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## **1 PRS\_E2EProtocol**

## **2 PRS\_LogAndTraceProtocol**

## **3 PRS\_RemoteEventCommunicationProtocol**

## **4 PRS\_SOMEIPProtocol**

## **5 PRS\_SOMEIPServiceDiscoveryProtocol**

## **6 RS\_E2E**

## **7 RS\_HealthMonitoring**

### **7.1 Specification Item RS\_HM\_09159**

#### **Trace References:**

none

#### **Content:**

**RfCs affecting this spec item between releases 1.3.0 and 1.4.0:** none

### **7.2 Specification Item RS\_HM\_09169**

#### **Trace References:**

none

#### **Content:**

**RfCs affecting this spec item between releases 1.3.0 and 1.4.0:** none

### 7.3 Specification Item RS\_HM\_09226

**Trace References:**

none

**Content:**

**RfCs affecting this spec item between releases 1.3.0 and 1.4.0:** none

### 7.4 Specification Item RS\_HM\_09251

**Trace References:**

none

**Content:**

**RfCs affecting this spec item between releases 1.3.0 and 1.4.0:** none

## 8 RS\_LogAndTrace

## 9 RS\_Main

### 9.1 Specification Item RS\_Main\_00001

**Trace References:**

none

**Content:**

**RfCs affecting this spec item between releases 1.3.0 and 1.4.0:**

- RfC #79424: Umbrella RfC for RS\_Main working list R18-03

**Problem description:**

This RfC is used to collect the RfCs currently discussed in the PL working list:

[https://svn.autosar.org/repos/work/26\\_Standards/00\\_FO\\_R1/01\\_Sources/Elaboration/RS\\_Main/F](https://svn.autosar.org/repos/work/26_Standards/00_FO_R1/01_Sources/Elaboration/RS_Main/F)

RfCs are discussed in the working list to achieve an agreement. Duplicate

RfCs or resolved RfCs targeting single changes will be linked to this RfC.

For the release all agreed changes from the working list are updated to this RfC and implemented.

**Agreed solution:**

[RS\_Main\_00001] AUTOSAR shall provide a software platform for embedded real-time systems

Description: AUTOSAR shall provide a software platform called AUTOSAR Classic Platform, which targets the domain of real-time systems.

Further Explanations: Real time systems are divided into hard and soft real time systems. Hard real time systems always have to deliver the correct result in the given time whereas from soft real time systems it is demanded that they compute the correct answer in a given time in a dedicated average.

[RS\_Main\_00150] AUTOSAR shall support the deployment and reallocation of AUTOSAR Application Software

Applies to: AP

[RS\_Main\_00190] AUTOSAR shall support standardized interoperability with non-AUTOSAR software

Description: Reuse of existing legacy software shall be supported by AUTOSAR .Integration of legacy software in an ECU compliant to AUTOSAR shall be supported.

Rationale: Independent of the target the code has to be compatible to legacy implementation on protocol level.

Remove [RS\_Main\_00330]

[new requirement] AUTOSAR shall support up - and download of data and software

Type: valid

Description: AUTOSAR shall support standardized up- and download of data and software. For all kind of data exchange between off- and onboard artifacts mechanisms and methods shall be defined. These mechanisms and methods shall support common protocols used for data-transfer. Partial updates of the software shall be supported. Independent access control rules and policies apply.

Rationale:

Use Case: Download of dedicated Software Components in ECU.

Applies to: AP

Dependencies: –

Supporting Material: –

[RS\_Main\_00280] AUTOSAR shall support standardized automotive communi-

cation protocols

Description: AUTOSAR shall support the communication between platforms defined by AUTOSAR and platforms defined other parties (e.g. running other operating systems).

Rationale: Automotive networks consist of ECUs running different software platforms (including offboard systems) beside the software platforms defined by AUTOSAR.

Use Case: V2X (offboard) communication for vehicle data storage

Communication with traffic light

High quality map data Car-2-X communication

Applies to: AP, CP

Dependencies: –

Supporting Material: –

(RS\_PO\_00003,RS\_PO\_00004,RS\_PO\_00005,RS\_PO\_00006,RS\_PO\_00009)

Remove[RS\_Main\_00285]

Remove[RS\_Main\_00505]

[RS\_Main\_00130] AUTOSAR shall provide an abstraction from hardware

Description: AUTOSAR shall provide an abstraction from hardware characteristics. This abstraction shall only be accessible to the software modules directly interacting with the hardware.

Rationale: Application Software has to be independent from the underlying hardware in order to be reused (e.g. on other hardware platforms)

[RS\_Main\_00435] AUTOSAR shall support automotive microcontrollers

Applies to: CP

–Last change on issue 79424 comment 5–

**BW-C-Level:**

Application	Specification	Bus
1	1	1

## 9.2 Specification Item RS\_Main\_00002

**Trace References:**

none

**Content:**

**RfCs affecting this spec item between releases 1.3.0 and 1.4.0:**

- RfC #79424: Umbrella RfC for RS\_Main working list R18-03

**Problem description:**

This RfC is used to collect the RfCs currently discussed in the PL working list:

[https://svn.autosar.org/repos/work/26\\_Standards/00\\_FO\\_R1/01\\_Sources/Elaboration/RS\\_Main/F](https://svn.autosar.org/repos/work/26_Standards/00_FO_R1/01_Sources/Elaboration/RS_Main/F)

RfCs are discussed in the working list to achieve an agreement. Duplicate RfCs or resolved RfCs targeting single changes will be linked to this RfC.

For the release all agreed changes from the working list are updated to this RfC and implemented.

**Agreed solution:**

[RS\_Main\_00001] AUTOSAR shall provide a software platform for embedded real-time systems

Description: AUTOSAR shall provide a software platform called AUTOSAR Classic Platform, which targets the domain of real-time systems.

Further Explanations: Real time systems are divided into hard and soft real time systems. Hard real time systems always have to deliver the correct result in the given time whereas from soft real time systems it is demanded that they compute the correct answer in a given time in a dedicated average.

[RS\_Main\_00150] AUTOSAR shall support the deployment and reallocation of AUTOSAR Application Software

Applies to: AP

[RS\_Main\_00190] AUTOSAR shall support standardized interoperability with non-AUTOSAR software

Description: Reuse of existing legacy software shall be supported by AUTOSAR .Integration of legacy software in an ECU compliant to AUTOSAR shall be supported.

Rationale: Independent of the target the code has to be compatible to legacy implementation on protocol level.

Remove [RS\_Main\_00330]

[new requirement] AUTOSAR shall support up - and download of data and software

Type: valid

Description: AUTOSAR shall support standardized up- and download of data and software. For all kind of data exchange between off- and onboard artifacts mechanisms and methods shall be defined. These mechanisms and methods shall



support common protocols used for data-transfer. Partial updates of the software shall be supported. Independent access control rules and policies apply.

Rationale:

Use Case: Download of dedicated Software Components in ECU.

Applies to: AP

Dependencies: –

Supporting Material: –

[RS\_Main\_00280] AUTOSAR shall support standardized automotive communication protocols

Description: AUTOSAR shall support the communication between platforms defined by AUTOSAR and platforms defined other parties (e.g. running other operating systems).

Rationale: Automotive networks consist of ECUs running different software platforms (including offboard systems) beside the software platforms defined by AUTOSAR.

Use Case: V2X (offboard) communication for vehicle data storage

Communication with traffic light

High quality map data Car-2-X communication

Applies to: AP, CP

Dependencies: –

Supporting Material: –

(RS\_PO\_00003,RS\_PO\_00004,RS\_PO\_00005,RS\_PO\_00006,RS\_PO\_00009)

Remove[RS\_Main\_00285]

Remove[RS\_Main\_00505]

[RS\_Main\_00130] AUTOSAR shall provide an abstraction from hardware

Description: AUTOSAR shall provide an abstraction from hardware characteristics. This abstraction shall only be accessible to the software modules directly interacting with the hardware.

Rationale: Application Software has to be independent from the underlying hardware in order to be reused (e.g. on other hardware platforms)

[RS\_Main\_00435] AUTOSAR shall support automotive microcontrollers

Applies to: CP

–Last change on issue 79424 comment 5–

#### BW-C-Level:

Application	Specification	Bus
1	1	1

### 9.3 Specification Item RS\_Main\_00049

#### Trace References:

none

#### Content:

#### RfCs affecting this spec item between releases 1.3.0 and 1.4.0:

- RfC #79424: Umbrella RfC for RS\_Main working list R18-03

#### Problem description:

This RfC is used to collect the RfCs currently discussed in the PL working list:

[https://svn.autosar.org/repos/work/26\\_Standards/00\\_FO\\_R1/01\\_Sources/Elaboration/RS\\_Main/F](https://svn.autosar.org/repos/work/26_Standards/00_FO_R1/01_Sources/Elaboration/RS_Main/F)

RfCs are discussed in the working list to achieve an agreement. Duplicate RfCs or resolved RfCs targeting single changes will be linked to this RfC.

For the release all agreed changes from the working list are updated to this RfC and implemented.

#### Agreed solution:

[RS\_Main\_00001] AUTOSAR shall provide a software platform for embedded real-time systems

Description: AUTOSAR shall provide a software platform called AUTOSAR Classic Platform, which targets the domain of real-time systems.

Further Explanations: Real time systems are divided into hard and soft real time systems. Hard real time systems always have to deliver the correct result in the given time whereas from soft real time systems it is demanded that they compute the correct answer in a given time in a dedicated average.

[RS\_Main\_00150] AUTOSAR shall support the deployment and reallocation of AUTOSAR Application Software

Applies to: AP

[RS\_Main\_00190] AUTOSAR shall support standardized interoperability with non-AUTOSAR software

Description: Reuse of existing legacy software shall be supported by AUTOSAR .Integration of legacy software in an ECU compliant to AUTOSAR shall be supported.

Rationale: Independent of the target the code has to be compatible to legacy implementation on protocol level.

Remove [RS\_Main\_00330]

[new requirement] AUTOSAR shall support up - and download of data and software

Type: valid

Description: AUTOSAR shall support standardized up- and download of data and software. For all kind of data exchange between off- and onboard artifacts mechanisms and methods shall be defined. These mechanisms and methods shall support common protocols used for data-transfer. Partial updates of the software shall be supported. Independent access control rules and policies apply.

Rationale:

Use Case: Download of dedicated Software Components in ECU.

Applies to: AP

Dependencies: –

Supporting Material: –

[RS\_Main\_00280] AUTOSAR shall support standardized automotive communication protocols

Description: AUTOSAR shall support the communication between platforms defined by AUTOSAR and platforms defined other parties (e.g. running other operating systems).

Rationale: Automotive networks consist of ECUs running different software platforms (including offboard systems) beside the software platforms defined by AUTOSAR.

Use Case: V2X (offboard) communication for vehicle data storage

Communication with traffic light

High quality map data Car-2-X communication

Applies to: AP, CP

Dependencies: –

Supporting Material: –

(RS\_PO\_00003,RS\_PO\_00004,RS\_PO\_00005,RS\_PO\_00006,RS\_PO\_00009)

Remove[RS\_Main\_00285]

Remove[RS\_Main\_00505]

[RS\_Main\_00130] AUTOSAR shall provide an abstraction from hardware

Description: AUTOSAR shall provide an abstraction from hardware characteristics. This abstraction shall only be accessible to the software modules directly interacting with the hardware.

Rationale: Application Software has to be independent from the underlying hardware in order to be reused (e.g. on other hardware platforms)

[RS\_Main\_00435] AUTOSAR shall support automotive microcontrollers

Applies to: CP

–Last change on issue 79424 comment 5–

**BW-C-Level:**

Application	Specification	Bus
1	1	1

## 9.4 Specification Item RS\_Main\_00080

**Trace References:**

none

**Content:**

**RfCs affecting this spec item between releases 1.3.0 and 1.4.0:**

- RfC #79424: Umbrella RfC for RS\_Main working list R18-03

**Problem description:**

This RfC is used to collect the RfCs currently discussed in the PL working list:

[https://svn.autosar.org/repos/work/26\\_Standards/00\\_FO\\_R1/01\\_Sources/Elaboration/RS\\_Main/F](https://svn.autosar.org/repos/work/26_Standards/00_FO_R1/01_Sources/Elaboration/RS_Main/F)

RfCs are discussed in the working list to achieve an agreement. Duplicate RfCs or resolved RfCs targeting single changes will be linked to this RfC.

For the release all agreed changes from the working list are updated to this RfC and implemented.

**Agreed solution:**

[RS\_Main\_00001] AUTOSAR shall provide a software platform for embedded real-time systems

Description: AUTOSAR shall provide a software platform called AUTOSAR Classic Platform, which targets the domain of real-time systems.

Further Explanations: Real time systems are divided into hard and soft real time systems. Hard real time systems always have to deliver the correct result in the given time whereas from soft real time systems it is demanded that they compute the correct answer in a given time in a dedicated average.

[RS\_Main\_00150] AUTOSAR shall support the deployment and reallocation of AUTOSAR Application Software

Applies to: AP

[RS\_Main\_00190] AUTOSAR shall support standardized interoperability with non-AUTOSAR software

Description: Reuse of existing legacy software shall be supported by AUTOSAR .Integration of legacy software in an ECU compliant to AUTOSAR shall be supported.

Rationale: Independent of the target the code has to be compatible to legacy implementation on protocol level.

Remove [RS\_Main\_00330]

[new requirement] AUTOSAR shall support up - and download of data and software

Type: valid

Description: AUTOSAR shall support standardized up- and download of data and software. For all kind of data exchange between off- and onboard artifacts mechanisms and methods shall be defined. These mechanisms and methods shall support common protocols used for data-transfer. Partial updates of the software shall be supported. Independent access control rules and policies apply.

Rationale:

Use Case: Download of dedicated Software Components in ECU.

Applies to: AP

Dependencies: –

Supporting Material: –

[RS\_Main\_00280] AUTOSAR shall support standardized automotive communication protocols

Description: AUTOSAR shall support the communication between platforms defined by AUTOSAR and platforms defined other parties (e.g. running other operating systems).

Rationale: Automotive networks consist of ECUs running different software platforms (including offboard systems) beside the software platforms defined by AUTOSAR.

Use Case: V2X (offboard) communication for vehicle data storage

Communication with traffic light

High quality map data Car-2-X communication

Applies to: AP, CP

Dependencies: –

Supporting Material: –

(RS\_PO\_00003,RS\_PO\_00004,RS\_PO\_00005,RS\_PO\_00006,RS\_PO\_00009)

Remove[RS\_Main\_00285]

Remove[RS\_Main\_00505]

[RS\_Main\_00130] AUTOSAR shall provide an abstraction from hardware  
Description: AUTOSAR shall provide an abstraction from hardware characteristics. This abstraction shall only be accessible to the software modules directly interacting with the hardware.

Rationale: Application Software has to be independent from the underlying hardware in order to be reused (e.g. on other hardware platforms)

[RS\_Main\_00435] AUTOSAR shall support automotive microcontrollers

Applies to: CP

–Last change on issue 79424 comment 5–

**BW-C-Level:**

Application	Specification	Bus
1	1	1

## 9.5 Specification Item RS\_Main\_00130

**Trace References:**

none

**Content:**

**RfCs affecting this spec item between releases 1.3.0 and 1.4.0:**

- RfC #79424: Umbrella RfC for RS\_Main working list R18-03

**Problem description:**

This RfC is used to collect the RfCs currently discussed in the PL working list:

[https://svn.autosar.org/repos/work/26\\_Standards/00\\_FO\\_R1/01\\_Sources/Elaboration/RS\\_Main/F](https://svn.autosar.org/repos/work/26_Standards/00_FO_R1/01_Sources/Elaboration/RS_Main/F)

RfCs are discussed in the working list to achieve an agreement. Duplicate RfCs or resolved RfCs targeting single changes will be linked to this RfC.

For the release all agreed changes from the working list are updated to this RfC and implemented.

**Agreed solution:**

[RS\_Main\_00001] AUTOSAR shall provide a software platform for embedded real-time systems

Description: AUTOSAR shall provide a software platform called AUTOSAR Classic Platform, which targets the domain of real-time systems.

Further Explanations: Real time systems are divided into hard and soft real time systems. Hard real time systems always have to deliver the correct result in the given time whereas from soft real time systems it is demanded that they compute the correct answer in a given time in a dedicated average.

[RS\_Main\_00150] AUTOSAR shall support the deployment and reallocation of AUTOSAR Application Software

Applies to: AP

[RS\_Main\_00190] AUTOSAR shall support standardized interoperability with non-AUTOSAR software

Description: Reuse of existing legacy software shall be supported by AUTOSAR .Integration of legacy software in an ECU compliant to AUTOSAR shall be supported.

Rationale: Independent of the target the code has to be compatible to legacy implementation on protocol level.

Remove [RS\_Main\_00330]

[new requirement] AUTOSAR shall support up - and download of data and software

Type: valid

Description: AUTOSAR shall support standardized up- and download of data and software. For all kind of data exchange between off- and onboard artifacts mechanisms and methods shall be defined. These mechanisms and methods shall support common protocols used for data-transfer. Partial updates of the software shall be supported. Independent access control rules and policies apply.

Rationale:

Use Case: Download of dedicated Software Components in ECU.

Applies to: AP

Dependencies: –

Supporting Material: –

[RS\_Main\_00280] AUTOSAR shall support standardized automotive communication protocols

Description: AUTOSAR shall support the communication between platforms defined by AUTOSAR and platforms defined other parties (e.g. running other operating systems).

Rationale: Automotive networks consist of ECUs running different software platforms (including offboard systems) beside the software platforms defined by

AUTOSAR.

Use Case: V2X (offboard) communication for vehicle data storage

Communication with traffic light

High quality map data Car-2-X communication

Applies to: AP, CP

Dependencies: –

Supporting Material: –

(RS\_PO\_00003,RS\_PO\_00004,RS\_PO\_00005,RS\_PO\_00006,RS\_PO\_00009)

Remove[RS\_Main\_00285]

Remove[RS\_Main\_00505]

[RS\_Main\_00130] AUTOSAR shall provide an abstraction from hardware

Description: AUTOSAR shall provide an abstraction from hardware characteristics. This abstraction shall only be accessible to the software modules directly interacting with the hardware.

Rationale: Application Software has to be independent from the underlying hardware in order to be reused (e.g. on other hardware platforms)

[RS\_Main\_00435] AUTOSAR shall support automotive microcontrollers

Applies to: CP

–Last change on issue 79424 comment 5–

**BW-C-Level:**

Application	Specification	Bus
1	1	1

## 9.6 Specification Item RS\_Main\_00150

**Trace References:**

none

**Content:**

**RfCs affecting this spec item between releases 1.3.0 and 1.4.0:**

- RfC #79424: Umbrella RfC for RS\_Main working list R18-03

**Problem description:**



This RfC is used to collect the RfCs currently discussed in the PL working list:

[https://svn.autosar.org/repos/work/26\\_Standards/00\\_FO\\_R1/01\\_Sources/Elaboration/RS\\_Main/F](https://svn.autosar.org/repos/work/26_Standards/00_FO_R1/01_Sources/Elaboration/RS_Main/F)

RfCs are discussed in the working list to achieve an agreement. Duplicate RfCs or resolved RfCs targeting single changes will be linked to this RfC.

For the release all agreed changes from the working list are updated to this RfC and implemented.

**Agreed solution:**

[RS\_Main\_00001] AUTOSAR shall provide a software platform for embedded real-time systems

Description: AUTOSAR shall provide a software platform called AUTOSAR Classic Platform, which targets the domain of real-time systems.

Further Explanations: Real time systems are divided into hard and soft real time systems. Hard real time systems always have to deliver the correct result in the given time whereas from soft real time systems it is demanded that they compute the correct answer in a given time in a dedicated average.

[RS\_Main\_00150] AUTOSAR shall support the deployment and reallocation of AUTOSAR Application Software

Applies to: AP

[RS\_Main\_00190] AUTOSAR shall support standardized interoperability with non-AUTOSAR software

Description: Reuse of existing legacy software shall be supported by AUTOSAR .Integration of legacy software in an ECU compliant to AUTOSAR shall be supported.

Rationale: Independent of the target the code has to be compatible to legacy implementation on protocol level.

Remove [RS\_Main\_00330]

[new requirement] AUTOSAR shall support up - and download of data and software

Type: valid

Description: AUTOSAR shall support standardized up- and download of data and software. For all kind of data exchange between off- and onboard artifacts mechanisms and methods shall be defined. These mechanisms and methods shall support common protocols used for data-transfer. Partial updates of the software shall be supported. Independent access control rules and policies apply.

Rationale:

Use Case: Download of dedicated Software Components in ECU.

Applies to: AP

Dependencies: –  
Supporting Material: –

[RS\_Main\_00280] AUTOSAR shall support standardized automotive communication protocols

Description: AUTOSAR shall support the communication between platforms defined by AUTOSAR and platforms defined other parties (e.g. running other operating systems).

Rationale: Automotive networks consist of ECUs running different software platforms (including offboard systems) beside the software platforms defined by AUTOSAR.

Use Case: V2X (offboard) communication for vehicle data storage

Communication with traffic light

High quality map data Car-2-X communication

Applies to: AP, CP

Dependencies: –

Supporting Material: –

(RS\_PO\_00003,RS\_PO\_00004,RS\_PO\_00005,RS\_PO\_00006,RS\_PO\_00009)

Remove[RS\_Main\_00285]

Remove[RS\_Main\_00505]

[RS\_Main\_00130] AUTOSAR shall provide an abstraction from hardware

Description: AUTOSAR shall provide an abstraction from hardware characteristics. This abstraction shall only be accessible to the software modules directly interacting with the hardware.

Rationale: Application Software has to be independent from the underlying hardware in order to be reused (e.g. on other hardware platforms)

[RS\_Main\_00435] AUTOSAR shall support automotive microcontrollers

Applies to: CP

–Last change on issue 79424 comment 5–

#### **BW-C-Level:**

Application	Specification	Bus
1	1	1

## 9.7 Specification Item RS\_Main\_00190

### Trace References:

none

### Content:

#### RfCs affecting this spec item between releases 1.3.0 and 1.4.0:

- RfC #79424: Umbrella RfC for RS\_Main working list R18-03

#### Problem description:

This RfC is used to collect the RfCs currently discussed in the PL working list:

[https://svn.autosar.org/repos/work/26\\_Standards/00\\_FO\\_R1/01\\_Sources/Elaboration/RS\\_Main/F](https://svn.autosar.org/repos/work/26_Standards/00_FO_R1/01_Sources/Elaboration/RS_Main/F)

RfCs are discussed in the working list to achieve an agreement. Duplicate RfCs or resolved RfCs targeting single changes will be linked to this RfC.

For the release all agreed changes from the working list are updated to this RfC and implemented.

#### Agreed solution:

[RS\_Main\_00001] AUTOSAR shall provide a software platform for embedded real-time systems

Description: AUTOSAR shall provide a software platform called AUTOSAR Classic Platform, which targets the domain of real-time systems.

Further Explanations: Real time systems are divided into hard and soft real time systems. Hard real time systems always have to deliver the correct result in the given time whereas from soft real time systems it is demanded that they compute the correct answer in a given time in a dedicated average.

[RS\_Main\_00150] AUTOSAR shall support the deployment and reallocation of AUTOSAR Application Software

Applies to: AP

[RS\_Main\_00190] AUTOSAR shall support standardized interoperability with non-AUTOSAR software

Description: Reuse of existing legacy software shall be supported by AUTOSAR .Integration of legacy software in an ECU compliant to AUTOSAR shall be supported.

Rationale: Independent of the target the code has to be compatible to legacy implementation on protocol level.

Remove [RS\_Main\_00330]

[new requirement] AUTOSAR shall support up - and download of data and software

Type: valid

Description: AUTOSAR shall support standardized up- and download of data and software. For all kind of data exchange between off- and onboard artifacts mechanisms and methods shall be defined. These mechanisms and methods shall support common protocols used for data-transfer. Partial updates of the software shall be supported. Independent access control rules and policies apply.

Rationale:

Use Case: Download of dedicated Software Components in ECU.

Applies to: AP

Dependencies: –

Supporting Material: –

[RS\_Main\_00280] AUTOSAR shall support standardized automotive communication protocols

Description: AUTOSAR shall support the communication between platforms defined by AUTOSAR and platforms defined other parties (e.g. running other operating systems).

Rationale: Automotive networks consist of ECUs running different software platforms (including offboard systems) beside the software platforms defined by AUTOSAR.

Use Case: V2X (offboard) communication for vehicle data storage

Communication with traffic light

High quality map data Car-2-X communication

Applies to: AP, CP

Dependencies: –

Supporting Material: –

(RS\_PO\_00003,RS\_PO\_00004,RS\_PO\_00005,RS\_PO\_00006,RS\_PO\_00009)

Remove[RS\_Main\_00285]

Remove[RS\_Main\_00505]

[RS\_Main\_00130] AUTOSAR shall provide an abstraction from hardware

Description: AUTOSAR shall provide an abstraction from hardware characteristics. This abstraction shall only be accessible to the software modules directly interacting with the hardware.

Rationale: Application Software has to be independent from the underlying hardware in order to be reused (e.g. on other hardware platforms)

[RS\_Main\_00435] AUTOSAR shall support automotive microcontrollers

Applies to: CP

–Last change on issue 79424 comment 5–

**BW-C-Level:**

Application	Specification	Bus
1	1	1

## 9.8 Specification Item RS\_Main\_00230

**Trace References:**

none

**Content:**

**RfCs affecting this spec item between releases 1.3.0 and 1.4.0:**

- RfC #79424: Umbrella RfC for RS\_Main working list R18-03

**Problem description:**

This RfC is used to collect the RfCs currently discussed in the PL working list:

[https://svn.autosar.org/repos/work/26\\_Standards/00\\_FO\\_R1/01\\_Sources/Elaboration/RS\\_Main/F](https://svn.autosar.org/repos/work/26_Standards/00_FO_R1/01_Sources/Elaboration/RS_Main/F)

RfCs are discussed in the working list to achieve an agreement. Duplicate RfCs or resolved RfCs targeting single changes will be linked to this RfC.

For the release all agreed changes from the working list are updated to this RfC and implemented.

**Agreed solution:**

[RS\_Main\_00001] AUTOSAR shall provide a software platform for embedded real-time systems

Description: AUTOSAR shall provide a software platform called AUTOSAR Classic Platform, which targets the domain of real-time systems.

Further Explanations: Real time systems are divided into hard and soft real time systems. Hard real time systems always have to deliver the correct result in the given time whereas from soft real time systems it is demanded that they compute the correct answer in a given time in a dedicated average.

[RS\_Main\_00150] AUTOSAR shall support the deployment and reallocation of AUTOSAR Application Software

Applies to: AP

[RS\_Main\_00190] AUTOSAR shall support standardized interoperability with non-AUTOSAR software

Description: Reuse of existing legacy software shall be supported by AUTOSAR .Integration of legacy software in an ECU compliant to AUTOSAR shall be supported.

Rationale: Independent of the target the code has to be compatible to legacy implementation on protocol level.

Remove [RS\_Main\_00330]

[new requirement] AUTOSAR shall support up - and download of data and software

Type: valid

Description: AUTOSAR shall support standardized up- and download of data and software. For all kind of data exchange between off- and onboard artifacts mechanisms and methods shall be defined. These mechanisms and methods shall support common protocols used for data-transfer. Partial updates of the software shall be supported. Independent access control rules and policies apply.

Rationale:

Use Case: Download of dedicated Software Components in ECU.

Applies to: AP

Dependencies: –

Supporting Material: –

[RS\_Main\_00280] AUTOSAR shall support standardized automotive communication protocols

Description: AUTOSAR shall support the communication between platforms defined by AUTOSAR and platforms defined other parties (e.g. running other operating systems).

Rationale: Automotive networks consist of ECUs running different software platforms (including offboard systems) beside the software platforms defined by AUTOSAR.

Use Case: V2X (offboard) communication for vehicle data storage

Communication with traffic light

High quality map data Car-2-X communication

Applies to: AP, CP

Dependencies: –

Supporting Material: –

(RS\_PO\_00003,RS\_PO\_00004,RS\_PO\_00005,RS\_PO\_00006,RS\_PO\_00009)

Remove[RS\_Main\_00285]

Remove[RS\_Main\_00505]

[RS\_Main\_00130] AUTOSAR shall provide an abstraction from hardware  
Description: AUTOSAR shall provide an abstraction from hardware characteristics. This abstraction shall only be accessible to the software modules directly interacting with the hardware.

Rationale: Application Software has to be independent from the underlying hardware in order to be reused (e.g. on other hardware platforms)

[RS\_Main\_00435] AUTOSAR shall support automotive microcontrollers

Applies to: CP

–Last change on issue 79424 comment 5–

**BW-C-Level:**

Application	Specification	Bus
1	1	1

## 9.9 Specification Item RS\_Main\_00280

**Trace References:**

none

**Content:**

**RfCs affecting this spec item between releases 1.3.0 and 1.4.0:**

- RfC #79424: Umbrella RfC for RS\_Main working list R18-03

**Problem description:**

This RfC is used to collect the RfCs currently discussed in the PL working list:

[https://svn.autosar.org/repos/work/26\\_Standards/00\\_FO\\_R1/01\\_Sources/Elaboration/RS\\_Main/F](https://svn.autosar.org/repos/work/26_Standards/00_FO_R1/01_Sources/Elaboration/RS_Main/F)

RfCs are discussed in the working list to achieve an agreement. Duplicate RfCs or resolved RfCs targeting single changes will be linked to this RfC.

For the release all agreed changes from the working list are updated to this RfC and implemented.

**Agreed solution:**

[RS\_Main\_00001] AUTOSAR shall provide a software platform for embedded real-time systems

Description: AUTOSAR shall provide a software platform called AUTOSAR Classic Platform, which targets the domain of real-time systems.

Further Explanations: Real time systems are divided into hard and soft real time systems. Hard real time systems always have to deliver the correct result in the given time whereas from soft real time systems it is demanded that they compute the correct answer in a given time in a dedicated average.

[RS\_Main\_00150] AUTOSAR shall support the deployment and reallocation of AUTOSAR Application Software

Applies to: AP

[RS\_Main\_00190] AUTOSAR shall support standardized interoperability with non-AUTOSAR software

Description: Reuse of existing legacy software shall be supported by AUTOSAR .Integration of legacy software in an ECU compliant to AUTOSAR shall be supported.

Rationale: Independent of the target the code has to be compatible to legacy implementation on protocol level.

Remove [RS\_Main\_00330]

[new requirement] AUTOSAR shall support up - and download of data and software

Type: valid

Description: AUTOSAR shall support standardized up- and download of data and software. For all kind of data exchange between off- and onboard artifacts mechanisms and methods shall be defined. These mechanisms and methods shall support common protocols used for data-transfer. Partial updates of the software shall be supported. Independent access control rules and policies apply.

Rationale:

Use Case: Download of dedicated Software Components in ECU.

Applies to: AP

Dependencies: –

Supporting Material: –

[RS\_Main\_00280] AUTOSAR shall support standardized automotive communication protocols

Description: AUTOSAR shall support the communication between platforms defined by AUTOSAR and platforms defined other parties (e.g. running other operating systems).

Rationale: Automotive networks consist of ECUs running different software platforms (including offboard systems) beside the software platforms defined by



AUTOSAR.

Use Case: V2X (offboard) communication for vehicle data storage

Communication with traffic light

High quality map data Car-2-X communication

Applies to: AP, CP

Dependencies: –

Supporting Material: –

(RS\_PO\_00003,RS\_PO\_00004,RS\_PO\_00005,RS\_PO\_00006,RS\_PO\_00009)

Remove[RS\_Main\_00285]

Remove[RS\_Main\_00505]

[RS\_Main\_00130] AUTOSAR shall provide an abstraction from hardware

Description: AUTOSAR shall provide an abstraction from hardware characteristics. This abstraction shall only be accessible to the software modules directly interacting with the hardware.

Rationale: Application Software has to be independent from the underlying hardware in order to be reused (e.g. on other hardware platforms)

[RS\_Main\_00435] AUTOSAR shall support automotive microcontrollers

Applies to: CP

–Last change on issue 79424 comment 5–

**BW-C-Level:**

Application	Specification	Bus
1	1	1

## 9.10 Specification Item RS\_Main\_00285

**Trace References:**

none

**Content:**

**RfCs affecting this spec item between releases 1.3.0 and 1.4.0:**

- RfC #79424: Umbrella RfC for RS\_Main working list R18-03

**Problem description:**

This RfC is used to collect the RfCs currently discussed in the PL working list:

[https://svn.autosar.org/repos/work/26\\_Standards/00\\_FO\\_R1/01\\_Sources/Elaboration/RS\\_Main/F](https://svn.autosar.org/repos/work/26_Standards/00_FO_R1/01_Sources/Elaboration/RS_Main/F)

RfCs are discussed in the working list to achieve an agreement. Duplicate RfCs or resolved RfCs targeting single changes will be linked to this RfC.

For the release all agreed changes from the working list are updated to this RfC and implemented.

**Agreed solution:**

[RS\_Main\_00001] AUTOSAR shall provide a software platform for embedded real-time systems

Description: AUTOSAR shall provide a software platform called AUTOSAR Classic Platform, which targets the domain of real-time systems.

Further Explanations: Real time systems are divided into hard and soft real time systems. Hard real time systems always have to deliver the correct result in the given time whereas from soft real time systems it is demanded that they compute the correct answer in a given time in a dedicated average.

[RS\_Main\_00150] AUTOSAR shall support the deployment and reallocation of AUTOSAR Application Software

Applies to: AP

[RS\_Main\_00190] AUTOSAR shall support standardized interoperability with non-AUTOSAR software

Description: Reuse of existing legacy software shall be supported by AUTOSAR .Integration of legacy software in an ECU compliant to AUTOSAR shall be supported.

Rationale: Independent of the target the code has to be compatible to legacy implementation on protocol level.

Remove [RS\_Main\_00330]

[new requirement] AUTOSAR shall support up - and download of data and software

Type: valid

Description: AUTOSAR shall support standardized up- and download of data and software. For all kind of data exchange between off- and onboard artifacts mechanisms and methods shall be defined. These mechanisms and methods shall support common protocols used for data-transfer. Partial updates of the software shall be supported. Independent access control rules and policies apply.

Rationale:

Use Case: Download of dedicated Software Components in ECU.

Applies to: AP

Dependencies: –  
Supporting Material: –

[RS\_Main\_00280] AUTOSAR shall support standardized automotive communication protocols

Description: AUTOSAR shall support the communication between platforms defined by AUTOSAR and platforms defined other parties (e.g. running other operating systems).

Rationale: Automotive networks consist of ECUs running different software platforms (including offboard systems) beside the software platforms defined by AUTOSAR.

Use Case: V2X (offboard) communication for vehicle data storage

Communication with traffic light

High quality map data Car-2-X communication

Applies to: AP, CP

Dependencies: –

Supporting Material: –

(RS\_PO\_00003,RS\_PO\_00004,RS\_PO\_00005,RS\_PO\_00006,RS\_PO\_00009)

Remove[RS\_Main\_00285]

Remove[RS\_Main\_00505]

[RS\_Main\_00130] AUTOSAR shall provide an abstraction from hardware

Description: AUTOSAR shall provide an abstraction from hardware characteristics. This abstraction shall only be accessible to the software modules directly interacting with the hardware.

Rationale: Application Software has to be independent from the underlying hardware in order to be reused (e.g. on other hardware platforms)

[RS\_Main\_00435] AUTOSAR shall support automotive microcontrollers

Applies to: CP

–Last change on issue 79424 comment 5–

#### BW-C-Level:

Application	Specification	Bus
1	1	1

## 9.11 Specification Item RS\_Main\_00330

### Trace References:

none

### Content:

### RfCs affecting this spec item between releases 1.3.0 and 1.4.0:

- RfC #79424: Umbrella RfC for RS\_Main working list R18-03

#### Problem description:

This RfC is used to collect the RfCs currently discussed in the PL working list:

[https://svn.autosar.org/repos/work/26\\_Standards/00\\_FO\\_R1/01\\_Sources/Elaboration/RS\\_Main/F](https://svn.autosar.org/repos/work/26_Standards/00_FO_R1/01_Sources/Elaboration/RS_Main/F)

RfCs are discussed in the working list to achieve an agreement. Duplicate RfCs or resolved RfCs targeting single changes will be linked to this RfC.

For the release all agreed changes from the working list are updated to this RfC and implemented.

#### Agreed solution:

[RS\_Main\_00001] AUTOSAR shall provide a software platform for embedded real-time systems

Description: AUTOSAR shall provide a software platform called AUTOSAR Classic Platform, which targets the domain of real-time systems.

Further Explanations: Real time systems are divided into hard and soft real time systems. Hard real time systems always have to deliver the correct result in the given time whereas from soft real time systems it is demanded that they compute the correct answer in a given time in a dedicated average.

[RS\_Main\_00150] AUTOSAR shall support the deployment and reallocation of AUTOSAR Application Software

Applies to: AP

[RS\_Main\_00190] AUTOSAR shall support standardized interoperability with non-AUTOSAR software

Description: Reuse of existing legacy software shall be supported by AUTOSAR .Integration of legacy software in an ECU compliant to AUTOSAR shall be supported.

Rationale: Independent of the target the code has to be compatible to legacy implementation on protocol level.

Remove [RS\_Main\_00330]

[new requirement] AUTOSAR shall support up - and download of data and software

Type: valid

Description: AUTOSAR shall support standardized up- and download of data and software. For all kind of data exchange between off- and onboard artifacts mechanisms and methods shall be defined. These mechanisms and methods shall support common protocols used for data-transfer. Partial updates of the software shall be supported. Independent access control rules and policies apply.

Rationale:

Use Case: Download of dedicated Software Components in ECU.

Applies to: AP

Dependencies: –

Supporting Material: –

[RS\_Main\_00280] AUTOSAR shall support standardized automotive communication protocols

Description: AUTOSAR shall support the communication between platforms defined by AUTOSAR and platforms defined other parties (e.g. running other operating systems).

Rationale: Automotive networks consist of ECUs running different software platforms (including offboard systems) beside the software platforms defined by AUTOSAR.

Use Case: V2X (offboard) communication for vehicle data storage

Communication with traffic light

High quality map data Car-2-X communication

Applies to: AP, CP

Dependencies: –

Supporting Material: –

(RS\_PO\_00003,RS\_PO\_00004,RS\_PO\_00005,RS\_PO\_00006,RS\_PO\_00009)

Remove[RS\_Main\_00285]

Remove[RS\_Main\_00505]

[RS\_Main\_00130] AUTOSAR shall provide an abstraction from hardware

Description: AUTOSAR shall provide an abstraction from hardware characteristics. This abstraction shall only be accessible to the software modules directly interacting with the hardware.

Rationale: Application Software has to be independent from the underlying hardware in order to be reused (e.g. on other hardware platforms)

[RS\_Main\_00435] AUTOSAR shall support automotive microcontrollers

Applies to: CP

–Last change on issue 79424 comment 5–

**BW-C-Level:**

Application	Specification	Bus
1	1	1

## 9.12 Specification Item RS\_Main\_00360

**Trace References:**

none

**Content:**

**RfCs affecting this spec item between releases 1.3.0 and 1.4.0:**

- RfC #78138: Final migration of RS\_Methodology from CP to FO - RS\_Main

**Problem description:**

This is a clone of Rfc # 77303 in order to decouple activities needed to adapt RS\_Main and the rest of the affected documents. Therefore the text here is identical to the text in Rfc # 77303.

The document RS\_Methodology from CP (CP\_RS\_Methodology) shall completely be migrated to FO together with the next CP release (for FO\_R1.3).

In a first step for FO\_R1.1 already some of the requirements in CP\_RS\_Methodology, which are also valid for AP, have been taken over. In this RfC, the remaining requirements shall be taken over, adapted, or deleted if not needed anymore. For the next CP release, the document CP\_RS\_Methodology can then completely be removed.

**Agreed solution:**

[RS\_Main\_00360] AUTOSAR shall support variant management

Applies to: AP, CP, FO

–Last change on issue 78138 comment 4–

**BW-C-Level:**

Application	Specification	Bus
1	1	1

## 9.13 Specification Item RS\_Main\_00400

### Trace References:

none

### Content:

### RfCs affecting this spec item between releases 1.3.0 and 1.4.0:

- RfC #79424: Umbrella RfC for RS\_Main working list R18-03

#### Problem description:

This RfC is used to collect the RfCs currently discussed in the PL working list:

[https://svn.autosar.org/repos/work/26\\_Standards/00\\_FO\\_R1/01\\_Sources/Elaboration/RS\\_Main/F](https://svn.autosar.org/repos/work/26_Standards/00_FO_R1/01_Sources/Elaboration/RS_Main/F)

RfCs are discussed in the working list to achieve an agreement. Duplicate RfCs or resolved RfCs targeting single changes will be linked to this RfC.

For the release all agreed changes from the working list are updated to this RfC and implemented.

#### Agreed solution:

[RS\_Main\_00001] AUTOSAR shall provide a software platform for embedded real-time systems

Description: AUTOSAR shall provide a software platform called AUTOSAR Classic Platform, which targets the domain of real-time systems.

Further Explanations: Real time systems are divided into hard and soft real time systems. Hard real time systems always have to deliver the correct result in the given time whereas from soft real time systems it is demanded that they compute the correct answer in a given time in a dedicated average.

[RS\_Main\_00150] AUTOSAR shall support the deployment and reallocation of AUTOSAR Application Software

Applies to: AP

[RS\_Main\_00190] AUTOSAR shall support standardized interoperability with non-AUTOSAR software

Description: Reuse of existing legacy software shall be supported by AUTOSAR .Integration of legacy software in an ECU compliant to AUTOSAR shall be supported.

Rationale: Independent of the target the code has to be compatible to legacy implementation on protocol level.

Remove [RS\_Main\_00330]

[new requirement] AUTOSAR shall support up - and download of data and software

Type: valid

Description: AUTOSAR shall support standardized up- and download of data and software. For all kind of data exchange between off- and onboard artifacts mechanisms and methods shall be defined. These mechanisms and methods shall support common protocols used for data-transfer. Partial updates of the software shall be supported. Independent access control rules and policies apply.

Rationale:

Use Case: Download of dedicated Software Components in ECU.

Applies to: AP

Dependencies: –

Supporting Material: –

[RS\_Main\_00280] AUTOSAR shall support standardized automotive communication protocols

Description: AUTOSAR shall support the communication between platforms defined by AUTOSAR and platforms defined other parties (e.g. running other operating systems).

Rationale: Automotive networks consist of ECUs running different software platforms (including offboard systems) beside the software platforms defined by AUTOSAR.

Use Case: V2X (offboard) communication for vehicle data storage

Communication with traffic light

High quality map data Car-2-X communication

Applies to: AP, CP

Dependencies: –

Supporting Material: –

(RS\_PO\_00003,RS\_PO\_00004,RS\_PO\_00005,RS\_PO\_00006,RS\_PO\_00009)

Remove[RS\_Main\_00285]

Remove[RS\_Main\_00505]

[RS\_Main\_00130] AUTOSAR shall provide an abstraction from hardware

Description: AUTOSAR shall provide an abstraction from hardware characteristics. This abstraction shall only be accessible to the software modules directly interacting with the hardware.

Rationale: Application Software has to be independent from the underlying hardware in order to be reused (e.g. on other hardware platforms)



[RS\_Main\_00435] AUTOSAR shall support automotive microcontrollers

Applies to: CP

–Last change on issue 79424 comment 5–

**BW-C-Level:**

Application	Specification	Bus
1	1	1

## 9.14 Specification Item RS\_Main\_00420

**Trace References:**

none

**Content:**

**RfCs affecting this spec item between releases 1.3.0 and 1.4.0:**

- RfC #79424: Umbrella RfC for RS\_Main working list R18-03

**Problem description:**

This RfC is used to collect the RfCs currently discussed in the PL working list:

[https://svn.autosar.org/repos/work/26\\_Standards/00\\_FO\\_R1/01\\_Sources/Elaboration/RS\\_Main/F](https://svn.autosar.org/repos/work/26_Standards/00_FO_R1/01_Sources/Elaboration/RS_Main/F)

RfCs are discussed in the working list to achieve an agreement. Duplicate RfCs or resolved RfCs targeting single changes will be linked to this RfC.

For the release all agreed changes from the working list are updated to this RfC and implemented.

**Agreed solution:**

[RS\_Main\_00001] AUTOSAR shall provide a software platform for embedded real-time systems

Description: AUTOSAR shall provide a software platform called AUTOSAR Classic Platform, which targets the domain of real-time systems.

Further Explanations: Real time systems are divided into hard and soft real time systems. Hard real time systems always have to deliver the correct result in the given time whereas from soft real time systems it is demanded that they compute the correct answer in a given time in a dedicated average.

[RS\_Main\_00150] AUTOSAR shall support the deployment and reallocation of AUTOSAR Application Software

Applies to: AP

[RS\_Main\_00190] AUTOSAR shall support standardized interoperability with non-AUTOSAR software

Description: Reuse of existing legacy software shall be supported by AUTOSAR .Integration of legacy software in an ECU compliant to AUTOSAR shall be supported.

Rationale: Independent of the target the code has to be compatible to legacy implementation on protocol level.

Remove [RS\_Main\_00330]

[new requirement] AUTOSAR shall support up - and download of data and software

Type: valid

Description: AUTOSAR shall support standardized up- and download of data and software. For all kind of data exchange between off- and onboard artifacts mechanisms and methods shall be defined. These mechanisms and methods shall support common protocols used for data-transfer. Partial updates of the software shall be supported. Independent access control rules and policies apply.

Rationale:

Use Case: Download of dedicated Software Components in ECU.

Applies to: AP

Dependencies: –

Supporting Material: –

[RS\_Main\_00280] AUTOSAR shall support standardized automotive communication protocols

Description: AUTOSAR shall support the communication between platforms defined by AUTOSAR and platforms defined other parties (e.g. running other operating systems).

Rationale: Automotive networks consist of ECUs running different software platforms (including offboard systems) beside the software platforms defined by AUTOSAR.

Use Case: V2X (offboard) communication for vehicle data storage

Communication with traffic light

High quality map data Car-2-X communication

Applies to: AP, CP

Dependencies: –

Supporting Material: –

(RS\_PO\_00003,RS\_PO\_00004,RS\_PO\_00005,RS\_PO\_00006,RS\_PO\_00009)

Remove[RS\_Main\_00285]

Remove[RS\_Main\_00505]

[RS\_Main\_00130] AUTOSAR shall provide an abstraction from hardware

Description: AUTOSAR shall provide an abstraction from hardware characteristics. This abstraction shall only be accessible to the software modules directly interacting with the hardware.

Rationale: Application Software has to be independent from the underlying hardware in order to be reused (e.g. on other hardware platforms)

[RS\_Main\_00435] AUTOSAR shall support automotive microcontrollers

Applies to: CP

–Last change on issue 79424 comment 5–

**BW-C-Level:**

Application	Specification	Bus
1	1	1

- RfC #79448: Referring to OSEK

**Problem description:**

The OSEK web site is not available anymore.

Therefore AUTOSAR references to OSEK have been removed or replaced by references to ISO. See:

[https://bugzilla.autosar.org/show\\_bug.cgi?id=73564](https://bugzilla.autosar.org/show_bug.cgi?id=73564)

Please double check your documents whether the occurrence of the term "OSEK" is still valid in your document or whether it should be removed or changed to mentioning the ISO documents instead.

PS: same RfC is stated in CP: RfC 79447 - Referring to OSEK

**Agreed solution:**

FO\_RS\_Main:

[RS\_Main\_00420]

Use Case:

Operating System in AUTOSAR ECUs.

Partial Networking.

Network Management.

POSIX

FO\_PRS\_RemoteEventCommunicationProtocol:

page 72: change

"[2] Communication

<http://portal.osek-vdx.org/files/pdf/specs/osekcom303.pdf>"

to

"[2] ISO 17356-4:2005

Road vehicles – Open interface for embedded automotive applications – Part 4: OSEK/VDX Communication (COM)"

page 31: correct the reference in the definition of I-PDU

"[2, OSEK COM]"

to

"[2, ISO 17356-4 COM]"

page 31: correct the text in the definition of Message

"OSEK-COM"

to

"ISO 17356-4 COM"

page 32: correct the text and the reference in the definition of Signal

"in OSEK COM, see [2, OSEK COM]"

to

"in ISO 17356-4 COM, see [2, ISO 17356-4 COM]"

–Last change on issue 79448 comment 8–

**BW-C-Level:**

Application	Specification	Bus
1	1	1

## 9.15 Specification Item RS\_Main\_00435

**Trace References:**

none

**Content:****RfCs affecting this spec item between releases 1.3.0 and 1.4.0:**

- RfC #79424: Umbrella RfC for RS\_Main working list R18-03

**Problem description:**

This RfC is used to collect the RfCs currently discussed in the PL working list:

[https://svn.autosar.org/repos/work/26\\_Standards/00\\_FO\\_R1/01\\_Sources/Elaboration/RS\\_Main/F](https://svn.autosar.org/repos/work/26_Standards/00_FO_R1/01_Sources/Elaboration/RS_Main/F)

RfCs are discussed in the working list to achieve an agreement. Duplicate RfCs or resolved RfCs targeting single changes will be linked to this RfC.

For the release all agreed changes from the working list are updated to this RfC and implemented.

**Agreed solution:**

[RS\_Main\_00001] AUTOSAR shall provide a software platform for embedded real-time systems

Description: AUTOSAR shall provide a software platform called AUTOSAR Classic Platform, which targets the domain of real-time systems.

Further Explanations: Real time systems are divided into hard and soft real time systems. Hard real time systems always have to deliver the correct result in the given time whereas from soft real time systems it is demanded that they compute the correct answer in a given time in a dedicated average.

[RS\_Main\_00150] AUTOSAR shall support the deployment and reallocation of AUTOSAR Application Software

Applies to: AP

[RS\_Main\_00190] AUTOSAR shall support standardized interoperability with non-AUTOSAR software

Description: Reuse of existing legacy software shall be supported by AUTOSAR .Integration of legacy software in an ECU compliant to AUTOSAR shall be supported.

Rationale: Independent of the target the code has to be compatible to legacy implementation on protocol level.

Remove [RS\_Main\_00330]

[new requirement] AUTOSAR shall support up - and download of data and software

Type: valid

Description: AUTOSAR shall support standardized up- and download of data and software. For all kind of data exchange between off- and onboard artifacts mechanisms and methods shall be defined. These mechanisms and methods shall support common protocols used for data-transfer. Partial updates of the software shall be supported. Independent access control rules and policies apply.

Rationale:

Use Case: Download of dedicated Software Components in ECU.

Applies to: AP

Dependencies: –  
Supporting Material: –

[RS\_Main\_00280] AUTOSAR shall support standardized automotive communication protocols

Description: AUTOSAR shall support the communication between platforms defined by AUTOSAR and platforms defined other parties (e.g. running other operating systems).

Rationale: Automotive networks consist of ECUs running different software platforms (including offboard systems) beside the software platforms defined by AUTOSAR.

Use Case: V2X (offboard) communication for vehicle data storage

Communication with traffic light

High quality map data Car-2-X communication

Applies to: AP, CP

Dependencies: –

Supporting Material: –

(RS\_PO\_00003,RS\_PO\_00004,RS\_PO\_00005,RS\_PO\_00006,RS\_PO\_00009)

Remove[RS\_Main\_00285]

Remove[RS\_Main\_00505]

[RS\_Main\_00130] AUTOSAR shall provide an abstraction from hardware

Description: AUTOSAR shall provide an abstraction from hardware characteristics. This abstraction shall only be accessible to the software modules directly interacting with the hardware.

Rationale: Application Software has to be independent from the underlying hardware in order to be reused (e.g. on other hardware platforms)

[RS\_Main\_00435] AUTOSAR shall support automotive microcontrollers

Applies to: CP

–Last change on issue 79424 comment 5–

#### **BW-C-Level:**

Application	Specification	Bus
1	1	1

## 9.16 Specification Item RS\_Main\_00501

### Trace References:

none

### Content:

### RfCs affecting this spec item between releases 1.3.0 and 1.4.0:

- RfC #79424: Umbrella RfC for RS\_Main working list R18-03

#### Problem description:

This RfC is used to collect the RfCs currently discussed in the PL working list:

[https://svn.autosar.org/repos/work/26\\_Standards/00\\_FO\\_R1/01\\_Sources/Elaboration/RS\\_Main/F](https://svn.autosar.org/repos/work/26_Standards/00_FO_R1/01_Sources/Elaboration/RS_Main/F)

RfCs are discussed in the working list to achieve an agreement. Duplicate RfCs or resolved RfCs targeting single changes will be linked to this RfC.

For the release all agreed changes from the working list are updated to this RfC and implemented.

#### Agreed solution:

[RS\_Main\_00001] AUTOSAR shall provide a software platform for embedded real-time systems

Description: AUTOSAR shall provide a software platform called AUTOSAR Classic Platform, which targets the domain of real-time systems.

Further Explanations: Real time systems are divided into hard and soft real time systems. Hard real time systems always have to deliver the correct result in the given time whereas from soft real time systems it is demanded that they compute the correct answer in a given time in a dedicated average.

[RS\_Main\_00150] AUTOSAR shall support the deployment and reallocation of AUTOSAR Application Software

Applies to: AP

[RS\_Main\_00190] AUTOSAR shall support standardized interoperability with non-AUTOSAR software

Description: Reuse of existing legacy software shall be supported by AUTOSAR .Integration of legacy software in an ECU compliant to AUTOSAR shall be supported.

Rationale: Independent of the target the code has to be compatible to legacy implementation on protocol level.

Remove [RS\_Main\_00330]

[new requirement] AUTOSAR shall support up - and download of data and software

Type: valid

Description: AUTOSAR shall support standardized up- and download of data and software. For all kind of data exchange between off- and onboard artifacts mechanisms and methods shall be defined. These mechanisms and methods shall support common protocols used for data-transfer. Partial updates of the software shall be supported. Independent access control rules and policies apply.

Rationale:

Use Case: Download of dedicated Software Components in ECU.

Applies to: AP

Dependencies: –

Supporting Material: –

[RS\_Main\_00280] AUTOSAR shall support standardized automotive communication protocols

Description: AUTOSAR shall support the communication between platforms defined by AUTOSAR and platforms defined other parties (e.g. running other operating systems).

Rationale: Automotive networks consist of ECUs running different software platforms (including offboard systems) beside the software platforms defined by AUTOSAR.

Use Case: V2X (offboard) communication for vehicle data storage

Communication with traffic light

High quality map data Car-2-X communication

Applies to: AP, CP

Dependencies: –

Supporting Material: –

(RS\_PO\_00003,RS\_PO\_00004,RS\_PO\_00005,RS\_PO\_00006,RS\_PO\_00009)

Remove[RS\_Main\_00285]

Remove[RS\_Main\_00505]

[RS\_Main\_00130] AUTOSAR shall provide an abstraction from hardware

Description: AUTOSAR shall provide an abstraction from hardware characteristics. This abstraction shall only be accessible to the software modules directly interacting with the hardware.

Rationale: Application Software has to be independent from the underlying hardware in order to be reused (e.g. on other hardware platforms)



[RS\_Main\_00435] AUTOSAR shall support automotive microcontrollers

Applies to: CP

–Last change on issue 79424 comment 5–

**BW-C-Level:**

Application	Specification	Bus
1	1	1

## 9.17 Specification Item RS\_Main\_00503

**Trace References:**

none

**Content:**

**RfCs affecting this spec item between releases 1.3.0 and 1.4.0:**

- RfC #79424: Umbrella RfC for RS\_Main working list R18-03

**Problem description:**

This RfC is used to collect the RfCs currently discussed in the PL working list:

[https://svn.autosar.org/repos/work/26\\_Standards/00\\_FO\\_R1/01\\_Sources/Elaboration/RS\\_Main/F](https://svn.autosar.org/repos/work/26_Standards/00_FO_R1/01_Sources/Elaboration/RS_Main/F)

RfCs are discussed in the working list to achieve an agreement. Duplicate RfCs or resolved RfCs targeting single changes will be linked to this RfC.

For the release all agreed changes from the working list are updated to this RfC and implemented.

**Agreed solution:**

[RS\_Main\_00001] AUTOSAR shall provide a software platform for embedded real-time systems

Description: AUTOSAR shall provide a software platform called AUTOSAR Classic Platform, which targets the domain of real-time systems.

Further Explanations: Real time systems are divided into hard and soft real time systems. Hard real time systems always have to deliver the correct result in the given time whereas from soft real time systems it is demanded that they compute the correct answer in a given time in a dedicated average.

[RS\_Main\_00150] AUTOSAR shall support the deployment and reallocation of AUTOSAR Application Software

Applies to: AP

[RS\_Main\_00190] AUTOSAR shall support standardized interoperability with non-AUTOSAR software

Description: Reuse of existing legacy software shall be supported by AUTOSAR .Integration of legacy software in an ECU compliant to AUTOSAR shall be supported.

Rationale: Independent of the target the code has to be compatible to legacy implementation on protocol level.

Remove [RS\_Main\_00330]

[new requirement] AUTOSAR shall support up - and download of data and software

Type: valid

Description: AUTOSAR shall support standardized up- and download of data and software. For all kind of data exchange between off- and onboard artifacts mechanisms and methods shall be defined. These mechanisms and methods shall support common protocols used for data-transfer. Partial updates of the software shall be supported. Independent access control rules and policies apply.

Rationale:

Use Case: Download of dedicated Software Components in ECU.

Applies to: AP

Dependencies: –

Supporting Material: –

[RS\_Main\_00280] AUTOSAR shall support standardized automotive communication protocols

Description: AUTOSAR shall support the communication between platforms defined by AUTOSAR and platforms defined other parties (e.g. running other operating systems).

Rationale: Automotive networks consist of ECUs running different software platforms (including offboard systems) beside the software platforms defined by AUTOSAR.

Use Case: V2X (offboard) communication for vehicle data storage

Communication with traffic light

High quality map data Car-2-X communication

Applies to: AP, CP

Dependencies: –

Supporting Material: –

(RS\_PO\_00003,RS\_PO\_00004,RS\_PO\_00005,RS\_PO\_00006,RS\_PO\_00009)

Remove[RS\_Main\_00285]

Remove[RS\_Main\_00505]

[RS\_Main\_00130] AUTOSAR shall provide an abstraction from hardware  
Description: AUTOSAR shall provide an abstraction from hardware characteristics. This abstraction shall only be accessible to the software modules directly interacting with the hardware.

Rationale: Application Software has to be independent from the underlying hardware in order to be reused (e.g. on other hardware platforms)

[RS\_Main\_00435] AUTOSAR shall support automotive microcontrollers

Applies to: CP

–Last change on issue 79424 comment 5–

**BW-C-Level:**

Application	Specification	Bus
1	1	1

## 9.18 Specification Item RS\_Main\_00505

**Trace References:**

none

**Content:**

**RfCs affecting this spec item between releases 1.3.0 and 1.4.0:**

- RfC #79424: Umbrella RfC for RS\_Main working list R18-03

**Problem description:**

This RfC is used to collect the RfCs currently discussed in the PL working list:

[https://svn.autosar.org/repos/work/26\\_Standards/00\\_FO\\_R1/01\\_Sources/Elaboration/RS\\_Main/F](https://svn.autosar.org/repos/work/26_Standards/00_FO_R1/01_Sources/Elaboration/RS_Main/F)

RfCs are discussed in the working list to achieve an agreement. Duplicate RfCs or resolved RfCs targeting single changes will be linked to this RfC.

For the release all agreed changes from the working list are updated to this RfC and implemented.

**Agreed solution:**

[RS\_Main\_00001] AUTOSAR shall provide a software platform for embedded real-time systems

Description: AUTOSAR shall provide a software platform called AUTOSAR Classic Platform, which targets the domain of real-time systems.

Further Explanations: Real time systems are divided into hard and soft real time systems. Hard real time systems always have to deliver the correct result in the given time whereas from soft real time systems it is demanded that they compute the correct answer in a given time in a dedicated average.

[RS\_Main\_00150] AUTOSAR shall support the deployment and reallocation of AUTOSAR Application Software

Applies to: AP

[RS\_Main\_00190] AUTOSAR shall support standardized interoperability with non-AUTOSAR software

Description: Reuse of existing legacy software shall be supported by AUTOSAR .Integration of legacy software in an ECU compliant to AUTOSAR shall be supported.

Rationale: Independent of the target the code has to be compatible to legacy implementation on protocol level.

Remove [RS\_Main\_00330]

[new requirement] AUTOSAR shall support up - and download of data and software

Type: valid

Description: AUTOSAR shall support standardized up- and download of data and software. For all kind of data exchange between off- and onboard artifacts mechanisms and methods shall be defined. These mechanisms and methods shall support common protocols used for data-transfer. Partial updates of the software shall be supported. Independent access control rules and policies apply.

Rationale:

Use Case: Download of dedicated Software Components in ECU.

Applies to: AP

Dependencies: –

Supporting Material: –

[RS\_Main\_00280] AUTOSAR shall support standardized automotive communication protocols

Description: AUTOSAR shall support the communication between platforms defined by AUTOSAR and platforms defined other parties (e.g. running other operating systems).

Rationale: Automotive networks consist of ECUs running different software platforms (including offboard systems) beside the software platforms defined by

AUTOSAR.

Use Case: V2X (offboard) communication for vehicle data storage

Communication with traffic light

High quality map data Car-2-X communication

Applies to: AP, CP

Dependencies: –

Supporting Material: –

(RS\_PO\_00003,RS\_PO\_00004,RS\_PO\_00005,RS\_PO\_00006,RS\_PO\_00009)

Remove[RS\_Main\_00285]

Remove[RS\_Main\_00505]

[RS\_Main\_00130] AUTOSAR shall provide an abstraction from hardware

Description: AUTOSAR shall provide an abstraction from hardware characteristics. This abstraction shall only be accessible to the software modules directly interacting with the hardware.

Rationale: Application Software has to be independent from the underlying hardware in order to be reused (e.g. on other hardware platforms)

[RS\_Main\_00435] AUTOSAR shall support automotive microcontrollers

Applies to: CP

–Last change on issue 79424 comment 5–

**BW-C-Level:**

Application	Specification	Bus
1	1	1

## 9.19 Specification Item RS\_Main\_01001

**Trace References:**

none

**Content:**

**RfCs affecting this spec item between releases 1.3.0 and 1.4.0:**

- RfC #79424: Umbrella RfC for RS\_Main working list R18-03

**Problem description:**

This RfC is used to collect the RfCs currently discussed in the PL working list:

[https://svn.autosar.org/repos/work/26\\_Standards/00\\_FO\\_R1/01\\_Sources/Elaboration/RS\\_Main/F](https://svn.autosar.org/repos/work/26_Standards/00_FO_R1/01_Sources/Elaboration/RS_Main/F)

RfCs are discussed in the working list to achieve an agreement. Duplicate RfCs or resolved RfCs targeting single changes will be linked to this RfC.

For the release all agreed changes from the working list are updated to this RfC and implemented.

**Agreed solution:**

[RS\_Main\_00001] AUTOSAR shall provide a software platform for embedded real-time systems

Description: AUTOSAR shall provide a software platform called AUTOSAR Classic Platform, which targets the domain of real-time systems.

Further Explanations: Real time systems are divided into hard and soft real time systems. Hard real time systems always have to deliver the correct result in the given time whereas from soft real time systems it is demanded that they compute the correct answer in a given time in a dedicated average.

[RS\_Main\_00150] AUTOSAR shall support the deployment and reallocation of AUTOSAR Application Software

Applies to: AP

[RS\_Main\_00190] AUTOSAR shall support standardized interoperability with non-AUTOSAR software

Description: Reuse of existing legacy software shall be supported by AUTOSAR .Integration of legacy software in an ECU compliant to AUTOSAR shall be supported.

Rationale: Independent of the target the code has to be compatible to legacy implementation on protocol level.

Remove [RS\_Main\_00330]

[new requirement] AUTOSAR shall support up - and download of data and software

Type: valid

Description: AUTOSAR shall support standardized up- and download of data and software. For all kind of data exchange between off- and onboard artifacts mechanisms and methods shall be defined. These mechanisms and methods shall support common protocols used for data-transfer. Partial updates of the software shall be supported. Independent access control rules and policies apply.

Rationale:

Use Case: Download of dedicated Software Components in ECU.

Applies to: AP

Dependencies: –  
Supporting Material: –

[RS\_Main\_00280] AUTOSAR shall support standardized automotive communication protocols

Description: AUTOSAR shall support the communication between platforms defined by AUTOSAR and platforms defined other parties (e.g. running other operating systems).

Rationale: Automotive networks consist of ECUs running different software platforms (including offboard systems) beside the software platforms defined by AUTOSAR.

Use Case: V2X (offboard) communication for vehicle data storage

Communication with traffic light

High quality map data Car-2-X communication

Applies to: AP, CP

Dependencies: –

Supporting Material: –

(RS\_PO\_00003,RS\_PO\_00004,RS\_PO\_00005,RS\_PO\_00006,RS\_PO\_00009)

Remove[RS\_Main\_00285]

Remove[RS\_Main\_00505]

[RS\_Main\_00130] AUTOSAR shall provide an abstraction from hardware

Description: AUTOSAR shall provide an abstraction from hardware characteristics. This abstraction shall only be accessible to the software modules directly interacting with the hardware.

Rationale: Application Software has to be independent from the underlying hardware in order to be reused (e.g. on other hardware platforms)

[RS\_Main\_00435] AUTOSAR shall support automotive microcontrollers

Applies to: CP

–Last change on issue 79424 comment 5–

#### **BW-C-Level:**

Application	Specification	Bus
1	1	1

- 10 RS\_Methodology**
- 11 RS\_ProjectObjectives**
- 12 RS\_SOMEIPProtocol**
- 13 RS\_SOMEIPServiceDiscoveryProtocol**
- 14 SRS\_Diagnostic**