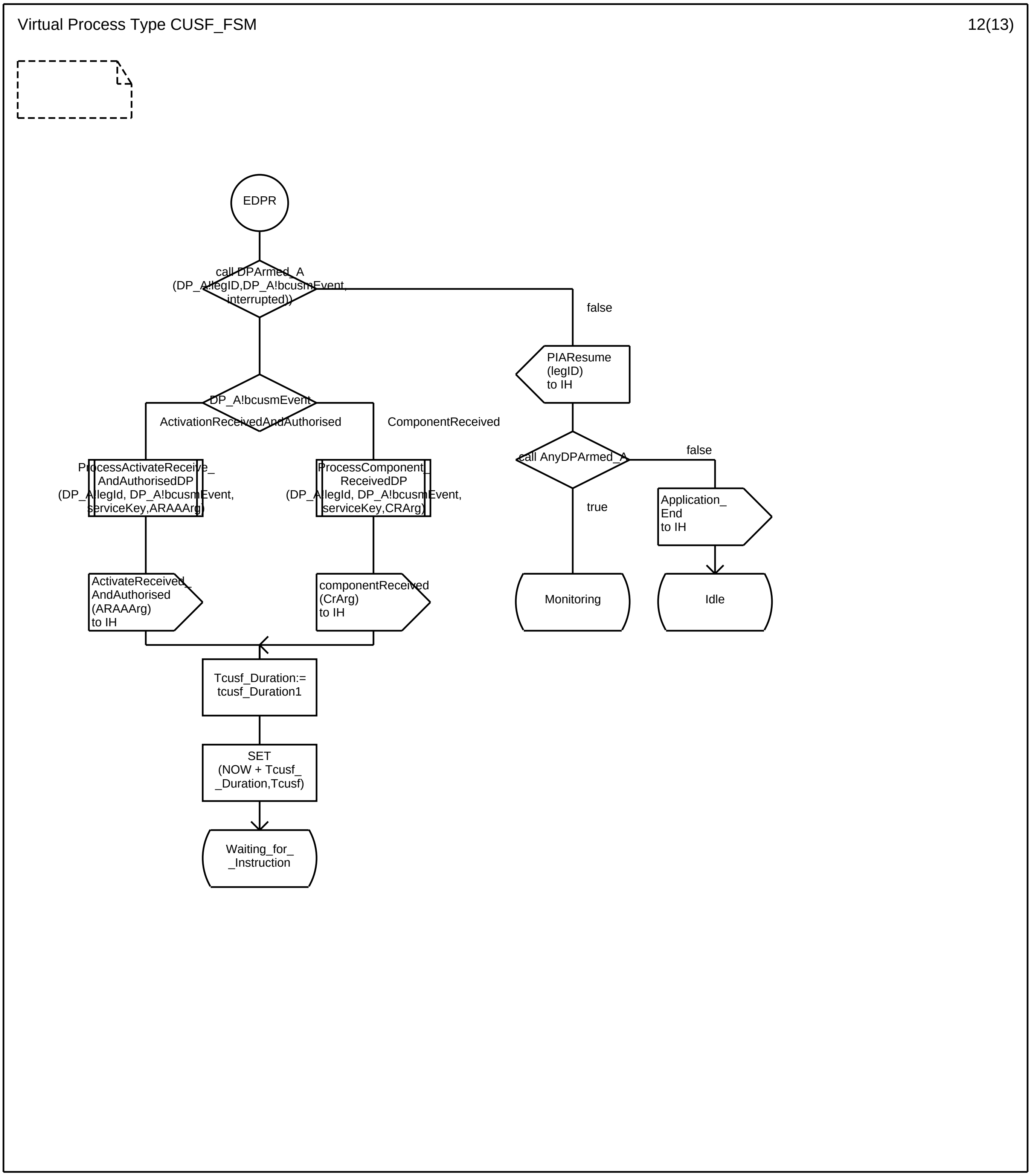
Virtual Process Type CUSF_FSM



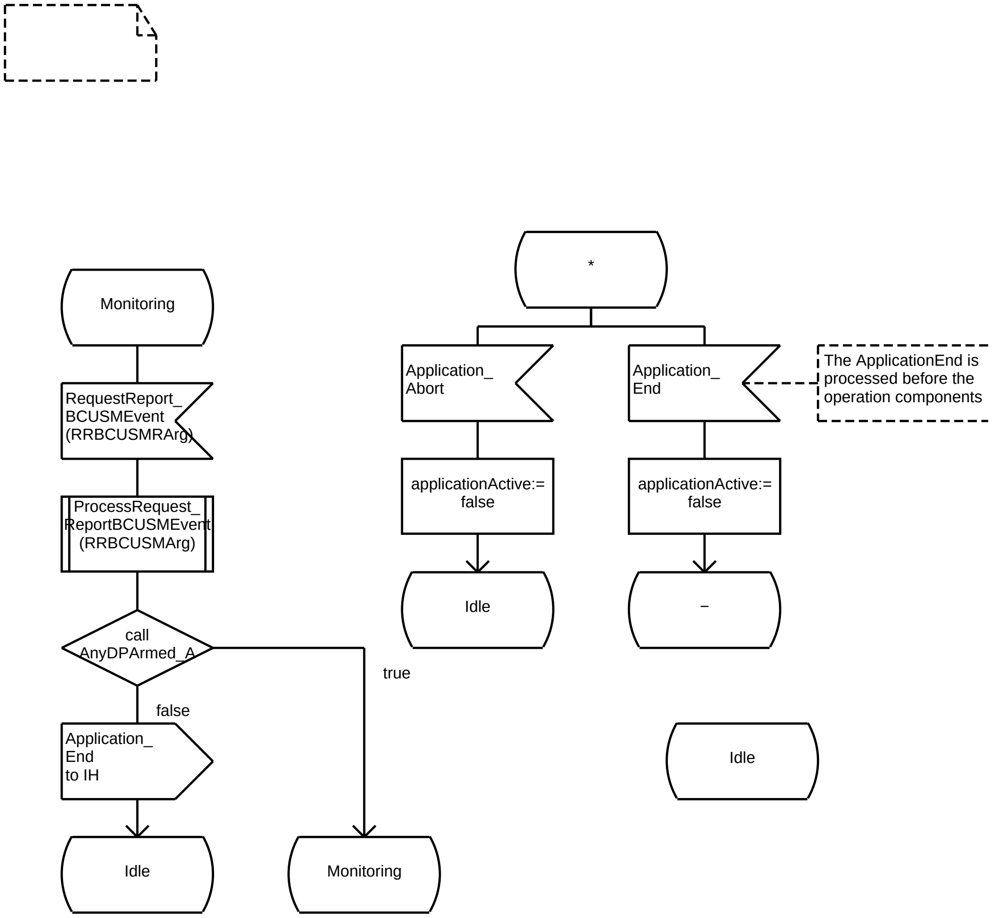

Virtual Process Type CUSF_FSM
10(13)
Montoring, Waiting_for_ _Instruction
DPAssociationRelease_ Requested (DP_A)
call IsDPArmed_A (DP_A!legId, DP_A!bcusmEvent)
false
true
call DPArmed_A (DP_A!legID,DP_A!bcusmEvent, notifyAndContinue)
true
false
ProcessAssociationRelease_ RequestedDP (DP_A!legId, DP_A!bcusmEvent, serviceKey,ARRArg)
ProcessAssociationRelease_ RequesteDP (DP_A!legId, DP_A!bcusmEvent, serviceKey,ARRArg)
PIAResume (legID) to IH
Association_ ReleaseRequested (ARRArg) toIH
Association_ ReleasedRequested (ARRArg) toIH
ApplicationEnd to IH
PIAResume (legID) to IH
SET (NOW + Tcusf_Duration,Tcusf)
Idle
ApplicationEnd to IH
Waiting_for_ _Instruction
Idle
*
CUSFStop

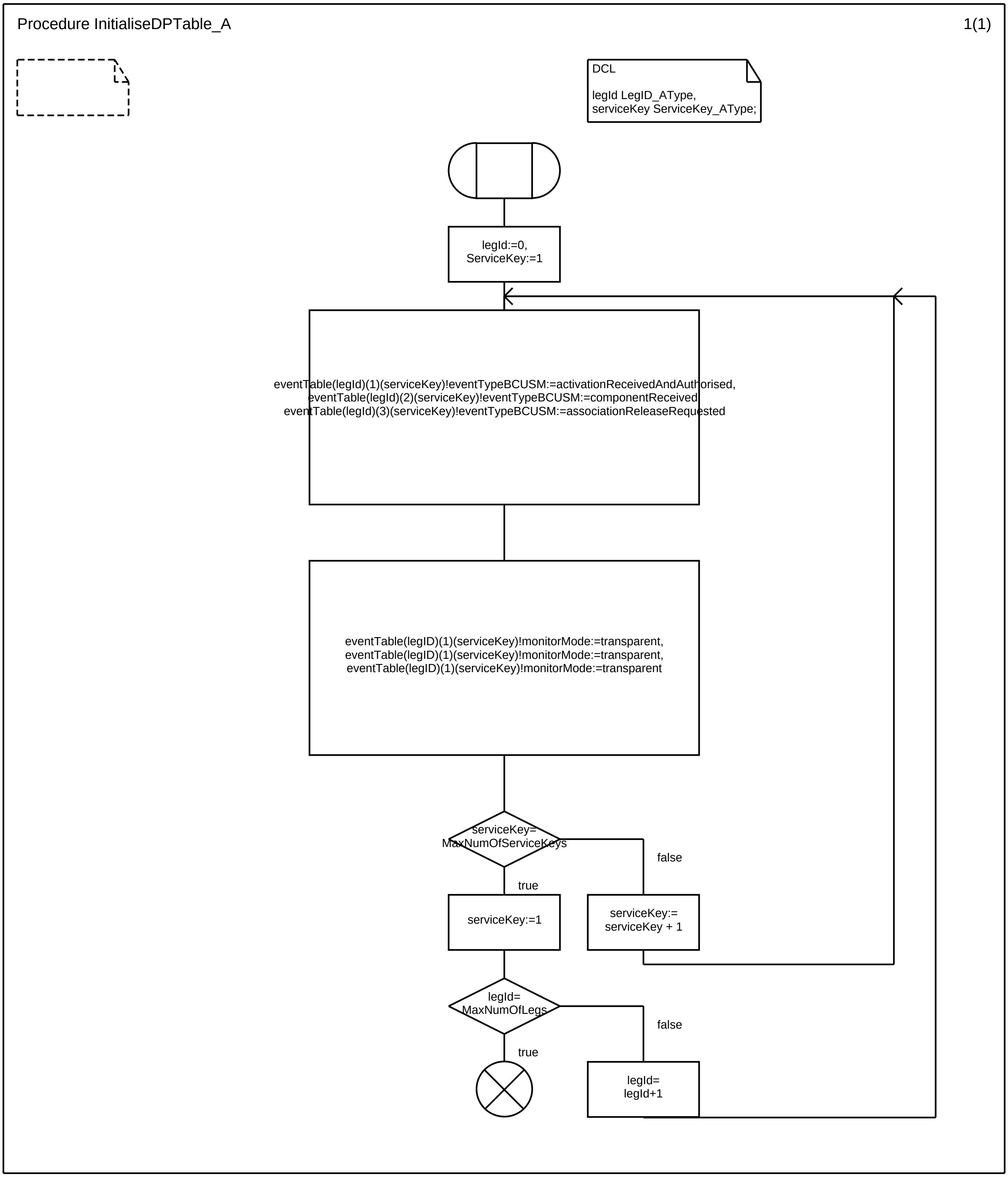
Virtual Process Type CUSF_FSM




Virtual Process Type CUSF_FSM
12(13)
EDPR
call DPArmed_A
(DP_A!legID,DP_A!bcusmEvent,
interrupted))
false
PIAResume
(legID)
to IH
DP_A!bcusmEvent
ActivationReceivedAndAuthorised
ComponentReceived
call AnyDPArmed_A
false
true
ProcessActivateReceive_
AndAuthorisedDP
(DP_A!legId, DP_A!bcusmEvent,
serviceKey,ARAAArg)
ProcessComponent_
ReceivedDP
(DP_A!legId, DP_A!bcusmEvent,
serviceKey,CRArg)
Application_
End
to IH
ActivateReceived_
AndAuthorised
(ARAAArg)
to IH
componentReceived
(CrArg)
to IH
Monitoring
Idle
Tcusf_Duration:=
tcusf_Duration1
SET
(NOW + Tcusf_
_Duration,Tcusf)
Waiting_for_
_Instruction

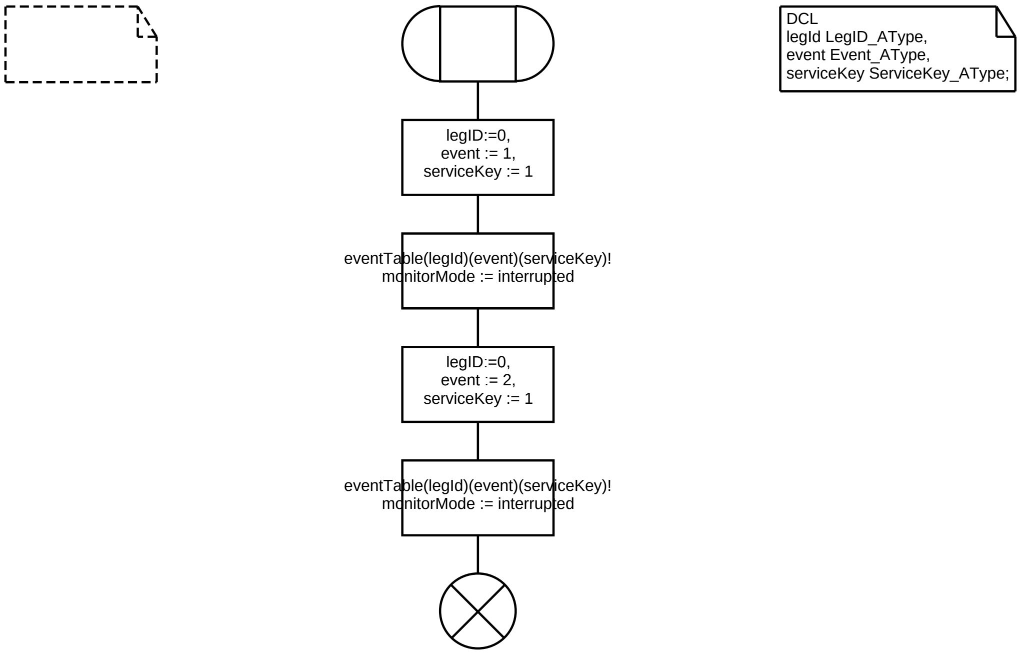
Virtual Process Type CUSF_FSM

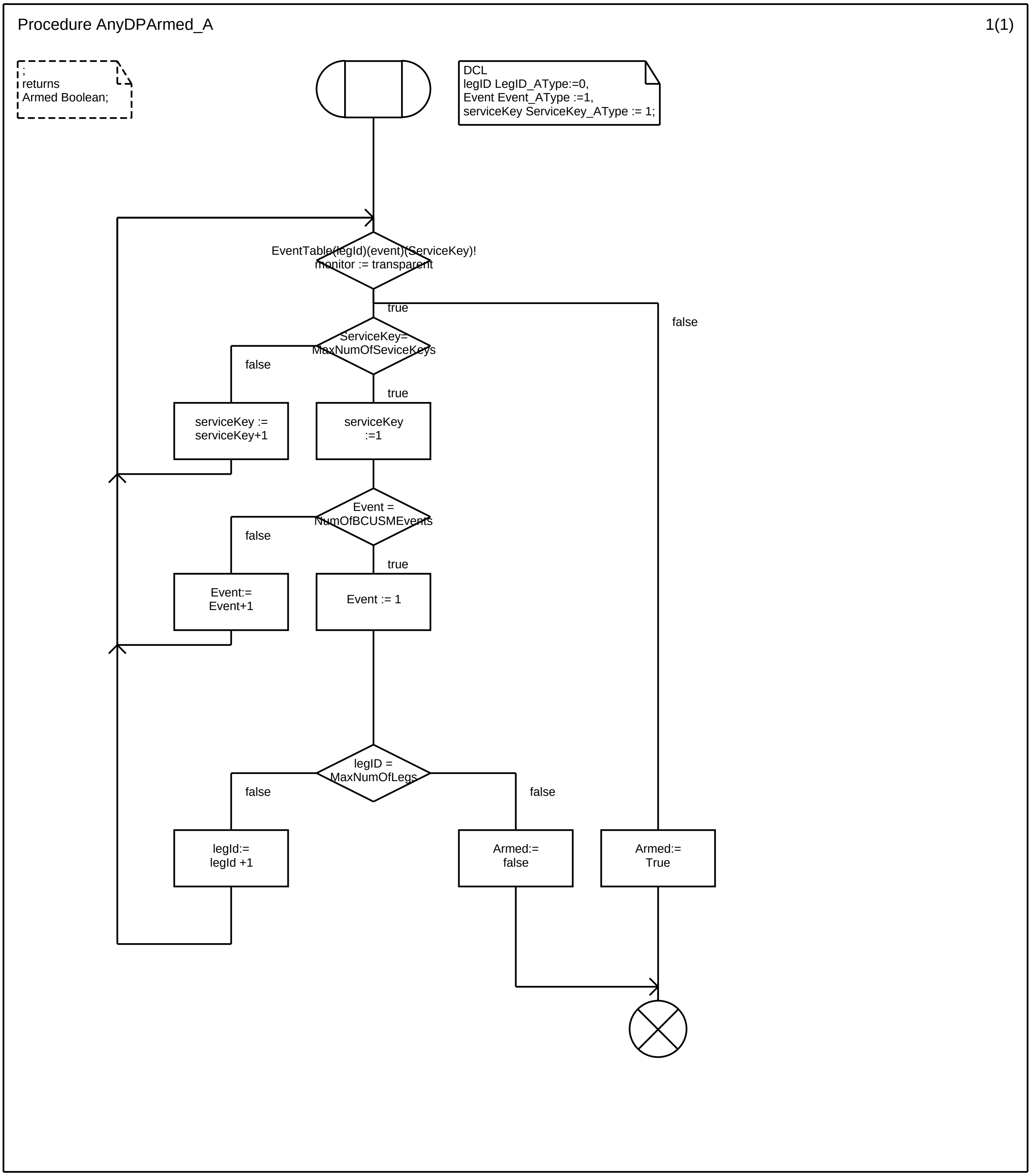


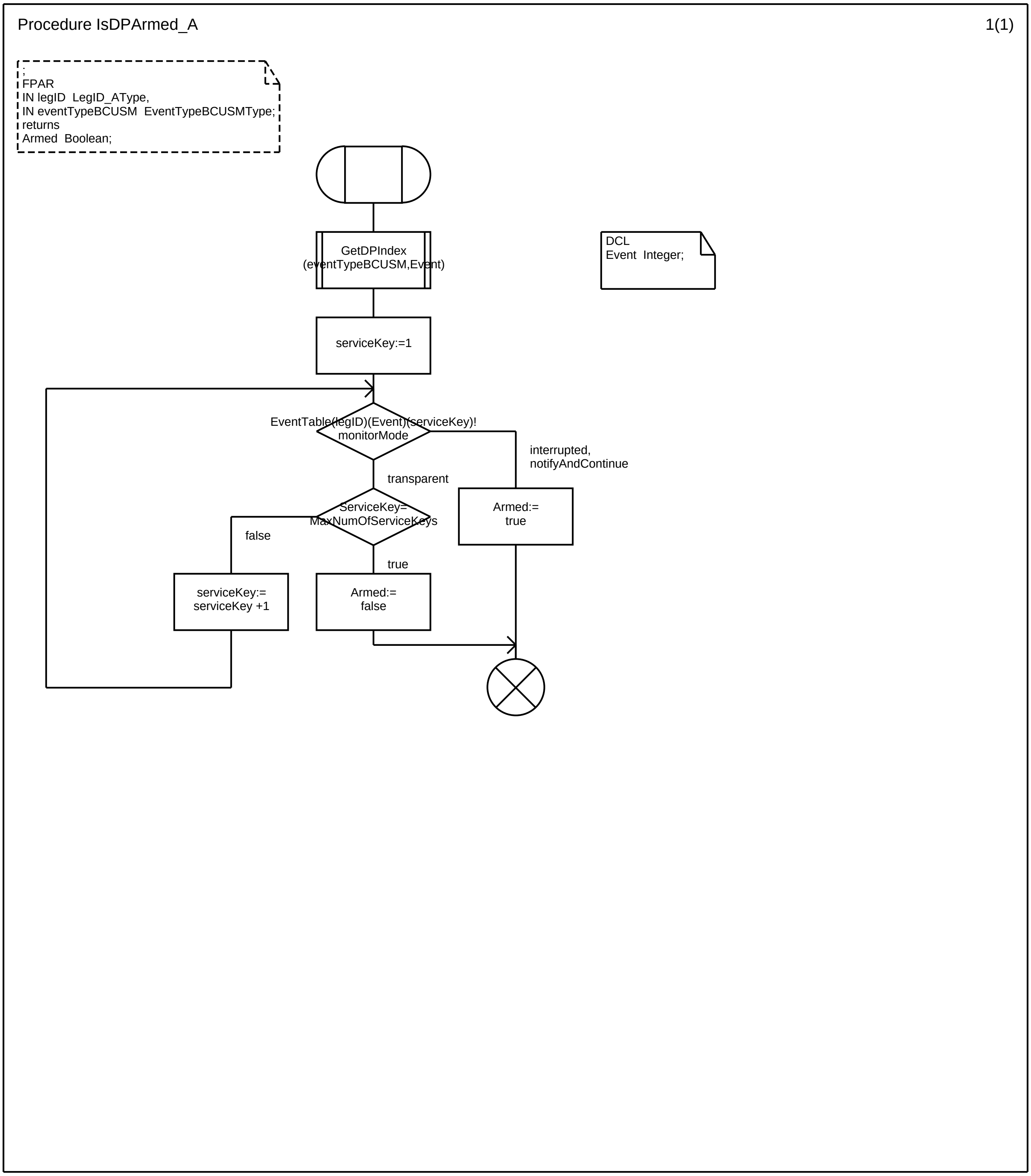

Procedure InitialiseDPTable_A
1(1)
DCL
legId LegID_AType,
serviceKey ServiceKey_AType;
legId:=0,
ServiceKey:=1
eventTable(legId)(1)(serviceKey)!eventTypeBCUSM:=activationReceivedAndAuthorised,
eventTable(legId)(2)(serviceKey)!eventTypeBCUSM:=componentReceived
eventTable(legId)(3)(serviceKey)!eventTypeBCUSM:=associationReleaseRequested
eventTable(legID)(1)(serviceKey)!monitorMode:=transparent,
eventTable(legID)(1)(serviceKey)!monitorMode:=transparent,
eventTable(legID)(1)(serviceKey)!monitorMode:=transparent
serviceKey=
MaxNumOfServiceKeys
false
true
serviceKey:=1
serviceKey:=
serviceKey + 1
legId=
MaxNumOfLegs
false
true
legId=
legId+1

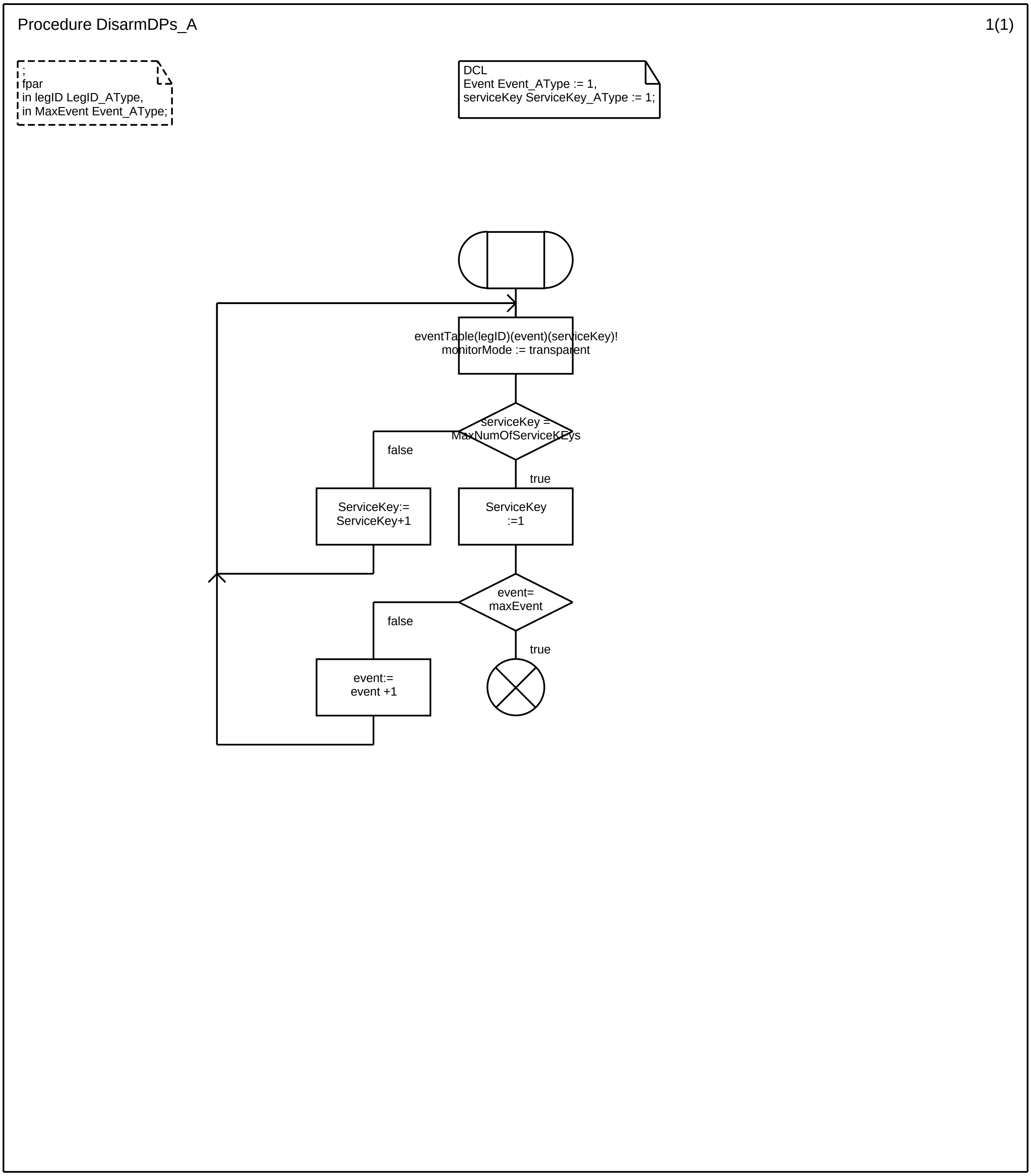
Procedure ArmStaticDPs_A

1(1)

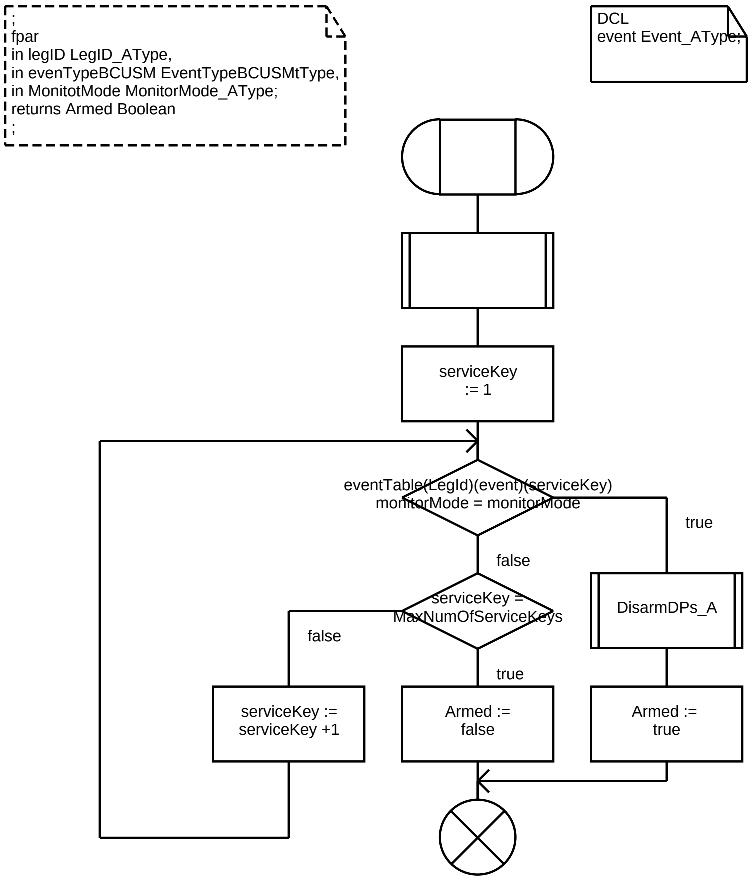

DCL
legId LegID_AType,
event Event_AType,
serviceKey ServiceKey_AType;
legID:=0,
event := 1,
serviceKey := 1
eventTable(legId)(event)(serviceKey)!
monitorMode := interrupted
legID:=0,
event := 2,
serviceKey := 1
eventTable(legId)(event)(serviceKey)!
monitorMode := interrupted


Procedure AnyDPArmed_A
1(1)
;
returns
Armed Boolean;
DCL
legID LegID_AType:=0,
Event Event_AType :=1,
serviceKey ServiceKey_AType := 1;
EventTable(legId)(event)(ServiceKey)!
monitor := transparent
true
false
ServiceKey=
MaxNumOfSeviceKeys
false
true
serviceKey :=
serviceKey+1
serviceKey
:=1
Event =
NumOfBCUSMEvents
false
true
Event:=
Event+1
Event := 1
legID =
MaxNumOfLegs
false
false
legId:=
legId +1
Armed:=
false
Armed:=
True


Procedure IsDPArmed_A
1(1)
;
FPAR
IN legID LegID_AType,
IN eventTypeBCUSM EventTypeBCUSMType;
returns
Armed Boolean;
GetDPIndex
(eventTypeBCUSM,Event)
DCL
Event Integer;
serviceKey:=1
EventTable(legID)(Event)(serviceKey)!
monitorMode
interrupted,
notifyAndContinue
transparent
ServiceKey=
MaxNumOfServiceKeys
false
Armed:=
true
true
serviceKey:=
serviceKey +1
Armed:=
false


Procedure DisarmDPs_A
1(1)
;
fpar
in legID LegID_AType,
in MaxEvent Event_AType;
DCL
Event Event_AType := 1,
serviceKey ServiceKey_AType := 1;
eventTable(legID)(event)(serviceKey)!
monitorMode := transparent
serviceKey =
MaxNumOfServiceKEys
false
true
ServiceKey:=
ServiceKey+1
ServiceKey
:=1
event=
maxEvent
false
true
event:=
event +1

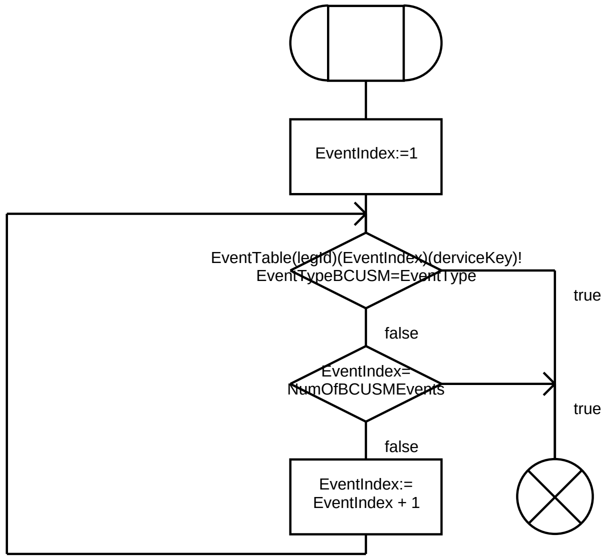
Procedure DPArmed_A 1(1)



Procedure GetDPIndex_A

1(1)

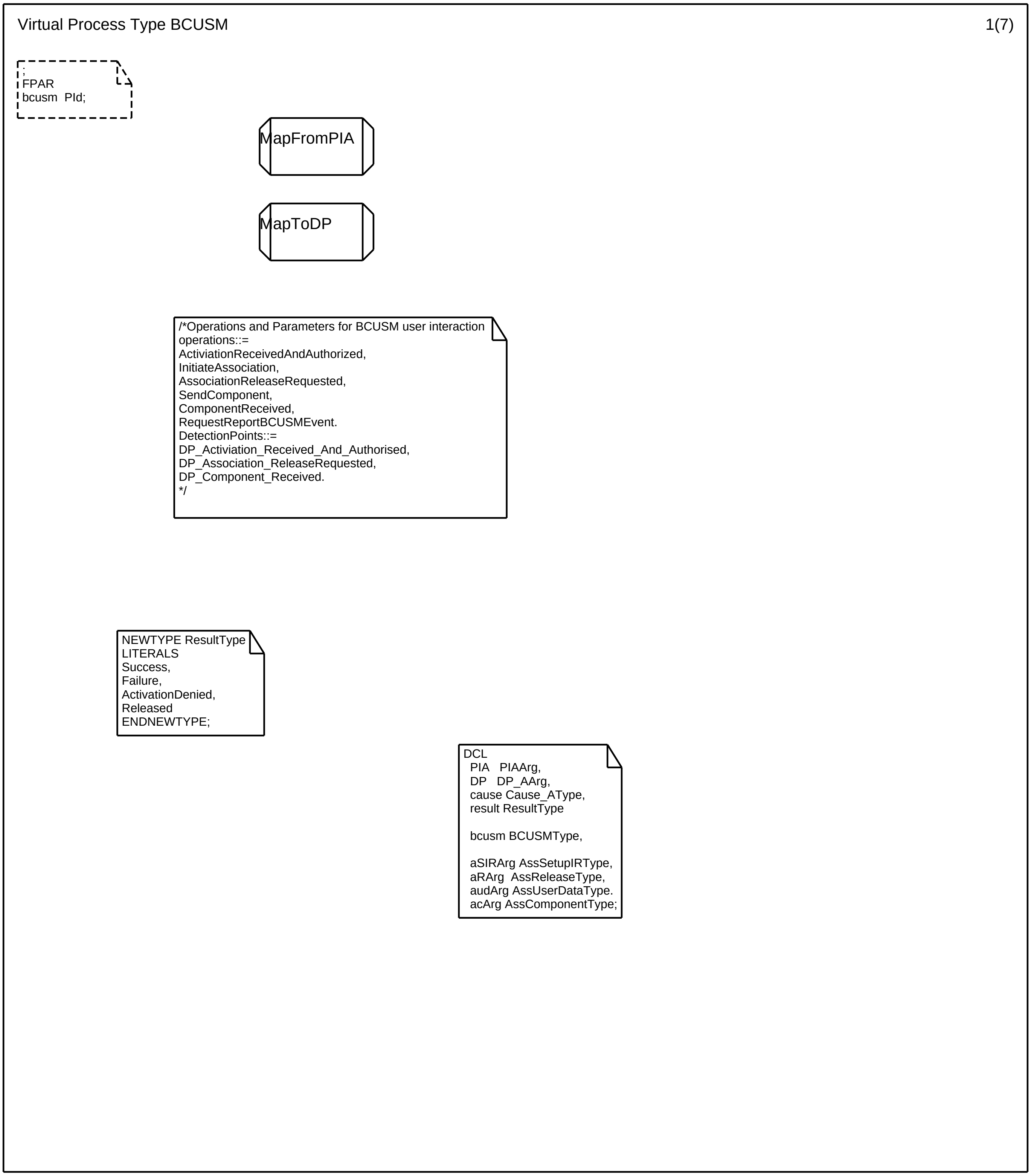
```
;
FPAR
IN eventType EventTypeBCUSMType,
IN/OUT EventIndex Integer;
```



```
DCL
legID LegID_AType :=0,
serviceKey ServiceKey_AType:=1;
```

Virtual Process Type BCUSM

1(7)

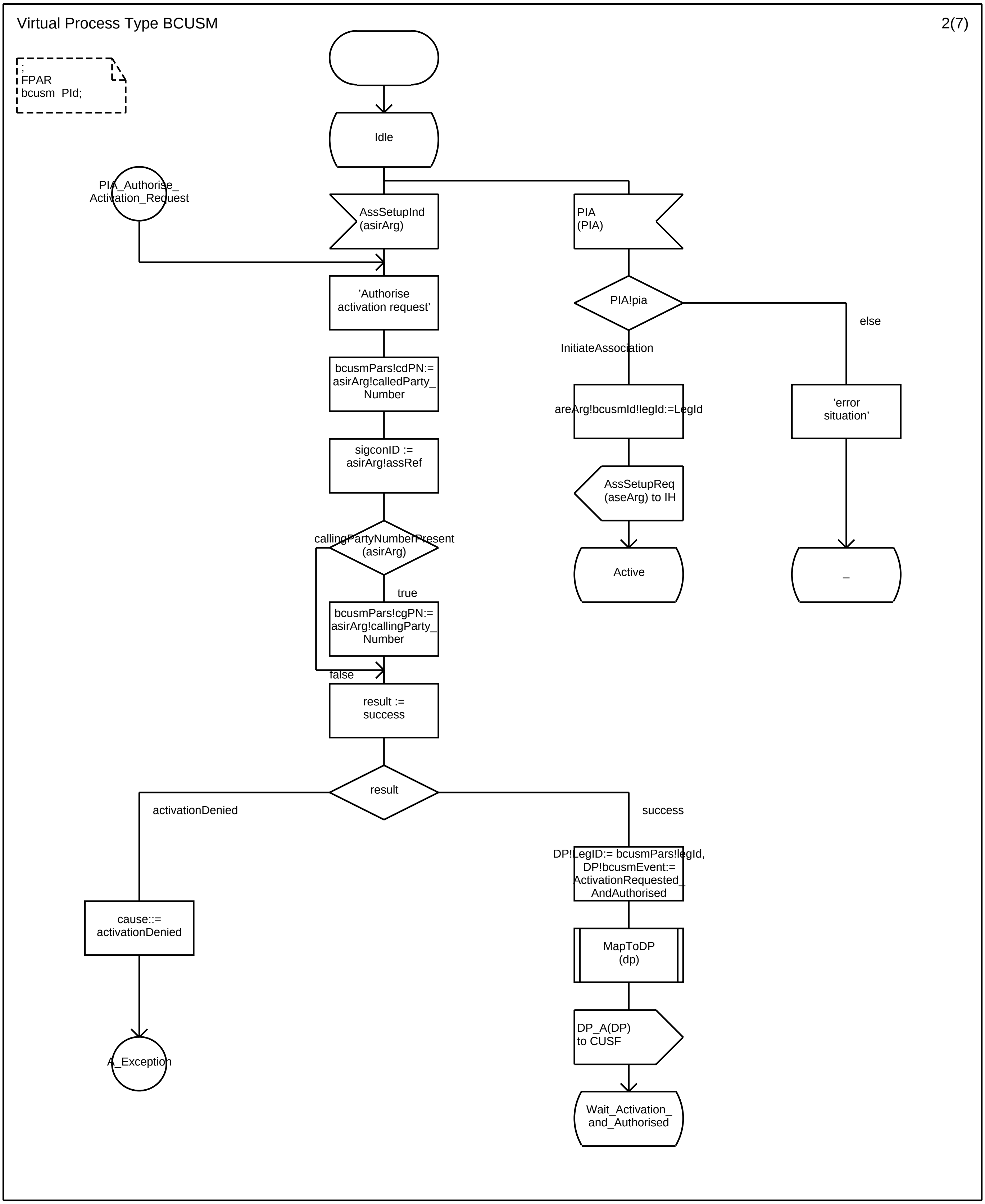


```
;
FPAR
bcusm  PId;
```

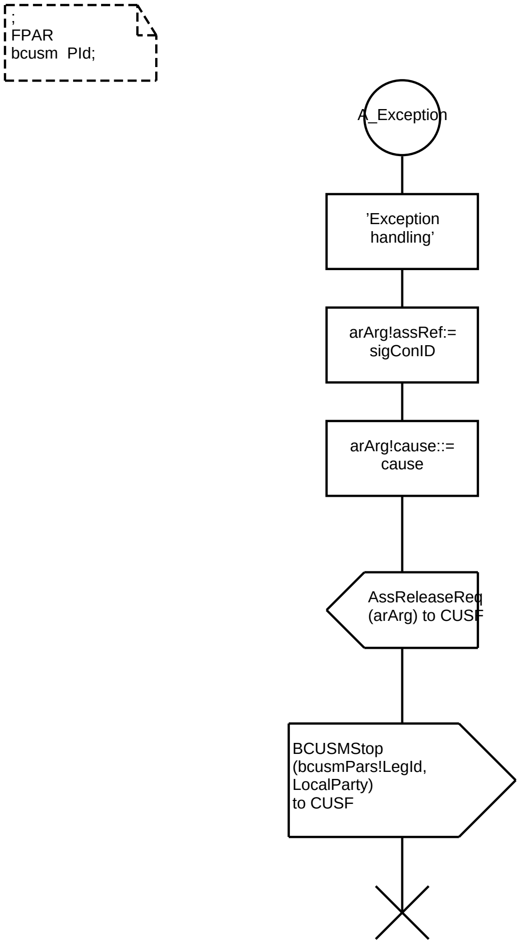
```
/*Operations and Parameters for BCUSM user interaction
operations::=
ActiviationReceivedAndAuthorized,
InitiateAssociation,
AssociationReleaseRequested,
SendComponent,
ComponentReceived,
RequestReportBCUSMEvent.
DetectionPoints::=
DP_Activiation_Received_And_Authorised,
DP_Association_ReleaseRequested,
DP_Component_Received.
*/
```

```
NEWTYPE ResultType
LITERALS
Success,
Failure,
ActivationDenied,
Released
ENDNEWTYPE;
```

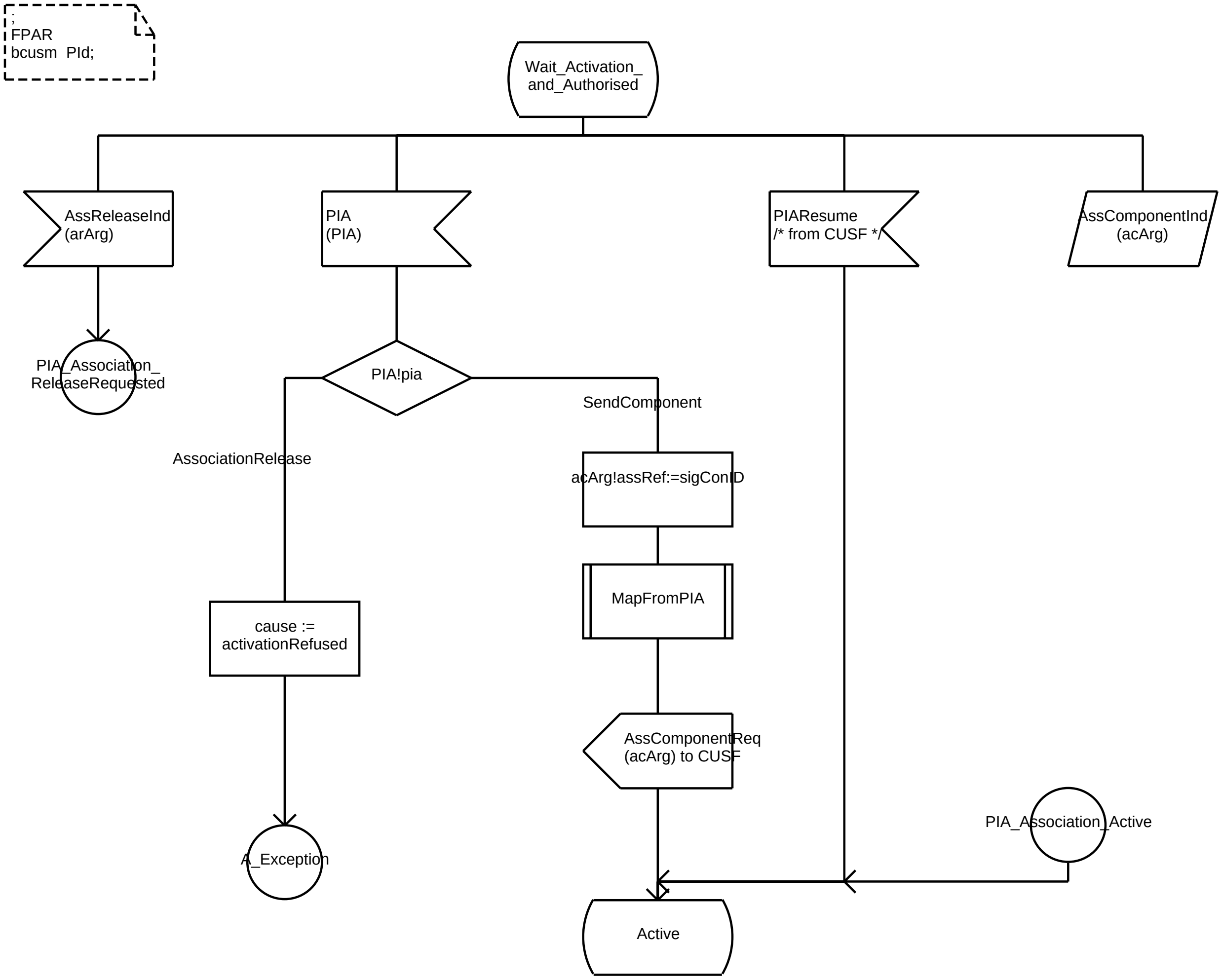
```
DCL
  PIA   PIAArg,
  DP   DP_AArg,
  cause Cause_AType,
  result ResultType

  bcusm BCUSMType,

  aSIRArg AssSetupIRType,
  aRArg  AssReleaseType,
  audArg AssUserDataType.
  acArg AssComponentType;
```

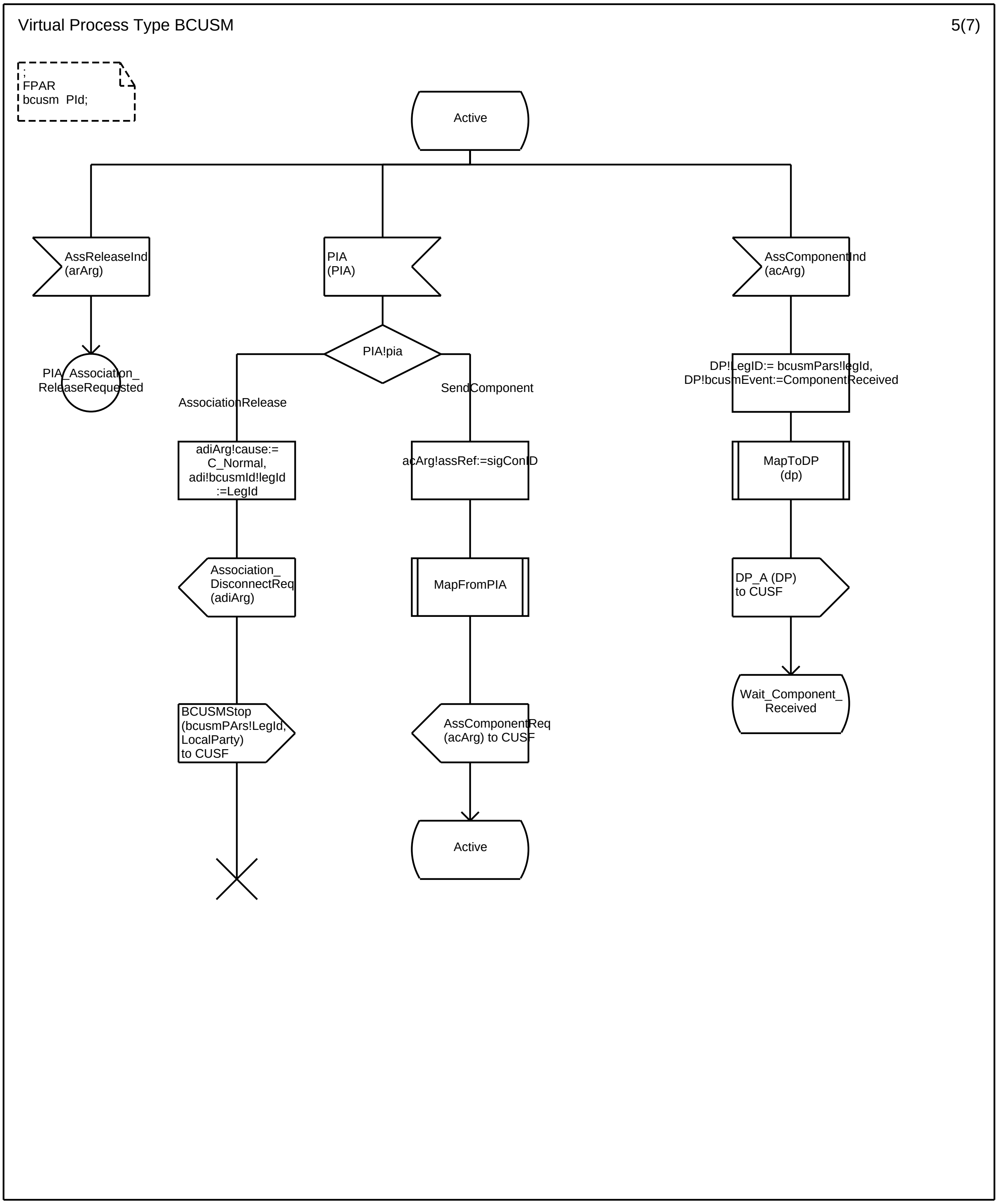

Virtual Process Type BCUSM
2(7)
;
FPAR
bcusm PId;
Idle
PIA_Authorise_
Activation_Request
AssSetupInd
(asirArg)
PIA
(PIA)
'Authorise
activation request'
PIA!pia
else
InitiateAssociation
bcusmPars!cdPN:=
asirArg!calledParty_
Number
areArg!bcusmId!legId:=LegId
'error
situation'
sigconID :=
asirArg!assRef
AssSetupReq
(aseArg) to IH
callingPartyNumberPresent
(asirArg)
Active
_
true
bcusmPars!cgPN:=
asirArg!callingParty_
Number
false
result :=
success
result
activationDenied
success
DP!LegID:= bcusmPars!legId,
DP!bcusmEvent:=
ActivationRequested_
AndAuthorised
cause::=
activationDenied
MapToDP
(dp)
DP_A(DP)
to CUSF
A_Exception
Wait_Activation_
and_Authorised

Virtual Process Type BCUSM

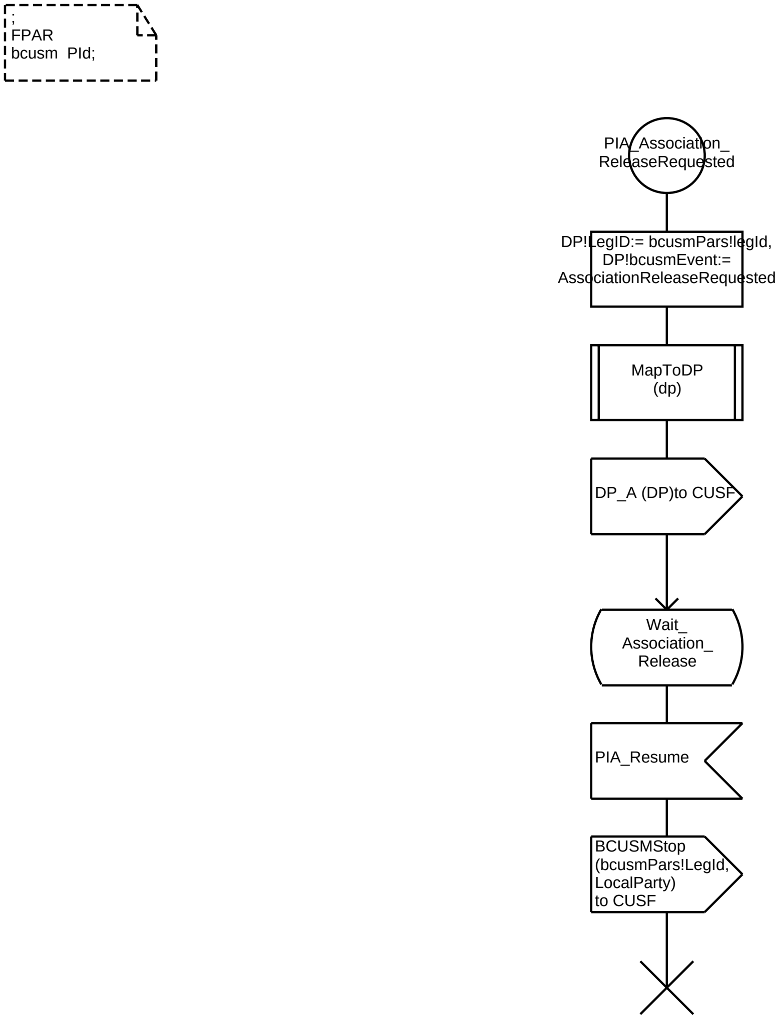


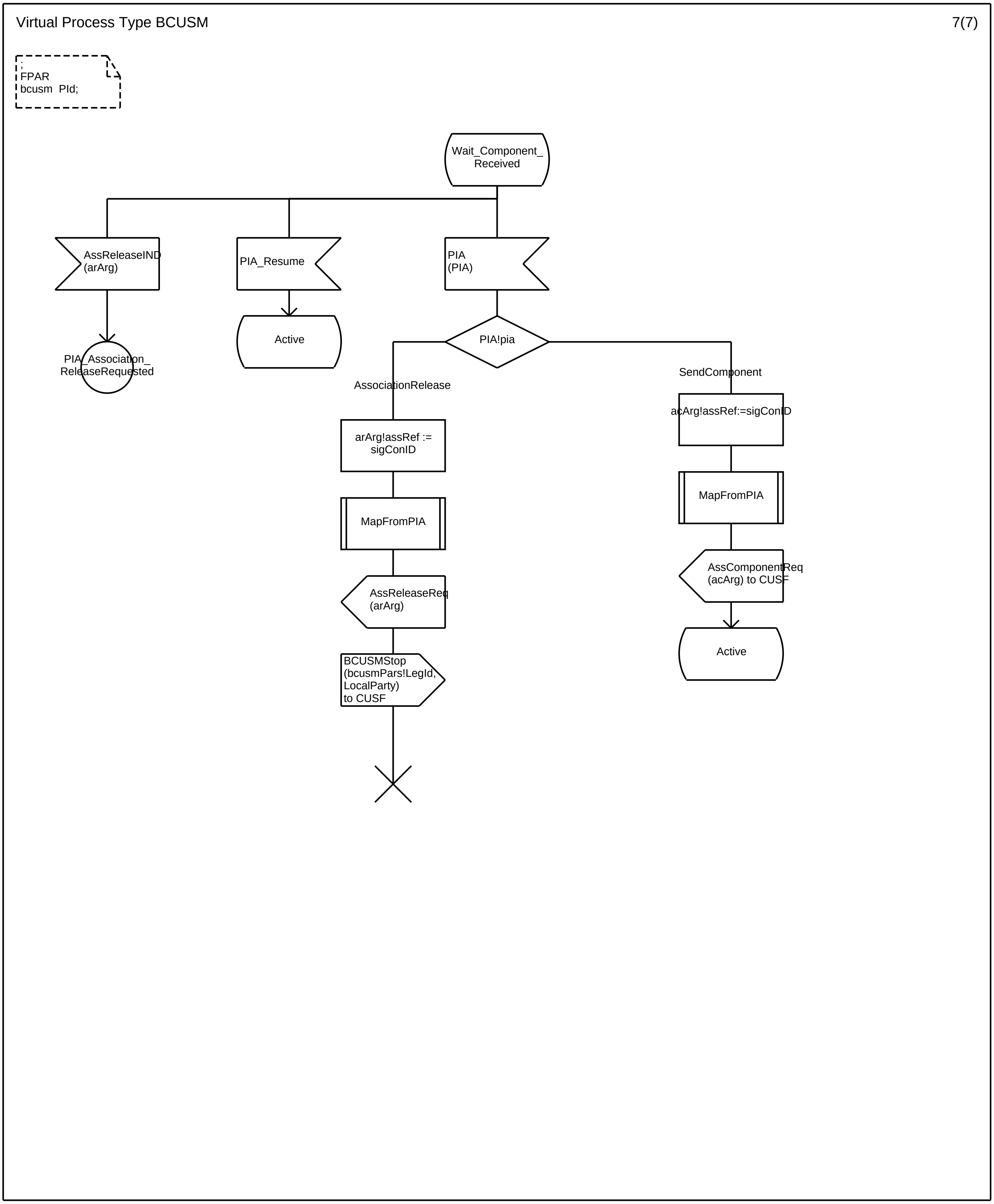
Virtual Process Type BCUSM 4(7)




Virtual Process Type BCUSM
5(7)
;
FPAR
bcusm PId;
Active
AssReleaseInd
(arArg)
PIA
(PIA)
AssComponentInd
(acArg)
PIA_Association_
ReleaseRequested
PIA!pia
AssociationRelease
SendComponent
DP!LegID:= bcusmPars!legId,
DP!bcusmEvent:=ComponentReceived
adiArg!cause:=
C_Normal,
adi!bcusmId!legId
:=LegId
acArg!assRef:=sigConID
MapToDP
(dp)
Association_
DisconnectReq
(adiArg)
MapFromPIA
DP_A (DP)
to CUSF
Wait_Component_
Received
BCUSMStop
(bcusmPArs!LegId,
LocalParty)
to CUSF
AssComponentReq
(acArg) to CUSF
Active

Virtual Process Type BCUSM




Virtual Process Type BCUSM
7(7)
;
FPAR
bcusm PId;
Wait_Component_
Received
AssReleaseIND
(arArg)
PIA_Resume
PIA
(PIA)
PIA_Association_
ReleaseRequested
Active
PIA!pia
AssociationRelease
SendComponent
arArg!assRef :=
sigConID
acArg!assRef:=sigConID
MapFromPIA
MapFromPIA
AssReleaseReq
(arArg)
AssComponentReq
(acArg) to CUSF
Active
BCUSMStop
(bcusmPars!LegId,
LocalParty)
to CUSF