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Table of Contents

1 RS_NetworkManagement

1.1 Specification Item RS_Nm_00044

Trace References:

RS_Main_00420

Content:

Type:	valid
Description:	Network management mechanisms for each supported protocol shall be realized using a limited number of predefined NM states and NM transitions. The events triggering the transitions between states and the actions taken on these transitions may be protocol specific. A bus sleep mode shall be supported for each protocol. NM shall be executable on asynchronous communication systems (e.g. CAN) as well as on synchronous communication systems (e.g. FlexRay), and also on any other types of communication systems which are in the scope of Autosar.
Rationale:	In today's cars, multiple different communication systems are implemented. For energy consumption, all ECUs have to be able to switch into a low power mode. Therefore, network management is necessary for all communication systems. To facilitate understanding, NM shall be constructed from a common set of state definitions.
AppliesTo:	AP, CP
Use Case:	ECU with CAN and FlexRay, Ethernet
Supporting Material:	–

RfCs affecting this spec item between releases 1.4.0 and 1.5.0:

- Unknown reason for change.

1.2 Specification Item RS_Nm_00148

Trace References:

RS_Main_00140

Content:

Type:	valid
Description:	The specification and implementation shall be split-up into a communication system independent and communication system dependent parts (the communication system dependent parts shall be based on the communication system abstraction).
Rationale:	Re-use
AppliesTo:	CP
Use Case:	CAN NM Software Architecture (AUTOSAR SC decision from Apr 25th, 2006).
Supporting Material:	–

RfCs affecting this spec item between releases 1.4.0 and 1.5.0:

- Unknown reason for change.

1.3 Specification Item RS_Nm_02510

Trace References:

RS_Main_00420

Content:

Type:	valid
Description:	For CAN NM it shall be optionally possible that the NM message transmission confirmation is generated at the transmission request to the CAN Interface layer.
Rationale:	If the bus access is completely regulated through an offline system design tool, the actual transmit confirmation to inform the Nm about a successful transmission can be regarded as redundant. Since the maximum arbitration time is known it is acceptable to immediately raise the confirmation at the transmission request time.
AppliesTo:	CP
Use Case:	Usage of CAN NM in a deterministic bus system.
Supporting Material:	–

RfCs affecting this spec item between releases 1.4.0 and 1.5.0:

- Unknown reason for change.

1.4 Specification Item RS_Nm_02529

Trace References:

RS_Main_00420

Content:

Type:	valid
Description:	If partial networking is used, the ECU shall secure that the first message on the bus is the wakeup frame. This requirement will be implemented in CanIf.
Rationale:	If all ECUs on the bus use partial networking, they use the CAN transceiver with the partial networking extensions. These transceivers only wake up after receiving the Wakeup Frame.
AppliesTo:	CP
Use Case:	–
Supporting Material:	–

RfCs affecting this spec item between releases 1.4.0 and 1.5.0:

- Unknown reason for change.

1.5 Specification Item RS_Nm_02530

Trace References:

RS_Main_00420

Content:

Type:	valid
Description:	CanIf shall provide an optional channel-specific TX filter. In blocking mode, the filter shall only pass transmission of wakeup frames. In pass mode the filter shall pass every PDU transmitted by an upper layer.
Rationale:	–
AppliesTo:	CP

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Use Case:	–
Supporting Material:	–

RfCs affecting this spec item between releases 1.4.0 and 1.5.0:

- Unknown reason for change.

1.6 Specification Item RS_Nm_02531

Trace References:

RS_Main_00420

Content:

Type:	valid
Description:	CanIf shall provide the possibility to initiate clear and check wake-up flags in the transceiver
Rationale:	–
AppliesTo:	CP
Use Case:	–
Supporting Material:	–

RfCs affecting this spec item between releases 1.4.0 and 1.5.0:

- Unknown reason for change.

1.7 Specification Item RS_Nm_02532

Trace References:

RS_Main_00420

Content:

Type:	valid
Description:	When full communication is requested, CanSm shall enable pass mode on the CanIf TX filter
Rationale:	–
AppliesTo:	CP
Use Case:	–
Supporting Material:	–

RfCs affecting this spec item between releases 1.4.0 and 1.5.0:

- Unknown reason for change.

1.8 Specification Item RS_Nm_02533

Trace References:

RS_Main_00420

Content:

Type:	valid
Description:	CanSm shall provide the possibility to initiate clear and check wake-up flags in the transceiver
Rationale:	–
AppliesTo:	CP
Use Case:	–
Supporting Material:	–

RfCs affecting this spec item between releases 1.4.0 and 1.5.0:

- Unknown reason for change.

1.9 Specification Item RS_Nm_02534

Trace References:

RS_Main_00420

Content:

Type:	valid
Description:	CanSm shall support a validPN shutdown sequence (CAN CC STOP ->gt; CAN TRCV STANBY ->gt; CAN CC SLEEP)
Rationale:	–
AppliesTo:	CP
Use Case:	–
Supporting Material:	–

RfCs affecting this spec item between releases 1.4.0 and 1.5.0:

- Unknown reason for change.

1.10 Specification Item RS_Nm_02535

Trace References:

RS_Main_00420

Content:

Type:	valid
Description:	Extent the existing The NM coordination algorithm in shall support coordination of a way that it allows to coordinate a second level of bus hierarchy, when shutting down coordinated bussesbuses. There is no limitation of hierarchy levelswith this concept.
Rationale:	The network management stack allows to have a coordinated shutdown of more than one bus if an ECU exists which is connected to the busses buses which are to be coordinated. The functionality is included in the NmIf module. However, there are currently two limitations
AppliesTo:	CP
Use Case:	Nested Gateways
Supporting Material:	–

RfCs affecting this spec item between releases 1.4.0 and 1.5.0:

- Unknown reason for change.