Schema documentation for CDE_schema.xsd

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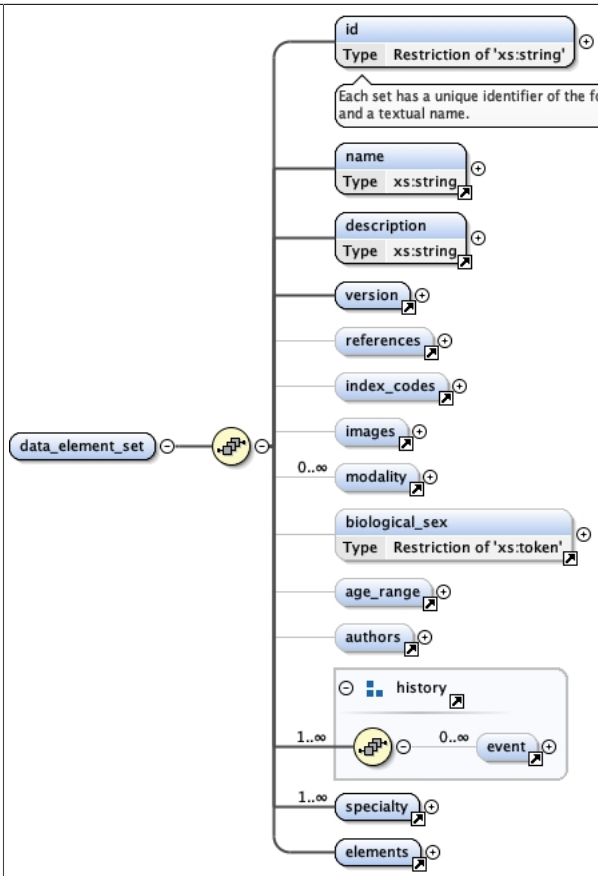
Schema(s)

Main schema `CDE_schema.xsd`

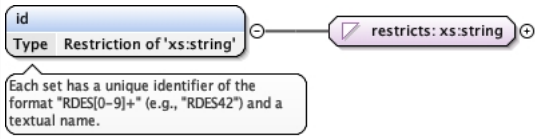
Element(s)

Element `data_element_set`

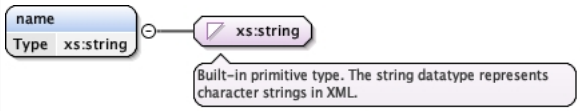
Diagram	
Model	id , name , description , version , references{0,1} , index_codes{0,1} , images{0,1} , modality* , biological_sex{0,1} , age_range{0,1} , authors{0,1} , event* , specialty+ , elements

Instance	<pre><data_element_set>
	  <id>{1,1}</id>
	  <name>{1,1}</name>
	  <description>{1,1}</description>
	  <version>{1,1}</version>
	  <references>{0,1}</references>
	  <index_codes>{0,1}</index_codes>
	  <images>{0,1}</images>
	  <modality>{0,unbounded}</modality>
	  <biological_sex>{0,1}</biological_sex>
	  <age_range>{0,1}</age_range>
	  <authors>{0,1}</authors>
	  <event>{0,unbounded}</event>
	  <specialty>{1,unbounded}</specialty>
	  <elements>{1,1}</elements>
	</data_element_set></pre>

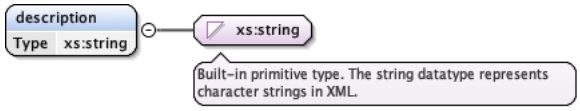
Element data_element_set / id

Annotations	Each set has a unique identifier of the format "RDES[0-9]+" (e.g., "RDES42") and a textual name.
Diagram	
Type	restriction of xs:string
Facets	pattern RDES\d+

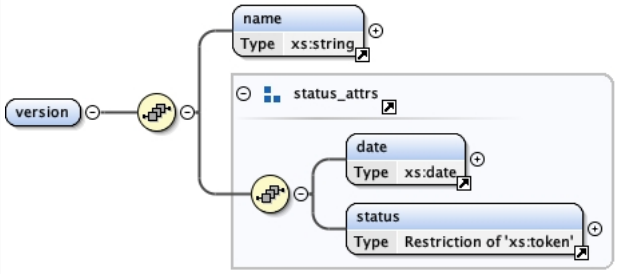
Element name

Diagram	
Type	xs:string
Used by	Elements data_element_set, element, organization, person, specialty, value_set/value, version

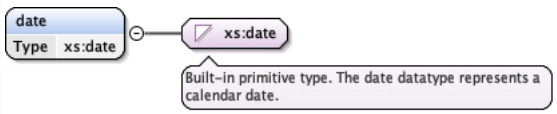
Element description

Diagram	
Type	xs:string
Used by	Element data_element_set

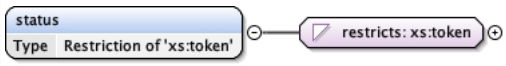
Element version

Diagram	
Used by	Elements data_element_set, element
Model	name , date , status
Instance	<version> <name>{1,1}</name> <date>{1,1}</date> <status>{1,1}</status> </version>

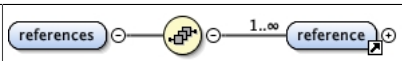
Element date

Diagram	
Type	xs:date
Used by	Element Group status_attrs

Element `status`

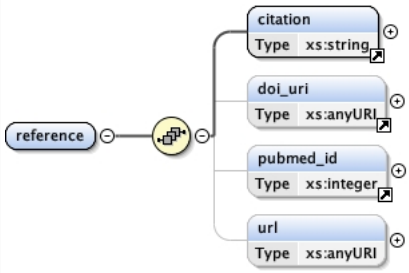
Diagram	
Type	restriction of xs:token
Facets	enumeration `proposed` enumeration `published` enumeration `retired`
Used by	Element Group status_attrs

Element `references`

Diagram	
Used by	Elements data_element_set, element, image, value_set/value
Model	reference+

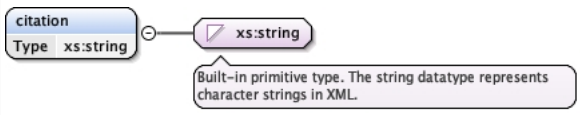
Instance	`<references>`
	`  <reference>{1,unbounded}</reference>`
	`</references>`

Element `reference`

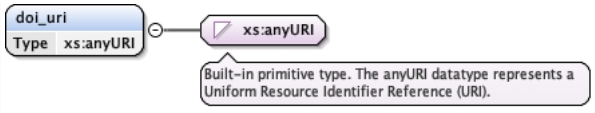
Diagram	
Used by	Element references
Model	citation , doi_uri{0,1} , pubmed_id{0,1} , url{0,1}

Instance	`<reference>`
	`  <citation>{1,1}</citation>`
	`  <doi_uri>{0,1}</doi_uri>`
	`  <pubmed_id>{0,1}</pubmed_id>`
	`  <url>{0,1}</url>`
	`</reference>`

Element `citation`

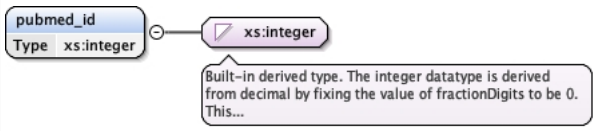
Diagram	
Type	xs:string
Used by	Element reference

Element `doi_uri`

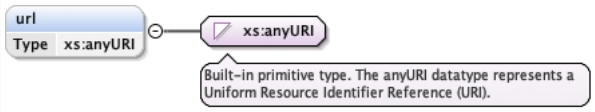
Diagram	
Type	xs:anyURI

Used by	Element	reference

Element pubmed_id

Diagram	
Type	xs:integer
Used by	Element reference

Element reference / url

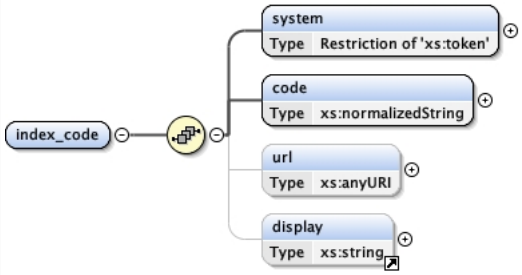
Diagram	
Type	xs:anyURI

Element index_codes

Diagram	
Used by	Elements data_element_set, element, value_set/value
Model	index_code+

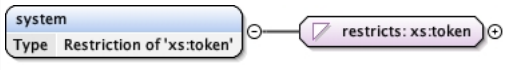
Instance	`<index_codes>`
	`  <index_code>{1,unbounded}</index_code>`
	`</index_codes>`

Element index_code

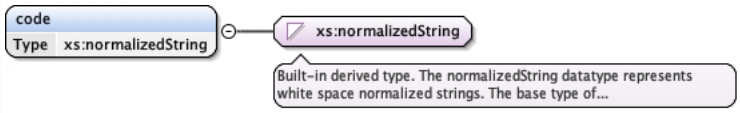
Diagram	
Used by	Element index_codes
Model	system , code , url{0,1} , display{0,1}

Instance	`<index_code>`
	`  <system>{1,1}</system>`
	`  <code>{1,1}</code>`
	`  <url>{0,1}</url>`
	`  <display>{0,1}</display>`
	`</index_code>`

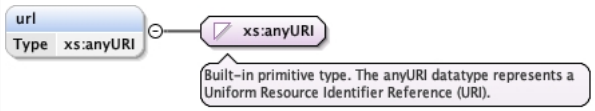
Element index_code / system

Diagram		
Type	restriction of xs:token	
Facets	enumeration	RADLEX
	enumeration	SNOMEDCT
	enumeration	LOINC

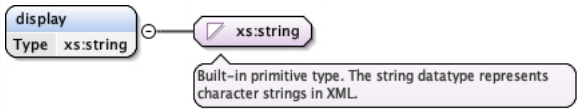
Element index_code / code

Diagram	
Type	xs:normalizedString

Element index_code / url

Diagram	
Type	xs:anyURI

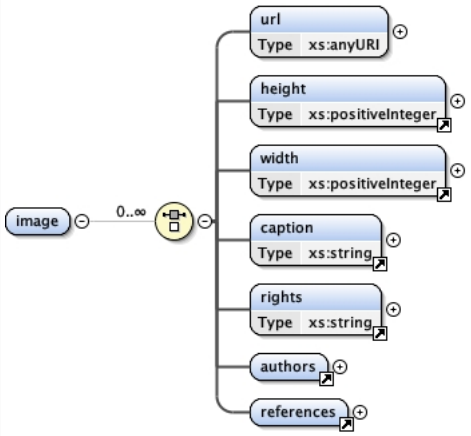
Element display

Diagram	
Type	xs:string
Used by	Element index_code

Element images

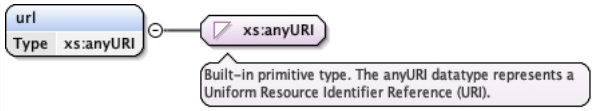
Diagram	
Used by	Elements data_element_set, element, value_set/value
Model	image+
Instance	<images> <image>{1,unbounded}</image> </images>

Element image

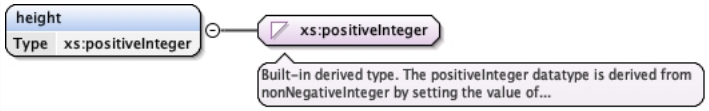
Diagram	
Used by	Element images
Model	url | height | width | caption | rights | authors | references
Instance	<image> <url>{1,1}</url> <height>{1,1}</height> <width>{1,1}</width> <caption>{1,1}</caption> <rights>{1,1}</rights>

```
  <authors>{1,1}</authors>
  <references>{1,1}</references>
</image>
```

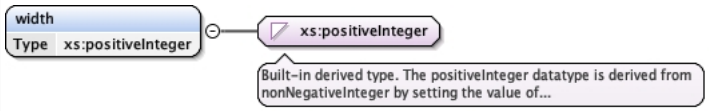
Element image / url

Diagram	
Type	xs:anyURI

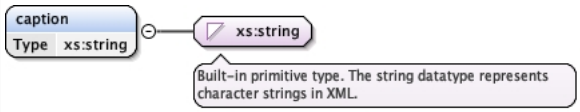
Element height

Diagram	
Type	xs:positiveInteger
Used by	Element image

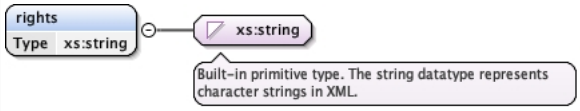
Element width

Diagram	
Type	xs:positiveInteger
Used by	Element image

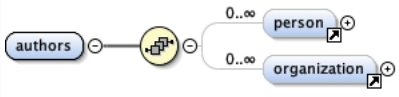
Element caption

Diagram	
Type	xs:string
Used by	Element image

Element rights

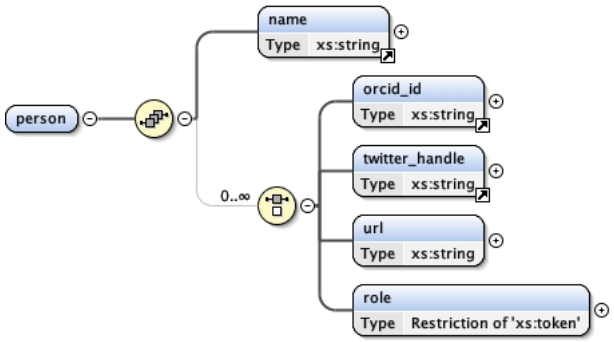
Diagram	
Type	xs:string
Used by	Element image

Element authors

Diagram	
Used by	Elements data_element_set, element, image
Model	person* , organization*
Instance	`<authors>` `  <person>{0,unbounded}</person>`

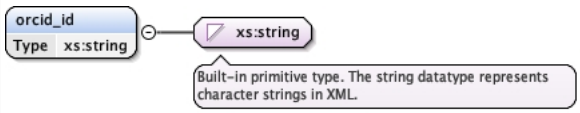
```
  <organization>{0,unbounded}</organization>
</authors>
```

Element person

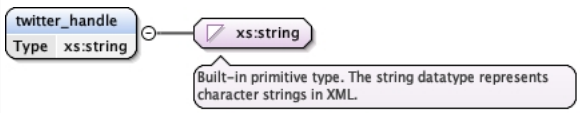
Diagram	
Used by	Element authors
Model	name , (orcid_id | twitter_handle | url | role)

Instance	`<person>`
	`  <name>{1,1}</name>`
	`  <orcid_id>{1,1}</orcid_id>`
	`  <twitter_handle>{1,1}</twitter_handle>`
	`  <url>{1,1}</url>`
	`  <role>{1,1}</role>`
	`</person>`

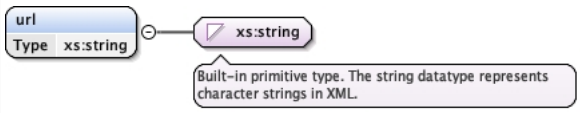
Element orcid_id

Diagram	
Type	xs:string
Used by	Element person

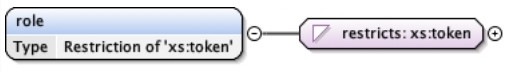
Element twitter_handle

Diagram	
Type	xs:string
Used by	Element person

Element person / url

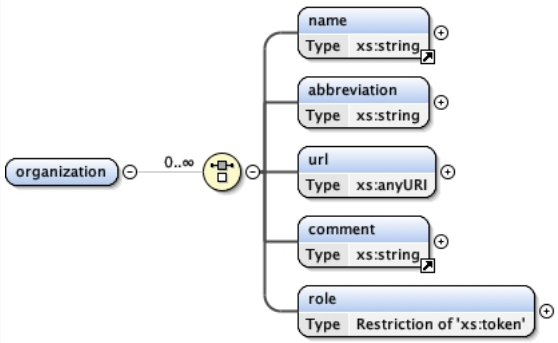
Diagram	
Type	xs:string

Element person / role

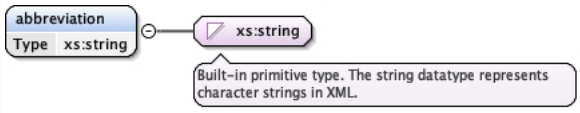
Diagram	
Type	restriction of xs:token
Facets	enumeration `author`

	enumeration	editor
	enumeration	translator
	enumeration	reviewer
	enumeration	contributor

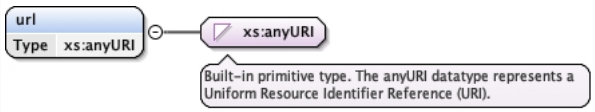
Element organization

Diagram	
Used by	Element authors
Model	name | abbreviation | url | comment | role
Instance	<organization> <name>{1,1}</name> <abbreviation>{1,1}</abbreviation> <url>{1,1}</url> <comment>{1,1}</comment> <role>{1,1}</role> </organization>

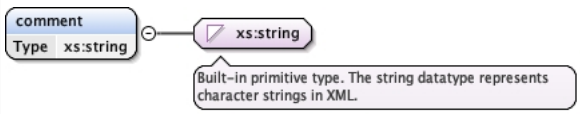
Element organization / abbreviation

Diagram	
Type	xs:string

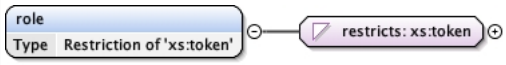
Element organization / url

Diagram	
Type	xs:anyURI

Element comment

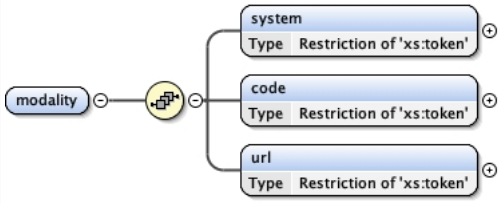
Diagram	
Type	xs:string
Used by	Element organization

Element organization / role

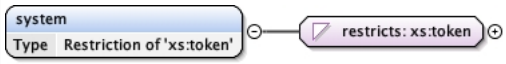
Diagram	
Type	restriction of xs:token

Facets	enumeration	contributor
	enumeration	sponsor
	enumeration	translator
	enumeration	reviewer
	enumeration	author

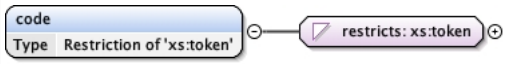
Element modality

Diagram		
Used by	Elements	data_element_set, element
Model	system , code , url	
Instance	<modality> <system>{1,1}</system> <code>{1,1}</code> <url>{1,1}</url> </modality>	

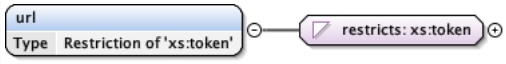
Element modality / system

Diagram		
Type	restriction of xs:token	
Facets	enumeration	DICOM

Element modality / code

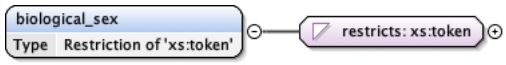
Diagram		
Type	restriction of xs:token	
Facets	enumeration	CR
	enumeration	CT
	enumeration	DX
	enumeration	IVUS
	enumeration	MG
	enumeration	MR
	enumeration	NM
	enumeration	PT
	enumeration	RF
	enumeration	RG
	enumeration	US
	enumeration	XA

Element modality / url

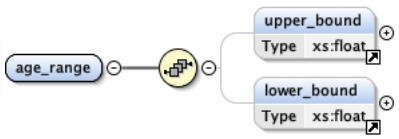
Diagram		
Type	restriction of xs:token	

Facets	enumeration	http://dicom.nema.org/medical/dicom/current/output/html/part03.html#sect_C.7.3.1.1.1

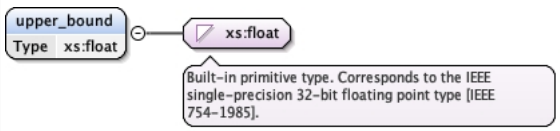
Element biological_sex

Diagram		
Type	restriction of xs:token	
Facets	enumeration	M
	enumeration	F
Used by	Elements	data_element_set, element

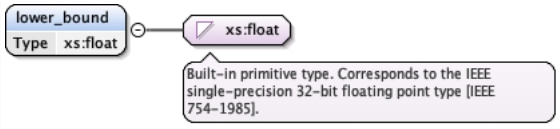
Element age_range

Diagram		
Used by	Elements	data_element_set, element
Model	upper_bound{0,1} , lower_bound{0,1}	
Instance	<age_range> <upper_bound>{0,1}</upper_bound> <lower_bound>{0,1}</lower_bound> </age_range>	

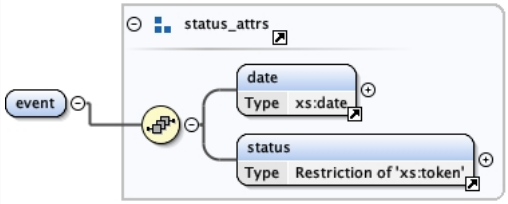
Element upper_bound

Diagram		
Type	xs:float	
Used by	Element	age_range

Element lower_bound

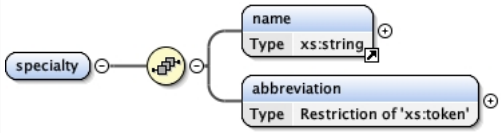
Diagram		
Type	xs:float	
Used by	Element	age_range

Element event

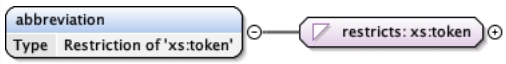
Diagram		
Used by	Element Group	history

Model	date , status
Instance	<event> <date>{1,1}</date> <status>{1,1}</status> </event>

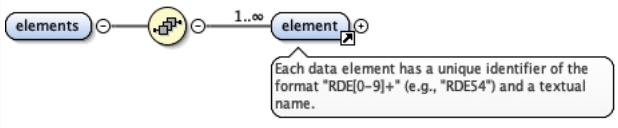
Element specialty

Diagram	
Used by	Elements data_element_set, element
Model	name , abbreviation
Instance	<specialty> <name>{1,1}</name> <abbreviation>{1,1}</abbreviation> </specialty>

Element specialty / abbreviation

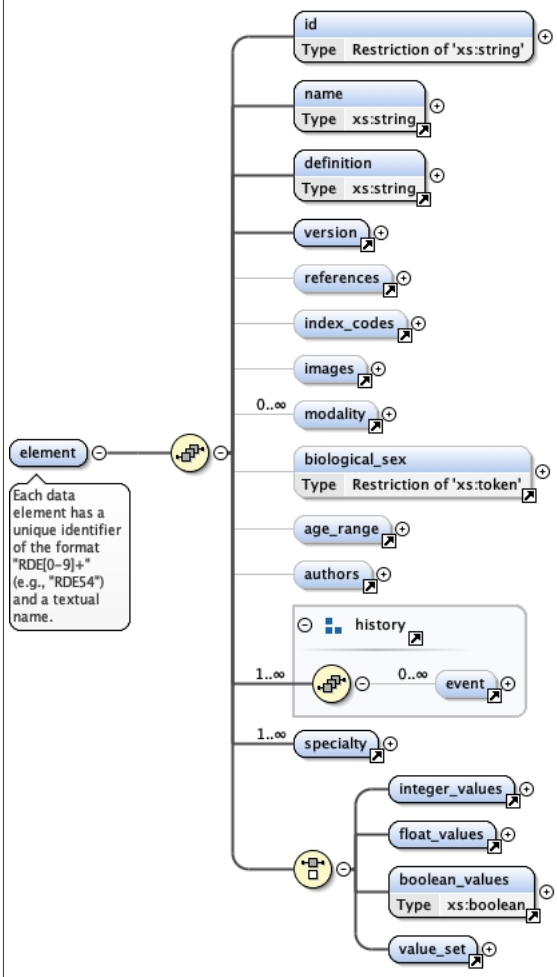
Diagram	
Type	restriction of xs:token
Facets	enumeration AB enumeration BR enumeration CA enumeration CH enumeration ER enumeration GI enumeration GU enumeration HN enumeration IR enumeration MI enumeration MK enumeration NR enumeration OB enumeration OI enumeration OT enumeration PD enumeration QI enumeration RS enumeration VI

Element elements

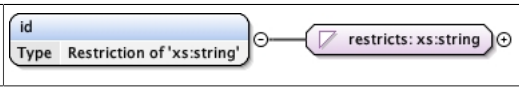
Diagram	
Used by	Element data_element_set
Model	element+
Instance	<elements> <element>{1,unbounded}</element>

```
</elements>
```

Element element

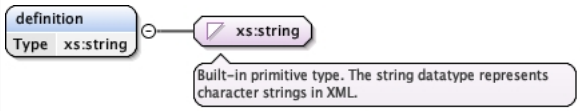
Annotations	Each data element has a unique identifier of the format "RDE[0-9]+" (e.g., "RDE54") and a textual name.
Diagram	
Used by	Element elements
Model	id , name , definition , version , references{0,1} , index_codes{0,1} , images{0,1} , modality* , biological_sex{0,1} , age_range{0,1} , authors{0,1} , event* , specialty+ , (integer_values | float_values | boolean_values | value_set)
Instance	<element> <id>{1,1}</id> <name>{1,1}</name> <definition>{1,1}</definition> <version>{1,1}</version> <references>{0,1}</references> <index_codes>{0,1}</index_codes> <images>{0,1}</images> <modality>{0,unbounded}</modality> <biological_sex>{0,1}</biological_sex> <age_range>{0,1}</age_range> <authors>{0,1}</authors> <event>{0,unbounded}</event> <specialty>{1,unbounded}</specialty> <integer_values>{1,1}</integer_values> <float_values>{1,1}</float_values> <boolean_values>{1,1}</boolean_values> <value_set>{1,1}</value_set> </element>

Element element / id

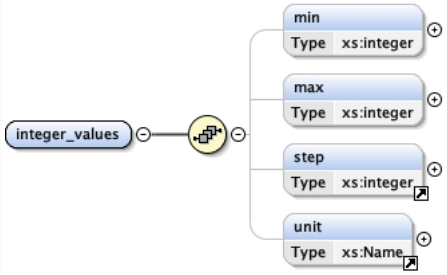
Diagram	

Type	restriction of xs:string
Facets	pattern RDE\d+

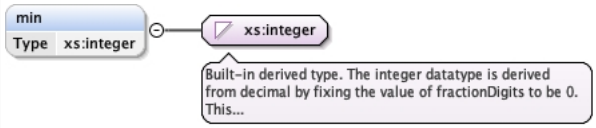
Element definition

Diagram	
Type	xs:string
Used by	Elements element, value_set/value

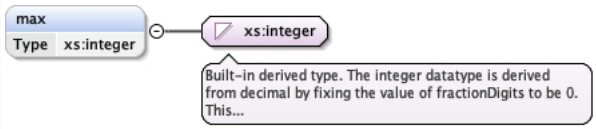
Element integer_values

Diagram	
Used by	Element element
Model	min{0,1} , max{0,1} , step{0,1} , unit{0,1}
Instance	<integer_values> <min>{0,1}</min> <max>{0,1}</max> <step>{0,1}</step> <unit>{0,1}</unit> </integer_values>

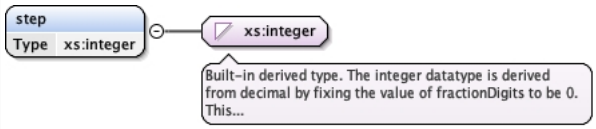
Element integer_values / min

Diagram	
Type	xs:integer

Element integer_values / max

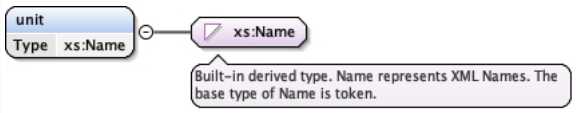
Diagram	
Type	xs:integer

Element step

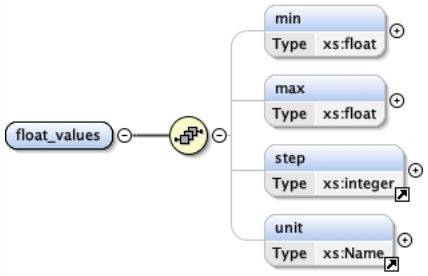
Diagram	

Type	xs:integer
Used by	Elements float_values, integer_values

Element `unit`

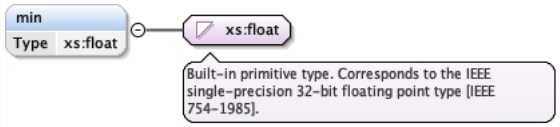
Diagram	
Type	xs:Name
Used by	Elements float_values, integer_values

Element `float_values`

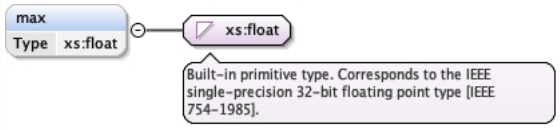
Diagram	
Used by	Element element
Model	min{0,1} , max{0,1} , step{0,1} , unit{0,1}

Instance	<pre><float_values>
	  <min>{0,1}</min>
	  <max>{0,1}</max>
	  <step>{0,1}</step>
	  <unit>{0,1}</unit>
	</float_values></pre>

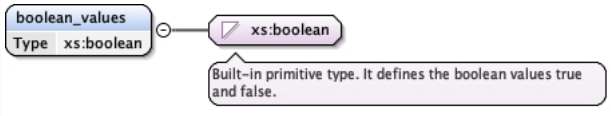
Element `float_values / min`

Diagram	
Type	xs:float

Element `float_values / max`

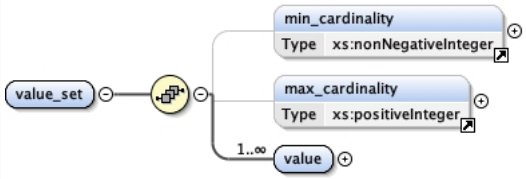
Diagram	
Type	xs:float

Element `boolean_values`

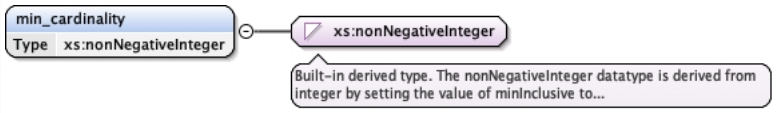
Diagram	
Type	xs:boolean

Used by	Element	element

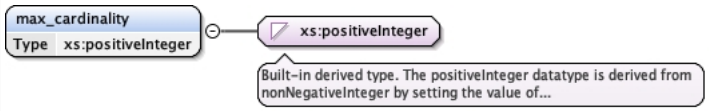
Element value_set

Diagram	
Used by	Element element
Model	min_cardinality{0,1} , max_cardinality{0,1} , value+
Instance	<value_set> <min_cardinality>{0,1}</min_cardinality> <max_cardinality>{0,1}</max_cardinality> <value>{1,unbounded}</value> </value_set>

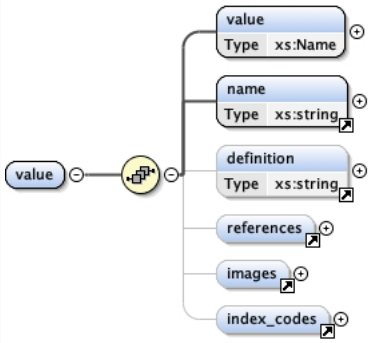
Element min_cardinality

Diagram	
Type	xs:nonNegativeInteger
Used by	Element value_set

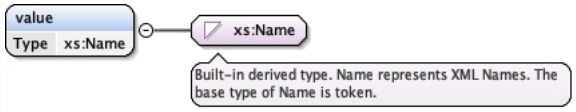
Element max_cardinality

Diagram	
Type	xs:positiveInteger
Used by	Element value_set

Element value_set / value

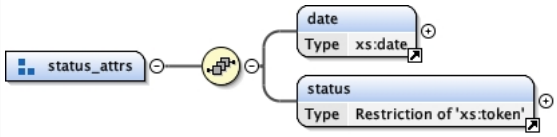
Diagram	
Model	value , name , definition{0,1} , references{0,1} , images{0,1} , index_codes{0,1}
Instance	<value> <value>{1,1}</value> <name>{1,1}</name> <definition>{0,1}</definition> <references>{0,1}</references> <images>{0,1}</images> <index_codes>{0,1}</index_codes> </value>

Element `value_set / value / value`

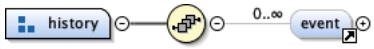
Diagram	
Type	xs:Name

Element Group(s)

Element Group `status_attrs`

Diagram	
Used by	Elements event, version
Model	date , status

Element Group `history`

Diagram	
Used by	Elements data_element_set, element
Model	event*