

Schema documentation for OSDSpec.xsd

january 25, 2014

Table of Contents



Resource hierarchy:	2
Namespace: "http://www.openiot.eu/osdspec"	2
Schema(s)	2
Main schema OSDSpec.xsd	2
Element(s)	2
Element osd:OSDSpec	2
Element osd:OAMO	3
Element osd:description	4
Element osd:graphMeta	4
Element osd:OSMO	4
Element osd:queryControls	5
Element osd:QuerySchedule	6
Element osd:QuerySchedule / osd:second	6
Element osd:QuerySchedule / osd:minute	6
Element osd:QuerySchedule / osd:hour	7
Element osd:QuerySchedule / osd:dayOfMonth	7
Element osd:QuerySchedule / osd:month	7
Element osd:QuerySchedule / osd:dayOfWeek	7
Element osd:queryControls / osd:trigger	8
Element osd:queryControls / osd:initialRecordTime	8
Element osd:queryControls / osd:reportIfEmpty	8
Element osd:requestPresentation	8
Element osd:widget	8
Element osd:presentationAttr	9
Element osd:dynamicAttrMaxValue	9
Element osd:serviceID	10
Element osd:serviceName	10
Element osd:serviceDescription	10
Namespace: "http://www.w3.org/2007/SPARQL/protocol-types"	10
Schema(s)	10
Imported schema protocol-types.xsd	10
Element(s)	11
Element st:query-request	11
Element st:query-result	11
Element st:fault-details	12
Element st:malformed-query	12
Element st:query-request-refused	12
Namespace: "http://www.w3.org/2007/SPARQL/results"	13
Schema(s)	13
Imported schema result.xsd	13
Element(s)	13
Element res:sparql	13
Element res:head	13
Element res:variable	14
Element res:link	14
Element res:results	14
Element res:result	15
Element res:binding	15
Element res:uri	16
Element res:bnode	16
Element res:literal	16
Element res:boolean	17
Simple Type(s)	17
Simple Type res:URI-reference	17
Attribute Group(s)	17
Attribute Group res:nameAttr	17
Attribute Group res:hrefAttr	17
Attribute Group res:xmlLang	18
Attribute Group res:indexAttr	18
Attribute Group res:datatypeAttr	18
Namespace: "http://www.w3.org/XML/1998/namespace"	18
Schema(s)	18
Imported schema xml.xsd	18



Attribute(s)	19
Attribute @xml:lang	19
Attribute @xml:space	20
Attribute @xml:base	20
Attribute @xml:id	20
Attribute Group(s)	21
Attribute Group xml:specialAttrs	21
Namespace: "http://www.w3.org/1999/02/22-rdf-syntax-ns#"	21
Schema(s)	21
Imported schema rdf.xsd	21
Element(s)	22
Element rdf:RDF	22
Namespace: ""	22
Element(s)	22
Element st:query-request / query	22
Element st:query-request / default-graph-uri	23
Element st:query-request / named-graph-uri	23
Attribute(s)	23
Attribute osd:presentationAttr / @name	23
Attribute osd:presentationAttr / @value	23
Attribute osd:widget / @widgetID	23
Attribute osd:dynamicAttrMaxValue / @name	23
Attribute osd:dynamicAttrMaxValue / @value	24
Attribute osd:OSMO / @id	24
Attribute osd:OSMO / @name	24
Attribute osd:OAMO / @id	24
Attribute osd:OAMO / @name	24
Attribute osd:OSDSpec / @userID	24
Attribute res:nameAttr / @name	25
Attribute res:hrefAttr / @href	25
Attribute res:literal / @datatype	25
Attribute res:result / @index	25
Attribute res:indexAttr / @index	25
Attribute res:datatypeAttr / @datatype	25

Resource hierarchy:

Legend:  Import,  Include,  Redefine,  Cycle detected

OSDSpec.xsd

  protocol-types.xsd

  result.xsd

  xml.xsd

  rdf.xsd

Namespace: "http://www.openiot.eu/osdspec"

Schema(s)

Main schema OSDSpec.xsd

Namespace	http://www.openiot.eu/osdspec	
Properties	attribute form default:	unqualified
	element form default:	qualified

Element(s)

Element osd:OSDSpec

Namespace	http://www.openiot.eu/osdspec
Annotations	OpenIoT Service Description Specification

Diagram					
Properties	content:	complex			
Model	osd:OAMO+				
Children	osd:OAMO				
Instance	<pre><osd:OSDSpec userID=" " xmlns:osd="http://www.openiot.eu/osdspec"> <osd:OAMO id=" " name=" ">{1,unbounded}</osd:OAMO> </osd:OSDSpec></pre>				
Attributes	QName	Type	Fixed	Default	Use
	userID	xs:anyURI			required
Source	<pre><xs:element name="OSDSpec"> <xs:annotation> <xs:documentation>OpenIoT Service Description Specification</xs:documentation> </xs:annotation> <xs:complexType> <xs:sequence> <xs:element maxOccurs="unbounded" ref="osd:OAMO"/> </xs:sequence> <xs:attribute name="userID" use="required" type="xs:anyURI"/> </xs:complexType> </xs:element></pre>				

Element osd:OAMO

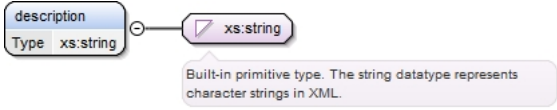
Namespace	http://www.openiot.eu/osdspec				
Annotations	OpenIoT Application Model Object				
Diagram					
Properties	content:	complex			
Used by	Element	osd:OSDSpec			
Model	osd:description{0,1} , osd:graphMeta{0,1} , osd:OSMO+				
Children	osd:OSMO, osd:description, osd:graphMeta				
Instance	<pre><osd:OAMO id=" " name=" " xmlns:osd="http://www.openiot.eu/osdspec"> <osd:description>{0,1}</osd:description> <osd:graphMeta>{0,1}</osd:graphMeta> <osd:OSMO id=" " name=" ">{1,unbounded}</osd:OSMO> </osd:OAMO></pre>				
Attributes	QName	Type	Fixed	Default	Use
	id	xs:anyURI			optional
	name	xs:NCName			required
Source	<pre><xs:element name="OAMO"> <xs:annotation></pre>				

```

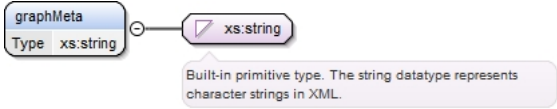
<xs:documentation>OpenIoT Application Model Object</xs:documentation>
</xs:annotation>
<xs:complexType>
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" ref="osd:description"/>
    <xs:element minOccurs="0" maxOccurs="1" ref="osd:graphMeta"/>
    <xs:element maxOccurs="unbounded" ref="osd:OSMO"/>
  </xs:sequence>
  <xs:attribute name="id" use="optional" type="xs:anyURI"/>
  <xs:attribute name="name" type="xs:NCName" use="required"/>
</xs:complexType>
</xs:element>

```

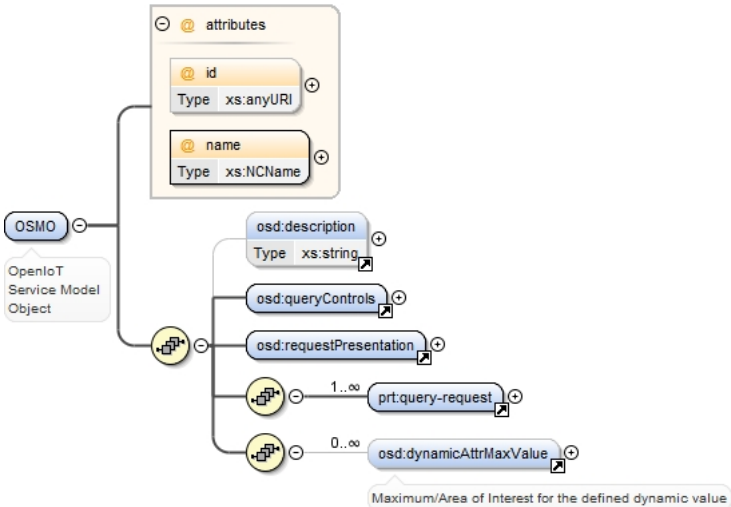
Element osd:description

Namespace	http://www.openiot.eu/osdspec
Diagram	
Type	xs:string
Properties	content: simple
Used by	Elements osd:OAMO, osd:OSMO
Source	<xs:element name="description" type="xs:string" />

Element osd:graphMeta

Namespace	http://www.openiot.eu/osdspec
Diagram	
Type	xs:string
Properties	content: simple
Used by	Element osd:OAMO
Source	<xs:element name="graphMeta" type="xs:string" />

Element osd:OSMO

Namespace	http://www.openiot.eu/osdspec
Annotations	OpenIoT Service Model Object
Diagram	
Properties	content: complex

Used by	Element osd:OAMO				
Model	osd:description{0,1} , osd:queryControls , osd:requestPresentation , st:query-request+ , osd:dynamicAttrMaxValue*				
Children	osd:description, osd:dynamicAttrMaxValue, osd:queryControls, osd:requestPresentation, st:query-request				
Instance	<pre><osd:OSMO id="" name="" xmlns:osd="http://www.openiot.eu/osdspec" xmlns:prt="http://www.w3.org/2007/SPARQL/protocol-types#"> <osd:description>{0,1}</osd:description> <osd:queryControls>{1,1}</osd:queryControls> <osd:requestPresentation>{1,1}</osd:requestPresentation> <prt:query-request>{1,unbounded}</prt:query-request> <osd:dynamicAttrMaxValue name="" value="">{0,unbounded}</osd:dynamicAttrMaxValue> </osd:OSMO></pre>				
Attributes	QName	Type	Fixed	Default	Use
	id	xs:anyURI			optional
	name	xs:NCName			required
Source	<pre><xs:element name="OSMO"> <xs:annotation> <xs:documentation>OpenIoT Service Model Object</xs:documentation> </xs:annotation> <xs:complexType> <xs:sequence> <xs:element minOccurs="0" maxOccurs="1" ref="osd:description"/> <xs:element ref="osd:queryControls"/> <xs:element ref="osd:requestPresentation"/> <xs:sequence> <xs:element ref="prt:query-request" maxOccurs="unbounded" minOccurs="1"/> </xs:sequence> <xs:sequence> <xs:element maxOccurs="unbounded" minOccurs="0" ref="osd:dynamicAttrMaxValue"/> </xs:sequence> </xs:sequence> <xs:attribute name="id" use="optional" type="xs:anyURI"/> <xs:attribute name="name" type="xs:NCName" use="required"/> </xs:complexType> </xs:element></pre>				

Element osd:queryControls

Namespace	http://www.openiot.eu/osdspec		
Diagram			
Properties	content:	complex	
Used by	Element	osd:OSMO	
Model	osd:QuerySchedule , osd:trigger{0,1} , osd:initialRecordTime{0,1} , osd:reportIfEmpty		
Children	osd:QuerySchedule, osd:initialRecordTime, osd:reportIfEmpty, osd:trigger		
Instance	<pre><osd:queryControls xmlns:osd="http://www.openiot.eu/osdspec"> <osd:QuerySchedule>{1,1}</osd:QuerySchedule> <osd:trigger>{0,1}</osd:trigger> <osd:initialRecordTime>{0,1}</osd:initialRecordTime> <osd:reportIfEmpty>{1,1}</osd:reportIfEmpty> </osd:queryControls></pre>		
Source	<pre><xs:element name="queryControls"> <xs:complexType> <xs:sequence> <xs:element ref="osd:QuerySchedule"/> <xs:element name="trigger" type="xs:anyURI" minOccurs="0"/> <xs:element name="initialRecordTime" type="xs:dateTime" minOccurs="0"/> <xs:element name="reportIfEmpty" type="xs:boolean"/> </xs:sequence> </xs:complexType> </xs:element></pre>		

Element `osd:QuerySchedule`

Namespace	http://www.openiot.eu/osdspec
Diagram	
Properties	content: complex
Used by	Element <code>osd:queryControls</code>
Model	<code>osd:second{0,1}</code> , <code>osd:minute{0,1}</code> , <code>osd:hour{0,1}</code> , <code>osd:dayOfMonth{0,1}</code> , <code>osd:month{0,1}</code> , <code>osd:dayOfWeek{0,1}</code>
Children	<code>osd:dayOfMonth</code> , <code>osd:dayOfWeek</code> , <code>osd:hour</code> , <code>osd:minute</code> , <code>osd:month</code> , <code>osd:second</code>
Instance	<pre> <osd:QuerySchedule xmlns:osd="http://www.openiot.eu/osdspec"> <osd:second>{0,1}</osd:second> <osd:minute>{0,1}</osd:minute> <osd:hour>{0,1}</osd:hour> <osd:dayOfMonth>{0,1}</osd:dayOfMonth> <osd:month>{0,1}</osd:month> <osd:dayOfWeek>{0,1}</osd:dayOfWeek> </osd:QuerySchedule> </pre>
Source	<pre> <xs:element name="QuerySchedule"> <xs:complexType> <xs:sequence> <xs:element name="second" type="xs:string" minOccurs="0"/> <xs:element name="minute" type="xs:string" minOccurs="0"/> <xs:element name="hour" type="xs:string" minOccurs="0"/> <xs:element name="dayOfMonth" type="xs:string" minOccurs="0"/> <xs:element name="month" type="xs:string" minOccurs="0"/> <xs:element name="dayOfWeek" type="xs:string" minOccurs="0"/> </xs:sequence> </xs:complexType> </xs:element> </pre>

Element `osd:QuerySchedule / osd:second`

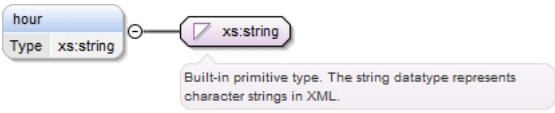
Namespace	http://www.openiot.eu/osdspec
Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0
Source	<code><xs:element name="second" type="xs:string" minOccurs="0"/></code>

Element `osd:QuerySchedule / osd:minute`

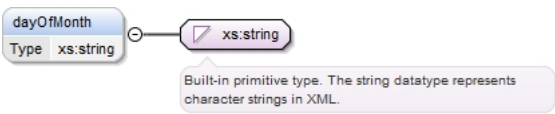
Namespace	http://www.openiot.eu/osdspec
Diagram	

Type	xs:string
Properties	content: simple
	minOccurs: 0
Source	<code><xs:element name="minute" type="xs:string" minOccurs="0"/></code>

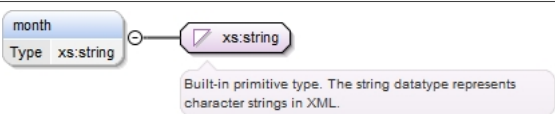
Element `osd:QuerySchedule / osd:hour`

Namespace	http://www.openiot.eu/osdspec
Diagram	
Type	xs:string
Properties	content: simple
	minOccurs: 0
Source	<code><xs:element name="hour" type="xs:string" minOccurs="0"/></code>

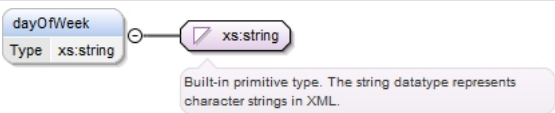
Element `osd:QuerySchedule / osd:dayOfMonth`

Namespace	http://www.openiot.eu/osdspec
Diagram	
Type	xs:string
Properties	content: simple
	minOccurs: 0
Source	<code><xs:element name="dayOfMonth" type="xs:string" minOccurs="0"/></code>

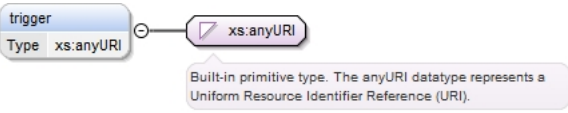
Element `osd:QuerySchedule / osd:month`

Namespace	http://www.openiot.eu/osdspec
Diagram	
Type	xs:string
Properties	content: simple
	minOccurs: 0
Source	<code><xs:element name="month" type="xs:string" minOccurs="0"/></code>

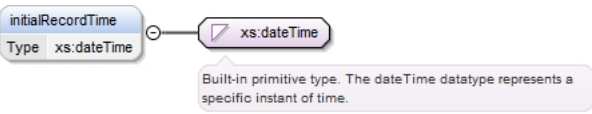
Element `osd:QuerySchedule / osd:dayOfWeek`

Namespace	http://www.openiot.eu/osdspec
Diagram	
Type	xs:string
Properties	content: simple
	minOccurs: 0
Source	<code><xs:element name="dayOfWeek" type="xs:string" minOccurs="0"/></code>

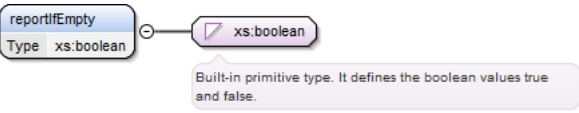
Element `osd:queryControls` / `osd:trigger`

Namespace	http://www.openiot.eu/osdspec
Diagram	
Type	xs:anyURI
Properties	content: simple minOccurs: 0
Source	<code><xs:element name="trigger" type="xs:anyURI" minOccurs="0"/></code>

Element `osd:queryControls` / `osd:initialRecordTime`

Namespace	http://www.openiot.eu/osdspec
Diagram	
Type	xs:dateTime
Properties	content: simple minOccurs: 0
Source	<code><xs:element name="initialRecordTime" type="xs:dateTime" minOccurs="0"/></code>

Element `osd:queryControls` / `osd:reportIfEmpty`

Namespace	http://www.openiot.eu/osdspec
Diagram	
Type	xs:boolean
Properties	content: simple
Source	<code><xs:element name="reportIfEmpty" type="xs:boolean"/></code>

Element `osd:requestPresentation`

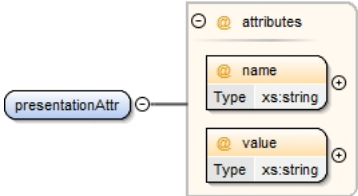
Namespace	http://www.openiot.eu/osdspec
Diagram	
Properties	content: complex
Used by	Element <code>osd:OSMO</code>
Model	osd:widget+
Children	osd:widget
Instance	<pre><osd:requestPresentation xmlns:osd="http://www.openiot.eu/osdspec"> <osd:widget widgetID=" ">{1,unbounded}</osd:widget> </osd:requestPresentation></pre>
Source	<pre><xs:element name="requestPresentation"> <xs:complexType> <xs:sequence> <xs:element maxOccurs="unbounded" ref="osd:widget"/> </xs:sequence> </xs:complexType> </xs:element></pre>

Element `osd:widget`

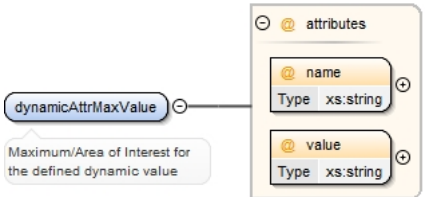
Namespace	http://www.openiot.eu/osdspec
-----------	-------------------------------

Diagram					
Properties	content:	complex			
Used by	Element	osd:requestPresentation			
Model	osd:presentationAttr+				
Children	osd:presentationAttr				
Instance	<pre><osd:widget widgetID=" " xmlns:osd="http://www.openiot.eu/osdspec"> <osd:presentationAttr name=" " value=" ">{1,unbounded}</osd:presentationAttr> </osd:widget></pre>				
Attributes	QName	Type	Fixed	Default	Use
	widgetID	xs:anyURI			required
Source	<pre><xs:element name="widget"> <xs:complexType> <xs:sequence> <xs:element maxOccurs="unbounded" ref="osd:presentationAttr"/> </xs:sequence> <xs:attribute name="widgetID" use="required" type="xs:anyURI"/> </xs:complexType> </xs:element></pre>				

Element osd:presentationAttr

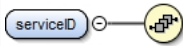
Namespace	http://www.openiot.eu/osdspec				
Diagram					
Properties	content:	complex			
Used by	Element	osd:widget			
Attributes	QName	Type	Fixed	Default	Use
	name	xs:string			required
	value	xs:string			required
Source	<pre><xs:element name="presentationAttr"> <xs:complexType> <xs:attribute name="name" use="required" type="xs:string"/> <xs:attribute name="value" use="required" type="xs:string"/> </xs:complexType> </xs:element></pre>				

Element osd:dynamicAttrMaxValue

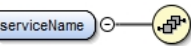
Namespace	http://www.openiot.eu/osdspec				
Annotations	Maximum/Area of Interest for the defined dynamic value				
Diagram					
Properties	content:	complex			

Used by	Element <code>osd:OSMO</code>				
Attributes	QName	Type	Fixed	Default	Use
	name	xs:string			required
	value	xs:string			required
Source	<pre> <xs:element name="dynamicAttrMaxValue"> <xs:annotation> <xs:documentation>Maximum/Area of Interest for the defined dynamic value</xs:documentation> </xs:annotation> <xs:complexType> <xs:attribute name="name" use="required" type="xs:string"/> <xs:attribute name="value" use="required" type="xs:string"/> </xs:complexType> </xs:element> </pre>				

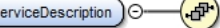
Element `osd:serviceID`

Namespace	http://www.openiot.eu/osdspec		
Diagram			
Properties	content:	complex	
Model			
Source	<pre><xs:element name="serviceID"> <xs:complexType> <xs:sequence> </xs:sequence> </xs:complexType> </xs:element></pre>		

Element `osd:serviceName`

Namespace	http://www.openiot.eu/osdspec		
Diagram			
Properties	content:	complex	
Model			
Source	<pre><xs:element name="serviceName"> <xs:complexType> <xs:sequence> </xs:sequence> </xs:complexType> </xs:element></pre>		

Element `osd:serviceDescription`

Namespace	http://www.openiot.eu/osdspec		
Diagram			
Properties	content:	complex	
Model			
Source	<pre><xs:element name="serviceDescription"> <xs:complexType> <xs:sequence> </xs:sequence> </xs:complexType> </xs:element></pre>		

Namespace: "http://www.w3.org/2007/SPARQL/protocol-types#"**Schema(s)****Imported schema `protocol-types.xsd`**

Namespace	http://www.w3.org/2007/SPARQL/protocol-types#
-----------	---

Properties	attribute form default:	unqualified
	element form default:	unqualified
	version:	\$Id: protocol-types.xsd,v 1.2 2007/10/17 17:17:35 eric Exp \$

Element(s)

Element `st:query-request`

Namespace	http://www.w3.org/2007/SPARQL/protocol-types#
Diagram	
Properties	content: complex
Used by	Element <code>osd:OSMO</code>
Model	query , default-graph-uri* , named-graph-uri*
Children	default-graph-uri, named-graph-uri, query
Instance	<pre><st:query-request xmlns:st="http://www.w3.org/2007/SPARQL/protocol-types#"> <query>{1,1}</query> <default-graph-uri>{0,unbounded}</default-graph-uri> <named-graph-uri>{0,unbounded}</named-graph-uri> </st:query-request></pre>
Source	<pre><xs:element name="query-request"> <xs:complexType> <xs:sequence> <xs:element minOccurs="1" maxOccurs="1" name="query" type="xs:string"> <xs:annotation> <xs:documentation>query is an xs:string constrained by the language definition, http:// www.w3.org/TR/rdf-sparql-query/#grammar, as "a sequence of characters in the language defined by the [SPARQL] grammar, starting with the Query production"</xs:documentation> </xs:annotation> </xs:element> <xs:element minOccurs="0" maxOccurs="unbounded" name="default-graph-uri" type="xs:anyURI"/> <xs:element minOccurs="0" maxOccurs="unbounded" name="named-graph-uri" type="xs:anyURI"/> </xs:sequence> </xs:complexType> </xs:element></pre>

Element `st:query-result`

Namespace	http://www.w3.org/2007/SPARQL/protocol-types#
Annotations	The type for serializing query results, either as XML or RDF/XML.
Diagram	
Properties	content: complex
Model	res:sparql rdf:RDF
Children	rdf:RDF, res:sparql
Instance	<pre><st:query-result xmlns:st="http://www.w3.org/2007/SPARQL/protocol-types#" xmlns:vbr="http:// www.w3.org/2007/SPARQL/results#" xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"> <vbr:sparql>{1,1}</vbr:sparql> <rdf:RDF>{1,1}</rdf:RDF> </st:query-result></pre>
Source	<pre><xs:element name="query-result"> <xs:annotation> <xs:documentation>The type for serializing query results, either as XML or RDF/XML.</ xs:documentation> </xs:annotation> <xs:complexType> <xs:sequence> <xs:element minOccurs="0" maxOccurs="1" name="vbr:sparql" type="xs:string"> <xs:annotation> <xs:documentation>The type for serializing query results, either as XML or RDF/XML.</ xs:documentation> </xs:annotation> </xs:element> <xs:element minOccurs="0" maxOccurs="1" name="rdf:RDF" type="xs:anyURI"> <xs:annotation> <xs:documentation>The content of the root RDF element must be valid RDF/XML as defined in the RDF/XML Syntax Specification (Revised):...</xs:documentation> </xs:annotation> </xs:element> </xs:sequence> </xs:complexType> </xs:element></pre>

```

</xs:annotation>
<xs:complexType>
  <xs:choice>
    <xs:element maxOccurs="1" ref="vbr:sparql" />
    <xs:element maxOccurs="1" ref="rdf:RDF" />
  </xs:choice>
</xs:complexType>
</xs:element>

```

Element st:fault-details

Namespace	http://www.w3.org/2007/SPARQL/protocol-types#
Annotations	This element contains human-readable information about the fault returned by the SPARQL query processing service.
Diagram	
Type	xs:string
Properties	content: simple
Used by	Elements st:malformed-query, st:query-request-refused
Source	<pre> <xs:element type="xs:string" name="fault-details"> <xs:annotation> <xs:documentation>This element contains human-readable information about the fault returned by the SPARQL query processing service.</xs:documentation> </xs:annotation> </xs:element> </pre>

Element st:malformed-query

Namespace	http://www.w3.org/2007/SPARQL/protocol-types#
Diagram	
Properties	content: complex
Model	ALL(st:fault-details{0,1})
Children	st:fault-details
Instance	<pre> <st:malformed-query xmlns:st="http://www.w3.org/2007/SPARQL/protocol-types#"> <st:fault-details>{0,1}</st:fault-details> </st:malformed-query> </pre>
Source	<pre> <xs:element name="malformed-query"> <xs:complexType> <xs:all> <xs:element minOccurs="0" maxOccurs="1" ref="st:fault-details" /> </xs:all> </xs:complexType> </xs:element> </pre>

Element st:query-request-refused

Namespace	http://www.w3.org/2007/SPARQL/protocol-types#
Diagram	
Properties	content: complex
Model	ALL(st:fault-details{0,1})
Children	st:fault-details

Instance	<pre><st:query-request-refused xmlns:st="http://www.w3.org/2007/SPARQL/protocol-types#"> <st:fault-details>{0,1}</st:fault-details> </st:query-request-refused></pre>
Source	<pre><xs:element name="query-request-refused"> <xs:complexType> <xs:all> <xs:element minOccurs="0" maxOccurs="1" ref="st:fault-details" /> </xs:all> </xs:complexType> </xs:element></pre>

Namespace: "http://www.w3.org/2007/SPARQL/results#"

Schema(s)

Imported schema result.xsd

Namespace	http://www.w3.org/2007/SPARQL/results#
Properties	attribute form default: unqualified element form default: qualified

Element(s)

Element res:sparql


Namespace	http://www.w3.org/2007/SPARQL/results#
Diagram	<pre> graph LR sparql((sparql)) --- seq1(()) seq1 --- head((head)) seq1 --- choice((choice)) choice --- results((results)) choice --- boolean((boolean)) </pre>
Properties	content: complex
Used by	Element st:query-result
Model	res:head , (res:results res:boolean)
Children	res:boolean, res:head, res:results
Instance	<pre><res:sparql xmlns:res="http://www.w3.org/2007/SPARQL/results#"> <res:head>{1,1}</res:head> <res:results>{1,1}</res:results> <res:boolean>{1,1}</res:boolean> </res:sparql></pre>
Source	<pre><xs:element name="sparql"> <xs:complexType> <xs:sequence> <xs:element ref="res:head" /> <xs:choice> <xs:element ref="res:results" /> <xs:element ref="res:boolean" /> </xs:choice> </xs:sequence> </xs:complexType> </xs:element></pre>

Element res:head


Namespace	http://www.w3.org/2007/SPARQL/results#
Diagram	<pre> graph LR head((head)) --- seq1(()) seq1 --- seq2(()) seq2 --- var((res:variable)) seq2 --- link((res:link)) </pre>
Properties	content: complex
Used by	Element res:sparql
Model	res:variable* , res:link*
Children	res:link, res:variable

Instance	<pre><res:head xmlns:res="http://www.w3.org/2007/SPARQL/results#"> <res:variable name=" ">{0,unbounded}</res:variable> <res:link href=" ">{0,unbounded}</res:link> </res:head></pre>
Source	<pre><xs:element name="head"> <xs:complexType> <xs:sequence> <xs:element minOccurs="0" maxOccurs="unbounded" ref="res:variable"/> <xs:element minOccurs="0" maxOccurs="unbounded" ref="res:link"/> </xs:sequence> </xs:complexType> </xs:element></pre>


Element res:variable

Namespace	http://www.w3.org/2007/SPARQL/results#				
Diagram					
Properties	content:	complex			
Used by	Element	res:head			
Attributes	QName	Type	Fixed	Default	Use
	name	xs:NMTOKEN			required
Source	<pre><xs:element name="variable"> <xs:complexType> <xs:attributeGroup ref="res:nameAttr"/> </xs:complexType> </xs:element></pre>				

Element res:link

Namespace	http://www.w3.org/2007/SPARQL/results#				
Diagram					
Properties	content:	complex			
Used by	Element	res:head			
Attributes	QName	Type	Fixed	Default	Use
	href	res:URI-reference			required
Source	<pre><xs:element name="link"> <xs:complexType> <xs:attributeGroup ref="res:hrefAttr"/> </xs:complexType> </xs:element></pre>				

Element res:results

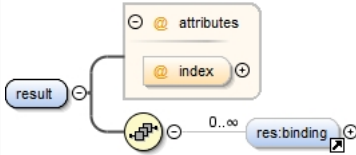
Namespace	http://www.w3.org/2007/SPARQL/results#	
Diagram		
Properties	content:	complex
Used by	Element	res:sparql
Model	res:result*	
Children	res:result	
Instance	<pre><res:results xmlns:res="http://www.w3.org/2007/SPARQL/results#"> <res:result index=" ">{0,unbounded}</res:result> </res:results></pre>	
Source	<pre><xs:element name="results"></pre>	

```

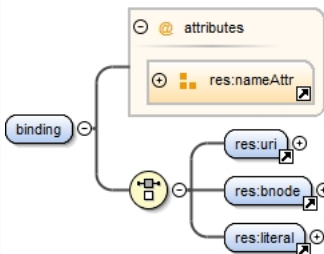
<xs:complexType>
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" ref="res:result"/>
  </xs:sequence>
</xs:complexType>
</xs:element>

```

Element res:result

Namespace	http://www.w3.org/2007/SPARQL/results#				
Diagram					
Properties	content:	complex			
Used by	Element	res:results			
Model	res:binding*				
Children	res:binding				
Instance	<pre><res:result index=" " xmlns:res="http://www.w3.org/2007/SPARQL/results#"> <res:binding name=" ">{0,unbounded}</res:binding> </res:result></pre>				
Attributes	QName	Type	Fixed	Default	Use
	index	xs:positiveInteger			optional
Source	<pre><xs:element name="result"> <xs:complexType> <xs:sequence> <xs:element minOccurs="0" maxOccurs="unbounded" ref="res:binding"/> </xs:sequence> <xs:attribute name="index" type="xs:positiveInteger"/> </xs:complexType> </xs:element></pre>				

Element res:binding

Namespace	http://www.w3.org/2007/SPARQL/results#				
Diagram					
Properties	content:	complex			
Used by	Element	res:result			
Model	res:uri res:bnode res:literal				
Children	res:bnode, res:literal, res:uri				
Instance	<pre><res:binding name=" " xmlns:res="http://www.w3.org/2007/SPARQL/results#"> <res:uri>{1,1}</res:uri> <res:bnode>{1,1}</res:bnode> <res:literal datatype=" " xml:lang=" ">{1,1}</res:literal> </res:binding></pre>				
Attributes	QName	Type	Fixed	Default	Use
	name	xs:NMTOKEN			required
Source	<pre><xs:element name="binding"> <xs:complexType> <xs:choice> <xs:element ref="res:uri"/> <xs:element ref="res:bnode"/> </xs:choice> </xs:complexType> </xs:element></pre>				

```

<xs:element ref="res:literal"/>
</xs:choice>
<xs:attributeGroup ref="res:nameAttr"/>
</xs:complexType>
</xs:element>

```

Element res:uri

Namespace	http://www.w3.org/2007/SPARQL/results#		
Diagram			
Type	xs:string		
Properties	content:	simple	
Used by	Element	res:binding	
Source	<xs:element name="uri" type="xs:string" />		

Element res:bnode

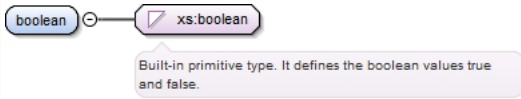
Namespace	http://www.w3.org/2007/SPARQL/results#		
Diagram			
Type	xs:string		
Properties	content:	simple	
Used by	Element	res:binding	
Source	<xs:element name="bnode" type="xs:string"/>		

Element res:literal

Namespace	http://www.w3.org/2007/SPARQL/results#				
Diagram					
Properties	content:	complex			
	mixed:	true			
Used by	Element	res:binding			
Model					
Attributes	QName	Type	Fixed	Default	Use
	datatype	res:URI-reference			optional
	xml:lang	union of(xs:language, restriction of xs:string)			optional
		Attempting to install the relevant ISO 2- and 3-letter codes as the enumerated possible values is probably never going to be a realistic possibility. See RFC 3066 at http://www.ietf.org/rfc/rfc3066.txt and the IANA registry at http://www.iana.org/assignments/lang-tag-apps.htm for further information.			
		The union allows for the 'un-declaration' of xml:lang with the empty string.			

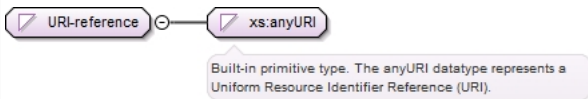
Source	<pre> <xs:element name="literal"> <xs:complexType mixed="true"> <xs:attribute name="datatype" type="res:URI-reference" /> <xs:attribute ref="xml:lang" /> </xs:complexType> </xs:element> </pre>
--------	--

Element `res:boolean`

Namespace	http://www.w3.org/2007/SPARQL/results#		
Diagram			
Type	xs:boolean		
Properties	content:	simple	
Used by	Element	res:sparql	
Source	<code><xs:element name="boolean" type="xs:boolean" /></code>		

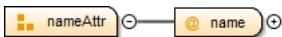
Simple Type(s)

Simple Type `res:URI-reference`

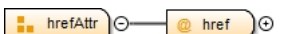
Namespace	http://www.w3.org/2007/SPARQL/results#		
Diagram			
Type	xs:anyURI		
Used by	Attributes	res:datatypeAttr/@datatype, res:hrefAttr/@href, res:literal/@datatype	
Source	<pre><xs:simpleType name="URI-reference"> <xs:restriction base="xs:anyURI" /> </xs:simpleType></pre>		

Attribute Group(s)

Attribute Group `res:nameAttr`

Namespace	http://www.w3.org/2007/SPARQL/results#				
Diagram					
Used by	Elements	res:binding, res:variable			
Attributes	QName	Type	Fixed	Default	Use
	name	xs:NMTOKEN			required
Source	<pre> <xs:attributeGroup name="nameAttr"> <xs:attribute name="name" use="required" type="xs:NMTOKEN" /> </xs:attributeGroup> </pre>				

Attribute Group `res:hrefAttr`

Namespace	http://www.w3.org/2007/SPARQL/results#				
Diagram					
Used by	Element	res:link			
Attributes	QName	Type	Fixed	Default	Use
	href	res:URI-reference			required
Source	<pre> <xs:attributeGroup name="hrefAttr"> <xs:attribute name="href" use="required" type="res:URI-reference" /> </xs:attributeGroup> </pre>				

Attribute Group `res:xmlLang`

Namespace	http://www.w3.org/2007/SPARQL/results#				
Diagram	<div></div>				
Attributes	QName	Type	Fixed	Default	Use
	xml:lang	union of(xs:language, restriction of xs:string)			required
		<p>Attempting to install the relevant ISO 2- and 3-letter codes as the enumerated possible values is probably never going to be a realistic possibility. See RFC 3066 at http://www.ietf.org/rfc/rfc3066.txt and the IANA registry at http://www.iana.org/assignments/lang-tag-apps.htm for further information.</p> <p>The union allows for the 'un-declaration' of xml:lang with the empty string.</p>			
Source	<pre><xs:attributeGroup name="xmlLang"> <xs:attribute ref="xml:lang" use="required"/> </xs:attributeGroup></pre>				

Attribute Group `res:indexAttr`

Namespace	http://www.w3.org/2007/SPARQL/results#				
Diagram					
Attributes	QName	Type	Fixed	Default	Use
	index	xs:positiveInteger			required
Source	<pre><xs:attributeGroup name="indexAttr"> <xs:attribute name="index" use="required" type="xs:positiveInteger"/> </xs:attributeGroup></pre>				

Attribute Group `res:datatypeAttr`

Namespace	http://www.w3.org/2007/SPARQL/results#				
Diagram					
Attributes	QName	Type	Fixed	Default	Use
	datatype	res:URI-reference			required
Source	<pre><xs:attributeGroup name="datatypeAttr"> <xs:attribute name="datatype" use="required" type="res:URI-reference"/> </xs:attributeGroup></pre>				

Namespace: "http://www.w3.org/XML/1998/namespace"**Schema(s)****Imported schema `xml.xsd`**

Namespace	http://www.w3.org/XML/1998/namespace
Annotations	<p>See http://www.w3.org/XML/1998/namespace.html and http://www.w3.org/TR/REC-xml for information about this namespace.</p> <p>This schema document describes the XML namespace, in a form suitable for import by other schema documents.</p> <p>Note that local names in this namespace are intended to be defined only by the World Wide Web Consortium or its subgroups. The following names are currently defined in this namespace and should not be used with conflicting semantics by any Working Group, specification, or document instance:</p>

	<p>base (as an attribute name): denotes an attribute whose value provides a URI to be used as the base for interpreting any relative URIs in the scope of the element on which it appears; its value is inherited. This name is reserved by virtue of its definition in the XML Base specification.</p> <p>id (as an attribute name): denotes an attribute whose value should be interpreted as if declared to be of type ID. This name is reserved by virtue of its definition in the xml:id specification.</p> <p>lang (as an attribute name): denotes an attribute whose value is a language code for the natural language of the content of any element; its value is inherited. This name is reserved by virtue of its definition in the XML specification.</p> <p>space (as an attribute name): denotes an attribute whose value is a keyword indicating what whitespace processing discipline is intended for the content of the element; its value is inherited. This name is reserved by virtue of its definition in the XML specification.</p> <p>Father (in any context at all): denotes Jon Bosak, the chair of the original XML Working Group. This name is reserved by the following decision of the W3C XML Plenary and XML Coordination groups:</p> <p style="padding-left: 40px;">In appreciation for his vision, leadership and dedication the W3C XML Plenary on this 10th day of February, 2000 reserves for Jon Bosak in perpetuity the XML name xml:Father</p> <p>This schema defines attributes and an attribute group suitable for use by schemas wishing to allow xml:base, xml:lang, xml:space or xml:id attributes on elements they define.</p> <p>To enable this, such a schema must import this schema for the XML namespace, e.g. as follows:</p> <pre><schema . . .> . . . <import namespace="http://www.w3.org/XML/1998/namespace" schemaLocation="http://www.w3.org/2001/xml.xsd"/></pre> <p>Subsequently, qualified reference to any of the attributes or the group defined below will have the desired effect, e.g.</p> <pre><type . . .> . . . <attributeGroup ref="xml:specialAttrs"/></pre> <p>will define a type which will schema-validate an instance element with any of those attributes</p> <p>In keeping with the XML Schema WG's standard versioning policy, this schema document will persist at http://www.w3.org/2007/08/xml.xsd. At the date of issue it can also be found at http://www.w3.org/2001/xml.xsd. The schema document at that URI may however change in the future, in order to remain compatible with the latest version of XML Schema itself, or with the XML namespace itself. In other words, if the XML Schema or XML namespaces change, the version of this document at http://www.w3.org/2001/xml.xsd will change accordingly; the version at http://www.w3.org/2007/08/xml.xsd will not change.</p>				
Properties	<table> <tr> <td>attribute form default:</td><td>unqualified</td></tr> <tr> <td>element form default:</td><td>unqualified</td></tr> </table>	attribute form default:	unqualified	element form default:	unqualified
attribute form default:	unqualified				
element form default:	unqualified				

Attribute(s)

Attribute @xml:lang

Namespace	http://www.w3.org/XML/1998/namespace
Annotations	<p>Attempting to install the relevant ISO 2- and 3-letter codes as the enumerated possible values is probably never going to be a realistic possibility. See RFC 3066 at http://www.ietf.org/rfc/rfc3066.txt and the IANA registry</p>

	<p>at http://www.iana.org/assignments/lang-tag-apps.htm for further information.</p> <p>The union allows for the 'un-declaration' of xml:lang with the empty string.</p>
Type	union of(xs:language, restriction of xs:string)
Properties	content: simple
Used by	Element res:literal
	Attribute Groups res:xmlLang, xml:specialAttrs
Source	<pre><xs:attribute name="lang"> <xs:annotation> <xs:documentation>Attempting to install the relevant ISO 2- and 3-letter codes as the enumerated possible values is probably never going to be a realistic possibility. See RFC 3066 at http:// www.ietf.org/rfc/rfc3066.txt and the IANA registry at http://www.iana.org/assignments/lang-tag- apps.htm for further information. The union allows for the 'un-declaration' of xml:lang with the empty string.</xs:documentation> </xs:annotation> <xs:simpleType> <xs:union memberTypes="xs:language"> <xs:simpleType> <xs:restriction base="xs:string"> <xs:enumeration value="" /> </xs:restriction> </xs:simpleType> </xs:union> </xs:simpleType> </xs:attribute></pre>

Attribute @xml:space

Namespace	http://www.w3.org/XML/1998/namespace
Type	restriction of xs:NCName
Properties	content: simple
Facets	enumeration default
	enumeration preserve
Used by	Attribute Group xml:specialAttrs
Source	<pre><xs:attribute name="space"> <xs:simpleType> <xs:restriction base="xs:NCName"> <xs:enumeration value="default" /> <xs:enumeration value="preserve" /> </xs:restriction> </xs:simpleType> </xs:attribute></pre>

Attribute @xml:base

Namespace	http://www.w3.org/XML/1998/namespace
Annotations	See http://www.w3.org/TR/xmlbase/ for information about this attribute.
Type	xs:anyURI
Properties	content: simple
Used by	Attribute Group xml:specialAttrs
Source	<pre><xs:attribute name="base" type="xs:anyURI"> <xs:annotation> <xs:documentation>See http://www.w3.org/TR/xmlbase/ for information about this attribute.</ xs:documentation> </xs:annotation> </xs:attribute></pre>

Attribute @xml:id

Namespace	http://www.w3.org/XML/1998/namespace
Annotations	See http://www.w3.org/TR/xml-id/ for information about this attribute.

Type	xs:ID
Properties	content: simple
Used by	Attribute Group xml:specialAttrs
Source	<pre><xs:attribute name="id" type="xs:ID"> <xs:annotation> <xs:documentation>See http://www.w3.org/TR/xml-id/ for information about this attribute.</ </xs:annotation> </xs:attribute></pre>

Attribute Group(s)

Attribute Group `xml:specialAttrs`

Namespace	http://www.w3.org/XML/1998/namespace				
Diagram					
Attributes	QName	Type	Fixed	Default	Use
	xml:base	xs:anyURI			optional
	xml:id	xs:ID			optional
	xml:lang	union of(xs:language, restriction of xs:string)			optional
	xml:space	restriction of xs:NCName			optional
Source	<pre><xs:attributeGroup name="specialAttrs"> <xs:attribute ref="xml:base"/> <xs:attribute ref="xml:lang"/> <xs:attribute ref="xml:space"/> <xs:attribute ref="xml:id"/> </xs:attributeGroup></pre>				

Namespace: "http://www.w3.org/1999/02/22-rdf-syntax-ns#"

Schema(s)

Imported schema `rdf.xsd`

Namespace	http://www.w3.org/1999/02/22-rdf-syntax-ns#
Properties	attribute form default: unqualified

element form default:	unqualified
version:	\$Id: rdf.xsd,v 1.1 2007/10/17 14:48:47 eric Exp \$

Element(s)

Element **rdf:RDF**

Namespace	http://www.w3.org/1999/02/22-rdf-syntax-ns#
Annotations	The content of the root RDF element must be valid RDF/XML as defined in the RDF/XML Syntax Specification (Revised): http://www.w3.org/TR/rdf-syntax-grammar/
Diagram	
Used by	Element <code>st:query-result</code>
Source	<pre><xs:element name="RDF" type="xs:anyType"> <xs:annotation> <xs:documentation xml:lang="en">The content of the root RDF element must be valid RDF/XML as defined in the RDF/XML Syntax Specification (Revised): http://www.w3.org/TR/rdf-syntax-grammar/</ xs:documentation> </xs:annotation> </xs:element></pre>

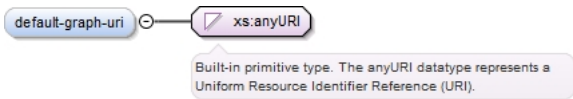
Namespace: ""

Element(s)

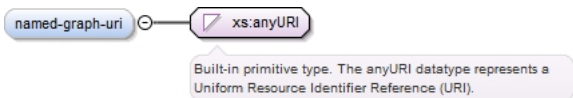
Element **st:query-request** / **query**

Namespace	No namespace						
Annotations	query is an xs:string constrained by the language definition, http://www.w3.org/TR/rdf-sparql-query/#grammar, as "a sequence of characters in the language defined by the [SPARQL] grammar, starting with the Query production"						
Diagram							
Type	xs:string						
Properties	<table> <tr> <td>content:</td><td>simple</td></tr> <tr> <td>minOccurs:</td><td>1</td></tr> <tr> <td>maxOccurs:</td><td>1</td></tr> </table>	content:	simple	minOccurs:	1	maxOccurs:	1
content:	simple						
minOccurs:	1						
maxOccurs:	1						
Source	<pre><xs:element minOccurs="1" maxOccurs="1" name="query" type="xs:string"> <xs:annotation> <xs:documentation>query is an xs:string constrained by the language definition, http:// www.w3.org/TR/rdf-sparql-query/#grammar, as "a sequence of characters in the language defined by the [SPARQL] grammar, starting with the Query production"</xs:documentation> </xs:annotation> </xs:element></pre>						

Element st:query-request / default-graph-uri

Namespace	No namespace						
Diagram							
Type	xs:anyURI						
Properties	<table> <tr> <td>content:</td><td>simple</td></tr> <tr> <td>minOccurs:</td><td>0</td></tr> <tr> <td>maxOccurs:</td><td>unbounded</td></tr> </table>	content:	simple	minOccurs:	0	maxOccurs:	unbounded
content:	simple						
minOccurs:	0						
maxOccurs:	unbounded						
Source	<code><xs:element minOccurs="0" maxOccurs="unbounded" name="default-graph-uri" type="xs:anyURI"/></code>						

Element st:query-request / named-graph-uri

Namespace	No namespace						
Diagram							
Type	xs:anyURI						
Properties	<table> <tr> <td>content:</td><td>simple</td></tr> <tr> <td>minOccurs:</td><td>0</td></tr> <tr> <td>maxOccurs:</td><td>unbounded</td></tr> </table>	content:	simple	minOccurs:	0	maxOccurs:	unbounded
content:	simple						
minOccurs:	0						
maxOccurs:	unbounded						
Source	<code><xs:element minOccurs="0" maxOccurs="unbounded" name="named-graph-uri" type="xs:anyURI"/></code>						

Attribute(s)**Attribute osd:presentationAttr / @name**

Namespace	No namespace		
Type	xs:string		
Properties	<table> <tr> <td>use:</td><td>required</td></tr> </table>	use:	required
use:	required		
Used by	Element osd:presentationAttr		
Source	<code><xs:attribute name="name" use="required" type="xs:string"/></code>		

Attribute osd:presentationAttr / @value

Namespace	No namespace		
Type	xs:string		
Properties	<table> <tr> <td>use:</td><td>required</td></tr> </table>	use:	required
use:	required		
Used by	Element osd:presentationAttr		
Source	<code><xs:attribute name="value" use="required" type="xs:string"/></code>		

Attribute osd:widget / @widgetID

Namespace	No namespace		
Type	xs:anyURI		
Properties	<table> <tr> <td>use:</td><td>required</td></tr> </table>	use:	required
use:	required		
Used by	Element osd:widget		
Source	<code><xs:attribute name="widgetID" use="required" type="xs:anyURI"/></code>		

Attribute osd:dynamicAttrMaxValue / @name

Namespace	No namespace
-----------	--------------

Type	xs:string
Properties	use: required
Used by	Element osd:dynamicAttrMaxValue
Source	<code><xs:attribute name="name" use="required" type="xs:string"/></code>

Attribute osd:dynamicAttrMaxValue / @value

Namespace	No namespace
Type	xs:string
Properties	use: required
Used by	Element osd:dynamicAttrMaxValue
Source	<code><xs:attribute name="value" use="required" type="xs:string"/></code>

Attribute osd:OSMO / @id

Namespace	No namespace
Type	xs:anyURI
Properties	use: optional
Used by	Element osd:OSMO
Source	<code><xs:attribute name="id" use="optional" type="xs:anyURI"/></code>

Attribute osd:OSMO / @name

Namespace	No namespace
Type	xs:NCName
Properties	use: required
Used by	Element osd:OSMO
Source	<code><xs:attribute name="name" type="xs:NCName" use="required"/></code>

Attribute osd:OAMO / @id

Namespace	No namespace
Type	xs:anyURI
Properties	use: optional
Used by	Element osd:OAMO
Source	<code><xs:attribute name="id" use="optional" type="xs:anyURI"/></code>

Attribute osd:OAMO / @name

Namespace	No namespace
Type	xs:NCName
Properties	use: required
Used by	Element osd:OAMO
Source	<code><xs:attribute name="name" type="xs:NCName" use="required"/></code>

Attribute osd:OSDSpec / @userID

Namespace	No namespace
Type	xs:anyURI
Properties	use: required
Used by	Element osd:OSDSpec

Source	<code><xs:attribute name="userID" use="required" type="xs:anyURI"/></code>
--------	--

Attribute `res:nameAttr` / `@name`

Namespace	No namespace
Type	xs:NMTOKEN
Properties	use: required
Used by	Attribute Group <code>res:nameAttr</code>
Source	<code><xs:attribute name="name" use="required" type="xs:NMTOKEN"/></code>

Attribute `res:hrefAttr` / `@href`

Namespace	No namespace
Type	res:URI-reference
Properties	use: required
Used by	Attribute Group <code>res:hrefAttr</code>
Source	<code><xs:attribute name="href" use="required" type="res:URI-reference"/></code>

Attribute `res:literal` / `@datatype`

Namespace	No namespace
Type	res:URI-reference
Properties	content: simple
Used by	Element <code>res:literal</code>
Source	<code><xs:attribute name="datatype" type="res:URI-reference"/></code>

Attribute `res:result` / `@index`

Namespace	No namespace
Type	xs:positiveInteger
Properties	content: simple
Used by	Element <code>res:result</code>
Source	<code><xs:attribute name="index" type="xs:positiveInteger"/></code>

Attribute `res:indexAttr` / `@index`

Namespace	No namespace
Type	xs:positiveInteger
Properties	use: required
Used by	Attribute Group <code>res:indexAttr</code>
Source	<code><xs:attribute name="index" use="required" type="xs:positiveInteger"/></code>

Attribute `res:datatypeAttr` / `@datatype`

Namespace	No namespace
Type	res:URI-reference
Properties	use: required
Used by	Attribute Group <code>res:datatypeAttr</code>
Source	<code><xs:attribute name="datatype" use="required" type="res:URI-reference"/></code>