Schema documentation for icp_v1_1.xsd

march 7, 2014

Table of Contents

Namespace: "kb.se/ns/image_capture_performance"

Schema(s)

Main schema icp_v1_1.xsd

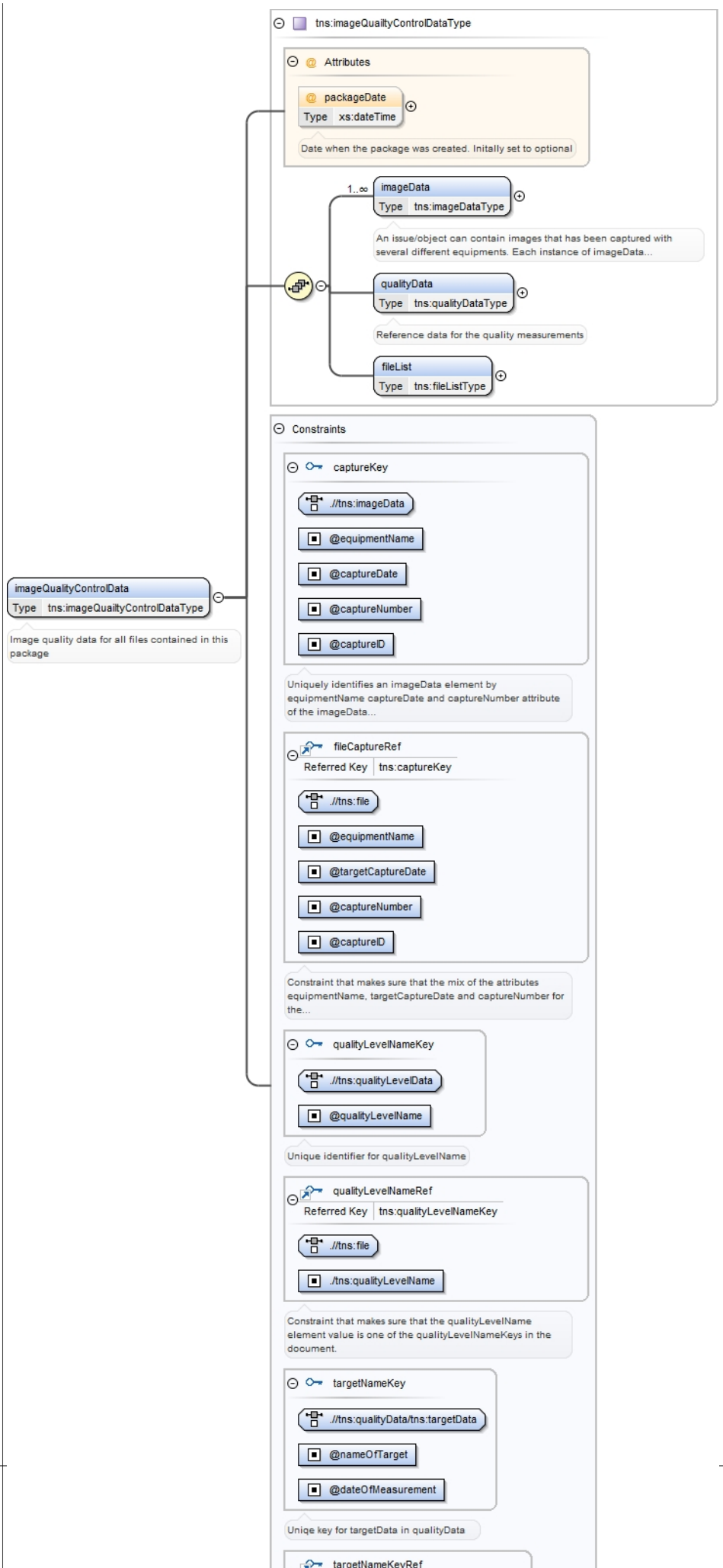
Namespace	kb.se/ns/image_capture_performance
Annotations	This is the xml schema for image capture performance data, developed by The National Library of Sweden, used for inhouse digitization projects. Reference to the latest version of xml schema: schemaLocation="http://www.kb.se/namespace/image_capture_performance/icp_v1.xsd" Recommended prefix for kb.se/ns/image_capture_performance: icp Current version: 1.1 (2014-03-04) Version history: In version 1.1 the following changes has been made: Elements deltaL, deltaC, meanDeltaL and meanDeltaC are made optional (set to minOccurs="0"); correction of misspelled dateOfIlluminationMeasurement
Properties	attribute form default: unqualified element form default: qualified version: 1.1

Element(s)

Element tns:imageQualityControlData

Namespace	kb.se/ns/image_capture_performance
Annotations	Image quality data for all files contained in this package

Diagram


tns:imageQuailtyControlDataType
Attributes
packageDate
Type xs:dateTime
Date when the package was created. Initally set to optional
1..∞
imageData
Type tns:imageDataType
An issue/object can contain images that has been captured with several different equipments. Each instance of imageData...
qualityData
Type tns:qualityDataType
Reference data for the quality measurements
fileList
Type tns:fileListType
Constraints
captureKey
.//tns:imageData
@equipmentName
@captureDate
@captureNumber
@captureID
Uniquely identifies an imageData element by equipmentName captureDate and captureNumber attribute of the imageData...
fileCaptureRef
Referred Key tns:captureKey
.//tns:file
@equipmentName
@targetCaptureDate
@captureNumber
@captureID
Constraint that makes sure that the mix of the attributes equipmentName, targetCaptureDate and captureNumber for the...
qualityLevelNameKey
.//tns:qualityLevelData
@qualityLevelName
Unique identifier for qualityLevelName
qualityLevelNameRef
Referred Key tns:qualityLevelNameKey
.//tns:file
./tns:qualityLevelName
Constraint that makes sure that the qualityLevelName element value is one of the qualityLevelNameKeys in the document.
targetNameKey
.//tns:qualityData/tns:targetData
@nameOfTarget
@dateOfMeasurement
Uniqe key for targetData in qualityData
imageQualityControlData
Type tns:imageQuailtyControlDataType
Image quality data for all files contained in this package

Type	tns:imageQuailtyControlDataType
Properties	content: complex
Model	tns:imageData+ , tns:qualityData , tns:fileList
Children	tns:fileList, tns:imageData, tns:qualityData

Instance

```
<tns:imageQualityControlData packageDate="" xmlns:tns="kb.se/ns/image_capture_performance">
  <tns:imageData captureDate="" captureID="" captureNumber="" equipmentName="">{1,unbounded}</
tns:imageData>
  <tns:qualityData>{1,1}</tns:qualityData>
  <tns:fileList>{1,1}</tns:fileList>
</tns:imageQualityControlData>
```

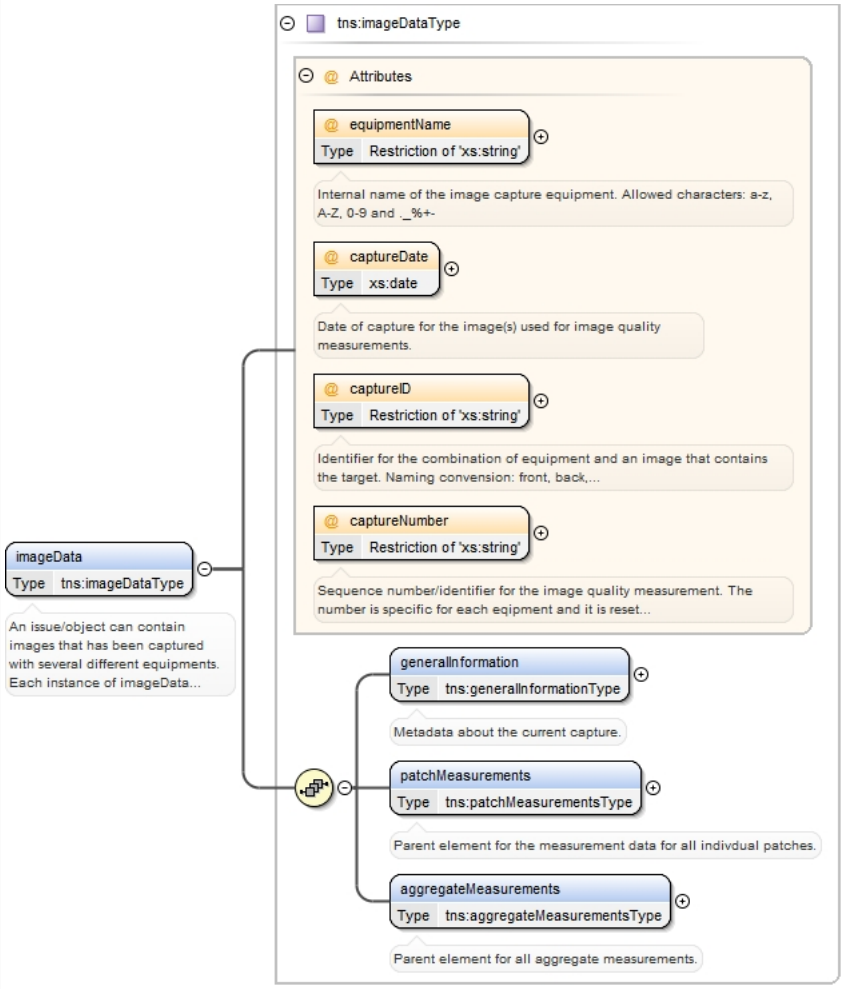
Attributes

QName	Type	Use	
packageDate	xs:dateTime	optional	
	Date when the package was created. Initally set to optional		

Source

```
<xs:element name="imageQualityControlData" type="tns:imageQuailtyControlDataType">
  <xs:annotation>
    <xs:documentation xml:lang="eng">Image quality data for all files contained in this package</
xs:documentation>
  </xs:annotation>
  <xs:key name="captureKey">
    <xs:annotation>
      <xs:documentation xml:lang="eng">Uniquely identifies an imageData element by equipmentName
 captureDate and captureNumber attribute of the imageData element</xs:documentation>
    </xs:annotation>
    <xs:selector xpath=".//tns:imageData"/>
    <xs:field xpath="@equipmentName"/>
    <xs:field xpath="@captureDate"/>
    <xs:field xpath="@captureNumber"/>
    <xs:field xpath="@captureID"/>
  </xs:key>
  <xs:keyref name="fileCaptureRef" refer="tns:captureKey">
    <xs:annotation>
      <xs:documentation xml:lang="eng">Constraint that makes sure that the mix of the attributes
 equipmentName, targetCaptureDate and captureNumber for the file element matches a present
 captureKey in the document</xs:documentation>
    </xs:annotation>
    <xs:selector xpath=".//tns:file"/>
    <xs:field xpath="@equipmentName"/>
    <xs:field xpath="@targetCaptureDate"/>
    <xs:field xpath="@captureNumber"/>
    <xs:field xpath="@captureID"/>
  </xs:keyref>
  <xs:key name="qualityLevelNameKey">
    <xs:annotation>
      <xs:documentation xml:lang="eng">Unique identifier for qualityLevelName</xs:documentation>
    </xs:annotation>
    <xs:selector xpath=".//tns:qualityLevelData"/>
    <xs:field xpath="@qualityLevelName"/>
  </xs:key>
  <xs:keyref name="qualityLevelNameRef" refer="tns:qualityLevelNameKey">
    <xs:annotation>
      <xs:documentation xml:lang="eng">Constraint that makes sure that the qualityLevelName element
 value is one of the qualityLevelNameKeys in the document.</xs:documentation>
    </xs:annotation>
    <xs:selector xpath=".//tns:file"/>
    <xs:field xpath="./tns:qualityLevelName"/>
  </xs:keyref>
  <xs:key name="targetNameKey">
    <xs:annotation>
      <xs:documentation xml:lang="eng">Uniqe key for targetData in qualityData</xs:documentation>
    </xs:annotation>
    <xs:selector xpath=".//tns:qualityData/tns:targetData"/>
    <xs:field xpath="@nameOfTarget"/>
    <xs:field xpath="@dateOfMeasurement"/>
  </xs:key>
  <xs:keyref name="targetNameKeyRef" refer="tns:targetNameKey">
    <xs:annotation>
      <xs:documentation xml:lang="eng">Key reference to qualityData/targetData</xs:documentation>
    </xs:annotation>
    <xs:selector xpath=".//tns:generalInformation/tns:targetData"/>
    <xs:field xpath="@nameOfTarget"/>
    <xs:field xpath="@dateOfPhysicalMeasurement"/>
  </xs:keyref>
</xs:element>
```

Element `tns:imageQuailtyControlDataType / tns:imageData`

Namespace	kb.se/ns/image_capture_performance
Annotations	An issue/object can contain images that has been captured with several different equipments. Each instance of imageData contains image quality data for a single image capture equipment. The image quality data is valid during a limited period of time, usually one day. Hence, the same piece of equipment can appear in several instances if it has been used on multiple occations that involves a time span that is longer than the period of validity. Some scanners can simultaneusly produce multiple images, generally of both sides of an object (front/back/left/right). For a number of scanners, it's impossible to identify if an image depicts the front or back side of an object. As a result, we cannot tie these images to a specific sensor (or sensors, if the image is stitched).
Diagram	
Type	tns:imageDataType
Properties	content: complex minOccurs: 1 maxOccurs: unbounded
Model	tns:generalInformation , tns:patchMeasurements , tns:aggregateMeasurements
Children	tns:aggregateMeasurements, tns:generalInformation, tns:patchMeasurements

Instance	`<tns:imageData captureDate="" captureID="" captureNumber="" equipmentName="" xmlns:tns="kb.se/ns/image_capture_performance">`
	`  <tns:generalInformation>{1,1}</tns:generalInformation>`
	`  <tns:patchMeasurements>{1,1}</tns:patchMeasurements>`
	`  <tns:aggregateMeasurements>{1,1}</tns:aggregateMeasurements>`
	`</tns:imageData>`

Attributes

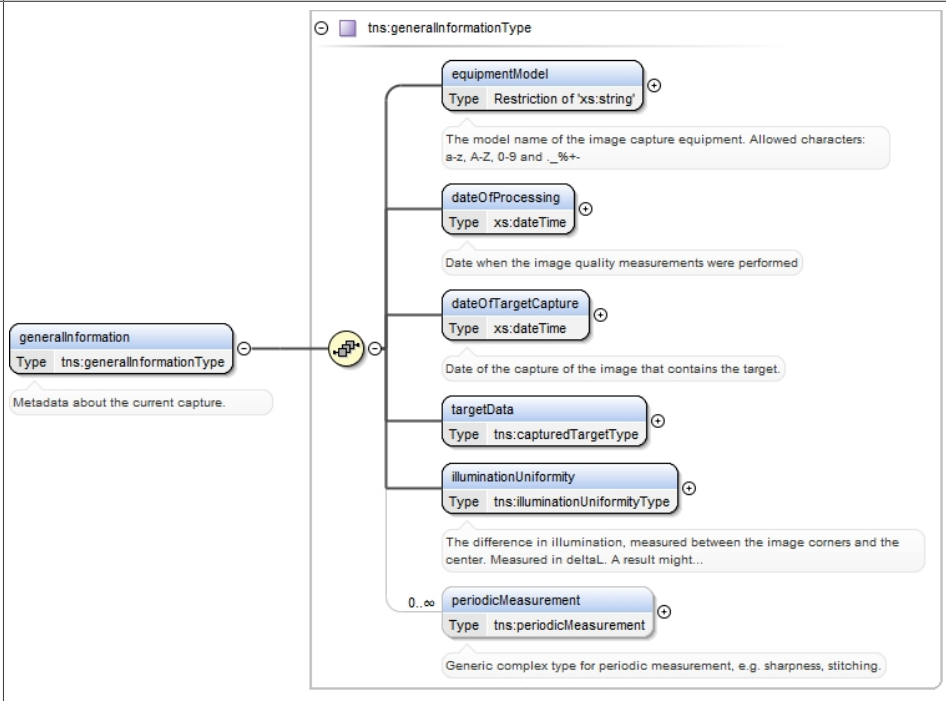
QName	Type	Use	
captureDate	xs:date	required	
	Date of capture for the image(s) used for image quality measurements.		

QName	Type	Use	
captureID	restriction of xs:string	required	
	Identifier for the combination of equipment and an image that contains the target. Naming convension: front, back, left, right, middle, single etc. An identical attribute is used for the element captureEquipment. Allowed characters: a-z, A-Z, 0-9 and ._%+-		
captureNumber	restriction of xs:string	required	
	Sequence number/identifier for the image quality measurement. The number is specific for each eqipment and it is reset daily. Included since we might want to perform several IQ measurements during a single day and we must be able to distinguish between them. Datatype is set to string to give the largest possible flexibility for the sequence numbering. Ordinary numbers are prefered. Allowed characters: a-z, A-Z, 0-9 and ._%+-		
equipmentName	restriction of xs:string	required	
	Internal name of the image capture equipment. Allowed characters: a-z, A-Z, 0-9 and ._%+-		

Source

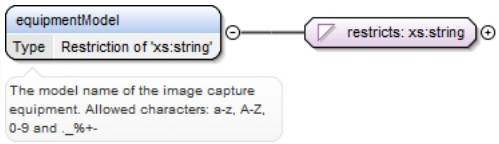
```
<xs:element type="tns:imageDataType" name="imageData" maxOccurs="unbounded" minOccurs="1">
  <xs:annotation>
    <xs:documentation xml:lang="eng">An issue/object can contain images that has been captured with several different equipments. Each instance of imageData contains image quality data for a single image capture equipment. The image quality data is valid during a limited period of time, usually one day. Hence, the same piece of equipment can appear in several instances if it has been used on multiple occations that involves a time span that is longer than the period of validity. Some scanners can simultaneusly produce multiple images, generally of both sides of an object (front/back/left/right). For a number of scanners, it's impossible to identify if an image depicts the front or back side of an object. As a result, we cannot tie these images to a specific sensor (or sensors, if the image is stitched).</xs:documentation>
  </xs:annotation>
</xs:element>
```

Element `tns:imageDataType / tns:generalInformation`

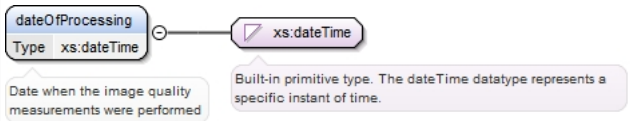
Namespace	kb.se/ns/image_capture_performance
Annotations	Metadata about the current capture.
Diagram	
Type	tns:generalInformationType
Properties	content: complex

Model	tns:equipmentModel , tns:dateOfProcessing , tns:dateOfTargetCapture , tns:targetData , tns:illuminationUniformity , tns:periodicMeasurement*
Children	tns:dateOfProcessing, tns:dateOfTargetCapture, tns:equipmentModel, tns:illuminationUniformity, tns:periodicMeasurement, tns:targetData
Instance	<tns:generalInformation xmlns:tns="kb.se/ns/image_capture_performance"> <tns:equipmentModel>{1,1}</tns:equipmentModel> <tns:dateOfProcessing>{1,1}</tns:dateOfProcessing> <tns:dateOfTargetCapture>{1,1}</tns:dateOfTargetCapture> <tns:targetData dateOfPhysicalMeasurement="" nameOfTarget="">{1,1}</tns:targetData> <tns:illuminationUniformity>{1,1}</tns:illuminationUniformity> <tns:periodicMeasurement measurementType="">{0,unbounded}</tns:periodicMeasurement> </tns:generalInformation>
Source	<xs:element type="tns:generalInformationType" name="generalInformation"> <xs:annotation> <xs:documentation xml:lang="eng">Metadata about the current capture.</xs:documentation> </xs:annotation> </xs:element>

Element tns:generalInformationType / tns:equipmentModel

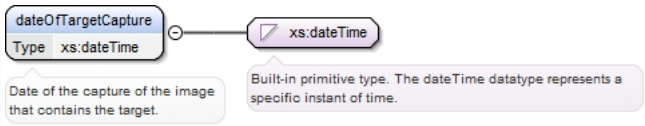
Namespace	kb.se/ns/image_capture_performance
Annotations	The model name of the image capture equipment. Allowed characters: a-z, A-Z, 0-9 and ._%+-
Diagram	
Type	restriction of xs:string
Properties	content: simple
Facets	pattern [a-zA-Z0-9._%+-]+
Source	<xs:element name="equipmentModel"> <xs:annotation> <xs:documentation xml:lang="eng">The model name of the image capture equipment. Allowed characters: a-z, A-Z, 0-9 and ._%+-</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:string"> <xs:pattern value="[a-zA-Z0-9._%+-]+"/> </xs:restriction> </xs:simpleType> </xs:element>

Element tns:generalInformationType / tns:dateOfProcessing

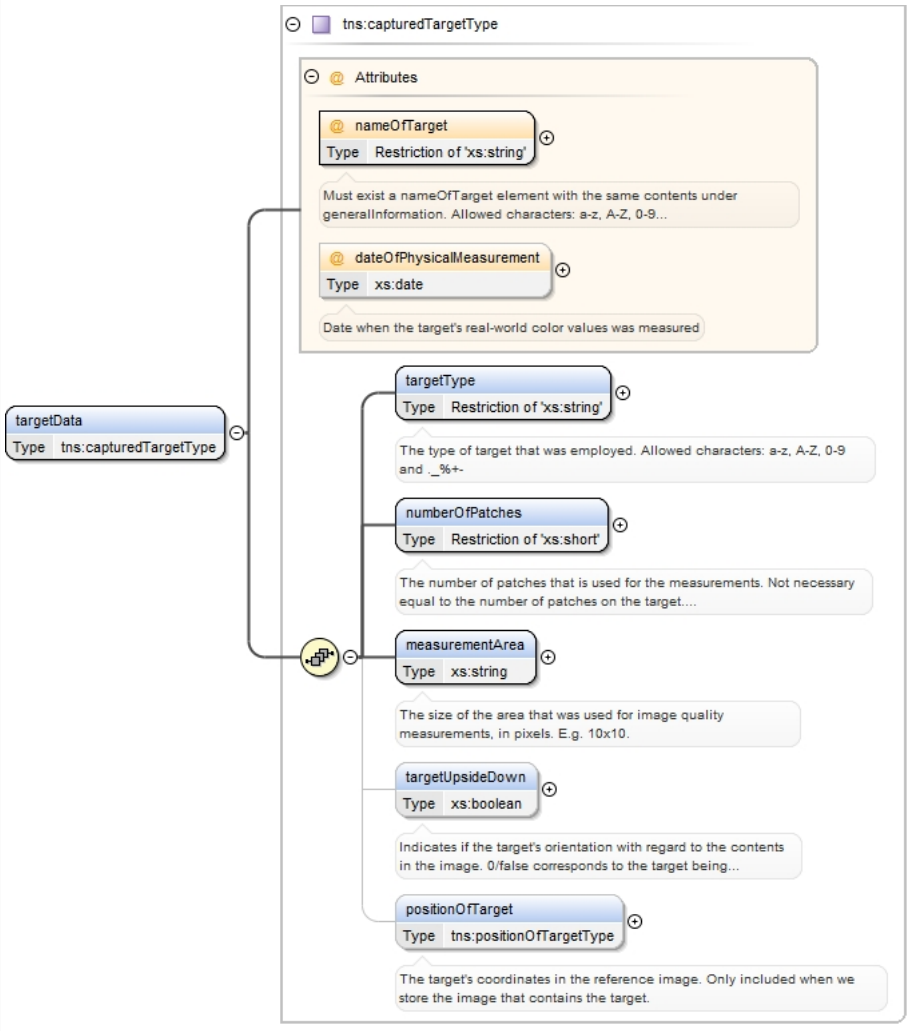
Namespace	kb.se/ns/image_capture_performance
Annotations	Date when the image quality measurements were performed
Diagram	
Type	xs:dateTime
Properties	content: simple
Source	<xs:element name="dateOfProcessing" type="xs:dateTime"> <xs:annotation> <xs:documentation xml:lang="eng">Date when the image quality measurements were performed</xs:documentation> </xs:annotation> </xs:element>

Element tns:generalInformationType / tns:dateOfTargetCapture

Namespace	kb.se/ns/image_capture_performance
Annotations	Date of the capture of the image that contains the

	target.
Diagram	
Type	xs:dateTime
Properties	content: simple
Source	<xs:element type="xs:dateTime" name="dateOfTargetCapture"> <xs:annotation> <xs:documentation xml:lang="eng">Date of the capture of the image that contains the target.</xs:documentation> </xs:annotation> </xs:element>

Element tns:generalInformationType / tns:targetData

Namespace	kb.se/ns/image_capture_performance
Diagram	
Type	tns:capturedTargetType
Properties	content: complex
Model	tns:targetType , tns:numberOfPatches , tns:measurementArea , tns:targetUpsideDown{0,1} , tns:positionOfTarget{0,1}
Children	tns:measurementArea, tns:numberOfPatches, tns:positionOfTarget, tns:targetType, tns:targetUpsideDown
Instance	<tns:targetData dateOfPhysicalMeasurement="" nameOfTarget="" xmlns:tns="kb.se/ns/image_capture_performance"> <tns:targetType>{1,1}</tns:targetType> <tns:numberOfPatches>{1,1}</tns:numberOfPatches> <tns:measurementArea>{1,1}</tns:measurementArea> <tns:targetUpsideDown>{0,1}</tns:targetUpsideDown>

<table>
<tr><td></td><td>

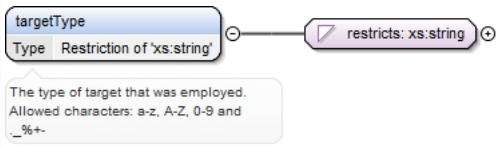
```
  <tns:positionOfTarget>{0,1}</tns:positionOfTarget>
</tns:targetData>
```

</td></tr>
<tr><td>Attributes</td><td>
<table>
<tr><th>QName</th><th>Type</th><th>Use</th><th></th></tr>
<tr><td>dateOfPhysicalMeasurement</td><td>xs:date</td><td>optional</td><td></td></tr>
<tr><td></td><td colspan="3">Date when the target's real-world color values was measured</td></tr>
<tr><td>nameOfTarget</td><td>restriction of xs:string</td><td>required</td><td></td></tr>
<tr><td></td><td colspan="3">Must exist a nameOfTarget element with the same contents under generalInformation. Allowed characters: a-z, A-Z, 0-9 and ._%+-</td></tr>
</table>
</td></tr>
<tr><td>Source</td><td>

```
<xs:element name="targetData" type="tns:capturedTargetType"/>
```

</td></tr>
</table>

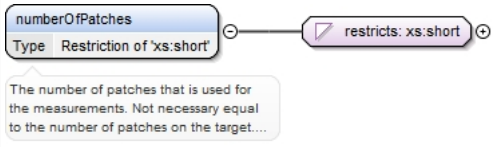
Element tns:capturedTargetType / tns:targetType

<table>
<tr><td>Namespace</td><td>kb.se/ns/image_capture_performance</td></tr>
<tr><td>Annotations</td><td>The type of target that was employed. Allowed characters: a-z, A-Z, 0-9 and ._%+-</td></tr>
<tr><td>Diagram</td><td> 
</td></tr>
<tr><td>Type</td><td>restriction of xs:string</td></tr>
<tr><td>Properties</td><td>content: simple</td></tr>
<tr><td>Facets</td><td>pattern [a-zA-Z0-9._%+-]+</td></tr>
<tr><td>Source</td><td>

```
<xs:element name="targetType">
  <xs:annotation>
    <xs:documentation xml:lang="eng">The type of target that was employed. Allowed characters: a-z,
 A-Z, 0-9 and ._%+-</xs:documentation>
  </xs:annotation>
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:pattern value="[a-zA-Z0-9._%+-]+"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
```

</td></tr>
</table>

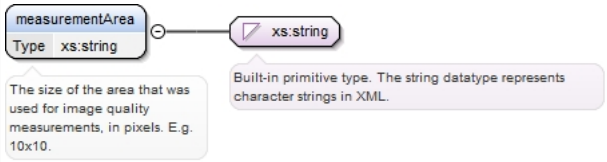
Element tns:capturedTargetType / tns:numberOfPatches

<table>
<tr><td>Namespace</td><td>kb.se/ns/image_capture_performance</td></tr>
<tr><td>Annotations</td><td>The number of patches that is used for the measurements.
Not necessary equal to the number of patches on the target. Mininum number of patches in Digidaily is twelve (six color patches and six grayscale patches)</td></tr>
<tr><td>Diagram</td><td> 
</td></tr>
<tr><td>Type</td><td>restriction of xs:short</td></tr>
<tr><td>Properties</td><td>content: simple
minOccurs: 1</td></tr>
<tr><td>Facets</td><td>minInclusive 12</td></tr>
<tr><td>Source</td><td>

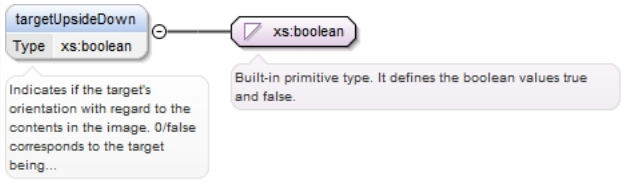
```
<xs:element name="numberOfPatches" minOccurs="1">
  <xs:annotation>
    <xs:documentation xml:lang="eng">The number of patches that is used for the measurements. Not
 necessary equal to the number of patches on the target. Mininum number of patches in Digidaily is
 twelve (six color patches and six grayscale patches)</xs:documentation>
  </xs:annotation>
  <xs:simpleType>
    <xs:restriction base="xs:short">
      <xs:minInclusive value="12"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
```

</td></tr>
</table>

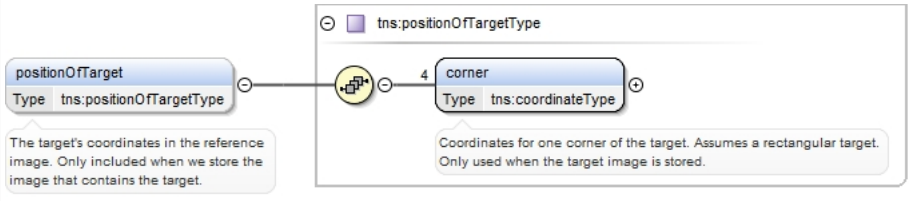
Element tns:capturedTargetType / tns:measurementArea

Namespace	kb.se/ns/image_capture_performance
Annotations	The size of the area that was used for image quality measurements, in pixels. E.g. 10x10.
Diagram	
Type	xs:string
Properties	content: simple
Source	<xs:element type="xs:string" name="measurementArea"> <xs:annotation> <xs:documentation xml:lang="eng">The size of the area that was used for image quality measurements, in pixels. E.g. 10x10.</xs:documentation> </xs:annotation> </xs:element>

Element tns:capturedTargetType / tns:targetUpsideDown

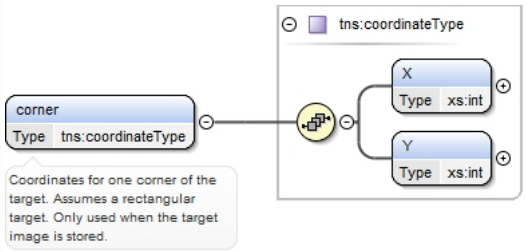
Namespace	kb.se/ns/image_capture_performance
Annotations	Indicates if the target's orientation with regard to the contents in the image. 0/false corresponds to the target being upsidedown with regard to the main content in the image. 1/true is the opposite. Only used when the target image is stored.
Diagram	
Type	xs:boolean
Properties	content: simple minOccurs: 0
Source	<xs:element type="xs:boolean" name="targetUpsideDown" minOccurs="0"> <xs:annotation> <xs:documentation xml:lang="eng">Indicates if the target's orientation with regard to the contents in the image. 0/false corresponds to the target being upsidedown with regard to the main content in the image. 1/true is the opposite. Only used when the target image is stored.</xs:documentation> </xs:annotation> </xs:element>

Element tns:capturedTargetType / tns:positionOfTarget

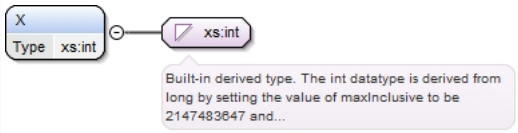
Namespace	kb.se/ns/image_capture_performance
Annotations	The target's coordinates in the reference image. Only included when we store the image that contains the target.
Diagram	
Type	tns:positionOfTargetType
Properties	content: complex minOccurs: 0
Model	tns:corner{4,4}

Children	tns:corner
Instance	<tns:positionOfTarget xmlns:tns="kb.se/ns/image_capture_performance"> <tns:corner>{4,4}</tns:corner> </tns:positionOfTarget>
Source	<xs:element type="tns:positionOfTargetType" name="positionOfTarget" minOccurs="0"> <xs:annotation> <xs:documentation xml:lang="eng">The target's coordinates in the reference image. Only included when we store the image that contains the target.</xs:documentation> </xs:annotation> </xs:element>

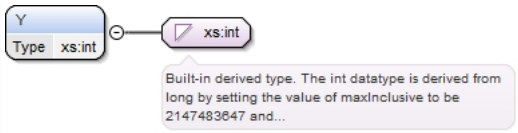
Element tns:positionOfTargetType / tns:corner

Namespace	kb.se/ns/image_capture_performance
Annotations	Coordinates for one corner of the target. Assumes a rectangular target. Only used when the target image is stored.
Diagram	
Type	tns:coordinateType
Properties	content: complex minOccurs: 4 maxOccurs: 4
Model	tns:X , tns:Y
Children	tns:X, tns:Y
Instance	<tns:corner xmlns:tns="kb.se/ns/image_capture_performance"> <tns:X>{1,1}</tns:X> <tns:Y>{1,1}</tns:Y> </tns:corner>
Source	<xs:element type="tns:coordinateType" name="corner" maxOccurs="4" minOccurs="4"> <xs:annotation> <xs:documentation xml:lang="eng">Coordinates for one corner of the target. Assumes a rectangular target. Only used when the target image is stored.</xs:documentation> </xs:annotation> </xs:element>

Element tns:coordinateType / tns:X

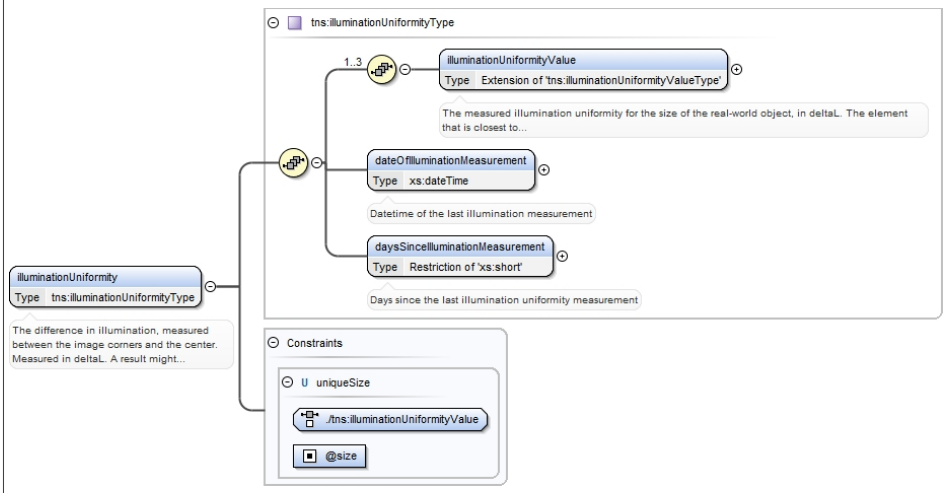
Namespace	kb.se/ns/image_capture_performance
Diagram	
Type	xs:int
Properties	content: simple
Source	<xs:element name="X" type="xs:int"/>

Element tns:coordinateType / tns:Y

Namespace	kb.se/ns/image_capture_performance
Diagram	

Type	xs:int
Properties	content: simple
Source	`<xs:element name="Y" type="xs:int"/>`

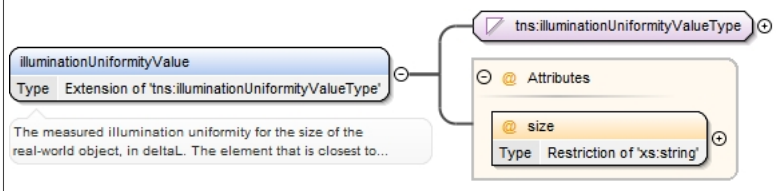
Element tns:generalInformationType / tns:illuminationUniformity

Namespace	kb.se/ns/image_capture_performance
Annotations	The difference in illumination, measured between the image corners and the center. Measured in deltaL. A result might be included for all possible object sizes or only for element that corresponds to the size of the current object
Diagram	
Type	tns:illuminationUniformityType
Properties	content: complex
Model	tns:illuminationUniformityValue , tns:dateOfIlluminationMeasurement , tns:daysSinceIlluminationMeasurement
Children	tns:dateOfIlluminationMeasurement, tns:daysSinceIlluminationMeasurement, tns:illuminationUniformityValue

Instance	`<tns:illuminationUniformity xmlns:tns="kb.se/ns/image_capture_performance">`
	`  <tns:illuminationUniformityValue size="">{1,1}</tns:illuminationUniformityValue>`
	`  <tns:dateOfIlluminationMeasurement>{1,1}</tns:dateOfIlluminationMeasurement>`
	`  <tns:daysSinceIlluminationMeasurement>{1,1}</tns:daysSinceIlluminationMeasurement>`
	`</tns:illuminationUniformity>`

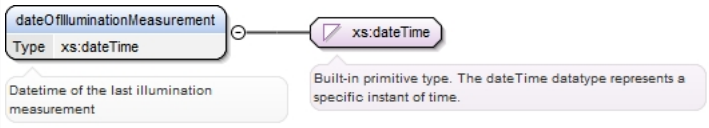
Source	`<xs:element name="illuminationUniformity" type="tns:illuminationUniformityType">`
	`  <xs:annotation>`
	`  <xs:documentation xml:lang="eng">The difference in illumination, measured between the image corners and the center. Measured in deltaL. A result might be included for all possible object sizes or only for element that corresponds to the size of the current object</xs:documentation>`
	`  </xs:annotation>`
	`  <xs:unique name="uniqueSize">`
	`  <xs:selector xpath="./tns:illuminationUniformityValue"/>`
	`  <xs:field xpath="@size"/>`
	`  </xs:unique>`
	`</xs:element>`

Element tns:illuminationUniformityType / tns:illuminationUniformityValue

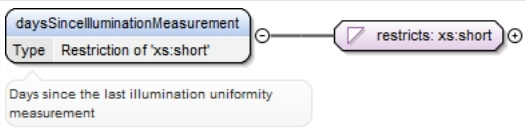
Namespace	kb.se/ns/image_capture_performance
Annotations	The measured illumination uniformity for the size of the real-world object, in deltaL. The element that is closest to the real-world size of the object must be created. The other elements are optional.
Diagram	
Type	extension of tns:illuminationUniformityValueType
Type hierarchy	• xs:float

	• tns:illuminationUniformityValueType
Properties	content: complex maxOccurs: 1
Attributes	**QName** / **Type** / **Use** **size** / restriction of xs:string / required
Source	<xs:element name="illuminationUniformityValue" maxOccurs="1"> <xs:annotation> <xs:documentation xml:lang="eng">The measured illumination uniformity for the size of the real-world object, in deltaL. The element that is closest to the real-world size of the object must be created. The other elements are optional.</xs:documentation> </xs:annotation> <xs:complexType> <xs:simpleContent> <xs:extension base="tns:illuminationUniformityValueType"> <xs:attribute name="size" use="required"> <xs:simpleType> <xs:restriction base="xs:string"> <xs:enumeration value="A1"/> <xs:enumeration value="A2"/> <xs:enumeration value="A3"/> </xs:restriction> </xs:simpleType> </xs:attribute> </xs:extension> </xs:simpleContent> </xs:complexType> </xs:element>

Element tns:illuminationUniformityType / tns:dateOfIlluminationMeasurement

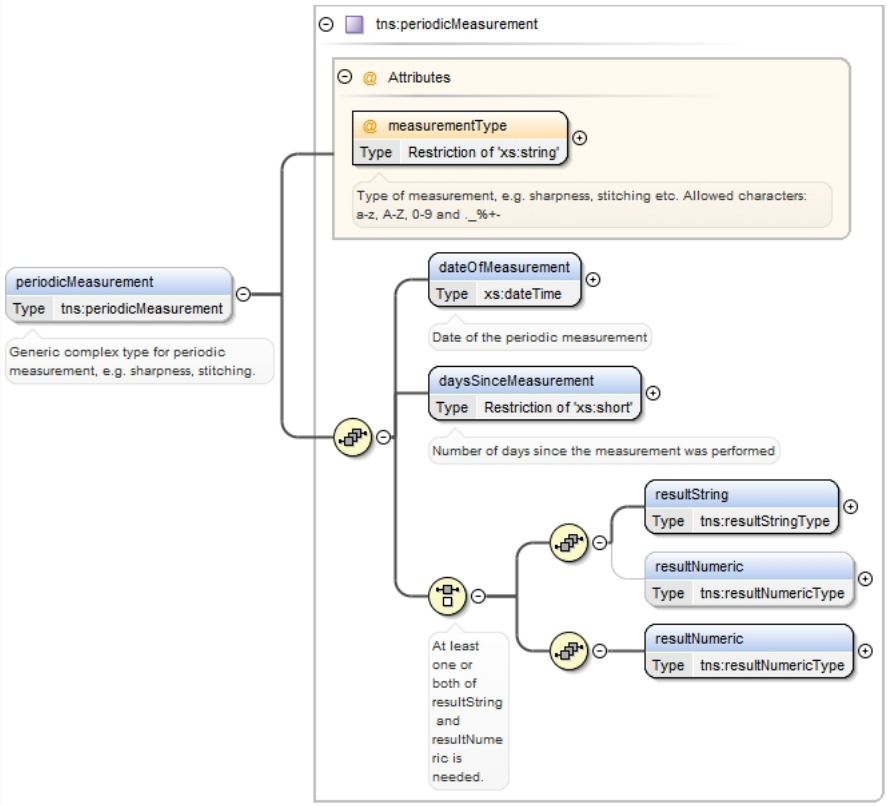
Namespace	kb.se/ns/image_capture_performance
Annotations	Datetime of the last illumination measurement
Diagram	
Type	xs:dateTime
Properties	content: simple
Source	<xs:element name="dateOfIlluminationMeasurement" type="xs:dateTime"> <xs:annotation> <xs:documentation xml:lang="eng">Datetime of the last illumination measurement</xs:documentation> </xs:annotation> </xs:element>

Element tns:illuminationUniformityType / tns:daysSinceIlluminationMeasurement

Namespace	kb.se/ns/image_capture_performance
Annotations	Days since the last illumination uniformity measurement
Diagram	
Type	restriction of xs:short
Properties	content: simple
Facets	minInclusive 0
Source	<xs:element name="daysSinceIlluminationMeasurement"> <xs:annotation> <xs:documentation xml:lang="eng">Days since the last illumination uniformity measurement</xs:documentation>

```
  </xs:annotation>
  <xs:simpleType>
    <xs:restriction base="xs:short">
      <xs:minInclusive value="0"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
```

Element `tns:generalInformationType / tns:periodicMeasurement`

Namespace	kb.se/ns/image_capture_performance
Annotations	`Generic complex type for periodic measurement, e.g. sharpness, stitching.`
Diagram	

Type	tns:periodicMeasurement
Properties	content: `complex` minOccurs: `0` maxOccurs: `unbounded`
Model	tns:dateOfMeasurement , tns:daysSinceMeasurement , ((tns:resultString , tns:resultNumeric{0,1}) | (tns:resultNumeric))
Children	tns:dateOfMeasurement, tns:daysSinceMeasurement, tns:resultNumeric, tns:resultString

Instance

```
<tns:periodicMeasurement measurementType="" xmlns:tns="kb.se/ns/image_capture_performance">
  <tns:dateOfMeasurement>{1,1}</tns:dateOfMeasurement>
  <tns:daysSinceMeasurement>{1,1}</tns:daysSinceMeasurement>
  <tns:resultString>{1,1}</tns:resultString>
  <tns:resultNumeric>{0,1}</tns:resultNumeric>
  <tns:resultNumeric>{1,1}</tns:resultNumeric>
</tns:periodicMeasurement>
```

Attributes

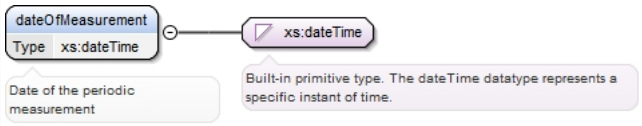
QName	Type	Use	
measurementType	restriction of xs:string	required	
	`Type of measurement, e.g. sharpness, stitching etc. Allowed characters: a-z, A-Z, 0-9 and ._%+-`		

Source

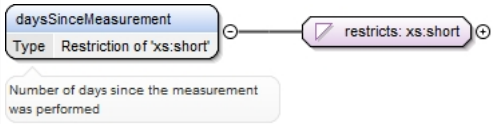
```
<xs:element name="periodicMeasurement" type="tns:periodicMeasurement" maxOccurs="unbounded"
 minOccurs="0">
  <xs:annotation>
    <xs:documentation xml:lang="eng">Generic complex type for periodic measurement, e.g. sharpness,
 stitching.</xs:documentation>
  </xs:annotation>
```

```
</xs:element>
```

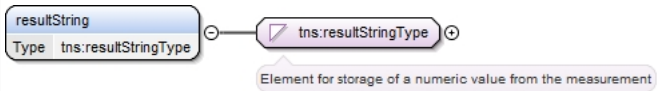
Element tns:periodicMeasurement / tns:dateOfMeasurement

Namespace	kb.se/ns/image_capture_performance
Annotations	Date of the periodic measurement
Diagram	
Type	xs:dateTime
Properties	content: simple
Source	<xs:element name="dateOfMeasurement" type="xs:dateTime"> <xs:annotation> <xs:documentation xml:lang="eng">Date of the periodic measurement</xs:documentation> </xs:annotation> </xs:element>

Element tns:periodicMeasurement / tns:daysSinceMeasurement

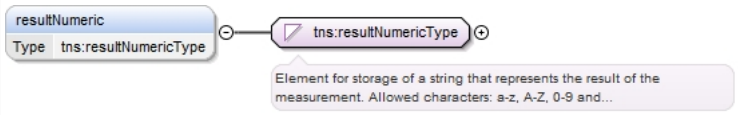
Namespace	kb.se/ns/image_capture_performance
Annotations	Number of days since the measurement was performed
Diagram	
Type	restriction of xs:short
Properties	content: simple
Facets	minInclusive 0
Source	<xs:element name="daysSinceMeasurement"> <xs:annotation> <xs:documentation xml:lang="eng">Number of days since the measurement was performed</ xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:short"> <xs:minInclusive value="0"/> </xs:restriction> </xs:simpleType> </xs:element>

Element tns:periodicMeasurement / tns:resultString

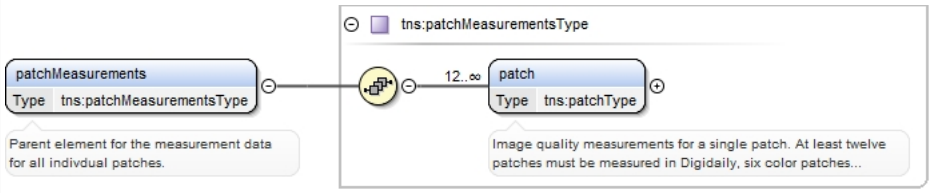
Namespace	kb.se/ns/image_capture_performance
Diagram	
Type	tns:resultStringType
Properties	content: simple minOccurs: 1
Facets	pattern [a-zA-Z0-9._%+-]+
Source	<xs:element name="resultString" type="tns:resultStringType" minOccurs="1"/>

Element tns:periodicMeasurement / tns:resultNumeric

Namespace	kb.se/ns/image_capture_performance

Diagram	
Type	tns:resultNumericType
Properties	content: simple minOccurs: 0
Source	`<xs:element name="resultNumeric" type="tns:resultNumericType" minOccurs="0"/>`

Element tns:imageDataType / tns:patchMeasurements

Namespace	kb.se/ns/image_capture_performance
Annotations	Parent element for the measurement data for all indivdual patches.
Diagram	
Type	tns:patchMeasurementsType
Properties	content: complex
Model	tns:patch{12,unbounded}
Children	tns:patch

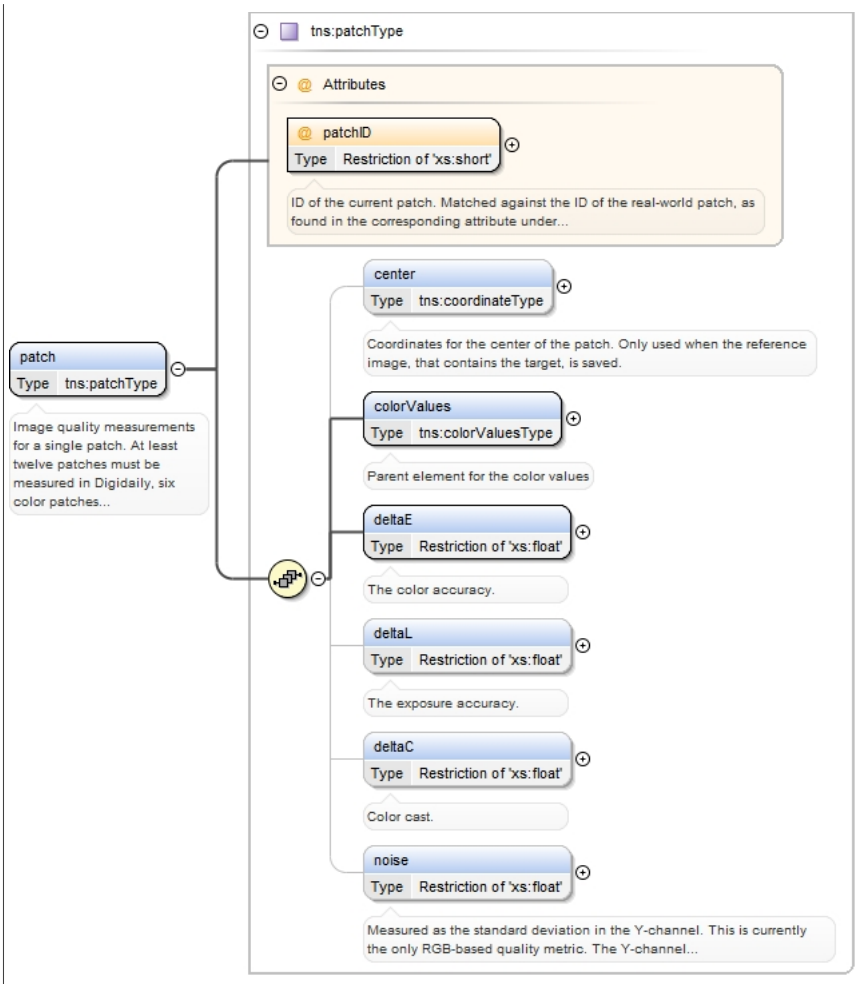
Instance	`<tns:patchMeasurements xmlns:tns="kb.se/ns/image_capture_performance">`
	`  <tns:patch patchID="">{12,unbounded}</tns:patch>`
	`</tns:patchMeasurements>`

Source	`<xs:element type="tns:patchMeasurementsType" name="patchMeasurements">`
	`  <xs:annotation>`
	`  <xs:documentation xml:lang="eng">Parent element for the measurement data for all indivdual patches.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element tns:patchMeasurementsType / tns:patch

Namespace	kb.se/ns/image_capture_performance
Annotations	Image quality measurements for a single patch. At least twelve patches must be measured in Digidaily, six color patches and six grayscale patches.

Diagram



Type: tns:patchType

Properties

content:	complex
minOccurs:	12
maxOccurs:	unbounded

Model: tns:center{0,1} , tns:colorValues , tns:deltaE , tns:deltaL{0,1} , tns:deltaC{0,1} , tns:noise{0,1}

Children: tns:center, tns:colorValues, tns:deltaC, tns:deltaE, tns:deltaL, tns:noise

Instance

```
<tns:patch patchID="" xmlns:tns="kb.se/ns/image_capture_performance">
  <tns:center>{0,1}</tns:center>
  <tns:colorValues>{1,1}</tns:colorValues>
  <tns:deltaE>{1,1}</tns:deltaE>
  <tns:deltaL>{0,1}</tns:deltaL>
  <tns:deltaC>{0,1}</tns:deltaC>
  <tns:noise>{0,1}</tns:noise>
</tns:patch>
```

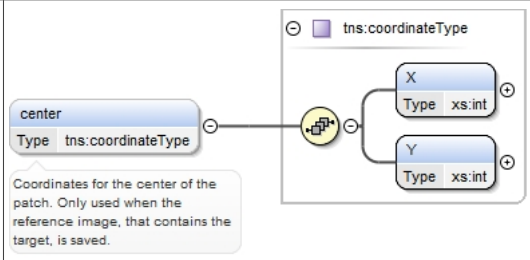
Attributes

QName	Type	Use	
patchID	restriction of xs:short	required	
	ID of the current patch. Matched against the ID of the real-world patch, as found in the corresponding attribute under targetData/colorValues. Allowed values: 1 or higher		

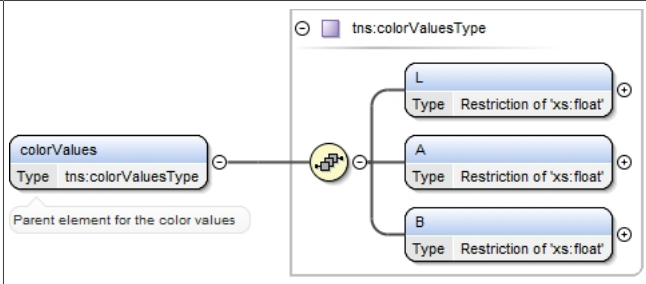
Source

```
<xs:element type="tns:patchType" name="patch" maxOccurs="unbounded" minOccurs="12">
  <xs:annotation>
    <xs:documentation xml:lang="eng">Image quality measurements for a single patch. At least
 twelve patches must be measured in Digidaily, six color patches and six grayscale patches.</
xs:documentation>
  </xs:annotation>
</xs:element>
```

Element tns:patchType / tns:center

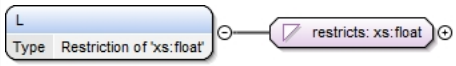
Namespace	kb.se/ns/image_capture_performance
Annotations	Coordinates for the center of the patch. Only used when the reference image, that contains the target, is saved.
Diagram	
Type	tns:coordinateType
Properties	content: complex minOccurs: 0
Model	tns:X , tns:Y
Children	tns:X, tns:Y
Instance	<tns:center xmlns:tns="kb.se/ns/image_capture_performance"> <tns:X>{1,1}</tns:X> <tns:Y>{1,1}</tns:Y> </tns:center>
Source	<xs:element type="tns:coordinateType" name="center" minOccurs="0"> <xs:annotation> <xs:documentation xml:lang="eng">Coordinates for the center of the patch. Only used when the reference image, that contains the target, is saved.</xs:documentation> </xs:annotation> </xs:element>

Element tns:patchType / tns:colorValues

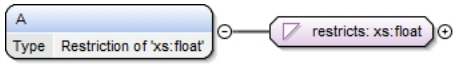
Namespace	kb.se/ns/image_capture_performance
Annotations	Parent element for the color values
Diagram	
Type	tns:colorValuesType
Properties	content: complex
Model	tns:L , tns:A , tns:B
Children	tns:A, tns:B, tns:L
Instance	<tns:colorValues xmlns:tns="kb.se/ns/image_capture_performance"> <tns:L>{1,1}</tns:L> <tns:A>{1,1}</tns:A> <tns:B>{1,1}</tns:B> </tns:colorValues>
Source	<xs:element type="tns:colorValuesType" name="colorValues"> <xs:annotation> <xs:documentation xml:lang="eng">Parent element for the color values</xs:documentation> </xs:annotation> </xs:element>

Element tns:colorValuesType / tns:L

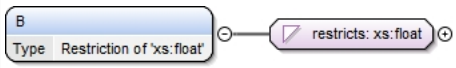
Namespace	kb.se/ns/image_capture_performance

Diagram	
Type	restriction of xs:float
Properties	content: simple minOccurs: 1
Facets	maxInclusive 100 minInclusive 0
Source	<xs:element name="L" minOccurs="1"> <xs:simpleType> <xs:restriction base="xs:float"> <xs:minInclusive value="0"/> <xs:maxInclusive value="100"/> </xs:restriction> </xs:simpleType> </xs:element>

Element tns:colorValuesType / tns:A

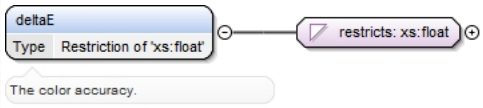
Namespace	kb.se/ns/image_capture_performance
Diagram	
Type	restriction of xs:float
Properties	content: simple minOccurs: 1
Facets	maxInclusive 100 minInclusive -100
Source	<xs:element name="A" minOccurs="1"> <xs:simpleType> <xs:restriction base="xs:float"> <xs:minInclusive value="-100"/> <xs:maxInclusive value="100"/> </xs:restriction> </xs:simpleType> </xs:element>

Element tns:colorValuesType / tns:B

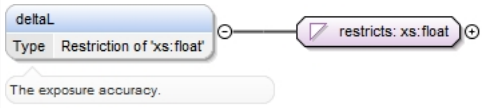
Namespace	kb.se/ns/image_capture_performance
Diagram	
Type	restriction of xs:float
Properties	content: simple minOccurs: 1
Facets	maxInclusive 100 minInclusive -100
Source	<xs:element name="B" minOccurs="1"> <xs:simpleType> <xs:restriction base="xs:float"> <xs:minInclusive value="-100"/> <xs:maxInclusive value="100"/> </xs:restriction> </xs:simpleType> </xs:element>

Element tns:patchType / tns:deltaE

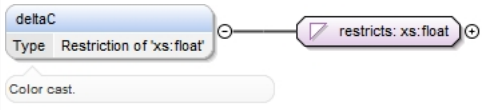
Namespace	kb.se/ns/image_capture_performance

Annotations	The color accuracy.
Diagram	
Type	restriction of xs:float
Properties	content: simple
Facets	maxInclusive 300 minInclusive 0
Source	<xs:element name="deltaE"> <xs:annotation> <xs:documentation xml:lang="eng">The color accuracy.</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:float"> <xs:minInclusive value="0"/> <xs:maxInclusive value="300"/> </xs:restriction> </xs:simpleType> </xs:element>

Element tns:patchType / tns:deltaL

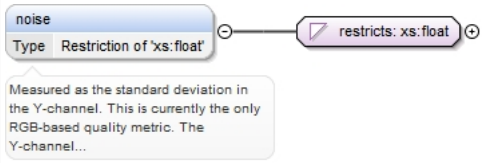
Namespace	kb.se/ns/image_capture_performance
Annotations	The exposure accuracy.
Diagram	
Type	restriction of xs:float
Properties	content: simple minOccurs: 0
Facets	maxInclusive 100 minInclusive 0
Source	<xs:element name="deltaL" minOccurs="0"> <xs:annotation> <xs:documentation xml:lang="eng">The exposure accuracy.</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:float"> <xs:minInclusive value="0"/> <xs:maxInclusive value="100"/> </xs:restriction> </xs:simpleType> </xs:element>

Element tns:patchType / tns:deltaC

Namespace	kb.se/ns/image_capture_performance
Annotations	Color cast.
Diagram	
Type	restriction of xs:float
Properties	content: simple minOccurs: 0
Facets	maxInclusive 283 minInclusive 0

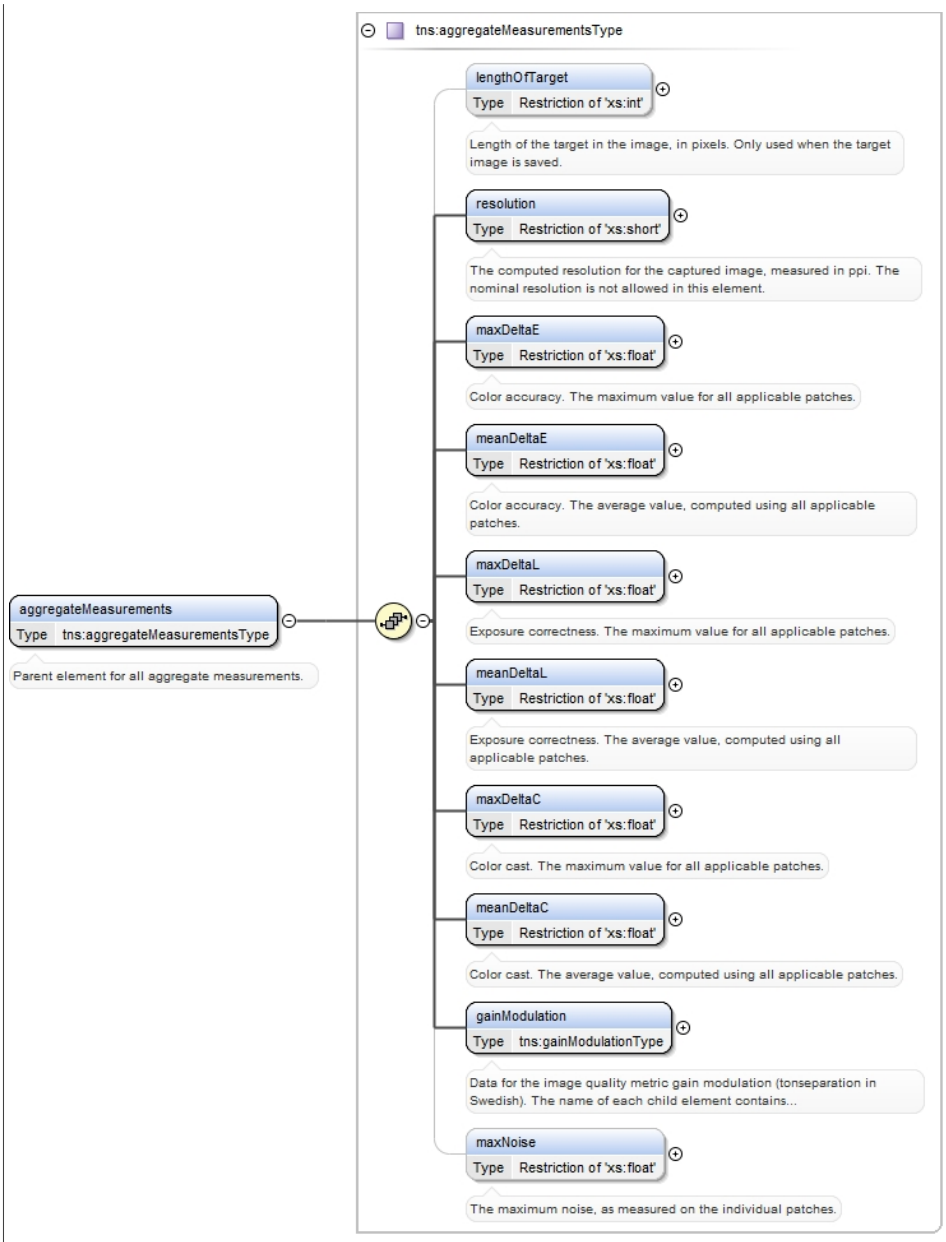
Source	<xs:element name="deltaC" minOccurs="0"> <xs:annotation> <xs:documentation xml:lang="eng">Color cast.</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:float"> <xs:minInclusive value="0"/> <xs:maxInclusive value="283"/> </xs:restriction> </xs:simpleType> </xs:element>

Element tns:patchType / tns:noise

Namespace	kb.se/ns/image_capture_performance
Annotations	Measured as the standard deviation in the Y-channel. This is currently the only RGB-based quality metric. The Y-channel is computed as Y=(0,299*R + 0,587*G + 0,114*B).
Diagram	
Type	restriction of xs:float
Properties	content: simple minOccurs: 0
Facets	minInclusive 0
Source	<xs:element name="noise" minOccurs="0"> <xs:annotation> <xs:documentation xml:lang="eng">Measured as the standard deviation in the Y-channel. This is currently the only RGB-based quality metric. The Y-channel is computed as Y=(0,299*R + 0,587*G + 0,114*B).</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:float"> <xs:minInclusive value="0"/> </xs:restriction> </xs:simpleType> </xs:element>

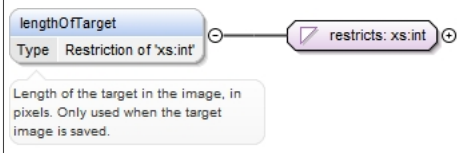
Element tns:imageDataType / tns:aggregateMeasurements

Namespace	kb.se/ns/image_capture_performance
Annotations	Parent element for all aggregate measurements.

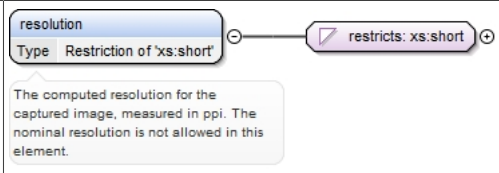
Diagram	
Type	tns:aggregateMeasurementsType
Properties	content: complex
Model	tns:lengthOfTarget{0,1} , tns:resolution , tns:maxDeltaE , tns:meanDeltaE , tns:maxDeltaL , tns:meanDeltaL , tns:maxDeltaC , tns:meanDeltaC , tns:gainModulation , tns:maxNoise{0,1}
Children	tns:gainModulation, tns:lengthOfTarget, tns:maxDeltaC, tns:maxDeltaE, tns:maxDeltaL, tns:maxNoise, tns:meanDeltaC, tns:meanDeltaE, tns:meanDeltaL, tns:resolution
Instance	<tns:aggregateMeasurements xmlns:tns="kb.se/ns/image_capture_performance"> <tns:lengthOfTarget>{0,1}</tns:lengthOfTarget> <tns:resolution>{1,1}</tns:resolution> <tns:maxDeltaE>{1,1}</tns:maxDeltaE> <tns:meanDeltaE>{1,1}</tns:meanDeltaE> <tns:maxDeltaL>{1,1}</tns:maxDeltaL> <tns:meanDeltaL>{1,1}</tns:meanDeltaL> <tns:maxDeltaC>{1,1}</tns:maxDeltaC> <tns:meanDeltaC>{1,1}</tns:meanDeltaC> <tns:gainModulation>{1,1}</tns:gainModulation> <tns:maxNoise>{0,1}</tns:maxNoise> </tns:aggregateMeasurements>
Source	<xs:element type="tns:aggregateMeasurementsType" name="aggregateMeasurements"> <xs:annotation> <xs:documentation xml:lang="eng">Parent element for all aggregate measurements.</ xs:documentation> </xs:annotation>

```
</xs:element>
```

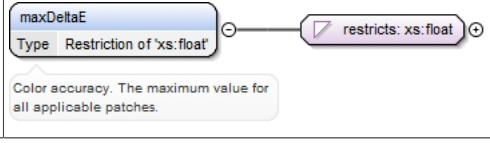
Element tns:aggregateMeasurementsType / tns:lengthOfTarget

Namespace	kb.se/ns/image_capture_performance
Annotations	Length of the target in the image, in pixels. Only used when the target image is saved.
Diagram	
Type	restriction of xs:int
Properties	content: simple minOccurs: 0
Facets	minInclusive 0
Source	<xs:element name="lengthOfTarget" minOccurs="0"> <xs:annotation> <xs:documentation xml:lang="eng">Length of the target in the image, in pixels. Only used when the target image is saved.</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:int"> <xs:minInclusive value="0"/> </xs:restriction> </xs:simpleType> </xs:element>

Element tns:aggregateMeasurementsType / tns:resolution

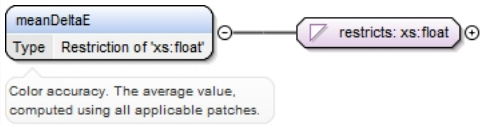
Namespace	kb.se/ns/image_capture_performance
Annotations	The computed resolution for the captured image, measured in ppi. The nominal resolution is not allowed in this element.
Diagram	
Type	restriction of xs:short
Properties	content: simple
Facets	minInclusive 0
Source	<xs:element name="resolution"> <xs:annotation> <xs:documentation xml:lang="eng">The computed resolution for the captured image, measured in ppi. The nominal resolution is not allowed in this element.</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:short"> <xs:minInclusive value="0"/> </xs:restriction> </xs:simpleType> </xs:element>

Element tns:aggregateMeasurementsType / tns:maxDeltaE

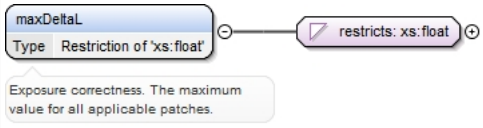
Namespace	kb.se/ns/image_capture_performance
Annotations	Color accuracy. The maximum value for all applicable patches.
Diagram	

Type	restriction of xs:float
Properties	content: simple minOccurs: 1
Facets	maxInclusive 300 minInclusive 0
Source	<xs:element name="maxDeltaE" minOccurs="1"> <xs:annotation> <xs:documentation xml:lang="eng">Color accuracy. The maximum value for all applicable patches.</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:float"> <xs:minInclusive value="0"/> <xs:maxInclusive value="300"/> </xs:restriction> </xs:simpleType> </xs:element>

Element tns:aggregateMeasurementsType / tns:meanDeltaE

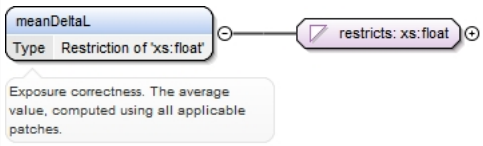
Namespace	kb.se/ns/image_capture_performance
Annotations	Color accuracy. The average value, computed using all applicable patches.
Diagram	
Type	restriction of xs:float
Properties	content: simple minOccurs: 1
Facets	maxInclusive 300 minInclusive 0
Source	<xs:element name="meanDeltaE" minOccurs="1"> <xs:annotation> <xs:documentation xml:lang="eng">Color accuracy. The average value, computed using all applicable patches.</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:float"> <xs:minInclusive value="0"/> <xs:maxInclusive value="300"/> </xs:restriction> </xs:simpleType> </xs:element>

Element tns:aggregateMeasurementsType / tns:maxDeltaL

Namespace	kb.se/ns/image_capture_performance
Annotations	Exposure correctness. The maximum value for all applicable patches.
Diagram	
Type	restriction of xs:float
Properties	content: simple minOccurs: 1
Facets	maxInclusive 100 minInclusive 0
Source	<xs:element name="maxDeltaL" minOccurs="1"> <xs:annotation>

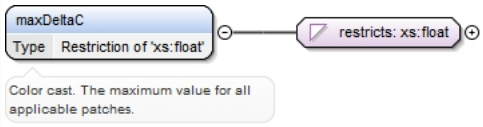
```
    <xs:documentation xml:lang="eng">Exposure correctness. The maximum value for all applicable
 patches.</xs:documentation>
  </xs:annotation>
  <xs:simpleType>
    <xs:restriction base="xs:float">
      <xs:minInclusive value="0"/>
      <xs:maxInclusive value="100"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
```

Element tns:aggregateMeasurementsType / tns:meanDeltaL

Namespace	kb.se/ns/image_capture_performance
Annotations	Exposure correctness. The average value, computed using all applicable patches.
Diagram	
Type	restriction of xs:float
Properties	content: simple minOccurs: 1
Facets	maxInclusive 100 minInclusive 0
Source	

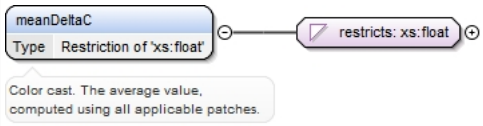
```
<xs:element name="meanDeltaL" minOccurs="1">
  <xs:annotation>
    <xs:documentation xml:lang="eng">Exposure correctness. The average value, computed using all
 applicable patches.</xs:documentation>
  </xs:annotation>
  <xs:simpleType>
    <xs:restriction base="xs:float">
      <xs:minInclusive value="0"/>
      <xs:maxInclusive value="100"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
```

Element tns:aggregateMeasurementsType / tns:maxDeltaC

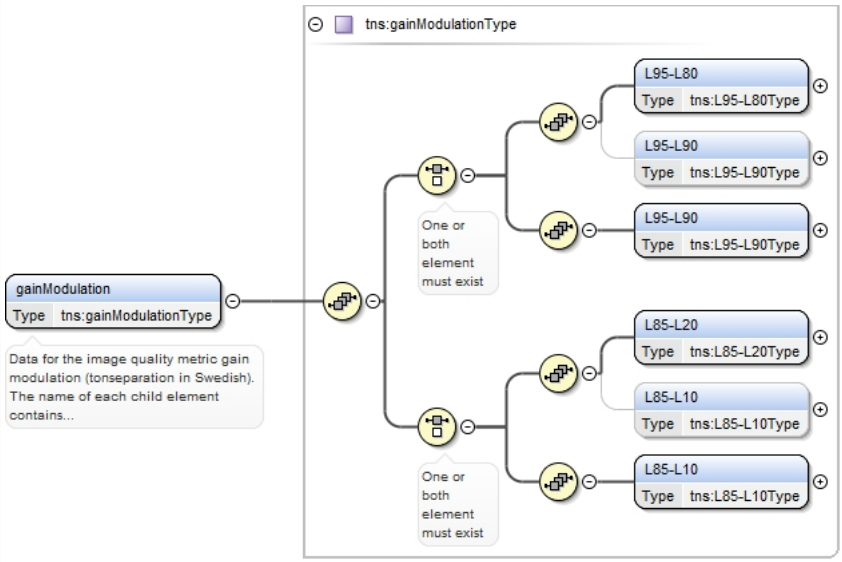
Namespace	kb.se/ns/image_capture_performance
Annotations	Color cast. The maximum value for all applicable patches.
Diagram	
Type	restriction of xs:float
Properties	content: simple minOccurs: 1
Facets	maxInclusive 283 minInclusive 0
Source	

```
<xs:element name="maxDeltaC" minOccurs="1">
  <xs:annotation>
    <xs:documentation xml:lang="eng">Color cast. The maximum value for all applicable patches.</
xs:documentation>
  </xs:annotation>
  <xs:simpleType>
    <xs:restriction base="xs:float">
      <xs:minInclusive value="0"/>
      <xs:maxInclusive value="283"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
```

Element tns:aggregateMeasurementsType / tns:meanDeltaC

Namespace	kb.se/ns/image_capture_performance
Annotations	Color cast. The average value, computed using all applicable patches.
Diagram	
Type	restriction of xs:float
Properties	content: simple minOccurs: 1
Facets	maxInclusive 283 minInclusive 0
Source	<xs:element name="meanDeltaC" minOccurs="1"> <xs:annotation> <xs:documentation xml:lang="eng">Color cast. The average value, computed using all applicable patches.</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:float"> <xs:minInclusive value="0"/> <xs:maxInclusive value="283"/> </xs:restriction> </xs:simpleType> </xs:element>

Element tns:aggregateMeasurementsType / tns:gainModulation

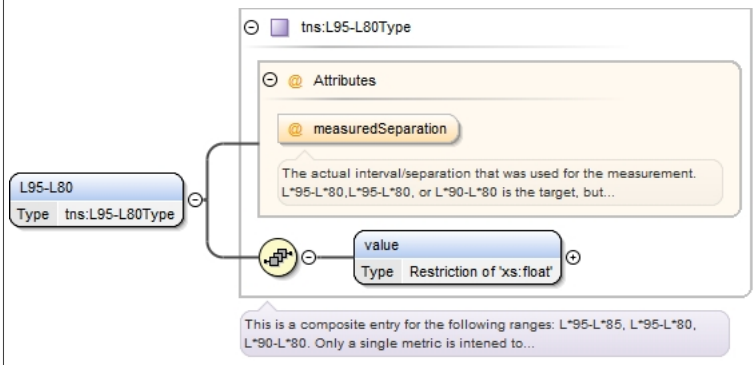
Namespace	kb.se/ns/image_capture_performance
Annotations	Data for the image quality metric gain modulation (tonseparation in Swedish). The name of each child element contains the approximate luminosity value of the two patches used for the measurement. Not all elements has to be used. Generally, measurements for one small intervall and one large intervall should be performed.
Diagram	
Type	tns:gainModulationType
Properties	content: complex
Model	((tns:L95-L80 , tns:L95-L90{0,1}) | (tns:L95-L90)) , ((tns:L85-L20 , tns:L85-L10{0,1}) | (tns:L85-L10))
Children	tns:L85-L10, tns:L85-L20, tns:L95-L80, tns:L95-L90
Instance	<tns:gainModulation xmlns:tns="kb.se/ns/image_capture_performance"> <tns:L95-L80 measuredSeparation="">{1,1}</tns:L95-L80> <tns:L95-L90 measuredSeparation="">{0,1}</tns:L95-L90> <tns:L95-L90 measuredSeparation="">{1,1}</tns:L95-L90>

```
  <tns:L85-L20 measuredSeparation="">{1,1}</tns:L85-L20>
  <tns:L85-L10 measuredSeparation="">{0,1}</tns:L85-L10>
  <tns:L85-L10 measuredSeparation="">{1,1}</tns:L85-L10>
</tns:gainModulation>
```

Source

```
<xs:element type="tns:gainModulationType" name="gainModulation">
  <xs:annotation>
    <xs:documentation xml:lang="eng">Data for the image quality metric gain modulation
 (tonseparation in Swedish). The name of each child element contains the approximate
 luminosity value of the two patches used for the measurement. Not all elements has to be used.
 Generally, measurements for one small intervall and one large intervall should be performed.</
xs:documentation>
  </xs:annotation>
</xs:element>
```

Element `tns:gainModulationType / tns:L95-L80`

Namespace	kb.se/ns/image_capture_performance
Diagram	
Type	tns:L95-L80Type
Properties	content: complex
Model	tns:value
Children	tns:value

Instance	`<tns:L95-L80 measuredSeparation="" xmlns:tns="kb.se/ns/image_capture_performance">`
	`  <tns:value>{1,1}</tns:value>`
	`</tns:L95-L80>`

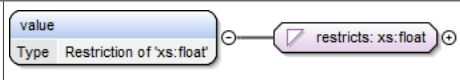
Attributes

QName	Type	Use	
measuredSeparation		optional	
	The actual interval/separation that was used for the measurement. L*95-L*80,L*95-L*80, or L*90-L*80 is the target, but the target patches might result in a slightly different interval.		

Source

```
<xs:element name="L95-L80" type="tns:L95-L80Type"/>
```

Element `tns:L95-L80Type / tns:value`

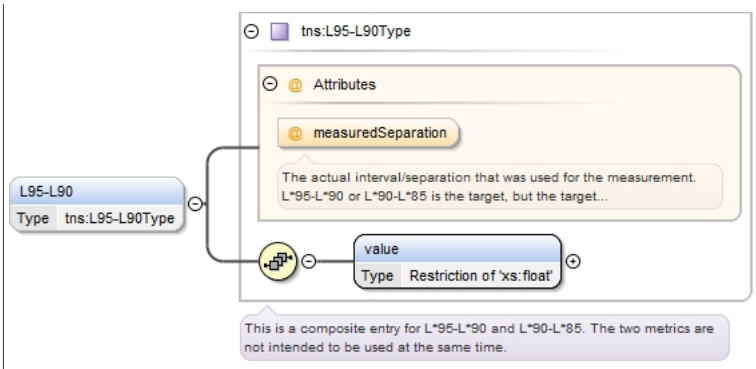
Namespace	kb.se/ns/image_capture_performance
Diagram	
Type	restriction of xs:float
Properties	content: simple
Facets	minInclusive 0

Source

```
<xs:element name="value">
  <xs:simpleType>
    <xs:restriction base="xs:float">
      <xs:minInclusive value="0"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
```

Element `tns:gainModulationType / tns:L95-L90`

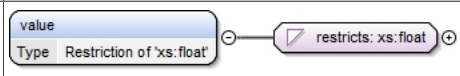
Namespace	kb.se/ns/image_capture_performance

Diagram	
Type	tns:L95-L90Type
Properties	content: complex minOccurs: 0
Model	tns:value
Children	tns:value

Instance	`<tns:L95-L90 measuredSeparation="" xmlns:tns="kb.se/ns/image_capture_performance">`
	`  <tns:value>{1,1}</tns:value>`
	`</tns:L95-L90>`

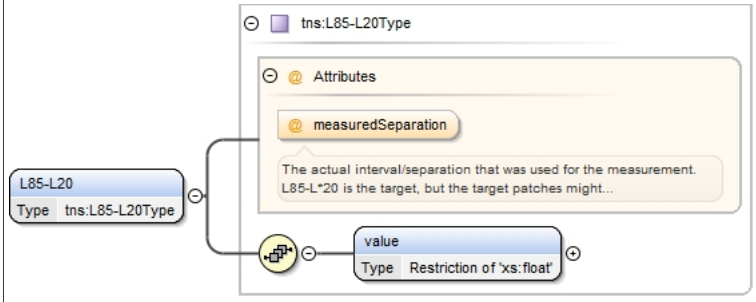
Attributes	**QName** / **Type** / **Use** **measuredSeparation** / optional The actual interval/separation that was used for the measurement. L*95-L*90 or L*90-L*85 is the target, but the target patches might result in a slightly different interval.
Source	`<xs:element name="L95-L90" minOccurs="0" type="tns:L95-L90Type"/>`

Element tns:L95-L90Type / tns:value

Namespace	kb.se/ns/image_capture_performance
Diagram	
Type	restriction of xs:float
Properties	content: simple
Facets	minInclusive 0

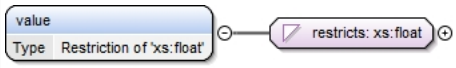
Source	`<xs:element name="value">`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:float">`
	`  <xs:minInclusive value="0"/>`
	`  </xs:restriction>`
	`  </xs:simpleType>`
	`</xs:element>`

Element tns:gainModulationType / tns:L85-L20

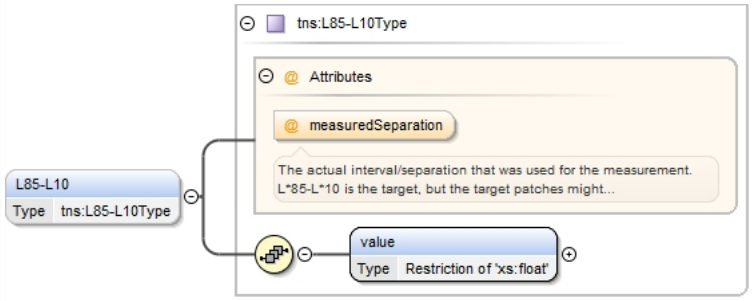
Namespace	kb.se/ns/image_capture_performance
Diagram	
Type	tns:L85-L20Type

Properties	content: complex
Model	tns:value
Children	tns:value
Instance	<tns:L85-L20 measuredSeparation="" xmlns:tns="kb.se/ns/image_capture_performance"> <tns:value>{1,1}</tns:value> </tns:L85-L20>
Attributes	**QName** / **Type** / **Use** **measuredSeparation** / optional The actual interval/separation that was used for the measurement. L85-L*20 is the target, but the target patches might result in a slightly different interval.
Source	<xs:element name="L85-L20" type="tns:L85-L20Type"/>

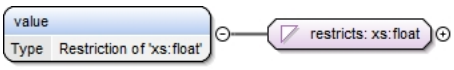
Element tns:L85-L20Type / tns:value

Namespace	kb.se/ns/image_capture_performance
Diagram	
Type	restriction of xs:float
Properties	content: simple
Facets	minInclusive 0
Source	<xs:element name="value"> <xs:simpleType> <xs:restriction base="xs:float"> <xs:minInclusive value="0"/> </xs:restriction> </xs:simpleType> </xs:element>

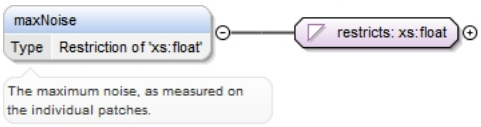
Element tns:gainModulationType / tns:L85-L10

Namespace	kb.se/ns/image_capture_performance
Diagram	
Type	tns:L85-L10Type
Properties	content: complex minOccurs: 0 maxOccurs: 1
Model	tns:value
Children	tns:value
Instance	<tns:L85-L10 measuredSeparation="" xmlns:tns="kb.se/ns/image_capture_performance"> <tns:value>{1,1}</tns:value> </tns:L85-L10>
Attributes	**QName** / **Type** / **Use** **measuredSeparation** / optional The actual interval/separation that was used for the measurement. L*85-L*10 is the target, but the target patches might result in a slightly different interval.
Source	<xs:element name="L85-L10" maxOccurs="1" minOccurs="0" type="tns:L85-L10Type"/>

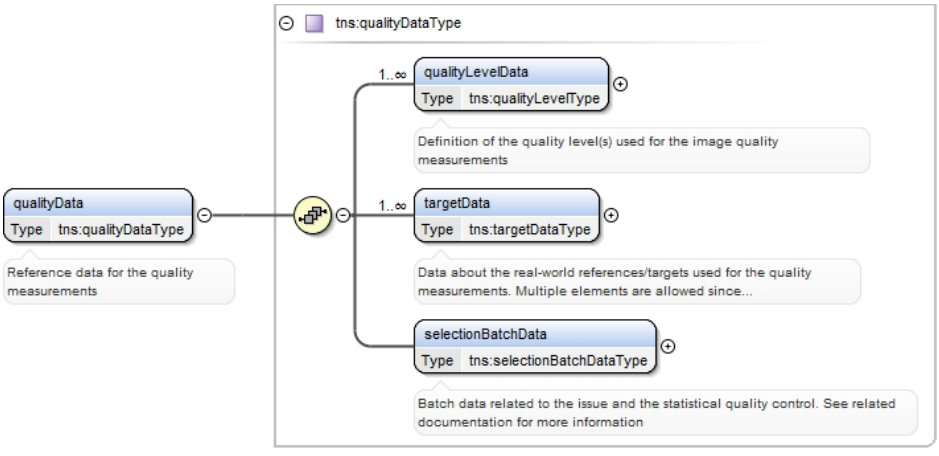
Element tns:L85-L10Type / tns:value

Namespace	kb.se/ns/image_capture_performance
Diagram	
Type	restriction of xs:float
Properties	content: simple
Facets	minInclusive 0
Source	<xs:element name="value"> <xs:simpleType> <xs:restriction base="xs:float"> <xs:minInclusive value="0"/> </xs:restriction> </xs:simpleType> </xs:element>

Element tns:aggregateMeasurementsType / tns:maxNoise

Namespace	kb.se/ns/image_capture_performance
Annotations	The maximum noise, as measured on the individual patches.
Diagram	
Type	restriction of xs:float
Properties	content: simple minOccurs: 0
Facets	minInclusive 0
Source	<xs:element name="maxNoise" minOccurs="0"> <xs:annotation> <xs:documentation xml:lang="eng">The maximum noise, as measured on the individual patches.</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:float"> <xs:minInclusive value="0"/> </xs:restriction> </xs:simpleType> </xs:element>

Element tns:imageQuailtyControlDataType / tns:qualityData

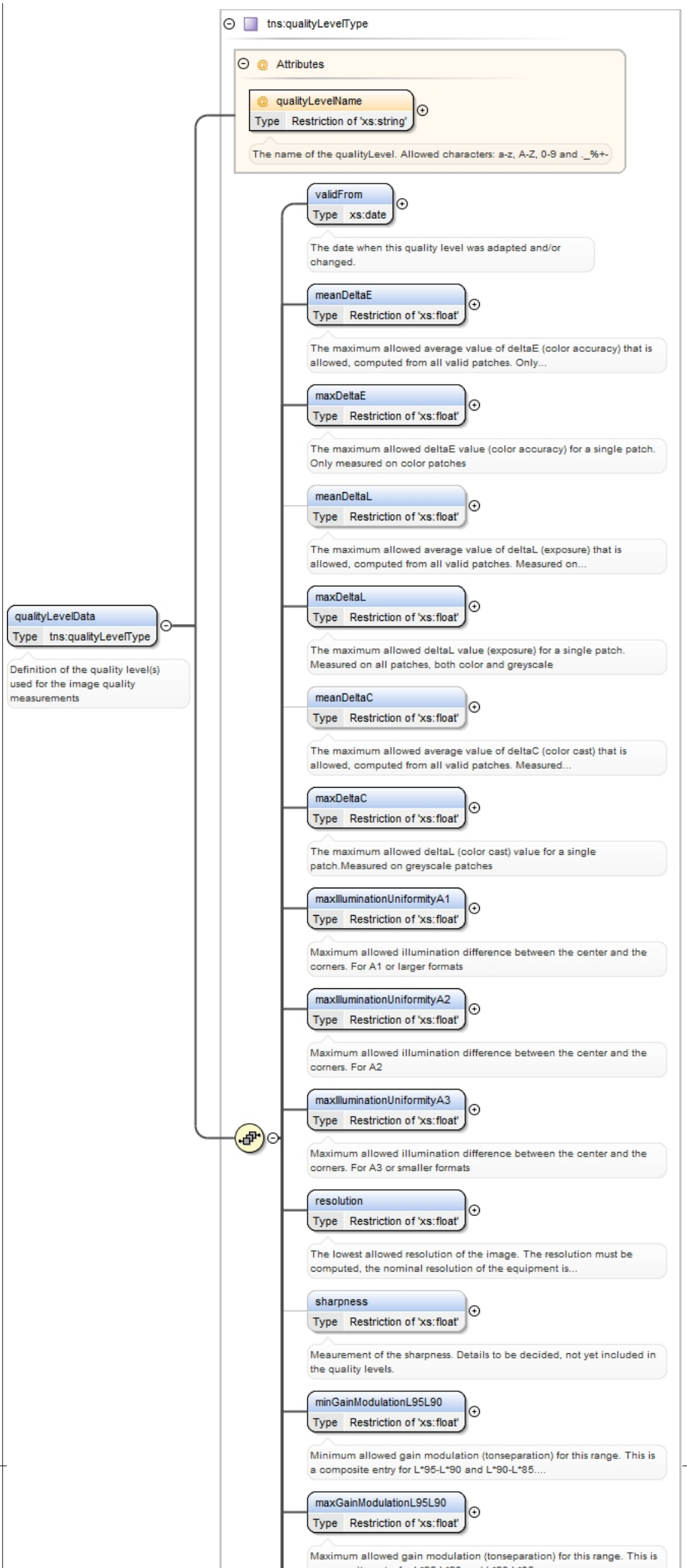
Namespace	kb.se/ns/image_capture_performance
Annotations	Reference data for the quality measurements
Diagram	

Type	tns:qualityDataType
Properties	content: complex
Model	tns:qualityLevelData+ , tns:targetData+ , tns:selectionBatchData
Children	tns:qualityLevelData, tns:selectionBatchData, tns:targetData
Instance	<tns:qualityData xmlns:tns="kb.se/ns/image_capture_performance"> <tns:qualityLevelData qualityLevelName="">{1,unbounded}</tns:qualityLevelData> <tns:targetData dateOfMeasurement="" nameOfTarget="">{1,unbounded}</tns:targetData> <tns:selectionBatchData selectionBatchID="">{1,1}</tns:selectionBatchData> </tns:qualityData>
Source	<xs:element type="tns:qualityDataType" name="qualityData"> <xs:annotation> <xs:documentation xml:lang="eng">Reference data for the quality measurements</xs:documentation> </xs:annotation> </xs:element>

Element tns:qualityDataType / tns:qualityLevelData

Namespace	kb.se/ns/image_capture_performance
Annotations	Definition of the quality level(s) used for the image quality measurements

Diagram


qualityLevelData
Type tns:qualityLevelType
Definition of the quality level(s) used for the image quality measurements
tns:qualityLevelType
Attributes
qualityLevelName
Type Restriction of 'xs:string'
The name of the qualityLevel. Allowed characters: a-z, A-Z, 0-9 and ._%+-
validFrom
Type xs:date
The date when this quality level was adapted and/or changed.
meanDeltaE
Type Restriction of 'xs:float'
The maximum allowed average value of deltaE (color accuracy) that is allowed, computed from all valid patches. Only...
maxDeltaE
Type Restriction of 'xs:float'
The maximum allowed deltaE value (color accuracy) for a single patch. Only measured on color patches
meanDeltaL
Type Restriction of 'xs:float'
The maximum allowed average value of deltaL (exposure) that is allowed, computed from all valid patches. Measured on...
maxDeltaL
Type Restriction of 'xs:float'
The maximum allowed deltaL value (exposure) for a single patch. Measured on all patches, both color and greyscale
meanDeltaC
Type Restriction of 'xs:float'
The maximum allowed average value of deltaC (color cast) that is allowed, computed from all valid patches. Measured...
maxDeltaC
Type Restriction of 'xs:float'
The maximum allowed deltaL (color cast) value for a single patch.Measured on greyscale patches
maxIlluminationUniformityA1
Type Restriction of 'xs:float'
Maximum allowed illumination difference between the center and the corners. For A1 or larger formats
maxIlluminationUniformityA2
Type Restriction of 'xs:float'
Maximum allowed illumination difference between the center and the corners. For A2
maxIlluminationUniformityA3
Type Restriction of 'xs:float'
Maximum allowed illumination difference between the center and the corners. For A3 or smaller formats
resolution
Type Restriction of 'xs:float'
The lowest allowed resolution of the image. The resolution must be computed, the nominal resolution of the equipment is...
sharpness
Type Restriction of 'xs:float'
Meaurement of the sharpness. Details to be decided, not yet included in the quality levels.
minGainModulationL95L90
Type Restriction of 'xs:float'
Minimum allowed gain modulation (tonseparation) for this range. This is a composite entry for L*95-L*90 and L*90-L*85....
maxGainModulationL95L90
Type Restriction of 'xs:float'
Maximum allowed gain modulation (tonseparation) for this range. This is

Type	tns:qualityLevelType
Properties	content: complex maxOccurs: unbounded
Model	tns:validFrom , tns:meanDeltaE , tns:maxDeltaE , tns:meanDeltaL{0,1} , tns:maxDeltaL , tns:meanDeltaC{0,1} , tns:maxDeltaC , tns:maxIlluminationUniformityA1 , tns:maxIlluminationUniformityA2 , tns:maxIlluminationUniformityA3 , tns:resolution , tns:sharpness{0,1} , tns:minGainModulationL95L90 , tns:maxGainModulationL95L90 , tns:minGainModulationL95L80 , tns:maxGainModulationL95L80 , tns:minGainModulationL85L20 , tns:maxGainModulationL85L20 , tns:minGainModulationL85L10 , tns:maxGainModulationL85L10
Children	tns:maxDeltaC, tns:maxDeltaE, tns:maxDeltaL, tns:maxGainModulationL85L10, tns:maxGainModulationL85L20, tns:maxGainModulationL95L80, tns:maxGainModulationL95L90, tns:maxIlluminationUniformityA1, tns:maxIlluminationUniformityA2, tns:maxIlluminationUniformityA3, tns:meanDeltaC, tns:meanDeltaE, tns:meanDeltaL, tns:minGainModulationL85L10, tns:minGainModulationL85L20, tns:minGainModulationL95L80, tns:minGainModulationL95L90, tns:resolution, tns:sharpness, tns:validFrom

Instance

```
<tns:qualityLevelData qualityLevelName="" xmlns:tns="kb.se/ns/image_capture_performance">
  <tns:validFrom>{1,1}</tns:validFrom>
  <tns:meanDeltaE>{1,1}</tns:meanDeltaE>
  <tns:maxDeltaE>{1,1}</tns:maxDeltaE>
  <tns:meanDeltaL>{0,1}</tns:meanDeltaL>
  <tns:maxDeltaL>{1,1}</tns:maxDeltaL>
  <tns:meanDeltaC>{0,1}</tns:meanDeltaC>
  <tns:maxDeltaC>{1,1}</tns:maxDeltaC>
  <tns:maxIlluminationUniformityA1>{1,1}</tns:maxIlluminationUniformityA1>
  <tns:maxIlluminationUniformityA2>{1,1}</tns:maxIlluminationUniformityA2>
  <tns:maxIlluminationUniformityA3>{1,1}</tns:maxIlluminationUniformityA3>
  <tns:resolution>{1,1}</tns:resolution>
  <tns:sharpness>{0,1}</tns:sharpness>
  <tns:minGainModulationL95L90>{1,1}</tns:minGainModulationL95L90>
  <tns:maxGainModulationL95L90>{1,1}</tns:maxGainModulationL95L90>
  <tns:minGainModulationL95L80>{1,1}</tns:minGainModulationL95L80>
  <tns:maxGainModulationL95L80>{1,1}</tns:maxGainModulationL95L80>
  <tns:minGainModulationL85L20>{1,1}</tns:minGainModulationL85L20>
  <tns:maxGainModulationL85L20>{1,1}</tns:maxGainModulationL85L20>
  <tns:minGainModulationL85L10>{1,1}</tns:minGainModulationL85L10>
  <tns:maxGainModulationL85L10>{1,1}</tns:maxGainModulationL85L10>
</tns:qualityLevelData>
```

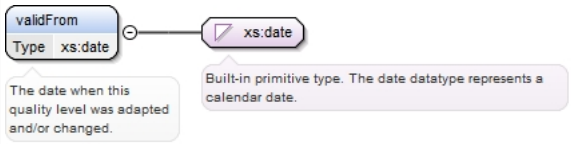
Attributes

QName	Type	Use	
qualityLevelName	restriction of xs:string	required	
	The name of the qualityLevel. Allowed characters: a-z, A-Z, 0-9 and ._%+-		

Source

```
<xs:element type="tns:qualityLevelType" name="qualityLevelData" maxOccurs="unbounded">
  <xs:annotation>
    <xs:documentation xml:lang="eng">Definition of the quality level(s) used for the image quality
 measurements</xs:documentation>
  </xs:annotation>
</xs:element>
```

Element tns:qualityLevelType / tns:validFrom

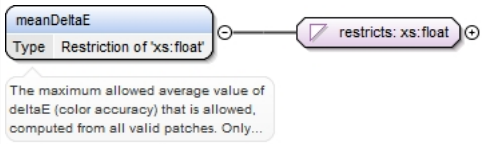
Namespace	kb.se/ns/image_capture_performance
Annotations	The date when this quality level was adapted and/or changed.
Diagram	
Type	xs:date
Properties	content: simple

Source

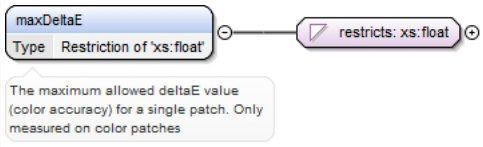
```
<xs:element type="xs:date" name="validFrom">
  <xs:annotation>
    <xs:documentation xml:lang="eng">The date when this quality level was adapted and/or changed.</
xs:documentation>
  </xs:annotation>
</xs:element>
```

Element tns:qualityLevelType / tns:meanDeltaE

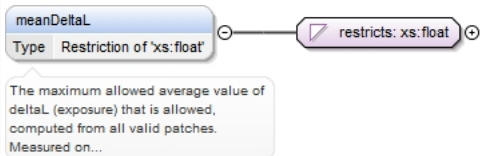
Namespace	kb.se/ns/image_capture_performance

Annotations	The maximum allowed average value of deltaE (color accuracy) that is allowed, computed from all valid patches. Only measured on color patches
Diagram	
Type	restriction of xs:float
Properties	content: simple
Facets	maxInclusive 347 minInclusive 0
Source	<xs:element name="meanDeltaE"> <xs:annotation> <xs:documentation xml:lang="eng">The maximum allowed average value of deltaE (color accuracy) that is allowed, computed from all valid patches. Only measured on color patches</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:float"> <xs:minInclusive value="0"/> <xs:maxInclusive value="347"/> </xs:restriction> </xs:simpleType> </xs:element>

Element tns:qualityLevelType / tns:maxDeltaE

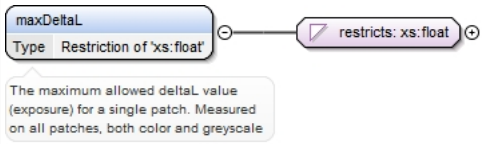
Namespace	kb.se/ns/image_capture_performance
Annotations	The maximum allowed deltaE value (color accuracy) for a single patch. Only measured on color patches
Diagram	
Type	restriction of xs:float
Properties	content: simple
Facets	maxInclusive 347 minInclusive 0
Source	<xs:element name="maxDeltaE"> <xs:annotation> <xs:documentation xml:lang="eng">The maximum allowed deltaE value (color accuracy) for a single patch. Only measured on color patches</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:float"> <xs:minInclusive value="0"/> <xs:maxInclusive value="347"/> </xs:restriction> </xs:simpleType> </xs:element>

Element tns:qualityLevelType / tns:meanDeltaL

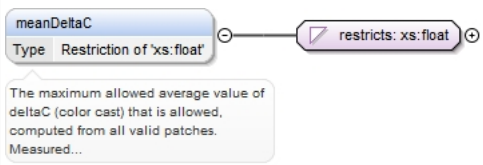
Namespace	kb.se/ns/image_capture_performance
Annotations	The maximum allowed average value of deltaL (exposure) that is allowed, computed from all valid patches. Measured on all patches, both color and greyscale
Diagram	

Type	restriction of xs:float
Properties	content: simple minOccurs: 0
Facets	maxInclusive 200 minInclusive 0
Source	<xs:element name="meanDeltaL" minOccurs="0"> <xs:annotation> <xs:documentation xml:lang="eng">The maximum allowed average value of deltaL (exposure) that is allowed, computed from all valid patches. Measured on all patches, both color and greyscale</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:float"> <xs:minInclusive value="0"/> <xs:maxInclusive value="200"/> </xs:restriction> </xs:simpleType> </xs:element>

Element tns:qualityLevelType / tns:maxDeltaL

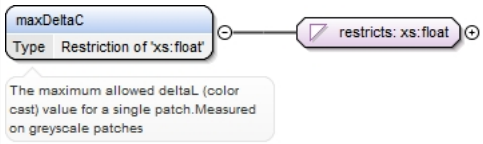
Namespace	kb.se/ns/image_capture_performance
Annotations	The maximum allowed deltaL value (exposure) for a single patch. Measured on all patches, both color and greyscale
Diagram	
Type	restriction of xs:float
Properties	content: simple
Facets	maxInclusive 200 minInclusive 0
Source	<xs:element name="maxDeltaL"> <xs:annotation> <xs:documentation xml:lang="eng">The maximum allowed deltaL value (exposure) for a single patch. Measured on all patches, both color and greyscale</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:float"> <xs:minInclusive value="0"/> <xs:maxInclusive value="200"/> </xs:restriction> </xs:simpleType> </xs:element>

Element tns:qualityLevelType / tns:meanDeltaC

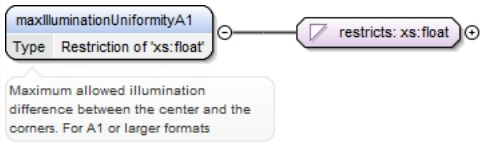
Namespace	kb.se/ns/image_capture_performance
Annotations	The maximum allowed average value of deltaC (color cast) that is allowed, computed from all valid patches. Measured only on greyscale patches
Diagram	
Type	restriction of xs:float
Properties	content: simple minOccurs: 0
Facets	maxInclusive 283

	minInclusive	0
Source	<xs:element name="meanDeltaC" minOccurs="0"> <xs:annotation> <xs:documentation xml:lang="eng">The maximum allowed average value of deltaC (color cast) that is allowed, computed from all valid patches. Measured only on greyscale patches</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:float"> <xs:minInclusive value="0"/> <xs:maxInclusive value="283"/> </xs:restriction> </xs:simpleType> </xs:element>	

Element tns:qualityLevelType / tns:maxDeltaC

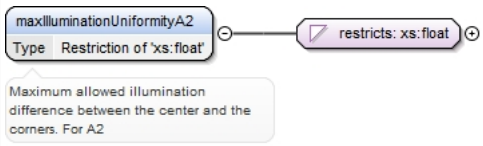
Namespace	kb.se/ns/image_capture_performance	
Annotations	The maximum allowed deltaL (color cast) value for a single patch.Measured on greyscale patches	
Diagram		
Type	restriction of xs:float	
Properties	content:	simple
Facets	maxInclusive	283
	minInclusive	0
Source	<xs:element name="maxDeltaC"> <xs:annotation> <xs:documentation xml:lang="eng">The maximum allowed deltaL (color cast) value for a single patch.Measured on greyscale patches</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:float"> <xs:minInclusive value="0"/> <xs:maxInclusive value="283"/> </xs:restriction> </xs:simpleType> </xs:element>	

Element tns:qualityLevelType / tns:maxIlluminationUniformityA1

Namespace	kb.se/ns/image_capture_performance	
Annotations	Maximum allowed illumination difference between the center and the corners. For A1 or larger formats	
Diagram		
Type	restriction of xs:float	
Properties	content:	simple
Facets	maxInclusive	200
	minInclusive	0
Source	<xs:element name="maxIlluminationUniformityA1"> <xs:annotation> <xs:documentation xml:lang="eng">Maximum allowed illumination difference between the center and the corners. For A1 or larger formats</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:float"> <xs:minInclusive value="0"/> <xs:maxInclusive value="200"/> </xs:restriction>	

```
  </xs:simpleType>
</xs:element>
```

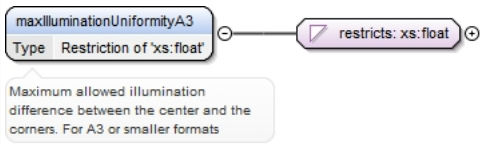
Element tns:qualityLevelType / tns:maxIlluminationUniformityA2

Namespace	kb.se/ns/image_capture_performance
Annotations	Maximum allowed illumination difference between the center and the corners. For A2
Diagram	
Type	restriction of xs:float
Properties	content: simple
Facets	maxInclusive 200 minInclusive 0

Source

```
<xs:element name="maxIlluminationUniformityA2">
  <xs:annotation>
    <xs:documentation xml:lang="eng">Maximum allowed illumination difference between the center and
 the corners. For A2</xs:documentation>
  </xs:annotation>
  <xs:simpleType>
    <xs:restriction base="xs:float">
      <xs:minInclusive value="0"/>
      <xs:maxInclusive value="200"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
```

Element tns:qualityLevelType / tns:maxIlluminationUniformityA3

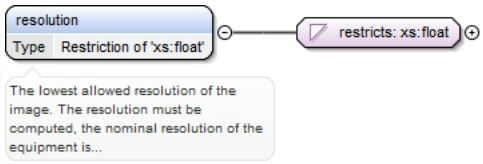
Namespace	kb.se/ns/image_capture_performance
Annotations	Maximum allowed illumination difference between the center and the corners. For A3 or smaller formats
Diagram	
Type	restriction of xs:float
Properties	content: simple
Facets	maxInclusive 200 minInclusive 0

Source

```
<xs:element name="maxIlluminationUniformityA3">
  <xs:annotation>
    <xs:documentation xml:lang="eng">Maximum allowed illumination difference between the center and
 the corners. For A3 or smaller formats</xs:documentation>
  </xs:annotation>
  <xs:simpleType>
    <xs:restriction base="xs:float">
      <xs:minInclusive value="0"/>
      <xs:maxInclusive value="200"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
```

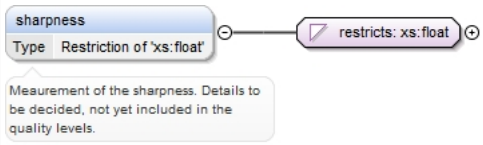
Element tns:qualityLevelType / tns:resolution

Namespace	kb.se/ns/image_capture_performance
Annotations	The lowest allowed resolution of the image. The resolution must be computed, the nominal resolution of the equipment is not allowed.

Diagram	
Type	restriction of xs:float
Properties	content: simple
Facets	minInclusive 0

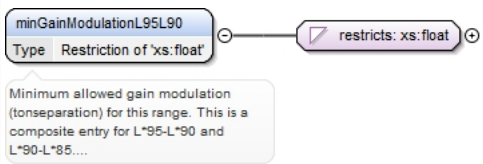
Source	`<xs:element name="resolution">`
	`  <xs:annotation>`
	`  <xs:documentation xml:lang="eng">The lowest allowed resolution of the image. The resolution must be computed, the nominal resolution of the equipment is not allowed.</xs:documentation>`
	`  </xs:annotation>`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:float">`
	`  <xs:minInclusive value="0"/>`
	`  </xs:restriction>`
	`  </xs:simpleType>`
	`</xs:element>`

Element tns:qualityLevelType / tns:sharpness

Namespace	kb.se/ns/image_capture_performance
Annotations	Meaurement of the sharpness. Details to be decided, not yet included in the quality levels.
Diagram	
Type	restriction of xs:float
Properties	content: simple minOccurs: 0
Facets	minInclusive 0

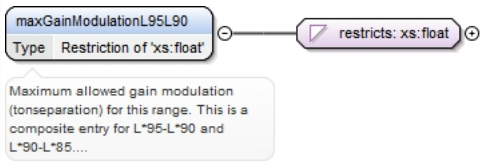
Source	`<xs:element minOccurs="0" name="sharpness">`
	`  <xs:annotation>`
	`  <xs:documentation xml:lang="eng">Meaurement of the sharpness. Details to be decided, not yet included in the quality levels.</xs:documentation>`
	`  </xs:annotation>`
	`  <xs:simpleType>`
	`  <xs:restriction base="xs:float">`
	`  <xs:minInclusive value="0"/>`
	`  </xs:restriction>`
	`  </xs:simpleType>`
	`</xs:element>`

Element tns:qualityLevelType / tns:minGainModulationL95L90

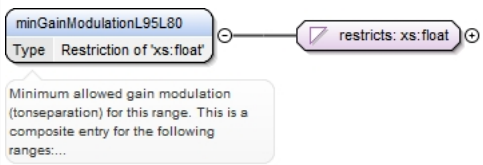
Namespace	kb.se/ns/image_capture_performance
Annotations	Minimum allowed gain modulation (tonseparation) for this range. This is a composite entry for L*95-L*90 and L*90-L*85. The two metrics are not intended to be used at the same time.
Diagram	
Type	restriction of xs:float
Properties	content: simple
Facets	minInclusive 0

Source	<xs:element name="minGainModulationL95L90"> <xs:annotation> <xs:documentation xml:lang="eng">Minimum allowed gain modulation (tonseparation) for this range. This is a composite entry for L*95-L*90 and L*90-L*85. The two metrics are not intended to be used at the same time.</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:float"> <xs:minInclusive value="0"/> </xs:restriction> </xs:simpleType> </xs:element>

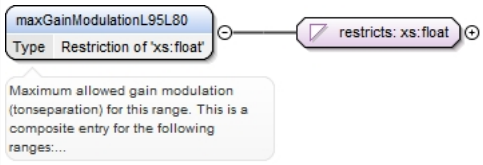
Element tns:qualityLevelType / tns:maxGainModulationL95L90

Namespace	kb.se/ns/image_capture_performance
Annotations	Maximum allowed gain modulation (tonseparation) for this range. This is a composite entry for L*95-L*90 and L*90-L*85. The two metrics are not intended to be used at the same time.
Diagram	
Type	restriction of xs:float
Properties	content: simple
Facets	minInclusive 0
Source	<xs:element name="maxGainModulationL95L90"> <xs:annotation> <xs:documentation xml:lang="eng">Maximum allowed gain modulation (tonseparation) for this range. This is a composite entry for L*95-L*90 and L*90-L*85. The two metrics are not intended to be used at the same time.</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:float"> <xs:minInclusive value="0"/> </xs:restriction> </xs:simpleType> </xs:element>

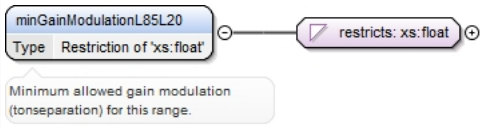
Element tns:qualityLevelType / tns:minGainModulationL95L80

Namespace	kb.se/ns/image_capture_performance
Annotations	Minimum allowed gain modulation (tonseparation) for this range. This is a composite entry for the following ranges: L*95-L*85, L*95-L*80, L*90-L*80. Only a single metrics is intened to be used at a measurement time.
Diagram	
Type	restriction of xs:float
Properties	content: simple
Facets	minInclusive 0
Source	<xs:element name="minGainModulationL95L80"> <xs:annotation> <xs:documentation xml:lang="eng">Minimum allowed gain modulation (tonseparation) for this range. This is a composite entry for the following ranges: L*95-L*85, L*95-L*80, L*90-L*80. Only a single metrics is intened to be used at a measurement time.</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:float"> <xs:minInclusive value="0"/> </xs:restriction> </xs:simpleType> </xs:element>

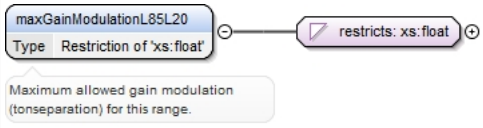
Element tns:qualityLevelType / tns:maxGainModulationL95L80

Namespace	kb.se/ns/image_capture_performance
Annotations	Maximum allowed gain modulation (tonseparation) for this range. This is a composite entry for the following ranges: L*95-L*85, L*95-L*80, L*90-L*80. Only a single metrics is intened to be used at a measurement time.
Diagram	
Type	restriction of xs:float
Properties	content: simple
Facets	minInclusive 0
Source	<xs:element name="maxGainModulationL95L80"> <xs:annotation> <xs:documentation xml:lang="eng">Maximum allowed gain modulation (tonseparation) for this range. This is a composite entry for the following ranges: L*95-L*85, L*95-L*80, L*90-L*80. Only a single metrics is intened to be used at a measurement time.</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:float"> <xs:minInclusive value="0"/> </xs:restriction> </xs:simpleType> </xs:element>

Element tns:qualityLevelType / tns:minGainModulationL85L20

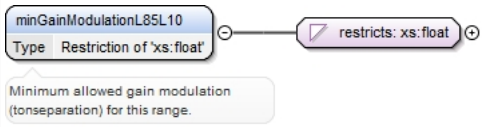
Namespace	kb.se/ns/image_capture_performance
Annotations	Minimum allowed gain modulation (tonseparation) for this range.
Diagram	
Type	restriction of xs:float
Properties	content: simple
Facets	minInclusive 0
Source	<xs:element name="minGainModulationL85L20"> <xs:annotation> <xs:documentation xml:lang="eng">Minimum allowed gain modulation (tonseparation) for this range.</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:float"> <xs:minInclusive value="0"/> </xs:restriction> </xs:simpleType> </xs:element>

Element tns:qualityLevelType / tns:maxGainModulationL85L20

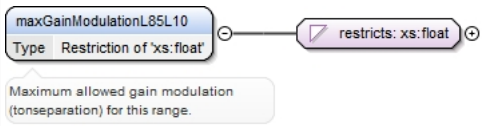
Namespace	kb.se/ns/image_capture_performance
Annotations	Maximum allowed gain modulation (tonseparation) for this range.
Diagram	
Type	restriction of xs:float
Properties	content: simple

Facets	minInclusive 0
Source	<xs:element name="maxGainModulationL85L20"> <xs:annotation> <xs:documentation xml:lang="eng">Maximum allowed gain modulation (tonseparation) for this range.</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:float"> <xs:minInclusive value="0"/> </xs:restriction> </xs:simpleType> </xs:element>

Element tns:qualityLevelType / tns:minGainModulationL85L10

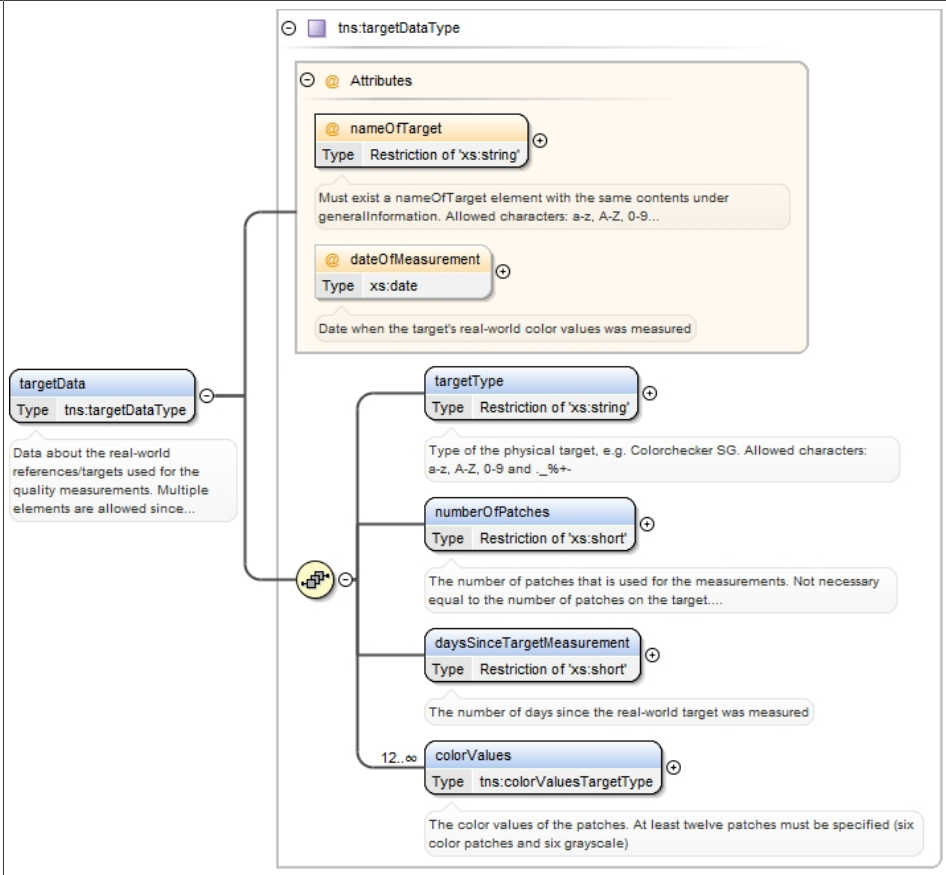
Namespace	kb.se/ns/image_capture_performance
Annotations	Minimum allowed gain modulation (tonseparation) for this range.
Diagram	
Type	restriction of xs:float
Properties	content: simple
Facets	minInclusive 0
Source	<xs:element name="minGainModulationL85L10"> <xs:annotation> <xs:documentation xml:lang="eng">Minimum allowed gain modulation (tonseparation) for this range.</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:float"> <xs:minInclusive value="0"/> </xs:restriction> </xs:simpleType> </xs:element>

Element tns:qualityLevelType / tns:maxGainModulationL85L10

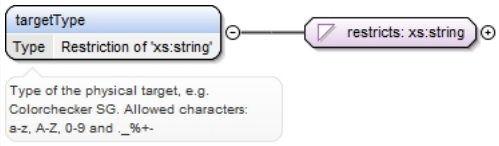
Namespace	kb.se/ns/image_capture_performance
Annotations	Maximum allowed gain modulation (tonseparation) for this range.
Diagram	
Type	restriction of xs:float
Properties	content: simple
Facets	minInclusive 0
Source	<xs:element name="maxGainModulationL85L10"> <xs:annotation> <xs:documentation xml:lang="eng">Maximum allowed gain modulation (tonseparation) for this range.</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:float"> <xs:minInclusive value="0"/> </xs:restriction> </xs:simpleType> </xs:element>

Element tns:qualityDataType / tns:targetData

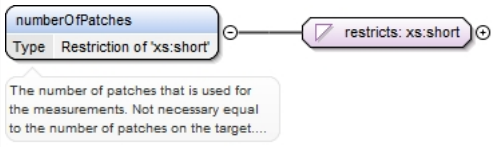
Namespace	kb.se/ns/image_capture_performance
Annotations	Data about the real-world references/targets used for the quality measurements. Multiple elements are allowed since multiple targets might have

	been used for the qaulity measurements. Always store for reference, although some data is only useful when we also store the images that contain the targets.
Diagram	
Type	tns:targetDataType
Properties	content: complex minOccurs: 1 maxOccurs: unbounded
Model	tns:targetType , tns:numberOfPatches , tns:daysSinceTargetMeasurement , tns:colorValues{12,unbounded}
Children	tns:colorValues, tns:daysSinceTargetMeasurement, tns:numberOfPatches, tns:targetType
Instance	<tns:targetData dateOfMeasurement="" nameOfTarget="" xmlns:tns="kb.se/ns/image_capture_performance"> <tns:targetType>{1,1}</tns:targetType> <tns:numberOfPatches>{1,1}</tns:numberOfPatches> <tns:daysSinceTargetMeasurement>{1,1}</tns:daysSinceTargetMeasurement> <tns:colorValues patchID="">{12,unbounded}</tns:colorValues> </tns:targetData>
Attributes	**QName** / **Type** / **Use** **dateOfMeasurement** / xs:date / optional Date when the target's real-world color values was measured **nameOfTarget** / restriction of xs:string / required Must exist a nameOfTarget element with the same contents under generalInformation. Allowed characters: a-z, A-Z, 0-9 and ._%+-
Source	<xs:element name="targetData" type="tns:targetDataType" maxOccurs="unbounded" minOccurs="1"> <xs:annotation> <xs:documentation xml:lang="eng">Data about the real-world references/targets used for the quality measurements. Multiple elements are allowed since multiple targets might have been used for the qaulity measurements. Always store for reference, although some data is only useful when we also store the images that contain the targets.</xs:documentation> </xs:annotation> </xs:element>

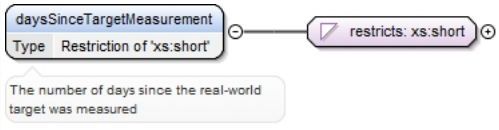
Element tns:targetDataType / tns:targetType

Namespace	kb.se/ns/image_capture_performance
Annotations	Type of the physical target, e.g. Colorchecker SG. Allowed characters: a-z, A-Z, 0-9 and ._%+-
Diagram	
Type	restriction of xs:string
Properties	content: simple
Facets	pattern ([a-zA-Z0-9._%+-]+)|()
Source	<xs:element name="targetType"> <xs:annotation> <xs:documentation xml:lang="eng">Type of the physical target, e.g. Colorchecker SG. Allowed characters: a-z, A-Z, 0-9 and ._%+-</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:string"> <xs:pattern value="[a-zA-Z0-9._%+-]+"/> <xs:pattern value=""/> </xs:restriction> </xs:simpleType> </xs:element>

Element tns:targetDataType / tns:numberOfPatches

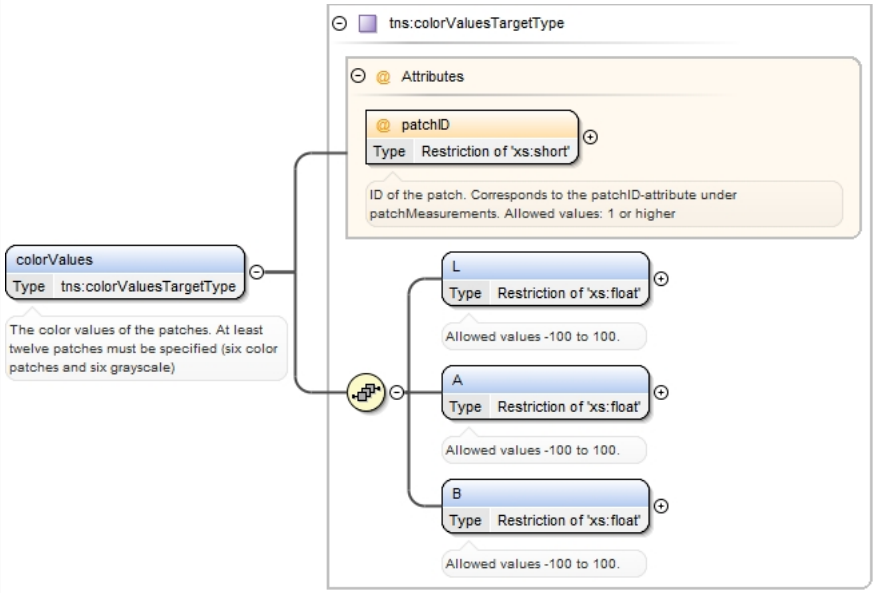
Namespace	kb.se/ns/image_capture_performance
Annotations	The number of patches that is used for the measurements. Not necessary equal to the number of patches on the target. Set to twelve or higher (for Digidaily), six color patches and six grayscale patches
Diagram	
Type	restriction of xs:short
Properties	content: simple
Facets	minInclusive 12
Source	<xs:element name="numberOfPatches"> <xs:annotation> <xs:documentation xml:lang="eng">The number of patches that is used for the measurements. Not necessary equal to the number of patches on the target. Set to twelve or higher (for Digidaily), six color patches and six grayscale patches</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:short"> <xs:minInclusive value="12"/> </xs:restriction> </xs:simpleType> </xs:element>

Element tns:targetDataType / tns:daysSinceTargetMeasurement

Namespace	kb.se/ns/image_capture_performance
Annotations	The number of days since the real-world target was measured
Diagram	

Type	restriction of xs:short
Properties	content: simple
Facets	minInclusive 0
Source	<xs:element name="daysSinceTargetMeasurement"> <xs:annotation> <xs:documentation xml:lang="eng">The number of days since the real-world target was measured</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:short"> <xs:minInclusive value="0"/> </xs:restriction> </xs:simpleType> </xs:element>

Element tns:targetDataType / tns:colorValues

Namespace	kb.se/ns/image_capture_performance
Annotations	The color values of the patches. At least twelve patches must be specified (six color patches and six grayscale)
Diagram	
Type	tns:colorValuesTargetType
Properties	content: complex minOccurs: 12 maxOccurs: unbounded
Model	tns:L , tns:A , tns:B
Children	tns:A, tns:B, tns:L
Instance	<tns:colorValues patchID="" xmlns:tns="kb.se/ns/image_capture_performance"> <tns:L>{1,1}</tns:L> <tns:A>{1,1}</tns:A> <tns:B>{1,1}</tns:B> </tns:colorValues>

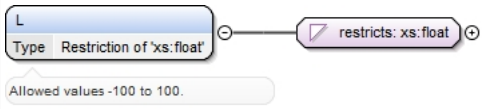
Attributes

QName	Type	Use	
patchID	restriction of xs:short	required	
	ID of the patch. Corresponds to the patchID-attribute under patchMeasurements. Allowed values: 1 or higher		

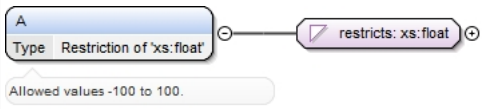
Source

```
<xs:element maxOccurs="unbounded" minOccurs="12" name="colorValues"
 type="tns:colorValuesTargetType">
  <xs:annotation>
    <xs:documentation xml:lang="eng">The color values of the patches. At least twelve patches must
 be specified (six color patches and six grayscale)</xs:documentation>
  </xs:annotation>
</xs:element>
```

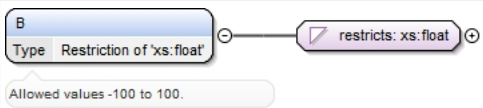
Element tns:colorValuesTargetType / tns:L

Namespace	kb.se/ns/image_capture_performance
Annotations	Allowed values -100 to 100.
Diagram	
Type	restriction of xs:float
Properties	content: simple minOccurs: 1
Facets	maxInclusive 100 minInclusive -100
Source	<xs:element name="L" minOccurs="1"> <xs:annotation> <xs:documentation xml:lang="eng">Allowed values -100 to 100.</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:float"> <xs:minInclusive value="-100"/> <xs:maxInclusive value="100"/> </xs:restriction> </xs:simpleType> </xs:element>

Element tns:colorValuesTargetType / tns:A

Namespace	kb.se/ns/image_capture_performance
Annotations	Allowed values -100 to 100.
Diagram	
Type	restriction of xs:float
Properties	content: simple minOccurs: 1
Facets	maxInclusive 100 minInclusive -100
Source	<xs:element name="A" minOccurs="1"> <xs:annotation> <xs:documentation xml:lang="eng">Allowed values -100 to 100.</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:float"> <xs:minInclusive value="-100"/> <xs:maxInclusive value="100"/> </xs:restriction> </xs:simpleType> </xs:element>

Element tns:colorValuesTargetType / tns:B

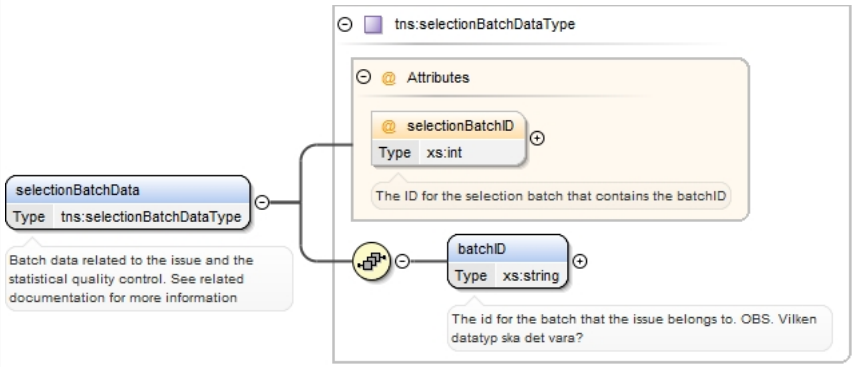
Namespace	kb.se/ns/image_capture_performance
Annotations	Allowed values -100 to 100.
Diagram	
Type	restriction of xs:float
Properties	content: simple

	minOccurs:	1
Facets	maxInclusive	100
	minInclusive	-100

Source

```
<xs:element name="B" minOccurs="1">
  <xs:annotation>
    <xs:documentation xml:lang="eng">Allowed values -100 to 100.</xs:documentation>
  </xs:annotation>
  <xs:simpleType>
    <xs:restriction base="xs:float">
      <xs:minInclusive value="-100"/>
      <xs:maxInclusive value="100"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
```

Element tns:qualityDataType / tns:selectionBatchData

Namespace	kb.se/ns/image_capture_performance
Annotations	Batch data related to the issue and the statistical quality control. See related documentation for more information
Diagram	
Type	tns:selectionBatchDataType
Properties	content: complex
Model	tns:batchID
Children	tns:batchID

Instance

```
<tns:selectionBatchData selectionBatchID="" xmlns:tns="kb.se/ns/image_capture_performance">
  <tns:batchID>{1,1}</tns:batchID>
</tns:selectionBatchData>
```

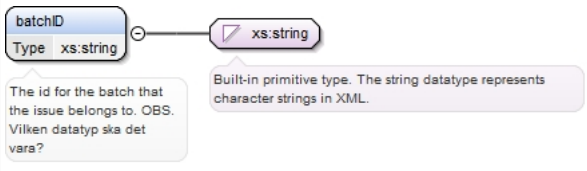
Attributes

QName	Type	Use	
selectionBatchID	xs:int	optional	
	The ID for the selection batch that contains the batchID		

Source

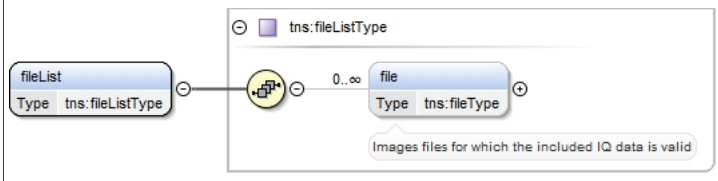
```
<xs:element name="selectionBatchData" type="tns:selectionBatchDataType">
  <xs:annotation>
    <xs:documentation xml:lang="eng">Batch data related to the issue and the statistical quality
 control. See related documentation for more information</xs:documentation>
  </xs:annotation>
</xs:element>
```

Element tns:selectionBatchDataType / tns:batchID

Namespace	kb.se/ns/image_capture_performance
Annotations	The id for the batch that the issue belongs to. OBS. Vilken datatyp ska det vara?
Diagram	

Type	xs:string
Properties	content: simple
Source	<xs:element name="batchID" type="xs:string"> <xs:annotation> <xs:documentation xml:lang="eng">The id for the batch that the issue belongs to. OBS. Vilken datatyp ska det vara?</xs:documentation> </xs:annotation> </xs:element>

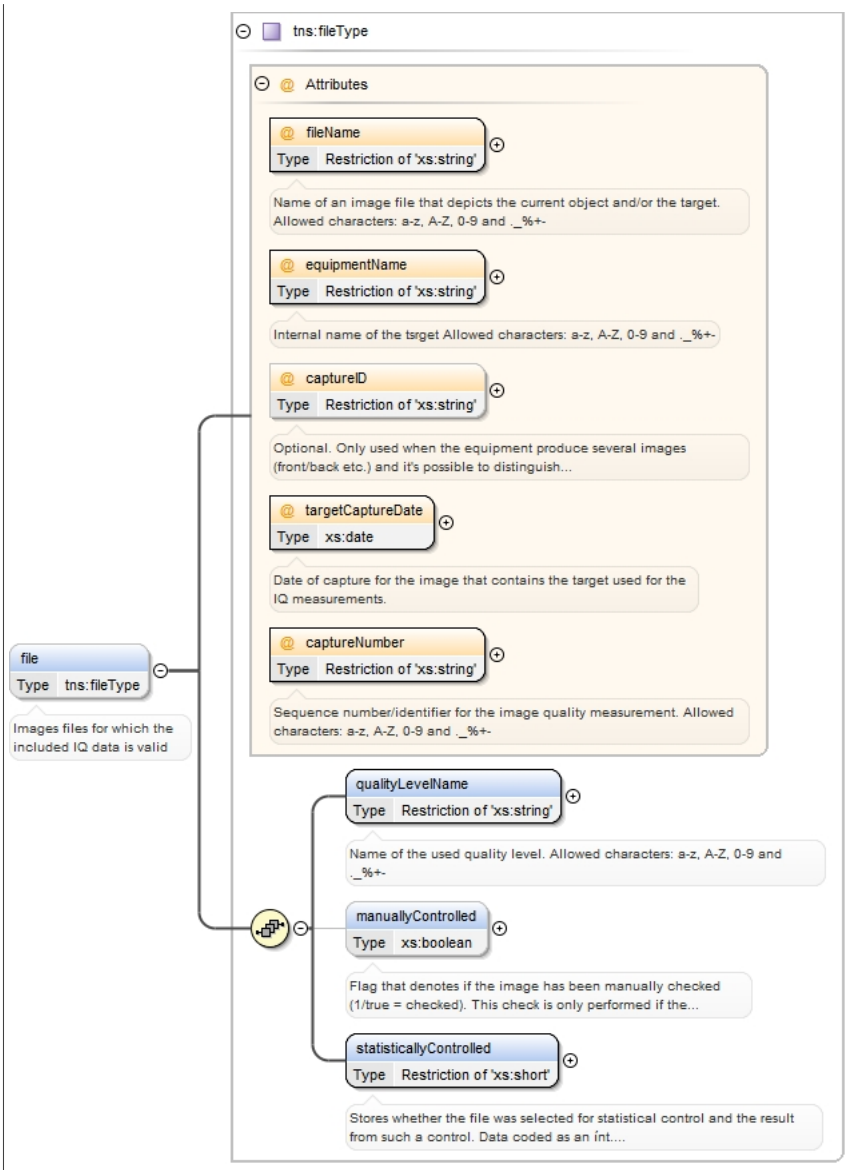
Element tns:imageQuailtyControlDataType / tns:fileList

Namespace	kb.se/ns/image_capture_performance
Diagram	
Type	tns:fileListType
Properties	content: complex
Model	tns:file*
Children	tns:file
Instance	<tns:fileList xmlns:tns="kb.se/ns/image_capture_performance"> <tns:file captureID="" captureNumber="" equipmentName="" fileName="" targetCaptureDate="">{0,unbounded}</tns:file> </tns:fileList>
Source	<xs:element type="tns:fileListType" name="fileList"> </xs:element>

Element tns:fileListType / tns:file

Namespace	kb.se/ns/image_capture_performance
Annotations	Images files for which the included IQ data is valid

Diagram



Type: tns:fileType

Properties

content:	complex
minOccurs:	0
maxOccurs:	unbounded

Model: tns:qualityLevelName , tns:manuallyControlled{0,1} , tns:statisticallyControlled

Children: tns:manuallyControlled, tns:qualityLevelName, tns:statisticallyControlled

Instance

```
<tns:file captureID="" captureNumber="" equipmentName="" fileName="" targetCaptureDate="" xmlns:tns="kb.se/ns/image_capture_performance">
  <tns:qualityLevelName>{1,1}</tns:qualityLevelName>
  <tns:manuallyControlled>{0,1}</tns:manuallyControlled>
  <tns:statisticallyControlled>{1,1}</tns:statisticallyControlled>
</tns:file>
```

Attributes

QName	Type	Use	
captureID	restriction of xs:string	optional	
	Optional. Only used when the equipment produce several images (front/back etc.) and it's possible to distinguish between them. Corresponds to the attributes with the same name under captureData Allowed characters: a-z, A-Z, 0-9 and ._%+-		
captureNumber	restriction of xs:string	required	
	Sequence number/identifier for the image quality		

	QName	Type	Use	
		measurement. Allowed characters: a-z, A-Z, 0-9 and ._%+-		
	equipmentName	restriction of xs:string	required	
		Internal name of the tsrget Allowed characters: a-z, A-Z, 0-9 and ._%+-		
	fileName	restriction of xs:string	required	
		Name of an image file that depicts the current object and/or the target. Allowed characters: a-z, A-Z, 0-9 and ._%+-		
	targetCaptureDate	xs:date	required	
		Date of capture for the image that contains the target used for the IQ measurements.		

Source

```
<xs:element type="tns:fileType" name="file" maxOccurs="unbounded" minOccurs="0">
  <xs:annotation>
    <xs:documentation xml:lang="eng">Images files for which the included IQ data is valid</
xs:documentation>
  </xs:annotation>
</xs:element>
```

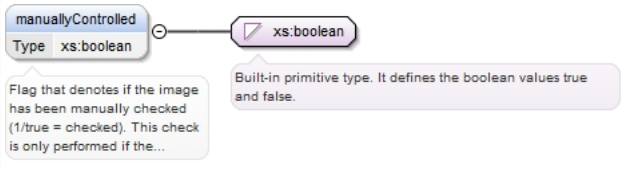
Element tns:fileType / tns:qualityLevelName

Namespace	kb.se/ns/image_capture_performance
Annotations	Name of the used quality level. Allowed characters: a-z, A-Z, 0-9 and ._%+-
Diagram	
Type	restriction of xs:string
Properties	content: simple
Facets	pattern [a-zA-Z0-9._%+-]+

Source

```
<xs:element name="qualityLevelName">
  <xs:annotation>
    <xs:documentation xml:lang="eng">Name of the used quality level. Allowed characters: a-z, A-Z,
 0-9 and ._%+-</xs:documentation>
  </xs:annotation>
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:pattern value="[a-zA-Z0-9._%+-]+"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
```

Element tns:fileType / tns:manuallyControlled

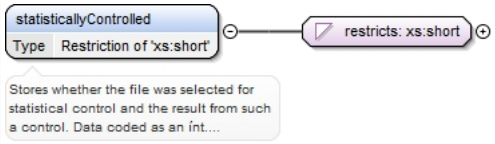
Namespace	kb.se/ns/image_capture_performance
Annotations	Flag that denotes if the image has been manually checked (1/true = checked). This check is only performed if the selection batch fails the statistical IQ-control.
Diagram	
Type	xs:boolean
Properties	content: simple minOccurs: 0

Source

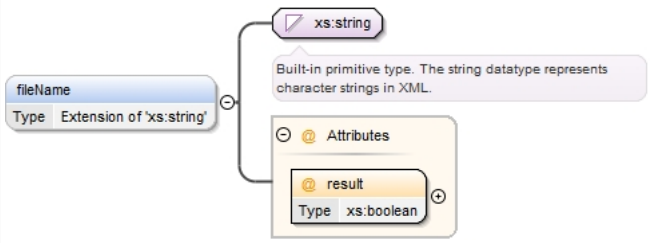
```
<xs:element minOccurs="0" name="manuallyControlled" type="xs:boolean">
  <xs:annotation>
    <xs:documentation xml:lang="eng">Flag that denotes if the image has been manually checked (1/
true = checked). This check is only performed if the selection batch fails the statistical IQ-
control.</xs:documentation>
```

```
  </xs:annotation>
</xs:element>
```

Element tns:fileType / tns:statisticallyControlled

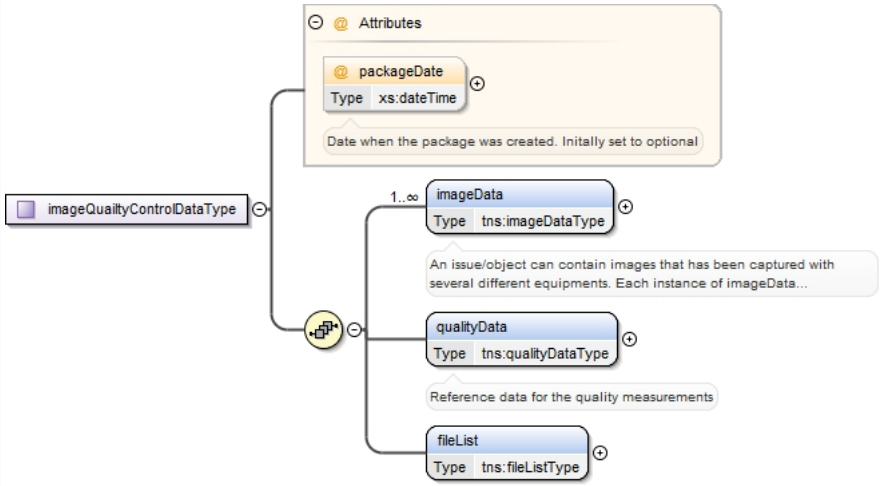
Namespace	kb.se/ns/image_capture_performance
Annotations	Stores whether the file was selected for statistical control and the result from such a control. Data coded as an ínt. Possible to extend the codes if necessary. -1 = not selected 0 = selected, failed the control 1 = selected, passed the control.
Diagram	
Type	restriction of xs:short
Properties	content: simple
Facets	enumeration -1 enumeration 1 enumeration 0
Source	<xs:element name="statisticallyControlled"> <xs:annotation> <xs:documentation xml:lang="eng">Stores whether the file was selected for statistical control and the result from such a control. Data coded as an ínt. Possible to extend the codes if necessary. -1 = not selected 0 = selected, failed the control 1 = selected, passed the control.</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:short"> <xs:enumeration value="-1"/> <xs:enumeration value="1"/> <xs:enumeration value="0"/> </xs:restriction> </xs:simpleType> </xs:element>

Element tns:manuallyControlledFilesType / tns:fileName

Namespace	kb.se/ns/image_capture_performance
Diagram	
Type	extension of xs:string
Properties	content: complex minOccurs: 0 maxOccurs: unbounded
Attributes	**QName** / **Type** / **Use** **result** / xs:boolean / required
Source	<xs:element maxOccurs="unbounded" minOccurs="0" name="fileName"> <xs:complexType> <xs:simpleContent> <xs:extension base="xs:string"> <xs:attribute name="result" type="xs:boolean" form="unqualified" use="required"/> </xs:extension> </xs:simpleContent> </xs:complexType> </xs:element>

Complex Type(s)

Complex Type `tns:imageQuailtyControlDataType`

Namespace	kb.se/ns/image_capture_performance
Diagram	
Used by	Element tns:imageQualityControlData
Model	tns:imageData+ , tns:qualityData , tns:fileList
Children	tns:fileList, tns:imageData, tns:qualityData

Attributes

QName	Type	Use	
packageDate	xs:dateTime	optional	
	Date when the package was created. Initally set to optional		

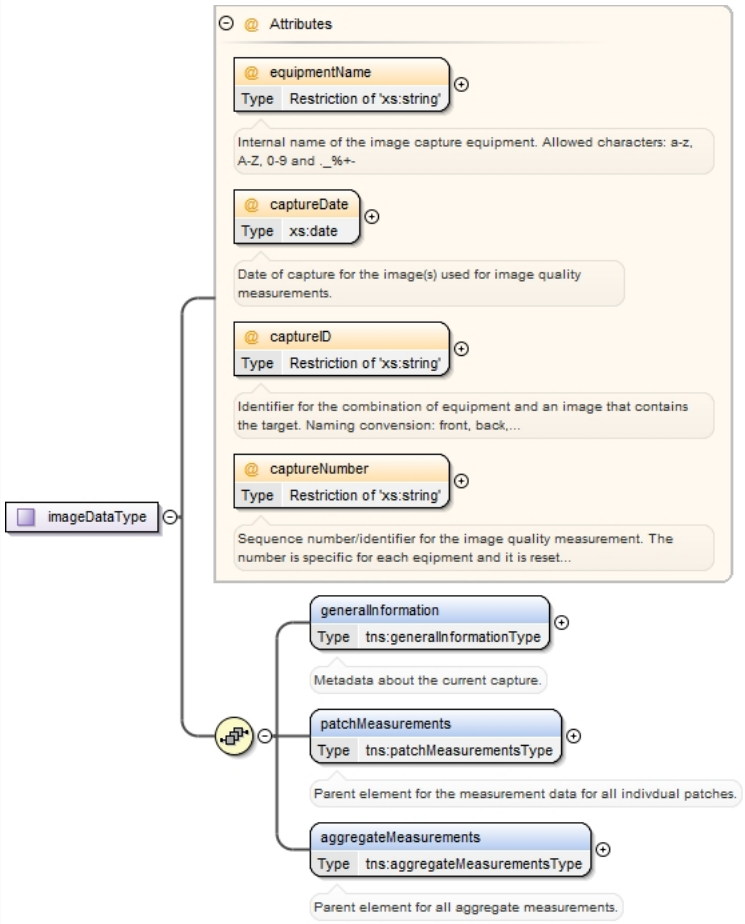
Source

```
<xs:complexType name="imageQuailtyControlDataType">
  <xs:sequence>
    <xs:element type="tns:imageDataType" name="imageData" maxOccurs="unbounded" minOccurs="1">
      <xs:annotation>
        <xs:documentation xml:lang="eng">An issue/object can contain images that has been captured
 with several different equipments. Each instance of imageData contains image quality data for a
 single image capture equipment. The image quality data is valid during a limited period of time,
 usually one day. Hence, the same piece of equipment can appear in several instances if it has been
 used on multiple occations that involves a time span that is longer than the period of validity.
 Some scanners can simultaneusly produce multiple images, generally of both sides of an object
 (front/back/left/right). For a number of scanners, it's impossible to identify if an image depicts
 the front or back side of an object. As a result, we cannot tie these images to a specific sensor
 (or sensors, if the image is stitched).</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element type="tns:qualityDataType" name="qualityData">
      <xs:annotation>
        <xs:documentation xml:lang="eng">Reference data for the quality measurements</
xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element type="tns:fileListType" name="fileList">
    </xs:element>
  </xs:sequence>
  <xs:attribute name="packageDate" type="xs:dateTime">
    <xs:annotation>
      <xs:documentation xml:lang="eng">Date when the package was created. Initally set to optional</
xs:documentation>
    </xs:annotation>
  </xs:attribute>
</xs:complexType>
```

Complex Type `tns:imageDataType`

Namespace	kb.se/ns/image_capture_performance

Diagram



Used by	Element tns:imageQuailtyControlDataType/tns:imageData
Model	tns:generalInformation , tns:patchMeasurements , tns:aggregateMeasurements
Children	tns:aggregateMeasurements, tns:generalInformation, tns:patchMeasurements

Attributes

QName	Type	Use	
captureDate	xs:date	required	
	Date of capture for the image(s) used for image quality measurements.		
captureID	restriction of xs:string	required	
	Identifier for the combination of equipment and an image that contains the target. Naming convension: front, back, left, right, middle, single etc. An identical attribute is used for the element captureEquipment. Allowed characters: a-z, A-Z, 0-9 and ._%+-		
captureNumber	restriction of xs:string	required	
	Sequence number/identifier for the image quality measurement. The number is specific for each eqipment and it is reset daily. Included since we might want to perform several IQ measurements during a single day and we must be able to distinguish between them. Datatype is set to string to give the largest possible flexibility for the sequence numbering. Ordinary numbers are prefered. Allowed characters: a-z, A-Z, 0-9 and ._%+-		
equipmentName	restriction of xs:string	required	
	Internal name of the image capture equipment. Allowed characters: a-z, A-Z, 0-9 and ._%+-		

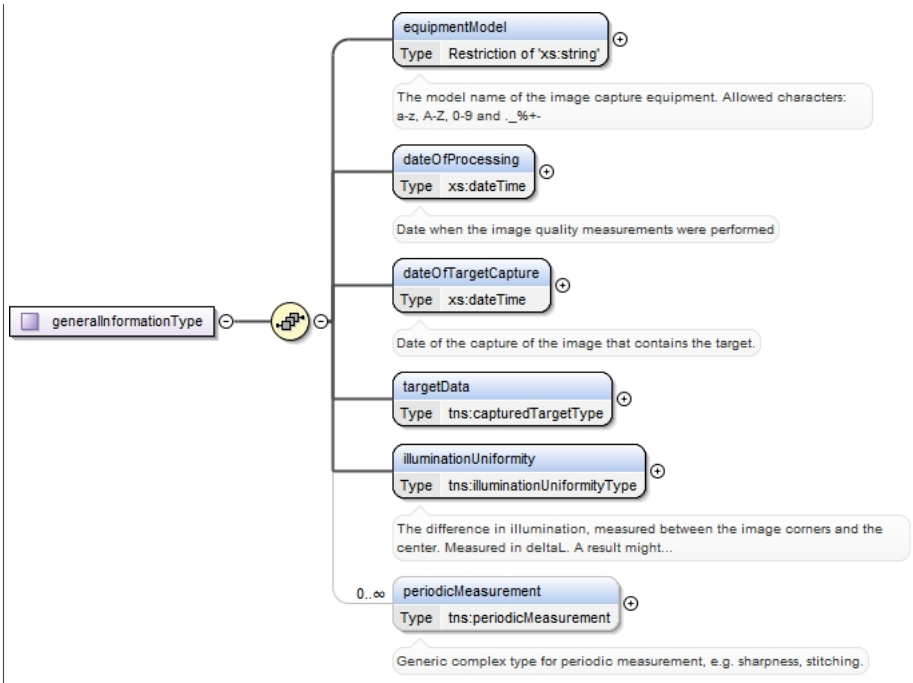
Source

```
<xs:complexType name="imageDataType">
  <xs:sequence>
    <xs:element type="tns:generalInformationType" name="generalInformation">
      <xs:annotation>
```

```
        <xs:documentation xml:lang="eng">Metadata about the current capture.</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element type="tns:patchMeasurementsType" name="patchMeasurements">
      <xs:annotation>
        <xs:documentation xml:lang="eng">Parent element for the measurement data for all indivdual
 patches.</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element type="tns:aggregateMeasurementsType" name="aggregateMeasurements">
      <xs:annotation>
        <xs:documentation xml:lang="eng">Parent element for all aggregate measurements.</
xs:documentation>
      </xs:annotation>
    </xs:element>
  </xs:sequence>
  <xs:attribute name="equipmentName" use="required">
    <xs:annotation>
      <xs:documentation xml:lang="eng">Internal name of the image capture equipment. Allowed
 characters: a-z, A-Z, 0-9 and ._%+-</xs:documentation>
    </xs:annotation>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:pattern value="[a-zA-Z0-9._%+-]+"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="captureDate" type="xs:date" use="required">
    <xs:annotation>
      <xs:documentation xml:lang="eng">Date of capture for the image(s) used for image quality
 measurements.</xs:documentation>
    </xs:annotation>
  </xs:attribute>
  <xs:attribute name="captureID" use="required">
    <xs:annotation>
      <xs:documentation xml:lang="eng">Identifier for the combination of equipment and an image that
 contains the target. Naming convension: front, back, left, right, middle, single etc. An identical
 attribute is used for the element captureEquipment. Allowed characters: a-z, A-Z, 0-9 and ._%+-</
xs:documentation>
    </xs:annotation>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:pattern value="[a-zA-Z0-9._%+-]+"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="captureNumber" use="required">
    <xs:annotation>
      <xs:documentation xml:lang="eng">Sequence number/identifier for the image quality measurement.
 The number is specific for each eqipment and it is reset daily. Included since we might want
 to perform several IQ measurements during a single day and we must be able to distinguish
 between them. Datatype is set to string to give the largest possible flexibility for the
 sequence numbering. Ordinary numbers are prefered. Allowed characters: a-z, A-Z, 0-9 and ._%+-</
xs:documentation>
    </xs:annotation>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:pattern value="[a-zA-Z0-9._%+-]+"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
</xs:complexType>
```

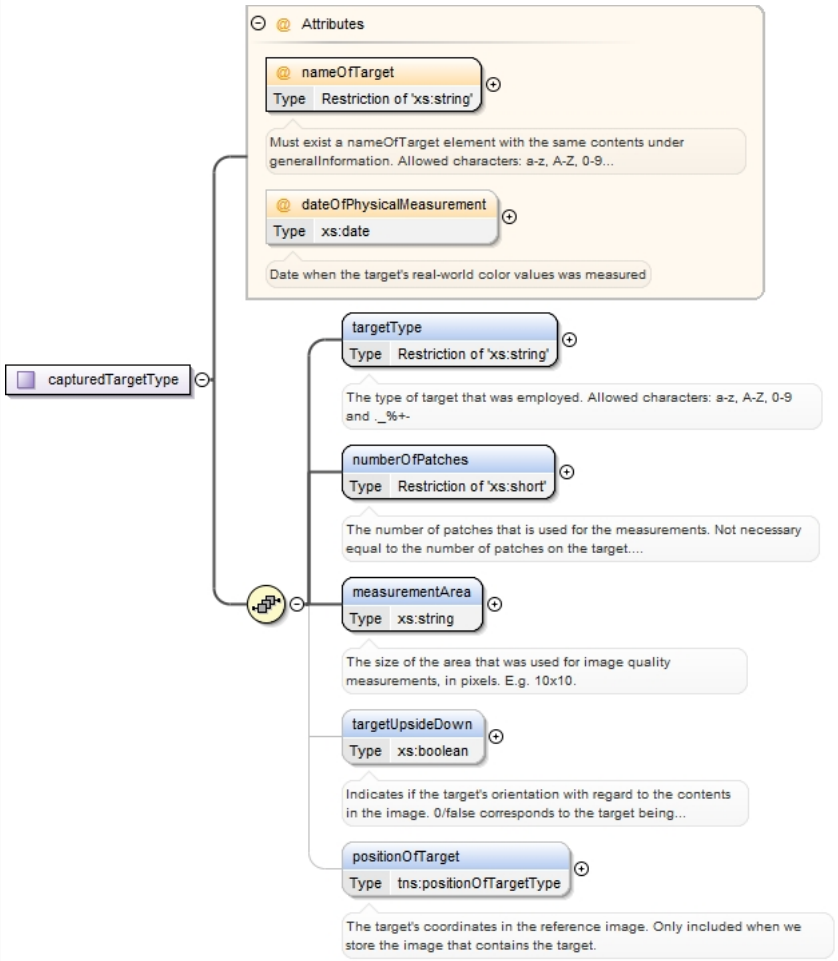
Complex Type `tns:generalInformationType`

Namespace	kb.se/ns/image_capture_performance

Diagram	
Used by	Element tns:imageDataType/tns:generalInformation
Model	tns:equipmentModel , tns:dateOfProcessing , tns:dateOfTargetCapture , tns:targetData , tns:illuminationUniformity , tns:periodicMeasurement*
Children	tns:dateOfProcessing, tns:dateOfTargetCapture, tns:equipmentModel, tns:illuminationUniformity, tns:periodicMeasurement, tns:targetData
Source	<xs:complexType name="generalInformationType"> <xs:sequence> <xs:element name="equipmentModel"> <xs:annotation> <xs:documentation xml:lang="eng">The model name of the image capture equipment. Allowed characters: a-z, A-Z, 0-9 and ._%+-</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:string"> <xs:pattern value="[a-zA-Z0-9._%+-]+"/> </xs:restriction> </xs:simpleType> </xs:element> <xs:element name="dateOfProcessing" type="xs:dateTime"> <xs:annotation> <xs:documentation xml:lang="eng">Date when the image quality measurements were performed</xs:documentation> </xs:annotation> </xs:element> <xs:element type="xs:dateTime" name="dateOfTargetCapture"> <xs:annotation> <xs:documentation xml:lang="eng">Date of the capture of the image that contains the target.</xs:documentation> </xs:annotation> </xs:element> <xs:element name="targetData" type="tns:capturedTargetType"/> <xs:element name="illuminationUniformity" type="tns:illuminationUniformityType"> <xs:annotation> <xs:documentation xml:lang="eng">The difference in illumination, measured between the image corners and the center. Measured in deltaL. A result might be included for all possible object sizes or only for element that corresponds to the size of the current object</xs:documentation> </xs:annotation> <xs:unique name="uniqueSize"> <xs:selector xpath="./tns:illuminationUniformityValue"/> <xs:field xpath="@size"/> </xs:unique> </xs:element> <xs:element name="periodicMeasurement" type="tns:periodicMeasurement" maxOccurs="unbounded" minOccurs="0"> <xs:annotation> <xs:documentation xml:lang="eng">Generic complex type for periodic measurement, e.g. sharpness, stitching.</xs:documentation> </xs:annotation> </xs:element>

```
  </xs:sequence>
</xs:complexType>
```

Complex Type `tns:capturedTargetType`

Namespace	kb.se/ns/image_capture_performance
Diagram	

Used by	Element tns:generalInformationType/tns:targetData
Model	tns:targetType , tns:numberOfPatches , tns:measurementArea , tns:targetUpsideDown{0,1} , tns:positionOfTarget{0,1}
Children	tns:measurementArea, tns:numberOfPatches, tns:positionOfTarget, tns:targetType, tns:targetUpsideDown

Attributes

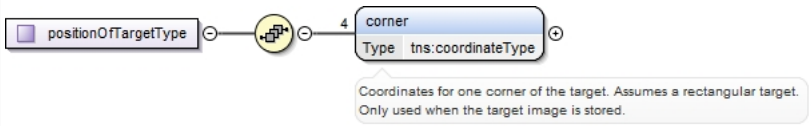
QName	Type	Use	
dateOfPhysicalMeasurement	xs:date	optional	
	Date when the target's real-world color values was measured		
nameOfTarget	restriction of xs:string	required	
	Must exist a nameOfTarget element with the same contents under generalInformation. Allowed characters: a-z, A-Z, 0-9 and ._%+-		

Source

```
<xs:complexType name="capturedTargetType">
  <xs:sequence>
    <xs:element name="targetType">
      <xs:annotation>
        <xs:documentation xml:lang="eng">The type of target that was employed. Allowed characters:
 a-z, A-Z, 0-9 and ._%+-</xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:pattern value="[a-zA-Z0-9._%+-]+"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="numberOfPatches" minOccurs="1">
      <xs:annotation>
```

```
        <xs:documentation xml:lang="eng">The number of patches that is used for the measurements.
 Not necessary equal to the number of patches on the target. Mininum number of patches in Digidaily
 is twelve (six color patches and six grayscale patches)</xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:short">
          <xs:minInclusive value="12"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element type="xs:string" name="measurementArea">
      <xs:annotation>
        <xs:documentation xml:lang="eng">The size of the area that was used for image quality
 measurements, in pixels. E.g. 10x10.</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element type="xs:boolean" name="targetUpsideDown" minOccurs="0">
      <xs:annotation>
        <xs:documentation xml:lang="eng">Indicates if the target's orientation with regard to
 the contents in the image. 0/false corresponds to the target being upsidedown with regard to the
 main content in the image. 1/true is the opposite. Only used when the target image is stored.</
xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element type="tns:positionOfTargetType" name="positionOfTarget" minOccurs="0">
      <xs:annotation>
        <xs:documentation xml:lang="eng">The target's coordinates in the reference image. Only
 included when we store the image that contains the target.</xs:documentation>
      </xs:annotation>
    </xs:element>
  </xs:sequence>
  <xs:attribute name="nameOfTarget" use="required">
    <xs:annotation>
      <xs:documentation xml:lang="eng">Must exist a nameOfTarget element with the same contents
 under generalInformation. Allowed characters: a-z, A-Z, 0-9 and ._%+-</xs:documentation>
    </xs:annotation>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:pattern value="[a-zA-Z0-9._%+-]+"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="dateOfPhysicalMeasurement" type="xs:date">
    <xs:annotation>
      <xs:documentation xml:lang="eng">Date when the target's real-world color values was measured</
xs:documentation>
    </xs:annotation>
  </xs:attribute>
</xs:complexType>
```

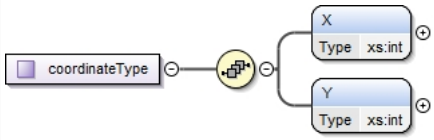
Complex Type `tns:positionOfTargetType`

Namespace	kb.se/ns/image_capture_performance
Diagram	
Used by	Element tns:capturedTargetType/tns:positionOfTarget
Model	tns:corner{4,4}
Children	tns:corner

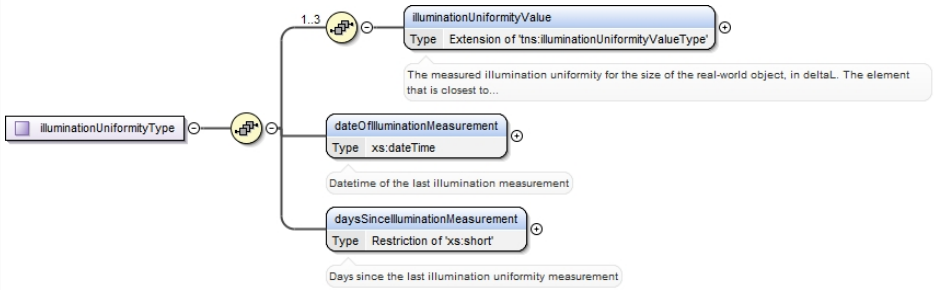
Source	`<xs:complexType name="positionOfTargetType">`
	`  <xs:sequence>`
	`    <xs:element type="tns:coordinateType" name="corner" maxOccurs="4" minOccurs="4">`
	`      <xs:annotation>`
	`        <xs:documentation xml:lang="eng">Coordinates for one corner of the target. Assumes a`
	` rectangular target. Only used when the target image is stored.</xs:documentation>`
	`      </xs:annotation>`
	`    </xs:element>`
	`  </xs:sequence>`
	`</xs:complexType>`

Complex Type `tns:coordinateType`

Namespace	kb.se/ns/image_capture_performance

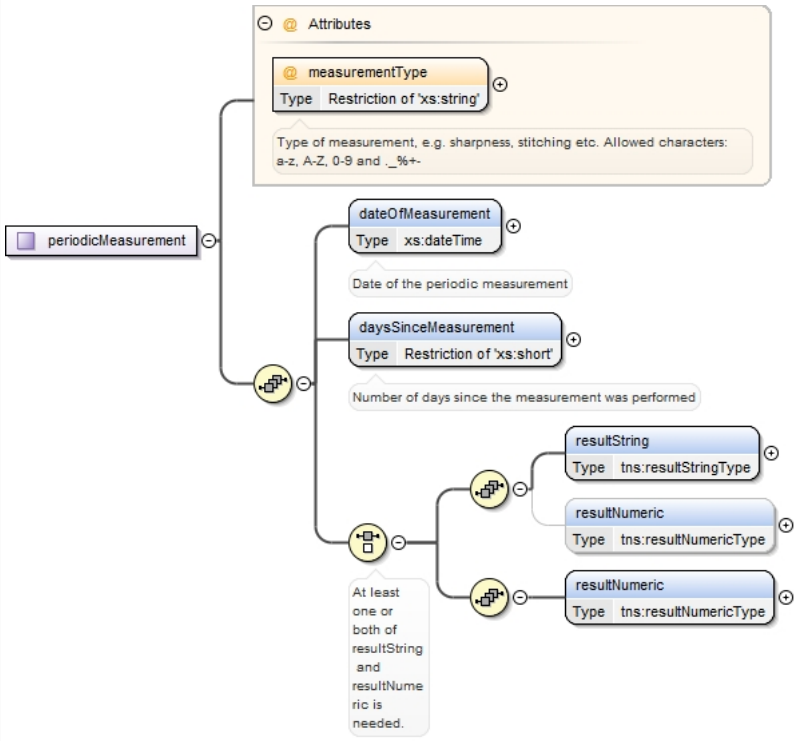
Diagram	
Used by	Elements tns:patchType/tns:center, tns:positionOfTargetType/tns:corner
Model	tns:X , tns:Y
Children	tns:X, tns:Y
Source	<xs:complexType name="coordinateType"> <xs:sequence> <xs:element name="X" type="xs:int"/> <xs:element name="Y" type="xs:int"/> </xs:sequence> </xs:complexType>

Complex Type `tns:illuminationUniformityType`

Namespace	kb.se/ns/image_capture_performance
Diagram	
Used by	Element tns:generalInformationType/tns:illuminationUniformity
Model	tns:illuminationUniformityValue , tns:dateOfIlluminationMeasurement , tns:daysSinceIlluminationMeasurement
Children	tns:dateOfIlluminationMeasurement, tns:daysSinceIlluminationMeasurement, tns:illuminationUniformityValue
Source	<xs:complexType name="illuminationUniformityType"> <xs:sequence> <xs:sequence minOccurs="1" maxOccurs="3"> <xs:element name="illuminationUniformityValue" maxOccurs="1"> <xs:annotation> <xs:documentation xml:lang="eng">The measured illumination uniformity for the size of the real-world object, in deltaL. The element that is closest to the real-world size of the object must be created. The other elements are optional.</xs:documentation> </xs:annotation> <xs:complexType> <xs:simpleContent> <xs:extension base="tns:illuminationUniformityValueType"> <xs:attribute name="size" use="required"> <xs:simpleType> <xs:restriction base="xs:string"> <xs:enumeration value="A1"/> <xs:enumeration value="A2"/> <xs:enumeration value="A3"/> </xs:restriction> </xs:simpleType> </xs:attribute> </xs:extension> </xs:simpleContent> </xs:complexType> </xs:element> </xs:sequence> <xs:element name="dateOfIlluminationMeasurement" type="xs:dateTime"> <xs:annotation> <xs:documentation xml:lang="eng">Datetime of the last illumination measurement</xs:documentation> </xs:annotation> </xs:element> <xs:element name="daysSinceIlluminationMeasurement"> <xs:annotation> <xs:documentation xml:lang="eng">Days since the last illumination uniformity measurement</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:short">

```
          <xs:minInclusive value="0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
  </xs:sequence>
</xs:complexType>
```

Complex Type `tns:periodicMeasurement`

Namespace	kb.se/ns/image_capture_performance
Diagram	
Used by	Element tns:generalInformationType/tns:periodicMeasurement
Model	tns:dateOfMeasurement , tns:daysSinceMeasurement , ((tns:resultString , tns:resultNumeric{0,1}) | (tns:resultNumeric))
Children	tns:dateOfMeasurement, tns:daysSinceMeasurement, tns:resultNumeric, tns:resultString

Attributes

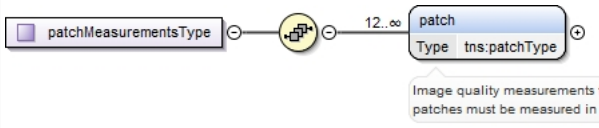
QName	Type	Use	
measurementType	restriction of xs:string	required	
	Type of measurement, e.g. sharpness, stitching etc. Allowed characters: a-z, A-Z, 0-9 and ._%+-		

Source

```
<xs:complexType name="periodicMeasurement">
  <xs:sequence>
    <xs:element name="dateOfMeasurement" type="xs:dateTime">
      <xs:annotation>
        <xs:documentation xml:lang="eng">Date of the periodic measurement</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="daysSinceMeasurement">
      <xs:annotation>
        <xs:documentation xml:lang="eng">Number of days since the measurement was performed</
xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:short">
          <xs:minInclusive value="0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:choice minOccurs="1" maxOccurs="1">
      <xs:annotation>
        <xs:documentation xml:lang="eng">At least one or both of resultString and resultNumeric is
 needed.</xs:documentation>
      </xs:annotation>
      <xs:sequence>
        <xs:element name="resultString" type="tns:resultStringType" minOccurs="1"/>
```

```
        <xs:element name="resultNumeric" type="tns:resultNumericType" minOccurs="0"/>
      </xs:sequence>
      <xs:sequence>
        <xs:element name="resultNumeric" type="tns:resultNumericType" minOccurs="1"/>
      </xs:sequence>
    </xs:choice>
    <!--
        <xs:element name="resultNumeric" type="xs:float" minOccurs="1">
        <xs:annotation>
          <xs:documentation xml:lang="eng">Element for storage of a numeric value from the
 measurement</xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element name="resultString">
        <xs:annotation>
          <xs:documentation xml:lang="eng">Element for storage of a string that represents the
 result of the measurement.
             Allowed characters: a-z, A-Z, 0-9 and ._%+-</xs:documentation>
        </xs:annotation>
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:pattern value="[a-zA-Z0-9._%+-]+"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
       -->
  </xs:sequence>
  <xs:attribute name="measurementType" use="required">
    <xs:annotation>
      <xs:documentation xml:lang="eng">Type of measurement, e.g. sharpness, stitching etc. Allowed
 characters: a-z, A-Z, 0-9 and ._%+-</xs:documentation>
    </xs:annotation>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:pattern value="[a-zA-Z0-9._%+-]+"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
</xs:complexType>
```

Complex Type `tns:patchMeasurementsType`

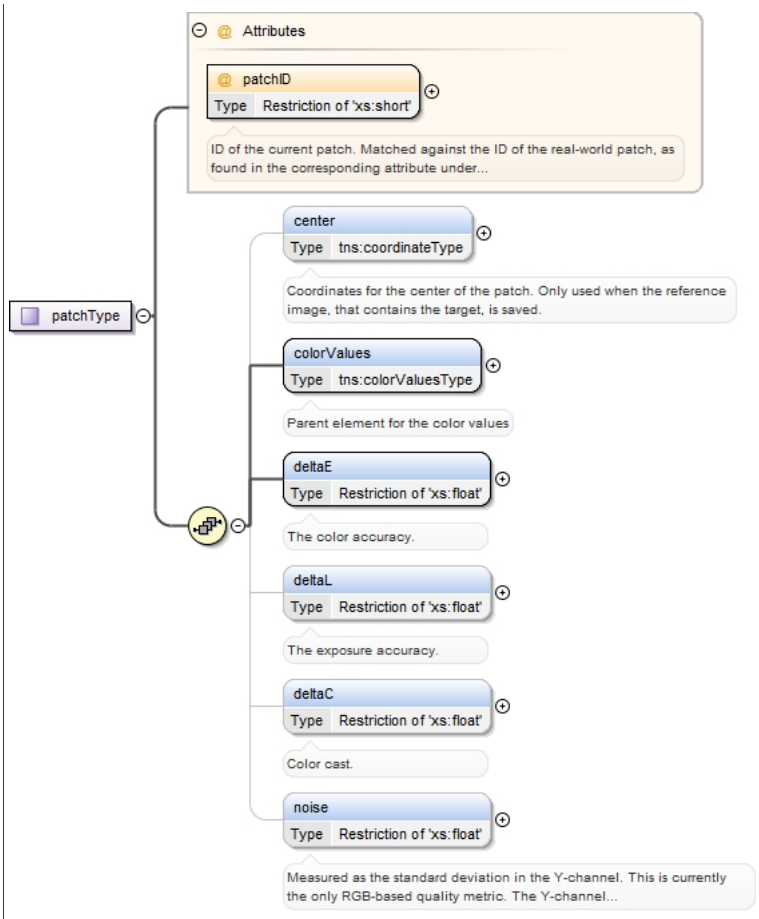
Namespace	kb.se/ns/image_capture_performance
Diagram	
Used by	Element tns:imageDataType/tns:patchMeasurements
Model	tns:patch{12,unbounded}
Children	tns:patch

Source	`<xs:complexType name="patchMeasurementsType">`
	`  <xs:sequence>`
	`    <xs:element type="tns:patchType" name="patch" maxOccurs="unbounded" minOccurs="12">`
	`      <xs:annotation>`
	`        <xs:documentation xml:lang="eng">Image quality measurements for a single patch. At least twelve patches must be measured in Digidaily, six color patches and six grayscale patches.</xs:documentation>`
	`      </xs:annotation>`
	`    </xs:element>`
	`  </xs:sequence>`
	`</xs:complexType>`

Complex Type `tns:patchType`

Namespace	kb.se/ns/image_capture_performance

Diagram



Used by

Element tns:patchMeasurementsType/tns:patch

Model

tns:center{0,1} , tns:colorValues , tns:deltaE , tns:deltaL{0,1} , tns:deltaC{0,1} , tns:noise{0,1}

Children

tns:center, tns:colorValues, tns:deltaC, tns:deltaE, tns:deltaL, tns:noise

Attributes

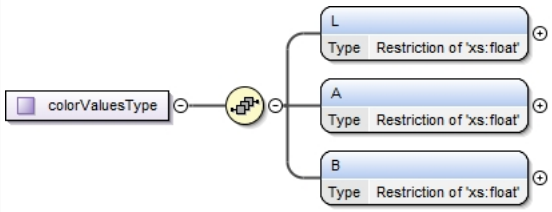
QName	Type	Use	
patchID	restriction of xs:short	required	
	ID of the current patch. Matched against the ID of the real-world patch, as found in the corresponding attribute under targetData/colorValues. Allowed values: 1 or higher		

Source

```
<xs:complexType name="patchType">
  <xs:sequence>
    <xs:element type="tns:coordinateType" name="center" minOccurs="0">
      <xs:annotation>
        <xs:documentation xml:lang="eng">Coordinates for the center of the patch. Only used when the
 reference image, that contains the target, is saved.</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element type="tns:colorValuesType" name="colorValues">
      <xs:annotation>
        <xs:documentation xml:lang="eng">Parent element for the color values</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="deltaE">
      <xs:annotation>
        <xs:documentation xml:lang="eng">The color accuracy.</xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="0"/>
          <xs:maxInclusive value="300"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="deltaL" minOccurs="0">
      <xs:annotation>
        <xs:documentation xml:lang="eng">The exposure accuracy.</xs:documentation>
```

```
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="0"/>
          <xs:maxInclusive value="100"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="deltaC" minOccurs="0">
      <xs:annotation>
        <xs:documentation xml:lang="eng">Color cast.</xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="0"/>
          <xs:maxInclusive value="283"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="noise" minOccurs="0">
      <xs:annotation>
        <xs:documentation xml:lang="eng">Measured as the standard deviation in the Y-channel. This
 is currently the only RGB-based quality metric. The Y-channel is computed as Y=(0,299*R + 0,587*G +
 0,114*B).</xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
  </xs:sequence>
  <xs:attribute name="patchID" use="required">
    <xs:annotation>
      <xs:documentation xml:lang="eng">ID of the current patch. Matched against the ID of the real-
world patch, as found in the corresponding attribute under targetData/colorValues. Allowed values: 1
 or higher</xs:documentation>
    </xs:annotation>
    <xs:simpleType>
      <xs:restriction base="xs:short">
        <xs:minInclusive value="1"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
</xs:complexType>
```

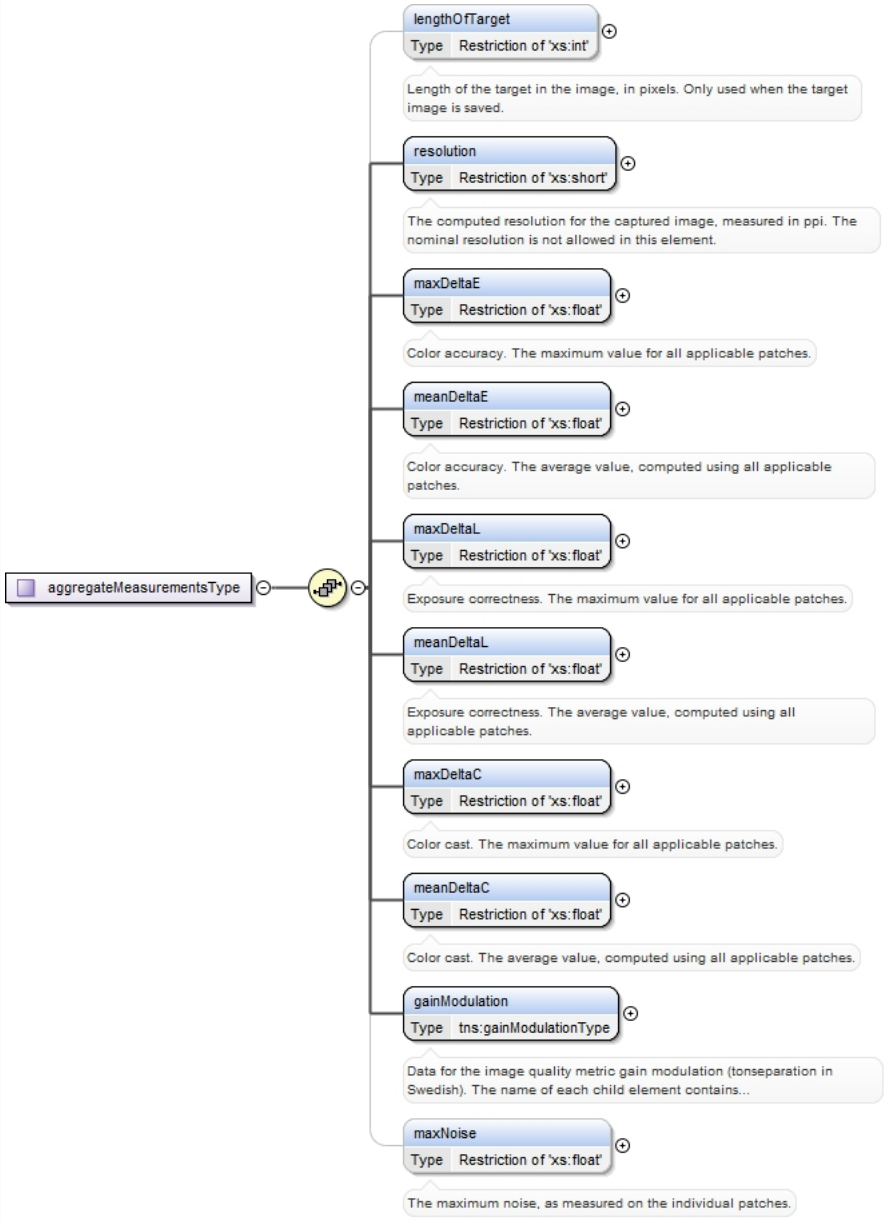
Complex Type `tns:colorValuesType`

Namespace	kb.se/ns/image_capture_performance
Diagram	
Used by	Element tns:patchType/tns:colorValues
Model	tns:L , tns:A , tns:B
Children	tns:A, tns:B, tns:L
Source	

```
<xs:complexType name="colorValuesType">
  <xs:sequence>
    <xs:element name="L" minOccurs="1">
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="0"/>
          <xs:maxInclusive value="100"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="A" minOccurs="1">
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="-100"/>
          <xs:maxInclusive value="100"/>
        </xs:restriction>
      </xs:simpleType>
```

```
    </xs:element>
    <xs:element name="B" minOccurs="1">
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="-100"/>
          <xs:maxInclusive value="100"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
  </xs:sequence>
</xs:complexType>
```

Complex Type `tns:aggregateMeasurementsType`

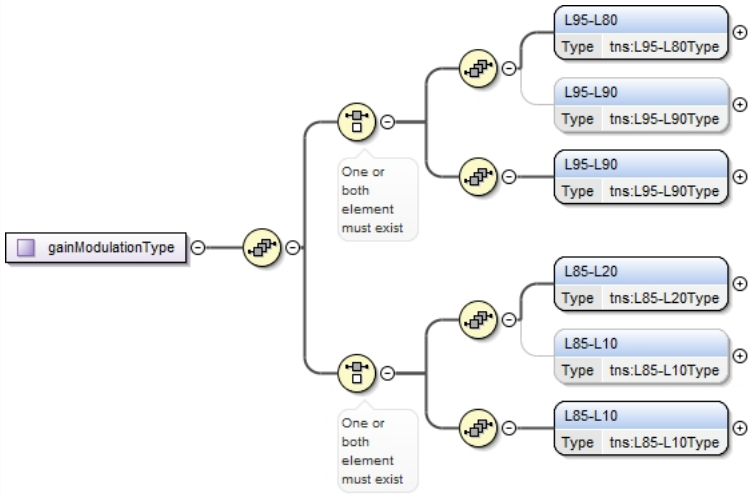
Namespace	kb.se/ns/image_capture_performance
Diagram	
Used by	Element tns:imageDataType/tns:aggregateMeasurements
Model	tns:lengthOfTarget{0,1} , tns:resolution , tns:maxDeltaE , tns:meanDeltaE , tns:maxDeltaL , tns:meanDeltaL , tns:maxDeltaC , tns:meanDeltaC , tns:gainModulation , tns:maxNoise{0,1}
Children	tns:gainModulation, tns:lengthOfTarget, tns:maxDeltaC, tns:maxDeltaE, tns:maxDeltaL, tns:maxNoise, tns:meanDeltaC, tns:meanDeltaE, tns:meanDeltaL, tns:resolution

Source	<pre><xs:complexType name="aggregateMeasurementsType">
	  <xs:sequence>
	    <xs:element name="lengthOfTarget" minOccurs="0">
	      <xs:annotation></pre>

```
        <xs:documentation xml:lang="eng">Length of the target in the image, in pixels. Only used
when the target image is saved.</xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:int">
          <xs:minInclusive value="0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="resolution">
      <xs:annotation>
        <xs:documentation xml:lang="eng">The computed resolution for the captured image, measured in
ppi. The nominal resolution is not allowed in this element.</xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:short">
          <xs:minInclusive value="0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="maxDeltaE" minOccurs="1">
      <xs:annotation>
        <xs:documentation xml:lang="eng">Color accuracy. The maximum value for all applicable
patches.</xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="0"/>
          <xs:maxInclusive value="300"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="meanDeltaE" minOccurs="1">
      <xs:annotation>
        <xs:documentation xml:lang="eng">Color accuracy. The average value, computed using all
applicable patches.</xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="0"/>
          <xs:maxInclusive value="300"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="maxDeltaL" minOccurs="1">
      <xs:annotation>
        <xs:documentation xml:lang="eng">Exposure correctness. The maximum value for all applicable
patches.</xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="0"/>
          <xs:maxInclusive value="100"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="meanDeltaL" minOccurs="1">
      <xs:annotation>
        <xs:documentation xml:lang="eng">Exposure correctness. The average value, computed using all
applicable patches.</xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="0"/>
          <xs:maxInclusive value="100"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="maxDeltaC" minOccurs="1">
      <xs:annotation>
        <xs:documentation xml:lang="eng">Color cast. The maximum value for all applicable patches.</
xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="0"/>
          <xs:maxInclusive value="283"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="meanDeltaC" minOccurs="1">
      <xs:annotation>
```

```
        <xs:documentation xml:lang="eng">Color cast. The average value, computed using all
 applicable patches.</xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="0"/>
          <xs:maxInclusive value="283"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element type="tns:gainModulationType" name="gainModulation">
      <xs:annotation>
        <xs:documentation xml:lang="eng">Data for the image quality metric gain modulation
 (tonseparation in Swedish). The name of each child element contains the approximate
 luminosity value of the two patches used for the measurement. Not all elements has to be used.
 Generally, measurements for one small intervall and one large intervall should be performed.</
xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="maxNoise" minOccurs="0">
      <xs:annotation>
        <xs:documentation xml:lang="eng">The maximum noise, as measured on the individual patches.</
xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
  </xs:sequence>
</xs:complexType>
```

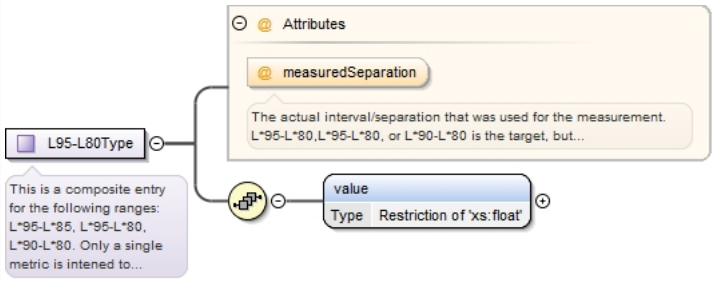
Complex Type `tns:gainModulationType`

Namespace	kb.se/ns/image_capture_performance
Diagram	
Used by	Element tns:aggregateMeasurementsType/tns:gainModulation
Model	((tns:L95-L80 , tns:L95-L90{0,1}) | (tns:L95-L90)) , ((tns:L85-L20 , tns:L85-L10{0,1}) | (tns:L85-L10))
Children	tns:L85-L10, tns:L85-L20, tns:L95-L80, tns:L95-L90
Source	

```
<xs:complexType name="gainModulationType">
  <xs:sequence>
    <xs:choice maxOccurs="1">
      <xs:annotation>
        <xs:documentation xml:lang="eng">One or both element must exist</xs:documentation>
      </xs:annotation>
      <xs:sequence>
        <xs:element name="L95-L80" type="tns:L95-L80Type"/>
        <xs:element name="L95-L90" minOccurs="0" type="tns:L95-L90Type"/>
      </xs:sequence>
      <xs:sequence>
        <xs:element name="L95-L90" type="tns:L95-L90Type"/>
      </xs:sequence>
    </xs:choice>
    <xs:choice maxOccurs="1">
      <xs:annotation>
        <xs:documentation xml:lang="eng">One or both element must exist</xs:documentation>
```

```
      </xs:annotation>
      <xs:sequence>
        <xs:element name="L85-L20" type="tns:L85-L20Type"/>
        <xs:element name="L85-L10" maxOccurs="1" minOccurs="0" type="tns:L85-L10Type"/>
      </xs:sequence>
      <xs:sequence>
        <xs:element name="L85-L10" maxOccurs="1" minOccurs="1" type="tns:L85-L10Type">
        </xs:element>
      </xs:sequence>
    </xs:choice>
  </xs:sequence>
</xs:complexType>
```

Complex Type `tns:L95-L80Type`

Namespace	kb.se/ns/image_capture_performance
Annotations	This is a composite entry for the following ranges: L*95-L*85, L*95-L*80, L*90-L*80. Only a single metric is intened to be used at measurement time
Diagram	
Used by	Element tns:gainModulationType/tns:L95-L80
Model	tns:value
Children	tns:value

Attributes

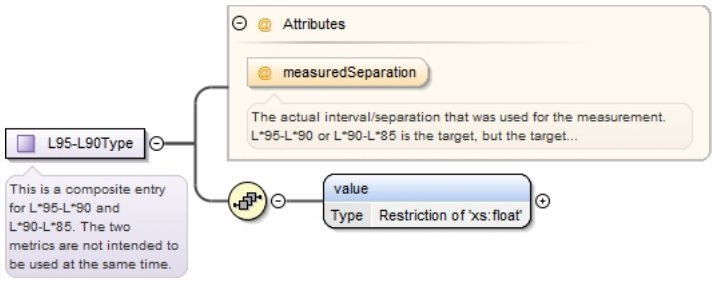
QName	Type	Use	
measuredSeparation		optional	
	The actual interval/separation that was used for the measurement. L*95-L*80,L*95-L*80, or L*90-L*80 is the target, but the target patches might result in a slightly different interval.		

Source

```
<xs:complexType name="L95-L80Type">
  <xs:annotation>
    <xs:documentation>This is a composite entry for the following ranges: L*95-L*85, L*95-L*80,
 L*90-L*80. Only a single metric is intened to be used at measurement time</xs:documentation>
  </xs:annotation>
  <xs:sequence>
    <xs:element name="value">
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
  </xs:sequence>
  <xs:attribute name="measuredSeparation">
    <xs:annotation>
      <xs:documentation>The actual interval/separation that was used for the measurement. L*95-
L*80,L*95-L*80, or L*90-L*80 is the target, but the target patches might result in a slightly
 different interval.</xs:documentation>
    </xs:annotation>
  </xs:attribute>
</xs:complexType>
```

Complex Type `tns:L95-L90Type`

Namespace	kb.se/ns/image_capture_performance
Annotations	This is a composite entry for L*95-L*90 and L*90-L*85. The two metrics are not intended to be used at the same time.

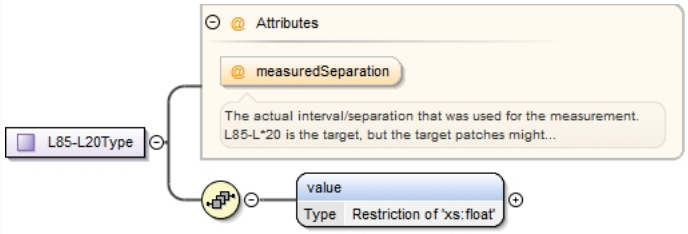
Diagram	
Used by	Element tns:gainModulationType/tns:L95-L90
Model	tns:value
Children	tns:value

Attributes	QName	Type	Use	
	measuredSeparation		optional	
		The actual interval/separation that was used for the measurement. L*95-L*90 or L*90-L*85 is the target, but the target patches might result in a slightly different interval.		

Source

```
<xs:complexType name="L95-L90Type">
  <xs:annotation>
    <xs:documentation>This is a composite entry for L*95-L*90 and L*90-L*85. The two metrics are not
 intended to be used at the same time.</xs:documentation>
  </xs:annotation>
  <xs:sequence>
    <xs:element name="value">
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
  </xs:sequence>
  <xs:attribute name="measuredSeparation">
    <xs:annotation>
      <xs:documentation>The actual interval/separation that was used for the measurement. L*95-L*90
 or L*90-L*85 is the target, but the target patches might result in a slightly different interval.</
xs:documentation>
    </xs:annotation>
  </xs:attribute>
</xs:complexType>
```

Complex Type `tns:L85-L20Type`

Namespace	kb.se/ns/image_capture_performance
Annotations	
Diagram	
Used by	Element tns:gainModulationType/tns:L85-L20
Model	tns:value
Children	tns:value

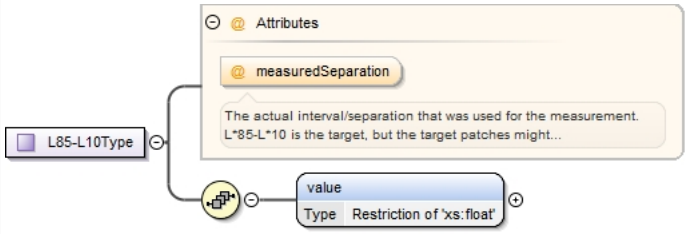
Attributes	QName	Type	Use	
	measuredSeparation		optional	
		The actual interval/separation that was used for the measurement. L85-L*20 is the target, but the target patches might result in a slightly different interval.		

Source

```
<xs:complexType name="L85-L20Type">
  <xs:annotation>
    <xs:documentation/>
```

```
  </xs:annotation>
  <xs:sequence>
    <xs:element name="value">
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
  </xs:sequence>
  <xs:attribute name="measuredSeparation">
    <xs:annotation>
      <xs:documentation>The actual interval/separation that was used for the measurement. L85-
L*20 is the target, but the target patches might result in a slightly different interval.</
xs:documentation>
    </xs:annotation>
  </xs:attribute>
</xs:complexType>
```

Complex Type `tns:L85-L10Type`

Namespace	kb.se/ns/image_capture_performance
Annotations	
Diagram	
Used by	Element tns:gainModulationType/tns:L85-L10
Model	tns:value
Children	tns:value

Attributes

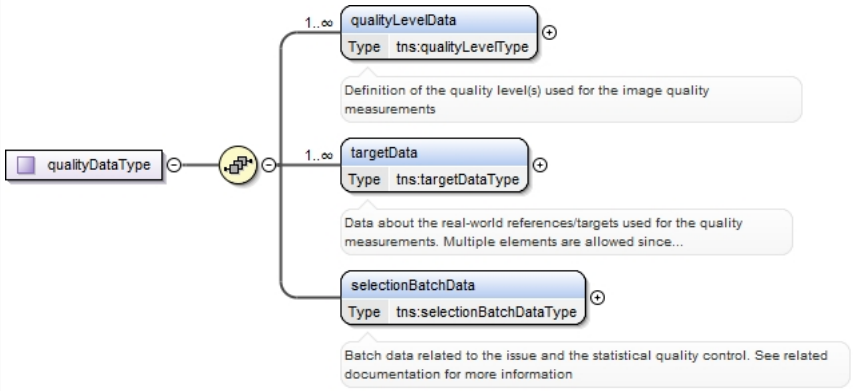
QName	Type	Use	
measuredSeparation		optional	
	The actual interval/separation that was used for the measurement. L*85-L*10 is the target, but the target patches might result in a slightly different interval.		

Source

```
<xs:complexType name="L85-L10Type">
  <xs:annotation>
    <xs:documentation/>
  </xs:annotation>
  <xs:sequence>
    <xs:element name="value">
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
  </xs:sequence>
  <xs:attribute name="measuredSeparation">
    <xs:annotation>
      <xs:documentation>The actual interval/separation that was used for the measurement. L*85-
L*10 is the target, but the target patches might result in a slightly different interval.</
xs:documentation>
    </xs:annotation>
  </xs:attribute>
</xs:complexType>
```

Complex Type `tns:qualityDataType`

Namespace	kb.se/ns/image_capture_performance

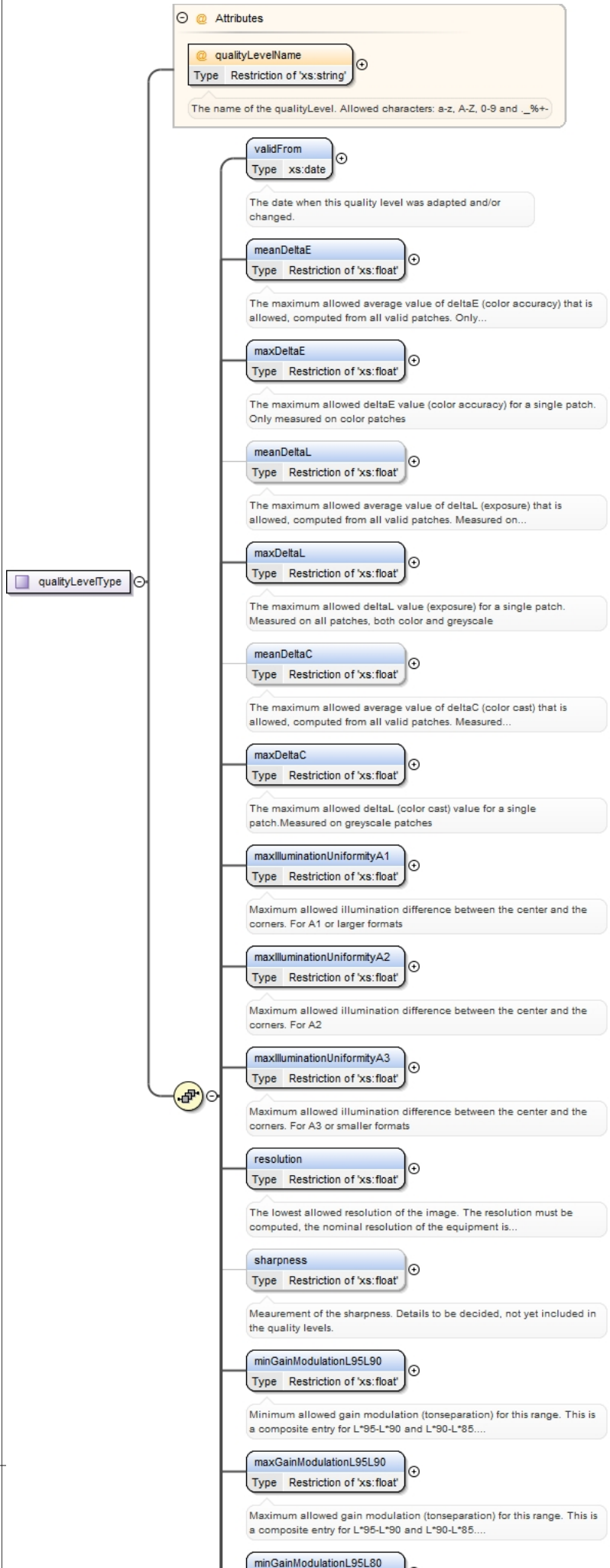
Diagram	
Used by	Element tns:imageQuailtyControlDataType/tns:qualityData
Model	tns:qualityLevelData+ , tns:targetData+ , tns:selectionBatchData
Children	tns:qualityLevelData, tns:selectionBatchData, tns:targetData

Source	<pre><xs:complexType name="qualityDataType">
	  <xs:sequence>
	  <xs:element type="tns:qualityLevelType" name="qualityLevelData" maxOccurs="unbounded">
	  <xs:annotation>
	  <xs:documentation xml:lang="eng">Definition of the quality level(s) used for the image quality measurements</xs:documentation>
	  </xs:annotation>
	  </xs:element>
	  <xs:element name="targetData" type="tns:targetDataType" maxOccurs="unbounded" minOccurs="1">
	  <xs:annotation>
	  <xs:documentation xml:lang="eng">Data about the real-world references/targets used for the quality measurements. Multiple elements are allowed since multiple targets might have been used for the qaulity measurements. Always store for reference, although some data is only useful when we also store the images that contain the targets.</xs:documentation>
	  </xs:annotation>
	  </xs:element>
	  <xs:element name="selectionBatchData" type="tns:selectionBatchDataType">
	  <xs:annotation>
	  <xs:documentation xml:lang="eng">Batch data related to the issue and the statistical quality control. See related documentation for more information</xs:documentation>
	  </xs:annotation>
	  </xs:element>
	  </xs:sequence>
	</xs:complexType></pre>

Complex Type `tns:qualityLevelType`

Namespace	kb.se/ns/image_capture_performance

Diagram


Attributes
qualityLevelName
Type Restriction of 'xs:string'
The name of the qualityLevel. Allowed characters: a-z, A-Z, 0-9 and ._%+-
qualityLevelType
validFrom
Type xs:date
The date when this quality level was adapted and/or changed.
meanDeltaE
Type Restriction of 'xs:float'
The maximum allowed average value of deltaE (color accuracy) that is allowed, computed from all valid patches. Only...
maxDeltaE
Type Restriction of 'xs:float'
The maximum allowed deltaE value (color accuracy) for a single patch. Only measured on color patches
meanDeltaL
Type Restriction of 'xs:float'
The maximum allowed average value of deltaL (exposure) that is allowed, computed from all valid patches. Measured on...
maxDeltaL
Type Restriction of 'xs:float'
The maximum allowed deltaL value (exposure) for a single patch. Measured on all patches, both color and greyscale
meanDeltaC
Type Restriction of 'xs:float'
The maximum allowed average value of deltaC (color cast) that is allowed, computed from all valid patches. Measured...
maxDeltaC
Type Restriction of 'xs:float'
The maximum allowed deltaL (color cast) value for a single patch.Measured on greyscale patches
maxIlluminationUniformityA1
Type Restriction of 'xs:float'
Maximum allowed illumination difference between the center and the corners. For A1 or larger formats
maxIlluminationUniformityA2
Type Restriction of 'xs:float'
Maximum allowed illumination difference between the center and the corners. For A2
maxIlluminationUniformityA3
Type Restriction of 'xs:float'
Maximum allowed illumination difference between the center and the corners. For A3 or smaller formats
resolution
Type Restriction of 'xs:float'
The lowest allowed resolution of the image. The resolution must be computed, the nominal resolution of the equipment is...
sharpness
Type Restriction of 'xs:float'
Meaurement of the sharpness. Details to be decided, not yet included in the quality levels.
minGainModulationL95L90
Type Restriction of 'xs:float'
Minimum allowed gain modulation (tonseparation) for this range. This is a composite entry for L*95-L*90 and L*90-L*85....
maxGainModulationL95L90
Type Restriction of 'xs:float'
Maximum allowed gain modulation (tonseparation) for this range. This is a composite entry for L*95-L*90 and L*90-L*85....
minGainModulationL95L80

Used by	Element tns:qualityDataType/tns:qualityLevelData
Model	tns:validFrom , tns:meanDeltaE , tns:maxDeltaE , tns:meanDeltaL{0,1} , tns:maxDeltaL , tns:meanDeltaC{0,1} , tns:maxDeltaC , tns:maxIlluminationUniformityA1 , tns:maxIlluminationUniformityA2 , tns:maxIlluminationUniformityA3 , tns:resolution , tns:sharpness{0,1} , tns:minGainModulationL95L90 , tns:maxGainModulationL95L90 , tns:minGainModulationL95L80 , tns:maxGainModulationL95L80 , tns:minGainModulationL85L20 , tns:maxGainModulationL85L20 , tns:minGainModulationL85L10 , tns:maxGainModulationL85L10
Children	tns:maxDeltaC, tns:maxDeltaE, tns:maxDeltaL, tns:maxGainModulationL85L10, tns:maxGainModulationL85L20, tns:maxGainModulationL95L80, tns:maxGainModulationL95L90, tns:maxIlluminationUniformityA1, tns:maxIlluminationUniformityA2, tns:maxIlluminationUniformityA3, tns:meanDeltaC, tns:meanDeltaE, tns:meanDeltaL, tns:minGainModulationL85L10, tns:minGainModulationL85L20, tns:minGainModulationL95L80, tns:minGainModulationL95L90, tns:resolution, tns:sharpness, tns:validFrom

Attributes

QName	Type	Use	
qualityLevelName	restriction of xs:string	required	
	The name of the qualityLevel. Allowed characters: a-z, A-Z, 0-9 and ._%+-		

Source

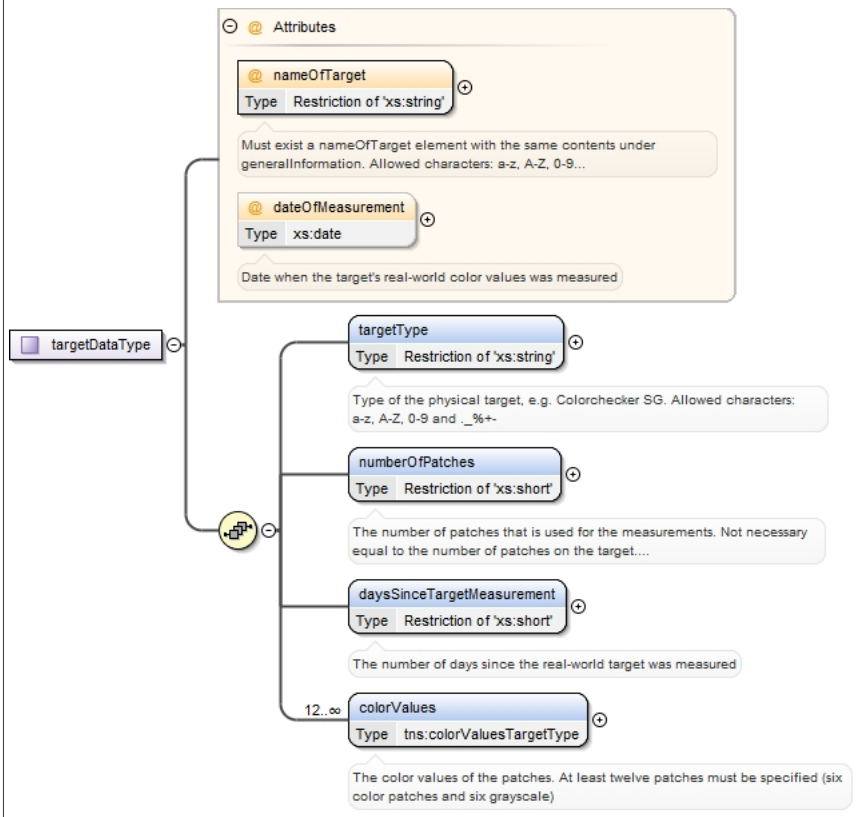
```
<xs:complexType name="qualityLevelType">
  <xs:sequence>
    <xs:element type="xs:date" name="validFrom">
      <xs:annotation>
        <xs:documentation xml:lang="eng">The date when this quality level was adapted and/or
 changed.</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="meanDeltaE">
      <xs:annotation>
        <xs:documentation xml:lang="eng">The maximum allowed average value of deltaE (color
 accuracy) that is allowed, computed from all valid patches. Only measured on color patches</
xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="0"/>
          <xs:maxInclusive value="347"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="maxDeltaE">
      <xs:annotation>
        <xs:documentation xml:lang="eng">The maximum allowed deltaE value (color accuracy) for a
 single patch. Only measured on color patches</xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="0"/>
          <xs:maxInclusive value="347"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="meanDeltaL" minOccurs="0">
      <xs:annotation>
        <xs:documentation xml:lang="eng">The maximum allowed average value of deltaL (exposure) that
 is allowed, computed from all valid patches. Measured on all patches, both color and greyscale</
xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="0"/>
          <xs:maxInclusive value="200"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="maxDeltaL">
      <xs:annotation>
        <xs:documentation xml:lang="eng">The maximum allowed deltaL value (exposure) for a single
 patch. Measured on all patches, both color and greyscale</xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="0"/>
          <xs:maxInclusive value="200"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="meanDeltaC" minOccurs="0">
      <xs:annotation>
```

```
        <xs:documentation xml:lang="eng">The maximum allowed average value of deltaC (color
 cast) that is allowed, computed from all valid patches. Measured only on greyscale patches</
xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="0"/>
          <xs:maxInclusive value="283"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="maxDeltaC">
      <xs:annotation>
        <xs:documentation xml:lang="eng">The maximum allowed deltaL (color cast) value for a single
 patch.Measured on greyscale patches</xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="0"/>
          <xs:maxInclusive value="283"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="maxIlluminationUniformityA1">
      <xs:annotation>
        <xs:documentation xml:lang="eng">Maximum allowed illumination difference between the center
 and the corners. For A1 or larger formats</xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="0"/>
          <xs:maxInclusive value="200"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="maxIlluminationUniformityA2">
      <xs:annotation>
        <xs:documentation xml:lang="eng">Maximum allowed illumination difference between the center
 and the corners. For A2</xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="0"/>
          <xs:maxInclusive value="200"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="maxIlluminationUniformityA3">
      <xs:annotation>
        <xs:documentation xml:lang="eng">Maximum allowed illumination difference between the center
 and the corners. For A3 or smaller formats</xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="0"/>
          <xs:maxInclusive value="200"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="resolution">
      <xs:annotation>
        <xs:documentation xml:lang="eng">The lowest allowed resolution of the image. The resolution
 must be computed, the nominal resolution of the equipment is not allowed.</xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element minOccurs="0" name="sharpness">
      <xs:annotation>
        <xs:documentation xml:lang="eng">Meaurement of the sharpness. Details to be decided, not yet
 included in the quality levels.</xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="minGainModulationL95L90">
      <xs:annotation>
```

```
      <xs:documentation xml:lang="eng">Minimum allowed gain modulation (tonseparation) for this
range. This is a composite entry for L*95-L*90 and L*90-L*85. The two metrics are not intended to
be used at the same time.</xs:documentation>
    </xs:annotation>
    <xs:simpleType>
      <xs:restriction base="xs:float">
        <xs:minInclusive value="0"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:element>
  <xs:element name="maxGainModulationL95L90">
    <xs:annotation>
      <xs:documentation xml:lang="eng">Maximum allowed gain modulation (tonseparation) for this
range. This is a composite entry for L*95-L*90 and L*90-L*85. The two metrics are not intended to
be used at the same time.</xs:documentation>
    </xs:annotation>
    <xs:simpleType>
      <xs:restriction base="xs:float">
        <xs:minInclusive value="0"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:element>
  <xs:element name="minGainModulationL95L80">
    <xs:annotation>
      <xs:documentation xml:lang="eng">Minimum allowed gain modulation (tonseparation) for this
range. This is a composite entry for the following ranges: L*95-L*85, L*95-L*80, L*90-L*80. Only a
single metrics is intened to be used at a measurement time.</xs:documentation>
    </xs:annotation>
    <xs:simpleType>
      <xs:restriction base="xs:float">
        <xs:minInclusive value="0"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:element>
  <xs:element name="maxGainModulationL95L80">
    <xs:annotation>
      <xs:documentation xml:lang="eng">Maximum allowed gain modulation (tonseparation) for this
range. This is a composite entry for the following ranges: L*95-L*85, L*95-L*80, L*90-L*80. Only a
single metrics is intened to be used at a measurement time.</xs:documentation>
    </xs:annotation>
    <xs:simpleType>
      <xs:restriction base="xs:float">
        <xs:minInclusive value="0"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:element>
  <xs:element name="minGainModulationL85L20">
    <xs:annotation>
      <xs:documentation xml:lang="eng">Minimum allowed gain modulation (tonseparation) for this
range.</xs:documentation>
    </xs:annotation>
    <xs:simpleType>
      <xs:restriction base="xs:float">
        <xs:minInclusive value="0"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:element>
  <xs:element name="maxGainModulationL85L20">
    <xs:annotation>
      <xs:documentation xml:lang="eng">Maximum allowed gain modulation (tonseparation) for this
range.</xs:documentation>
    </xs:annotation>
    <xs:simpleType>
      <xs:restriction base="xs:float">
        <xs:minInclusive value="0"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:element>
  <xs:element name="minGainModulationL85L10">
    <xs:annotation>
      <xs:documentation xml:lang="eng">Minimum allowed gain modulation (tonseparation) for this
range.</xs:documentation>
    </xs:annotation>
    <xs:simpleType>
      <xs:restriction base="xs:float">
        <xs:minInclusive value="0"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:element>
  <xs:element name="maxGainModulationL85L10">
    <xs:annotation>
      <xs:documentation xml:lang="eng">Maximum allowed gain modulation (tonseparation) for this
range.</xs:documentation>
```

```
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
  </xs:sequence>
  <xs:attribute name="qualityLevelName" use="required">
    <xs:annotation>
      <xs:documentation xml:lang="eng">The name of the qualityLevel. Allowed characters: a-z, A-Z,
 0-9 and ._%+-</xs:documentation>
    </xs:annotation>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:pattern value="[a-zA-Z0-9._%+-]+"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
</xs:complexType>
```

Complex Type `tns:targetDataType`

Namespace	kb.se/ns/image_capture_performance
Diagram	
Used by	Element tns:qualityDataType/tns:targetData
Model	tns:targetType , tns:numberOfPatches , tns:daysSinceTargetMeasurement , tns:colorValues{12,unbounded}
Children	tns:colorValues, tns:daysSinceTargetMeasurement, tns:numberOfPatches, tns:targetType

Attributes

QName	Type	Use	
dateOfMeasurement	xs:date	optional	
	Date when the target's real-world color values was measured		
nameOfTarget	restriction of xs:string	required	
	Must exist a nameOfTarget element with the same contents under generalInformation. Allowed characters: a-z, A-Z, 0-9 and ._%+-		

Source

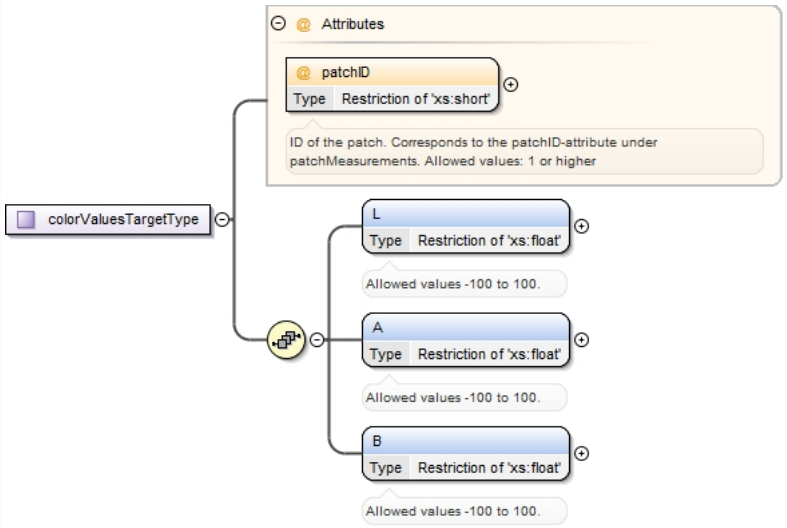
```
<xs:complexType name="targetDataType">
  <xs:sequence>
    <xs:element name="targetType">
      <xs:annotation>
```

```
        <xs:documentation xml:lang="eng">Type of the physical target, e.g. Colorchecker SG. Allowed
 characters: a-z, A-Z, 0-9 and ._%+-</xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:pattern value="[a-zA-Z0-9._%+-]+"/>
          <xs:pattern value=""/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="numberOfPatches">
      <xs:annotation>
        <xs:documentation xml:lang="eng">The number of patches that is used for the measurements.
 Not necessary equal to the number of patches on the target. Set to twelve or higher (for
 Digidaily), six color patches and six grayscale patches</xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:short">
          <xs:minInclusive value="12"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="daysSinceTargetMeasurement">
      <xs:annotation>
        <xs:documentation xml:lang="eng">The number of days since the real-world target was
 measured</xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:short">
          <xs:minInclusive value="0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element maxOccurs="unbounded" minOccurs="12" name="colorValues"
 type="tns:colorValuesTargetType">
      <xs:annotation>
        <xs:documentation xml:lang="eng">The color values of the patches. At least twelve patches
 must be specified (six color patches and six grayscale)</xs:documentation>
      </xs:annotation>
    </xs:element>
  </xs:sequence>
  <xs:attribute name="nameOfTarget" use="required">
    <xs:annotation>
      <xs:documentation xml:lang="eng">Must exist a nameOfTarget element with the same contents
 under generalInformation. Allowed characters: a-z, A-Z, 0-9 and ._%+-</xs:documentation>
    </xs:annotation>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:pattern value="[a-zA-Z0-9._%+-]+"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="dateOfMeasurement" type="xs:date">
    <xs:annotation>
      <xs:documentation xml:lang="eng">Date when the target's real-world color values was measured</
xs:documentation>
    </xs:annotation>
  </xs:attribute>
</xs:complexType>
```

Complex Type `tns:colorValuesTargetType`

Namespace	kb.se/ns/image_capture_performance

Diagram



Used by

Element tns:targetDataType/tns:colorValues

Model

tns:L , tns:A , tns:B

Children

tns:A, tns:B, tns:L

Attributes

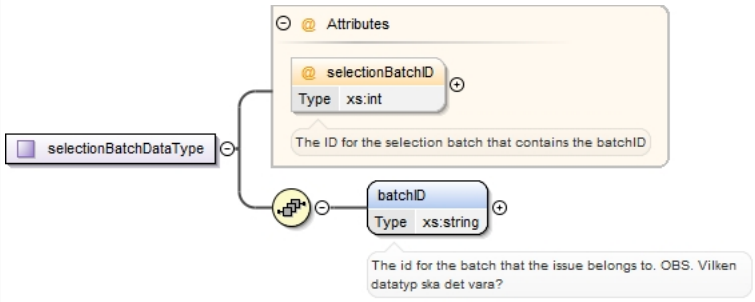
QName	Type	Use	
patchID	restriction of xs:short	required	
	ID of the patch. Corresponds to the patchID-attribute under patchMeasurements. Allowed values: 1 or higher		

Source

```
<xs:complexType name="colorValuesTargetType">
  <xs:sequence>
    <xs:element name="L" minOccurs="1">
      <xs:annotation>
        <xs:documentation xml:lang="eng">Allowed values -100 to 100.</xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="-100"/>
          <xs:maxInclusive value="100"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="A" minOccurs="1">
      <xs:annotation>
        <xs:documentation xml:lang="eng">Allowed values -100 to 100.</xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="-100"/>
          <xs:maxInclusive value="100"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="B" minOccurs="1">
      <xs:annotation>
        <xs:documentation xml:lang="eng">Allowed values -100 to 100.</xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:float">
          <xs:minInclusive value="-100"/>
          <xs:maxInclusive value="100"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
  </xs:sequence>
  <xs:attribute name="patchID" use="required">
    <xs:annotation>
      <xs:documentation xml:lang="eng">ID of the patch. Corresponds to the patchID-attribute under
patchMeasurements. Allowed values: 1 or higher</xs:documentation>
    </xs:annotation>
    <xs:simpleType>
      <xs:restriction base="xs:short">
        <xs:minInclusive value="1"/>
      </xs:restriction>
    </xs:simpleType>
```

```
  </xs:attribute>
</xs:complexType>
```

Complex Type `tns:selectionBatchDataType`

Namespace	kb.se/ns/image_capture_performance
Diagram	
Used by	Element tns:qualityDataType/tns:selectionBatchData
Model	tns:batchID
Children	tns:batchID

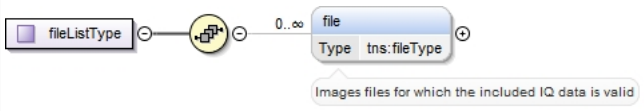
Attributes

QName	Type	Use	
selectionBatchID	xs:int	optional	
	The ID for the selection batch that contains the batchID		

Source

```
<xs:complexType name="selectionBatchDataType">
  <xs:sequence>
    <xs:element name="batchID" type="xs:string">
      <xs:annotation>
        <xs:documentation xml:lang="eng">The id for the batch that the issue belongs to. OBS. Vilken
 datatyp ska det vara?</xs:documentation>
      </xs:annotation>
    </xs:element>
  </xs:sequence>
  <xs:attribute name="selectionBatchID" type="xs:int">
    <xs:annotation>
      <xs:documentation xml:lang="eng">The ID for the selection batch that contains the batchID</
xs:documentation>
    </xs:annotation>
  </xs:attribute>
</xs:complexType>
```

Complex Type `tns:fileListType`

Namespace	kb.se/ns/image_capture_performance
Diagram	
Used by	Element tns:imageQuailtyControlDataType/tns:fileList
Model	tns:file*
Children	tns:file

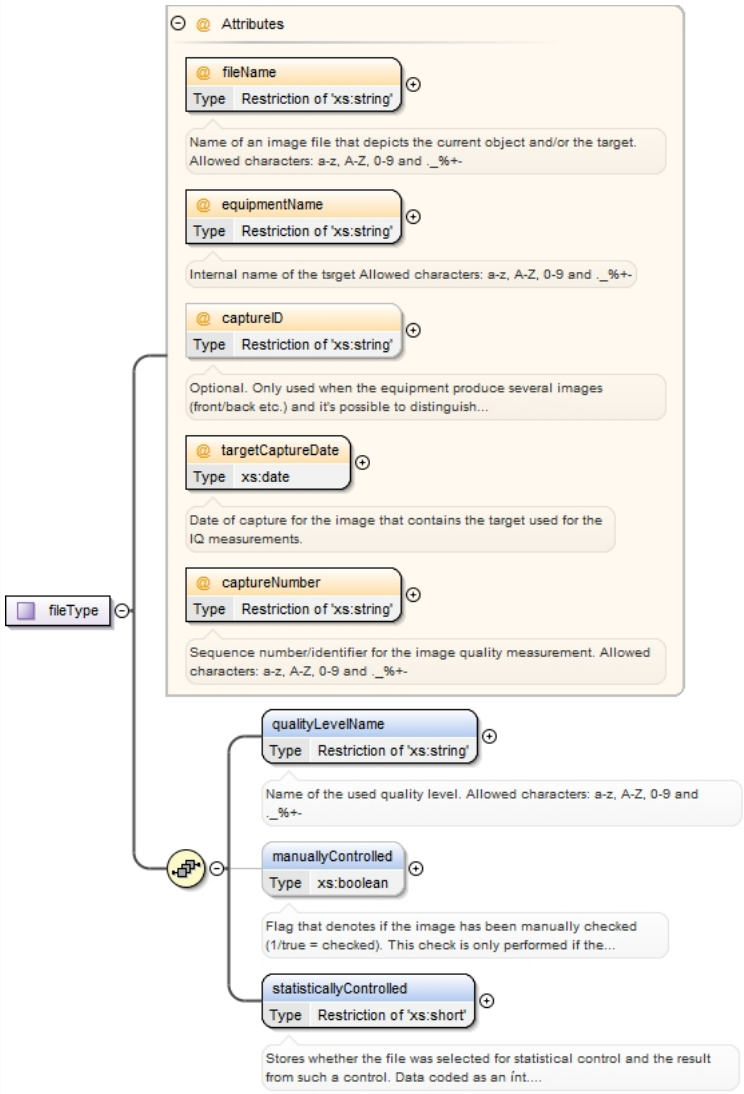
Source

```
<xs:complexType name="fileListType">
  <xs:sequence>
    <xs:element type="tns:fileType" name="file" maxOccurs="unbounded" minOccurs="0">
      <xs:annotation>
        <xs:documentation xml:lang="eng">Images files for which the included IQ data is valid</
xs:documentation>
      </xs:annotation>
    </xs:element>
  </xs:sequence>
</xs:complexType>
```

Complex Type `tns:fileType`

Namespace	kb.se/ns/image_capture_performance

Diagram



Used by

Element tns:fileListType/tns:file

Model

tns:qualityLevelName , tns:manuallyControlled{0,1} , tns:statisticallyControlled

Children

tns:manuallyControlled, tns:qualityLevelName, tns:statisticallyControlled

Attributes

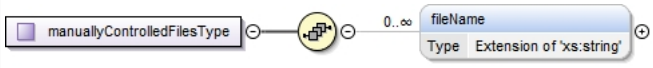
QName	Type	Use	
captureID	restriction of xs:string	optional	
	Optional. Only used when the equipment produce several images (front/back etc.) and it's possible to distinguish between them. Corresponds to the attributes with the same name under captureData Allowed characters: a-z, A-Z, 0-9 and ._%+-		
captureNumber	restriction of xs:string	required	
	Sequence number/identifier for the image quality measurement. Allowed characters: a-z, A-Z, 0-9 and ._%+-		
equipmentName	restriction of xs:string	required	
	Internal name of the tsrget Allowed characters: a-z, A-Z, 0-9 and ._%+-		
fileName	restriction of xs:string	required	
	Name of an image file that depicts the current object and/or the target. Allowed characters: a-z, A-Z, 0-9 and ._%+-		
targetCaptureDate	xs:date	required	
	Date of capture for the image that contains the target used for the IQ measurements.		

Source

```
<xs:complexType name="fileType">
  <xs:sequence>
    <xs:element name="qualityLevelName">
      <xs:annotation>
        <xs:documentation xml:lang="eng">Name of the used quality level. Allowed characters: a-z, A-
Z, 0-9 and ._%+-</xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:pattern value="[a-zA-Z0-9._%+-]+"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element minOccurs="0" name="manuallyControlled" type="xs:boolean">
      <xs:annotation>
        <xs:documentation xml:lang="eng">Flag that denotes if the image has been manually checked
 (1/true = checked). This check is only performed if the selection batch fails the statistical IQ-
control.</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="statisticallyControlled">
      <xs:annotation>
        <xs:documentation xml:lang="eng">Stores whether the file was selected for statistical
 control and the result from such a control. Data coded as an int. Possible to extend the codes if
 necessary. -1 = not selected 0 = selected, failed the control 1 = selected, passed the control.</
xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:short">
          <xs:enumeration value="-1"/>
          <xs:enumeration value="1"/>
          <xs:enumeration value="0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
  </xs:sequence>
  <xs:attribute name="fileName" use="required">
    <xs:annotation>
      <xs:documentation xml:lang="eng">Name of an image file that depicts the current object and/or
 the target. Allowed characters: a-z, A-Z, 0-9 and ._%+-</xs:documentation>
    </xs:annotation>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:pattern value="[a-zA-Z0-9._%+-]+"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="equipmentName" use="required">
    <xs:annotation>
      <xs:documentation xml:lang="eng">Internal name of the tsrget Allowed characters: a-z, A-Z, 0-9
 and ._%+-</xs:documentation>
    </xs:annotation>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:pattern value="[a-zA-Z0-9._%+-]+"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="captureID">
    <xs:annotation>
      <xs:documentation xml:lang="eng">Optional. Only used when the equipment produce several images
 (front/back etc.) and it's possible to distinguish between them. Corresponds to the attributes with
 the same name under captureData Allowed characters: a-z, A-Z, 0-9 and ._%+-</xs:documentation>
    </xs:annotation>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:pattern value="[a-zA-Z0-9._%+-]+"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute type="xs:date" name="targetCaptureDate" use="required">
    <xs:annotation>
      <xs:documentation xml:lang="eng">Date of capture for the image that contains the target used
 for the IQ measurements.</xs:documentation>
    </xs:annotation>
  </xs:attribute>
  <xs:attribute form="unqualified" name="captureNumber" use="required">
    <xs:annotation>
      <xs:documentation xml:lang="eng">Sequence number/identifier for the image quality measurement.
 Allowed characters: a-z, A-Z, 0-9 and ._%+-</xs:documentation>
    </xs:annotation>
    <xs:simpleType>
```

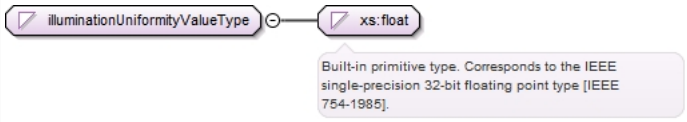
```
      <xs:restriction base="xs:string">
        <xs:pattern value="[a-zA-Z0-9._%+-]+"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
</xs:complexType>
```

Complex Type `tns:manuallyControlledFilesType`

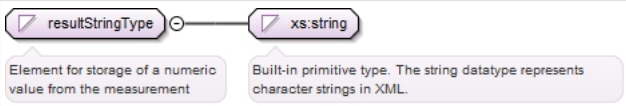
Namespace	kb.se/ns/image_capture_performance
Diagram	
Model	tns:fileName*
Children	tns:fileName
Source	<xs:complexType name="manuallyControlledFilesType"> <xs:sequence> <xs:element maxOccurs="unbounded" minOccurs="0" name="fileName"> <xs:complexType> <xs:simpleContent> <xs:extension base="xs:string"> <xs:attribute name="result" type="xs:boolean" form="unqualified" use="required"/> </xs:extension> </xs:simpleContent> </xs:complexType> </xs:element> </xs:sequence> </xs:complexType>

Simple Type(s)

Simple Type `tns:illuminationUniformityValueType`

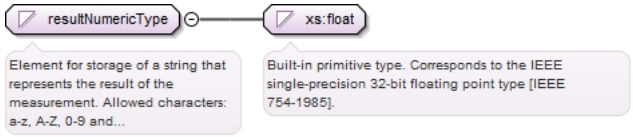
Namespace	kb.se/ns/image_capture_performance
Diagram	
Type	restriction of xs:float
Facets	maxInclusive 200 minInclusive 0
Used by	Element tns:illuminationUniformityType/tns:illuminationUniformityValue
Source	<xs:simpleType name="illuminationUniformityValueType"> <xs:restriction base="xs:float"> <xs:minInclusive value="0"/> <xs:maxInclusive value="200"/> </xs:restriction> </xs:simpleType>

Simple Type `tns:resultStringType`

Namespace	kb.se/ns/image_capture_performance
Annotations	Element for storage of a numeric value from the measurement
Diagram	
Type	restriction of xs:string
Facets	pattern [a-zA-Z0-9._%+-]+
Used by	Element tns:periodicMeasurement/tns:resultString
Source	<xs:simpleType name="resultStringType"> <xs:annotation> <xs:documentation xml:lang="eng">Element for storage of a numeric value from the measurement</ xs:documentation>

```
  </xs:annotation>
  <xs:restriction base="xs:string">
    <xs:pattern value="[a-zA-Z0-9._%+-]+"/>
  </xs:restriction>
</xs:simpleType>
```

Simple Type `tns:resultNumericType`

Namespace	kb.se/ns/image_capture_performance
Annotations	Element for storage of a string that represents the result of the measurement. Allowed characters: a-z, A-Z, 0-9 and ._%+-
Diagram	
Type	xs:float
Used by	Element tns:periodicMeasurement/tns:resultNumeric
Source	<xs:simpleType name="resultNumericType"> <xs:annotation> <xs:documentation xml:lang="eng">Element for storage of a string that represents the result of the measurement. Allowed characters: a-z, A-Z, 0-9 and ._%+-</xs:documentation> </xs:annotation> <xs:restriction base="xs:float"/> </xs:simpleType>

Namespace: ""

Attribute(s)

Attribute `tns:capturedTargetType / @nameOfTarget`

Namespace	No namespace
Annotations	Must exist a nameOfTarget element with the same contents under generalInformation. Allowed characters: a-z, A-Z, 0-9 and ._%+-
Type	restriction of xs:string
Properties	use: required
Facets	pattern [a-zA-Z0-9._%+-]+
Used by	Complex Type tns:capturedTargetType
Source	<xs:attribute name="nameOfTarget" use="required"> <xs:annotation> <xs:documentation xml:lang="eng">Must exist a nameOfTarget element with the same contents under generalInformation. Allowed characters: a-z, A-Z, 0-9 and ._%+-</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:string"> <xs:pattern value="[a-zA-Z0-9._%+-]+"/> </xs:restriction> </xs:simpleType> </xs:attribute>

Attribute `tns:capturedTargetType / @dateOfPhysicalMeasurement`

Namespace	No namespace
Annotations	Date when the target's real-world color values was measured
Type	xs:date
Properties	content: simple
Used by	Complex Type tns:capturedTargetType
Source	<xs:attribute name="dateOfPhysicalMeasurement" type="xs:date"> <xs:annotation> <xs:documentation xml:lang="eng">Date when the target's real-world color values was measured</xs:documentation> </xs:annotation>

```
</xs:attribute>
```

Attribute `tns:illuminationUniformityType / tns:illuminationUniformityValue / @size`

Namespace	No namespace	
Type	restriction of xs:string	
Properties	use:	required
Facets	enumeration	A1
	enumeration	A2
	enumeration	A3
Used by	Element	tns:illuminationUniformityType/tns:illuminationUniformityValue

Source

```
<xs:attribute name="size" use="required">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:enumeration value="A1"/>
      <xs:enumeration value="A2"/>
      <xs:enumeration value="A3"/>
    </xs:restriction>
  </xs:simpleType>
</xs:attribute>
```

Attribute `tns:periodicMeasurement / @measurementType`

Namespace	No namespace	
Annotations	Type of measurement, e.g. sharpness, stitching etc. Allowed characters: a-z, A-Z, 0-9 and ._%+-	
Type	restriction of xs:string	
Properties	use:	required
Facets	pattern	[a-zA-Z0-9._%+-]+
Used by	Complex Type	tns:periodicMeasurement

Source

```
<xs:attribute name="measurementType" use="required">
  <xs:annotation>
    <xs:documentation xml:lang="eng">Type of measurement, e.g. sharpness, stitching etc. Allowed
 characters: a-z, A-Z, 0-9 and ._%+-</xs:documentation>
  </xs:annotation>
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:pattern value="[a-zA-Z0-9._%+-]+"/>
    </xs:restriction>
  </xs:simpleType>
</xs:attribute>
```

Attribute `tns:patchType / @patchID`

Namespace	No namespace	
Annotations	ID of the current patch. Matched against the ID of the real-world patch, as found in the corresponding attribute under targetData/colorValues. Allowed values: 1 or higher	
Type	restriction of xs:short	
Properties	use:	required
Facets	minInclusive	1
Used by	Complex Type	tns:patchType

Source

```
<xs:attribute name="patchID" use="required">
  <xs:annotation>
    <xs:documentation xml:lang="eng">ID of the current patch. Matched against the ID of the real-
world patch, as found in the corresponding attribute under targetData/colorValues. Allowed values: 1
 or higher</xs:documentation>
  </xs:annotation>
  <xs:simpleType>
    <xs:restriction base="xs:short">
      <xs:minInclusive value="1"/>
```

```
    </xs:restriction>
  </xs:simpleType>
</xs:attribute>
```

Attribute `tns:L95-L80Type / @measuredSeparation`

Namespace	No namespace
Annotations	The actual interval/separation that was used for the measurement. L*95-L*80,L*95-L*80, or L*90-L*80 is the target, but the target patches might result in a slightly different interval.
Used by	Complex Type tns:L95-L80Type

Source	`<xs:attribute name="measuredSeparation">`
	`  <xs:annotation>`
	`  <xs:documentation>The actual interval/separation that was used for the measurement. L*95-L*80,L*95-L*80, or L*90-L*80 is the target, but the target patches might result in a slightly different interval.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:attribute>`

Attribute `tns:L95-L90Type / @measuredSeparation`

Namespace	No namespace
Annotations	The actual interval/separation that was used for the measurement. L*95-L*90 or L*90-L*85 is the target, but the target patches might result in a slightly different interval.
Used by	Complex Type tns:L95-L90Type

Source	`<xs:attribute name="measuredSeparation">`
	`  <xs:annotation>`
	`  <xs:documentation>The actual interval/separation that was used for the measurement. L*95-L*90 or L*90-L*85 is the target, but the target patches might result in a slightly different interval.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:attribute>`

Attribute `tns:L85-L20Type / @measuredSeparation`

Namespace	No namespace
Annotations	The actual interval/separation that was used for the measurement. L85-L*20 is the target, but the target patches might result in a slightly different interval.
Used by	Complex Type tns:L85-L20Type

Source	`<xs:attribute name="measuredSeparation">`
	`  <xs:annotation>`
	`  <xs:documentation>The actual interval/separation that was used for the measurement. L85-L*20 is the target, but the target patches might result in a slightly different interval.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:attribute>`

Attribute `tns:L85-L10Type / @measuredSeparation`

Namespace	No namespace
Annotations	The actual interval/separation that was used for the measurement. L*85-L*10 is the target, but the target patches might result in a slightly different interval.
Used by	Complex Type tns:L85-L10Type

Source	`<xs:attribute name="measuredSeparation">`
	`  <xs:annotation>`
	`  <xs:documentation>The actual interval/separation that was used for the measurement. L*85-L*10 is the target, but the target patches might result in a slightly different interval.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:attribute>`

Attribute `tns:imageDataType / @equipmentName`

Namespace	No namespace
Annotations	Internal name of the image capture equipment. Allowed characters: a-z, A-Z, 0-9 and ._%+-
Type	restriction of xs:string

Properties	use:	required
Facets	pattern	[a-zA-Z0-9._%+-]+
Used by	Complex Type	tns:imageDataType
Source	<xs:attribute name="equipmentName" use="required"> <xs:annotation> <xs:documentation xml:lang="eng">Internal name of the image capture equipment. Allowed characters: a-z, A-Z, 0-9 and ._%+-</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:string"> <xs:pattern value="[a-zA-Z0-9._%+-]+"/> </xs:restriction> </xs:simpleType> </xs:attribute>	

Attribute tns:imageDataType / @captureDate

Namespace	No namespace
Annotations	Date of capture for the image(s) used for image quality measurements.
Type	xs:date
Properties	use: required
Used by	Complex Type tns:imageDataType
Source	<xs:attribute name="captureDate" type="xs:date" use="required"> <xs:annotation> <xs:documentation xml:lang="eng">Date of capture for the image(s) used for image quality measurements.</xs:documentation> </xs:annotation> </xs:attribute>

Attribute tns:imageDataType / @captureID

Namespace	No namespace
Annotations	Identifier for the combination of equipment and an image that contains the target. Naming convension: front, back, left, right, middle, single etc. An identical attribute is used for the element captureEquipment. Allowed characters: a-z, A-Z, 0-9 and ._%+-
Type	restriction of xs:string
Properties	use: required
Facets	pattern [a-zA-Z0-9._%+-]+
Used by	Complex Type tns:imageDataType
Source	<xs:attribute name="captureID" use="required"> <xs:annotation> <xs:documentation xml:lang="eng">Identifier for the combination of equipment and an image that contains the target. Naming convension: front, back, left, right, middle, single etc. An identical attribute is used for the element captureEquipment. Allowed characters: a-z, A-Z, 0-9 and ._%+-</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:string"> <xs:pattern value="[a-zA-Z0-9._%+-]+"/> </xs:restriction> </xs:simpleType> </xs:attribute>

Attribute tns:imageDataType / @captureNumber

Namespace	No namespace
Annotations	Sequence number/identifier for the image quality measurement. The number is specific for each eqipment and it is reset daily. Included since we might want to perform several IQ measurements during a single day and we must be able to distinguish between them. Datatype is set to string to give the largest possible flexibility for the sequence numbering. Ordinary numbers are prefered. Allowed characters: a-z, A-Z, 0-9 and ._%+-
Type	restriction of xs:string

Properties	use:	required
Facets	pattern	[a-zA-Z0-9._%+-]+
Used by	Complex Type	tns:imageDataType
Source	<xs:attribute name="captureNumber" use="required"> <xs:annotation> <xs:documentation xml:lang="eng">Sequence number/identifier for the image quality measurement. The number is specific for each eqipment and it is reset daily. Included since we might want to perform several IQ measurements during a single day and we must be able to distinguish between them. Datatype is set to string to give the largest possible flexibility for the sequence numbering. Ordinary numbers are prefered. Allowed characters: a-z, A-Z, 0-9 and ._%+-</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:string"> <xs:pattern value="[a-zA-Z0-9._%+-]+"/> </xs:restriction> </xs:simpleType> </xs:attribute>	

Attribute tns:qualityLevelType / @qualityLevelName

Namespace	No namespace	
Annotations	The name of the qualityLevel. Allowed characters: a-z, A-Z, 0-9 and ._%+-	
Type	restriction of xs:string	
Properties	use:	required
Facets	pattern	[a-zA-Z0-9._%+-]+
Used by	Complex Type	tns:qualityLevelType
Source	<xs:attribute name="qualityLevelName" use="required"> <xs:annotation> <xs:documentation xml:lang="eng">The name of the qualityLevel. Allowed characters: a-z, A-Z, 0-9 and ._%+-</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:string"> <xs:pattern value="[a-zA-Z0-9._%+-]+"/> </xs:restriction> </xs:simpleType> </xs:attribute>	

Attribute tns:colorValuesTargetType / @patchID

Namespace	No namespace	
Annotations	ID of the patch. Corresponds to the patchID-attribute under patchMeasurements. Allowed values: 1 or higher	
Type	restriction of xs:short	
Properties	use:	required
Facets	minInclusive	1
Used by	Complex Type	tns:colorValuesTargetType
Source	<xs:attribute name="patchID" use="required"> <xs:annotation> <xs:documentation xml:lang="eng">ID of the patch. Corresponds to the patchID-attribute under patchMeasurements. Allowed values: 1 or higher</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:short"> <xs:minInclusive value="1"/> </xs:restriction> </xs:simpleType> </xs:attribute>	

Attribute tns:targetDataType / @nameOfTarget

Namespace	No namespace
Annotations	Must exist a nameOfTarget element with the same contents

	under generalInformation. Allowed characters: a-z, A-Z, 0-9 and ._%+-
Type	restriction of xs:string
Properties	use: required
Facets	pattern [a-zA-Z0-9._%+-]+
Used by	Complex Type tns:targetDataType
Source	<xs:attribute name="nameOfTarget" use="required"> <xs:annotation> <xs:documentation xml:lang="eng">Must exist a nameOfTarget element with the same contents under generalInformation. Allowed characters: a-z, A-Z, 0-9 and ._%+-</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:string"> <xs:pattern value="[a-zA-Z0-9._%+-]+"/> </xs:restriction> </xs:simpleType> </xs:attribute>

Attribute tns:targetDataType / @dateOfMeasurement

Namespace	No namespace
Annotations	Date when the target's real-world color values was measured
Type	xs:date
Properties	content: simple
Used by	Complex Type tns:targetDataType
Source	<xs:attribute name="dateOfMeasurement" type="xs:date"> <xs:annotation> <xs:documentation xml:lang="eng">Date when the target's real-world color values was measured</xs:documentation> </xs:annotation> </xs:attribute>

Attribute tns:selectionBatchDataType / @selectionBatchID

Namespace	No namespace
Annotations	The ID for the selection batch that contains the batchID
Type	xs:int
Properties	content: simple
Used by	Complex Type tns:selectionBatchDataType
Source	<xs:attribute name="selectionBatchID" type="xs:int"> <xs:annotation> <xs:documentation xml:lang="eng">The ID for the selection batch that contains the batchID</xs:documentation> </xs:annotation> </xs:attribute>

Attribute tns:fileType / @fileName

Namespace	No namespace
Annotations	Name of an image file that depicts the current object and/or the target. Allowed characters: a-z, A-Z, 0-9 and ._%+-
Type	restriction of xs:string
Properties	use: required
Facets	pattern [a-zA-Z0-9._%+-]+
Used by	Complex Type tns:fileType
Source	<xs:attribute name="fileName" use="required"> <xs:annotation> <xs:documentation xml:lang="eng">Name of an image file that depicts the current object and/or the target. Allowed characters: a-z, A-Z, 0-9 and ._%+-</xs:documentation> </xs:annotation> <xs:simpleType>

```
    <xs:restriction base="xs:string">
      <xs:pattern value="[a-zA-Z0-9._%+-]+"/>
    </xs:restriction>
  </xs:simpleType>
</xs:attribute>
```

Attribute `tns:fileType / @equipmentName`

Namespace	No namespace
Annotations	Internal name of the tsrget Allowed characters: a-z, A-Z, 0-9 and ._%+-
Type	restriction of xs:string
Properties	use: required
Facets	pattern [a-zA-Z0-9._%+-]+
Used by	Complex Type tns:fileType
Source	<xs:attribute name="equipmentName" use="required"> <xs:annotation> <xs:documentation xml:lang="eng">Internal name of the tsrget Allowed characters: a-z, A-Z, 0-9 and ._%+-</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:string"> <xs:pattern value="[a-zA-Z0-9._%+-]+"/> </xs:restriction> </xs:simpleType> </xs:attribute>

Attribute `tns:fileType / @captureID`

Namespace	No namespace
Annotations	Optional. Only used when the equipment produce several images (front/back etc.) and it's possible to distinguish between them. Corresponds to the attributes with the same name under captureData Allowed characters: a-z, A-Z, 0-9 and ._%+-
Type	restriction of xs:string
Properties	content: simple
Facets	pattern [a-zA-Z0-9._%+-]+
Used by	Complex Type tns:fileType
Source	<xs:attribute name="captureID"> <xs:annotation> <xs:documentation xml:lang="eng">Optional. Only used when the equipment produce several images (front/back etc.) and it's possible to distinguish between them. Corresponds to the attributes with the same name under captureData Allowed characters: a-z, A-Z, 0-9 and ._%+-</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:string"> <xs:pattern value="[a-zA-Z0-9._%+-]+"/> </xs:restriction> </xs:simpleType> </xs:attribute>

Attribute `tns:fileType / @targetCaptureDate`

Namespace	No namespace
Annotations	Date of capture for the image that contains the target used for the IQ measurements.
Type	xs:date
Properties	use: required
Used by	Complex Type tns:fileType
Source	<xs:attribute type="xs:date" name="targetCaptureDate" use="required"> <xs:annotation> <xs:documentation xml:lang="eng">Date of capture for the image that contains the target used for the IQ measurements.</xs:documentation> </xs:annotation> </xs:attribute>

Attribute `tns:fileType / @captureNumber`

Namespace	No namespace
Annotations	`Sequence number/identifier for the image quality measurement. Allowed characters: a-z, A-Z, 0-9 and ._%+-`
Type	restriction of xs:string
Properties	use: `required`
Facets	pattern `[a-zA-Z0-9._%+-]+`
Used by	Complex Type tns:fileType
Source	<xs:attribute form="unqualified" name="captureNumber" use="required"> <xs:annotation> <xs:documentation xml:lang="eng">Sequence number/identifier for the image quality measurement. Allowed characters: a-z, A-Z, 0-9 and ._%+-</xs:documentation> </xs:annotation> <xs:simpleType> <xs:restriction base="xs:string"> <xs:pattern value="[a-zA-Z0-9._%+-]+"/> </xs:restriction> </xs:simpleType> </xs:attribute>

Attribute `tns:imageQuailtyControlDataType / @packageDate`

Namespace	No namespace
Annotations	`Date when the package was created. Initally set to optional`
Type	xs:dateTime
Properties	content: `simple`
Used by	Complex Type tns:imageQuailtyControlDataType
Source	<xs:attribute name="packageDate" type="xs:dateTime"> <xs:annotation> <xs:documentation xml:lang="eng">Date when the package was created. Initally set to optional</xs:documentation> </xs:annotation> </xs:attribute>

Attribute `tns:manuallyControlledFilesType / tns:fileName / @result`

Namespace	No namespace
Type	xs:boolean
Properties	use: `required`
Used by	Element tns:manuallyControlledFilesType/tns:fileName
Source	<xs:attribute name="result" type="xs:boolean" form="unqualified" use="required"/>