

Requirements for the SCF Module EBU-TT2EBU-TT-D

Contents

Disclaimer.....	3
Structure of the requirements.....	4
Requirements for Sub-module EBU-TT2EBU-TT-D.....	5
requirement-337: offsetInSeconds parameter.....	5
requirement-338: xml:space attribute mapping.....	5
requirement-339: ttp:timeBase attribute mapping.....	5
requirement-340: ttp:cellResolution attribute mapping.....	6
requirement-341: xml:lang attribute mapping.....	6
requirement-343: ebuttm:documentCopyright element mapping.....	6
requirement-344: Elements not mapped.....	7
requirement-345: Schema conformity.....	7
requirement-346: Copied elements.....	8
requirement-347: ebuttm:authoredFrameRate element mapping.....	8
requirement-348: ebuttm:authoredFrameRateMultiplier element mapping.....	8
requirement-349: offsetInFrames Parameter.....	9
requirement-351: tt:style element mapping - tts:background.....	9
requirement-352: tt:style element mapping - tts:fontSize.....	10
requirement-353: tt:style element mapping - tts:lineHeight.....	10
requirement-354: tt:style element mapping - attributes.....	10
requirement-357: tt:region element mapping - tts:extent.....	11
requirement-358: tt:region element mapping - tts:origin.....	11
requirement-359: tt:region element mapping - tts:padding.....	12
requirement-360: tt:region element mapping - attributes.....	12
requirement-364: tt:div element mapping - attributes.....	12
requirement-367: tt:p element mapping - attributes.....	13
requirement-368: tt:p element mapping - begin.....	13
requirement-369: tt:p element mapping - end.....	14
requirement-371: tt:span element mapping - begin and end attributes.....	14
requirement-372: tt:span element mapping - attributes.....	14
requirement-373: ebuttm:conformsToStandard element.....	15
requirement-450: tt:region element mapping - tts:extent in percentage.....	15
requirement-451: tt:region element mapping - tts:origin in percentage.....	15

Disclaimer

Copyright 2016 Institut für Rundfunktechnik GmbH, Munich, Germany

Licensed under the Apache License, Version 2.0 (the "License"); you may not use this file except in compliance with the License.

You may obtain a copy of the License at <http://www.apache.org/licenses/LICENSE-2.0>

Unless required by applicable law or agreed to in writing, the subject work distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.

See the License for the specific language governing permissions and limitations under the License.

Structure of the requirements

The structure of the requirements are as follows:

- **title:** a short title with the internal id of the requirement in brackets
- **description:** the requirement text - the specified text will be taken to test the implementation
- **area:** apart from more general requirements the requirements are categorized by modules (e.g. STLXML2EBUTT oder EBUTT2EBUTTD)
- **requirement review status:** this is the internal review status of the requirement itself (esp. of the requirement text)
- **status implementation:** this status indicates if the requirement is already met by the implementation the status codes are:
 - *outstanding* - the corresponding code has not been written yet or the requirement has been implemented but there are no test files for it
 - *waitingReview* - the code to implement the requirement has been written but with exception of the developer nobody has reviewed the code yet
 - *underReview* - the corresponding code is underReview and has not been accepted by the first reviewer yet
 - *reviewed* - the corresponding code has been reviewed and accepted by the first reviewer
 - *Priority* according to MoSCoW (the priority that is the base to decide when the feature will be implemented: m - MUST, S-Should, C-could, W-Won't. For more information see http://en.wikipedia.org/wiki/MoSCoW_method))

Requirements for Sub-module EBU-TT2EBU-TT-D

requirement-337: offsetInSeconds parameter

Description

There is a parameter called "offsetInSeconds", that describes if an offset shall be used for the time codes or not. The value of the parameter is either "0" if no offset shall be used, or the value of the desired offset in seconds. If the parameter has a value different than 0, this offset is subtracted from all begin and end attributes' values. If the result is a negative time expression the processing is aborted.

Area

EBU-TT2EBU-TT-D

Requirement Review Status

accepted

Status Implementation

accepted

Priority according to MoSCoW

m

requirement-338: xml:space attribute mapping

Description

The EBU-TT-D file created from an EBU-TT file has its root element's xml:space attribute set to the same value as the EBU-TT file's root element's xml:space attribute. If the xml:space attribute is not set in the EBU-TT file, the EBU-TT-D file has its xml:space attribute set to "default".

Area

EBU-TT2EBU-TT-D

Requirement Review Status

accepted

Status Implementation

accepted

Priority according to MoSCoW

s

requirement-339: ttp:timeBase attribute mapping

Description

The EBU-TT-D file's tt:tt root element has exactly one ttp:timeBase attribute with a value of type xs:string set to "media" according to EBU Tech 3380 (p.13).

Area

EBU-TT2EBU-TT-D

Requirement Review Status

accepted

Status Implementation

accepted

Priority according to MoSCoW

m

requirement-340: ttp:cellResolution attribute mapping

Description

The EBU-TT-D file created from an EBU-TT file has its root element's ttp:cellResolution attribute set to the same value as the EBU-TT file's root element's ttp:cellResolution attribute. If the ttp:cellResolution attribute is not set in the EBU-TT file, the EBU-TT-D file has its ttp:cellResolution attribute set to "50 30".

Area

EBU-TT2EBU-TT-D

Requirement Review Status

accepted

Status Implementation

accepted

Priority according to MoSCoW

m

requirement-341: xml:lang attribute mapping

Description

The EBU-TT-D file created from an EBU-TT file has its root element's xml:lang attribute set to the same value as the EBU-TT file's root element's xml:lang attribute.

Area

EBU-TT2EBU-TT-D

Requirement Review Status

accepted

Status Implementation

accepted

Priority according to MoSCoW

m

requirement-343: ebttm:documentCopyright element mapping

Description

If the EBU-TT file's tt:head element has a ebuttm:documentCopyright child element, the EBU-TT-D file's tt:head element has a ttm:copyright child element with its value taken from the EBU-TT file's ebuttm:documentCopyright element. Otherwise the element is not mapped.

Area

EBU-TT2EBU-TT-D

Requirement Review Status

accepted

Status Implementation

outstanding

Priority according to MoSCoW

s

requirement-344: Elements not mapped

Description

The following elements are not mapped from EBU-TT to EBU-TT-D according to EBU Tech 3380 (p.16): ebuttm:documentReadingSpeed, ebuttm:binaryData, ebuttm:documentOriginalProgrammeTitle, ebuttm:documentOriginalEpisodeTitle, ebuttm:documentTranslatedProgrammeTitle, ebuttm:documentTranslatedEpisodeTitle, ebuttm:documentTotalNumberOfSubtitles, ebuttm:documentMaximumNumberOfDisplayableCharacterInAnyRow, ebuttm:documentSubtitleListReferenceCode, ebuttm:documentStartOfProgramme.

Area

EBU-TT2EBU-TT-D

Requirement Review Status

accepted

Status Implementation

accepted

Priority according to MoSCoW

s

requirement-345: Schema conformity

Description

The EBU-TT-D file conforms to the EBU-TT-D XSD.

Area

EBU-TT2EBU-TT-D

Requirement Review Status

accepted

Status Implementation

outstanding

Priority according to MoSCoW

m

requirement-346: Copied elements

Description

The following elements, if existent, are copied from EBU-TT to EBU-TT-D with all their respective attributes and content according to EBU Tech 3380 (p.16). They are placed as children of the ebttm:documentMetadata element: ebttm:documentIdentifier, ebttm:documentOriginatingSystem, ebttm:documentTargetAspectRatio, ebttm:documentTargetActiveFormatDescriptor, ebttm:documentIntendedTargetBarData, ebttm:documentIntendedTargetFormat, ebttm:documentTranslatorsName, ebttm:documentTranslatorsContactDetails, ebttm:documentCountryOfOrigin, ebttm:documentPublisher, ebttm:documentEditorsName, ebttm:documentEditorsContactDetails, ebttm:documentUserDefinedArea, ttm:agent.

Area

EBU-TT2EBU-TT-D

Requirement Review Status

inDiscussion

Status Implementation

outstanding

Priority according to MoSCoW

s

requirement-347: ebttm:authoredFrameRate element mapping

Description

The EBU-TT-D file's ebttm:authoredFrameRate element is mapped from the EBU-TT file's tt:tt element's ttp:frameRate attribute.

Area

EBU-TT2EBU-TT-D

Requirement Review Status

inDiscussion

Status Implementation

outstanding

Priority according to MoSCoW

w

requirement-348: ebttm:authoredFrameRateMultiplier element mapping

Description

If available the EBU-TT-D file's ebttm:authoredFrameRateMultiplier element is taken from the EBU-TT file's tt:tt element's ttp:frameRateMultiplier attribute. Otherwise this metadata element is not set.

Area

EBU-TT2EBU-TT-D

Requirement Review Status

inDiscussion

Status Implementation

outstanding

Priority according to MoSCoW

w

requirement-349: offsetInFrames Parameter

Description

There is a parameter called "offsetInFrames", that describes if an offset shall be used. The value of the parameter is either "0" if no offset shall be used, or the value of the desired offset in the format "HH:MM:SS:FF" (where H = hours, M = minutes, S = seconds and F = frames). If the parameter has a value different than 0, this offset is subtracted from all begin and end attributes' values. If the result is a negative time expression the processing is aborted.

Area

EBU-TT2EBU-TT-D

Requirement Review Status

accepted

Status Implementation

accepted

Priority according to MoSCoW

m

requirement-351: tt:style element mapping - tts:background

Description

The EBU-TT file's tt:style elements' tts:color attribute and tts:background attribute of type ebuttdt:colorType (only hex notation and named colors) are mapped to the EBU-TT-D file's tt:style elements' tts:color attribute and tts:background attribute of type ebuttdt:distributionColorType according to the datatype definition in EBU Tech 3380 4.2 (p.34). Named colors are mapped according to the table in TTML1 8.3.10.

Area

EBU-TT2EBU-TT-D

Requirement Review Status

accepted

Status Implementation

accepted

Priority according to MoSCoW

m

requirement-352: tt:style element mapping - tts:fontSize

Description

The EBU-TT file's tt:style elements' tts:fontSize attribute of type ebuttdt:fontSizeType is mapped to the EBU-TT-D file's tt:style elements' tts:fontSize attribute of type ebuttdt:distributionFontSizeType according to the datatype definition in EBU Tech 3380 4.5 (p.35). Thus the values of this type are non-negative numbers of type xs:decimal appended by the percentage sign "%". If the EBU-TT file's tt:style element's tts:fontSize attribute is set to '1c 1c', the EBU-TT-D file's tt:style element's tts:fontSize attribute is mapped to '100%'. If it is set to '1c 2c', it gets mapped to '200%'. Other values are currently not supported.

Area

EBU-TT2EBU-TT-D

Requirement Review Status

accepted

Status Implementation

accepted

Priority according to MoSCoW

m

requirement-353: tt:style element mapping - tts:lineHeight

Description

The EBU-TT file's tt:style elements' tts:lineHeight attribute of type ebuttdt:lineHeightType is mapped to the EBU-TT-D file's tt:style elements' tts:lineHeight attribute of type ebuttdt:distributionLineHeightType according to the datatype definition in EBU Tech 3380 4.8 (p.35). Thus the type of this value is the string "normal" or a non-negative number of type xs:decimal appended by the percentage sign "%". If the value from the EBU-TT file matches this type it can be copied, otherwise the value needs to be transformed into a percentage representation of the value.

Area

EBU-TT2EBU-TT-D

Requirement Review Status

inDiscussion

Status Implementation

outstanding

Priority according to MoSCoW

m

requirement-354: tt:style element mapping - attributes

Description

The EBU-TT-D file's tt:style elements are mapped to the EBU-TT file's tt:style elements with regard of the supported style attributes according to EBU Tech 3380 (p.18 - p.22). The following attributes can be copied from the EBU-TT file: xml:id, tts:direction, tts:fontFamily, tts:textAlign, tts:fontStyle, tts:fontWeight, tts:textDecoration, tts:unicodeBidi, ebutts:multiRowAlign.

Area

EBU-TT2EBU-TT-D

Requirement Review Status

accepted

Status Implementation

accepted

Priority according to MoSCoW

m

requirement-357: tt:region element mapping - tts:extent

Description

The EBU-TT-D file's tt:region elements' tts:extent attribute of type ebuttdt:distributionExtentType is mapped to the EBU-TT file's tt:region elements' tts:extent attribute of type ebuttdt:extentType according to the datatype definition in EBU Tech 3380 4.3 (p.34). Thus the values of this type are non-negative numbers of type xs:decimal appended by the percentage sign "%" with the first value expressing the width and the second value expressing the height. If the EBU-TT file uses % values the values are copied, if the EBU-TT file uses a cell or pixel metric the percentage values are calculated so that proportional relationship to height and width of the root container are kept.

Area

EBU-TT2EBU-TT-D

Requirement Review Status

accepted

Status Implementation

outstanding

Priority according to MoSCoW

m

requirement-358: tt:region element mapping - tts:origin

Description

The EBU-TT-D file's tt:region elements' tts:origin attribute of type ebuttdt:distributionOriginType is mapped to the EBU-TT file's tt:region elements' tts:origin attribute of type ebuttdt:originType according to the datatype definition in EBU Tech 3380 4.3 (p.34). Thus the values of this type are non-negative numbers of type xs:decimal appended by the percentage sign "%" with the first value expressing the offset in x-direction and the second value expressing the offset in y-direction. If the EBU-TT file uses % values the values are copied, if the EBU-TT file uses a cell or pixel metric the percentage values are calculated so that proportional relationship to height and width of the root container are kept.

Area

EBU-TT2EBU-TT-D

Requirement Review Status

accepted

Status Implementation

outstanding

Priority according to MoSCoW

m

requirement-359: tt:region element mapping - tts:padding

Description

The EBU-TT-D file's tt:region elements' tts:padding attribute of type ebuttdt:distributionPaddingType is mapped to the EBU-TT file's tt:region elements' tts:padding attribute of type ebuttdt:PaddingType according to the datatype definition in EBU Tech 3380 4.3 (p.34). Thus the values of this type are non-negative numbers of type xs:decimal appended by the percentage sign "%". Depending on the amount of values given within the attribute, the mapping is done according to the meaning described in EBU Tech 3380 4.10 (p.36). If the EBU-TT file uses % values the values are copied, if the EBU-TT file uses a cell metric the percentage values are calculated so that proportional relationship to height and width of the root container are kept. The "px" metric are mapped by default to "80% 80%" until this metric is supported in this conversion as well.

Area

EBU-TT2EBU-TT-D

Requirement Review Status

accepted

Status Implementation

outstanding

Priority according to MoSCoW

m

requirement-360: tt:region element mapping - attributes

Description

The EBU-TT-D file's tt:region elements are taken from the EBU-TT file's tt:region elements with regard of the supported style attributes according to EBU Tech 3380 (p.23 - p.26). The following attributes can be copied: xml:id, style, tts:displayAlign, tts:writingMode. The mapping of all other attributes is handled in separate requirements.

Area

EBU-TT2EBU-TT-D

Requirement Review Status

accepted

Status Implementation

accepted

Priority according to MoSCoW

m

requirement-364: tt:div element mapping - attributes

Description

The EBU-TT-D file's tt:div elements' attributes are copied from the EBU-TT file's tt:div elements' attributes with regard of the supported attributes according to EBU Tech 3380 (p.28 - p.29). The following attributes can be copied: xml:id, region, style.

Area

EBU-TT2EBU-TT-D

Requirement Review Status

accepted

Status Implementation

accepted

Priority according to MoSCoW

m

requirement-367: tt:p element mapping - attributes

Description

The EBU-TT-D file's tt:p elements' attributes are copied from the EBU-TT file's tt:p elements' attributes with regard of the supported attributes according to EBU Tech 3380 (p.29 - p.32). The following attributes can be copied: xml:id, xml:space, xml:lang, region, style, ttm:role, ttm:agent.

Area

EBU-TT2EBU-TT-D

Requirement Review Status

accepted

Status Implementation

accepted

Priority according to MoSCoW

m

requirement-368: tt:p element mapping - begin

Description

The EBU-TT-D file's tt:p elements' begin attributes are taken from the EBU-TT file's tt:p elements' begin attributes. The format of the EBU-TT-D file's tt:p element's begin attributes has the form hh:mm:ss.ms (hh = hours, mm = minutes, ss = seconds, ms = milliseconds / fraction). If the timebase of the EBU-TT file is SMPTE the value is calculated according to the specified frameRate, frameRateMultiplier and DropFrame. If the timecode of in the source document does not conform to the expected value (taking into account the framerate) transformation exits with an error message.

Area

EBU-TT2EBU-TT-D

Requirement Review Status

accepted

Status Implementation

accepted

Priority according to MoSCoW

m

requirement-369: tt:p element mapping - end

Description

The EBU-TT-D file's tt:p elements' end attributes are taken from the EBU-TT file's tt:p elements' end attributes. The format of the EBU-TT-D file's tt:p element's begin attributes has the form hh:mm:ss.ms (hh = hours, mm = minutes, ss = seconds, ms = milliseconds / fraction). If the timebase of the EBU-TT file is SMPTE the value is calculated according to the specified frameRate, frameRateMultiplier and DropFrame. If the timecode of in the source document does not conform to the expected value (taking into account the framerate) transformation exits with an error message.

Area

EBU-TT2EBU-TT-D

Requirement Review Status

accepted

Status Implementation

accepted

Priority according to MoSCoW

m

requirement-371: tt:span element mapping - begin and end attributes

Description

An EBU-TT file's tt:span elements' begin and end attribute of either type ebuttdt:smpTETimingType or type ebuttdt:mediaTimingType are mapped to the created EBU-TT-D file's tt:span elements' begin and end attribute of type ebuttdt:distributionMediaTimingType according to the datatype definition in EBU Tech 3380 4.12 (p.36) taking into account frameRate, frameRateMultiplier and dropMode when the timebase is "smpTE".

Area

EBU-TT2EBU-TT-D

Requirement Review Status

accepted

Status Implementation

outstanding

Priority according to MoSCoW

m

requirement-372: tt:span element mapping - attributes

Description

An EBU-TT-D file's tt:span elements' attributes are copied from the EBU-TT file's tt:span elements' attributes with regard of the supported attributes according to EBU Tech 3380 (p.32 - p.34). The following attributes can be copied: xml:id, xml:space, xml:lang, style, ttm:role, ttm:agent.

Area

EBU-TT2EBU-TT-D

Requirement Review Status

accepted

Status Implementation

accepted

Priority according to MoSCoW

m

requirement-373: ebuttm:conformsToStandard element

Description

The conformance to the EBU Spec 3380 is signalled through the addition of the ebuttm:conformsToStandard element as the first child of the ebuttm:documentMetadata element.

Area

EBU-TT2EBU-TT-D

Requirement Review Status

accepted

Status Implementation

accepted

Priority according to MoSCoW

m

requirement-450: tt:region element mapping - tts:extent in percentage

Description

When the attribute "tts:extent" from the EBU-TT file's element "tt:region" is represented in percentage values, it is mapped to the attribute "tts:extent" of the element "tt:region" in the target EBU-TT-D file. The value can be copied without further transformation.

Area

EBU-TT2EBU-TT-D

Requirement Review Status

accepted

Status Implementation

accepted

Priority according to MoSCoW

m

requirement-451: tt:region element mapping - tts:origin in percentage

Description

When the attribute "tts:origin" from the EBU-TT file's element "tt:region" is represented in percentage values, it is mapped to the attribute "tts:origin" of the element "tt:region" in the target EBU-TT-D file. The value can be copied without further transformation.

Area

EBU-TT2EBU-TT-D

Requirement Review Status

accepted

Status Implementation

accepted

Priority according to MoSCoW

m