

MICROSAR BswM

Document Information

History

Author	Date	Version	Remarks
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Reference Documents

No.	Source	Title	Version
[1]			
[2]			
[3]			
[4]			
[5]			
[6]			
[7]			
[8]			
[9]			
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[14]			
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Caution

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10	Contact.....	124
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Tables

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1 Component History

Component Version	New Features
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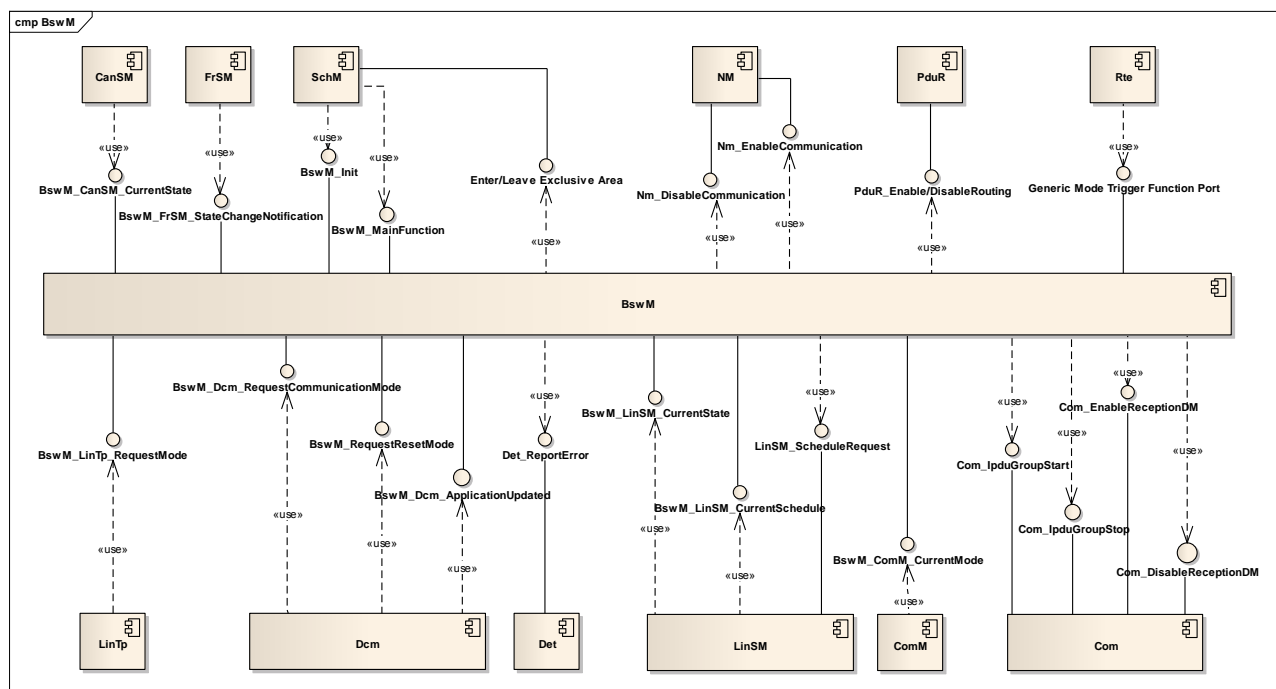
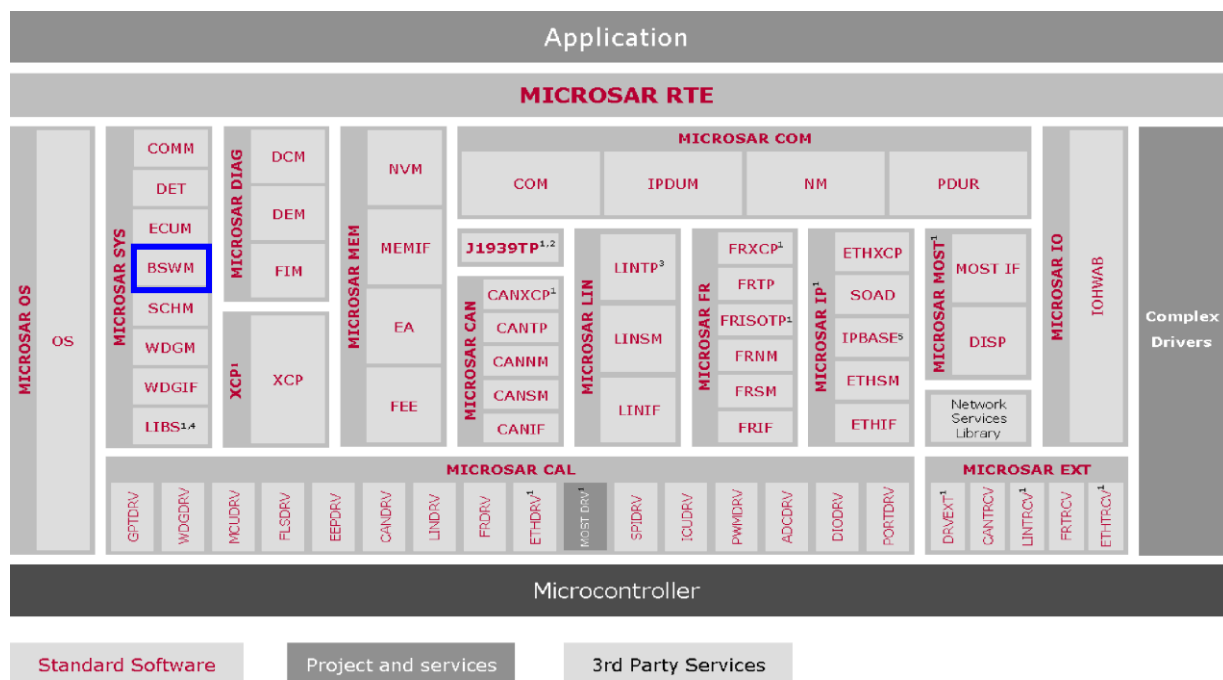
2 Introduction



Cross reference

Supported AUTOSAR Release*:		
Supported Configuration Variants:	-	-
Vendor ID:		-
Module ID:		

2.1 Architecture Overview



3 Functional Description

3.1 Features

> -

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> -

Supported AUTOSAR Standard Conform Features

-

Not Supported AUTOSAR Standard Conform Features

-

Features Provided Beyond The AUTOSAR Standard
-

-

3.2 Initialization

3.3 Mode Management

> **Mode Source**

-

> **Mode Arbitration**

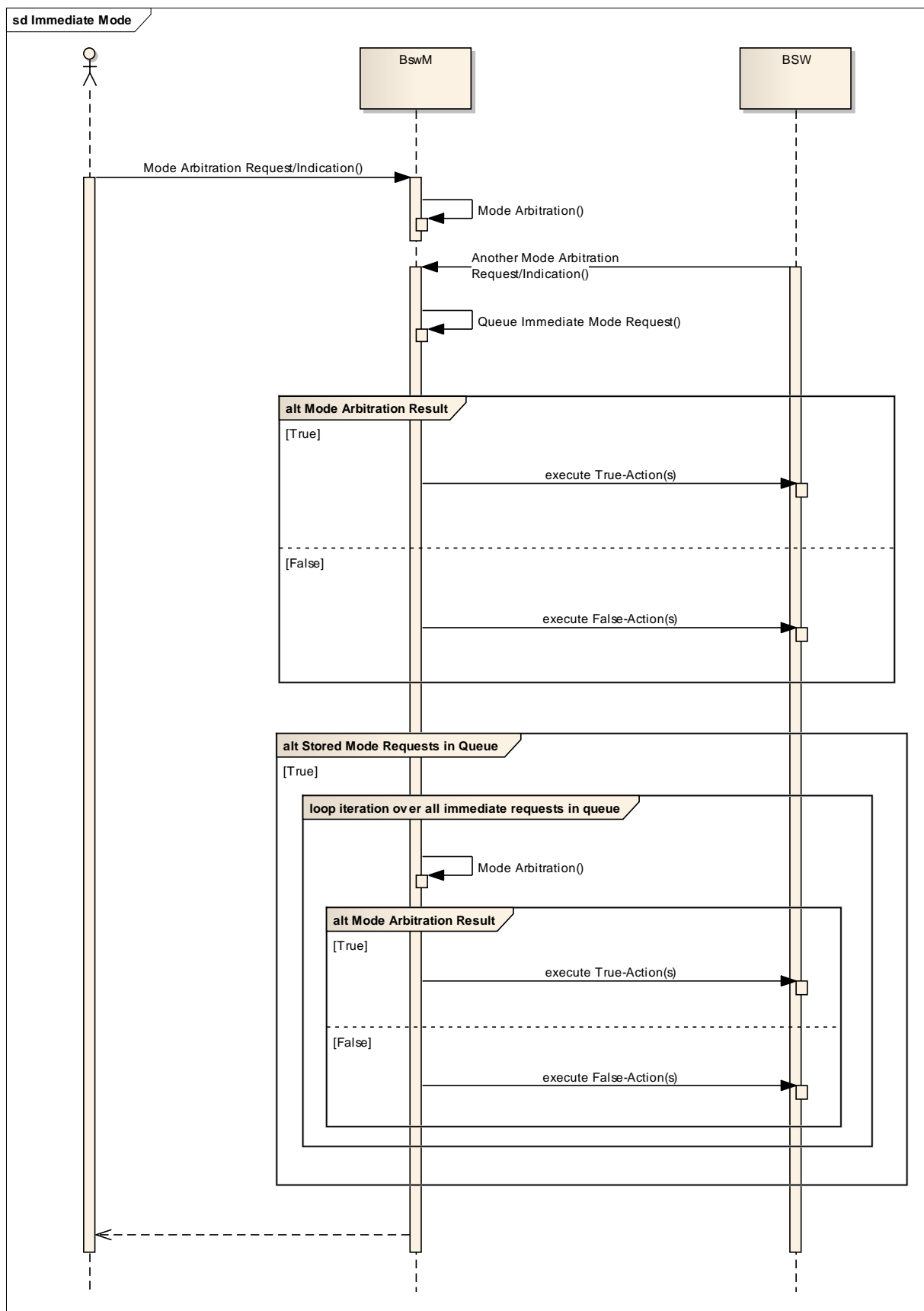
> **Mode Rule**

-

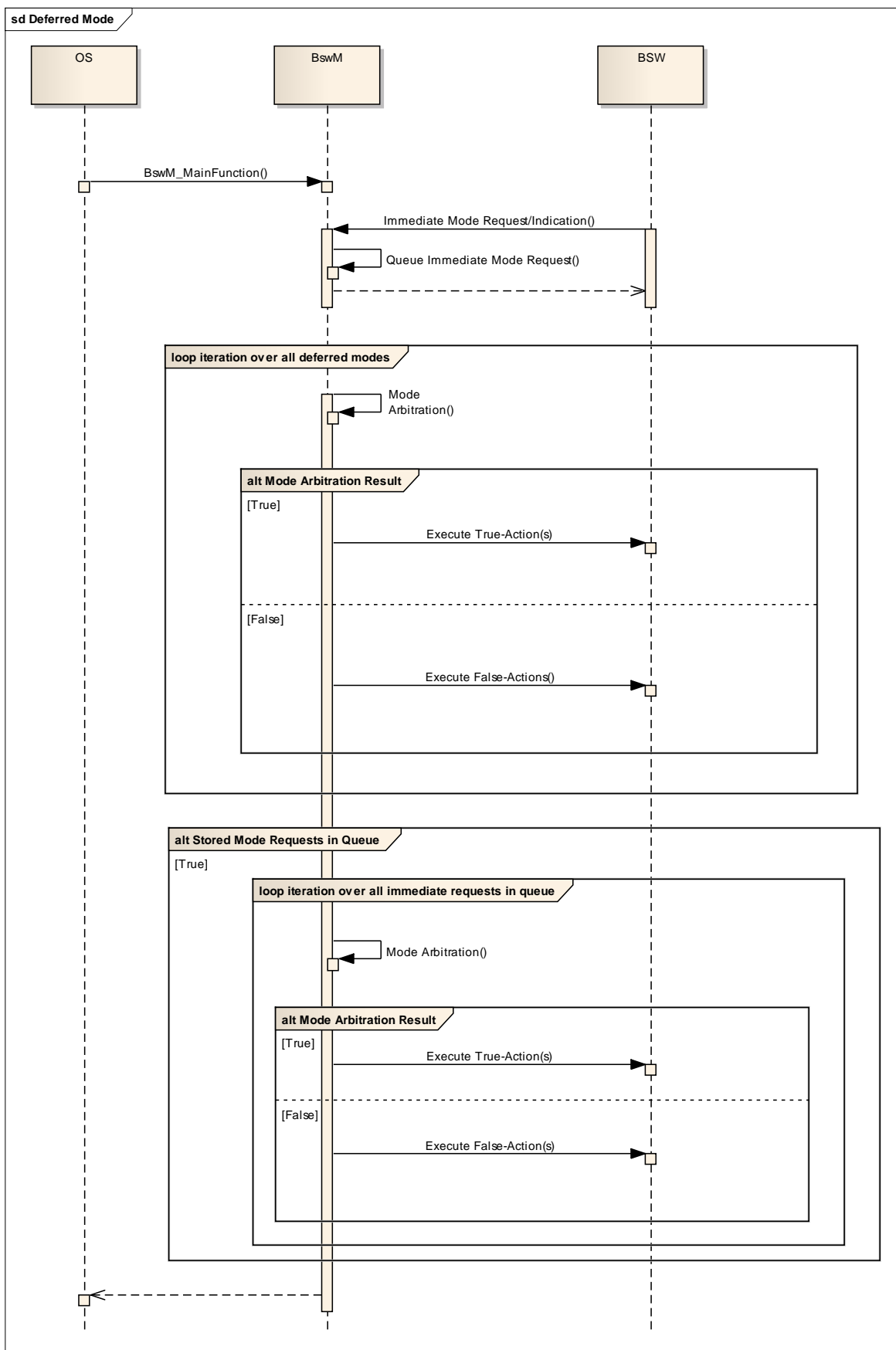
-

> **Mode Actions**

3.3.1 Immediate Mode Handling



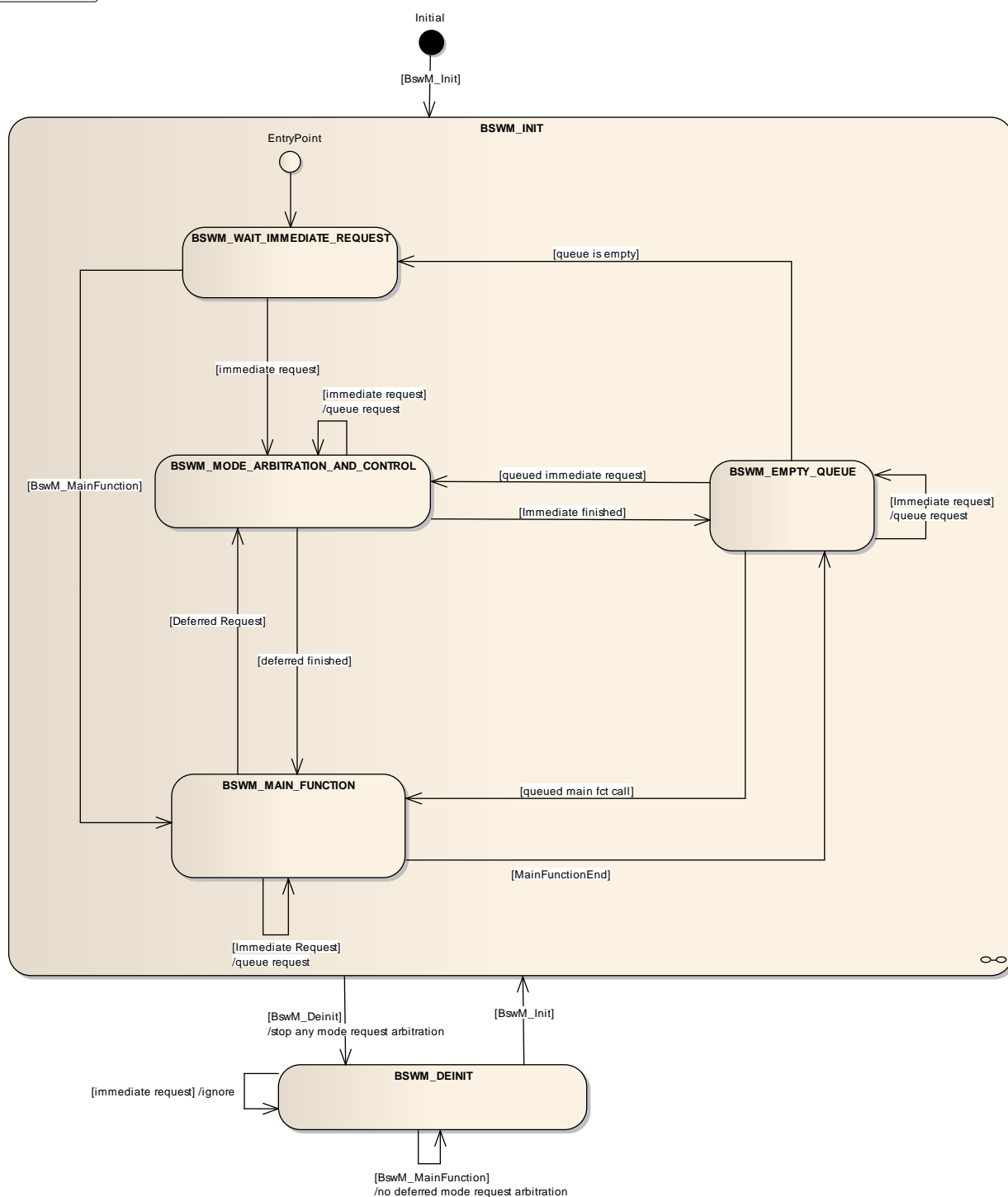
3.3.2 Deferred Mode Handling



3.4 Execution of action lists

3.5 States

stm State_Machine



- > BSWM_INIT
- > BSWM_WAIT_IMMEDIATE_REQUEST
- > BSWM_MAIN_FUNCTION
- > BSWM_MODE_ARBITRATION_AND_CONTROL
- > BSWM_EMPTY_QUEUE
- > BSWM_DEINIT

3.6 Error Handling

3.6.1 Development Error Reporting

-

Service ID	Service

Service ID		Service

-

Error Code		Description

-

3.6.1.1 Parameter Checking

[illegible]

3.6.2 Production Code Error Reporting

4 Integration

4.1 Scope of Delivery

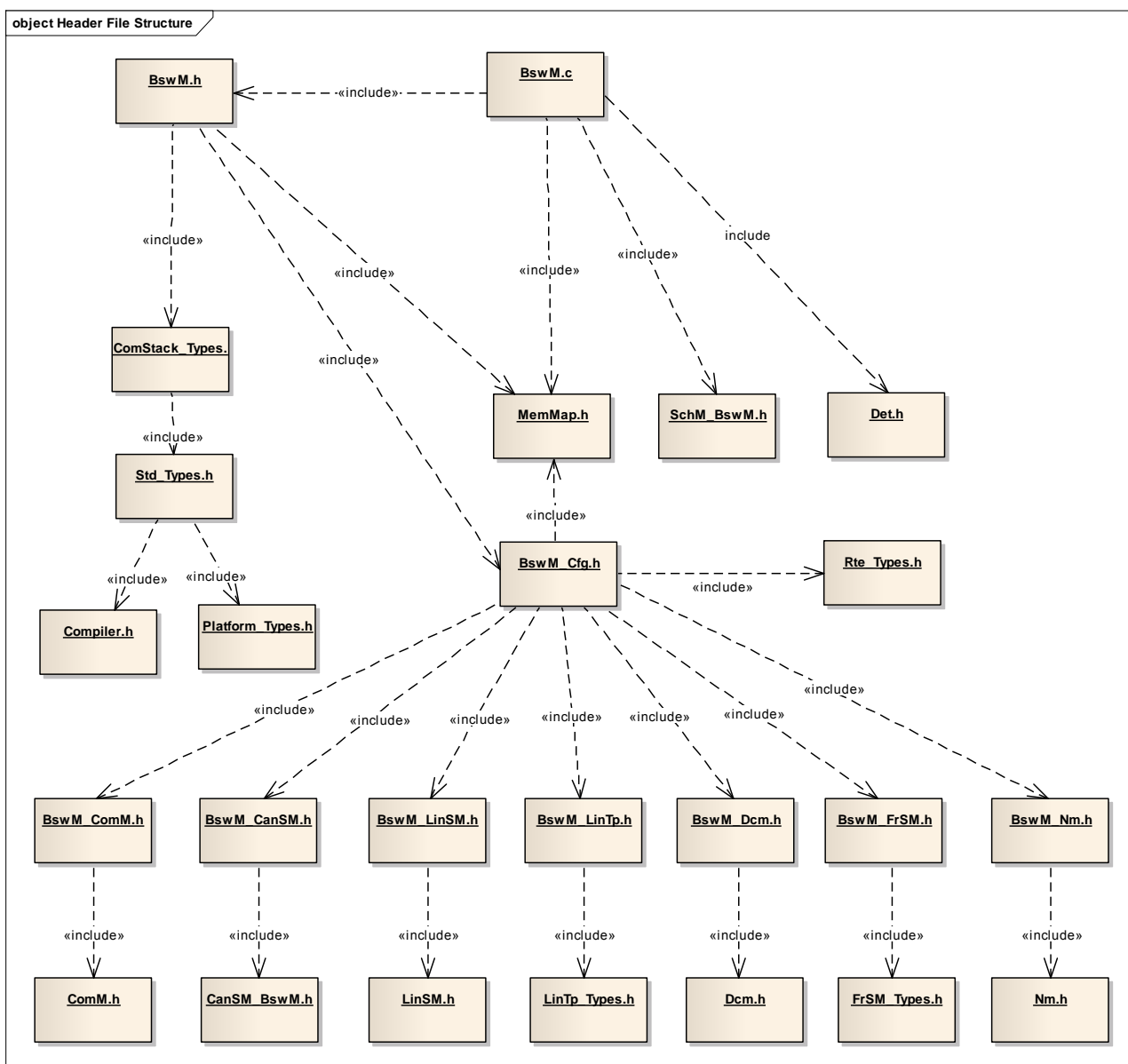
4.1.1 Static Files

File Name	Source Code Delivery	Object Code Delivery	Description
	■		
	■		
	■		
	■		
	■		
	■		
	■		
	■		

4.1.2 Dynamic Files

File Name	Description

4.2 Include Structure



4.3 Critical Sections

4.4 Cyclic Task

5 API Description

-

5.1 Type Definitions

Type Name	C-Type	Description	Value Range

-

5.2 Services provided by BswM

5.2.1 BswM_RequestMode

Prototype	
Parameter	
Return code	
Functional Description	
Particularities and Limitations	
>	
>	
>	
>	

5.2.2 BswM_Init

Prototype	
Parameter	
Return code	
Functional Description	
Particularities and Limitations	
>	
>	
>	
>	



Example

5.2.3 BswM_InitMemory

Prototype	
Parameter	
Return code	
Functional Description	
Particularities and Limitations	
>	
>	
>	
>	

5.2.4 BswM_Deinit

Prototype	
Parameter	
Return code	
Functional Description	
Particularities and Limitations	
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>	
>	
>	

5.2.5 BswM_GetVersionInfo

Prototype	
Parameter	
Return code	
Functional Description	
Particularities and Limitations	
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>	
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5.2.6 BswM_ComM_CurrentMode

Prototype	
Parameter	
Return code	
Functional Description	
Particularities and Limitations	
>	
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>	
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5.2.7 BswM_ComM_CurrentPNCMode

Prototype	
Parameter	
Return code	
Functional Description	

Particularities and Limitations

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5.2.8 BswM_CanSM_CurrentState

Prototype	
Parameter	
Return code	
Functional Description	
Particularities and Limitations	
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5.2.9 BswM_FrSM_StateChangeNotification

Prototype

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Parameter

Return code

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Functional Description

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Particularities and Limitations

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>
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5.2.10 BswM_LinSM_CurrentState

Prototype

Parameter

Return code

Functional Description

Particularities and Limitations

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5.2.11 BswM_LinSM_CurrentSchedule

Prototype	
Parameter	
Return code	
Functional Description	
Particularities and Limitations	
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5.2.12 BswM_LinSM_ScheduleEnd_Notification

Prototype

Parameter

Return code

Functional Description

Particularities and Limitations

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5.2.13 BswM_LinTp_RequestMode

Prototype

Parameter

Return code

Functional Description

Particularities and Limitations

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5.2.14 BswM_Nm_StateChangeNotification

Prototype

Parameter

Return code

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Functional Description

--

Particularities and Limitations

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5.2.15 BswM_Dcm_RequestCommunicationMode

Prototype

Parameter

Return code

Functional Description

Particularities and Limitations

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5.2.16 BswM_Dcm_RequestResetMode

Prototype

Parameter

Return code

Functional Description

Particularities and Limitations

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5.2.17 BswM_Dcm_SetPassiveMode

Prototype	
Parameter	
Return code	
Functional Description	
Particularities and Limitations	
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5.2.18 BswM_Dcm_ApplicationUpdated

Prototype	
Parameter	
Return code	
Functional Description	
Particularities and Limitations	
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5.3 Services used by BswM

Component	API

5.4 Callback Functions

5.4.1 Appl_BswM_ApplicationUpdated

Prototype	
Parameter	
Return code	
Functional Description	

Particularities and Limitations	
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5.5 Configurable Interfaces

5.5.1 Callout Functions

Prototype	
Parameter	
	-
Return code	
	-
Functional Description	
Particularities and Limitations	
>	-
>	

5.5.2 Mode Trigger Functions

Prototype

Parameter	
Return code	
	-
Functional Description	
Particularities and Limitations	
>	
>	
>	

5.5.3 User Condition Functions

Prototype	
Parameter	
	-
Return code	
Functional Description	
Particularities and Limitations	
> -	
>	

5.6 Service Ports

5.6.1 Client Server Interface

5.6.1.1 Provide Ports on BswM Side

-

5.6.1.1.1 BswM_ModelIndication_<GenericModeName>

Operation	API Function	Port Defined Argument Values
		-

-

5.6.1.1.2 BswM_DcmAppUpdate

Operation	API Function	Port Defined Argument Values
		-

-

5.6.1.2 Require Ports

5.6.1.2.1 Mode Switch Port

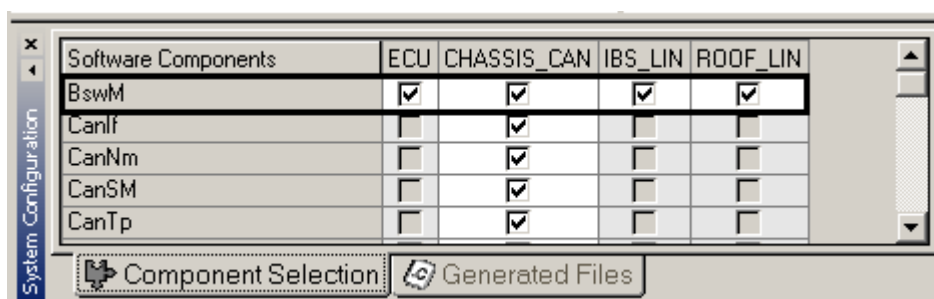
Operation	Rte Interface	Mode Declaration Group
		■

-

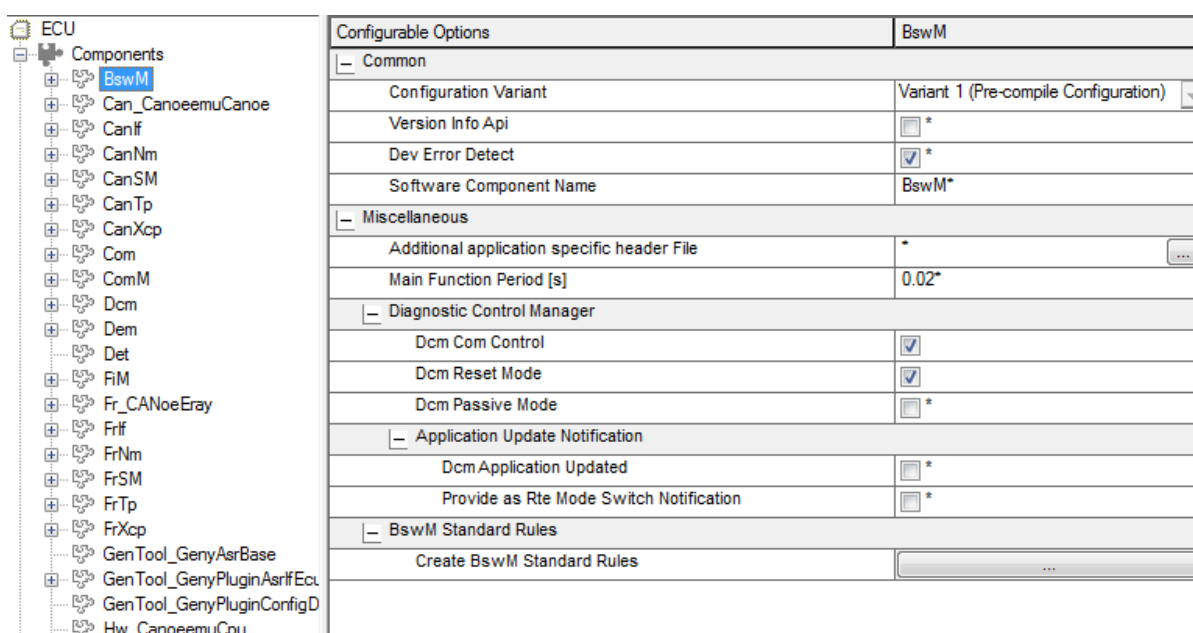
6 Configuration

6.1 Configuration Variants

6.2 Configuration with GENy



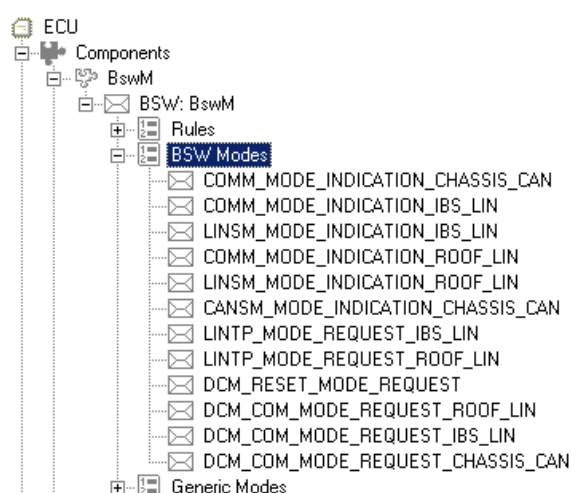
6.2.1 General Configuration Options



Attribute Name	Value Type	Values	Description
		Variant 1 (Pre-compile Configuration)	-
		False	-
		False	Dev Error Detect
		BswM	
		-	
		0.02	
		False	-
		False	-
		False	-
		False	-
		False	-
		False	-

Attribute Name	Value Type	Values	Description
	-	-	- - - - -

6.2.2 BSW Mode Configuration



	Mode Request Processing Type
COMM_MODE_INDICATION_CHASSIS_CAN	BSWM_IMMEDIATE
COMM_MODE_INDICATION_IBS_LIN	BSWM_IMMEDIATE
LINSM_MODE_INDICATION_IBS_LIN	BSWM_IMMEDIATE
COMM_MODE_INDICATION_ROOF_LIN	BSWM_IMMEDIATE
LINSM_MODE_INDICATION_ROOF_LIN	BSWM_IMMEDIATE
CANSM_MODE_INDICATION_CHASSIS_CAN	BSWM_IMMEDIATE
LINTP_MODE_REQUEST_IBS_LIN	BSWM_IMMEDIATE
LINTP_MODE_REQUEST_ROOF_LIN	BSWM_IMMEDIATE
DCM_RESET_MODE_REQUEST	BSWM_IMMEDIATE
DCM_COM_MODE_REQUEST_ROOF_LIN	BSWM_IMMEDIATE
DCM_COM_MODE_REQUEST_IBS_LIN	BSWM_IMMEDIATE
DCM_COM_MODE_REQUEST_CHASSIS_CAN	BSWM_IMMEDIATE

BSW Mode Indication	Possible Modes	Description
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	> > > >	
	> >	

BSW Mode Indication	Possible Modes	Description
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BSW Mode Indication	Possible Modes	Description
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	> > > > > > > >	
	>	



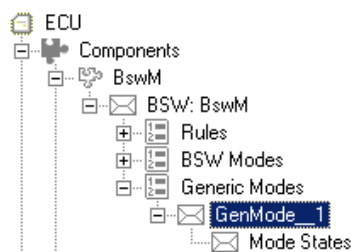
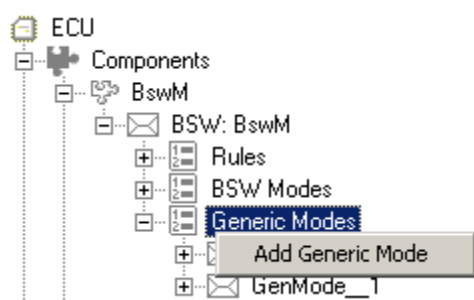
Caution

Attribute Name	Value Type	Values	Description
		BSWM_IMMEDIATE	

Attribute Name	Value Type	Values	Description

6.2.3 Generic Mode Configuration

Add Generic Mode



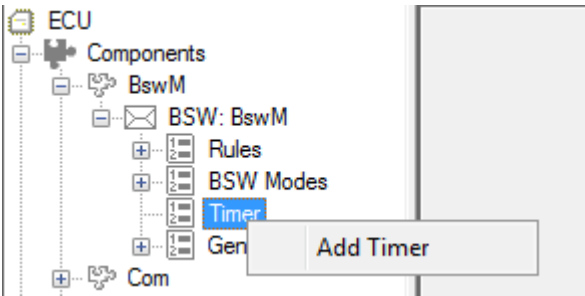
Configurable Options	GenMode__1
Name	GenMode__1
Generic Mode Initial State	0*
Generic Mode Request Processing Type	BSWM_IMMEDIATE
Generic Mode Trigger Function	*
Use Rte	<input type="checkbox"/> *

Attribute Name	Value Type	Values	Description
		GenMode__<index>	
		0	
		BSWM_IMMEDIATE	

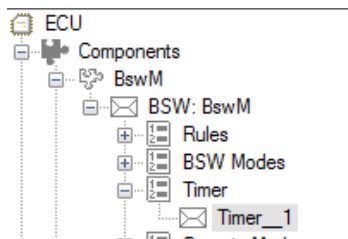
Attribute Name	Value Type	Values	Description
		*	
		FALSE	Use Rte

6.2.4 Timer Configuration

>
>
>



Timer_<number>



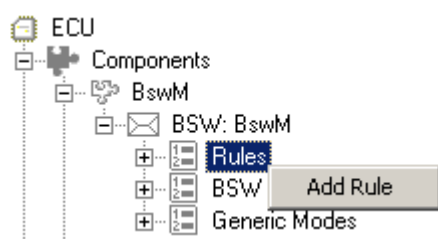
ECU

- Components
 - BswM
 - BSW: BswM
 - Rules
 - BSW Modes
 - Timer
 - Timer__1

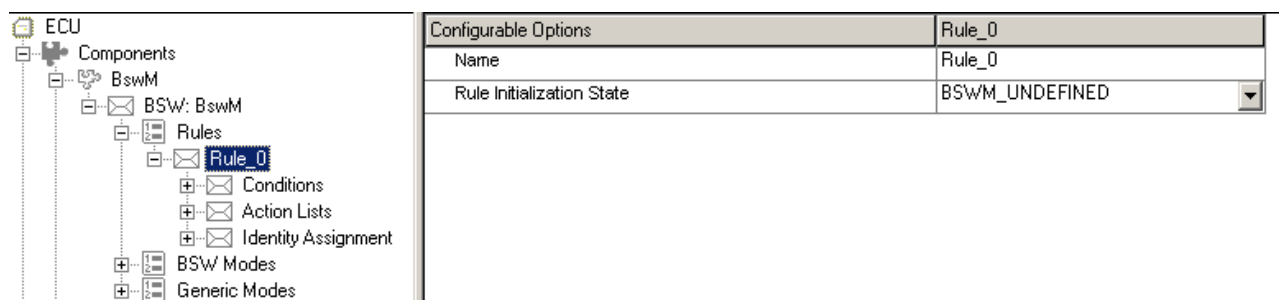
Configurable Options	
Name	Timer__1
Generic Mode Request Processing Type	BSWM_DEFERRED
Timer Value [ms]	20

6.2.5 Rule Configuration

Rules



Rule_<number>



The screenshot shows the ECU configuration tool interface. On the left, a tree view displays the component hierarchy: ECU > Components > BswM > BSW: BswM > Rules > Rule_0. The 'Rule_0' node is selected. On the right, the 'Configurable Options' table for 'Rule_0' is shown.

Configurable Options		Rule_0
Name		Rule_0
Rule Initialization State		BSWM_UNDEFINED

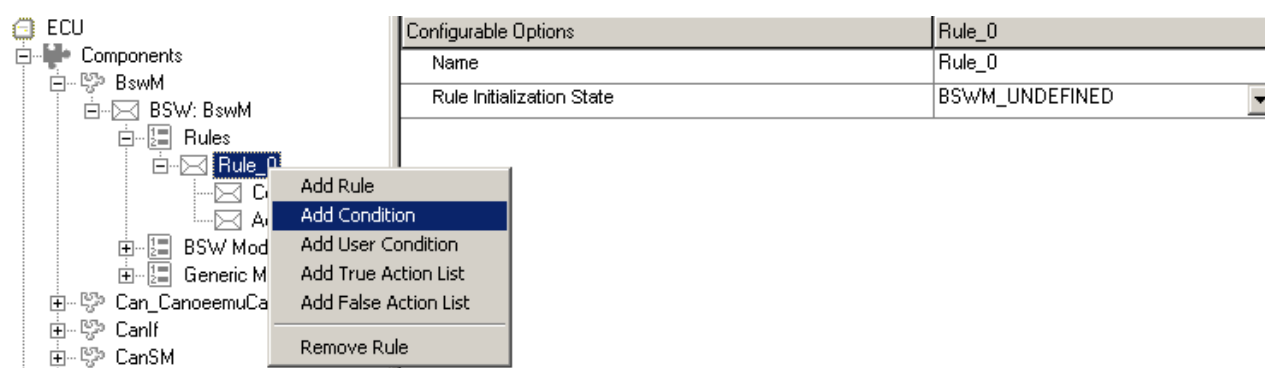


Note

Rule Initialization State
ActionListExecution **BSWM_TRIGGER**

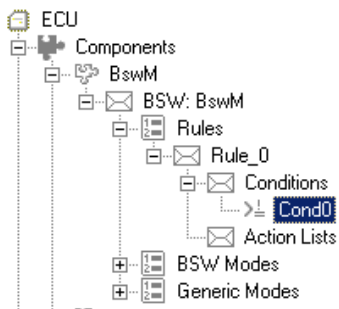
Attribute Name	Value Type	Values	Description
		Rule<number>	
		BSWM_UNDEFINED	-

6.2.5.1 Configuration of Rule Conditions



The screenshot shows the ECU configuration tool interface. On the left, the tree view shows the 'Rule_0' node selected. A context menu is open over 'Rule_0', showing options: Add Rule, Add Condition (highlighted), Add User Condition, Add True Action List, Add False Action List, and Remove Rule. On the right, the 'Configurable Options' table for 'Rule_0' is shown.

Configurable Options		Rule_0
Name		Rule_0
Rule Initialization State		BSWM_UNDEFINED

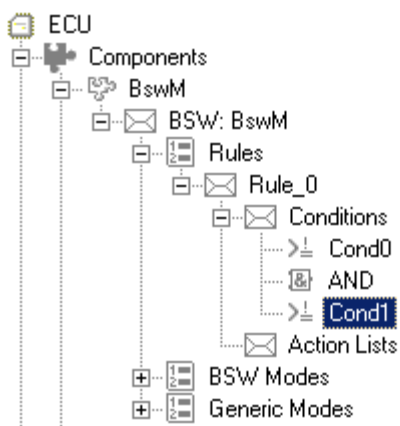
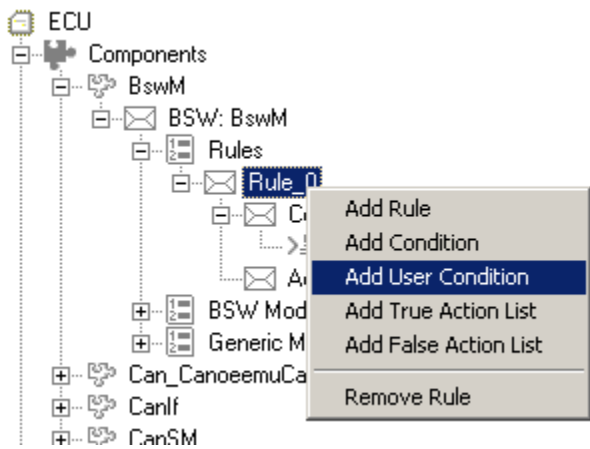


Configurable Options	Cond0
Mode	*
Relational Operator	EQUAL
Mode State	*

Attribute Name	Value Type	Values	Description
		*	
		EQUAL	
		* < Possible Mode States the Mode can have >	

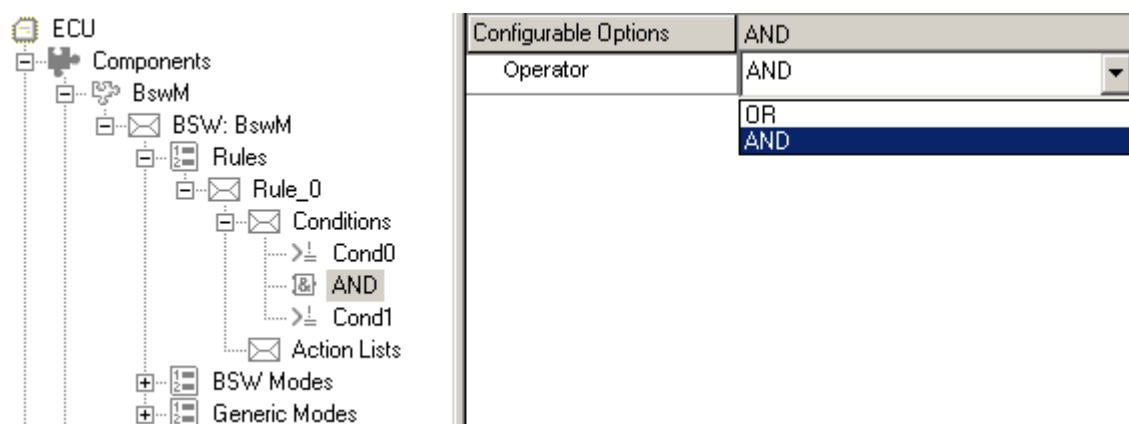


Caution



Configurable Options	Cond1
User Condition	*

Attribute Name	Value Type	Values	Description
		*	



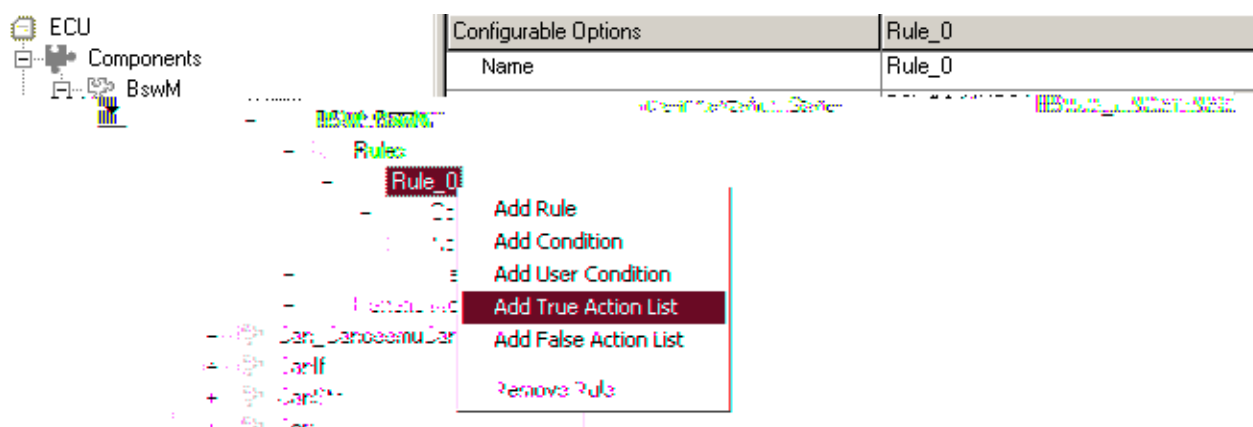
Attribute Name	Value Type	Values	Description
		AND	

6.2.5.2 Configuration of Rule Action Lists

true false

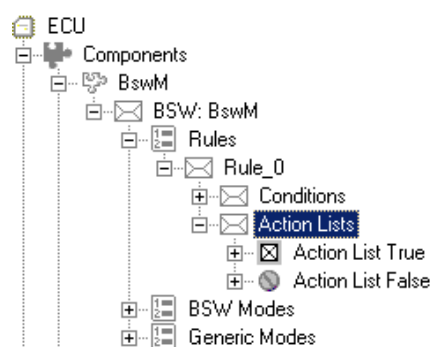
Action List True

Action List False



6.2.5.2.1 Action List Execution Type

ActionListExecution



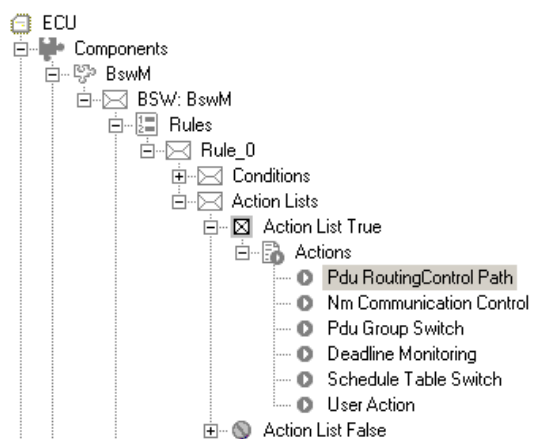
Action List Execution Type	
Action List True	BSWM_TRIGGER
Action List False	BSWM_CONDITION

Attribute Name	Value Type	Values	Description
		BSWM_TRIGGER	

6.2.5.2.2 Adding Actions to an Action List

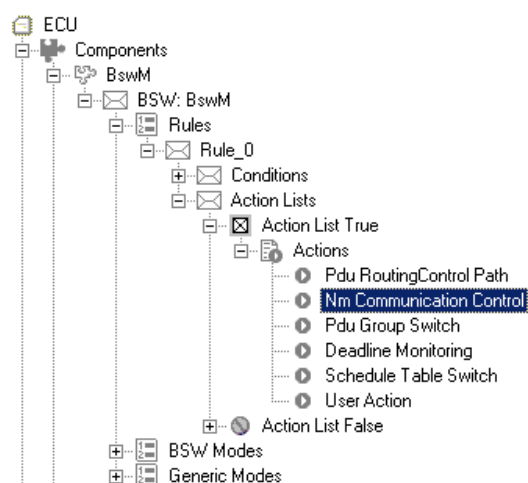
The screenshot displays the Vector CANoe software interface. On the left, a tree view shows the project structure under 'ECU' > 'Components' > 'BswM' > 'Rules' > 'StdRule_Switch_DM_BODY_ID_STAR1' > 'Action Lists' > 'Action List True'. A context menu is open over 'Action List True', listing various actions to be added, such as 'Add Action Pdu Router Control', 'Add Action Nm Control', 'Add Action Pdu Group Switch', 'Add Action Deadline Monitoring Control', 'Add Action Lin Schedule Switch', 'Add Action User Callout', 'Add Action Rule', and 'Remove Action List'. On the right, a 'Configurable Options' table is visible.

Configurable Options	Action List True
Action List Execution Type	BSWM_TRIGGER



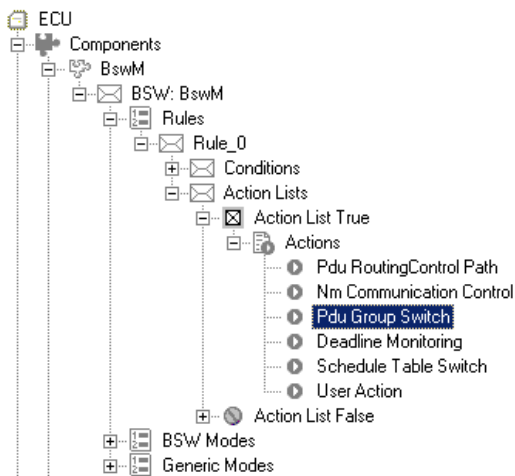
Configurable Options	Pdu RoutingControl Path
Pdu Routing Path Control Type	DISABLE_PDU_ROUTING_PATH
Handle Name of the Pdu Routing Path	*

Attribute Name	Value Type	Values	Description
		DISABLE_PDU_ROUTING_PATH	
		*	



Configurable Options	Nm Communication Control
Nm Control Type	DISABLE_NM_COM
Channel	*

Attribute Name	Value Type	Values	Description
		DISABLE_NM_COM	
		*	

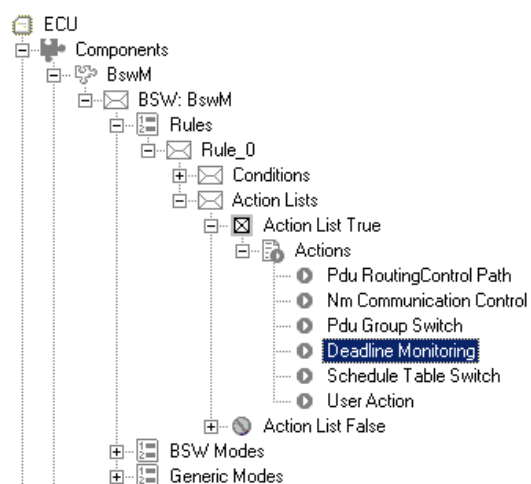


Configurable Options	Pdu Group Switch
Pdu Group Control Type	BSWM_PDU_GROUP_START
Pdu Group Handle	*
Pdu Group Reinitialization	<input type="checkbox"/> *

Attribute Name	Value Type	Values	Description
		BSWM_PDU_GROUP_START	
		*	
		Disabled	BSWM_PDU_GROUP_START

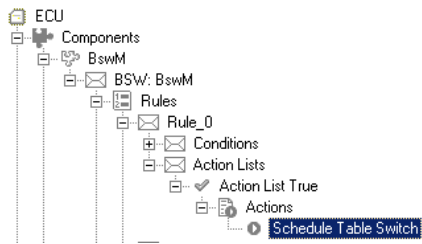


Caution



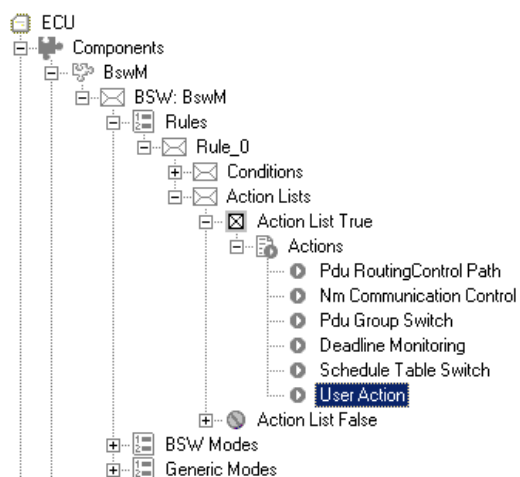
Configurable Options	Deadline Monitoring
Pdu Group Handle	*
Deadline Monitoring Control Type	ENABLE_RX_DM

Attribute Name	Value Type	Values	Description
		*	
		ENABLE_RX_DM	



Configurable Options	Schedule Table Switch
Channel	*
Schedule Table Handle	*
Abort Action List On Fail	<input type="checkbox"/> *

Attribute Name	Value Type	Values	Description
		*	
		*	
		false	



Configurable Options	User Action
User Callout	*

Attribute Name	Value Type	Values	Description
		*	



ECU

- Components
 - BswM
 - BSW: BswM
 - Rules
 - Rule_0
 - Conditions
 - Action Lists
 - Action List True
 - Actions
 - Action Rule
 - Identity Assignment
 - Rule_1
 - BSW Modes
 - Generic Modes

Configurable Options	Action Rule
Rule	Rule_1
Abort Action List On Fail	<input type="checkbox"/> *

Attribute Name	Value Type	Values	Description
		*	
		false	



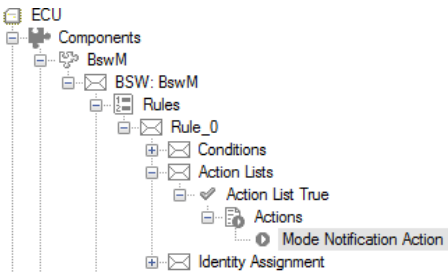
ECU

- Components
 - BswM
 - BSW: BswM
 - Rules
 - Rule_0
 - Conditions
 - Action Lists
 - Action List True
 - Actions
 - Timer Action
 - Identity Assignment
 - BSW Modes
 - Timer

Configurable Options	Timer Action
Timer	BSWM_TMR_LINTP_MR_LIN00
Timer Action	BSWM_TIMER_START

Attribute Name	Value Type	Values	Description
		*	
		BSWM_TIMER_STARTED	





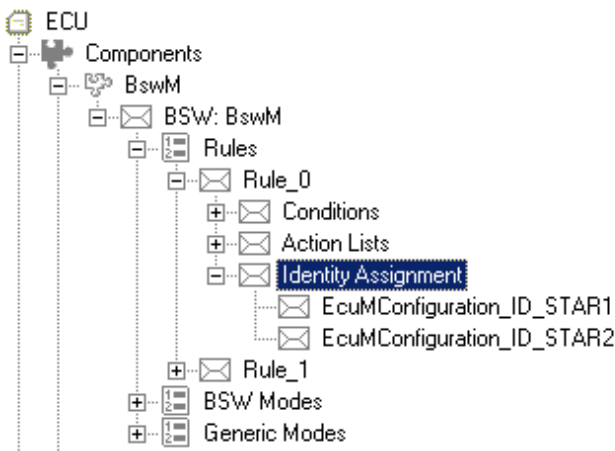
Configurable Options	Mode Notification Action
Generic Mode	*
Mode State	*

Attribute Name	Value Type	Values	Description
		*	
		*	



Caution

6.2.5.3 Configuration of the Identity Assignment



	Rule relevant for identity
EcuMConfiguration_ID_STAR1	<input checked="" type="checkbox"/> *
EcuMConfiguration_ID_STAR2	<input checked="" type="checkbox"/> *



Example

>

>

>

	Identity 0	Identity 1
	■	■
	■	

7 Use Cases of BSWM



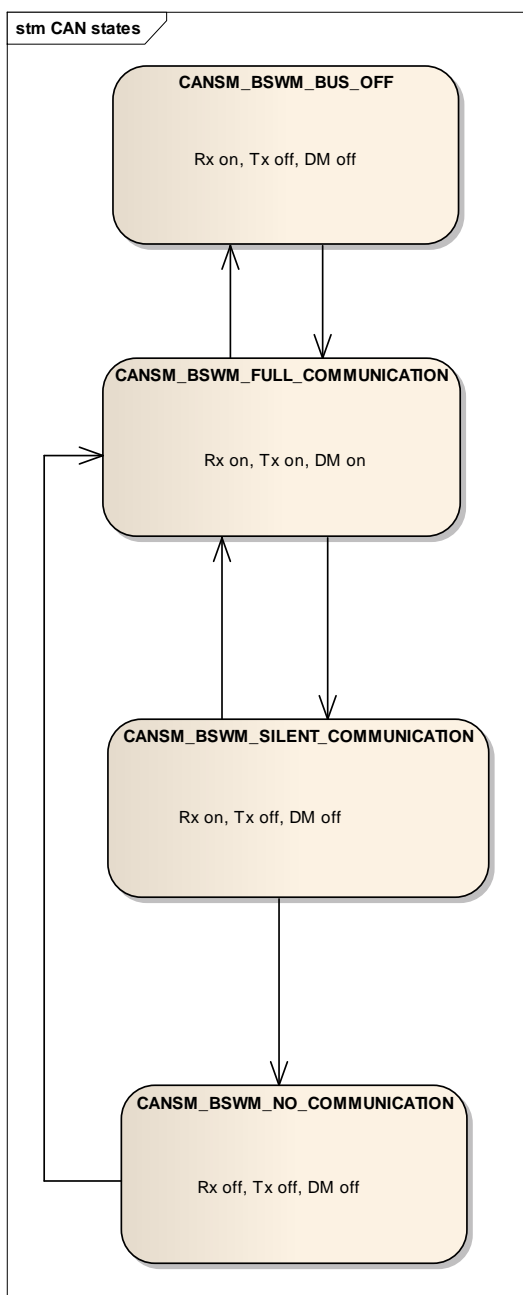
Note

-

- > CAN Communication Modes _____
-
- > DCM Communication Control Modes _____
-
- > DCM Reset Modes _____
- > LIN Communication Modes _____
- > LIN TP Modes _____
- > FlexRay Communication Modes _____
-
- > NmFiatB Communication Modes _____
-
- > NmFiatC Communication Modes _____
-
- > Partial Network Cluster Modes _____

7.1 CAN Communication Modes

CANSM_MODE_INDICATION_<channel-name>



CANSM_MODE_INDICATION_<channel-name>

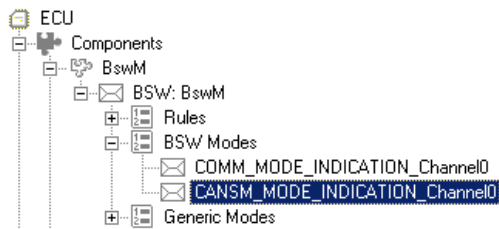
CANSM_PREVIOUS_MODE_<channel-name>

-

off on

> STEP 1

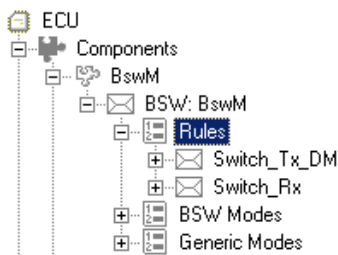
BSWM_IMMEDIATE



Configurable Options	CANSM_MODE_INDICATION_Channel0
Mode Request Processing Type	BSWM_IMMEDIATE

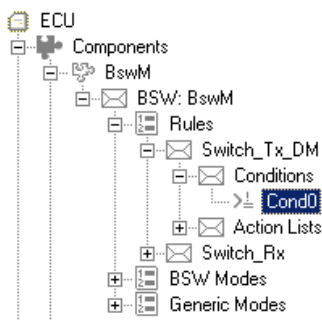
> STEP 2 BSWM_FALSE

Switch_Tx_DM Switch_Rx Rule Initialization State

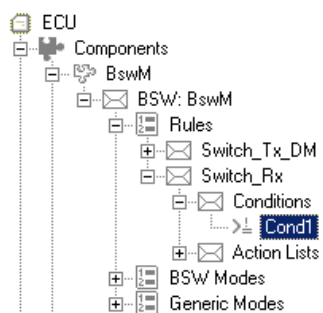


	Name	Rule Initialization State
Switch_Tx_DM	Switch_Tx_DM	BSWM_FALSE
Switch_Rx	Switch_Rx	BSWM_FALSE

> STEP 3



Configurable Options	Cond0
Mode	CANSM_MODE_INDICATION_Channel0
Relational Operator	EQUAL
Mode State	CANSM_BSWM_FULL_COMMUNICATION



Configurable Options	Cond1
Mode	CANSM_MODE_INDICATION_Channel0
Relational Operator	NOT_EQUAL
Mode State	CANSM_BSWM_NO_COMMUNICATION

Switch_Tx_DM

>

CANSM_BSWM_FULL_COMMUNICATION

>

Switch_Rx

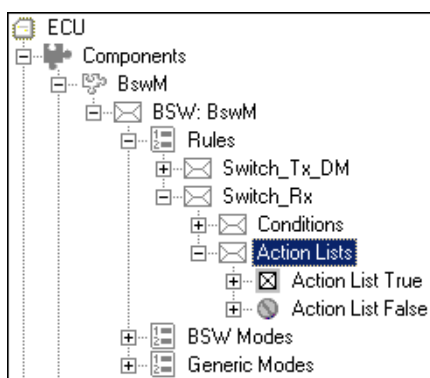
>

CANSM_BSWM_NO_COMMUNICATION

>

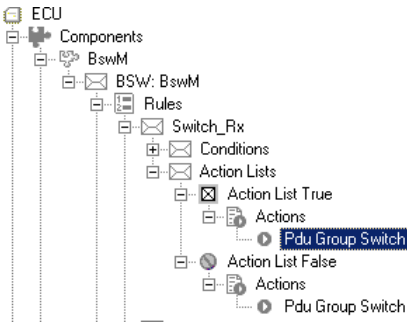
> STEP 4

BSWM_TRIGGER



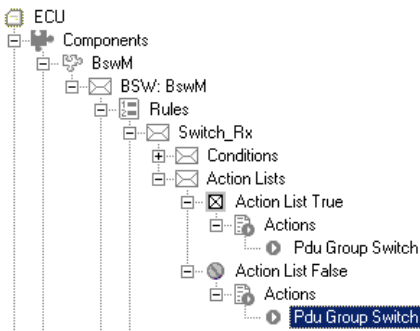
	Action List Execution Type
Action List True	BSWM_TRIGGER
Action List False	BSWM_TRIGGER

> STEP 5



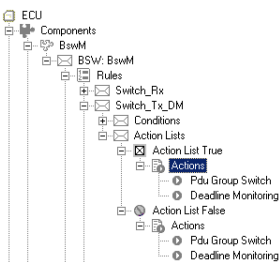
Configurable Options		Pdu Group Switch
Pdu Group Control Type		BSWM_PDU_GROUP_START
Pdu Group Handle		PduGrip_EIS_CHASSIS_CAN_Rx
Pdu Group Reinitialization		<input type="checkbox"/> *

Group Switch Switch_Rx Pdu
BSWM_PDU_GROUP_START



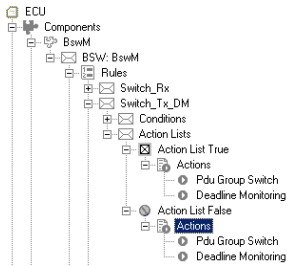
Configurable Options		Pdu Group Switch
Pdu Group Control Type		BSWM_PDU_GROUP_STOP
Pdu Group Handle		PduGrip_EIS_CHASSIS_CAN_Rx
Pdu Group Reinitialization		<input type="checkbox"/> *

Group Switch Switch_Rx Pdu
BSWM_PDU_GROUP_STOP



	Pdu Group Control Type	Pdu Group Handle	Pdu Group Reinitialization	Pdu Group Handle	Deadline Monitoring Control Type
Pdu Group Switch	BSWM_PDU_GROUP_START	PduGrip_EIS_CHASSIS_CAN_Tx	<input type="checkbox"/> *		
Deadline Monitoring				PduGrip_EIS_CHASSIS_CAN_Rx	ENABLE_RX_DM

Group Switch Switch_Tx_DM Pdu
BSWM_PDU_GROUP_START
Deadline Monitoring



	Pdu Group Control Type	Pdu Group Handle	Pdu Group Reinitialization	Pdu Group Handle	Deadline Monitoring Control Type
Pdu Group Switch	BSWM_PDU_GROUP_STOP	PduGrip_EIS_CHASSIS_CAN_Tx	<input type="checkbox"/> *		
Deadline Monitoring				PduGrip_EIS_CHASSIS_CAN_Rx	DISABLE_RX_DM

Switch_Tx_DM

7.1.1 Rule Switch_Tx_DM

Attribute Name	Values	Description
		BSWM_TRIGGER
	Mode Relational Operator Mode State	
	Mode Relational Operator Mode State	
	Mode Relational Operator Mode State	

Attribute Name	Values	Description
	Mode Relational Operator Mode State	
	Mode Relational Operator Mode State	
	Action List Execution Type Actions > >	BSWM_TRIGGER
	Action List Execution Type Actions > >	BSWM_TRIGGER

7.1.2 Rule Switch_Rx

Attribute Name	Values	Description
		BSWM_TRIGGER
	Mode Relational Operator Mode State	
	Mode Relational Operator Mode State	
	Mode Relational Operator Mode State	
	Mode Relational Operator Mode State	
	Mode Relational Operator Mode State	
	Action List Execution Type	

Attribute Name	Values	Description
	Actions >	BSWM_TRIGGER
	Action List Execution Type Actions >	BSWM_TRIGGER

7.2 Dcm Communication Control Modes

DCM_COM_MODE_REQUEST_<channel-name>

Requested Mode	Actions
	> - > - > -
	> - > - > -
	> - > - > -
	> - > - > -
	>
	>
	>
	>
	> - >

Requested Mode	Actions
	> - > -
	> - > - > - > -
	> - > - > - > -



Caution

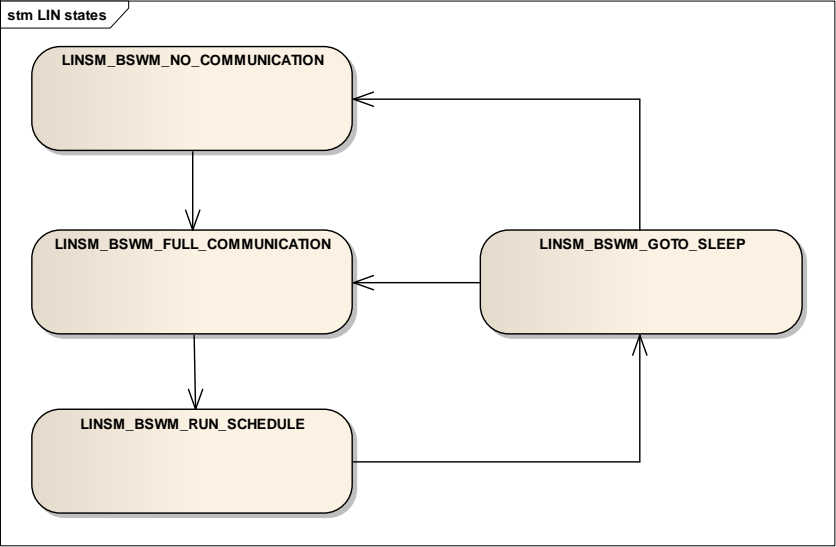
7.3 Dcm Reset Modes

DCM_RESET_MODE_REQUEST

>
>
>
>

7.4 LIN Communication Modes

LINSM_MODE_INDICATION_<channel-name>



>

>

>

7.4.1 Generic Mode for clamp 15

Attribute Name	Values	Description

Attribute Name	Values	Description
	-	

7.4.2 Rule clamp 15 on

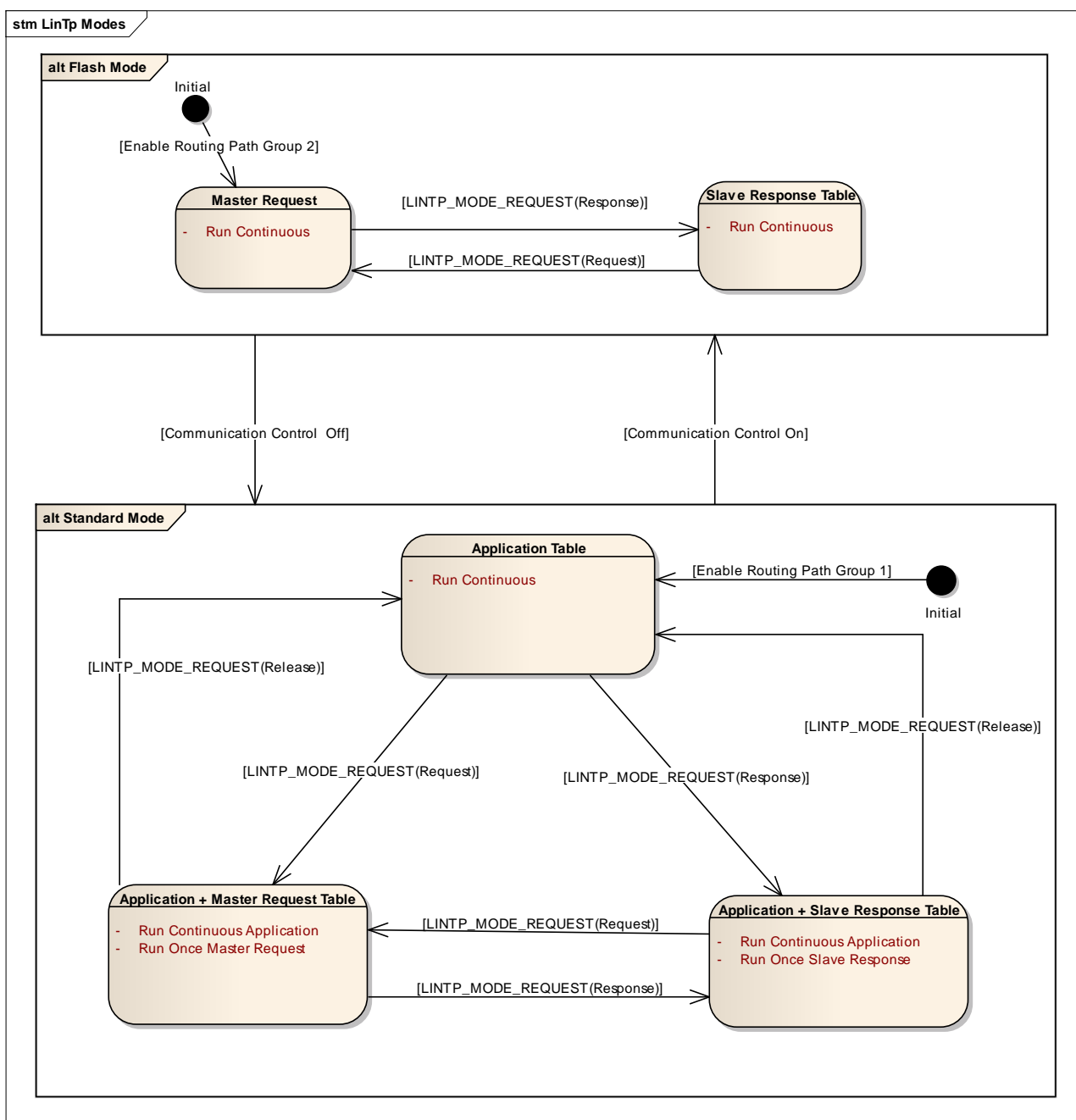
Attribute Name	Values	Description
	Mode Relational Operator Mode State	
	Mode Relational Operator Mode State	Clamp_15
	Action List Execution Type Actions >	

7.4.3 Rule clamp 15 off

Attribute Name	Values	Description
	Mode Relational Operator Mode State	
	Mode Relational Operator Mode State	Clamp_15
	Action List Execution Type Actions >	

7.5 LIN TP Modes

- > LINTP_MODE_REQUEST
- > LINTP_MODE_RESPONSE
- > LINTP_MODE_RELEASE
- > LIN_STANDARD
- > LIN_FLASH



> Generic Mode LIN Diagnostic Mode

> **Rule Switch LIN Diagnostic Mode**

-

> **Rule Application Schedule in Standard Mode**

> **Rule Master Request in Standard Mode**

-

> **Slave Response in Standard Mode**

-

> **Rule Master Request in Flash Mode**

-

> **Rule Slave Response in Flash Mode**

-

-

7.5.1 Generic Mode Configuration

Attribute Name

7.5.2 Rule Configuration

7.5.2.1 Rule for application schedule

Attribute Name	Values	Description
	Mode Relational Operator Mode State	
	Action List Execution Type Actions > > >	

7.5.2.2 Rule for switching the LIN Diagnostic Mode

Attribute Name	Values	Description
	Mode Relational Operator Mode State	
		OR-
	Mode Relational Operator Mode State	
	Action List Execution Type Actions > SetLinDiagFlashMode > - > >	
	Action List Execution Type Actions > SetLinDiagStandardMode > > > >	

7.5.2.3 Rule for master request in LIN_STANDARD Mode

Attribute Name	Values	Description
	Mode Relational Operator Mode State	
		AND-
	Mode Relational Operator Mode State	
	Action List Execution Type Actions > - -	BSWM_CONDITION

7.5.2.4 Rule for slave response in LIN_STANDARD Mode

Attribute Name	Values	Description
	Mode Relational Operator Mode State	
		AND-
	Mode Relational Operator Mode State	
	Action List Execution Type Actions > -	BSWM_CONDITION

7.5.2.5 Rule for master request in LIN_FLASH Mode

Attribute Name	Values	Description
	Mode Relational Operator Mode State	
		AND-
	Mode Relational Operator Mode State	
	Action List Execution Type Actions > -	BSWM_TRIGGER

7.5.2.6 Rule for slave response in LIN_FLASH Mode

Attribute Name	Values	Description
	Mode Relational Operator Mode State	
		AND-
	Mode Relational Operator Mode State	
	Action List Execution Type Actions > -	BSWM_TRIGGER

7.5.3 User Callouts

>

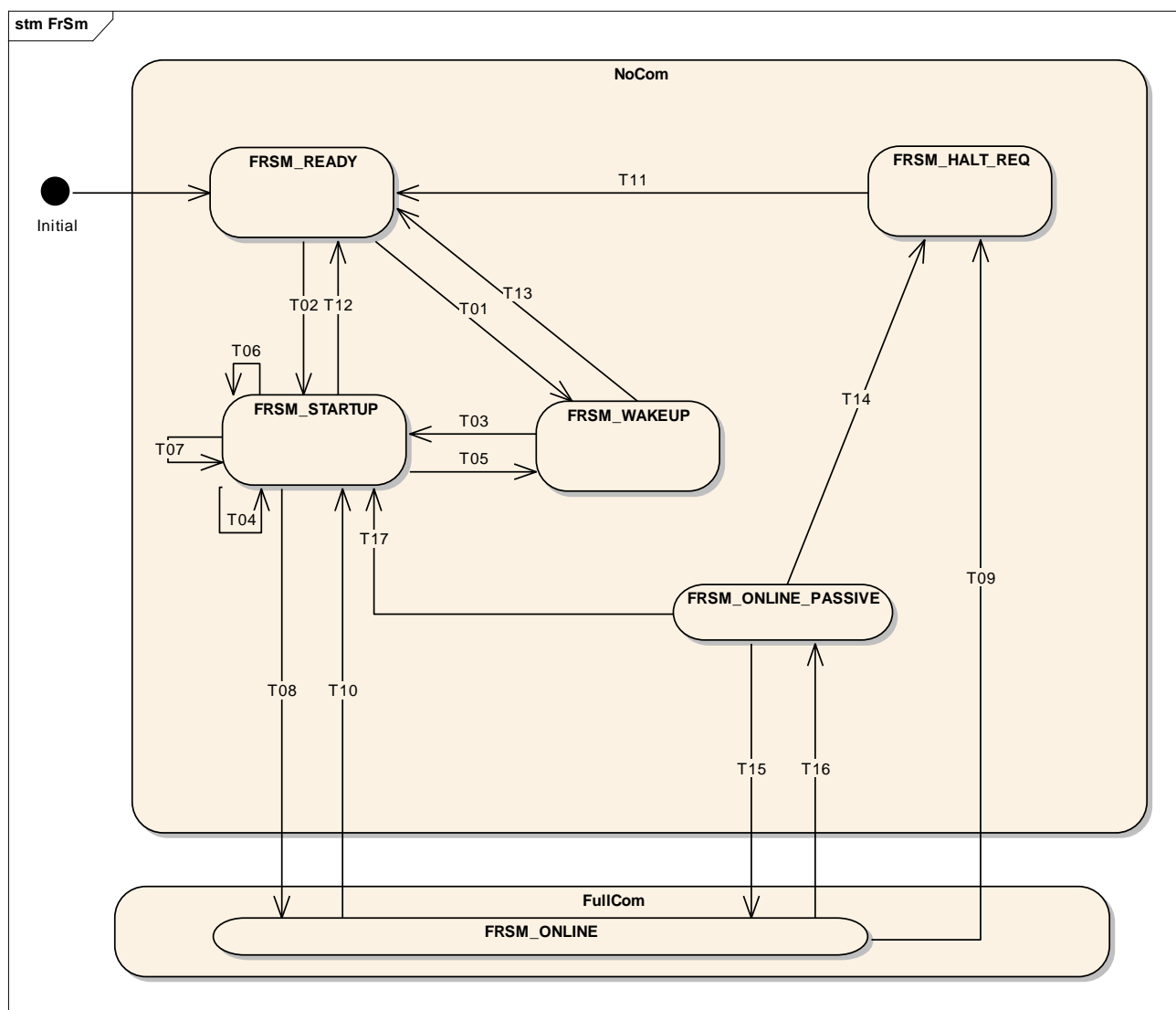
>

LinDiagMode



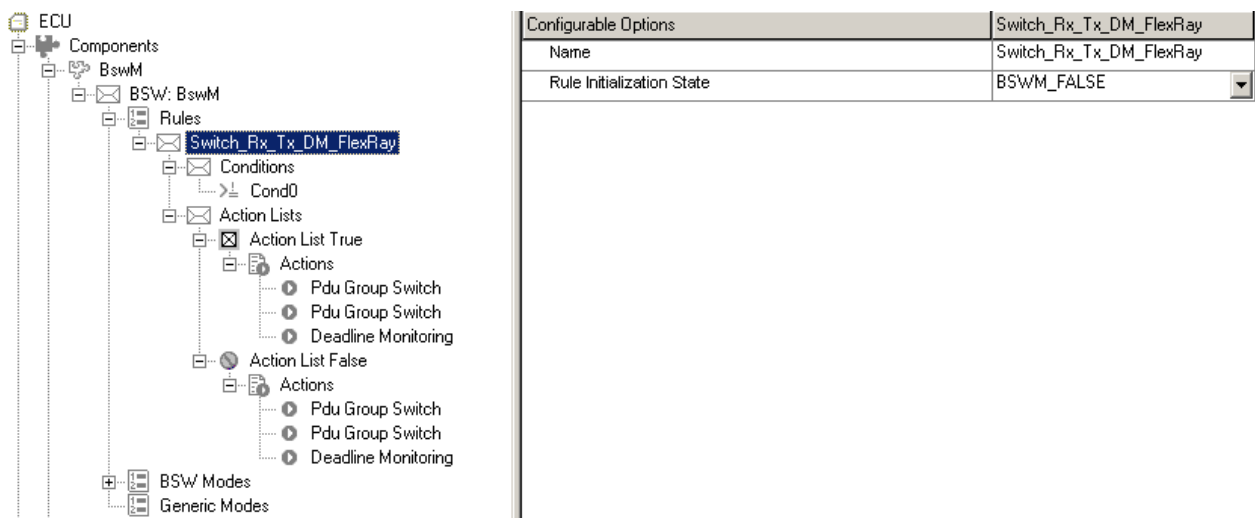
Example

7.6 FlexRay Communication Modes



7.6.1 Rule Switch_Rx_Tx_DM_FlexRay

Attribute Name	Values	Description
		BSWM_TRIGGER
	Mode Relational Operator Mode State	
	Action List Execution Type Actions > > >	BSWM_TRIGGER
	Action List Execution Type Actions > > >	BSWM_TRIGGER



Switch_Rx_Tx_DM_Flexray

7.6.2 Rule Switch_Tx_FlexRay

Attribute Name	Values	Description
		BSWM_TRIGGER
	Mode Relational Operator Mode State	
	Mode Relational Operator Mode State	

Attribute Name	Values	Description
	Mode Relational Operator Mode State	
	Mode Relational Operator Mode State	
	Mode Relational Operator Mode State	
	Action List Execution Type Actions >	BSWM_TRIGGER
	Action List Execution Type Actions >	BSWM_TRIGGER

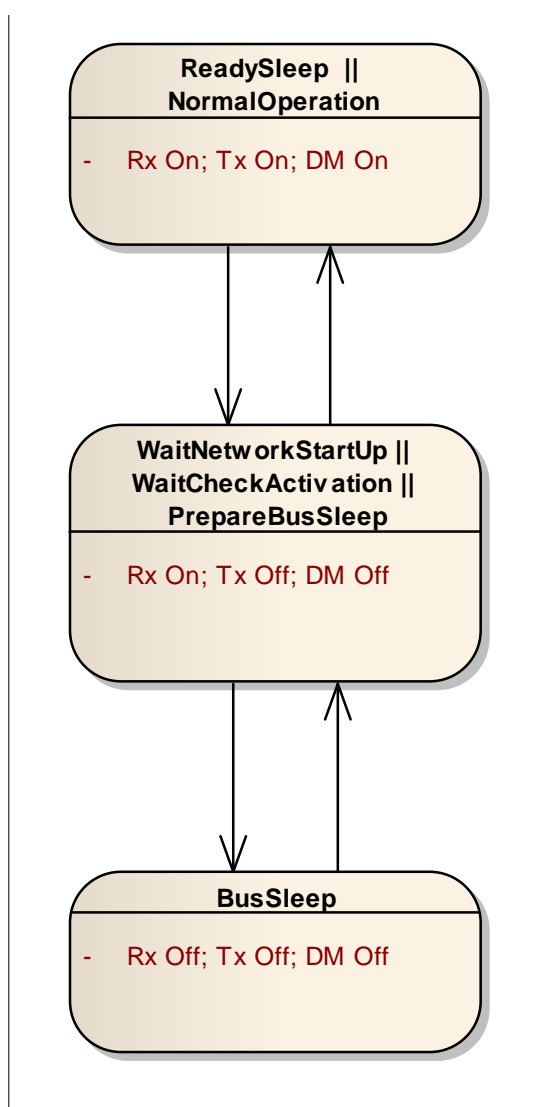
7.6.3 Rule Switch_Rx_DM_FlexRay

Attribute Name	Values	Description
		BSWM_TRIGGER

Attribute Name	Values	Description
	Mode Relational Operator Mode State	
	Mode Relational Operator Mode State	
	Mode Relational Operator: Mode State	
	Mode Relational Operator Mode State	
	Mode Relational Operator Mode State	
	Action List Execution Type Actions > >	BSWM_TRIGGER
	Action List Execution Type	

Attribute Name	Values	Description
	Actions > >	BSWM_TRIGGER

7.7 NmFiatB and NmFiatC Communication Modes





Caution

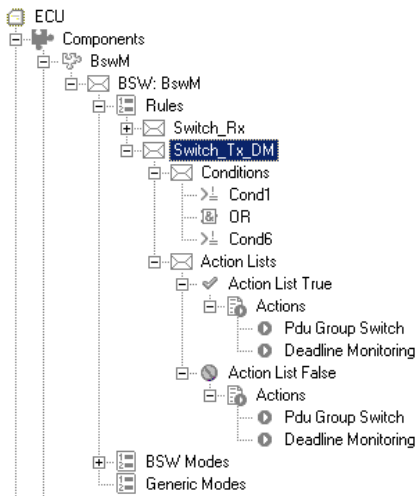
7.7.1 Rule Switch_Tx_DM

Attribute Name	Values	Description
		BSWM_TRIGGER
	Mode Relational Operator Mode State	
	OR	
	Mode Relational Operator Mode State	
	Action List Execution Type Actions > >	BSWM_TRIGGER
	Action List Execution Type Actions	BSWM_TRIGGER

Attribute Name	Values	Description
	> >	

Attribute Name	Values	Description
		BSWM_TRIGGER
	Mode Relational Operator Mode State	CANSM_BSWM_FULL_COMMUNICATION.
	AND	
	Mode Relational Operator Mode State	NM_STATE_BUS_SLEEP
	AND	
	Mode Relational Operator Mode State	NM_STATE_PREPARE_BUS_SLEEP
	AND	
	Mode Relational Operator	NM_STATE_WAIT_CHECK_ACTIVATION

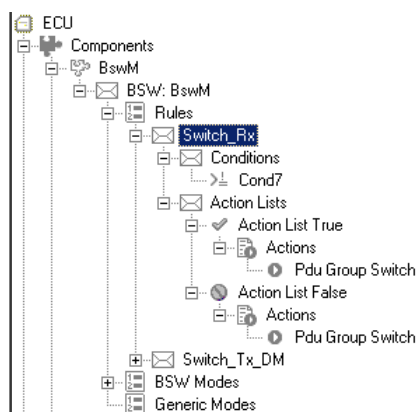
Attribute Name	Values	Description
	Mode State	
	AND	
	Mode Relational Operator Mode State	NM_STATE_WAIT_NETWORK_STARTUP
	Action List Execution Type Actions > >	BSWM_TRIGGER
	Action List Execution Type Actions > >	BSWM_TRIGGER



Configurable Options	
Name	Switch_Tx_DM
Rule Initialization State	BSWM_FALSE

7.7.2 Rule Switch_Rx

Attribute Name	Values	Description
		BSWM_TRIGGER
	Mode Relational Operator Mode State	
	Action List Execution Type Actions >	BSWM_TRIGGER
	Action List Execution Type Actions >	BSWM_TRIGGER



Configurable Options	
Name	Switch_Rx
Rule Initialization State	BSWM_FALSE

7.7.3 Rule Switch_Tx_DM with communication control

Attribute Name	Values	Description
		BSWM_TRIGGER
	Mode Relational Operator Mode State	
	Mode Relational Operator Mode State	
	Mode Relational Operator Mode State	
	Mode Relational Operator Mode State	
	Mode Relational Operator	

Attribute Name	Values	Description
	Mode State	
	Mode Relational Operator Mode State	
	Mode Relational Operator Mode State	
	Mode Relational Operator Mode State	
	Mode Relational Operator Mode State	
	Action List Execution Type Actions > >	BSWM_TRIGGER
	Action List Execution Type Actions > >	BSWM_TRIGGER

Attribute Name	Values	Description
		BSWM_TRIGGER
	Mode Relational Operator Mode State	ANSM_BSWM_FULL_COMMUNICATION
	Mode Relational Operator Mode State	
	Mode Relational Operator Mode State	
	Mode Relational Operator Mode State	
	Mode Relational Operator Mode State	

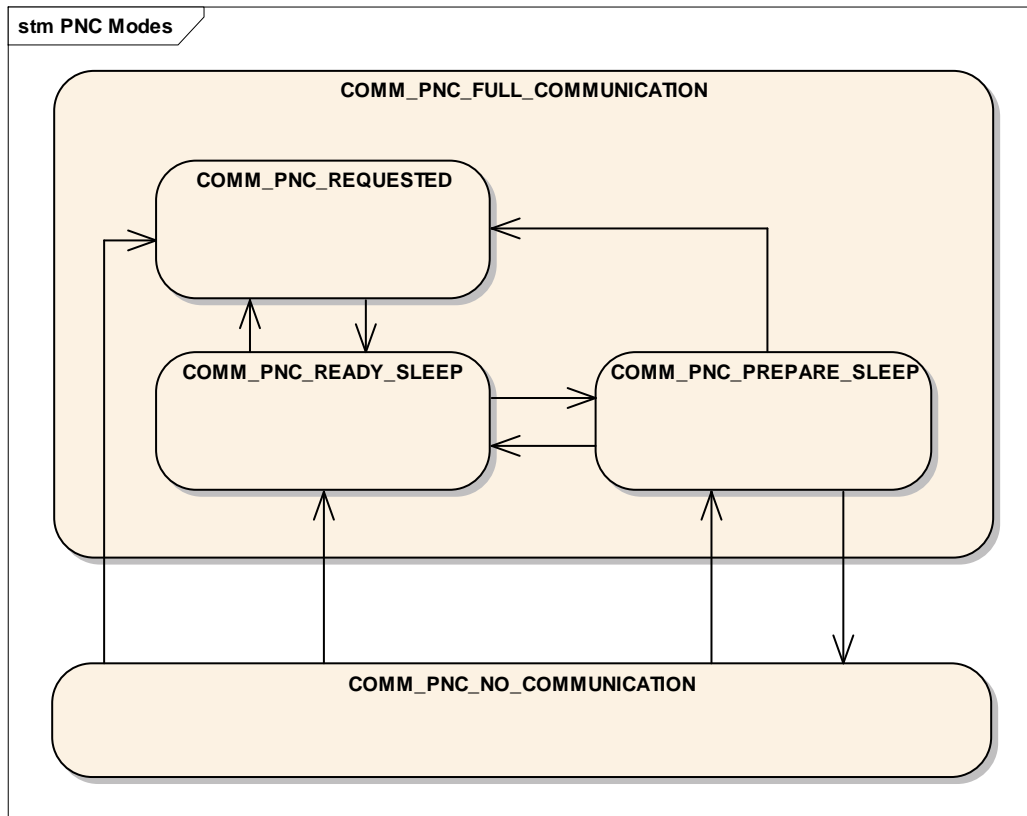
Attribute Name	Values	Description
	Mode Relational Operator Mode State	
	Mode Relational Operator Mode State	
	Mode Relational Operator Mode State	
	Mode Relational Operator Mode State	
	Action List Execution Type Actions > >	BSWM_TRIGGER
	Action List Execution Type Actions > >	BSWM_TRIGGER

7.7.4 Rule Switch_Rx with communication control

Attribute Name	Values	Description
		BSWM_TRIGGER
	Mode Relational Operator Mode State	
	Mode Relational Operator Mode State	
	Mode Relational Operator Mode State	
	Mode Relational Operator Mode State	
	Mode Relational Operator Mode State	
	Action List Execution Type Actions	BSWM_TRIGGER

Attribute Name	Values	Description
	> >	
	Action List Execution Type Actions > >	BSWM_TRIGGER

7.8 Partial Network Cluster Modes



> **COMM_PNC_FULL_COMMUNICATION**

> **COMM_PNC_NO_COMMUNICATION**

>

>

>


7.8.1 Rule Switch_On_PNC

Attribute Name	Values	Description
	Mode Relational Operator Mode State	
	Action List Execution Type Actions: >	BSWM_TRIGGER

7.8.2 Rule Switch_Off_PNC

Attribute Name	Values	Description
	Mode Relational Operator Mode State	
	Action List Execution Type Actions: >	BSWM_CONDITION

7.8.3 Extension for communication start

Attribute Name	Values	Description
	<div>Mode</div> <div>Relational Operator</div> <div>Mode State</div>	
	<div>Action List Execution Type</div> <div>Actions:</div> <div>></div> <div>></div> <div>></div> <div>></div> <div><div></div><div>Caution</div><div>-</div></div>	<div>BSWM_TRIGGER</div>

8 AUTOSAR Standard Compliance

8.1 Deviations

-

8.2 Additions/ Extensions

8.3 Limitations

8.3.1 Mode arbitration and mode control

AND

OR

8.3.2 BSW modes

>

9 Glossary and Abbreviations

9.1 Glossary

Term	Description

9.2 Abbreviations

Abbreviation	Description

10 Contact

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