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1 Introduction

The purpose of the present backward compatibility analysis is to support users in the migration between different releases. The document covers bus and application compatibility of release 4.1 revision 3 (4.1.3) against release 4.1 revision 2 (4.1.2) as well as specification-wise compatibility. As the statement was extracted from the change management tooling, the level of detail might differ for the different documents.

2 Acronyms and abbreviations

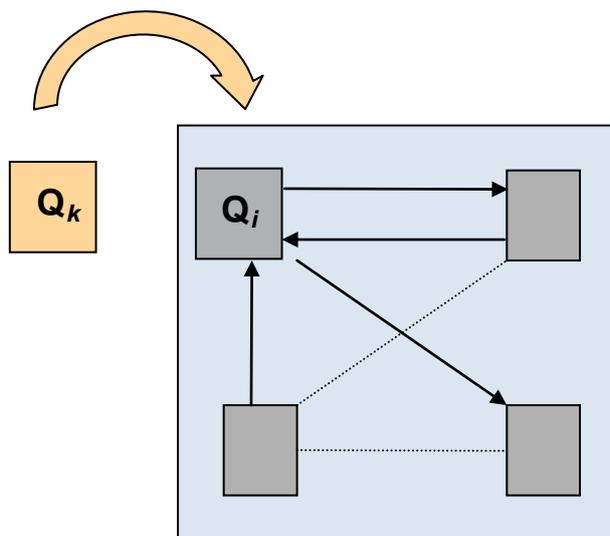
<i>Abbreviation / Acronym:</i>	<i>Description:</i>
BWC	Backward Compatibility
APP	Application

3 Overview

3.1 Definition of backward compatibility

A product Q_k is said to be compatible to product Q_i if Q_k is able to take the place of Q_i that again is interacting with other products (which were left untouched) designed for product Q_i .

A product Q_k is said to be backwards compatible to product Q_i if Q_k is compatible to Q_i and Q_k is a successor of Q_i



3.2 Bus Compatibility

Column I “BW-C bus wise” of the file “AUTOSAR_TR_BWCStatement.xls” contains backward compatibility statements for all changes from release 4.1.2 compared to release 4.1.3 for all documents, which can affect the backward compatibility on the communication busses. The underlying use case is described in the following example:

- Old scenario: Interacting ECUs developed with a R4.1.2 environment (R4.1.2 compliant tooling, R4.1.2 compliant BSW on each ECU)
- New scenario: E.g. One of the interacting ECUs is re-developed with a R4.1.3 environment (R4.1.3 compliant tooling, R4.1.3 compliant BSW on each ECU) but the other ECUs should stay untouched with R4.1.2 and are directly reused („Mischverbau“, mixed usage).
- Question: Can the new ECU be integrated into the system of the other ECUs (resulting in the exact behavior like in the old scenario)?

3.3 Application Compatibility

Column E “BW-C app wise” of the file “AUTOSAR_TR_BWCStatement.xls” contains backward compatibility statements for all changes from release 4.1.2 compared to

release 4.1.3 for all documents, which can affect the backward compatibility of the application. The underlying use case is described in the following example:

- Old scenario: An ECU is developed with a R4.1.2 environment (R4.1.2 compliant tooling, R4.1.2 compliant BSW on each ECU).
- New scenario: Replace the R4.1.2 BSW with a R4.1.3 BSW (R4.1.3 compliant tooling, R4.1.3 compliant BSW on the ECU). Take the application part from the R4.1.2 environment (at least part of the application software components or part of the sensor/actuator software components).
- Question: Can - part of - the applications from the old scenario be reused in the R4.1.3 environment?