Schema documentation for sms.xsd

september 7, 2012

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Namespace: "http://www.ime.iiasa.ac.at/model/spec"

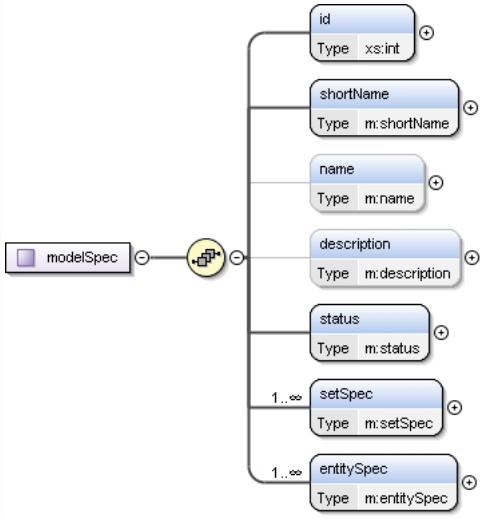
Schema(s)

Main schema `sms.xsd`

Namespace	http://www.ime.iiasa.ac.at/model/spec
Properties	attribute form default: `unqualified` element form default: `unqualified`

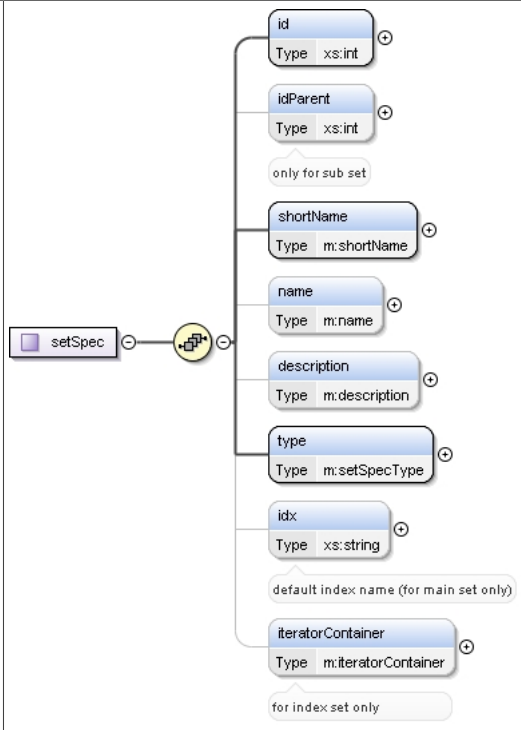
Complex Type(s)

Complex Type `m:modelSpec`

Namespace	http://www.ime.iiasa.ac.at/model/spec
Diagram	
Model	id , shortName , name{0,1} , description{0,1} , status , setSpec+ , entitySpec+
Children	description, entitySpec, id, name, setSpec, shortName, status
Source	`<xs:complexType name="modelSpec">` `  <xs:sequence>`

```
    <xs:element name="id" type="xs:int"/>
    <xs:element name="shortName" type="m:shortName"/>
    <xs:element name="name" type="m:name" minOccurs="0" maxOccurs="1"/>
    <xs:element name="description" type="m:description" minOccurs="0" maxOccurs="1"/>
    <xs:element name="status" type="m:status"/>
    <xs:element name="setSpec" type="m:setSpec" maxOccurs="unbounded"/>
    <xs:element name="entitySpec" type="m:entitySpec" maxOccurs="unbounded"/>
  </xs:sequence>
</xs:complexType>
```

Complex Type `m:setSpec`

Namespace	http://www.ime.iiasa.ac.at/model/spec
Diagram	
Used by	Element m:modelSpec/setSpec
Model	id , idParent{0,1} , shortName , name{0,1} , description{0,1} , type , idx{0,1} , iteratorContainer{0,1}
Children	description, id, idParent, idx, iteratorContainer, name, shortName, type
Source	

```
<xs:complexType name="setSpec">
  <xs:sequence>
    <xs:element name="id" type="xs:int"/>
    <xs:element name="idParent" type="xs:int" minOccurs="0" maxOccurs="1">
      <xs:annotation>
        <xs:documentation>only for sub set</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="shortName" type="m:shortName"/>
    <xs:element name="name" type="m:name" minOccurs="0" maxOccurs="1"/>
    <xs:element name="description" type="m:description" minOccurs="0" maxOccurs="1"/>
    <xs:element name="type" type="m:setSpecType"/>
    <xs:element name="idx" type="xs:string" minOccurs="0" maxOccurs="1">
      <xs:annotation>
        <xs:documentation>default index name (for main set only)</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="iteratorContainer" type="m:iteratorContainer" minOccurs="0" maxOccurs="1">
      <xs:annotation>
        <xs:documentation>for index set only</xs:documentation>
      </xs:annotation>
    </xs:element>
  </xs:sequence>
</xs:complexType>
```

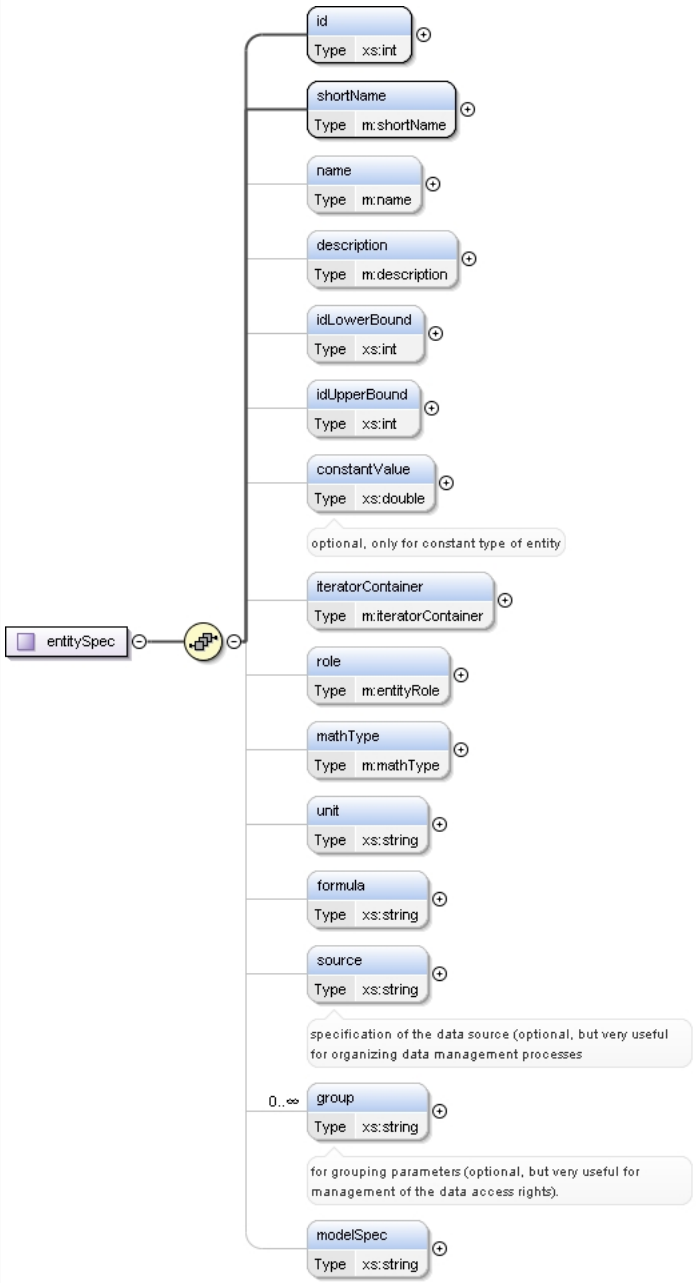
Complex Type `m:iteratorContainer`

Namespace	http://www.ime.iiasa.ac.at/model/spec

Diagram	
Used by	Elements m:entitySpec/iteratorContainer, m:setSpec/iteratorContainer
Model	idSetSpec+
Children	idSetSpec

Source	`<xs:complexType name="iteratorContainer">`
	`  <xs:sequence>`
	`  <xs:element name="idSetSpec" type="xs:int" minOccurs="1" maxOccurs="unbounded"/>`
	`  </xs:sequence>`
	`</xs:complexType>`

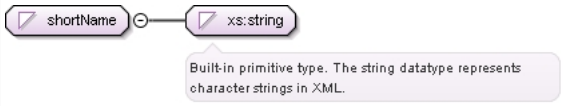
Complex Type `m:entitySpec`

Namespace	http://www.ime.iiasa.ac.at/model/spec
Diagram	
Used by	Element m:modelSpec/entitySpec
Model	id , shortName , name{0,1} , description{0,1} , idLowerBound{0,1} , idUpperBound{0,1} , constantValue{0,1} , iteratorContainer{0,1} , role{0,1} , mathType{0,1} , unit{0,1} , formula{0,1} , source{0,1} , group* , modelSpec{0,1}

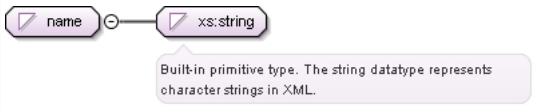
Children	constantValue, description, formula, group, id, idLowerBound, idUpperBound, iteratorContainer, mathType, modelSpec, name, role, shortName, source, unit
Source	<xs:complexType name="entitySpec"> <xs:sequence> <xs:element name="id" type="xs:int"/> <xs:element name="shortName" type="m:shortName"/> <xs:element name="name" type="m:name" minOccurs="0" maxOccurs="1"/> <xs:element name="description" type="m:description" minOccurs="0" maxOccurs="1"/> <xs:element name="idLowerBound" type="xs:int" minOccurs="0" maxOccurs="1"/> <xs:element name="idUpperBound" type="xs:int" minOccurs="0" maxOccurs="1"/> <xs:element name="constantValue" type="xs:double" minOccurs="0" maxOccurs="1"> <xs:annotation> <xs:documentation>optional, only for constant type of entity</xs:documentation> </xs:annotation> </xs:element> <xs:element name="iteratorContainer" type="m:iteratorContainer" minOccurs="0" maxOccurs="1"/> <xs:element name="role" type="m:entityRole" minOccurs="0" maxOccurs="1"/> <xs:element name="mathType" type="m:mathType" minOccurs="0" maxOccurs="1"/> <xs:element name="unit" type="xs:string" minOccurs="0" maxOccurs="1"/> <xs:element name="formula" type="xs:string" minOccurs="0" maxOccurs="1"/> <xs:element name="source" type="xs:string" minOccurs="0" maxOccurs="1"> <xs:annotation> <xs:documentation>specification of the data source (optional, but very useful for organizing data management processes</xs:documentation> </xs:annotation> </xs:element> <xs:element name="group" type="xs:string" minOccurs="0" maxOccurs="unbounded"> <xs:annotation> <xs:documentation>for grouping parameters (optional, but very useful for management of the data access rights).</xs:documentation> </xs:annotation> </xs:element> <xs:element name="modelSpec" type="xs:string" minOccurs="0" maxOccurs="1"/> </xs:sequence> </xs:complexType>

Simple Type(s)

Simple Type `m:shortName`

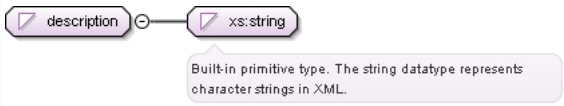
Namespace	http://www.ime.iiasa.ac.at/model/spec
Diagram	
Type	restriction of xs:string
Facets	minLength 1 maxLength 8
Used by	Elements m:entitySpec/shortName, m:modelSpec/shortName, m:setSpec/shortName
Source	<xs:simpleType name="shortName"> <xs:restriction base="xs:string"> <xs:minLength value="1"/> <xs:maxLength value="8"/> </xs:restriction> </xs:simpleType>

Simple Type `m:name`

Namespace	http://www.ime.iiasa.ac.at/model/spec
Diagram	
Type	restriction of xs:string
Facets	minLength 1 maxLength 32
Used by	Elements m:entitySpec/name, m:modelSpec/name, m:setSpec/name
Source	<xs:simpleType name="name">

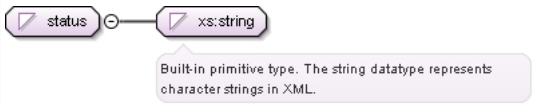
```
  <xs:restriction base="xs:string">
    <xs:minLength value="1"/>
    <xs:maxLength value="32"/>
  </xs:restriction>
</xs:simpleType>
```

Simple Type `m:description`

Namespace	http://www.ime.iiasa.ac.at/model/spec
Diagram	
Type	restriction of xs:string
Facets	minLength 1 maxLength 512
Used by	Elements m:entitySpec/description, m:modelSpec/description, m:setSpec/description

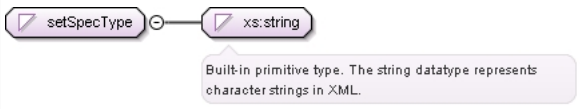
Source	`<xs:simpleType name="description">`
	`  <xs:restriction base="xs:string">`
	`  <xs:minLength value="1"/>`
	`  <xs:maxLength value="512"/>`
	`  </xs:restriction>`
	`</xs:simpleType>`

Simple Type `m:status`

Namespace	http://www.ime.iiasa.ac.at/model/spec
Diagram	
Type	restriction of xs:string
Facets	enumeration EDIT enumeration TEST enumeration COMMITTED
Used by	Element m:modelSpec/status

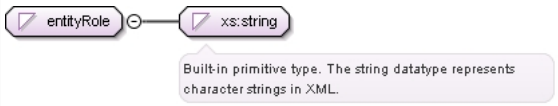
Source	`<xs:simpleType name="status">`
	`  <xs:restriction base="xs:string">`
	`  <xs:enumeration value="EDIT"/>`
	`  <xs:enumeration value="TEST"/>`
	`  <xs:enumeration value="COMMITTED"/>`
	`  </xs:restriction>`
	`</xs:simpleType>`

Simple Type `m:setSpecType`

Namespace	http://www.ime.iiasa.ac.at/model/spec
Diagram	
Type	restriction of xs:string
Facets	enumeration COLLECTION enumeration SEQUENCE
Used by	Element m:setSpec/type

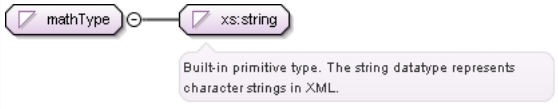
Source	`<xs:simpleType name="setSpecType">`
	`  <xs:restriction base="xs:string">`
	`  <xs:enumeration value="COLLECTION"/>`
	`  <xs:enumeration value="SEQUENCE"/>`
	`  </xs:restriction>`
	`</xs:simpleType>`

Simple Type `m:entityRole`

Namespace	http://www.ime.iiasa.ac.at/model/spec
Diagram	
Type	restriction of xs:string
Facets	enumeration CONSTANT enumeration PARAMETER enumeration DECISION_VAR enumeration EXTERNAL_DECISION_VAR enumeration OUTCOME_VAR enumeration AUXILIARY_VAR enumeration ASSIGNMENT enumeration CONSTRAINT enumeration A_VARIABLE — any type of variable: DECISION_VAR, EXTERNAL_DECISION_VAR,OUTCOME_VAR,or AUXILIARY_VAR enumeration A_FORMULA — any type of formula: ASSIGNMENT or CONSTRAINT
Used by	Element m:entitySpec/role

Source	`<xs:simpleType name="entityRole">`
	`  <xs:restriction base="xs:string">`
	`  <xs:enumeration value="CONSTANT"/>`
	`  <xs:enumeration value="PARAMETER"/>`
	`  <xs:enumeration value="DECISION_VAR"/>`
	`  <xs:enumeration value="EXTERNAL_DECISION_VAR"/>`
	`  <xs:enumeration value="OUTCOME_VAR"/>`
	`  <xs:enumeration value="AUXILIARY_VAR"/>`
	`  <xs:enumeration value="ASSIGNMENT"/>`
	`  <xs:enumeration value="CONSTRAINT"/>`
	`  <xs:enumeration value="A_VARIABLE">`
	`  <xs:annotation>`
	`  <xs:documentation>any type of variable: DECISION_VAR, EXTERNAL_DECISION_VAR,OUTCOME_VAR,or AUXILIARY_VAR</xs:documentation>`
	`  </xs:annotation>`
	`  </xs:enumeration>`
	`  <xs:enumeration value="A_FORMULA">`
	`  <xs:annotation>`
	`  <xs:documentation>any type of formula: ASSIGNMENT or CONSTRAINT</xs:documentation>`
	`  </xs:annotation>`
	`  </xs:enumeration>`
	`  </xs:restriction>`
	`</xs:simpleType>`

Simple Type `m:mathType`

Namespace	http://www.ime.iiasa.ac.at/model/spec
Diagram	
Type	restriction of xs:string
Facets	enumeration INTEGER enumeration REAL
Used by	Element m:entitySpec/mathType

Source	`<xs:simpleType name="mathType">`
	`  <xs:restriction base="xs:string">`
	`  <xs:enumeration value="INTEGER"/>`
	`  <!--  <xs:enumeration value="BINARY"/> -->`
	`  <xs:enumeration value="REAL"/>`
	`  </xs:restriction>`
	`</xs:simpleType>`