Schema documentation for fre.xsd

august 7, 2012

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Resource hierarchy:

Legend: *Import,* *Include,* *Redefine,* *Cycle detected*

fre.xsd

xi.xsd

fre.xsd

xml.xsd

fre.xsd

Namespace: ""

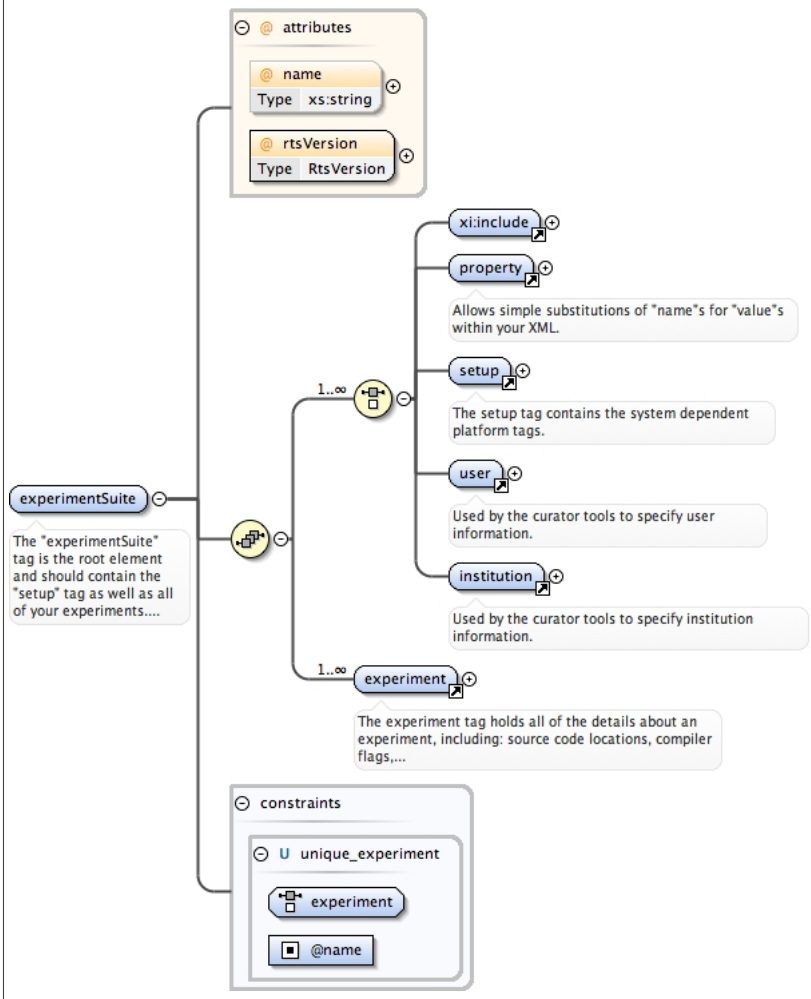
Schema(s)

Main schema `fre.xsd`

Namespace	No namespace
Properties	attribute form default: `unqualified` element form default: `qualified`

Element(s)

Element `experimentSuite`

Namespace	No namespace
Annotations	`The "experimentSuite" tag is the root element and should contain the "setup" tag as well as all of your experiments. The name attribute is not required and the rtsVersion specifies the version of the schema.`
Diagram	
Properties	content: `complex`
Model	(xi:include | property | setup | user | institution) , experiment+
Children	experiment, institution, property, setup, user, xi:include

Instance	`<experimentSuite name="" rtsVersion="" xmlns:xi="http://www.w3.org/2001/XInclude">`
	`  <xi:include href="" xpointer="">{1,1}</xi:include>`
	`  <property name="" value="">{1,1}</property>`

```
  <setup>{1,1}</setup>
  <user email="" login="" name="">{1,1}</user>
  <institution address="" name="" url="">{1,1}</institution>
  <experiment inherit="" name="">{1,unbounded}</experiment>
</experimentSuite>
```

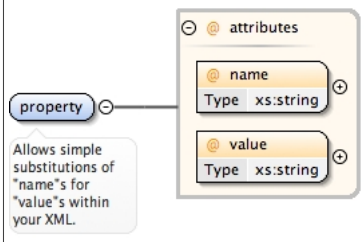
Attributes

QName	Type	Fixed	Default	Use
name	xs:string			optional
rtsVersion	RtsVersion			required

Source

```
<xs:element name="experimentSuite">
  <xs:annotation>
    <xs:documentation>The "experimentSuite" tag is the root element and should contain the "setup"
 tag as well as all of your experiments. The name attribute is not required and the rtsVersion
 specifies the version of the schema.</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>
      <xs:choice maxOccurs="unbounded">
        <xs:element ref="xi:include"/>
        <xs:element ref="property"/>
        <xs:element ref="setup"/>
        <xs:element ref="user"/>
        <xs:element ref="institution"/>
      </xs:choice>
      <xs:element maxOccurs="unbounded" ref="experiment"/>
    </xs:sequence>
    <xs:attribute name="name" type="xs:string"/>
    <xs:attribute name="rtsVersion" use="required" type="RtsVersion"/>
  </xs:complexType>
  <xs:unique name="unique_experiment">
    <xs:selector xpath="experiment"/>
    <xs:field xpath="@name"/>
  </xs:unique>
</xs:element>
```

Element `property`

Namespace	No namespace
Annotations	Allows simple substitutions of "name"s for "value"s within your XML.
Diagram	

Properties	content:	complex
Used by	Elements	experimentSuite, platform

Attributes

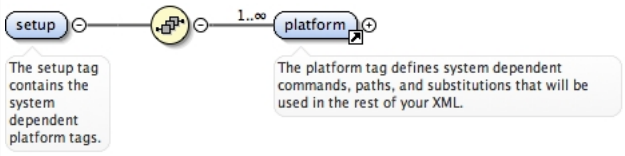
QName	Type	Fixed	Default	Use
name	xs:string			required
value	xs:string			required

Source

```
<xs:element name="property">
  <xs:annotation>
    <xs:documentation>Allows simple substitutions of "name"s for "value"s within your XML.</
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>
```

Element `setup`

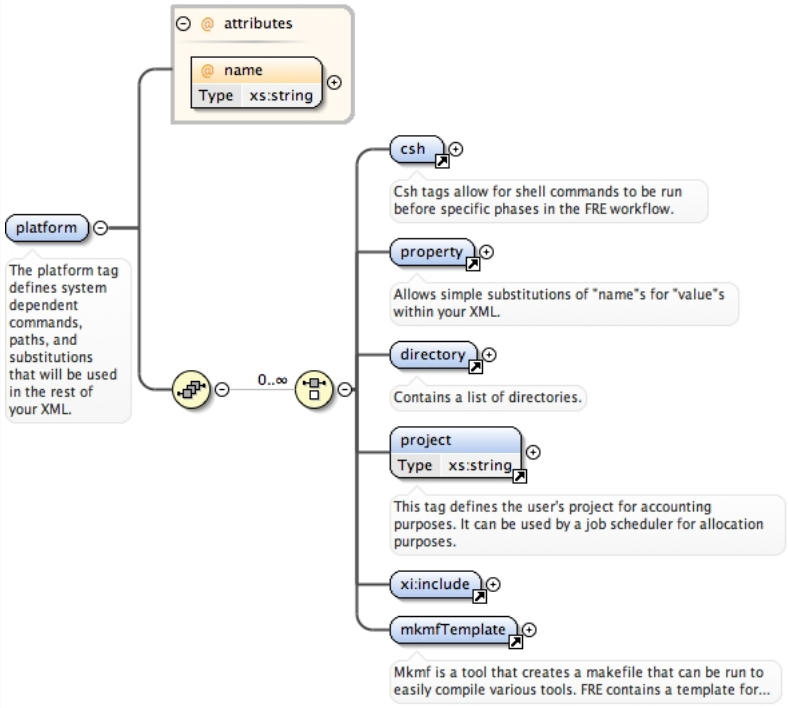
Namespace	No namespace
Annotations	The setup tag contains the system dependent platform tags.

Diagram	
Properties	content: complex
Used by	Element experimentSuite
Model	platform+
Children	platform

Instance	`<setup>`
	`  <platform name="">{1,unbounded}</platform>`
	`</setup>`

Source	`<xs:element name="setup">`
	`  <xs:annotation>`
	`  <xs:documentation>The setup tag contains the system dependent platform tags.</xs:documentation>`
	`  </xs:annotation>`
	`  <xs:complexType>`
	`  <xs:sequence>`
	`  <xs:element maxOccurs="unbounded" ref="platform"/>`
	`  </xs:sequence>`
	`  </xs:complexType>`
	`</xs:element>`

Element `platform`

Namespace	No namespace
Annotations	The platform tag defines system dependent commands, paths, and substitutions that will be used in the rest of your XML.
Diagram	
Properties	content: complex
Used by	Element setup
Model	(csh | property | directory | project | xi:include | mkmfTemplate)
Children	csh, directory, mkmfTemplate, project, property, xi:include

Instance	`<platform name="" xmlns:xi="http://www.w3.org/2001/XInclude">`
	`  <csh type="">{1,1}</csh>`
	`  <property name="" value="">{1,1}</property>`
	`  <directory stem="">{1,1}</directory>`
	`  <project>{1,1}</project>`

```
  <xi:include href="" xpointer="">{1,1}</xi:include>
  <mkmfTemplate file="">{1,1}</mkmfTemplate>
</platform>
```

Attributes

QName	Type	Fixed	Default	Use
name	xs:string			required

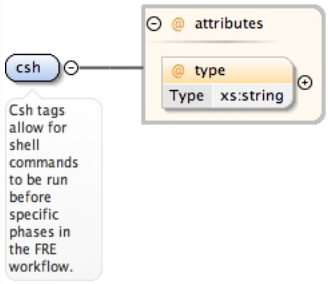
Source

```
<xs:element name="platform">
  <xs:annotation>
    <xs:documentation>The platform tag defines system dependent commands, paths, and substitutions
 that will be used in the rest of your XML.</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>
      <xs:choice minOccurs="0" maxOccurs="unbounded">
        <xs:element ref="csh"/>
        <xs:element ref="property"/>
        <xs:element ref="directory"/>
        <xs:element ref="project"/>
        <xs:element ref="xi:include"/>
        <xs:element ref="mkmfTemplate"/>
      </xs:choice>
    </xs:sequence>
    <xs:attribute name="name" use="required" type="xs:string"/>
  </xs:complexType>
</xs:element>
```

Element csh

Namespace	No namespace
Annotations	Csh tags allow for shell commands to be run before specific phases in the FRE workflow.

Diagram



Properties		
	content:	complex
	mixed:	true
Used by	Elements	compile, input, platform, postProcess, runtime, source
Model		

Attributes

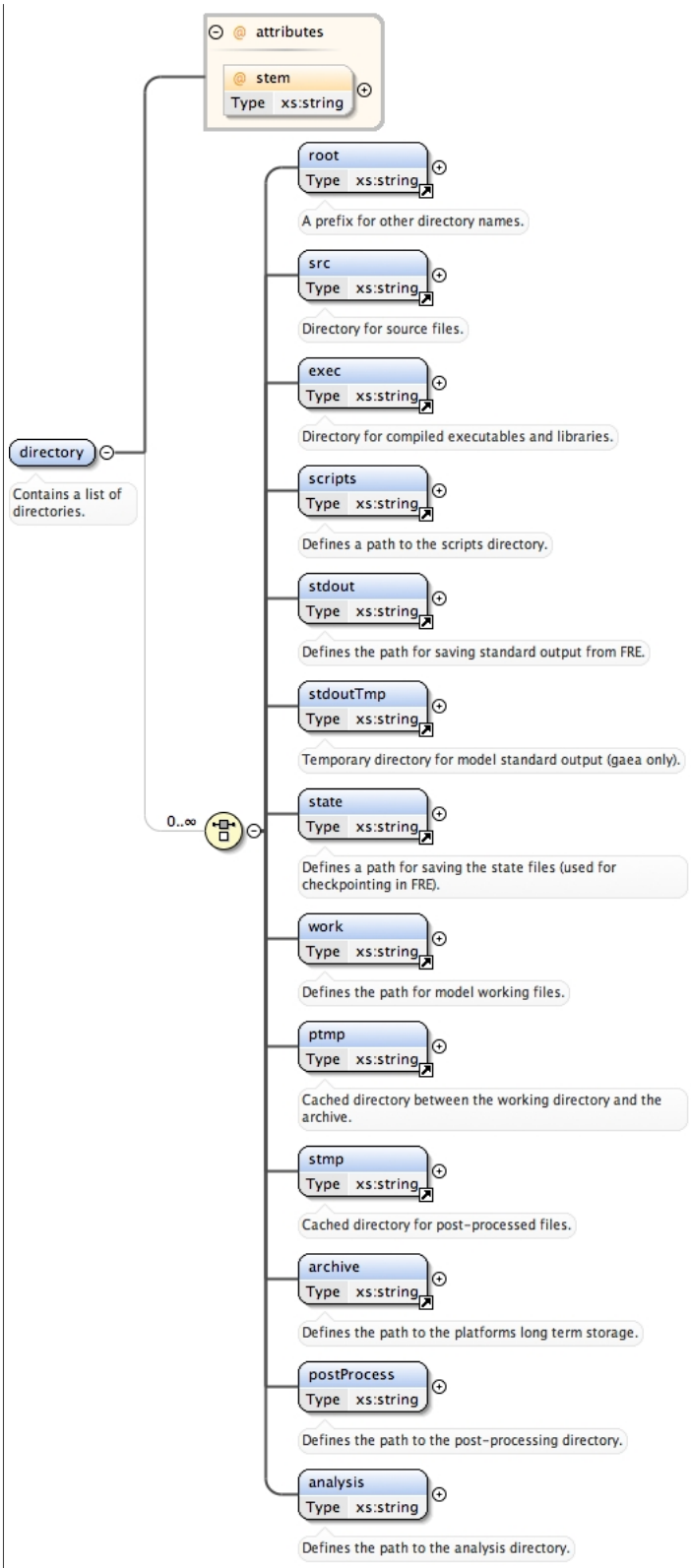
QName	Type	Fixed	Default	Use
type	xs:string			optional

Source

```
<xs:element name="csh">
  <xs:annotation>
    <xs:documentation>Csh tags allow for shell commands to be run before specific phases in the FRE
 workflow.</xs:documentation>
  </xs:annotation>
  <xs:complexType mixed="true">
    <xs:attribute name="type" type="xs:string"/>
  </xs:complexType>
</xs:element>
```

Element directory

Namespace	No namespace
Annotations	Contains a list of directories.

Diagram	
Properties	content: complex
Used by	Element platform
Model	root | src | exec | scripts | stdout | stdoutTmp | state | work | ptmp | stmp | archive | postProcess | analysis
Children	analysis, archive, exec, postProcess, ptmp, root, scripts, src, state, stdout, stdoutTmp, stmp, work
Instance	<directory stem=""> <root>{1,1}</root> <src>{1,1}</src>

```
  <exec>{1,1}</exec>
  <scripts>{1,1}</scripts>
  <stdout>{1,1}</stdout>
  <stdoutTmp>{1,1}</stdoutTmp>
  <state>{1,1}</state>
  <work>{1,1}</work>
  <ptmp>{1,1}</ptmp>
  <stmp>{1,1}</stmp>
  <archive>{1,1}</archive>
  <postProcess>{1,1}</postProcess>
  <analysis>{1,1}</analysis>
</directory>
```

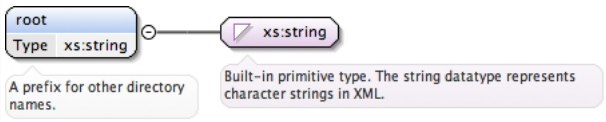
Attributes

QName	Type	Fixed	Default	Use
stem	xs:string			optional

Source

```
<xs:element name="directory">
  <xs:annotation>
    <xs:documentation>Contains a list of directories.</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:choice minOccurs="0" maxOccurs="unbounded">
      <xs:element ref="root"/>
      <xs:element ref="src"/>
      <xs:element ref="exec"/>
      <xs:element ref="scripts"/>
      <xs:element ref="stdout"/>
      <xs:element ref="stdoutTmp"/>
      <xs:element ref="state"/>
      <xs:element ref="work"/>
      <xs:element ref="ptmp"/>
      <xs:element ref="stmp"/>
      <xs:element ref="archive"/>
      <xs:element name="postProcess" type="xs:string">
        <xs:annotation>
          <xs:documentation>Defines the path to the post-processing directory.</xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element name="analysis" type="xs:string">
        <xs:annotation>
          <xs:documentation>Defines the path to the analysis directory.</xs:documentation>
        </xs:annotation>
      </xs:element>
    </xs:choice>
    <xs:attribute name="stem" type="xs:string"/>
  </xs:complexType>
</xs:element>
```

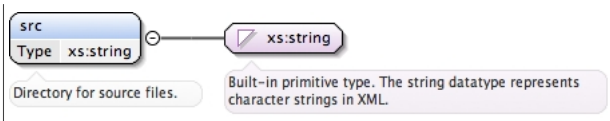
Element `root`

Namespace	No namespace
Annotations	`A prefix for other directory names.`
Diagram	
Type	xs:string
Properties	content: `simple`
Used by	Element directory
Source	

```
<xs:element name="root" type="xs:string">
  <xs:annotation>
    <xs:documentation>A prefix for other directory names.</xs:documentation>
  </xs:annotation>
</xs:element>
```

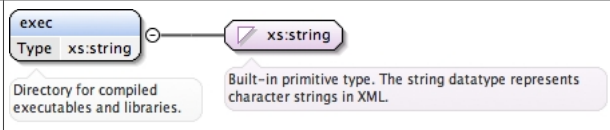
Element `src`

Namespace	No namespace
Annotations	`Directory for source files.`

Diagram	
Type	xs:string
Properties	content: simple
Used by	Element directory

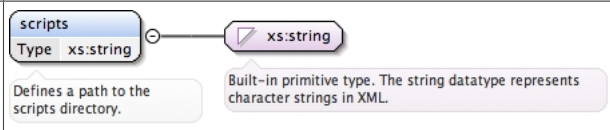
Source	`<xs:element name="src" type="xs:string">`
	`  <xs:annotation>`
	`  <xs:documentation>Directory for source files.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element exec

Namespace	No namespace
Annotations	Directory for compiled executables and libraries.
Diagram	
Type	xs:string
Properties	content: simple
Used by	Element directory

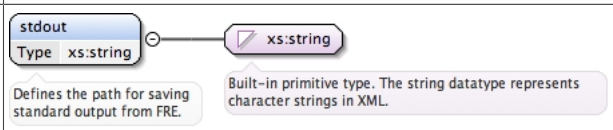
Source	`<xs:element name="exec" type="xs:string">`
	`  <xs:annotation>`
	`  <xs:documentation>Directory for compiled executables and libraries.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element scripts

Namespace	No namespace
Annotations	Defines a path to the scripts directory.
Diagram	
Type	xs:string
Properties	content: simple
Used by	Element directory

Source	`<xs:element name="scripts" type="xs:string">`
	`  <xs:annotation>`
	`  <xs:documentation>Defines a path to the scripts directory.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

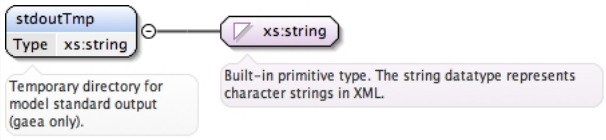
Element stdout

Namespace	No namespace
Annotations	Defines the path for saving standard output from FRE.
Diagram	
Type	xs:string
Properties	content: simple

Used by	Element directory

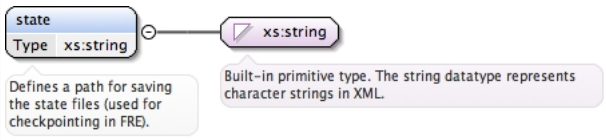
Source	`<xs:element name="stdout" type="xs:string">`
	`  <xs:annotation>`
	`  <xs:documentation>Defines the path for saving standard output from FRE.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element `stdoutTmp`

Namespace	No namespace
Annotations	Temporary directory for model standard output (gaea only).
Diagram	
Type	xs:string
Properties	content: simple
Used by	Element directory

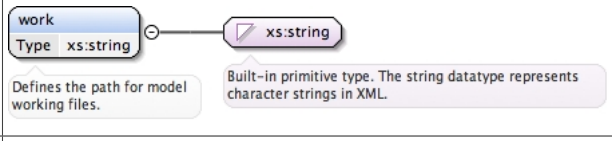
Source	`<xs:element name="stdoutTmp" type="xs:string">`
	`  <xs:annotation>`
	`  <xs:documentation>Temporary directory for model standard output (gaea only).</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element `state`

Namespace	No namespace
Annotations	Defines a path for saving the state files (used for checkpointing in FRE).
Diagram	
Type	xs:string
Properties	content: simple
Used by	Element directory

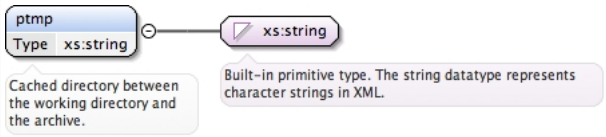
Source	`<xs:element name="state" type="xs:string">`
	`  <xs:annotation>`
	`  <xs:documentation>Defines a path for saving the state files (used for checkpointing in FRE).</`
	`xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element `work`

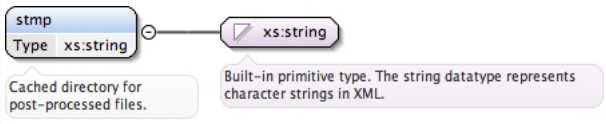
Namespace	No namespace
Annotations	Defines the path for model working files.
Diagram	
Type	xs:string
Properties	content: simple
Used by	Element directory

Source	`<xs:element name="work" type="xs:string">`
	`  <xs:annotation>`
	`  <xs:documentation>Defines the path for model working files.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

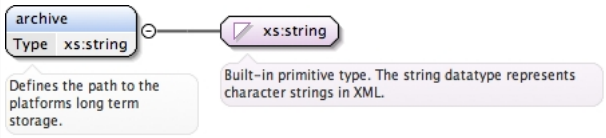
Element ptmp

Namespace	No namespace
Annotations	Cached directory between the working directory and the archive.
Diagram	
Type	xs:string
Properties	content: simple
Used by	Element directory
Source	<xs:element name="ptmp" type="xs:string"> <xs:annotation> <xs:documentation>Cached directory between the working directory and the archive.</ xs:documentation> </xs:annotation> </xs:element>

Element stmp

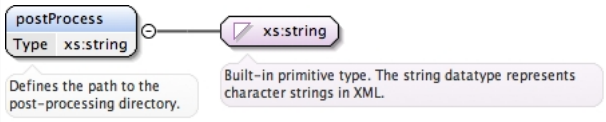
Namespace	No namespace
Annotations	Cached directory for post-processed files.
Diagram	
Type	xs:string
Properties	content: simple
Used by	Element directory
Source	<xs:element name="stmp" type="xs:string"> <xs:annotation> <xs:documentation>Cached directory for post-processed files.</xs:documentation> </xs:annotation> </xs:element>

Element archive

Namespace	No namespace
Annotations	Defines the path to the platforms long term storage.
Diagram	
Type	xs:string
Properties	content: simple
Used by	Element directory
Source	<xs:element name="archive" type="xs:string"> <xs:annotation> <xs:documentation>Defines the path to the platforms long term storage.</xs:documentation> </xs:annotation> </xs:element>

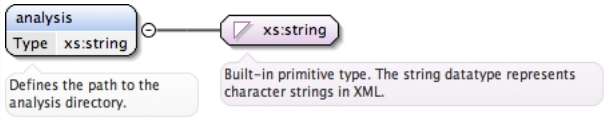
Element directory / postProcess

Namespace	No namespace
Annotations	Defines the path to the post-processing directory.

Diagram	
Type	xs:string
Properties	content: simple

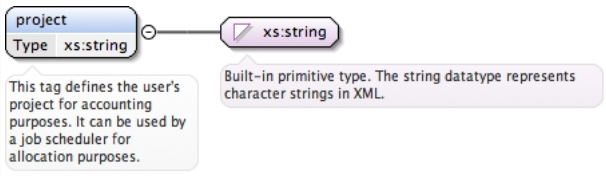
Source	`<xs:element name="postProcess" type="xs:string">`
	`  <xs:annotation>`
	`  <xs:documentation>Defines the path to the post-processing directory.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element `directory / analysis`

Namespace	No namespace
Annotations	Defines the path to the analysis directory.
Diagram	
Type	xs:string
Properties	content: simple

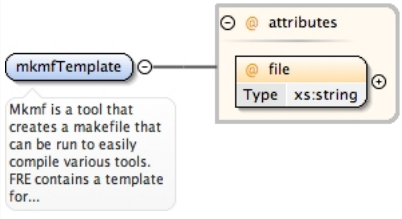
Source	`<xs:element name="analysis" type="xs:string">`
	`  <xs:annotation>`
	`  <xs:documentation>Defines the path to the analysis directory.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element `project`

Namespace	No namespace
Annotations	This tag defines the user's project for accounting purposes. It can be used by a job scheduler for allocation purposes.
Diagram	
Type	xs:string
Properties	content: simple
Used by	Element platform

Source	`<xs:element name="project" type="xs:string">`
	`  <xs:annotation>`
	`  <xs:documentation>This tag defines the user's project for accounting purposes. It can be used by a job scheduler for allocation purposes.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element `mkmfTemplate`

Namespace	No namespace
Annotations	Mkmf is a tool that creates a makefile that can be run to easily compile various tools. FRE contains a template for this utility, but the ability to override the template is provide in this tag.
Diagram	

Properties	content:	complex
Used by	Element	platform

Attributes

QName	Type	Fixed	Default	Use
file	xs:string			required

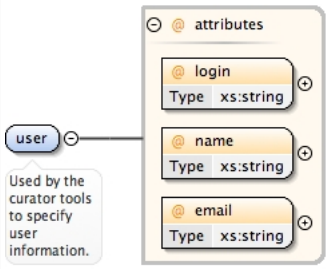
Source

```
<xs:element name="mkmfTemplate">
  <xs:annotation>
    <xs:documentation>Mkmf is a tool that creates a makefile that can be run to easily compile
 various tools. FRE contains a template for this utility, but the ability to override the template
 is provide in this tag.</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:attribute name="file" use="required" type="xs:string"/>
  </xs:complexType>
</xs:element>
```

Element user

Namespace	No namespace
Annotations	Used by the curator tools to specify user information.

Diagram



Properties	content:	complex
Used by	Element	experimentSuite

Attributes

QName	Type	Fixed	Default	Use
email	xs:string			required
login	xs:string			required
name	xs:string			required

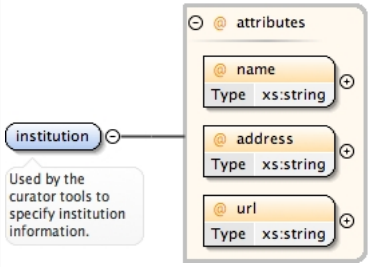
Source

```
<xs:element name="user">
  <xs:annotation>
    <xs:documentation>Used by the curator tools to specify user information.</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:attribute name="login" use="required" type="xs:string"/>
    <xs:attribute name="name" use="required" type="xs:string"/>
    <xs:attribute name="email" use="required" type="xs:string"/>
  </xs:complexType>
</xs:element>
```

Element institution

Namespace	No namespace
Annotations	Used by the curator tools to specify institution information.

Diagram



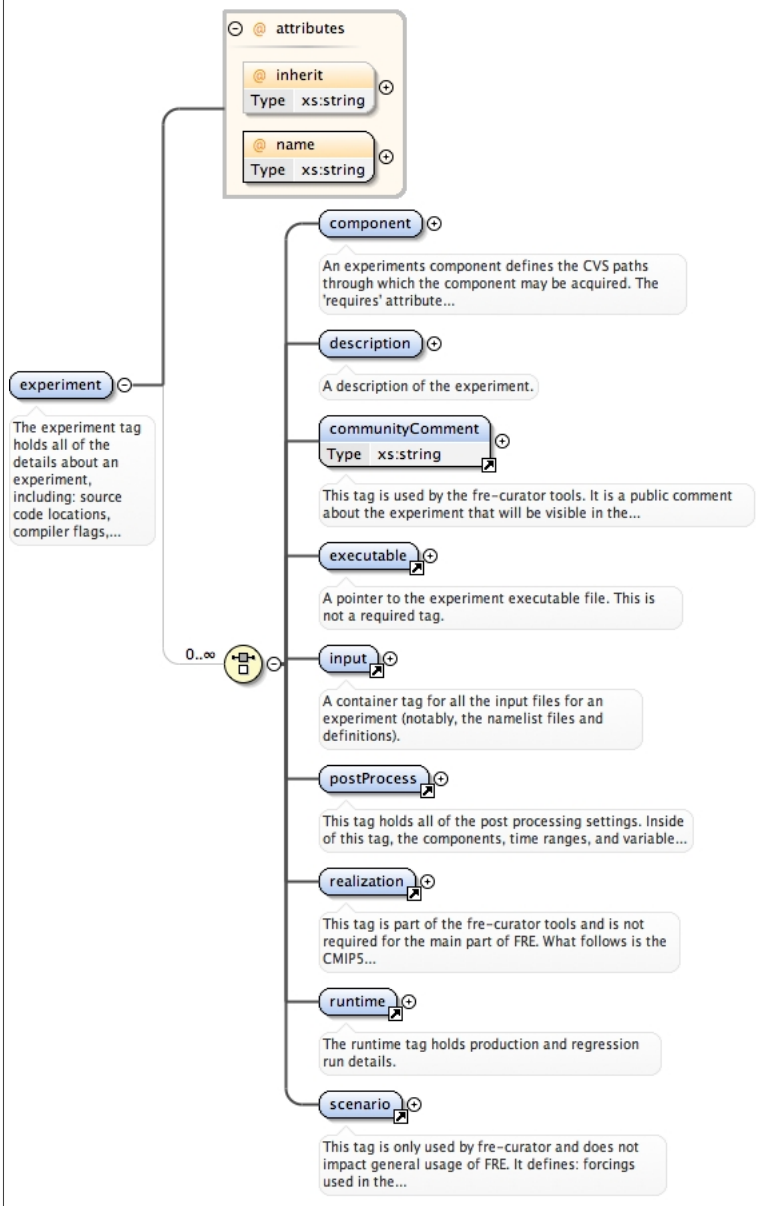
Properties	content:	complex
Used by	Element	experimentSuite

Attributes	QName	Type	Fixed	Default	Use
	address	xs:string			required
	name	xs:string			required
	url	xs:string			required

Source

```
<xs:element name="institution">
  <xs:annotation>
    <xs:documentation>Used by the curator tools to specify institution information.</
xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:attribute name="name" use="required" type="xs:string"/>
    <xs:attribute name="address" use="required" type="xs:string"/>
    <xs:attribute name="url" use="required" type="xs:string"/>
  </xs:complexType>
</xs:element>
```

Element `experiment`

Namespace	No namespace
Annotations	The experiment tag holds all of the details about an experiment, including: source code locations, compiler flags, components to process, and input file locations. Each experiment must be given a unique name.
Diagram	

Properties	content:	complex

	mixed: `true`
Used by	Element experimentSuite
Model	component | description | communityComment | executable | input | postProcess | realization | runtime | scenario
Children	communityComment, component, description, executable, input, postProcess, realization, runtime, scenario

Instance

```
<experiment inherit="" name="">
  <component includeDir="" name="" paths="" requires="">{1,1}</component>
  <description communityExperimentID="" communityExperimentName="" communityModel="" communityModelID="" communityP
description>
  <communityComment>{1,1}</communityComment>
  <executable file="">{1,1}</executable>
  <input>{1,1}</input>
  <postProcess combine="" npes="">{1,1}</postProcess>
  <realization i="" p="" r="">{1,1}</realization>
  <runtime>{1,1}</runtime>
  <scenario branch_time="" communityForcing="" endTime="" parentExperimentID="" parentExperimentRIP="" startTime="
scenario>
</experiment>
```

Attributes

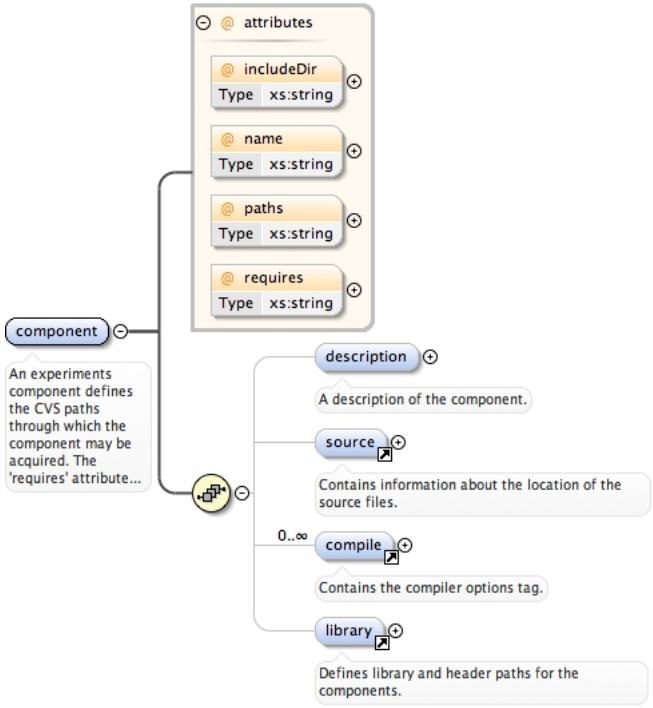
QName	Type	Fixed	Default	Use
inherit	xs:string			optional
name	xs:string			required

Source

```
<xs:element name="experiment">
  <xs:annotation>
    <xs:documentation>The experiment tag holds all of the details about an experiment, including:
 source code locations, compiler flags, components to process, and input file locations. Each
 experiment must be given a unique name.</xs:documentation>
  </xs:annotation>
  <xs:complexType mixed="true">
    <xs:choice minOccurs="0" maxOccurs="unbounded">
      <xs:element name="component">
        <xs:annotation>
          <xs:documentation>An experiments component defines the CVS paths through which the
 component may be acquired. The 'requires' attribute lists dependencies for that component. The
 'paths' attribute lists the directory that will be search after CVS checkout.</xs:documentation>
        </xs:annotation>
        <xs:complexType>
          <xs:sequence>
            <xs:element name="description" minOccurs="0">
              <xs:annotation>
                <xs:documentation>A description of the component.</xs:documentation>
              </xs:annotation>
              <xs:complexType mixed="true">
                <xs:attribute name="communityGrid" type="xs:string"/>
                <xs:attribute name="communityName" type="xs:string"/>
                <xs:attribute name="communityVersion" type="xs:string"/>
                <xs:attribute name="domainName" type="xs:string"/>
              </xs:complexType>
            </xs:element>
            <xs:element minOccurs="0" ref="source"/>
            <xs:element minOccurs="0" maxOccurs="unbounded" ref="compile"/>
            <xs:element minOccurs="0" ref="library"/>
          </xs:sequence>
          <xs:attribute name="includeDir" type="xs:string"/>
          <xs:attribute name="name" type="xs:string"/>
          <xs:attribute name="paths" type="xs:string"/>
          <xs:attribute name="requires" type="xs:string"/>
        </xs:complexType>
      </xs:element>
      <xs:element name="description">
        <xs:annotation>
          <xs:documentation>A description of the experiment.</xs:documentation>
        </xs:annotation>
        <xs:complexType mixed="true">
          <xs:attribute name="communityExperimentID" type="xs:string"/>
          <xs:attribute name="communityExperimentName" type="xs:string"/>
          <xs:attribute name="communityModel" type="xs:string"/>
          <xs:attribute name="communityModelID" type="xs:string"/>
          <xs:attribute name="communityProject" type="xs:string"/>
        </xs:complexType>
      </xs:element>
      <xs:element ref="communityComment"/>
      <xs:element ref="executable"/>
      <xs:element ref="input"/>
      <xs:element ref="postProcess"/>
      <xs:element ref="realization"/>
      <xs:element ref="runtime"/>
      <xs:element ref="scenario"/>
```

```
    </xs:choice>
    <xs:attribute name="inherit" type="xs:string"/>
    <xs:attribute name="name" use="required" type="xs:string"/>
  </xs:complexType>
</xs:element>
```

Element `experiment / component`

Namespace	No namespace
Annotations	An experiments component defines the CVS paths through which the component may be acquired. The 'requires' attribute lists dependencies for that component. The 'paths' attribute lists the directory that will be search after CVS checkout.
Diagram	
Properties	content: complex
Model	description{0,1} , source{0,1} , compile* , library{0,1}
Children	compile, description, library, source

Instance	`<component includeDir="" name="" paths="" requires="">`
	`  <description communityGrid="" communityName="" communityVersion="" domainName="">{0,1}</description>`
	`  <source versionControl="" versonControl="">{0,1}</source>`
	`  <compile target="">{0,unbounded}</compile>`
	`  <library headerDir="" path="">{0,1}</library>`
	`</component>`

Attributes

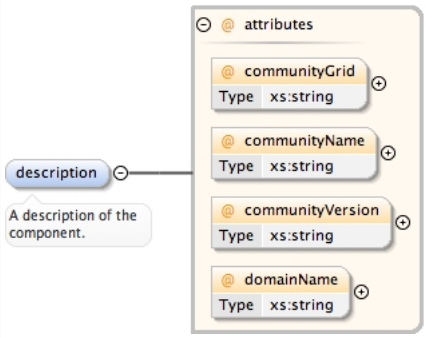
QName	Type	Fixed	Default	Use
includeDir	xs:string			optional
name	xs:string			optional
paths	xs:string			optional
requires	xs:string			optional

Source

```
<xs:element name="component">
  <xs:annotation>
    <xs:documentation>An experiments component defines the CVS paths through which the component may
 be acquired. The 'requires' attribute lists dependencies for that component. The 'paths' attribute
 lists the directory that will be search after CVS checkout.</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>
      <xs:element name="description" minOccurs="0">
        <xs:annotation>
          <xs:documentation>A description of the component.</xs:documentation>
        </xs:annotation>
        <xs:complexType mixed="true">
          <xs:attribute name="communityGrid" type="xs:string"/>
```

```
          <xs:attribute name="communityName" type="xs:string"/>
          <xs:attribute name="communityVersion" type="xs:string"/>
          <xs:attribute name="domainName" type="xs:string"/>
        </xs:complexType>
      </xs:element>
      <xs:element minOccurs="0" ref="source"/>
      <xs:element minOccurs="0" maxOccurs="unbounded" ref="compile"/>
      <xs:element minOccurs="0" ref="library"/>
    </xs:sequence>
    <xs:attribute name="includeDir" type="xs:string"/>
    <xs:attribute name="name" type="xs:string"/>
    <xs:attribute name="paths" type="xs:string"/>
    <xs:attribute name="requires" type="xs:string"/>
  </xs:complexType>
</xs:element>
```

Element `experiment / component / description`

Namespace	No namespace
Annotations	`A description of the component.`
Diagram	

Properties

content:	`complex`
minOccurs:	`0`
mixed:	`true`

Model

Attributes

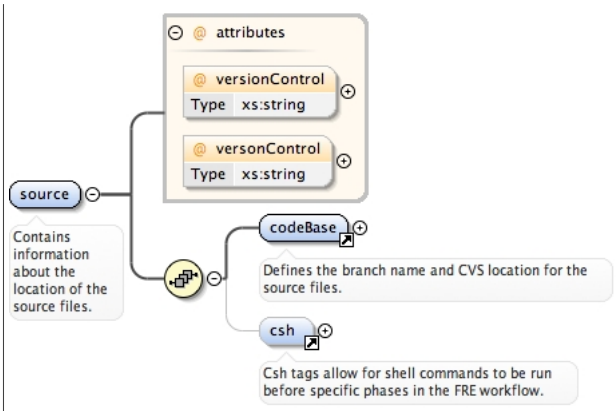
QName	Type	Fixed	Default	Use
communityGrid	xs:string			optional
communityName	xs:string			optional
communityVersion	xs:string			optional
domainName	xs:string			optional

Source

```
<xs:element name="description" minOccurs="0">
  <xs:annotation>
    <xs:documentation>A description of the component.</xs:documentation>
  </xs:annotation>
  <xs:complexType mixed="true">
    <xs:attribute name="communityGrid" type="xs:string"/>
    <xs:attribute name="communityName" type="xs:string"/>
    <xs:attribute name="communityVersion" type="xs:string"/>
    <xs:attribute name="domainName" type="xs:string"/>
  </xs:complexType>
</xs:element>
```

Element `source`

Namespace	No namespace
Annotations	`Contains information about the location of the source files.`

Diagram	
Properties	content: complex
Used by	Element experiment/component
Model	codeBase , csh{0,1}
Children	codeBase, csh

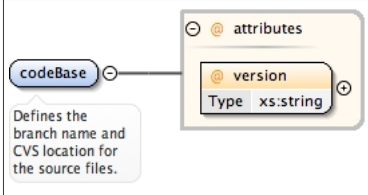
Instance	`<source versionControl="" versonControl="">`
	`  <codeBase version="">{1,1}</codeBase>`
	`  <csh type="">{0,1}</csh>`
	`</source>`

Attributes	QName	Type	Fixed	Default	Use
	versionControl	xs:string			optional
	versonControl	xs:string			optional

Source

```
<xs:element name="source">
  <xs:annotation>
    <xs:documentation>Contains information about the location of the source files.</
xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="codeBase"/>
      <xs:element minOccurs="0" ref="csh"/>
    </xs:sequence>
    <xs:attribute name="versionControl" type="xs:string"/>
    <xs:attribute name="versonControl" type="xs:string"/>
  </xs:complexType>
</xs:element>
```

Element codeBase

Namespace	No namespace
Annotations	Defines the branch name and CVS location for the source files.
Diagram	
Properties	content: complex mixed: true
Used by	Element source
Model	

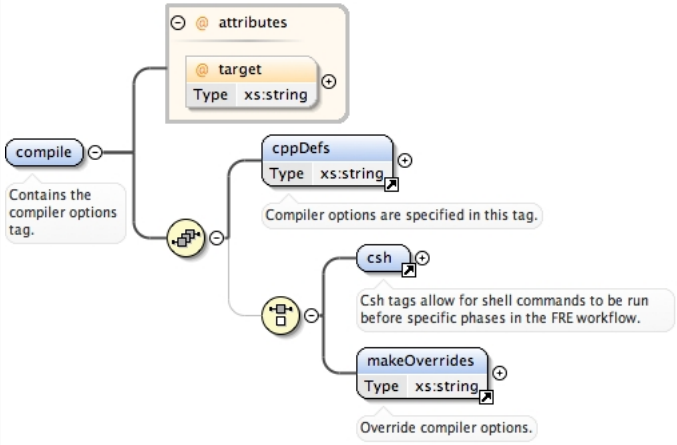
Attributes	QName	Type	Fixed	Default	Use
	version	xs:string			required

Source

```
<xs:element name="codeBase">
  <xs:annotation>
    <xs:documentation>Defines the branch name and CVS location for the source files.</
xs:documentation>
```

```
  </xs:annotation>
  <xs:complexType mixed="true">
    <xs:attribute name="version" use="required" type="xs:string"/>
  </xs:complexType>
</xs:element>
```

Element compile

Namespace	No namespace
Annotations	Contains the compiler options tag.
Diagram	
Properties	content: complex
Used by	Element experiment/component
Model	cppDefs , (csh | makeOverrides)
Children	cppDefs, csh, makeOverrides

Instance	`<compile target="">`
	`  <cppDefs>{1,1}</cppDefs>`
	`  <csh type="">{1,1}</csh>`
	`  <makeOverrides>{1,1}</makeOverrides>`
	`</compile>`

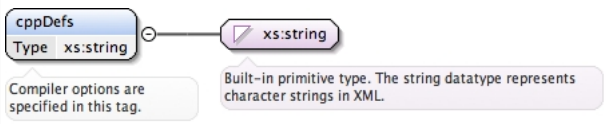
Attributes

QName	Type	Fixed	Default	Use
target	xs:string			optional

Source

```
<xs:element name="compile">
  <xs:annotation>
    <xs:documentation>Contains the compiler options tag.</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="cppDefs"/>
      <xs:choice minOccurs="0">
        <xs:element ref="csh"/>
        <xs:element ref="makeOverrides"/>
      </xs:choice>
    </xs:sequence>
    <xs:attribute name="target" type="xs:string"/>
  </xs:complexType>
</xs:element>
```

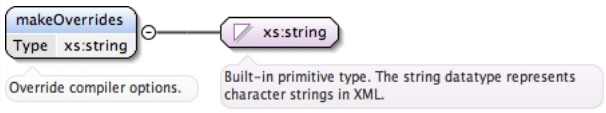
Element cppDefs

Namespace	No namespace
Annotations	Compiler options are specified in this tag.
Diagram	
Type	xs:string
Properties	content: simple

Used by	Element compile

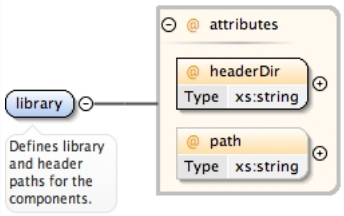
Source	`<xs:element name="cppDefs" type="xs:string">`
	`  <xs:annotation>`
	`  <xs:documentation>Compiler options are specified in this tag.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element `makeOverrides`

Namespace	No namespace
Annotations	`Override compiler options.`
Diagram	
Type	xs:string
Properties	content: `simple`
Used by	Element compile

Source	`<xs:element name="makeOverrides" type="xs:string">`
	`  <xs:annotation>`
	`  <xs:documentation>Override compiler options.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

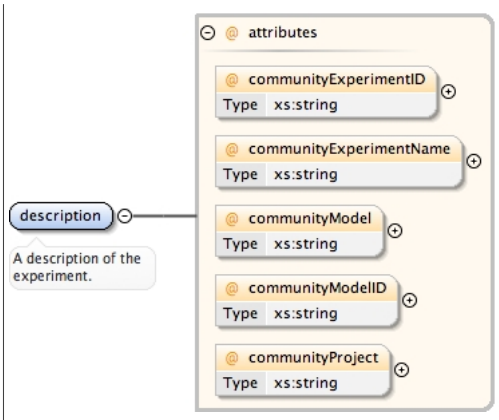
Element `library`

Namespace	No namespace
Annotations	`Defines library and header paths for the components.`
Diagram	
Properties	content: `complex`
Used by	Element experiment/component
Attributes	**QName** / **Type** / **Fixed** / **Default** / **Use** **headerDir** / xs:string / / / required **path** / xs:string / / / optional

Source	`<xs:element name="library">`
	`  <xs:annotation>`
	`  <xs:documentation>Defines library and header paths for the components.</xs:documentation>`
	`  </xs:annotation>`
	`  <xs:complexType>`
	`  <xs:attribute name="headerDir" use="required" type="xs:string"/>`
	`  <xs:attribute name="path" type="xs:string"/>`
	`  </xs:complexType>`
	`</xs:element>`

Element `experiment / description`

Namespace	No namespace
Annotations	`A description of the experiment.`

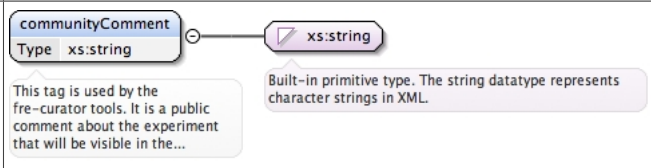
Diagram	
Properties	content: complex mixed: true
Model	
Attributes	

QName	Type	Fixed	Default	Use
communityExperimentID	xs:string			optional
communityExperimentName	xs:string			optional
communityModel	xs:string			optional
communityModelID	xs:string			optional
communityProject	xs:string			optional

Source

```
<xs:element name="description">
  <xs:annotation>
    <xs:documentation>A description of the experiment.</xs:documentation>
  </xs:annotation>
  <xs:complexType mixed="true">
    <xs:attribute name="communityExperimentID" type="xs:string"/>
    <xs:attribute name="communityExperimentName" type="xs:string"/>
    <xs:attribute name="communityModel" type="xs:string"/>
    <xs:attribute name="communityModelID" type="xs:string"/>
    <xs:attribute name="communityProject" type="xs:string"/>
  </xs:complexType>
</xs:element>
```

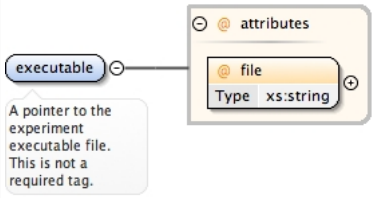
Element communityComment

Namespace	No namespace
Annotations	This tag is used by the fre-curator tools. It is a public comment about the experiment that will be visible in the netcdf output files.
Diagram	
Type	xs:string
Properties	content: simple
Used by	Element experiment
Source	

```
<xs:element name="communityComment" type="xs:string">
  <xs:annotation>
    <xs:documentation>This tag is used by the fre-curator tools. It is a public comment about the
 experiment that will be visible in the netcdf output files.</xs:documentation>
  </xs:annotation>
</xs:element>
```

Element executable

Namespace	No namespace
Annotations	A pointer to the experiment executable file. This is not a required tag.

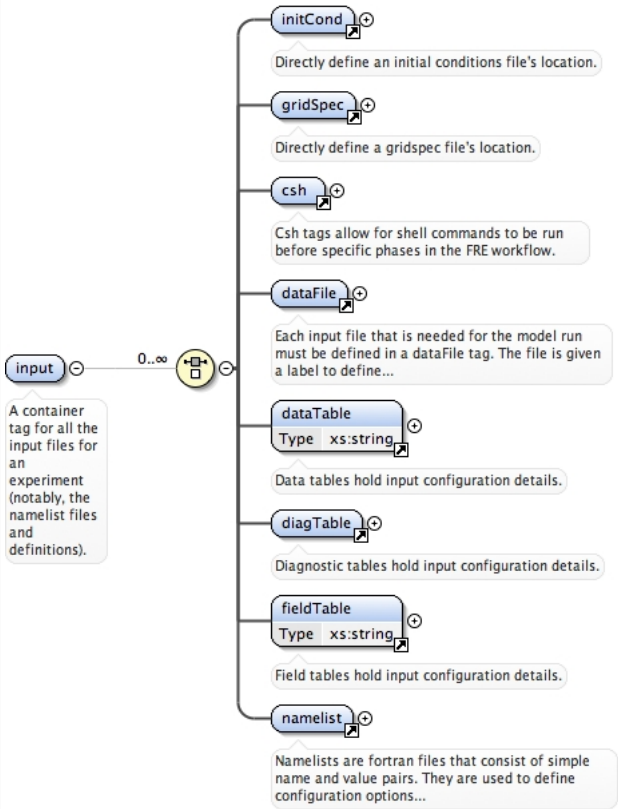
Diagram	
Properties	content: complex
Used by	Element experiment

Attributes	QName	Type	Fixed	Default	Use
	file	xs:string			required

Source

```
<xs:element name="executable">
  <xs:annotation>
    <xs:documentation>A pointer to the experiment executable file. This is not a required tag.</
xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:attribute name="file" use="required" type="xs:string"/>
  </xs:complexType>
</xs:element>
```

Element `input`

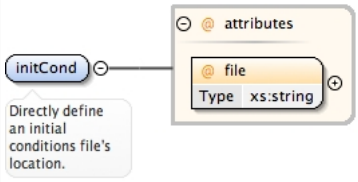
Namespace	No namespace
Annotations	A container tag for all the input files for an experiment (notably, the namelist files and definitions).
Diagram	
Properties	content: complex
Used by	Element experiment
Model	initCond | gridSpec | csh | dataFile | dataTable | diagTable | fieldTable | namelist
Children	csh, dataFile, dataTable, diagTable, fieldTable, gridSpec, initCond, namelist
Instance	<input> <initCond file="">{1,1}</initCond> <gridSpec file="">{1,1}</gridSpec>

```
  <csh type="">{1,1}</csh>
  <dataFile chksum="" label="" size="" target="" timestamp="">{1,1}</dataFile>
  <dataTable>{1,1}</dataTable>
  <diagTable file="">{1,1}</diagTable>
  <fieldTable>{1,1}</fieldTable>
  <namelist file="" name="">{1,1}</namelist>
</input>
```

Source

```
<xs:element name="input">
  <xs:annotation>
    <xs:documentation>A container tag for all the input files for an experiment (notably, the
 namelist files and definitions).</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:choice minOccurs="0" maxOccurs="unbounded">
      <xs:element ref="initCond"/>
      <xs:element ref="gridSpec"/>
      <xs:element ref="csh"/>
      <xs:element ref="dataFile"/>
      <xs:element ref="dataTable"/>
      <xs:element ref="diagTable"/>
      <xs:element ref="fieldTable"/>
      <xs:element ref="namelist"/>
    </xs:choice>
  </xs:complexType>
</xs:element>
```

Element `initCond`

Namespace	No namespace
Annotations	`Directly define an initial conditions file's location.`
Diagram	
Properties	content: `complex`
Used by	Element input

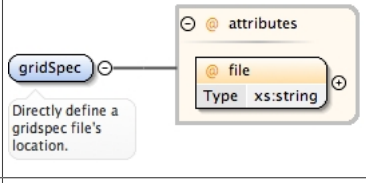
Attributes

QName	Type	Fixed	Default	Use
file	xs:string			required

Source

```
<xs:element name="initCond">
  <xs:annotation>
    <xs:documentation>Directly define an initial conditions file's location.</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:attribute name="file" use="required" type="xs:string"/>
  </xs:complexType>
</xs:element>
```

Element `gridSpec`

Namespace	No namespace
Annotations	`Directly define a gridspec file's location.`
Diagram	
Properties	content: `complex`
Used by	Element input

Attributes

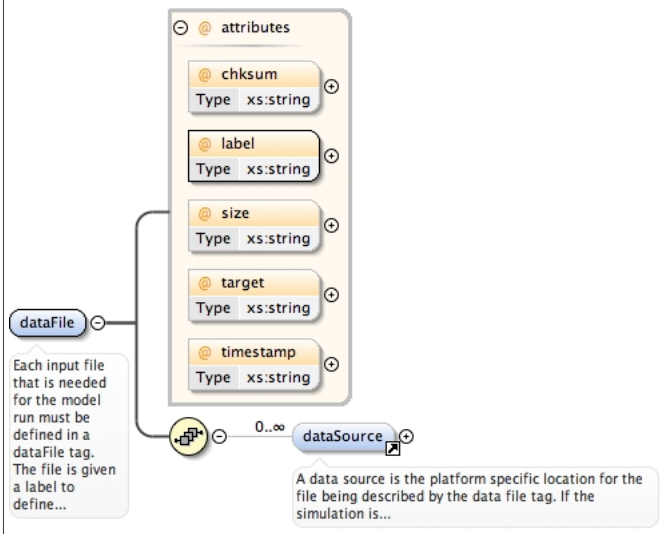
QName	Type	Fixed	Default	Use
file	xs:string			required

Source

```
<xs:element name="gridSpec">
```

```
  <xs:annotation>
    <xs:documentation>Directly define a gridspec file's location.</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:attribute name="file" use="required" type="xs:string"/>
  </xs:complexType>
</xs:element>
```

Element `dataFile`

Namespace	No namespace
Annotations	Each input file that is needed for the model run must be defined in a dataFile tag. The file is given a label to define the type of file it is, a target that defines where the file will be transferred to, and file attributes that may be used by FRE in the future to ensure successful transfers (checksum, timestamp, and file size).
Diagram	
Properties	content: complex mixed: true
Used by	Elements: input, runtime
Model	dataSource*
Children	dataSource

Instance	`<dataFile chksum="" label="" size="" target="" timestamp="">`
	`  <dataSource platform="" site="">{0,unbounded}</dataSource>`
	`</dataFile>`

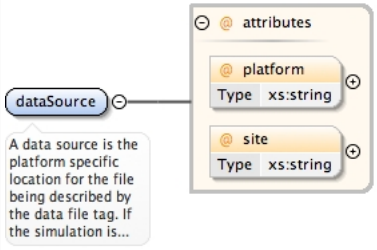
Attributes

QName	Type	Fixed	Default	Use
chksum	xs:string			optional
label	xs:string			required
size	xs:string			optional
target	xs:string			optional
timestamp	xs:string			optional

Source

```
<xs:element name="dataFile">
  <xs:annotation>
    <xs:documentation>Each input file that is needed for the model run must be defined in a dataFile
 tag. The file is given a label to define the type of file it is, a target that defines where the
 file will be transferred to, and file attributes that may be used by FRE in the future to ensure
 successful transfers (checksum, timestamp, and file size).</xs:documentation>
  </xs:annotation>
  <xs:complexType mixed="true">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" ref="dataSource"/>
    </xs:sequence>
    <xs:attribute name="chksum" type="xs:string"/>
    <xs:attribute name="label" use="required" type="xs:string"/>
    <xs:attribute name="size" type="xs:string"/>
    <xs:attribute name="target" type="xs:string"/>
    <xs:attribute name="timestamp" type="xs:string"/>
  </xs:complexType>
</xs:element>
```

Element dataSource

Namespace	No namespace
Annotations	A data source is the platform specific location for the file being described by the data file tag. If the simulation is run on multiple platforms, multiple data source tags can be used to specify the various locations of the needed file.
Diagram	
Properties	content: complex mixed: true
Used by	Element dataFile
Model	

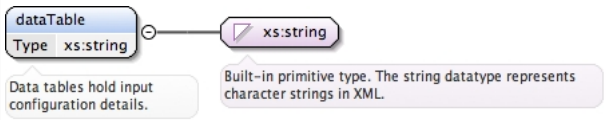
Attributes

QName	Type	Fixed	Default	Use
platform	xs:string			optional
site	xs:string			optional

Source

```
<xs:element name="dataSource">
  <xs:annotation>
    <xs:documentation>A data source is the platform specific location for the file being described
 by the data file tag. If the simulation is run on multiple platforms, multiple data source tags can
 be used to specify the various locations of the needed file.</xs:documentation>
  </xs:annotation>
  <xs:complexType mixed="true">
    <xs:attribute name="platform" type="xs:string"/>
    <xs:attribute name="site" type="xs:string"/>
  </xs:complexType>
</xs:element>
```

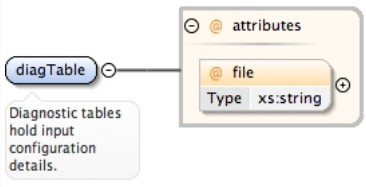
Element dataTable

Namespace	No namespace
Annotations	Data tables hold input configuration details.
Diagram	
Type	xs:string
Properties	content: simple
Used by	Element input

Source

```
<xs:element name="dataTable" type="xs:string">
  <xs:annotation>
    <xs:documentation>Data tables hold input configuration details.</xs:documentation>
  </xs:annotation>
</xs:element>
```

Element diagTable

Namespace	No namespace
Annotations	Diagnostic tables hold input configuration details.
Diagram	

Properties	content:	complex
	mixed:	true
Used by	Element	input
Model		

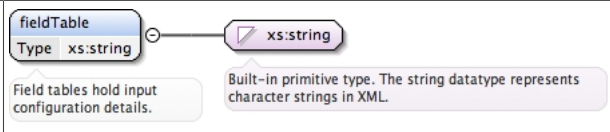
Attributes

QName	Type	Fixed	Default	Use
file	xs:string			optional

Source

```
<xs:element name="diagTable">
  <xs:annotation>
    <xs:documentation>Diagnostic tables hold input configuration details.</xs:documentation>
  </xs:annotation>
  <xs:complexType mixed="true">
    <xs:attribute name="file" type="xs:string"/>
  </xs:complexType>
</xs:element>
```

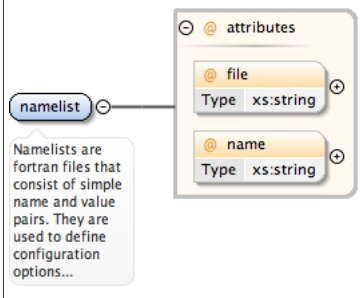
Element fieldTable

Namespace	No namespace
Annotations	Field tables hold input configuration details.
Diagram	
Type	xs:string
Properties	content: simple
Used by	Element input

Source

```
<xs:element name="fieldTable" type="xs:string">
  <xs:annotation>
    <xs:documentation>Field tables hold input configuration details.</xs:documentation>
  </xs:annotation>
</xs:element>
```

Element namelist

Namespace	No namespace
Annotations	Namelists are fortran files that consist of simple name and value pairs. They are used to define configuration options in the model.
Diagram	
Properties	content: complex
	mixed: true
Used by	Element input
Model	

Attributes

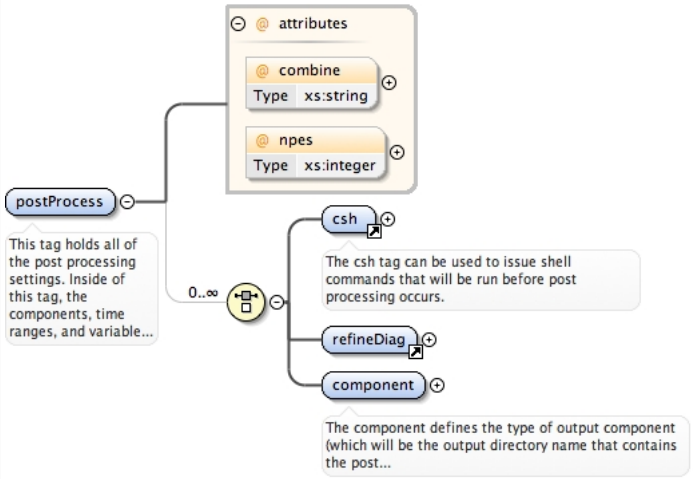
QName	Type	Fixed	Default	Use
file	xs:string			optional
name	xs:string			optional

Source

```
<xs:element name="namelist">
  <xs:annotation>
```

```
    <xs:documentation>Namelists are fortran files that consist of simple name and value pairs. They
 are used to define configuration options in the model.</xs:documentation>
  </xs:annotation>
  <xs:complexType mixed="true">
    <xs:attribute name="file" type="xs:string"/>
    <xs:attribute name="name" type="xs:string"/>
  </xs:complexType>
</xs:element>
```

Element postProcess

Namespace	No namespace
Annotations	This tag holds all of the post processing settings. Inside of this tag, the components, time ranges, and variable subsets are declared for post processing.
Diagram	
Properties	content: complex
Used by	Element experiment
Model	csh | refineDiag | component
Children	component, csh, refineDiag
Instance	<postProcess combine="" npes=""> <csh type="">{1,1}</csh> <refineDiag script="">{1,1}</refineDiag> <component cubicToLatLon="" interpMethod="" source="" start="" type="" zInterp="">{1,1}</component> </postProcess>

Attributes

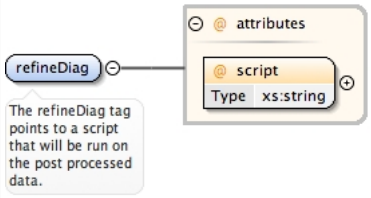
QName	Type	Fixed	Default	Use
combine	xs:string			optional
npes	xs:integer			optional

Source

```
<xs:element name="postProcess">
  <xs:annotation>
    <xs:documentation>This tag holds all of the post processing settings. Inside of this tag, the
 components, time ranges, and variable subsets are declared for post processing.</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:choice minOccurs="0" maxOccurs="unbounded">
      <xs:element ref="csh">
        <xs:annotation>
          <xs:documentation>The csh tag can be used to issue shell commands that will be run before
 post processing occurs.</xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element ref="refineDiag">
        <xs:annotation>
          <xs:documentation/>
        </xs:annotation>
      </xs:element>
      <xs:element name="component">
        <xs:annotation>
          <xs:documentation>The component defines the type of output component (which will be the
 output directory name that contains the post processed files), the z-interpolation method, the
 start year (in the event that you wish to account for spin up time), the source component (which
 should link back to a component defined in the experiment tag, an interpolation method, and finally
 a cubed-sphere to lat/lon grid conversion factor.</xs:documentation>
```

```
        </xs:annotation>
        <xs:complexType>
          <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="unbounded" ref="timeSeries">
              <xs:annotation>
                <xs:documentation>This tag defines the frequency in which the original model output
 data is to be post processed, as well as the "chunk length" or the length of time per output
 file.</xs:documentation>
              </xs:annotation>
            </xs:element>
            <xs:element minOccurs="0" maxOccurs="unbounded" ref="timeAverage"/>
          </xs:sequence>
          <xs:attribute name="cubicToLatLon" type="xs:string"/>
          <xs:attribute name="interpMethod" type="xs:string"/>
          <xs:attribute name="source" type="xs:string"/>
          <xs:attribute name="start" type="xs:string"/>
          <xs:attribute name="type" type="xs:string"/>
          <xs:attribute name="zInterp" type="xs:string"/>
        </xs:complexType>
      </xs:element>
    </xs:choice>
    <xs:attribute name="combine" type="xs:string"/>
    <xs:attribute name="npes" type="xs:integer"/>
  </xs:complexType>
</xs:element>
```

Element `refineDiag`

Namespace	No namespace
Annotations	The refineDiag tag points to a script that will be run on the post processed data.
Diagram	
Properties	content: complex
Used by	Element postProcess

Attributes

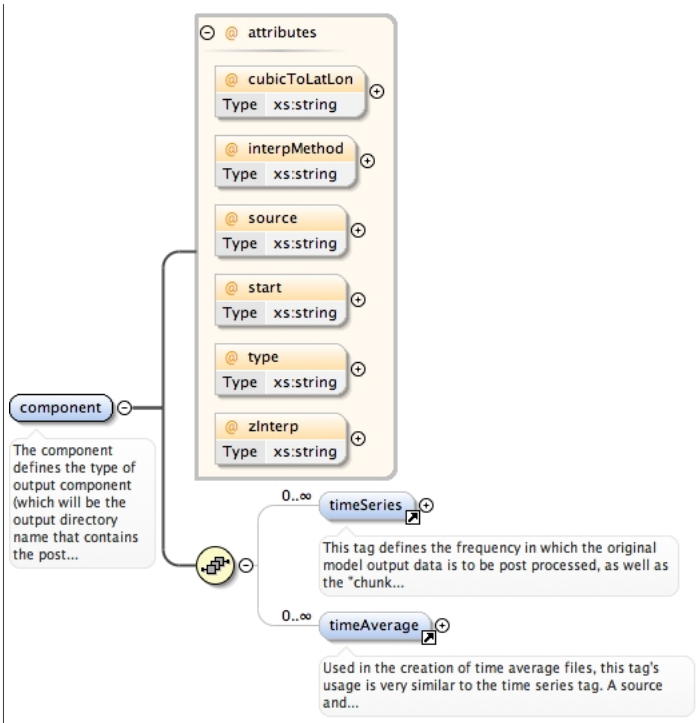
QName	Type	Fixed	Default	Use
script	xs:string			required

Source

```
<xs:element name="refineDiag">
  <xs:annotation>
    <xs:documentation>The refineDiag tag points to a script that will be run on the post processed
 data.</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:attribute name="script" use="required" type="xs:string"/>
  </xs:complexType>
</xs:element>
```

Element `postProcess / component`

Namespace	No namespace
Annotations	The component defines the type of output component (which will be the output directory name that contains the post processed files), the z-interpolation method, the start year (in the event that you wish to account for spin up time), the source component (which should link back to a component defined in the experiment tag, an interpolation method, and finally a cubed-sphere to lat/lon grid conversion factor.

Diagram	
Properties	content: complex
Model	timeSeries* , timeAverage*
Children	timeAverage, timeSeries

Instance	<pre><component cubicToLatLon="" interpMethod="" source="" start="" type="" zInterp="">
	  <timeSeries chunkLength="" cumulative="" endYear="" freq="" from="" source="">{0,unbounded}</timeSeries>
	  <timeAverage calcInterval="" endYear="" from="" interval="" source="">{0,unbounded}</timeAverage>
	</component></pre>

Attributes

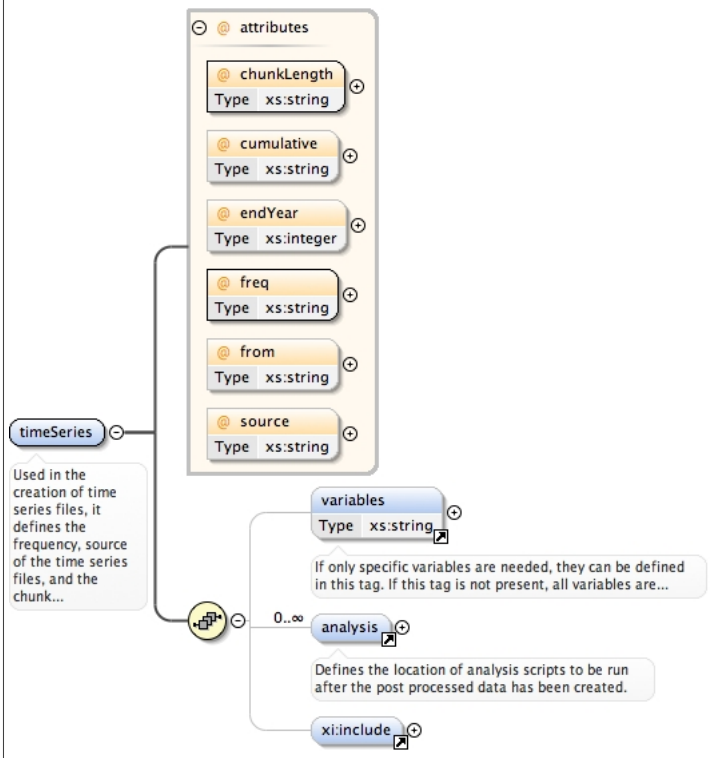
QName	Type	Fixed	Default	Use
cubicToLatLon	xs:string			optional
interpMethod	xs:string			optional
source	xs:string			optional
start	xs:string			optional
type	xs:string			optional
zInterp	xs:string			optional

Source

```
<xs:element name="component">
  <xs:annotation>
    <xs:documentation>The component defines the type of output component (which will be the output
 directory name that contains the post processed files), the z-interpolation method, the start year
 (in the event that you wish to account for spin up time), the source component (which should link
 back to a component defined in the experiment tag, an interpolation method, and finally a cubed-
sphere to lat/lon grid conversion factor.</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" ref="timeSeries">
        <xs:annotation>
          <xs:documentation>This tag defines the frequency in which the original model output data
 is to be post processed, as well as the "chunk length" or the length of time per output file.</
xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element minOccurs="0" maxOccurs="unbounded" ref="timeAverage"/>
    </xs:sequence>
    <xs:attribute name="cubicToLatLon" type="xs:string"/>
    <xs:attribute name="interpMethod" type="xs:string"/>
    <xs:attribute name="source" type="xs:string"/>
    <xs:attribute name="start" type="xs:string"/>
    <xs:attribute name="type" type="xs:string"/>
    <xs:attribute name="zInterp" type="xs:string"/>
  </xs:complexType>
```

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

Element timeSeries

Namespace	No namespace
Annotations	Used in the creation of time series files, it defines the frequency, source of the time series files, and the chunk length.
Diagram	
Properties	content: complex
Used by	Element postProcess/component
Model	variables{0,1} , analysis* , xi:include{0,1}
Children	analysis, variables, xi:include

Instance	`<timeSeries chunkLength="" cumulative="" endYear="" freq="" from="" source="" xmlns:xi="http://www.w3.org/2001/XInclude">`
	`  <variables>{0,1}</variables>`
	`  <analysis xml:base="" cumulative="" endYear="" mode="" momGrid="" outdir="" script="" specify1year="" startYear="`
	`analysis>`
	`  <xi:include href="" xpointer="">{0,1}</xi:include>`
	`</timeSeries>`

Attributes

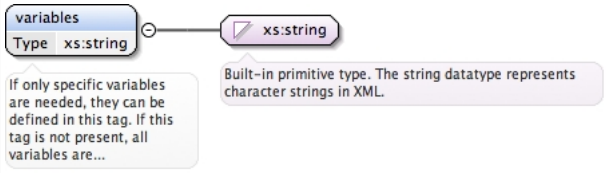
QName	Type	Fixed	Default	Use
chunkLength	xs:string			required
cumulative	xs:string			optional
endYear	xs:integer			optional
freq	xs:string			required
from	xs:string			optional
source	xs:string			optional

Source

```
<xs:element name="timeSeries">
  <xs:annotation>
    <xs:documentation>Used in the creation of time series files, it defines the frequency, source of
 the time series files, and the chunk length.</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" ref="variables"/>
      <xs:element minOccurs="0" maxOccurs="unbounded" ref="analysis"/>
      <xs:element minOccurs="0" ref="xi:include"/>
    </xs:sequence>
    <xs:attribute name="chunkLength" use="required" type="xs:string"/>
```

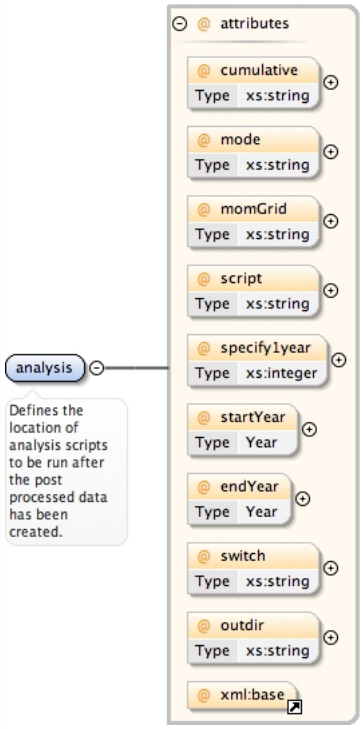
```
    <xs:attribute name="cumulative" type="xs:string"/>
    <xs:attribute name="endYear" type="xs:integer"/>
    <xs:attribute name="freq" use="required" type="xs:string"/>
    <xs:attribute name="from" type="xs:string"/>
    <xs:attribute name="source" type="xs:string"/>
  </xs:complexType>
</xs:element>
```

Element `variables`

Namespace	No namespace
Annotations	`If only specific variables are needed, they can be defined in this tag. If this tag is not present, all variables are post processed.`
Diagram	
Type	xs:string
Properties	content: `simple`
Used by	Element timeSeries

Source	`<xs:element name="variables" type="xs:string">`
	`  <xs:annotation>`
	`  <xs:documentation>If only specific variables are needed, they can be defined in this tag. If this tag is not present, all variables are post processed.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element `analysis`

Namespace	No namespace
Annotations	`Defines the location of analysis scripts to be run after the post processed data has been created.`
Diagram	
Properties	content: `complex` mixed: `true`
Used by	Elements timeAverage, timeSeries

Model	

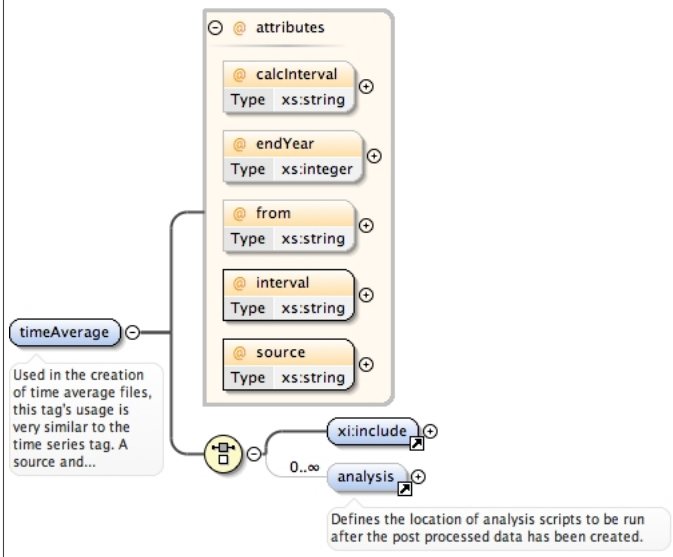
Attributes

QName	Type	Fixed	Default	Use
cumulative	xs:string			optional
endYear	Year			optional
mode	xs:string			optional
momGrid	xs:string			optional
outdir	xs:string			optional
script	xs:string			optional
specify1year	xs:integer			optional
startYear	Year			optional
switch	xs:string			optional
xml:base				optional

Source

```
<xs:element name="analysis">
  <xs:annotation>
    <xs:documentation>Defines the location of analysis scripts to be run after the post processed
 data has been created.</xs:documentation>
  </xs:annotation>
  <xs:complexType mixed="true">
    <xs:attribute name="cumulative" type="xs:string"/>
    <xs:attribute name="mode" type="xs:string"/>
    <xs:attribute name="momGrid" type="xs:string"/>
    <xs:attribute name="script" type="xs:string"/>
    <xs:attribute name="specify1year" type="xs:integer"/>
    <xs:attribute name="startYear" type="Year"/>
    <xs:attribute name="endYear" type="Year"/>
    <xs:attribute name="switch" type="xs:string"/>
    <xs:attribute name="outdir" type="xs:string"/>
    <xs:attribute ref="xml:base"/>
  </xs:complexType>
</xs:element>
```

Element `timeAverage`

Namespace	No namespace
Annotations	`Used in the creation of time average files, this tag's usage is very similar to the time series tag. A source and interval are defined for creating these files.`
Diagram	

Properties	content:	`complex`
Used by	Element	postProcess/component
Model	xi:include | analysis*	
Children	analysis, xi:include	
Instance	`<timeAverage calcInterval="" endYear="" from="" interval="" source="" xmlns:xi="http://www.w3.org/2001/XInclude">`	

```
  <xi:include href="" xpointer="">{1,1}</xi:include>
  <analysis xml:base="" cumulative="" endYear="" mode="" momGrid="" outdir="" script="" specify1year="" startYear="
analysis>
</timeAverage>
```

Attributes

QName	Type	Fixed	Default	Use
calcInterval	xs:string			optional
endYear	xs:integer			optional
from	xs:string			optional
interval	xs:string			required
source	xs:string			required

Source

```
<xs:element name="timeAverage">
  <xs:annotation>
    <xs:documentation>Used in the creation of time average files, this tag's usage is very
 similar to the time series tag. A source and interval are defined for creating these files.</
xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:choice>
      <xs:element ref="xi:include"/>
      <xs:element minOccurs="0" maxOccurs="unbounded" ref="analysis"/>
    </xs:choice>
    <xs:attribute name="calcInterval" type="xs:string"/>
    <xs:attribute name="endYear" type="xs:integer"/>
    <xs:attribute name="from" type="xs:string"/>
    <xs:attribute name="interval" use="required" type="xs:string"/>
    <xs:attribute name="source" use="required" type="xs:string"/>
  </xs:complexType>
</xs:element>
```

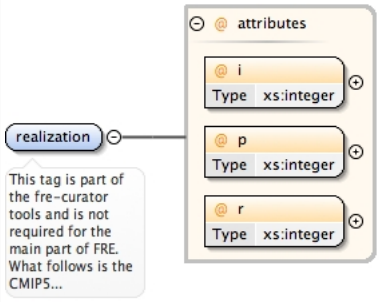
Element `realization`

Namespace: No namespace

Annotations

```
This tag is part of the fre-curator tools and is not required for the main part of FRE. What
 follows is the CMIP5 definition of what values these ensemble members should contain. When
 multiple simulations are derived form the same experiment, the 'r' value should be incremented.
 When the initialization method or input files are altered, the 'i' value should be incremented.
 When forcings cause the physics version to differ between simulations, the 'p' value should be
 incremented.
```

Diagram



Properties

content:	`complex`

Used by

Element	experiment

Attributes

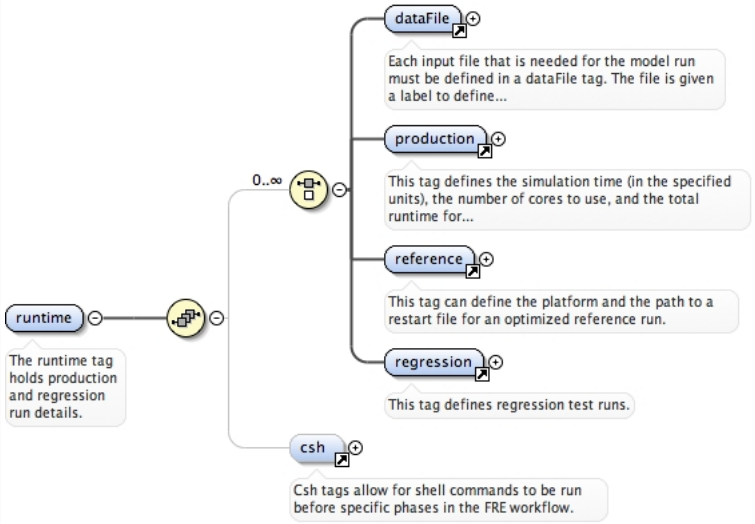
QName	Type	Fixed	Default	Use
i	xs:integer			required
p	xs:integer			required
r	xs:integer			required

Source

```
<xs:element name="realization">
  <xs:annotation>
    <xs:documentation>This tag is part of the fre-curator tools and is not required for the main
 part of FRE. What follows is the CMIP5 definition of what values these ensemble members should
 contain. When multiple simulations are derived form the same experiment, the 'r' value should be
 incremented. When the initialization method or input files are altered, the 'i' value should be
 incremented. When forcings cause the physics version to differ between simulations, the 'p' value
 should be incremented.</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:attribute name="i" use="required" type="xs:integer"/>
```

```
    <xs:attribute name="p" use="required" type="xs:integer"/>
    <xs:attribute name="r" use="required" type="xs:integer"/>
  </xs:complexType>
</xs:element>
```

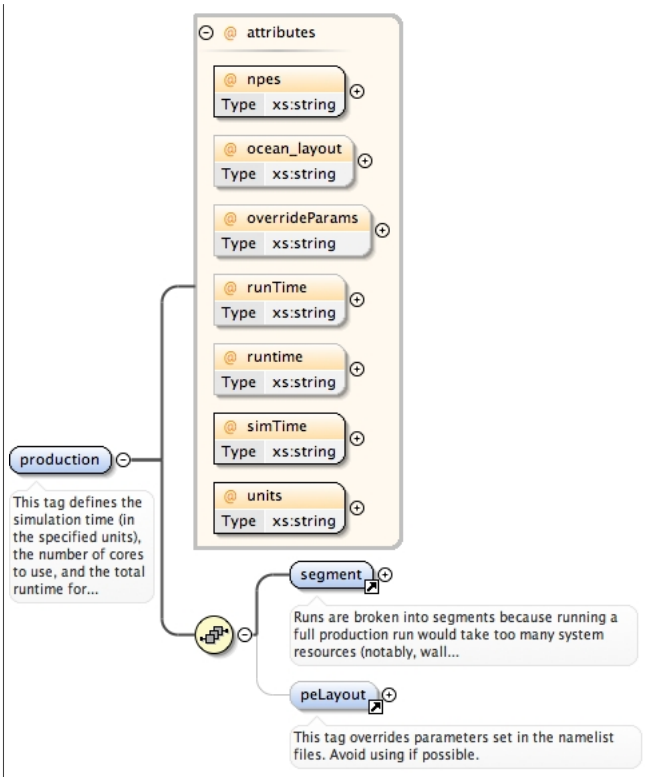
Element `runtime`

Namespace	No namespace
Annotations	The runtime tag holds production and regression run details.
Diagram	
Properties	content: complex
Used by	Element experiment
Model	(dataFile | production | reference | regression) , csh{0,1}
Children	csh, dataFile, production, reference, regression
Instance	`<runtime> <dataFile chksum="" label="" size="" target="" timestamp="">{1,1}</dataFile> <production npes="" ocean_layout="" overrideParams="" runtime="" runTime="" simTime="" units="">{1,1}</production> <reference platform="" restart="" site="">{1,1}</reference> <regression label="" name="">{1,1}</regression> <csh type="">{0,1}</csh> </runtime>`
Source	`<xs:element name="runtime"> <xs:annotation> <xs:documentation>The runtime tag holds production and regression run details.</xs:documentation> </xs:annotation> <xs:complexType> <xs:sequence> <xs:choice minOccurs="0" maxOccurs="unbounded"> <xs:element ref="dataFile"/> <xs:element ref="production"/> <xs:element ref="reference"/> <xs:element ref="regression"/> </xs:choice> <xs:element minOccurs="0" ref="csh"/> </xs:sequence> </xs:complexType> </xs:element>`

Element `production`

Namespace	No namespace
Annotations	This tag defines the simulation time (in the specified units), the number of cores to use, and the total runtime for the run.

Diagram



Properties	content: complex
Used by	Element runtime
Model	segment , peLayout{0,1}
Children	peLayout, segment

Instance

```
<production npes="" ocean_layout="" overrideParams="" runtime="" runTime="" simTime="" units="">
  <segment runTime="" simTime="" units="">{1,1}</segment>
  <peLayout ocean="">{0,1}</peLayout>
</production>
```

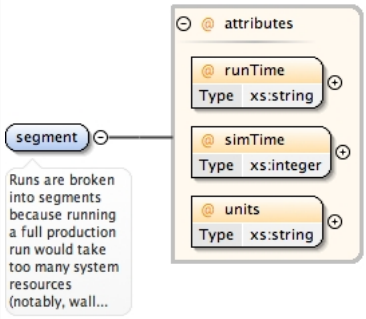
Attributes

QName	Type	Fixed	Default	Use
npes	xs:string			required
ocean_layout	xs:string			optional
overrideParams	xs:string			optional
runTime	xs:string			optional
runtime	xs:string			optional
simTime	xs:string			required
units	xs:string			required

Source

```
<xs:element name="production">
  <xs:annotation>
    <xs:documentation>This tag defines the simulation time (in the specified units), the number of
 cores to use, and the total runtime for the run.</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="segment"/>
      <xs:element minOccurs="0" ref="peLayout"/>
    </xs:sequence>
    <xs:attribute name="npes" use="required" type="xs:string"/>
    <xs:attribute name="ocean_layout" type="xs:string"/>
    <xs:attribute name="overrideParams" type="xs:string"/>
    <xs:attribute name="runTime" type="xs:string"/>
    <xs:attribute name="runtime" type="xs:string"/>
    <xs:attribute name="simTime" use="required" type="xs:string"/>
    <xs:attribute name="units" use="required" type="xs:string"/>
  </xs:complexType>
</xs:element>
```

Element segment

Namespace	No namespace
Annotations	Runs are broken into segments because running a full production run would take too many system resources (notably, wall clock time). Segments define their own simulation time (and units), as well as their own run time. The run time defined in the production tag will be used over the run time defined in the segment tag.
Diagram	
Properties	content: complex
Used by	Element production

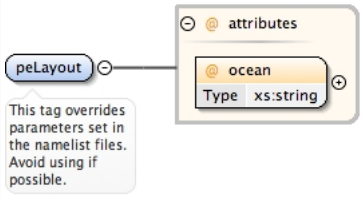
Attributes

QName	Type	Fixed	Default	Use
runTime	xs:string			required
simTime	xs:integer			required
units	xs:string			required

Source

```
<xs:element name="segment">
  <xs:annotation>
    <xs:documentation>Runs are broken into segments because running a full production run would take
 too many system resources (notably, wall clock time). Segments define their own simulation time
 (and units), as well as their own run time. The run time defined in the production tag will be used
 over the run time defined in the segment tag.</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:attribute name="runTime" use="required" type="xs:string"/>
    <xs:attribute name="simTime" use="required" type="xs:integer"/>
    <xs:attribute name="units" use="required" type="xs:string"/>
  </xs:complexType>
</xs:element>
```

Element peLayout

Namespace	No namespace
Annotations	This tag overrides parameters set in the namelist files. Avoid using if possible.
Diagram	
Properties	content: complex
Used by	Element production

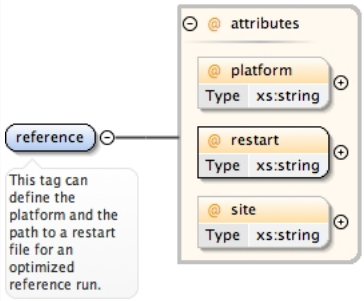
Attributes

QName	Type	Fixed	Default	Use
ocean	xs:string			required

Source

```
<xs:element name="peLayout">
  <xs:annotation>
    <xs:documentation>This tag overrides parameters set in the namelist files. Avoid using if
 possible.</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:attribute name="ocean" use="required" type="xs:string"/>
  </xs:complexType>
</xs:element>
```

Element `reference`

Namespace	No namespace
Annotations	This tag can define the platform and the path to a restart file for an optimized reference run.
Diagram	
Properties	content: complex
Used by	Element runtime

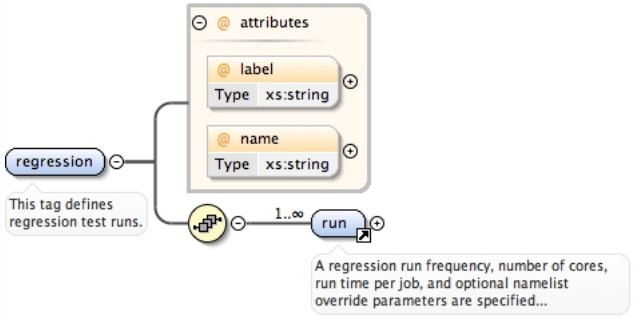
Attributes

QName	Type	Fixed	Default	Use
platform	xs:string			optional
restart	xs:string			required
site	xs:string			optional

Source

```
<xs:element name="reference">
  <xs:annotation>
    <xs:documentation>This tag can define the platform and the path to a restart file for an
 optimized reference run.</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:attribute name="platform" type="xs:string"/>
    <xs:attribute name="restart" use="required" type="xs:string"/>
    <xs:attribute name="site" type="xs:string"/>
  </xs:complexType>
</xs:element>
```

Element `regression`

Namespace	No namespace
Annotations	This tag defines regression test runs.
Diagram	
Properties	content: complex
Used by	Element runtime
Model	run+
Children	run

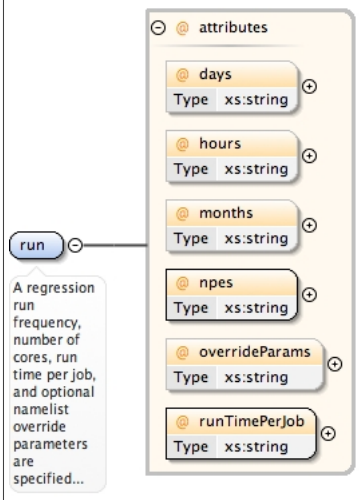
Instance	`<regression label="" name="">`
	`  <run days="" hours="" months="" npes="" overrideParams="" runTimePerJob="">{1,unbounded}</run>`
	`</regression>`

Attributes

QName	Type	Fixed	Default	Use
label	xs:string			optional
name	xs:string			optional

Source	<xs:element name="regression"> <xs:annotation> <xs:documentation>This tag defines regression test runs.</xs:documentation> </xs:annotation> <xs:complexType> <xs:sequence> <xs:element maxOccurs="unbounded" ref="run"/> </xs:sequence> <xs:attribute name="label" type="xs:string"/> <xs:attribute name="name" type="xs:string"/> </xs:complexType> </xs:element>

Element run

Namespace	No namespace
Annotations	A regression run frequency, number of cores, run time per job, and optional namelist override parameters are specified in this tag.
Diagram	
Properties	content: complex
Used by	Element regression

Attributes

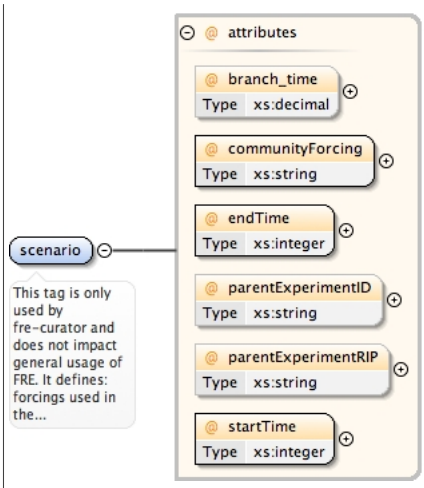
QName	Type	Fixed	Default	Use
days	xs:string			optional
hours	xs:string			optional
months	xs:string			optional
npes	xs:string			required
overrideParams	xs:string			optional
runTimePerJob	xs:string			required

Source

```
<xs:element name="run">
  <xs:annotation>
    <xs:documentation>A regression run frequency, number of cores, run time per job, and optional
 namelist override parameters are specified in this tag.</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:attribute name="days" type="xs:string"/>
    <xs:attribute name="hours" type="xs:string"/>
    <xs:attribute name="months" type="xs:string"/>
    <xs:attribute name="npes" use="required" type="xs:string"/>
    <xs:attribute name="overrideParams" type="xs:string"/>
    <xs:attribute name="runTimePerJob" use="required" type="xs:string"/>
  </xs:complexType>
</xs:element>
```

Element scenario

Namespace	No namespace
Annotations	This tag is only used by fre-curator and does not impact general usage of FRE. It defines: forcings used in the simulation, the start and end time of the simulation, and parent experiment information (including name, ensemble member values, and the branch time).

Diagram	
Properties	content: `complex` mixed: `true`
Used by	Element experiment
Model	

Attributes

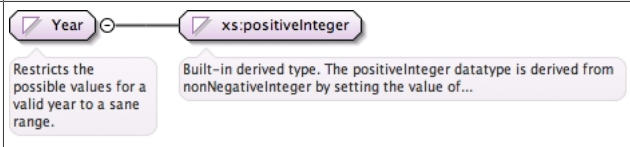
QName	Type	Fixed	Default	Use
branch_time	xs:decimal			optional
communityForcing	xs:string			required
endTime	xs:integer			required
parentExperimentID	xs:string			optional
parentExperimentRIP	xs:string			optional
startTime	xs:integer			required

Source

```
<xs:element name="scenario">
  <xs:annotation>
    <xs:documentation>This tag is only used by fre-curator and does not impact general usage of
 FRE. It defines: forcings used in the simulation, the start and end time of the simulation, and
 parent experiment information (including name, ensemble member values, and the branch time).</
xs:documentation>
  </xs:annotation>
  <xs:complexType mixed="true">
    <xs:attribute name="branch_time" type="xs:decimal"/>
    <xs:attribute name="communityForcing" use="required" type="xs:string"/>
    <xs:attribute name="endTime" use="required" type="xs:integer"/>
    <xs:attribute name="parentExperimentID" type="xs:string"/>
    <xs:attribute name="parentExperimentRIP" type="xs:string"/>
    <xs:attribute name="startTime" use="required" type="xs:integer"/>
  </xs:complexType>
</xs:element>
```

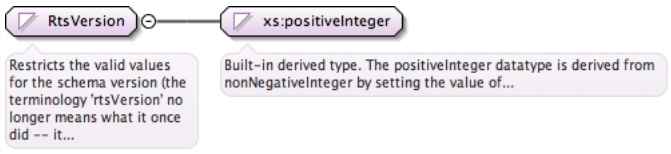
Simple Type(s)

Simple Type `Year`

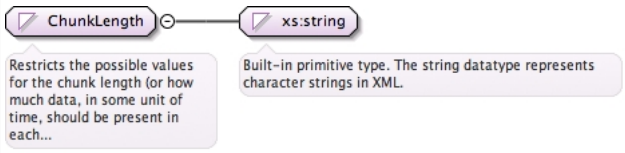
Namespace	No namespace
Annotations	`Restricts the possible values for a valid year to a sane range.`
Diagram	
Type	restriction of xs:positiveInteger
Facets	maxInclusive `9999` minInclusive `0001`
Used by	Attributes analysis/@endYear, analysis/@startYear
Source	`<xs:simpleType name="Year">`

```
  <xs:annotation>
    <xs:documentation>Restricts the possible values for a valid year to a sane range.</
xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:positiveInteger">
    <xs:minInclusive value="0001"/>
    <xs:maxInclusive value="9999"/>
  </xs:restriction>
</xs:simpleType>
```

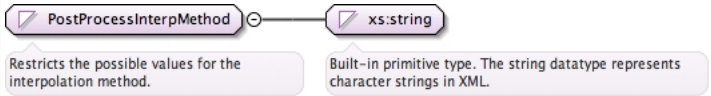
Simple Type `RtsVersion`

Namespace	No namespace
Annotations	Restricts the valid values for the schema version (the terminology 'rtsVersion' no longer means what it once did -- it is now simply the schema version).
Diagram	
Type	restriction of xs:positiveInteger
Facets	maxInclusive 4 minInclusive 1
Used by	Attribute experimentSuite/@rtsVersion
Source	<xs:simpleType name="RtsVersion"> <xs:annotation> <xs:documentation>Restricts the valid values for the schema version (the terminology 'rtsVersion' no longer means what it once did -- it is now simply the schema version).</xs:documentation> </xs:annotation> <xs:restriction base="xs:positiveInteger"> <xs:minInclusive value="1"/> <xs:maxInclusive value="4"/> </xs:restriction> </xs:simpleType>

Simple Type `ChunkLength`

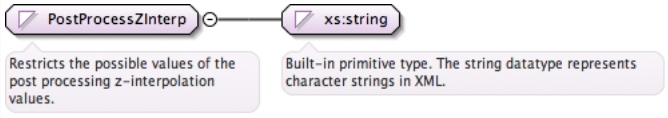
Namespace	No namespace
Annotations	Restricts the possible values for the chunk length (or how much data, in some unit of time, should be present in each output file).
Diagram	
Type	restriction of xs:string
Facets	pattern [0-9]+yr
Source	<xs:simpleType name="ChunkLength"> <xs:annotation> <xs:documentation>Restricts the possible values for the chunk length (or how much data, in some unit of time, should be present in each output file).</xs:documentation> </xs:annotation> <xs:restriction base="xs:string"> <xs:pattern value="[0-9]+yr"/> </xs:restriction> </xs:simpleType>

Simple Type `PostProcessInterpMethod`

Namespace	No namespace
Annotations	Restricts the possible values for the interpolation method.
Diagram	

Type	restriction of xs:string
Facets	enumeration conserve_order1 enumeration conserve_order2
Source	<xs:simpleType name="PostProcessInterpMethod"> <xs:annotation> <xs:documentation>Restricts the possible values for the interpolation method.</xs:documentation> </xs:annotation> <xs:restriction base="xs:string"> <xs:enumeration value="conserve_order1"/> <xs:enumeration value="conserve_order2"/> </xs:restriction> </xs:simpleType>

Simple Type PostProcessZInterp

Namespace	No namespace
Annotations	Restricts the possible values of the post processing z-interpolation values.
Diagram	
Type	restriction of xs:string
Facets	enumeration ncep enumeration am3 enumeration hs20 enumeration era40 enumeration narcaap enumeration zgrid
Source	<xs:simpleType name="PostProcessZInterp"> <xs:annotation> <xs:documentation>Restricts the possible values of the post processing z-interpolation values.</xs:documentation> </xs:annotation> <xs:restriction base="xs:string"> <xs:enumeration value="ncep"/> <xs:enumeration value="am3"/> <xs:enumeration value="hs20"/> <xs:enumeration value="era40"/> <xs:enumeration value="narcaap"/> <xs:enumeration value="zgrid"/> </xs:restriction> </xs:simpleType>

Attribute(s)

Attribute xi:include / @href

Namespace	No namespace
Used by	Element xi:include
Source	<xs:attribute name="href"/>

Attribute xi:include / @xpointer

Namespace	No namespace
Used by	Element xi:include
Source	<xs:attribute name="xpointer"/>

Attribute property / @name

Namespace	No namespace
Type	xs:string

Properties	use:	required
Used by	Element	property
Source	<xs:attribute name="name" use="required" type="xs:string"/>	

Attribute property / @value

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

Attribute csh / @type

Namespace	No namespace	
Type	xs:string	
Properties	content:	simple
Used by	Element	csh
Source	<xs:attribute name="type" type="xs:string"/>	

Attribute directory / @stem

Namespace	No namespace	
Type	xs:string	
Properties	content:	simple
Used by	Element	directory
Source	<xs:attribute name="stem" type="xs:string"/>	

Attribute mkmfTemplate / @file

Namespace	No namespace	
Type	xs:string	
Properties	use:	required
Used by	Element	mkmfTemplate
Source	<xs:attribute name="file" use="required" type="xs:string"/>	

Attribute platform / @name

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

Attribute user / @login

Namespace	No namespace	
Type	xs:string	
Properties	use:	required
Used by	Element	user
Source	<xs:attribute name="login" use="required" type="xs:string"/>	

Attribute `user / @name`

Namespace	No namespace
Type	xs:string
Properties	use: `required`
Used by	Element user
Source	`<xs:attribute name="name" use="required" type="xs:string"/>`

Attribute `user / @email`

Namespace	No namespace
Type	xs:string
Properties	use: `required`
Used by	Element user
Source	`<xs:attribute name="email" use="required" type="xs:string"/>`

Attribute `institution / @name`

Namespace	No namespace
Type	xs:string
Properties	use: `required`
Used by	Element institution
Source	`<xs:attribute name="name" use="required" type="xs:string"/>`

Attribute `institution / @address`

Namespace	No namespace
Type	xs:string
Properties	use: `required`
Used by	Element institution
Source	`<xs:attribute name="address" use="required" type="xs:string"/>`

Attribute `institution / @url`

Namespace	No namespace
Type	xs:string
Properties	use: `required`
Used by	Element institution
Source	`<xs:attribute name="url" use="required" type="xs:string"/>`

Attribute `experiment / component / description / @communityGrid`

Namespace	No namespace
Type	xs:string
Properties	content: `simple`
Used by	Element experiment/component/description
Source	`<xs:attribute name="communityGrid" type="xs:string"/>`

Attribute `experiment / component / description / @communityName`

Namespace	No namespace

Type	xs:string
Properties	content: simple
Used by	Element experiment/component/description
Source	<xs:attribute name="communityName" type="xs:string"/>

Attribute experiment / component / description / @communityVersion

Namespace	No namespace
Type	xs:string
Properties	content: simple
Used by	Element experiment/component/description
Source	<xs:attribute name="communityVersion" type="xs:string"/>

Attribute experiment / component / description / @domainName

Namespace	No namespace
Type	xs:string
Properties	content: simple
Used by	Element experiment/component/description
Source	<xs:attribute name="domainName" type="xs:string"/>

Attribute codeBase / @version

Namespace	No namespace
Type	xs:string
Properties	use: required
Used by	Element codeBase
Source	<xs:attribute name="version" use="required" type="xs:string"/>

Attribute source / @versionControl

Namespace	No namespace
Type	xs:string
Properties	content: simple
Used by	Element source
Source	<xs:attribute name="versionControl" type="xs:string"/>

Attribute source / @versonControl

Namespace	No namespace
Type	xs:string
Properties	content: simple
Used by	Element source
Source	<xs:attribute name="versonControl" type="xs:string"/>

Attribute compile / @target

Namespace	No namespace
Type	xs:string
Properties	content: simple
Used by	Element compile

Source	`<xs:attribute name="target" type="xs:string"/>`

Attribute `library / @headerDir`

Namespace	No namespace	
Type	xs:string	
Properties	use:	`required`
Used by	Element	library
Source	`<xs:attribute name="headerDir" use="required" type="xs:string"/>`	

Attribute `library / @path`

Namespace	No namespace	
Type	xs:string	
Properties	content:	`simple`
Used by	Element	library
Source	`<xs:attribute name="path" type="xs:string"/>`	

Attribute `experiment / component / @includeDir`

Namespace	No namespace	
Type	xs:string	
Properties	content:	`simple`
Used by	Element	experiment/component
Source	`<xs:attribute name="includeDir" type="xs:string"/>`	

Attribute `experiment / component / @name`

Namespace	No namespace	
Type	xs:string	
Properties	content:	`simple`
Used by	Element	experiment/component
Source	`<xs:attribute name="name" type="xs:string"/>`	

Attribute `experiment / component / @paths`

Namespace	No namespace	
Type	xs:string	
Properties	content:	`simple`
Used by	Element	experiment/component
Source	`<xs:attribute name="paths" type="xs:string"/>`	

Attribute `experiment / component / @requires`

Namespace	No namespace	
Type	xs:string	
Properties	content:	`simple`
Used by	Element	experiment/component
Source	`<xs:attribute name="requires" type="xs:string"/>`	

Attribute `experiment / description / @communityExperimentID`

Namespace	No namespace

Type	xs:string
Properties	content: simple
Used by	Element experiment/description
Source	<xs:attribute name="communityExperimentID" type="xs:string"/>

Attribute experiment / description / @communityExperimentName

Namespace	No namespace
Type	xs:string
Properties	content: simple
Used by	Element experiment/description
Source	<xs:attribute name="communityExperimentName" type="xs:string"/>

Attribute experiment / description / @communityModel

Namespace	No namespace
Type	xs:string
Properties	content: simple
Used by	Element experiment/description
Source	<xs:attribute name="communityModel" type="xs:string"/>

Attribute experiment / description / @communityModelID

Namespace	No namespace
Type	xs:string
Properties	content: simple
Used by	Element experiment/description
Source	<xs:attribute name="communityModelID" type="xs:string"/>

Attribute experiment / description / @communityProject

Namespace	No namespace
Type	xs:string
Properties	content: simple
Used by	Element experiment/description
Source	<xs:attribute name="communityProject" type="xs:string"/>

Attribute executable / @file

Namespace	No namespace
Type	xs:string
Properties	use: required
Used by	Element executable
Source	<xs:attribute name="file" use="required" type="xs:string"/>

Attribute initCond / @file

Namespace	No namespace
Type	xs:string
Properties	use: required
Used by	Element initCond

Source	`<xs:attribute name="file" use="required" type="xs:string"/>`

Attribute `gridSpec / @file`

Namespace	No namespace	
Type	xs:string	
Properties	use:	`required`
Used by	Element	gridSpec
Source	`<xs:attribute name="file" use="required" type="xs:string"/>`	

Attribute `dataSource / @platform`

Namespace	No namespace	
Type	xs:string	
Properties	content:	`simple`
Used by	Element	dataSource
Source	`<xs:attribute name="platform" type="xs:string"/>`	

Attribute `dataSource / @site`

Namespace	No namespace	
Type	xs:string	
Properties	content:	`simple`
Used by	Element	dataSource
Source	`<xs:attribute name="site" type="xs:string"/>`	

Attribute `dataFile / @chksum`

Namespace	No namespace	
Type	xs:string	
Properties	content:	`simple`
Used by	Element	dataFile
Source	`<xs:attribute name="chksum" type="xs:string"/>`	

Attribute `dataFile / @label`

Namespace	No namespace	
Type	xs:string	
Properties	use:	`required`
Used by	Element	dataFile
Source	`<xs:attribute name="label" use="required" type="xs:string"/>`	

Attribute `dataFile / @size`

Namespace	No namespace	
Type	xs:string	
Properties	content:	`simple`
Used by	Element	dataFile
Source	`<xs:attribute name="size" type="xs:string"/>`	

Attribute `dataFile / @target`

Namespace	No namespace

Type	xs:string
Properties	content: simple
Used by	Element dataFile
Source	`<xs:attribute name="target" type="xs:string"/>`

Attribute `dataFile / @timestamp`

Namespace	No namespace
Type	xs:string
Properties	content: simple
Used by	Element dataFile
Source	`<xs:attribute name="timestamp" type="xs:string"/>`

Attribute `diagTable / @file`

Namespace	No namespace
Type	xs:string
Properties	content: simple
Used by	Element diagTable
Source	`<xs:attribute name="file" type="xs:string"/>`

Attribute `namelist / @file`

Namespace	No namespace
Type	xs:string
Properties	content: simple
Used by	Element namelist
Source	`<xs:attribute name="file" type="xs:string"/>`

Attribute `namelist / @name`

Namespace	No namespace
Type	xs:string
Properties	content: simple
Used by	Element namelist
Source	`<xs:attribute name="name" type="xs:string"/>`

Attribute `refineDiag / @script`

Namespace	No namespace
Type	xs:string
Properties	use: required
Used by	Element refineDiag
Source	`<xs:attribute name="script" use="required" type="xs:string"/>`

Attribute `analysis / @cumulative`

Namespace	No namespace
Type	xs:string
Properties	content: simple

Used by	Element	analysis
Source	<xs:attribute name="cumulative" type="xs:string"/>	

Attribute analysis / @mode

Namespace	No namespace	
Type	xs:string	
Properties	content:	simple
Used by	Element	analysis
Source	<xs:attribute name="mode" type="xs:string"/>	

Attribute analysis / @momGrid

Namespace	No namespace	
Type	xs:string	
Properties	content:	simple
Used by	Element	analysis
Source	<xs:attribute name="momGrid" type="xs:string"/>	

Attribute analysis / @script

Namespace	No namespace	
Type	xs:string	
Properties	content:	simple
Used by	Element	analysis
Source	<xs:attribute name="script" type="xs:string"/>	

Attribute analysis / @specify1year

Namespace	No namespace	
Type	xs:integer	
Properties	content:	simple
Used by	Element	analysis
Source	<xs:attribute name="specify1year" type="xs:integer"/>	

Attribute analysis / @startYear

Namespace	No namespace	
Type	Year	
Properties	content:	simple
Facets	maxInclusive	9999
	minInclusive	0001
Used by	Element	analysis
Source	<xs:attribute name="startYear" type="Year"/>	

Attribute analysis / @endYear

Namespace	No namespace	
Type	Year	
Properties	content:	simple
Facets	maxInclusive	9999

	minInclusive	0001
Used by	Element	analysis
Source	<xs:attribute name="endYear" type="Year"/>	

Attribute analysis / @switch

Namespace	No namespace	
Type	xs:string	
Properties	content:	simple
Used by	Element	analysis
Source	<xs:attribute name="switch" type="xs:string"/>	

Attribute analysis / @outdir

Namespace	No namespace	
Type	xs:string	
Properties	content:	simple
Used by	Element	analysis
Source	<xs:attribute name="outdir" type="xs:string"/>	

Attribute timeSeries / @chunkLength

Namespace	No namespace	
Type	xs:string	
Properties	use:	required
Used by	Element	timeSeries
Source	<xs:attribute name="chunkLength" use="required" type="xs:string"/>	

Attribute timeSeries / @cumulative

Namespace	No namespace	
Type	xs:string	
Properties	content:	simple
Used by	Element	timeSeries
Source	<xs:attribute name="cumulative" type="xs:string"/>	

Attribute timeSeries / @endYear

Namespace	No namespace	
Type	xs:integer	
Properties	content:	simple
Used by	Element	timeSeries
Source	<xs:attribute name="endYear" type="xs:integer"/>	

Attribute timeSeries / @freq

Namespace	No namespace	
Type	xs:string	
Properties	use:	required
Used by	Element	timeSeries
Source	<xs:attribute name="freq" use="required" type="xs:string"/>	

Attribute `timeSeries / @from`

Namespace	No namespace
Type	xs:string
Properties	content: simple
Used by	Element timeSeries
Source	`<xs:attribute name="from" type="xs:string"/>`

Attribute `timeSeries / @source`

Namespace	No namespace
Type	xs:string
Properties	content: simple
Used by	Element timeSeries
Source	`<xs:attribute name="source" type="xs:string"/>`

Attribute `timeAverage / @calcInterval`

Namespace	No namespace
Type	xs:string
Properties	content: simple
Used by	Element timeAverage
Source	`<xs:attribute name="calcInterval" type="xs:string"/>`

Attribute `timeAverage / @endYear`

Namespace	No namespace
Type	xs:integer
Properties	content: simple
Used by	Element timeAverage
Source	`<xs:attribute name="endYear" type="xs:integer"/>`

Attribute `timeAverage / @from`

Namespace	No namespace
Type	xs:string
Properties	content: simple
Used by	Element timeAverage
Source	`<xs:attribute name="from" type="xs:string"/>`

Attribute `timeAverage / @interval`

Namespace	No namespace
Type	xs:string
Properties	use: required
Used by	Element timeAverage
Source	`<xs:attribute name="interval" use="required" type="xs:string"/>`

Attribute `timeAverage / @source`

Namespace	No namespace
Type	xs:string

Properties	use:	required
Used by	Element	timeAverage
Source	<xs:attribute name="source" use="required" type="xs:string"/>	

Attribute postProcess / component / @cubicToLatLon

Namespace	No namespace	
Type	xs:string	
Properties	content:	simple
Used by	Element	postProcess/component
Source	<xs:attribute name="cubicToLatLon" type="xs:string"/>	

Attribute postProcess / component / @interpMethod

Namespace	No namespace	
Type	xs:string	
Properties	content:	simple
Used by	Element	postProcess/component
Source	<xs:attribute name="interpMethod" type="xs:string"/>	

Attribute postProcess / component / @source

Namespace	No namespace	
Type	xs:string	
Properties	content:	simple
Used by	Element	postProcess/component
Source	<xs:attribute name="source" type="xs:string"/>	

Attribute postProcess / component / @start

Namespace	No namespace	
Type	xs:string	
Properties	content:	simple
Used by	Element	postProcess/component
Source	<xs:attribute name="start" type="xs:string"/>	

Attribute postProcess / component / @type

Namespace	No namespace	
Type	xs:string	
Properties	content:	simple
Used by	Element	postProcess/component
Source	<xs:attribute name="type" type="xs:string"/>	

Attribute postProcess / component / @zInterp

Namespace	No namespace	
Type	xs:string	
Properties	content:	simple
Used by	Element	postProcess/component
Source	<xs:attribute name="zInterp" type="xs:string"/>	

Attribute `postProcess / @combine`

Namespace	No namespace
Type	xs:string
Properties	content: simple
Used by	Element postProcess
Source	`<xs:attribute name="combine" type="xs:string"/>`

Attribute `postProcess / @npes`

Namespace	No namespace
Type	xs:integer
Properties	content: simple
Used by	Element postProcess
Source	`<xs:attribute name="npes" type="xs:integer"/>`

Attribute `realization / @i`

Namespace	No namespace
Type	xs:integer
Properties	use: required
Used by	Element realization
Source	`<xs:attribute name="i" use="required" type="xs:integer"/>`

Attribute `realization / @p`

Namespace	No namespace
Type	xs:integer
Properties	use: required
Used by	Element realization
Source	`<xs:attribute name="p" use="required" type="xs:integer"/>`

Attribute `realization / @r`

Namespace	No namespace
Type	xs:integer
Properties	use: required
Used by	Element realization
Source	`<xs:attribute name="r" use="required" type="xs:integer"/>`

Attribute `segment / @runTime`

Namespace	No namespace
Type	xs:string
Properties	use: required
Used by	Element segment
Source	`<xs:attribute name="runTime" use="required" type="xs:string"/>`

Attribute `segment / @simTime`

Namespace	No namespace
Type	xs:integer

Properties	use:	`required`
Used by	Element	segment
Source	`<xs:attribute name="simTime" use="required" type="xs:integer"/>`	

Attribute `segment / @units`

Namespace	No namespace	
Type	xs:string	
Properties	use:	`required`
Used by	Element	segment
Source	`<xs:attribute name="units" use="required" type="xs:string"/>`	

Attribute `peLayout / @ocean`

Namespace	No namespace	
Type	xs:string	
Properties	use:	`required`
Used by	Element	peLayout
Source	`<xs:attribute name="ocean" use="required" type="xs:string"/>`	

Attribute `production / @npes`

Namespace	No namespace	
Type	xs:string	
Properties	use:	`required`
Used by	Element	production
Source	`<xs:attribute name="npes" use="required" type="xs:string"/>`	

Attribute `production / @ocean_layout`

Namespace	No namespace	
Type	xs:string	
Properties	content:	`simple`
Used by	Element	production
Source	`<xs:attribute name="ocean_layout" type="xs:string"/>`	

Attribute `production / @overrideParams`

Namespace	No namespace	
Type	xs:string	
Properties	content:	`simple`
Used by	Element	production
Source	`<xs:attribute name="overrideParams" type="xs:string"/>`	

Attribute `production / @runTime`

Namespace	No namespace	
Type	xs:string	
Properties	content:	`simple`
Used by	Element	production
Source	`<xs:attribute name="runTime" type="xs:string"/>`	

Attribute `production / @runtime`

Namespace	No namespace
Type	xs:string
Properties	content: simple
Used by	Element production
Source	`<xs:attribute name="runtime" type="xs:string"/>`

Attribute `production / @simTime`

Namespace	No namespace
Type	xs:string
Properties	use: required
Used by	Element production
Source	`<xs:attribute name="simTime" use="required" type="xs:string"/>`

Attribute `production / @units`

Namespace	No namespace
Type	xs:string
Properties	use: required
Used by	Element production
Source	`<xs:attribute name="units" use="required" type="xs:string"/>`

Attribute `reference / @platform`

Namespace	No namespace
Type	xs:string
Properties	content: simple
Used by	Element reference
Source	`<xs:attribute name="platform" type="xs:string"/>`

Attribute `reference / @restart`

Namespace	No namespace
Type	xs:string
Properties	use: required
Used by	Element reference
Source	`<xs:attribute name="restart" use="required" type="xs:string"/>`

Attribute `reference / @site`

Namespace	No namespace
Type	xs:string
Properties	content: simple
Used by	Element reference
Source	`<xs:attribute name="site" type="xs:string"/>`

Attribute `run / @days`

Namespace	No namespace
Type	xs:string

Properties	content:	simple
Used by	Element	run
Source	<xs:attribute name="days" type="xs:string"/>	

Attribute run / @hours

Namespace	No namespace	
Type	xs:string	
Properties	content:	simple
Used by	Element	run
Source	<xs:attribute name="hours" type="xs:string"/>	

Attribute run / @months

Namespace	No namespace	
Type	xs:string	
Properties	content:	simple
Used by	Element	run
Source	<xs:attribute name="months" type="xs:string"/>	

Attribute run / @npes

Namespace	No namespace	
Type	xs:string	
Properties	use:	required
Used by	Element	run
Source	<xs:attribute name="npes" use="required" type="xs:string"/>	

Attribute run / @overrideParams

Namespace	No namespace	
Type	xs:string	
Properties	content:	simple
Used by	Element	run
Source	<xs:attribute name="overrideParams" type="xs:string"/>	

Attribute run / @runTimePerJob

Namespace	No namespace	
Type	xs:string	
Properties	use:	required
Used by	Element	run
Source	<xs:attribute name="runTimePerJob" use="required" type="xs:string"/>	

Attribute regression / @label

Namespace	No namespace	
Type	xs:string	
Properties	content:	simple
Used by	Element	regression
Source	<xs:attribute name="label" type="xs:string"/>	

Attribute regression / @name

Namespace	No namespace
Type	xs:string
Properties	content: simple
Used by	Element regression
Source	<xs:attribute name="name" type="xs:string"/>

Attribute scenario / @branch_time

Namespace	No namespace
Type	xs:decimal
Properties	content: simple
Used by	Element scenario
Source	<xs:attribute name="branch_time" type="xs:decimal"/>

Attribute scenario / @communityForcing

Namespace	No namespace
Type	xs:string
Properties	use: required
Used by	Element scenario
Source	<xs:attribute name="communityForcing" use="required" type="xs:string"/>

Attribute scenario / @endTime

Namespace	No namespace
Type	xs:integer
Properties	use: required
Used by	Element scenario
Source	<xs:attribute name="endTime" use="required" type="xs:integer"/>

Attribute scenario / @parentExperimentID

Namespace	No namespace
Type	xs:string
Properties	content: simple
Used by	Element scenario
Source	<xs:attribute name="parentExperimentID" type="xs:string"/>

Attribute scenario / @parentExperimentRIP

Namespace	No namespace
Type	xs:string
Properties	content: simple
Used by	Element scenario
Source	<xs:attribute name="parentExperimentRIP" type="xs:string"/>

Attribute scenario / @startTime

Namespace	No namespace
Type	xs:integer

Properties	use:	`required`
Used by	Element	scenario
Source	`<xs:attribute name="startTime" use="required" type="xs:integer"/>`	

Attribute `experiment / @inherit`

Namespace	No namespace	
Type	xs:string	
Properties	content:	`simple`
Used by	Element	experiment
Source	`<xs:attribute name="inherit" type="xs:string"/>`	

Attribute `experiment / @name`

Namespace	No namespace	
Type	xs:string	
Properties	use:	`required`
Used by	Element	experiment
Source	`<xs:attribute name="name" use="required" type="xs:string"/>`	

Attribute `experimentSuite / @name`

Namespace	No namespace	
Type	xs:string	
Properties	content:	`simple`
Used by	Element	experimentSuite
Source	`<xs:attribute name="name" type="xs:string"/>`	

Attribute `experimentSuite / @rtsVersion`

Namespace	No namespace	
Type	RtsVersion	
Properties	use:	`required`
Facets	maxInclusive	`4`
	minInclusive	`1`
Used by	Element	experimentSuite
Source	`<xs:attribute name="rtsVersion" use="required" type="RtsVersion"/>`	

Namespace: "http://www.w3.org/2001/XInclude"

Schema(s)

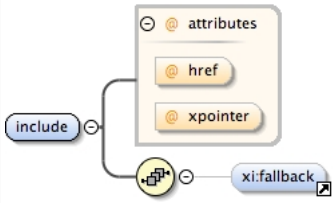
Imported schema `xi.xsd`

Namespace	http://www.w3.org/2001/XInclude	
Properties	attribute form default:	`unqualified`
	element form default:	`qualified`

Element(s)

Element `xi:include`

Namespace	http://www.w3.org/2001/XInclude

Diagram	
Properties	content: complex
Used by	Elements experimentSuite, platform, timeAverage, timeSeries
Model	xi:fallback{0,1}
Children	xi:fallback

Instance	`<xi:include href="" xpointer="" xmlns:xi="http://www.w3.org/2001/XInclude">`
	`  <xi:fallback>{0,1}</xi:fallback>`
	`</xi:include>`

Attributes

QName	Type	Fixed	Default	Use
href				optional
xpointer				optional

Source

```
<xs:element name="include">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" ref="xi:fallback"/>
    </xs:sequence>
    <xs:attribute name="href"/>
    <xs:attribute name="xpointer"/>
  </xs:complexType>
</xs:element>
```

Element `xi:fallback`

Namespace	http://www.w3.org/2001/XInclude
Diagram	
Properties	content: complex
Used by	Element xi:include

Source

```
<xs:element name="fallback">
  <xs:complexType/>
</xs:element>
```

Namespace: "http://www.w3.org/XML/1998/namespace"

Schema(s)

Imported schema `xml.xsd`

Namespace	http://www.w3.org/XML/1998/namespace
Properties	attribute form default: unqualified element form default: qualified

Attribute(s)

Attribute `@xml:base`

Namespace	http://www.w3.org/XML/1998/namespace
Used by	Element analysis

Source

```
<xs:attribute name="base"/>
```