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# 1 SRS\_COM

## 1.1 Specification Item SRS\_Com\_00177

### Trace References:

RS\_BRF\_01544, RS\_BRF\_01120

### Content:

<b>Type:</b>	valid
<b>Description:</b>	AUTOSAR COM and LargeDataCOM shall allow the configuration of communication at the following different stages:
<b>Rationale:</b>	Guarantee flexibility of using the AUTOSAR COM and LargeDataCOM.
<b>Applies to:</b>	
<b>Use Case:</b>	It must be possible to configure the handled bus frames after compile- or build-time, <b>particularly for future concepts running at BMW (reuse example when reusing an ECU within another vehicle product line with different and incompatible communication layouts).</b>
<b>Supporting Material:</b>	–

### RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #78035: SRS requirements refer to BMW specifications

#### Problem description:

AUTOSAR documents shall not relate to any particular company.

The requirements below reference various BMW specifications and have to be corrected.

Document: SRS\_EEPROMDriver:

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[SRS\_Eep\_00087] The EEPROM driver shall provide an asynchronous read function

"Supporting Material: BMW Specification MCAL V1.0a"

[SRS\_Eep\_00088] The EEPROM driver shall provide an asynchronous write function

"Supporting Material: BMW Specification MCAL V1.0a"

[SRS\_Eep\_00089] The EEPROM driver shall provide an asynchronous erase function

"Supporting Material: BMW Specification MCAL V1.0a"

[SRS\_Eep\_00090] The EEPROM driver shall provide a synchronous cancel function

"Supporting Material: BMW Specification MCAL V1.0a"

[SRS\_Eep\_00091] The EEPROM driver shall provide a synchronous function which returns the job processing status

"Supporting Material: BMW Specification MCAL V1.0a"

[SRS\_Eep\_00096] EEPROM driver static shall be configured

"Supporting Material: BMW Specification MCAL V1.0a"

[SRS\_Eep\_00092] The EEPROM driver shall only write data if at least one data value of the affected erasable block is different from the data value to be written

"Supporting Material: BMW Specification MCAL V1.0a"

[SRS\_Eep\_00094] The EEPROM driver shall handle the EEPROM memory segmentation

"Supporting Material: BMW Specification MCAL V1.0a"

[SRS\_Eep\_00095] The EEPROM driver shall handle only one job at the same time

"Supporting Material: BMW Specification MCAL V1.0a"

[SRS\_Eep\_12047] The EEPROM driver shall provide a function that has to be called for job processin

"Supporting Material: BMW Specification MCAL V1.0a"

[SRS\_Eep\_12050] The job processing function of the EEPROM driver shall process only as much data as the EEPROM hardware can handle

"Supporting Material: BMW Specification MCAL V1.0a"

Document: SRS\_SPALGeneral:

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[SRS\_SPAL\_12056] All driver modules shall allow the static configuration of notification mechanism

"Supporting Material: BMW Specification MCAL V1.0a, [...]"

[SRS\_SPAL\_12057] All driver modules shall implement an interface for initialization

"Supporting Material: BMW Specification MCAL V1.0a, MAL1.0.0"

[SRS\_SPAL\_12063] All driver modules shall only support raw value mode  
"Supporting Material: BMW Specification MCAL V1.0a, MAL1.6.0"

[SRS\_SPAL\_12064] All driver modules shall raise an error if the change of the operation mode leads to degradation of running operations  
"Supporting Material: BMW Specification MCAL V1.0a, MAL1.5.2"

SRS\_SPAL\_12067 All driver modules shall set their wake-up conditions depending on the selected operation mode  
"Supporting Material: BMW Specification MCAL V1.0a, MAL1.5.0"

Document: SRS\_PWMDriver:

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[SRS\_Pwm\_12293] The PWM driver shall allow the static configuration of PWM channel properties  
"Supporting Material: BMW Specification MCAL V1.0a, MAL13.1.4 The idle level configuration covers the active phase requirement from Hella.

[SRS\_Pwm\_12295] The PWM driver shall provide a service for setting the duty cycle of a selected channel  
"Supporting Material: BMW Specification MCAL V1.0a, MAL13.x"

[SRS\_Pwm\_12297] The PWM driver shall provide a service for setting the period of a selected channel  
"Supporting Material: BMW Specification MCAL V1.0a, MAL13.8.0; Kojak movies (in case you do not know Kojak)"

Document: SRS\_BSWGeneral:

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Chapter 5 "General Requirements on Basic Software"

The ECU application experience is taken from the following concrete applications:

Sunroof and power window ECU

Diesel engine ECU

ESP ECU

BMW, DC and VW standard software packages (Standard Core, Standard Software Platform, Standard Software Core) including OSEK OS, communication modules, bootloader, basic diagnostic functions for the domains listed above

Infotainment control ECU

[SRS\_BSW\_00305] Data types naming convention  
"Supporting Material: BMW Standard Core Programming Guidelines"

Document: SRS\_COM:

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[SRS\_Com\_00177] AUTOSAR COM and LargeDataCOM shall support multiple configuration stages

"Use Case: It must be possible to configure the handled bus frames after compile- or build-time, particularly for future concepts running at BMW (reuse an ECU within another vehicle product line with different and incompatible communication layouts)."

Document: SRS\_ADCDriver:

---

[SRS\_Adc\_12280] The ADC Driver shall allow a specific result access modes for each ADC Channel Group

"Supporting Material: BMW Specification MCAL V1.0a, MAL14.2.0."

[SRS\_Adc\_12283] The ADC driver shall mask out information bits from the conversion result not belonging to the ADC value

"Supporting Material: BMW Specification MCAL V1.0a, MAL14.4.1."

[SRS\_Adc\_12819] The ADC Driver shall provide a synchronous service for reading the last valid conversion results of the selected channel group

"Supporting Material: BMW Specification MCAL V1.0a."

[SRS\_Adc\_12291] The ADC Driver shall provide a service for querying the status of an ADC Channel Group

"Supporting Material: BMW Specification MCAL V1.0a."

[SRS\_Adc\_12288] Based on the channel group configuration the ADC driver shall be able to handle the buffers of stream jobs

"Supporting Material: BMW Specification MCAL V1.0a."

[SRS\_Adc\_12292] If the ADC provides signed values, the ADC driver shall put the sign bit into the MSB of the return value

"Supporting Material: BMW Specification MCAL V1.0a, MAL14.4.2."

Document: SRS\_DIODriver:

---

[SRS\_Dio\_12003] The DIO Driver shall provide a service that writes a data word to the assigned DIO port

"Supporting Material: BMW Specification MCAL V1.0a, REQ MAL10.3.0"

[SRS\_Dio\_12004] The DIO Driver shall provide a service that writes a selectable number of adjoining bits to an assigned part of a DIO port

"Supporting Material: BMW Specification MCAL V1.0a, REQ MAL10.3.1"

[SRS\_Dio\_12005] The DIO Driver shall provide a service for write access to single DIO channels

"Supporting Material: BMW Specification MCAL V1.0a, REQ MAL10.4.0"

[SRS\_Dio\_12006] The DIO Driver shall provide a service for reading a data word from the assigned DIO port

"Supporting Material: BMW Specification MCAL V1.0a, REQ MAL10.4.0"

[SRS\_Dio\_12007] The DIO Driver shall provide a service for reading a selectable number of adjoining bits from an assigned part of a DIO port

"Supporting Material: BMW Specification MCAL V1.0a, REQ MAL10.4.1"

[SRS\_Dio\_12008] The DIO Driver shall provide a service for reading one bit of an assigned DIO channel

"Supporting Material: BMW Specification MCAL V1.0a, REQ MAL10.6.0"

**Agreed solution:**

CP\_SRS\_ADCDriver

SRS\_Adc\_12280, SRS\_Adc\_12283, SRS\_Adc\_12819, SRS\_Adc\_12291,  
SRS\_Adc\_12288, SRS\_Adc\_12292

Change from:

Supporting Material: BMW Specification MCAL V1.0a, [...]

to:

Supporting Material: –

====

CP\_SRS\_BSWGeneral

replace "BMW Standard Core Programming Guidelines" by "-" in SRS\_BSW\_00305

====

CP\_SRS\_COM

Update [SRS\_Com\_00177] AUTOSAR COM and LargeDataCOM shall support multiple configuration stages

"Use Case: It must be possible to configure the handled bus frames after compile- or build-time, for example when reusing an ECU within another vehicle product line with different and incompatible communication layouts."

====

CP\_SRS\_DIODriver

SRS\_Dio\_12003, SRS\_Dio\_12004, SRS\_Dio\_12005, SRS\_Dio\_12006,  
SRS\_Dio\_12007, SRS\_Dio\_12008

Change from:

Supporting Material: BMW Specification MCAL V1.0a, REQ MAL10.x.x

to:

Supporting Material: –

====

CP\_SRS\_EEPROMDriver

SRS\_Eep\_00087, SRS\_Eep\_00088, SRS\_Eep\_00089, SRS\_Eep\_00090,  
SRS\_Eep\_00091, SRS\_Eep\_00092, SRS\_Eep\_00094, SRS\_Eep\_00095,  
SRS\_Eep\_00096, SRS\_Eep\_12047, SRS\_Eep\_12050

Change from:

Supporting Material: BMW Specification MCAL V1.0a

to:

Supporting Material: –

====

CP\_SRS\_PWMDriver

SRS\_Pwm\_12293:

Change from:

Supporting Material: BMW Specification MCAL V1.0a, MAL13.1.4. The idle level configuration covers the active phase requirement from Hella.

Change to:

Supporting Material: –

SRS\_Pwm\_12295:

Change from:

Supporting Material: BMW Specification MCAL V1.0a, MAL13.x

Change to:  
Supporting Material: –

SRS\_Pwm\_12297:

Change from:  
Supporting Material: BMW Specification MCAL V1.0a, MAL13.8.0. Kojak movies (in case you do not know Kojak)

Change to:  
Supporting Material: –

===

CP\_SRS\_SPALGeneral  
SRS\_SPAL\_12056, SRS\_SPAL\_12057, SRS\_SPAL\_12063, SRS\_SPAL\_12064,  
SRS\_SPAL\_12067

Change from:  
Supporting Material: BMW Specification MCAL V1.0a, ...  
to:  
Supporting Material: –  
–Last change on issue 78035 comment 14–

**BW-C-Level:**

Application	Specification	Bus
1	1	1

## 1.2 Specification Item SRS\_Com\_00218

**Trace References:**

RS\_BRF\_01544

**Content:**

<b>Type:</b>	
<b>Description:</b>	The AUTOSAR COM module shall be able to start and to stop sending and receiving for multiple I-PDU groups during runtime.
<b>Rationale:</b>	<b>OSEK</b> [ <b>DOC_ISO_COM</b> ] can only start/ stop communication (StartCOM and Stop COM services) as a whole. Such a limitation is too restrictive.
<b>Applies to:</b>	

<b>Use Case:</b>	Such configurable groups of I-PDUs provide for example the possibility to disable the transmission of all I-PDUs on a single channel, and enable only their reception (Silent Mode).
<b>Supporting Material:</b>	–

**RfCs affecting this spec item between releases 4.3.0 and 4.3.1:**

- RfC #73564: References to OSEK

**Problem description:**

The OSEK web site is not available.  
References need to be updated.

OSEK was pushed to ISO 17356  
ISO 17356-2: introduction?  
ISO 17356-3: OS  
ISO 17356-4: COM  
ISO 17356-5: NM (not sure we need to have such reference)  
ISO 17356-6: OIL (not sure we need to have such reference)

I tried to select the documents where it would make sense to get a fix.

**Agreed solution:**

Replace references to  
\* OSEK web site  
\* the OSEK file name / version  
with an ISO reference (with ISO version)

Check references to OSEK subsection (or avoid such references), to make sure that the section numbering in ISO is the same.

SWS OS  
=====

Change references in chapter 3.2.1 to ISO. Remove [16], [18], [19] and [20]

Remove [22] from chapter 3.2.2

Remove "OSEKtime OS [16] and the HIS Protected OSEK [22] are immature specifications that contain concepts necessary for AUTOSAR and satisfy specific application domains. It is the purpose of this document to identify these needs and to recommend the use of parts (or all) of these specifications as appropriate." from

chapter 4.1.

Change "OSEK OS" to new ISO reference ("OSEK OS[..]" - many occurrences, also in chapter 10)

Remove "So called hard and smooth synchronization from OSEKtime [16] are supported by this single unified concept in AUTOSAR OS. Smooth synchronization may be emulated by setting the small adjustment values on the final expiry point. Hard synchronization may be emulated by setting large adjustment values on the final expiry point." from 7.4.2.2.3

Remove "and provides the type of protection given by the OSEKtime Interrupt re-enable schedule event [16]." from 7.7.2.1

Remove chapter 12.3

SWCT:

=====

Replace reference to OSEK COM:

Fifteen filter algorithms formally described by the enumeration type DataFilter-TypeEnum in the meta-model are taken from OSEK COM 3.0.3 specification [18] that is referenced by the RTE specification [2].

by:

Fifteen filter algorithms formally described by the enumeration type DataFilter-TypeEnum in the meta-model are taken from the ISO 17356-4 specification [18] that is referenced by the RTE specification [2].

Replace:

[TPS\_SWCT\_01222] Applicability of DataFilter

This OSEK specification states that filtering is only used for messages that can be interpreted as C language unsigned integer types (characters, unsigned integers and enumerations).(RS\_SWCT\_03221)

by:

[TPS\_SWCT\_01222] Applicability of DataFilter

The ISO 17356-4 specification states that filtering is only used for messages that can be interpreted as C language unsigned integer types (characters, unsigned integers and enumerations).(RS\_SWCT\_03221)

Replace:

[constr\_1044] Applicability of DataFilter

According to the origin of DataFilter, i.e. OSEK COM 3.0.3 specification [18], DataFilters can only be applied to values with an integer base type.()

by:

[constr\_1044] Applicability of DataFilter

According to the origin of DataFilter, i.e. ISO 17356-4 specification [18], DataFilters can only be applied to values with an integer base type.()

Replace footnote to [constr\_1090]:

This constraint is valid at least in the OSEK standard where an extended task (that can have wait points) can only exist a single time in the context of the scheduler.

by:

This constraint is valid at least in the ISO 17356-3 standard where an extended task (that can have wait points) can only exist a single time in the context of the scheduler.

=====

Dem

=====

Replace the reference [17] Communication in Chapter 3.1 Input documents & related standards and norms Bibliography by : ISO 17356-3 in [www.iso.org/](http://www.iso.org/)

=====

Dcm

=====

Replace the reference [8]Communication in Chapter 3.1 Input documents & related standards and norms Bibliography by : ISO 17356-3 in [www.iso.org/](http://www.iso.org/)

=====

EXP\_VFB

Add an entry in chapter "13 References" related to ISO 17356-4:

ISO 17356-4  
OSEK/VDX Communication (COM)  
[www.iso.org](http://www.iso.org)

Change the references to "OSEK-COM V3.0.3" in Table 4.2 (4.3.2 From the point of view of the receiver) and EXP\_Vfb\_00028 (4.3.4 Filtering between the sender and the receiver) to "ISO 17356-4". Link the references to the entry in chapter "13 References".

=====

SRS\_BSWGeneral

## 5 General Requirements on Basic Software

Replace "OSEK OS" by "ISO 17356-3"

### 5.2.3.4 Standard header Files

Replace in [SRS\_BSW\_00348]

Because E\_OK is already defined within OSEK OS, E\_OK has to be checked for being already defined:

```
/* for OSEK compliance this typedef has been added */
```

by

Because E\_OK is already defined within ISO 17356-3, E\_OK has to be checked for being already defined

```
/* for ISO 17356 compliance this typedef has been added */
```

## 6.2 Related Standards and Norms

Remove

### 6.2.1 OSEK

[STD\_OSEK\_OS] OSEK/VDX Operating System Specification

<http://www.osek-vdx.org>

Replace with ISO 17356-3 norm

=====

SRS\_COM

1)

Remove [DOC\_OSEK\_GLOS] and all its references, since a) AUTOSAR has an own wording and glossary b) the references to (old) OSEK-terms most probably create more confusion than guidance

2)

Set reference of [DOC\_OSEK\_COM] to: ISO 17356-4: COM

Move refernce to Chapter 7.3 ISO and remove Chapter 7.2 OSEK

3)

Remove secton references to [DOC\_OSEK\_COM], just keep the textual references no numbers

4)

Search and replace textual references to OSEK COM 3.0.3 by ISO 17356-4: COM

5)

[SRS\_Com\_02084]: Change following text in Description,

from

< The possibilities to define those conditions shall be the same as defined in [DOC\_OSEK\_COM] reception filter algorithms (see [DOC\_OSEK\_GLOS], Section 2.2.2).

to

> The possibilities to define those conditions shall be the same as defined in [DOC\_ISO\_COM] reception filter algorithms (see [DOC\_ISO\_COM], Section 3.2.3).

6)

[SRS\_Com\_02058]: Change following text in Supporting Material,

from

< If no update bits are used, the AUTOSAR COM module provides the deadline monitoring defined in [DOC\_OSEK\_COM] (Section 2.5.1).

to

> If no update bits are used, the AUTOSAR COM module provides the deadline monitoring defined in [DOC\_ISO\_COM] (Section 3.5.1).

=====

SRS\_Os

in chapter 6.2.1 OSEK:

Replace "[STD\_OSEK\_OS] OSEK/VDX Operating System, Version 2.2.3, <http://www.osek-vdx.org/mirror/os223.pdf>"

by "[STD\_OSEK\_OS] ISO 17356-3: OS"

Replace "[STD\_OSEK\_OIL] OSEK / VDX Implementation Language (OIL) V2.5, OSEK Implementation Language, <http://www.osek-vdx.org/mirror/oil25.pdf>" by "[STD\_OSEK\_OIL] ISO 17356-6: OIL"

Remove "[STD\_OSEK\_TTOS] OSEK/VDX Time-Triggered Operating System, Version 1.0, July 24, 2001, <http://www.osek-vdx.org/mirror/ttos10.pdf>"

Remove "[STD\_OSEK\_ORTI] OSEK/VDX ORTI (OSEK RunTime Interface) Part A Version 2.1.1, Part B Version 2.1, <http://www.osek-vdx.org/mirror/ORTI-A-211.pdf>"

in [SRS\_Os\_11002]: remove [STD\_OSEK\_TTOS] from Supporting Material

=====

#### SWS\_COM

1)

Set reference of [17] to ISO 17356-4: COM

Set reference of [18] to ISO 17356-6: OIL

2)

Search and replace textual references to OSEK COM 3.0.3 by ISO 17356-4: COM or [17] (if suitable)

and textual references to OSEK OIL by ISO 17356-6: OIL or [18] (if suitable)

=====

#### SWS\_StandardTypes:

In Section 3.2: replace

[7] OSEK/VDX Operating System, Version 2.2.2 [www.osek-vdx.org/os222.pdf](http://www.osek-vdx.org/os222.pdf)

by

[7] OSEK/VDX Operating System, ISO 17356-3: OS

=====

#### CP\_TR\_AutosarModelConstraints

see PS for the SWCT.

=====

=====

#### SRS\_NetworkManagement:

1) Change Section 7.2.1 name from "OSEK" to "ISO 17356-5"

Remove the description:

[5] [STD\_OSEK\_NM]

OSEK/VDX NM Specification (ISO 17356-5), Version 2.5.3  
 [STD\_OSEK\_NM] OSEK/VDX NM Specification (ISO 17356-5), V2.5.3  
<http://www.osek-vedx.org/>  
 Change to :  
 OSEK/VDX NM Specification  
[www.iso.org](http://www.iso.org)  
 ==>  
 7.2.1 ISO 17356-5  
 [5] ISO 17356-5: NM Specification  
[www.iso.org](http://www.iso.org)

2) Replace "OSEK-NM" to "ISO 17356-5: NM Specification" in [SRS\_Nm\_02515]

3) Replace "OSEK NM 2.5.3" to "ISO 17356-5: NM Specification" in [SRS\_Nm\_00142]

–Last change on issue 73564 comment 28–

**BW-C-Level:**

Application	Specification	Bus
1	1	1

### 1.3 Specification Item SRS\_Com\_02037

**Trace References:**

RS\_BRF\_01544

**Content:**

<b>Type:</b>	
<b>Description:</b>	The AUTOSAR COM module shall be based on the functionality and APIs specified in OSEK [DOC_ISO_COM3.0.3]. Specifications not done there, respectively specifications of functionality different from that specified in the above mentioned document shall be defined in the AUTOSAR COM SRS and SWS specifications.
<b>Rationale:</b>	This SRS is only an add-on to OSEK [DOC_ISO_COM3.0.3 ] as an existing standard.
<b>Applies to:</b>	
<b>Use Case:</b>	–
<b>Supporting Material:</b>	[DOC_OSEKISO_GLOS ], [DOC_OSEKISO_COM]

**RfCs affecting this spec item between releases 4.3.0 and 4.3.1:**

- RfC #73564: References to OSEK

**Problem description:**

The OSEK web site is not available.  
References need to be updated.

OSEK was pushed to ISO 17356  
ISO 17356-2: introduction?  
ISO 17356-3: OS  
ISO 17356-4: COM  
ISO 17356-5: NM (not sure we need to have such reference)  
ISO 17356-6: OIL (not sure we need to have such reference)

I tried to select the documents where it would make sense to get a fix.

**Agreed solution:**

Replace references to  
\* OSEK web site  
\* the OSEK file name / version  
with an ISO reference (with ISO version)

Check references to OSEK subsection (or avoid such references), to make sure that the section numbering in ISO is the same.

SWS OS  
=====

Change references in chapter 3.2.1 to ISO. Remove [16], [18], [19] and [20]

Remove [22] from chapter 3.2.2

Remove "OSEKtime OS [16] and the HIS Protected OSEK [22] are immature specifications that contain concepts necessary for AUTOSAR and satisfy specific application domains. It is the purpose of this document to identify these needs and to recommend the use of parts (or all) of these specifications as appropriate." from chapter 4.1.

Change "OSEK OS" to new ISO reference ("OSEK OS[..]" - many occurrences, also in chapter 10)

Remove "So called hard and smooth synchronization from OSEKtime [16] are supported by this single unified concept in AUTOSAR OS. Smooth synchronization may be emulated by setting the small adjustment values on the final expiry point. Hard synchronization may be emulated by setting large adjustment values on the

final expiry point." from 7.4.2.2.3

Remove "and provides the type of protection given by the OSEKtime Interrupt re-enable

schedule event [16]." from 7.7.2.1

Remove chapter 12.3

SWCT:

=====

Replace reference to OSEK COM:

Fifteen filter algorithms formally described by the enumeration type DataFilter-TypeEnum in the meta-model are taken from OSEK COM 3.0.3 specification [18] that is referenced by the RTE specification [2].

by:

Fifteen filter algorithms formally described by the enumeration type DataFilter-TypeEnum in the meta-model are taken from the ISO 17356-4 specification [18] that is referenced by the RTE specification [2].

Replace:

[TPS\_SWCT\_01222] Applicability of DataFilter

This OSEK specification states that filtering is only used for messages that can be interpreted as C language unsigned integer types (characters, unsigned integers and enumerations).(RS\_SWCT\_03221)

by:

[TPS\_SWCT\_01222] Applicability of DataFilter

The ISO 17356-4 specification states that filtering is only used for messages that can be interpreted as C language unsigned integer types (characters, unsigned integers and enumerations).(RS\_SWCT\_03221)

Replace:

[constr\_1044] Applicability of DataFilter

According to the origin of DataFilter, i.e. OSEK COM 3.0.3 specification [18],

DataFilters can only be applied to values with an integer base type.()

by:

[constr\_1044] Applicability of DataFilter

According to the origin of DataFilter, i.e. ISO 17356-4 specification [18], DataFilters can only be applied to values with an integer base type.()

Replace footnote to [constr\_1090]:

This constraint is valid at least in the OSEK standard where an extended task (that can have wait points) can only exist a single time in the context of the scheduler.

by:

This constraint is valid at least in the ISO 17356-3 standard where an extended task (that can have wait points) can only exist a single time in the context of the scheduler.

=====

Dem

=====

Replace the reference [17] Communication in Chapter 3.1 Input documents & related standards and norms Bibliography by : ISO 17356-3 in [www.iso.org/](http://www.iso.org/)

=====

Dcm

=====

Replace the reference [8]Communication in Chapter 3.1 Input documents & related standards and norms Bibliography by : ISO 17356-3 in [www.iso.org/](http://www.iso.org/)

=====

EXP\_VFB

Add an entry in chapter "13 References" related to ISO 17356-4:

ISO 17356-4

OSEK/VDX Communication (COM)

[www.iso.org](http://www.iso.org)

Change the references to "OSEK-COM V3.0.3" in Table 4.2 (4.3.2 From the point of view of the receiver) and EXP\_Vfb\_00028 (4.3.4 Filtering between the sender and the receiver) to "ISO 17356-4". Link the references to the entry in chapter "13 References".

=====

SRS\_BSWGeneral

## 5 General Requirements on Basic Software

Replace "OSEK OS" by "ISO 17356-3"

### 5.2.3.4 Standard header Files

Replace in [SRS\_BSW\_00348]

Because E\_OK is already defined within OSEK OS, E\_OK has to be checked for being already defined:

```
/* for OSEK compliance this typedef has been added */
```

by

Because E\_OK is already defined within ISO 17356-3, E\_OK has to be checked for being already defined

```
/* for ISO 17356 compliance this typedef has been added */
```

## 6.2 Related Standards and Norms

Remove

### 6.2.1 OSEK

[STD\_OSEK\_OS] OSEK/VDX Operating System Specification

<http://www.osek-vdx.org>

Replace with ISO 17356-3 norm

=====

SRS\_COM

1)

Remove [DOC\_OSEK\_GLOS] and all its references, since a) AUTOSAR has an own wording and glossary b) the references to (old) OSEK-terms most probably create more confusion than guidance

2)

Set reference of [DOC\_OSEK\_COM] to: ISO 17356-4: COM

Move refernce to Chapter 7.3 ISO and remove Chapter 7.2 OSEK

3)

Remove section references to [DOC\_OSEK\_COM], just keep the textual references no numbers

4)

Search and replace textual references to OSEK COM 3.0.3 by ISO 17356-4: COM

5)

[SRS\_Com\_02084]: Change following text in Description,

from

< The possibilities to define those conditions shall be the same as defined in [DOC\_OSEK\_COM] reception filter algorithms (see [DOC\_OSEK\_GLOS], Section 2.2.2).

to

> The possibilities to define those conditions shall be the same as defined in [DOC\_ISO\_COM] reception filter algorithms (see [DOC\_ISO\_COM], Section 3.2.3).

6)

[SRS\_Com\_02058]: Change following text in Supporting Material,

from

< If no update bits are used, the AUTOSAR COM module provides the deadline monitoring defined in [DOC\_OSEK\_COM] (Section 2.5.1).

to

> If no update bits are used, the AUTOSAR COM module provides the deadline monitoring defined in [DOC\_ISO\_COM] (Section 3.5.1).

=====

SRS\_Os

in chapter 6.2.1 OSEK:

Replace "[STD\_OSEK\_OS] OSEK/VDX Operating System, Version 2.2.3, <http://www.osek-vdx.org/mirror/os223.pdf>"

by "[STD\_OSEK\_OS] ISO 17356-3: OS"

Replace "[STD\_OSEK\_OIL] OSEK / VDX Implementation Language (OIL) V2.5, OSEK Implementation Language, <http://www.osek-vdx.org/mirror/oil25.pdf>"

by "[STD\_OSEK\_OIL] ISO 17356-6: OIL"

Remove "[STD\_OSEK\_TTOS] OSEK/VDX Time-Triggered Operating System, Version 1.0, July 24, 2001, <http://www.osek-vdx.org/mirror/ttos10.pdf>"

Remove "[STD\_OSEK\_ORTI] OSEK/VDX ORTI (OSEK RunTime Interface) Part A Version 2.1.1, Part B Version 2.1, <http://www.osek-vdx.org/mirror/ORTI-A->

211.pdf"

in [SRS\_Os\_11002]: remove [STD\_OSEK\_TTOS] from Supporting Material

=====

SWS\_COM

1)

Set reference of [17] to ISO 17356-4: COM

Set reference of [18] to ISO 17356-6: OIL

2)

Search and replace textual references to OSEK COM 3.0.3 by ISO 17356-4: COM  
or [17] (if suitable)

and textual references to OSEK OIL by ISO 17356-6: OIL or [18] (if suitable)

=====

SWS\_StandardTypes:

In Section 3.2: replace

[7] OSEK/VDX Operating System, Version 2.2.2 [www.osek-vdx.org/os222.pdf](http://www.osek-vdx.org/os222.pdf)

by

[7] OSEK/VDX Operating System, ISO 17356-3: OS

=====

CP\_TR\_AutosarModelConstraints

see PS for the SWCT.

=====

=====

SRS\_NetworkManagement:

1) Change Section 7.2.1 name from "OSEK" to "ISO 17356-5"

Remove the description:

[5] [STD\_OSEK\_NM]

OSEK/VDX NM Specification (ISO 17356-5), Version 2.5.3

[STD\_OSEK\_NM] OSEK/VDX NM Specification (ISO 17356-5), V2.5.3

<http://www.osek-vdx.org/>

Change to :

OSEK/VDX NM Specification

[www.iso.org](http://www.iso.org)

====>

7.2.1 ISO 17356-5

[5] ISO 17356-5: NM Specification

www.iso.org

2) Replace "OSEK-NM" to "ISO 17356-5: NM Specification" in [SRS\_Nm\_02515]

3) Replace "OSEK NM 2.5.3" to "ISO 17356-5: NM Specification" in [SRS\_Nm\_00142]

–Last change on issue 73564 comment 28–

**BW-C-Level:**

Application	Specification	Bus
1	1	1

## 1.4 Specification Item SRS\_Com\_02058

**Trace References:**

RS\_BRF\_01544, RS\_BRF\_00113

**Content:**

<b>Type:</b>	
<b>Description:</b>	The AUTOSAR COM module shall monitor on receiver-side, if an updated value for a specific signal/signal group has been received within a configurable, signal/signal group specific deadline, i.e. the AUTOSAR COM module shall check, whether the sender-side upper layers have explicitly sent the signal/signal group.
<b>Rationale:</b>	Due to latency times of communication systems or interrupts data might be not received in a pre-defined time (e.g. jitter of period to big, older than max age).
<b>Applies to:</b>	
<b>Use Case:</b>	Detect delays in communication system to make sure the application works on up-to-date data.
<b>Supporting Material:</b>	If no update bits are used, the AUTOSAR COM module provides the deadline monitoring defined in [DOC_OSEKISO_COM] (Section 2.53.5.1). Here, deadline monitoring is done on the reception of I-PDUs but deadline violations are notified per signal to the upper layer.

**RfCs affecting this spec item between releases 4.3.0 and 4.3.1:**

- RfC #73564: References to OSEK

**Problem description:**

The OSEK web site is not available.

References need to be updated.

OSEK was pushed to ISO 17356

ISO 17356-2: introduction?

ISO 17356-3: OS

ISO 17356-4: COM

ISO 17356-5: NM (not sure we need to have such reference)

ISO 17356-6: OIL (not sure we need to have such reference)

I tried to select the documents where it would make sense to get a fix.

**Agreed solution:**

Replace references to

\* OSEK web site

\* the OSEK file name / version

with an ISO reference (with ISO version)

Check references to OSEK subsection (or avoid such references), to make sure that the section numbering in ISO is the same.

SWS OS

=====

Change references in chapter 3.2.1 to ISO. Remove [16], [18], [19] and [20]

Remove [22] from chapter 3.2.2

Remove "OSEKtime OS [16] and the HIS Protected OSEK [22] are immature specifications that contain concepts necessary for AUTOSAR and satisfy specific application domains. It is the purpose of this document to identify these needs and to recommend the use of parts (or all) of these specifications as appropriate." from chapter 4.1.

Change "OSEK OS" to new ISO reference ("OSEK OS[.]" - many occurrences, also in chapter 10)

Remove "So called hard and smooth synchronization from OSEKtime [16] are supported by this single unified concept in AUTOSAR OS. Smooth synchronization may be emulated by setting the small adjustment values on the final expiry point. Hard synchronization may be emulated by setting large adjustment values on the final expiry point." from 7.4.2.2.3

Remove "and provides the type of protection given by the OSEKtime Interrupt re-enable schedule event [16]." from 7.7.2.1

Remove chapter 12.3

SWCT:

=====

Replace reference to OSEK COM:

Fifteen filter algorithms formally described by the enumeration type `DataFilter-TypeEnum` in the meta-model are taken from OSEK COM 3.0.3 specification [18] that is referenced by the RTE specification [2].

by:

Fifteen filter algorithms formally described by the enumeration type `DataFilter-TypeEnum` in the meta-model are taken from the ISO 17356-4 specification [18] that is referenced by the RTE specification [2].

Replace:

[TPS\_SWCT\_01222] Applicability of `DataFilter`

This OSEK specification states that filtering is only used for messages that can be interpreted as C language unsigned integer types (characters, unsigned integers and enumerations).(RS\_SWCT\_03221)

by:

[TPS\_SWCT\_01222] Applicability of `DataFilter`

The ISO 17356-4 specification states that filtering is only used for messages that can be interpreted as C language unsigned integer types (characters, unsigned integers and enumerations).(RS\_SWCT\_03221)

Replace:

[constr\_1044] Applicability of `DataFilter`

According to the origin of `DataFilter`, i.e. OSEK COM 3.0.3 specification [18], `DataFilters` can only be applied to values with an integer base type.()

by:

[constr\_1044] Applicability of `DataFilter`

According to the origin of `DataFilter`, i.e. ISO 17356-4 specification [18], `DataFilters` can only be applied to values with an integer base type.()

Replace footnote to [constr\_1090]:

This constraint is valid at least in the OSEK standard where an extended task (that can have wait points) can only exist a single time in the context of the scheduler.

by:

This constraint is valid at least in the ISO 17356-3 standard where an extended task (that can have wait points) can only exist a single time in the context of the scheduler.

=====

Dem

=====

Replace the reference [17] Communication in Chapter 3.1 Input documents & related standards and norms Bibliography by : ISO 17356-3 in [www.iso.org/](http://www.iso.org/)

=====

Dcm

=====

Replace the reference [8]Communication in Chapter 3.1 Input documents & related standards and norms Bibliography by : ISO 17356-3 in [www.iso.org/](http://www.iso.org/)

=====

EXP\_VFB

Add an entry in chapter "13 References" related to ISO 17356-4:

ISO 17356-4

OSEK/VDX Communication (COM)

[www.iso.org](http://www.iso.org)

Change the references to "OSEK-COM V3.0.3" in Table 4.2 (4.3.2 From the point of view of the receiver) and EXP\_Vfb\_00028 (4.3.4 Filtering between the sender and the receiver) to "ISO 17356-4". Link the references to the entry in chapter "13 References".

=====

SRS\_BSWGeneral

5 General Requirements on Basic Software

Replace "OSEK OS" by "ISO 17356-3"

#### 5.2.3.4 Standard header Files

Replace in [SRS\_BSW\_00348]

Because E\_OK is already defined within OSEK OS, E\_OK has to be checked for being already defined:

```
/* for OSEK compliance this typedef has been added */
```

by

Because E\_OK is already defined within ISO 17356-3, E\_OK has to be checked for being already defined

```
/* for ISO 17356 compliance this typedef has been added */
```

## 6.2 Related Standards and Norms

Remove

### 6.2.1 OSEK

[STD\_OSEK\_OS] OSEK/VDX Operating System Specification

<http://www.osek-vdx.org>

Replace with ISO 17356-3 norm

=====  
SRS\_COM

1)

Remove [DOC\_OSEK\_GLOS] and all its references, since a) AUTOSAR has an own wording and glossary b) the references to (old) OSEK-terms most probably create more confusion than guidance

2)

Set reference of [DOC\_OSEK\_COM] to: ISO 17356-4: COM

Move reference to Chapter 7.3 ISO and remove Chapter 7.2 OSEK

3)

Remove section references to [DOC\_OSEK\_COM], just keep the textual references no numbers

4)

Search and replace textual references to OSEK COM 3.0.3 by ISO 17356-4: COM

5)

[SRS\_Com\_02084]: Change following text in Description,  
from

< The possibilities to define those conditions shall be the same as defined in [DOC\_OSEK\_COM] reception filter algorithms (see [DOC\_OSEK\_GLOS], Section 2.2.2).

to

> The possibilities to define those conditions shall be the same as defined in [DOC\_ISO\_COM] reception filter algorithms (see [DOC\_ISO\_COM], Section 3.2.3).

6)

[SRS\_Com\_02058]: Change following text in Supporting Material,  
from

< If no update bits are used, the AUTOSAR COM module provides the deadline monitoring defined in [DOC\_OSEK\_COM] (Section 2.5.1).

to

> If no update bits are used, the AUTOSAR COM module provides the deadline monitoring defined in [DOC\_ISO\_COM] (Section 3.5.1).

=====

SRS\_Os

in chapter 6.2.1 OSEK:

Replace "[STD\_OSEK\_OS] OSEK/VDX Operating System, Version 2.2.3, <http://www.osek-vdx.org/mirror/os223.pdf>"

by "[STD\_OSEK\_OS] ISO 17356-3: OS"

Replace "[STD\_OSEK\_OIL] OSEK / VDX Implementation Language (OIL) V2.5, OSEK Implementation Language, <http://www.osek-vdx.org/mirror/oil25.pdf>"

by "[STD\_OSEK\_OIL] ISO 17356-6: OIL"

Remove "[STD\_OSEK\_TTOS] OSEK/VDX Time-Triggered Operating System, Version 1.0, July 24, 2001, <http://www.osek-vdx.org/mirror/ttos10.pdf>"

Remove "[STD\_OSEK\_ORTI] OSEK/VDX ORTI (OSEK RunTime Interface) Part A Version 2.1.1, Part B Version 2.1, <http://www.osek-vdx.org/mirror/ORTI-A-211.pdf>"

in [SRS\_Os\_11002]: remove [STD\_OSEK\_TTOS] from Supporting Material

=====

SWS\_COM

1)  
 Set reference of [17] to ISO 17356-4: COM  
 Set reference of [18] to ISO 17356-6: OIL

2)  
 Search and replace textual references to OSEK COM 3.0.3 by ISO 17356-4: COM  
 or [17] (if suitable)  
 and textual references to OSEK OIL by ISO 17356-6: OIL or [18] (if suitable)

=====  
 SWS\_StandardTypes:  
 In Section 3.2: replace  
 [7] OSEK/VDX Operating System, Version 2.2.2 [www.osek-vdx.org/os222.pdf](http://www.osek-vdx.org/os222.pdf)  
 by  
 [7] OSEK/VDX Operating System, ISO 17356-3: OS

=====  
 CP\_TR\_AutosarModelConstraints  
 see PS for the SWCT.

=====  
 SRS\_NetworkManagement:

1) Change Section 7.2.1 name from "OSEK" to "ISO 17356-5"  
 Remove the description:  
 [5] [STD\_OSEK\_NM]  
 OSEK/VDX NM Specification (ISO 17356-5), Version 2.5.3  
 [STD\_OSEK\_NM] OSEK/VDX NM Specification (ISO 17356-5), V2.5.3  
<http://www.osek-vdx.org/>

Change to :  
 OSEK/VDX NM Specification  
[www.iso.org](http://www.iso.org)

====>  
 7.2.1 ISO 17356-5  
 [5] ISO 17356-5: NM Specification  
[www.iso.org](http://www.iso.org)

2) Replace "OSEK-NM" to "ISO 17356-5: NM Specification" in [SRS\_Nm\_02515]

3) Replace "OSEK NM 2.5.3" to "ISO 17356-5: NM Specification" in  
 [SRS\_Nm\_00142]

–Last change on issue 73564 comment 28–

**BW-C-Level:**

Application	Specification	Bus
1	1	1

## 1.5 Specification Item SRS\_Com\_02083

**Trace References:**

RS\_BRF\_01592, RS\_BRF\_01544

**Content:**

<b>Type:</b>	
<b>Description:</b>	The AUTOSAR COM module shall provide the transmission modes given in the following tabular for each I-PDU. It shows the transmission modes available and a short description of those transmission modes.
<b>Rationale:</b>	These modes are commonly used by all existing automotive bus systems.
<b>Applies to:</b>	
<b>Use Case:</b>	–
<b>Supporting Material:</b>	Transmission modes "periodic", "mixed" are the same as already defined in [DOC_OSEKISO_COM]. See also Use Cases in [DOC_OSEKISO_GLOS].

**RfCs affecting this spec item between releases 4.3.0 and 4.3.1:**

- RfC #73564: References to OSEK

**Problem description:**

The OSEK web site is not available.  
References need to be updated.

OSEK was pushed to ISO 17356  
ISO 17356-2: introduction?  
ISO 17356-3: OS  
ISO 17356-4: COM  
ISO 17356-5: NM (not sure we need to have such reference)  
ISO 17356-6: OIL (not sure we need to have such reference)

I tried to select the documents where it would make sense to get a fix.

**Agreed solution:**

Replace references to  
\* OSEK web site  
\* the OSEK file name / version

with an ISO reference (with ISO version)

Check references to OSEK subsection (or avoid such references), to make sure that the section numbering in ISO is the same.

SWS OS

=====

Change references in chapter 3.2.1 to ISO. Remove [16], [18], [19] and [20]

Remove [22] from chapter 3.2.2

Remove "OSEKtime OS [16] and the HIS Protected OSEK [22] are immature specifications that contain concepts necessary for AUTOSAR and satisfy specific application domains. It is the purpose of this document to identify these needs and to recommend the use of parts (or all) of these specifications as appropriate." from chapter 4.1.

Change "OSEK OS" to new ISO reference ("OSEK OS[.]" - many occurrences, also in chapter 10)

Remove "So called hard and smooth synchronization from OSEKtime [16] are supported by this single unified concept in AUTOSAR OS. Smooth synchronization may be emulated by setting the small adjustment values on the final expiry point. Hard synchronization may be emulated by setting large adjustment values on the final expiry point." from 7.4.2.2.3

Remove "and provides the type of protection given by the OSEKtime Interrupt re-enable schedule event [16]." from 7.7.2.1

Remove chapter 12.3

SWCT:

=====

Replace reference to OSEK COM:

Fifteen filter algorithms formally described by the enumeration type DataFilter-TypeEnum in the meta-model are taken from OSEK COM 3.0.3 specification [18] that is referenced by the RTE specification [2].

by:

Fifteen filter algorithms formally described by the enumeration type `DataFilter-TypeEnum` in the meta-model are taken from the ISO 17356-4 specification [18] that is referenced by the RTE specification [2].

Replace:

[TPS\_SWCT\_01222] Applicability of `DataFilter`

This OSEK specification states that filtering is only used for messages that can be interpreted as C language unsigned integer types (characters, unsigned integers and enumerations).(RS\_SWCT\_03221)

by:

[TPS\_SWCT\_01222] Applicability of `DataFilter`

The ISO 17356-4 specification states that filtering is only used for messages that can be interpreted as C language unsigned integer types (characters, unsigned integers and enumerations).(RS\_SWCT\_03221)

Replace:

[constr\_1044] Applicability of `DataFilter`

According to the origin of `DataFilter`, i.e. OSEK COM 3.0.3 specification [18], `DataFilters` can only be applied to values with an integer base type.()

by:

[constr\_1044] Applicability of `DataFilter`

According to the origin of `DataFilter`, i.e. ISO 17356-4 specification [18], `DataFilters` can only be applied to values with an integer base type.()

Replace footnote to [constr\_1090]:

This constraint is valid at least in the OSEK standard where an extended task (that can have wait points) can only exist a single time in the context of the scheduler.

by:

This constraint is valid at least in the ISO 17356-3 standard where an extended task (that can have wait points) can only exist a single time in the context of the scheduler.

=====

Dem

=====

Replace the reference [17] Communication in Chapter 3.1 Input documents & related standards and norms Bibliography by : ISO 17356-3 in [www.iso.org/](http://www.iso.org/)

=====

Dcm

=====

Replace the reference [8]Communication in Chapter 3.1 Input documents & related standards and norms Bibliography by : ISO 17356-3 in [www.iso.org/](http://www.iso.org/)

=====

EXP\_VFB

Add an entry in chapter "13 References" related to ISO 17356-4:  
ISO 17356-4  
OSEK/VDX Communication (COM)  
[www.iso.org](http://www.iso.org)

Change the references to "OSEK-COM V3.0.3" in Table 4.2 (4.3.2 From the point of view of the receiver) and EXP\_Vfb\_00028 (4.3.4 Filtering between the sender and the receiver) to "ISO 17356-4". Link the references to the entry in chapter "13 References".

=====

SRS\_BSWGeneral

5 General Requirements on Basic Software

Replace "OSEK OS" by "ISO 17356-3"

5.2.3.4 Standard header Files

Replace in [SRS\_BSW\_00348]

Because E\_OK is already defined within OSEK OS, E\_OK has to be checked for being already defined:

```
/* for OSEK compliance this typedef has been added */
```

by

Because E\_OK is already defined within ISO 17356-3, E\_OK has to be checked for being already defined

/\* for ISO 17356 compliance this typedef has been added \*/

## 6.2 Related Standards and Norms

Remove

### 6.2.1 OSEK

[STD\_OSEK\_OS] OSEK/VDX Operating System Specification

<http://www.osek-vdx.org>

Replace with ISO 17356-3 norm

=====

SRS\_COM

1)

Remove [DOC\_OSEK\_GLOS] and all its references, since a) AUTOSAR has an own wording and glossary b) the references to (old) OSEK-terms most probably create more confusion than guidance

2)

Set reference of [DOC\_OSEK\_COM] to: ISO 17356-4: COM

Move refernce to Chapter 7.3 ISO and remove Chapter 7.2 OSEK

3)

Remove secton references to [DOC\_OSEK\_COM], just keep the textual references no numbers

4)

Search and replace textual references to OSEK COM 3.0.3 by ISO 17356-4: COM

5)

[SRS\_Com\_02084]: Change following text in Description,  
from

< The possibilities to define those conditions shall be the same as defined in [DOC\_OSEK\_COM] reception filter algorithms (see [DOC\_OSEK\_GLOS], Section 2.2.2).

to

> The possibilities to define those conditions shall be the same as defined in [DOC\_ISO\_COM] reception filter algorithms (see [DOC\_ISO\_COM], Section 3.2.3).

6)

[SRS\_Com\_02058]: Change following text in Supporting Material,

from

< If no update bits are used, the AUTOSAR COM module provides the deadline monitoring defined in [DOC\_OSEK\_COM] (Section 2.5.1).

to

> If no update bits are used, the AUTOSAR COM module provides the deadline monitoring defined in [DOC\_ISO\_COM] (Section 3.5.1).

=====

SRS\_Os

in chapter 6.2.1 OSEK:

Replace "[STD\_OSEK\_OS] OSEK/VDX Operating System, Version 2.2.3, <http://www.osek-vdx.org/mirror/os223.pdf>"

by "[STD\_OSEK\_OS] ISO 17356-3: OS"

Replace "[STD\_OSEK\_OIL] OSEK / VDX Implementation Language (OIL) V2.5, OSEK Implementation Language, <http://www.osek-vdx.org/mirror/oil25.pdf>"

by "[STD\_OSEK\_OIL] ISO 17356-6: OIL"

Remove "[STD\_OSEK\_TTOS] OSEK/VDX Time-Triggered Operating System, Version 1.0, July 24, 2001, <http://www.osek-vdx.org/mirror/ttos10.pdf>"

Remove "[STD\_OSEK\_ORTI] OSEK/VDX ORTI (OSEK RunTime Interface) Part A Version 2.1.1, Part B Version 2.1, <http://www.osek-vdx.org/mirror/ORTI-A-211.pdf>"

in [SRS\_Os\_11002]: remove [STD\_OSEK\_TTOS] from Supporting Material

=====

SWS\_COM

1)

Set reference of [17] to ISO 17356-4: COM

Set reference of [18] to ISO 17356-6: OIL

2)

Search and replace textual references to OSEK COM 3.0.3 by ISO 17356-4: COM or [17] (if suitable)

and textual references to OSEK OIL by ISO 17356-6: OIL or [18] (if suitable)

=====

SWS\_StandardTypes:

In Section 3.2: replace  
 [7] OSEK/VDX Operating System, Version 2.2.2 [www.osek-vdx.org/os222.pdf](http://www.osek-vdx.org/os222.pdf)  
 by  
 [7] OSEK/VDX Operating System, ISO 17356-3: OS  
 =====  
 CP\_TR\_AutosarModelConstraints  
 see PS for the SWCT.  
 =====

=====

SRS\_NetworkManagement:

- 1) Change Section 7.2.1 name from "OSEK" to "ISO 17356-5"  
 Remove the description:  
 [5] [STD\_OSEK\_NM]  
 OSEK/VDX NM Specification (ISO 17356-5), Version 2.5.3  
 [STD\_OSEK\_NM] OSEK/VDX NM Specification (ISO 17356-5), V2.5.3  
<http://www.osek-vdx.org/>  
 Change to :  
 OSEK/VDX NM Specification  
[www.iso.org](http://www.iso.org)  
 ==>  
 7.2.1 ISO 17356-5  
 [5] ISO 17356-5: NM Specification  
[www.iso.org](http://www.iso.org)
  
- 2) Replace "OSEK-NM" to "ISO 17356-5: NM Specification" in [SRS\_Nm\_02515]
  
- 3) Replace "OSEK NM 2.5.3" to "ISO 17356-5: NM Specification" in [SRS\_Nm\_00142]  
 –Last change on issue 73564 comment 28–

**BW-C-Level:**

Application	Specification	Bus
1	1	1

**1.6 Specification Item SRS\_Com\_02084**

**Trace References:**

RS\_BRF\_01592, RS\_BRF\_01544

**Content:**

<b>Type:</b>	
<b>Description:</b>	To select one of the two transmission modes, the AUTOSAR COM module shall provide the possibility to attach a condition to each signal within an I-PDU separately. The possibilities to define those conditions shall be the same as defined in [DOC_OSEKISO_COM] reception filter algorithms (see [DOC_OSEKISO_GLOSCOM], Section 2.2.23.2.3).
<b>Rationale:</b>	These modes are commonly used by many existing automotive bus systems.
<b>Applies to:</b>	
<b>Use Case:</b>	–
<b>Supporting Material:</b>	–

**RfCs affecting this spec item between releases 4.3.0 and 4.3.1:**

- RfC #73564: References to OSEK

**Problem description:**

The OSEK web site is not available.  
References need to be updated.

OSEK was pushed to ISO 17356  
ISO 17356-2: introduction?  
ISO 17356-3: OS  
ISO 17356-4: COM  
ISO 17356-5: NM (not sure we need to have such reference)  
ISO 17356-6: OIL (not sure we need to have such reference)

I tried to select the documents where it would make sense to get a fix.

**Agreed solution:**

Replace references to  
\* OSEK web site  
\* the OSEK file name / version  
with an ISO reference (with ISO version)

Check references to OSEK subsection (or avoid such references), to make sure that the section numbering in ISO is the same.

SWS OS  
=====

Change references in chapter 3.2.1 to ISO. Remove [16], [18], [19] and [20]

Remove [22] from chapter 3.2.2

Remove "OSEKtime OS [16] and the HIS Protected OSEK [22] are immature specifications that contain concepts necessary for AUTOSAR and satisfy specific application domains. It is the purpose of this document to identify these needs and to recommend the use of parts (or all) of these specifications as appropriate." from chapter 4.1.

Change "OSEK OS" to new ISO reference ("OSEK OS[.]" - many occurrences, also in chapter 10)

Remove "So called hard and smooth synchronization from OSEKtime [16] are supported by this single unified concept in AUTOSAR OS. Smooth synchronization may be emulated by setting the small adjustment values on the final expiry point. Hard synchronization may be emulated by setting large adjustment values on the final expiry point." from 7.4.2.2.3

Remove "and provides the type of protection given by the OSEKtime Interrupt re-enable schedule event [16]." from 7.7.2.1

Remove chapter 12.3

SWCT:

=====

Replace reference to OSEK COM:

Fifteen filter algorithms formally described by the enumeration type DataFilter-TypeEnum in the meta-model are taken from OSEK COM 3.0.3 specification [18] that is referenced by the RTE specification [2].

by:

Fifteen filter algorithms formally described by the enumeration type DataFilter-TypeEnum in the meta-model are taken from the ISO 17356-4 specification [18] that is referenced by the RTE specification [2].

Replace:

[TPS\_SWCT\_01222] Applicability of DataFilter

This OSEK specification states that filtering is only used for messages that can be interpreted as C language unsigned integer types (characters, unsigned integers and enumerations).(RS\_SWCT\_03221)

by:

[TPS\_SWCT\_01222] Applicability of DataFilter

The ISO 17356-4 specification states that filtering is only used for messages that can be interpreted as C language unsigned integer types (characters, unsigned integers and enumerations).(RS\_SWCT\_03221)

Replace:

[constr\_1044] Applicability of DataFilter

According to the origin of DataFilter, i.e. OSEK COM 3.0.3 specification [18], DataFilters can only be applied to values with an integer base type.()

by:

[constr\_1044] Applicability of DataFilter

According to the origin of DataFilter, i.e. ISO 17356-4 specification [18], DataFilters can only be applied to values with an integer base type.()

Replace footnote to [constr\_1090]:

This constraint is valid at least in the OSEK standard where an extended task (that can have wait points) can only exist a single time in the context of the scheduler.

by:

This constraint is valid at least in the ISO 17356-3 standard where an extended task (that can have wait points) can only exist a single time in the context of the scheduler.

=====

Dem

=====

Replace the reference [17] Communication in Chapter 3.1 Input documents & related standards and norms Bibliography by : ISO 17356-3 in [www.iso.org/](http://www.iso.org/)

=====

Dcm

=====

Replace the reference [8]Communication in Chapter 3.1 Input documents & related

standards and norms Bibliography by : ISO 17356-3 in [www.iso.org/](http://www.iso.org/)

=====

EXP\_VFB

Add an entry in chapter "13 References" related to ISO 17356-4:

ISO 17356-4

OSEK/VDX Communication (COM)

[www.iso.org](http://www.iso.org)

Change the references to "OSEK-COM V3.0.3" in Table 4.2 (4.3.2 From the point of view of the receiver) and EXP\_Vfb\_00028 (4.3.4 Filtering between the sender and the receiver) to "ISO 17356-4". Link the references to the entry in chapter "13 References".

=====

SRS\_BSWGeneral

5 General Requirements on Basic Software

Replace "OSEK OS" by "ISO 17356-3"

5.2.3.4 Standard header Files

Replace in [SRS\_BSW\_00348]

Because E\_OK is already defined within OSEK OS, E\_OK has to be checked for being already defined:

```
/* for OSEK compliance this typedef has been added */
```

by

Because E\_OK is already defined within ISO 17356-3, E\_OK has to be checked for being already defined

```
/* for ISO 17356 compliance this typedef has been added */
```

6.2 Related Standards and Norms

Remove

6.2.1 OSEK

[STD\_OSEK\_OS] OSEK/VDX Operating System Specification

<http://www.osek-vdx.org>

Replace with ISO 17356-3 norm

=====

SRS\_COM

1)

Remove [DOC\_OSEK\_GLOS] and all its references, since a) AUTOSAR has an own wording and glossary b) the references to (old) OSEK-terms most probably create more confusion than guidance

2)

Set reference of [DOC\_OSEK\_COM] to: ISO 17356-4: COM  
Move refernce to Chapter 7.3 ISO and remove Chapter 7.2 OSEK

3)

Remove secton references to [DOC\_OSEK\_COM], just keep the textual references  
no numbers

4)

Search and replace textual references to OSEK COM 3.0.3 by ISO 17356-4: COM

5)

[SRS\_Com\_02084]: Change following text in Description,  
from

< The possibilities to define those conditions shall be the same as defined in [DOC\_OSEK\_COM] reception filter algorithms (see [DOC\_OSEK\_GLOS], Section 2.2.2).

to

> The possibilities to define those conditions shall be the same as defined in [DOC\_ISO\_COM] reception filter algorithms (see [DOC\_ISO\_COM], Section 3.2.3).

6)

[SRS\_Com\_02058]: Change following text in Supporting Material,  
from

< If no update bits are used, the AUTOSAR COM module provides the deadline monitoring defined in [DOC\_OSEK\_COM] (Section 2.5.1).

to

> If no update bits are used, the AUTOSAR COM module provides the deadline monitoring defined in [DOC\_ISO\_COM] (Section 3.5.1).

=====

SRS\_Os

in chapter 6.2.1 OSEK:

Replace "[STD\_OSEK\_OS] OSEK/VDX Operating System, Version 2.2.3, <http://www.osek-vdx.org/mirror/os223.pdf>"  
by "[STD\_OSEK\_OS] ISO 17356-3: OS"

Replace "[STD\_OSEK\_OIL] OSEK / VDX Implementation Language (OIL) V2.5, OSEK Implementation Language, <http://www.osek-vdx.org/mirror/oil25.pdf>"  
by "[STD\_OSEK\_OIL] ISO 17356-6: OIL"

Remove "[STD\_OSEK\_TTOS] OSEK/VDX Time-Triggered Operating System, Version 1.0, July 24, 2001, <http://www.osek-vdx.org/mirror/ttos10.pdf>"

Remove "[STD\_OSEK\_ORTI] OSEK/VDX ORTI (OSEK RunTime Interface) Part A Version 2.1.1, Part B Version 2.1, <http://www.osek-vdx.org/mirror/ORTI-A-211.pdf>"

in [SRS\_Os\_11002]: remove [STD\_OSEK\_TTOS] from Supporting Material

=====

SWS\_COM

1)

Set reference of [17] to ISO 17356-4: COM

Set reference of [18] to ISO 17356-6: OIL

2)

Search and replace textual references to OSEK COM 3.0.3 by ISO 17356-4: COM or [17] (if suitable)

and textual references to OSEK OIL by ISO 17356-6: OIL or [18] (if suitable)

=====

SWS\_StandardTypes:

In Section 3.2: replace

[7] OSEK/VDX Operating System, Version 2.2.2 [www.osek-vdx.org/os222.pdf](http://www.osek-vdx.org/os222.pdf)

by

[7] OSEK/VDX Operating System, ISO 17356-3: OS

=====

CP\_TR\_AutosarModelConstraints

see PS for the SWCT.

=====

=====

SRS\_NetworkManagement:

1) Change Section 7.2.1 name from "OSEK" to "ISO 17356-5"

Remove the description:

[5] [STD\_OSEK\_NM]

OSEK/VDX NM Specification (ISO 17356-5), Version 2.5.3

[STD\_OSEK\_NM] OSEK/VDX NM Specification (ISO 17356-5), V2.5.3

<http://www.osek-vdx.org/>

Change to :

OSEK/VDX NM Specification

[www.iso.org](http://www.iso.org)

====>

7.2.1 ISO 17356-5

[5] ISO 17356-5: NM Specification

[www.iso.org](http://www.iso.org)

2) Replace "OSEK-NM" to "ISO 17356-5: NM Specification" in [SRS\_Nm\_02515]

3) Replace "OSEK NM 2.5.3" to "ISO 17356-5: NM Specification" in [SRS\_Nm\_00142]

–Last change on issue 73564 comment 28–

**BW-C-Level:**

Application	Specification	Bus
1	1	1

## 1.7 Specification Item SRS\_Com\_02092

**Trace References:**

RS\_BRF\_01648, RS\_BRF\_01544

**Content:**

<b>Type:</b>	
<b>Description:</b>	At most one dynamic length signal shall be supported per I-PDU.
<b>Rationale:</b>	If only one signal per I-PDU is allowed then the dynamical length does not have to be coded into the I-PDU. The receiver will calculate the length of the signal from the length of the IPDU. This is the same approach as in [DOC_OSEKISO_GLOS].
<b>Applies to:</b>	
<b>Use Case:</b>	Sending textual messages e.g. SMS.
<b>Supporting Material:</b>	[DOC_OSEKISO_GLOS]

**RfCs affecting this spec item between releases 4.3.0 and 4.3.1:**

- RfC #73564: References to OSEK

**Problem description:**

The OSEK web site is not available.  
References need to be updated.

OSEK was pushed to ISO 17356

ISO 17356-2: introduction?

ISO 17356-3: OS

ISO 17356-4: COM

ISO 17356-5: NM (not sure we need to have such reference)

ISO 17356-6: OIL (not sure we need to have such reference)

I tried to select the documents where it would make sense to get a fix.

**Agreed solution:**

Replace references to

\* OSEK web site

\* the OSEK file name / version

with an ISO reference (with ISO version)

Check references to OSEK subsection (or avoid such references), to make sure that the section numbering in ISO is the same.

SWS OS

=====

Change references in chapter 3.2.1 to ISO. Remove [16], [18], [19] and [20]

Remove [22] from chapter 3.2.2

Remove "OSEKtime OS [16] and the HIS Protected OSEK [22] are immature specifications that contain concepts necessary for AUTOSAR and satisfy specific application domains. It is the purpose of this document to identify these needs and to recommend the use of parts (or all) of these specifications as appropriate." from chapter 4.1.

Change "OSEK OS" to new ISO reference ("OSEK OS[..]" - many occurrences, also in chapter 10)

Remove "So called hard and smooth synchronization from OSEKtime [16] are supported by this single unified concept in AUTOSAR OS. Smooth synchronization may be emulated by setting the small adjustment values on the final expiry point. Hard synchronization may be emulated by setting large adjustment values on the final expiry point." from 7.4.2.2.3

Remove "and provides the type of protection given by the OSEKtime Interrupt re-enable schedule event [16]." from 7.7.2.1

Remove chapter 12.3

SWCT:

=====

Replace reference to OSEK COM:

Fifteen filter algorithms formally described by the enumeration type DataFilter-TypeEnum in the meta-model are taken from OSEK COM 3.0.3 specification [18] that is referenced by the RTE specification [2].

by:

Fifteen filter algorithms formally described by the enumeration type DataFilter-TypeEnum in the meta-model are taken from the ISO 17356-4 specification [18] that is referenced by the RTE specification [2].

Replace:

[TPS\_SWCT\_01222] Applicability of DataFilter

This OSEK specification states that filtering is only used for messages that can be interpreted as C language unsigned integer types (characters, unsigned integers and enumerations).(RS\_SWCT\_03221)

by:

[TPS\_SWCT\_01222] Applicability of DataFilter

The ISO 17356-4 specification states that filtering is only used for messages that can be interpreted as C language unsigned integer types (characters, unsigned integers and enumerations).(RS\_SWCT\_03221)

Replace:

[constr\_1044] Applicability of DataFilter

According to the origin of DataFilter, i.e. OSEK COM 3.0.3 specification [18], DataFilters can only be applied to values with an integer base type.()

by:

[constr\_1044] Applicability of DataFilter

According to the origin of DataFilter, i.e. ISO 17356-4 specification [18], DataFilters can only be applied to values with an integer base type.()

Replace footnote to [constr\_1090]:

This constraint is valid at least in the OSEK standard where an extended task (that can have wait points) can only exist a single time in the context of the scheduler.

by:

This constraint is valid at least in the ISO 17356-3 standard where an extended task (that can have wait points) can only exist a single time in the context of the scheduler.

=====

Dem

=====

Replace the reference [17] Communication in Chapter 3.1 Input documents & related standards and norms Bibliography by : ISO 17356-3 in [www.iso.org/](http://www.iso.org/)

=====

Dcm

=====

Replace the reference [8]Communication in Chapter 3.1 Input documents & related standards and norms Bibliography by : ISO 17356-3 in [www.iso.org/](http://www.iso.org/)

=====

EXP\_VFB

Add an entry in chapter "13 References" related to ISO 17356-4:

ISO 17356-4

OSEK/VDX Communication (COM)

[www.iso.org](http://www.iso.org)

Change the references to "OSEK-COM V3.0.3" in Table 4.2 (4.3.2 From the

point of view of the receiver) and EXP\_Vfb\_00028 (4.3.4 Filtering between the sender and the receiver) to "ISO 17356-4". Link the references to the entry in chapter "13 References".

=====

SRS\_BSWGeneral

## 5 General Requirements on Basic Software

Replace "OSEK OS" by "ISO 17356-3"

### 5.2.3.4 Standard header Files

Replace in [SRS\_BSW\_00348]

Because E\_OK is already defined within OSEK OS, E\_OK has to be checked for being already defined:

```
/* for OSEK compliance this typedef has been added */
```

by

Because E\_OK is already defined within ISO 17356-3, E\_OK has to be checked for being already defined

```
/* for ISO 17356 compliance this typedef has been added */
```

## 6.2 Related Standards and Norms

Remove

### 6.2.1 OSEK

[STD\_OSEK\_OS] OSEK/VDX Operating System Specification

<http://www.osek-vdx.org>

Replace with ISO 17356-3 norm

=====

SRS\_COM

1)

Remove [DOC\_OSEK\_GLOS] and all its references, since a) AUTOSAR has an own wording and glossary b) the references to (old) OSEK-terms most probably create more confusion than guidance

2)

Set reference of [DOC\_OSEK\_COM] to: ISO 17356-4: COM  
 Move refernce to Chapter 7.3 ISO and remove Chapter 7.2 OSEK

3)

Remove secton references to [DOC\_OSEK\_COM], just keep the textual references  
 no numbers

4)

Search and replace textual references to OSEK COM 3.0.3 by ISO 17356-4: COM

5)

[SRS\_Com\_02084]: Change following text in Description,  
 from

< The possibilities to define those conditions shall be the same as defined in  
 [DOC\_OSEK\_COM] reception filter algorithms (see [DOC\_OSEK\_GLOS], Section  
 2.2.2).

to

> The possibilities to define those conditions shall be the same as defined in  
 [DOC\_ISO\_COM] reception filter algorithms (see [DOC\_ISO\_COM], Section 3.2.3).

6)

[SRS\_Com\_02058]: Change following text in Supporting Material,  
 from

< If no update bits are used, the AUTOSAR COM module provides the deadline  
 monitoring defined in [DOC\_OSEK\_COM] (Section 2.5.1).

to

> If no update bits are used, the AUTOSAR COM module provides the deadline  
 monitoring defined in [DOC\_ISO\_COM] (Section 3.5.1).

=====

SRS\_Os

in chapter 6.2.1 OSEK:

Replace "[STD\_OSEK\_OS] OSEK/VDX Operating System, Version 2.2.3,  
<http://www.osek-vdx.org/mirror/os223.pdf>

by "[STD\_OSEK\_OS] ISO 17356-3: OS"

Replace "[STD\_OSEK\_OIL] OSEK / VDX Implementation Language (OIL) V2.5,  
 OSEK Implementation Language, <http://www.osek-vdx.org/mirror/oil25.pdf>

by "[STD\_OSEK\_OIL] ISO 17356-6: OIL"

Remove "[STD\_OSEK\_TTOS] OSEK/VDX Time-Triggered Operating System,

Version 1.0, July 24, 2001, <http://www.osek-vdx.org/mirror/ttos10.pdf>"

Remove "[STD\_OSEK\_ORTI] OSEK/VDX ORTI (OSEK RunTime Interface) Part A Version 2.1.1, Part B Version 2.1, <http://www.osek-vdx.org/mirror/ORTI-A-211.pdf>"

in [SRS\_Os\_11002]: remove [STD\_OSEK\_TTOS] from Supporting Material

=====

SWS\_COM

1)

Set reference of [17] to ISO 17356-4: COM

Set reference of [18] to ISO 17356-6: OIL

2)

Search and replace textual references to OSEK COM 3.0.3 by ISO 17356-4: COM or [17] (if suitable)

and textual references to OSEK OIL by ISO 17356-6: OIL or [18] (if suitable)

=====

SWS\_StandardTypes:

In Section 3.2: replace

[7] OSEK/VDX Operating System, Version 2.2.2 [www.osek-vdx.org/os222.pdf](http://www.osek-vdx.org/os222.pdf)

by

[7] OSEK/VDX Operating System, ISO 17356-3: OS

=====

CP\_TR\_AutosarModelConstraints

see PS for the SWCT.

=====

=====

SRS\_NetworkManagement:

1) Change Section 7.2.1 name from "OSEK" to "ISO 17356-5"

Remove the description:

[5] [STD\_OSEK\_NM]

OSEK/VDX NM Specification (ISO 17356-5), Version 2.5.3

[STD\_OSEK\_NM] OSEK/VDX NM Specification (ISO 17356-5), V2.5.3

<http://www.osek-vdx.org/>

Change to :

OSEK/VDX NM Specification

www.iso.org

====>

7.2.1 ISO 17356-5

[5] ISO 17356-5: NM Specification

www.iso.org

2) Replace "OSEK-NM" to "ISO 17356-5: NM Specification" in [SRS\_Nm\_02515]

3) Replace "OSEK NM 2.5.3" to "ISO 17356-5: NM Specification" in [SRS\_Nm\_00142]

–Last change on issue 73564 comment 28–

**BW-C-Level:**

Application	Specification	Bus
1	1	1

## 1.8 Specification Item SRS\_Com\_02093

**Trace References:**

RS\_BRF\_01648, RS\_BRF\_01544

**Content:**

<b>Type:</b>	
<b>Description:</b>	The dynamic length signal must be placed last in the dynamic length I-PDU. This is the same approach as in [DOC_OSEKISO_GLOS].
<b>Rationale:</b>	Placing the signal last in the frame removes the need of coding the dynamical length into the IPDU. The receiving COM can directly derive the length of the dynamic length signal from the length of the IPDU
<b>Applies to:</b>	
<b>Use Case:</b>	see Rationale
<b>Supporting Material:</b>	[DOC_OSEKISO_GLOS]

**RfCs affecting this spec item between releases 4.3.0 and 4.3.1:**

- RfC #73564: References to OSEK

**Problem description:**

The OSEK web site is not available.  
References need to be updated.

OSEK was pushed to ISO 17356

ISO 17356-2: introduction?  
ISO 17356-3: OS  
ISO 17356-4: COM  
ISO 17356-5: NM (not sure we need to have such reference)  
ISO 17356-6: OIL (not sure we need to have such reference)

I tried to select the documents where it would make sense to get a fix.

**Agreed solution:**

Replace references to  
\* OSEK web site  
\* the OSEK file name / version  
with an ISO reference (with ISO version)

Check references to OSEK subsection (or avoid such references), to make sure that the section numbering in ISO is the same.

SWS OS

=====

Change references in chapter 3.2.1 to ISO. Remove [16], [18], [19] and [20]

Remove [22] from chapter 3.2.2

Remove "OSEKtime OS [16] and the HIS Protected OSEK [22] are immature specifications that contain concepts necessary for AUTOSAR and satisfy specific application domains. It is the purpose of this document to identify these needs and to recommend the use of parts (or all) of these specifications as appropriate." from chapter 4.1.

Change "OSEK OS" to new ISO reference ("OSEK OS[.]" - many occurrences, also in chapter 10)

Remove "So called hard and smooth synchronization from OSEKtime [16] are supported by this single unified concept in AUTOSAR OS. Smooth synchronization may be emulated by setting the small adjustment values on the final expiry point. Hard synchronization may be emulated by setting large adjustment values on the final expiry point." from 7.4.2.2.3

Remove "and provides the type of protection given by the OSEKtime Interrupt re-enable schedule event [16]." from 7.7.2.1

Remove chapter 12.3

SWCT:

=====

Replace reference to OSEK COM:

Fifteen filter algorithms formally described by the enumeration type `DataFilter-TypeEnum` in the meta-model are taken from OSEK COM 3.0.3 specification [18] that is referenced by the RTE specification [2].

by:

Fifteen filter algorithms formally described by the enumeration type `DataFilter-TypeEnum` in the meta-model are taken from the ISO 17356-4 specification [18] that is referenced by the RTE specification [2].

Replace:

[TPS\_SWCT\_01222] Applicability of `DataFilter`

This OSEK specification states that filtering is only used for messages that can be interpreted as C language unsigned integer types (characters, unsigned integers and enumerations).(RS\_SWCT\_03221)

by:

[TPS\_SWCT\_01222] Applicability of `DataFilter`

The ISO 17356-4 specification states that filtering is only used for messages that can be interpreted as C language unsigned integer types (characters, unsigned integers and enumerations).(RS\_SWCT\_03221)

Replace:

[constr\_1044] Applicability of `DataFilter`

According to the origin of `DataFilter`, i.e. OSEK COM 3.0.3 specification [18], `DataFilters` can only be applied to values with an integer base type.()

by:

[constr\_1044] Applicability of `DataFilter`

According to the origin of `DataFilter`, i.e. ISO 17356-4 specification [18], `DataFilters`

can only be applied to values with an integer base type.)

Replace footnote to [constr\_1090]:

This constraint is valid at least in the OSEK standard where an extended task (that can have wait points) can only exist a single time in the context of the scheduler.

by:

This constraint is valid at least in the ISO 17356-3 standard where an extended task (that can have wait points) can only exist a single time in the context of the scheduler.

=====

Dem

=====

Replace the reference [17] Communication in Chapter 3.1 Input documents & related standards and norms Bibliography by : ISO 17356-3 in [www.iso.org/](http://www.iso.org/)

=====

Dcm

=====

Replace the reference [8]Communication in Chapter 3.1 Input documents & related standards and norms Bibliography by : ISO 17356-3 in [www.iso.org/](http://www.iso.org/)

=====

EXP\_VFB

Add an entry in chapter "13 References" related to ISO 17356-4:

ISO 17356-4

OSEK/VDX Communication (COM)

[www.iso.org](http://www.iso.org)

Change the references to "OSEK-COM V3.0.3" in Table 4.2 (4.3.2 From the point of view of the receiver) and EXP\_Vfb\_00028 (4.3.4 Filtering between the sender and the receiver) to "ISO 17356-4". Link the references to the entry in chapter "13 References".

=====

SRS\_BSWGeneral

5 General Requirements on Basic Software

Replace "OSEK OS" by "ISO 17356-3"

#### 5.2.3.4 Standard header Files

Replace in [SRS\_BSW\_00348]

Because E\_OK is already defined within OSEK OS, E\_OK has to be checked for being already defined:

```
/* for OSEK compliance this typedef has been added */
```

by

Because E\_OK is already defined within ISO 17356-3, E\_OK has to be checked for being already defined

```
/* for ISO 17356 compliance this typedef has been added */
```

## 6.2 Related Standards and Norms

Remove

### 6.2.1 OSEK

[STD\_OSEK\_OS] OSEK/VDX Operating System Specification

<http://www.osek-vdx.org>

Replace with ISO 17356-3 norm

=====

SRS\_COM

1)

Remove [DOC\_OSEK\_GLOS] and all its references, since a) AUTOSAR has an own wording and glossary b) the references to (old) OSEK-terms most probably create more confusion than guidance

2)

Set reference of [DOC\_OSEK\_COM] to: ISO 17356-4: COM

Move refernce to Chapter 7.3 ISO and remove Chapter 7.2 OSEK

3)

Remove secton references to [DOC\_OSEK\_COM], just keep the textual references no numbers

4)

Search and replace textual references to OSEK COM 3.0.3 by ISO 17356-4: COM

5)

[SRS\_Com\_02084]: Change following text in Description,  
from

< The possibilities to define those conditions shall be the same as defined in [DOC\_OSEK\_COM] reception filter algorithms (see [DOC\_OSEK\_GLOS], Section 2.2.2).

to

> The possibilities to define those conditions shall be the same as defined in [DOC\_ISO\_COM] reception filter algorithms (see [DOC\_ISO\_COM], Section 3.2.3).

6)

[SRS\_Com\_02058]: Change following text in Supporting Material,  
from

< If no update bits are used, the AUTOSAR COM module provides the deadline monitoring defined in [DOC\_OSEK\_COM] (Section 2.5.1).

to

> If no update bits are used, the AUTOSAR COM module provides the deadline monitoring defined in [DOC\_ISO\_COM] (Section 3.5.1).

=====

SRS\_Os

in chapter 6.2.1 OSEK:

Replace "[STD\_OSEK\_OS] OSEK/VDX Operating System, Version 2.2.3, <http://www.osek-vdx.org/mirror/os223.pdf>"  
by "[STD\_OSEK\_OS] ISO 17356-3: OS"

Replace "[STD\_OSEK\_OIL] OSEK / VDX Implementation Language (OIL) V2.5, OSEK Implementation Language, <http://www.osek-vdx.org/mirror/oil25.pdf>"  
by "[STD\_OSEK\_OIL] ISO 17356-6: OIL"

Remove "[STD\_OSEK\_TTOS] OSEK/VDX Time-Triggered Operating System, Version 1.0, July 24, 2001, <http://www.osek-vdx.org/mirror/ttos10.pdf>"

Remove "[STD\_OSEK\_ORTI] OSEK/VDX ORTI (OSEK RunTime Interface) Part A Version 2.1.1, Part B Version 2.1, <http://www.osek-vdx.org/mirror/ORTI-A-211.pdf>"

in [SRS\_Os\_11002]: remove [STD\_OSEK\_TTOS] from Supporting Material

=====

SWS\_COM

1)

Set reference of [17] to ISO 17356-4: COM

Set reference of [18] to ISO 17356-6: OIL

2)

Search and replace textual references to OSEK COM 3.0.3 by ISO 17356-4: COM or [17] (if suitable)

and textual references to OSEK OIL by ISO 17356-6: OIL or [18] (if suitable)

=====

SWS\_StandardTypes:

In Section 3.2: replace

[7] OSEK/VDX Operating System, Version 2.2.2 [www.osek-vdx.org/os222.pdf](http://www.osek-vdx.org/os222.pdf)

by

[7] OSEK/VDX Operating System, ISO 17356-3: OS

=====

CP\_TR\_AutosarModelConstraints

see PS for the SWCT.

=====

=====

SRS\_NetworkManagement:

1) Change Section 7.2.1 name from "OSEK" to "ISO 17356-5"

Remove the description:

[5] [STD\_OSEK\_NM]

OSEK/VDX NM Specification (ISO 17356-5), Version 2.5.3

[STD\_OSEK\_NM] OSEK/VDX NM Specification (ISO 17356-5), V2.5.3

<http://www.osek-vdx.org/>

Change to :

OSEK/VDX NM Specification

[www.iso.org](http://www.iso.org)

==>

7.2.1 ISO 17356-5

[5] ISO 17356-5: NM Specification

[www.iso.org](http://www.iso.org)

2) Replace "OSEK-NM" to "ISO 17356-5: NM Specification" in [SRS\_Nm\_02515]

3) Replace "OSEK NM 2.5.3" to "ISO 17356-5: NM Specification" in

[SRS\_Nm\_00142]

–Last change on issue 73564 comment 28–

**BW-C-Level:**

Application	Specification	Bus
1	1	1

## 1.9 Specification Item SRS\_Com\_02094

**Trace References:**

RS\_BRF\_01648, RS\_BRF\_01544

**Content:**

<b>Type:</b>	
<b>Description:</b>	AUTOSAR COM and LargeDataCOM shall only support dynamic length signals of type UINT8[n].
<b>Rationale:</b>	It would be possible to also add support for bit length dynamical length signals, but this will introduce unnecessary complexity
<b>Applies to:</b>	
<b>Use Case:</b>	This restriction is made because actually there is no strong use-case that requires non byte-array data for large signals.
<b>Supporting Material:</b>	[DOC_OSEKISO_GLOS]

**RfCs affecting this spec item between releases 4.3.0 and 4.3.1:**

- RfC #73564: References to OSEK

**Problem description:**

The OSEK web site is not available.  
References need to be updated.

OSEK was pushed to ISO 17356

ISO 17356-2: introduction?

ISO 17356-3: OS

ISO 17356-4: COM

ISO 17356-5: NM (not sure we need to have such reference)

ISO 17356-6: OIL (not sure we need to have such reference)

I tried to select the documents where it would make sense to get a fix.

**Agreed solution:**

Replace references to

\* OSEK web site

\* the OSEK file name / version

with an ISO reference (with ISO version)

Check references to OSEK subsection (or avoid such references), to make sure that the section numbering in ISO is the same.

SWS OS

=====

Change references in chapter 3.2.1 to ISO. Remove [16], [18], [19] and [20]

Remove [22] from chapter 3.2.2

Remove "OSEKtime OS [16] and the HIS Protected OSEK [22] are immature specifications that contain concepts necessary for AUTOSAR and satisfy specific application domains. It is the purpose of this document to identify these needs and to recommend the use of parts (or all) of these specifications as appropriate." from chapter 4.1.

Change "OSEK OS" to new ISO reference ("OSEK OS[..]" - many occurrences, also in chapter 10)

Remove "So called hard and smooth synchronization from OSEKtime [16] are supported by this single unified concept in AUTOSAR OS. Smooth synchronization may be emulated by setting the small adjustment values on the final expiry point. Hard synchronization may be emulated by setting large adjustment values on the final expiry point." from 7.4.2.2.3

Remove "and provides the type of protection given by the OSEKtime Interrupt re-enable schedule event [16]." from 7.7.2.1

Remove chapter 12.3

SWCT:

=====

Replace reference to OSEK COM:

Fifteen filter algorithms formally described by the enumeration type `DataFilter-TypeEnum` in the meta-model are taken from OSEK COM 3.0.3 specification [18] that is referenced by the RTE specification [2].

by:

Fifteen filter algorithms formally described by the enumeration type `DataFilter-TypeEnum` in the meta-model are taken from the ISO 17356-4 specification [18] that is referenced by the RTE specification [2].

Replace:

[TPS\_SWCT\_01222] Applicability of `DataFilter`

This OSEK specification states that filtering is only used for messages that can be interpreted as C language unsigned integer types (characters, unsigned integers and enumerations).(RS\_SWCT\_03221)

by:

[TPS\_SWCT\_01222] Applicability of `DataFilter`

The ISO 17356-4 specification states that filtering is only used for messages that can be interpreted as C language unsigned integer types (characters, unsigned integers and enumerations).(RS\_SWCT\_03221)

Replace:

[constr\_1044] Applicability of `DataFilter`

According to the origin of `DataFilter`, i.e. OSEK COM 3.0.3 specification [18], `DataFilters` can only be applied to values with an integer base type.()

by:

[constr\_1044] Applicability of `DataFilter`

According to the origin of `DataFilter`, i.e. ISO 17356-4 specification [18], `DataFilters` can only be applied to values with an integer base type.()

Replace footnote to [constr\_1090]:

This constraint is valid at least in the OSEK standard where an extended task (that can have wait points) can only exist a single time in the context of the scheduler.

by:

This constraint is valid at least in the ISO 17356-3 standard where an extended task (that can have wait points) can only exist a single time in the context of the scheduler.

=====

Dem

=====

Replace the reference [17] Communication in Chapter 3.1 Input documents & related standards and norms Bibliography by : ISO 17356-3 in [www.iso.org/](http://www.iso.org/)

=====

Dcm

=====

Replace the reference [8]Communication in Chapter 3.1 Input documents & related standards and norms Bibliography by : ISO 17356-3 in [www.iso.org/](http://www.iso.org/)

=====

EXP\_VFB

Add an entry in chapter "13 References" related to ISO 17356-4:

ISO 17356-4

OSEK/VDX Communication (COM)

[www.iso.org](http://www.iso.org)

Change the references to "OSEK-COM V3.0.3" in Table 4.2 (4.3.2 From the point of view of the receiver) and EXP\_Vfb\_00028 (4.3.4 Filtering between the sender and the receiver) to "ISO 17356-4". Link the references to the entry in chapter "13 References".

=====

SRS\_BSWGeneral

5 General Requirements on Basic Software

Replace "OSEK OS" by "ISO 17356-3"

5.2.3.4 Standard header Files

Replace in [SRS\_BSW\_00348]

Because E\_OK is already defined within OSEK OS, E\_OK has to be checked for being already defined:

/\* for OSEK compliance this typedef has been added \*/

by

Because E\_OK is already defined within ISO 17356-3, E\_OK has to be checked for being already defined

/\* for ISO 17356 compliance this typedef has been added \*/

## 6.2 Related Standards and Norms

Remove

### 6.2.1 OSEK

[STD\_OSEK\_OS] OSEK/VDX Operating System Specification

<http://www.osek-vdx.org>

Replace with ISO 17356-3 norm

=====

SRS\_COM

1)

Remove [DOC\_OSEK\_GLOS] and all its references, since a) AUTOSAR has an own wording and glossary b) the references to (old) OSEK-terms most probably create more confusion than guidance

2)

Set reference of [DOC\_OSEK\_COM] to: ISO 17356-4: COM

Move refernce to Chapter 7.3 ISO and remove Chapter 7.2 OSEK

3)

Remove secton references to [DOC\_OSEK\_COM], just keep the textual references no numbers

4)

Search and replace textual references to OSEK COM 3.0.3 by ISO 17356-4: COM

5)

[SRS\_Com\_02084]: Change following text in Description,  
from

< The possibilities to define those conditions shall be the same as defined in [DOC\_OSEK\_COM] reception filter algorithms (see [DOC\_OSEK\_GLOS], Section 2.2.2).

to

> The possibilities to define those conditions shall be the same as defined in [DOC\_ISO\_COM] reception filter algorithms (see [DOC\_ISO\_COM], Section 3.2.3).

6)

[SRS\_Com\_02058]: Change following text in Supporting Material,  
from

< If no update bits are used, the AUTOSAR COM module provides the deadline monitoring defined in [DOC\_OSEK\_COM] (Section 2.5.1).

to

> If no update bits are used, the AUTOSAR COM module provides the deadline monitoring defined in [DOC\_ISO\_COM] (Section 3.5.1).

=====

SRS\_Os

in chapter 6.2.1 OSEK:

Replace "[STD\_OSEK\_OS] OSEK/VDX Operating System, Version 2.2.3, <http://www.osek-vdx.org/mirror/os223.pdf>"

by "[STD\_OSEK\_OS] ISO 17356-3: OS"

Replace "[STD\_OSEK\_OIL] OSEK / VDX Implementation Language (OIL) V2.5, OSEK Implementation Language, <http://www.osek-vdx.org/mirror/oil25.pdf>"

by "[STD\_OSEK\_OIL] ISO 17356-6: OIL"

Remove "[STD\_OSEK\_TTOS] OSEK/VDX Time-Triggered Operating System, Version 1.0, July 24, 2001, <http://www.osek-vdx.org/mirror/ttos10.pdf>"

Remove "[STD\_OSEK\_ORTI] OSEK/VDX ORTI (OSEK RunTime Interface) Part A Version 2.1.1, Part B Version 2.1, <http://www.osek-vdx.org/mirror/ORTI-A-211.pdf>"

in [SRS\_Os\_11002]: remove [STD\_OSEK\_TTOS] from Supporting Material

=====

SWS\_COM

1)

Set reference of [17] to ISO 17356-4: COM

Set reference of [18] to ISO 17356-6: OIL

2)

Search and replace textual references to OSEK COM 3.0.3 by ISO 17356-4: COM or [17] (if suitable)

and textual references to OSEK OIL by ISO 17356-6: OIL or [18] (if suitable)

=====

SWS\_StandardTypes:

In Section 3.2: replace

[7] OSEK/VDX Operating System, Version 2.2.2 [www.osek-vdx.org/os222.pdf](http://www.osek-vdx.org/os222.pdf)  
by

[7] OSEK/VDX Operating System, ISO 17356-3: OS

=====

CP\_TR\_AutosarModelConstraints

see PS for the SWCT.

=====

=====

SRS\_NetworkManagement:

1) Change Section 7.2.1 name from "OSEK" to "ISO 17356-5"

Remove the description:

[5] [STD\_OSEK\_NM]

OSEK/VDX NM Specification (ISO 17356-5), Version 2.5.3

[STD\_OSEK\_NM] OSEK/VDX NM Specification (ISO 17356-5), V2.5.3

<http://www.osek-vdx.org/>

Change to :

OSEK/VDX NM Specification

[www.iso.org](http://www.iso.org)

==>

7.2.1 ISO 17356-5

[5] ISO 17356-5: NM Specification

[www.iso.org](http://www.iso.org)

2) Replace "OSEK-NM" to "ISO 17356-5: NM Specification" in [SRS\_Nm\_02515]

3) Replace "OSEK NM 2.5.3" to "ISO 17356-5: NM Specification" in  
[SRS\_Nm\_00142]

–Last change on issue 73564 comment 28–

**BW-C-Level:**

Application	Specification	Bus
1	1	1