Schema documentation for the Published Interface

Contents

Schema fileformats.xsd

schema location: D:\nffs\Design\System Implementation Specification\Published Interface\XSD files Published Interface 2.3\fileformats.xsd
targetNamespace: **http://www.wldelft.nl/fews/PI**

schema location: D:\nffs\Design\System Implementation Specification\Published Interface\XSD files Published Interface 2.3\pi_branches.xsd
targetNamespace: **http://www.wldelft.nl/fews/PI**

Elements	Complex types
Branches	BranchComplexType
	BranchesComplexType
	NodePointComplexType

schema location: D:\nffs\Design\System Implementation Specification\Published Interface\XSD files Published Interface 2.3\pi_cells.xsd
targetNamespace: **http://www.wldelft.nl/fews/PI**

Elements	Complex types
Cells	CellPtComplexType
	CellsComplexType

schema location: D:\nffs\Design\System Implementation Specification\Published Interface\XSD files Published Interface 2.3\pi_crosssections.xsd
targetNamespace: **http://www.wldelft.nl/fews/PI**

Elements	Complex types
CrossSections	CrossSectionComplexType
	CrossSectionsComplexType
	CrossSectionXdataComplexType

schema location: D:\nffs\Design\System Implementation Specification\Published Interface\XSD files Published Interface 2.3\pi_diag.xsd
targetNamespace: **http://www.wldelft.nl/fews/PI**

Elements	Complex types
Diag	DiagComplexType
	LineComplexType

schema location: D:\nffs\Design\System Implementation Specification\Published Interface\XSD files Published Interface 2.3\pi_latinputs.xsd
targetNamespace: **http://www.wldelft.nl/fews/PI**

Elements	Complex types
LatInputs	**LatInputComplexType**
	LatInputsComplexType

schema location: **D:\nffs\Design\System Implementation Specification\Published Interface\XSD files Published Interface 2.3\pi_locations.xsd**
targetNamespace: **http://www.wldelft.nl/fews/PI**

Elements	Complex types
Locations	**LocationComplexType**
	LocationsComplexType

schema location: **D:\nffs\Design\System Implementation Specification\Published Interface\XSD files Published Interface 2.3\pi_mapstacks.xsd**
targetNamespace: **http://www.wldelft.nl/fews/PI**

Elements	Complex types
MapStacks	**FileComplexType**
	MapStackComplexType
	MapStacksComplexType

schema location: **D:\nffs\Design\System Implementation Specification\Published Interface\XSD files Published Interface 2.3\pi_parameters.xsd**
targetNamespace: **http://www.wldelft.nl/fews/PI**

Elements	Complex types
Parameters	**ParameterComplexType**
	ParameterDataComplexType
	ParametersComplexType

schema location: **D:\nffs\Design\System Implementation Specification\Published Interface\XSD files Published Interface 2.3\pi_polygons.xsd**
targetNamespace: **http://www.wldelft.nl/fews/PI**

Elements	Complex types
Polygons	**PolygonCentroidComplexType**
	PolygonComplexType
	PolygonPtComplexType
	PolygonsComplexType

schema location: **D:\nffs\Design\System Implementation Specification\Published Interface\XSD files Published Interface 2.3\pi_profiles.xsd**
targetNamespace: **http://www.wldelft.nl/fews/PI**

Elements	Complex types
Profiles	**ProfileComplexType**

ProfilesComplexType

ProfileXdataComplexType

schema location: D:\nffs\Design\System Implementation Specification\Published Interface\XSD files Published Interface 2.3\pi_state.xsd
targetNamespace: **http://www.wldelft.nl/fews/PI**

Elements	Complex types
State	StateComplexType
	StateReadWriteDirectoryComplexType

schema location: D:\nffs\Design\System Implementation Specification\Published Interface\XSD files Published Interface 2.3\pi_table.xsd
targetNamespace: **http://www.wldelft.nl/fews/PI**

Elements	Complex types
Table	DataComplexType
	InfoComplexType
	RelationComplexType
	TableComplexType

schema location: D:\nffs\Design\System Implementation Specification\Published Interface\XSD files Published Interface 2.3\pi_timeseries.xsd
targetNamespace: **http://www.wldelft.nl/fews/PI**

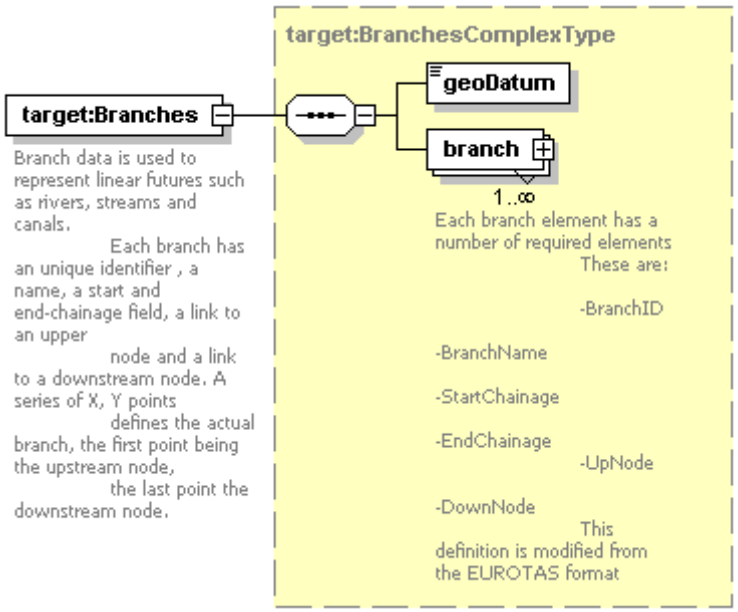
Elements	Complex types
TimeSeries	EventComplexType
	HeaderComplexType
	TimeSerieComplexType
	TimeSeriesComplexType

schema location: D:\nffs\Design\System Implementation Specification\Published Interface\XSD files Published Interface 2.3\pi_sharedtypes.xsd
targetNamespace: **http://www.wldelft.nl/fews/PI**

Complex types	Simple types
DateTimeComplexType	commentString
TimeStepComplexType	GeoDatumEnumStringType
	idString
	LocationIdSimpleType
	nameString
	ParameterSimpleType
	timeStepUnitEnumStringType
	TimeZoneSimpleType
	versionString

element fews:Branches

diagram



namespace http://www.wldelft.nl/fews/PI

type **fews:BranchesComplexType**

children **geoDatum** **branch**

attributes

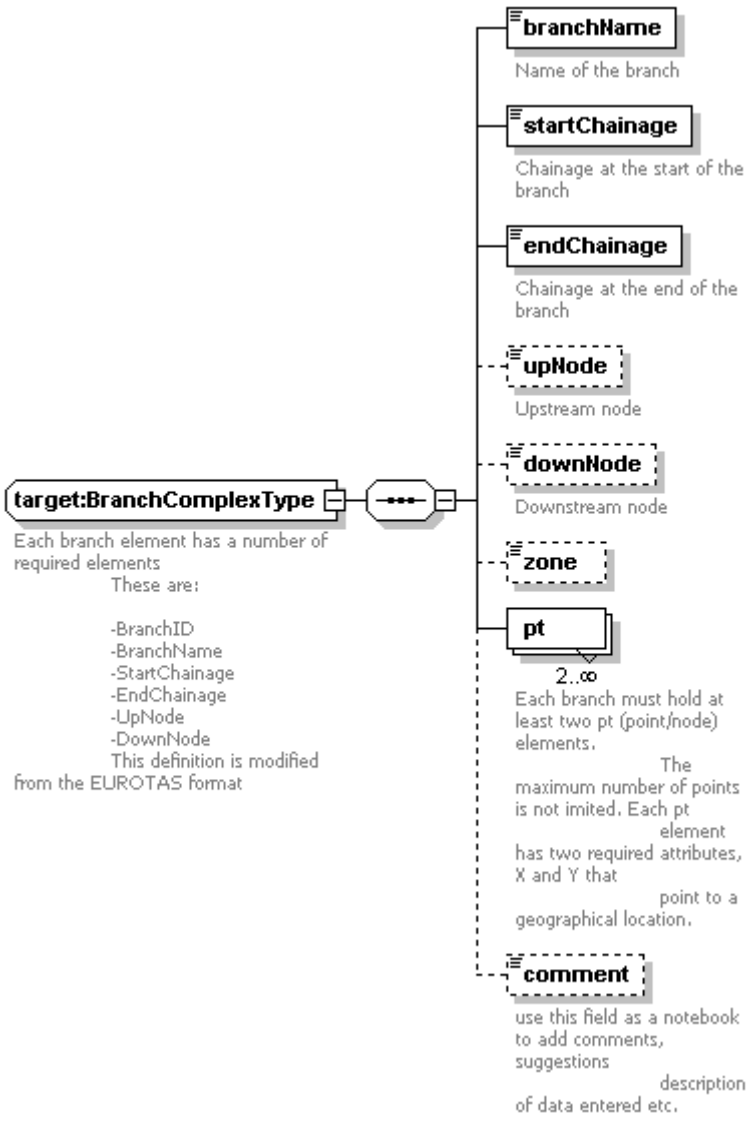
Name	Type	Use	Default	Fixed

source

```
<element name="Branches" type="fews:BranchesComplexType">
 <annotation>
  <documentation>Branch data is used to represent linear futures such as rivers, streams and canals.
        Each branch has an unique identifier , a name, a start and end-chainage field, a link to an upper
        node and a link to a downstream node. A series of X, Y points
        defines the actual branch, the first point being the upstream node,
        the last point the downstream node. </documentation>
 </annotation>
</element>
```

complexType **fews:BranchComplexType**

diagram



namespace http://www.wldelft.nl/fews/PI

children **branchName** **startChainage** **endChainage** **upNode** **downNode** **zone** **pt** **comment**

used by element **fews:BranchesComplexType/branch**

source

```
<complexType name="BranchComplexType">
 <annotation>
  <documentation>Each branch element has a number of required elements
        These are:

        -BranchID
        -BranchName
        -StartChainage
        -EndChainage
        -UpNode
        -DownNode
        This definition is modified from the EUROTAS format</documentation>
 </annotation>
 <sequence>
  <element name="branchName" type="fews:nameString">
   <annotation>
    <documentation>Name of the branch</documentation>
   </annotation>
  </element>
```

```
<element name="startChainage" type="double">
 <annotation>
  <documentation>Chainage at the start of the branch</documentation>
 </annotation>
</element>
<element name="endChainage" type="double">
 <annotation>
  <documentation>Chainage at the end of the branch</documentation>
 </annotation>
</element>
<element name="upNode" type="int" minOccurs="0">
 <annotation>
  <documentation>Upstream node</documentation>
 </annotation>
</element>
<element name="downNode" type="int" minOccurs="0">
 <annotation>
  <documentation>Downstream node</documentation>
 </annotation>
</element>
<element name="zone" type="string" minOccurs="0"/>
<element name="pt" type="fews:NodePointComplexType" minOccurs="2" maxOccurs="unbounded">
 <annotation>
  <documentation>Each branch must hold at least two pt (point/node) elements.
            The maximum number of points is not imited. Each pt
            element has two required attributes, X and Y that
            point to a geographical location.</documentation>
 </annotation>
</element>
<element name="comment" type="fews:commentString" minOccurs="0">
 <annotation>
  <documentation>use this field as a notebook to add comments, suggestions
            description of data entered etc.</documentation>
 </annotation>
</element>
</sequence>
</complexType>
```

element **fews:BranchComplexType/branchName**

diagram

namespace http://www.wldelft.nl/fews/PI

type **fews:nameString**

source

```
<element name="branchName" type="fews:nameString">
 <annotation>
  <documentation>Name of the branch</documentation>
 </annotation>
</element>
```

element **fews:BranchComplexType/startChainage**

diagram

namespace http://www.wldelft.nl/fews/PI

type **double**

source

```
<element name="startChainage" type="double">
 <annotation>
  <documentation>Chainage at the start of the branch</documentation>
 </annotation>
</element>
```

element **fews:BranchComplexType/endChainage**

diagram

namespace http://www.wldelft.nl/fews/PI

type **double**

source
```
<element name="endChainage" type="double">
 <annotation>
  <documentation>Chainage at the end of the branch</documentation>
 </annotation>
</element>
```

element **fews:BranchComplexType/upNode**

diagram

namespace http://www.wldelft.nl/fews/PI

type **int**

source
```
<element name="upNode" type="int" minOccurs="0">
 <annotation>
  <documentation>Upstream node</documentation>
 </annotation>
</element>
```

element **fews:BranchComplexType/downNode**

diagram

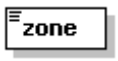
namespace http://www.wldelft.nl/fews/PI

type **int**

source
```
<element name="downNode" type="int" minOccurs="0">
 <annotation>
  <documentation>Downstream node</documentation>
 </annotation>
</element>
```

element **fews:BranchComplexType/zone**

diagram



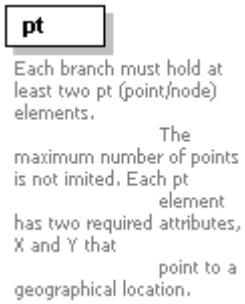
namespace http://www.wldelft.nl/fews/PI

type **string**

source
```
<element name="zone" type="string" minOccurs="0"/>
```

element **fews:BranchComplexType/pt**

diagram



namespace http://www.wldelft.nl/fews/PI

type **fews:NodePointComplexType**

attributes

Name	Type	Use	Default	Fixed
x	double	required		
y	double	required		
chainage	double	required		

source

```
<element name="pt" type="fews:NodePointComplexType" minOccurs="2" maxOccurs="unbounded">
 <annotation>
  <documentation>Each branch must hold at least two pt (point/node) elements.
                 The maximum number of points is not imited. Each pt
                 element has two required attributes, X and Y that
                 point to a geographical location.</documentation>
 </annotation>
</element>
```

element **fews:BranchComplexType/comment**

diagram

namespace http://www.wldelft.nl/fews/PI

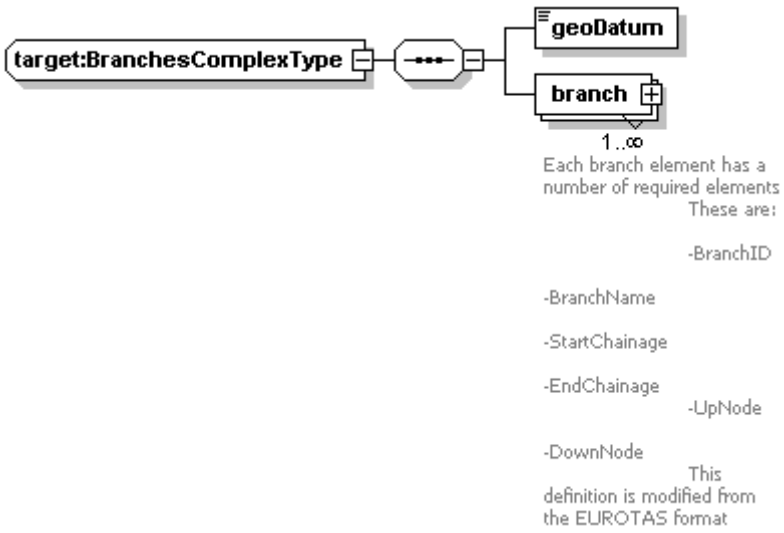
type **fews:commentString**

source

```
<element name="comment" type="fews:commentString" minOccurs="0">
 <annotation>
  <documentation>use this field as a notebook to add comments, suggestions
                 description of data entered etc.</documentation>
 </annotation>
</element>
```

complexType **fews:BranchesComplexType**

diagram



namespace http://www.wldelft.nl/fews/PI

children **geoDatum** **branch**

used by element **fews:Branches**

attributes

Name	Type	Use	Default	Fixed

source

```
<complexType name="BranchesComplexType">
 <sequence>
  <element name="geoDatum" type="fews:GeoDatumEnumStringType" default="LOCAL"/>
  <element name="branch" maxOccurs="unbounded">
   <annotation>
    <documentation>Each branch element has a number of required elements
                   These are:

                   -BranchID
                   -BranchName
                   -StartChainage
                   -EndChainage
                   -UpNode
                   -DownNode
                   This definition is modified from the EUROTAS format</documentation>
   </annotation>
   <complexType>
    <complexContent>
     <extension base="fews:BranchComplexType">
      <attribute name="branchId" type="fews:idString" use="required"/>
     </extension>
    </complexContent>
   </complexType>
  </element>
 </sequence>
 <attribute name="version" type="fews:versionString" use="required" fixed="1.2"/>
</complexType>
```

element **fews:BranchesComplexType/geoDatum**

diagram

namespace http://www.wldelft.nl/fews/PI

type **fews:GeoDatumEnumStringType**

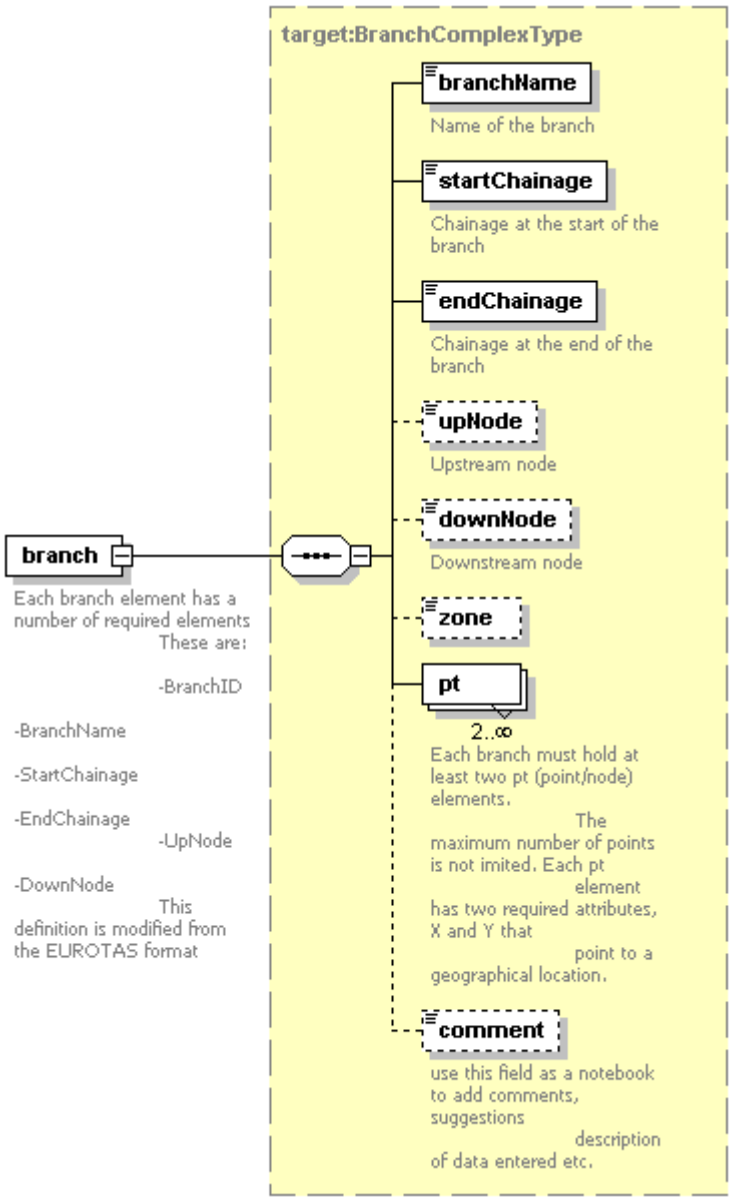
facets

enumeration	WGS-1984
enumeration	Ordnance Survey Great Britain 1936

source <element name="geoDatum" type="fews:GeoDatumEnumStringType" default="LOCAL"/>

element **fews:BranchesComplexType/branch**

diagram



namespace http://www.wldelft.nl/fews/PI

type extension of **fews:BranchComplexType**

children **branchName startChainage endChainage upNode downNode zone pt comment**

attributes

Name	Type	Use	Default	Fixed

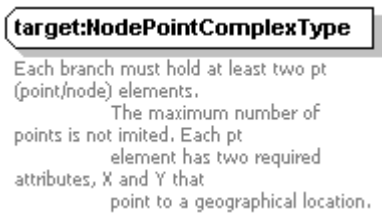
source

```
<element name="branch" maxOccurs="unbounded">
 <annotation>
  <documentation>Each branch element has a number of required elements
                 These are:

                 -BranchID
                 -BranchName
                 -StartChainage
                 -EndChainage
                 -UpNode
                 -DownNode
                 This definition is modified from the EUROTAS format</documentation>
```

```
  </annotation>
  <complexType>
   <complexContent>
    <extension base="fews:BranchComplexType">
     <attribute name="branchId" type="fews:idString" use="required"/>
    </extension>
   </complexContent>
  </complexType>
 </element>
```

complexType **fews:NodePointComplexType**

diagram



namespace http://www.wldelft.nl/fews/PI

used by element **fews:BranchComplexType/pt**

attributes

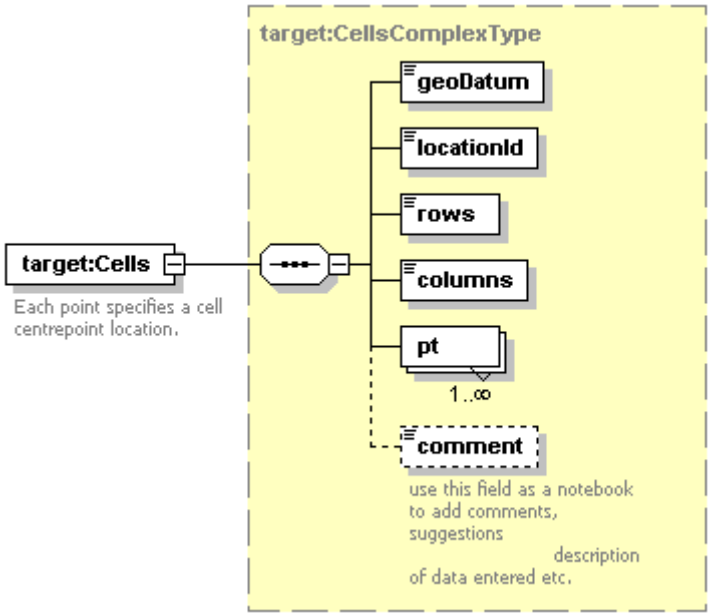
Name	Type	Use	Default	Fixed
x	double	required		
y	double	required		
chainage	double	required		

source

```
<complexType name="NodePointComplexType">
 <annotation>
  <documentation>Each branch must hold at least two pt (point/node) elements.
        The maximum number of points is not imited. Each pt
        element has two required attributes, X and Y that
        point to a geographical location.</documentation>
 </annotation>
 <attribute name="x" type="double" use="required"/>
 <attribute name="y" type="double" use="required"/>
 <attribute name="chainage" type="double" use="required"/>
 <attribute name="label" type="string" use="optional"/>
</complexType>
```

element fews:Cells

diagram



namespace http://www.wldelft.nl/fews/PI

type **fews:CellsComplexType**

children **geoDatum locationId rows columns pt comment**

attributes

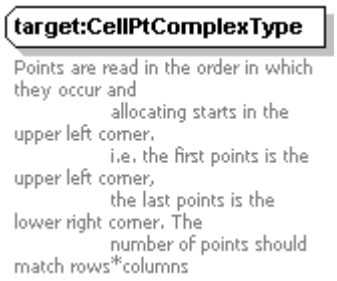
Name	Type	Use	Default	Fixed

source

```
<element name="Cells" type="fews:CellsComplexType">
 <annotation>
  <documentation>Each point specifies a cell centrepoint location.</documentation>
 </annotation>
</element>
```

complexType **fews:CellPtComplexType**

diagram



namespace http://www.wldelft.nl/fews/PI

used by element **fews:CellsComplexType/pt**

attributes

Name	Type	Use	Default	Fixed
x	double	required		
y	double	required		

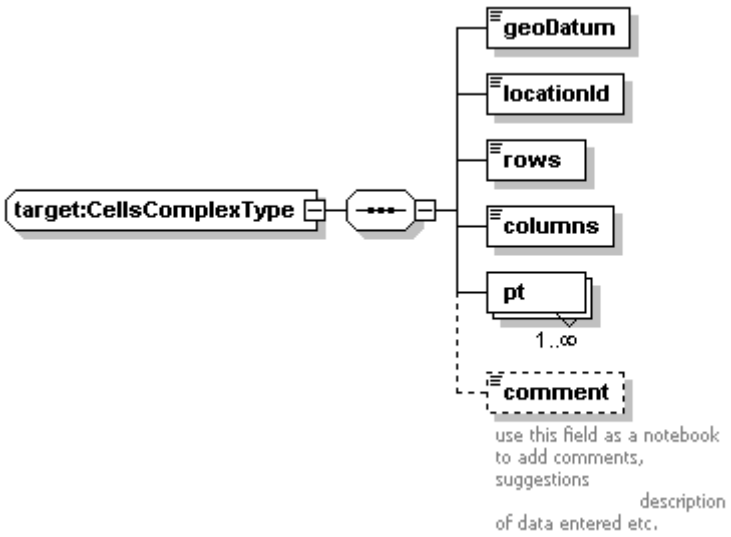
source

```
<complexType name="CellPtComplexType">
 <annotation>
  <documentation>Points are read in the order in which they occur and
        allocating starts in the upper left corner.
        i.e. the first points is the upper left corner,
```

```
            the last points is the lower right corner. The
            number of points should match rows*columns</documentation>
  </annotation>
  <attribute name="x" type="double" use="required"/>
  <attribute name="y" type="double" use="required"/>
  <attribute name="z" type="double" use="required"/>
</complexType>
```

complexType **fews:CellsComplexType**

diagram



namespace http://www.wldelft.nl/fews/PI

children **geoDatum** **locationId** **rows** **columns** **pt** **comment**

used by element **fews:Cells**

attributes

Name	Type	Use	Default	Fixed

source

```
<complexType name="CellsComplexType">
  <sequence>
    <element name="geoDatum" type="fews:GeoDatumEnumStringType" default="LOCAL"/>
    <element name="locationId" type="fews:LocationIdSimpleType"/>
    <element name="rows" type="int"/>
    <element name="columns" type="int"/>
    <element name="pt" type="fews:CellPtComplexType" maxOccurs="unbounded"/>
    <element name="comment" type="fews:commentString" minOccurs="0">
      <annotation>
        <documentation>use this field as a notebook to add comments, suggestions
                       description of data entered etc.</documentation>
      </annotation>
    </element>
  </sequence>
  <attribute name="version" type="fews:versionString" use="required" fixed="1.2"/>
</complexType>
```

element **fews:CellsComplexType/geoDatum**

diagram

namespace http://www.wldelft.nl/fews/PI

type **fews:GeoDatumEnumStringType**

facets

enumeration	WGS-1984
enumeration	Ordnance Survey Great Britain 1936

source

```
<element name="geoDatum" type="fews:GeoDatumEnumStringType" default="LOCAL"/>
```

element **fews:CellsComplexType/locationId**

diagram 

namespace http://www.wldelft.nl/fews/PI

type **fews:LocationIdSimpleType**

source
```
<element name="locationId" type="fews:LocationIdSimpleType"/>
```

element **fews:CellsComplexType/rows**

diagram 

namespace http://www.wldelft.nl/fews/PI

type **int**

source
```
<element name="rows" type="int"/>
```

element **fews:CellsComplexType/columns**

diagram 

namespace http://www.wldelft.nl/fews/PI

type **int**

source
```
<element name="columns" type="int"/>
```

element **fews:CellsComplexType/pt**

diagram 

namespace http://www.wldelft.nl/fews/PI

type **fews:CellPtComplexType**

attributes

Name	Type	Use	Default	Fixed
x	double	required		
y	double	required		

source
```
<element name="pt" type="fews:CellPtComplexType" maxOccurs="unbounded"/>
```

element **fews:CellsComplexType/comment**

diagram 

namespace http://www.wldelft.nl/fews/PI

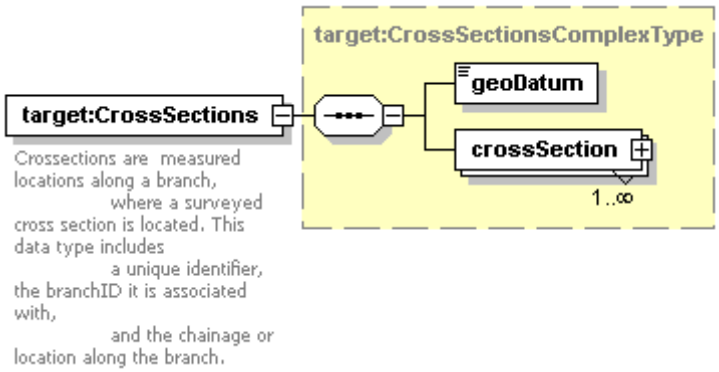
type **fews:commentString**

source
```
<element name="comment" type="fews:commentString" minOccurs="0">
 <annotation>
  <documentation>use this field as a notebook to add comments, suggestions
                 description of data entered etc.</documentation>
 </annotation>
```

```
</element>
```

element fews:CrossSections

diagram



namespace http://www.wldelft.nl/fews/PI

type **fews:CrossSectionsComplexType**

children **geoDatum** **crossSection**

attributes

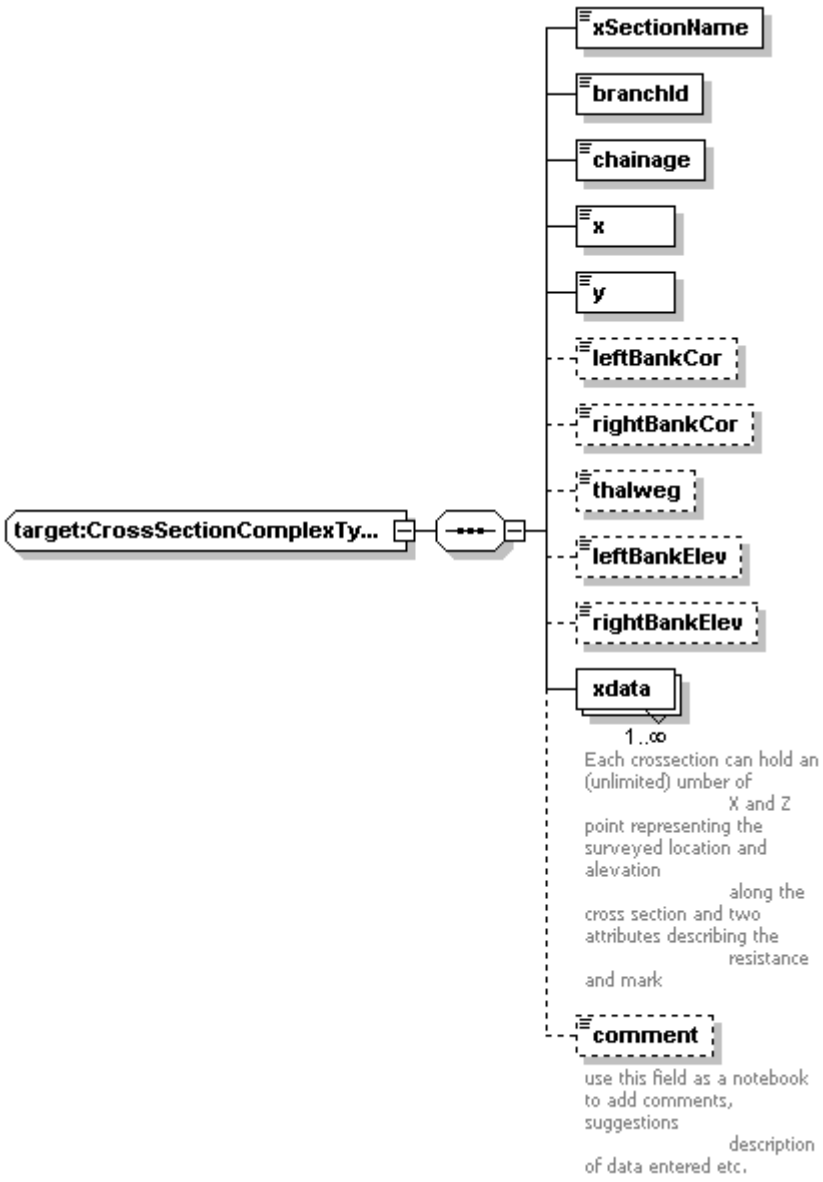
Name	Type	Use	Default	Fixed

source

```
<element name="CrossSections" type="fews:CrossSectionsComplexType">
 <annotation>
  <documentation>Crossections are  measured locations along a branch,
        where a surveyed cross section is located. This data type includes
        a unique identifier, the branchID it is associated with,
        and the chainage or location along the branch.</documentation>
 </annotation>
</element>
```

complexType **fews:CrossSectionComplexType**

diagram



namespace http://www.wldelft.nl/fews/PI

children **xSectionName branchId chainage x y leftBankCor rightBankCor thalweg leftBankElev rightBankElev xdata comment**

used by element **fews:CrossSectionsComplexType/crossSection**

source

```
<complexType name="CrossSectionComplexType">
 <sequence>
  <element name="xSectionName" type="fews:nameString"/>
  <element name="branchId" type="fews:idString"/>
  <element name="chainage" type="double"/>
  <element name="x" type="double"/>
  <element name="y" type="double"/>
  <element name="leftBankCor" type="double" minOccurs="0"/>
  <element name="rightBankCor" type="double" minOccurs="0"/>
  <element name="thalweg" type="double" minOccurs="0"/>
  <element name="leftBankElev" type="double" minOccurs="0"/>
  <element name="rightBankElev" type="double" minOccurs="0"/>
  <element name="xdata" type="fews:CrossSectionXdataComplexType" maxOccurs="unbounded">
   <annotation>
    <documentation>Each crossection can hold an (unlimited) umber of
```

```
                X and Z point representing the surveyed location and alevation
                along the cross section and two attributes describing the
                resistance and mark</documentation>
            </annotation>
          </element>
          <element name="comment" type="fews:commentString" minOccurs="0">
            <annotation>
              <documentation>use this field as a notebook to add comments, suggestions
                description of data entered etc.</documentation>
            </annotation>
          </element>
        </sequence>
      </complexType>
```

element **fews:CrossSectionComplexType/xSectionName**

diagram 

namespace http://www.wldelft.nl/fews/PI

type **fews:nameString**

source
```
<element name="xSectionName" type="fews:nameString"/>
```

element **fews:CrossSectionComplexType/branchId**

diagram 

namespace http://www.wldelft.nl/fews/PI

type **fews:idString**

source
```
<element name="branchId" type="fews:idString"/>
```

element **fews:CrossSectionComplexType/chainage**

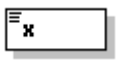
diagram 

namespace http://www.wldelft.nl/fews/PI

type **double**

source
```
<element name="chainage" type="double"/>
```

element **fews:CrossSectionComplexType/x**

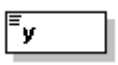
diagram 

namespace http://www.wldelft.nl/fews/PI

type **double**

source
```
<element name="x" type="double"/>
```

element **fews:CrossSectionComplexType/y**

diagram 

namespace http://www.wldelft.nl/fews/PI

type **double**

source <element name="y" type="double"/>

element **fews:CrossSectionComplexType/leftBankCor**

diagram 

namespace http://www.wldelft.nl/fews/PI

type **double**

source <element name="leftBankCor" type="double" minOccurs="0"/>

element **fews:CrossSectionComplexType/rightBankCor**

diagram 

namespace http://www.wldelft.nl/fews/PI

type **double**

source <element name="rightBankCor" type="double" minOccurs="0"/>

element **fews:CrossSectionComplexType/thalweg**

diagram 

namespace http://www.wldelft.nl/fews/PI

type **double**

source <element name="thalweg" type="double" minOccurs="0"/>

element **fews:CrossSectionComplexType/leftBankElev**

diagram 

namespace http://www.wldelft.nl/fews/PI

type **double**

source <element name="leftBankElev" type="double" minOccurs="0"/>

element **fews:CrossSectionComplexType/rightBankElev**

diagram 

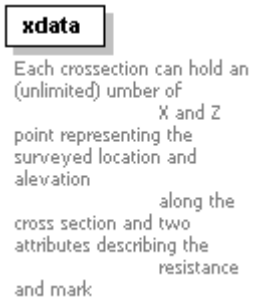
namespace http://www.wldelft.nl/fews/PI

type **double**

source <element name="rightBankElev" type="double" minOccurs="0"/>

element **fews:CrossSectionComplexType/xdata**

diagram



namespace http://www.wldelft.nl/fews/PI

type **fews:CrossSectionXdataComplexType**

attributes

Name	Type	Use	Default	Fixed
csy	double	required		
z	double	required		
roughness	double	optional		
mark	integer	optional		
x	double	optional		

source

```
<element name="xdata" type="fews:CrossSectionXdataComplexType" maxOccurs="unbounded">
 <annotation>
  <documentation>Each crossection can hold an (unlimited) umber of
                 X and Z point representing the surveyed location and alevation
                 along the cross section and two attributes describing the
                 resistance and mark</documentation>
 </annotation>
</element>
```

element **fews:CrossSectionComplexType/comment**

diagram

namespace http://www.wldelft.nl/fews/PI

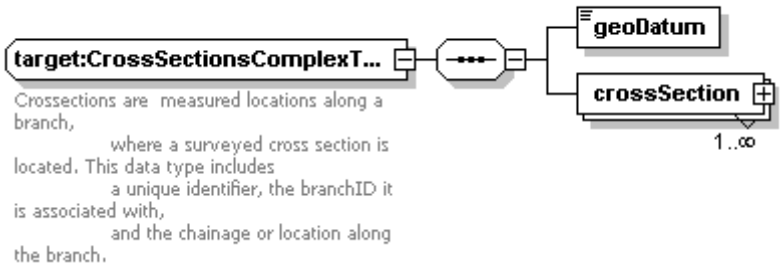
type **fews:commentString**

source

```
<element name="comment" type="fews:commentString" minOccurs="0">
 <annotation>
  <documentation>use this field as a notebook to add comments, suggestions
                 description of data entered etc.</documentation>
 </annotation>
</element>
```

complexType **fews:CrossSectionsComplexType**

diagram



namespace http://www.wldelft.nl/fews/PI

children **geoDatum** **crossSection**

used by element **fews:CrossSections**

attributes

Name	Type	Use	Default	Fixed

source

```
<complexType name="CrossSectionsComplexType">
 <annotation>
  <documentation>Crossections are  measured locations along a branch,
        where a surveyed cross section is located. This data type includes
        a unique identifier, the branchID it is associated with,
        and the chainage or location along the branch.</documentation>
 </annotation>
 <sequence>
  <element name="geoDatum" type="fews:GeoDatumEnumStringType" default="LOCAL"/>
  <element name="crossSection" maxOccurs="unbounded">
   <complexType>
    <complexContent>
     <extension base="fews:CrossSectionComplexType">
      <attribute name="xSectionId" type="fews:idString" use="required"/>
     </extension>
    </complexContent>
   </complexType>
  </element>
 </sequence>
 <attribute name="version" type="fews:versionString" use="required" fixed="1.2"/>
</complexType>
```

element **fews:CrossSectionsComplexType/geoDatum**

diagram

namespace http://www.wldelft.nl/fews/PI

type **fews:GeoDatumEnumStringType**

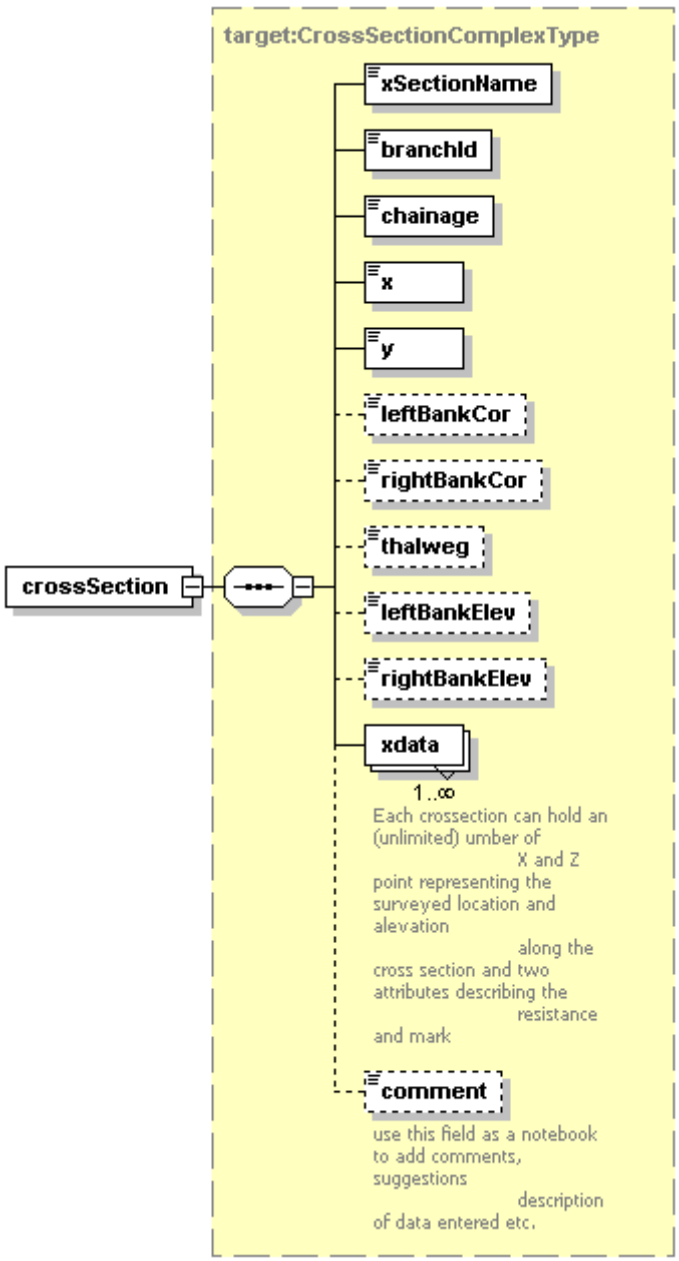
facets
enumeration WGS-1984
enumeration Ordnance Survey Great Britain 1936

source

```
<element name="geoDatum" type="fews:GeoDatumEnumStringType" default="LOCAL"/>
```

element **fews:CrossSectionsComplexType/crossSection**

diagram



namespace http://www.wldelft.nl/fews/PI

type extension of **fews:CrossSectionComplexType**

children **xSectionName branchId chainage x y leftBankCor rightBankCor thalweg leftBankElev rightBankElev xdata comment**

attributes

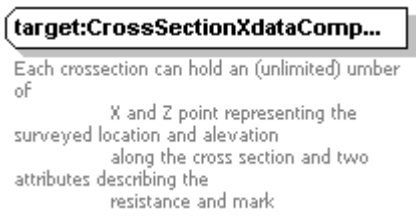
Name	Type	Use	Default	Fixed

source

```
<element name="crossSection" maxOccurs="unbounded">
 <complexType>
  <complexContent>
   <extension base="fews:CrossSectionComplexType">
    <attribute name="xSectionId" type="fews:idString" use="required"/>
   </extension>
  </complexContent>
 </complexType>
</element>
```

complexType **fews:CrossSectionXdataComplexType**

diagram



namespace http://www.wldelft.nl/fews/PI

used by element **fews:CrossSectionComplexType/xdata**

attributes

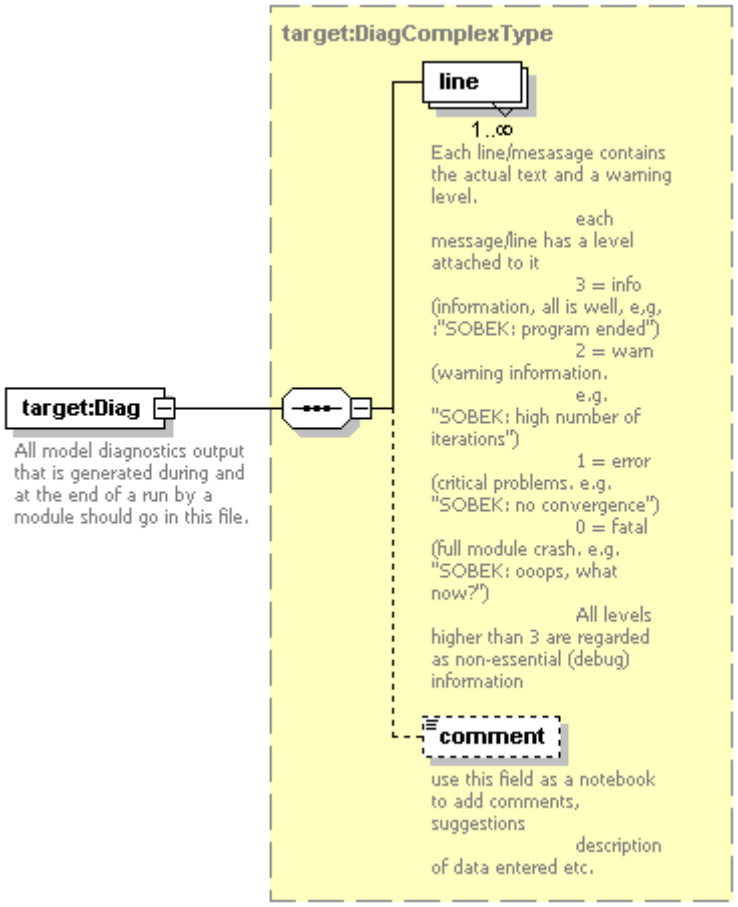
Name	Type	Use	Default	Fixed
csy	double	required		
z	double	required		
roughness	double	optional		
mark	integer	optional		
x	double	optional		

source

```
<complexType name="CrossSectionXdataComplexType">
 <annotation>
  <documentation>Each crossection can hold an (unlimited) umber of
        X and Z point representing the surveyed location and alevation
        along the cross section and two attributes describing the
        resistance and mark</documentation>
 </annotation>
 <attribute name="csy" type="double" use="required">
  <annotation>
   <documentation>cross section point distance co-ordinate</documentation>
  </annotation>
 </attribute>
 <attribute name="z" type="double" use="required">
  <annotation>
   <documentation>cross section point elevation</documentation>
  </annotation>
 </attribute>
 <attribute name="roughness" type="double" use="optional">
  <annotation>
   <documentation>This assigns roughness to each point
        in the cross section.</documentation>
  </annotation>
 </attribute>
 <attribute name="mark" type="integer" use="optional">
  <annotation>
   <documentation>Indicators used to define points of interest
        (i.e. thalweg, left bank)</documentation>
  </annotation>
 </attribute>
 <attribute name="x" type="double" use="optional">
  <annotation>
   <documentation>geographical X co-ordinate</documentation>
  </annotation>
 </attribute>
 <attribute name="y" type="double" use="optional">
  <annotation>
   <documentation>geographical Y co-ordinate</documentation>
  </annotation>
 </attribute>
</complexType>
```

element fews:Diag

diagram



namespace http://www.wldelft.nl/fews/PI

type **fews:DiagComplexType**

children **line** **comment**

attributes

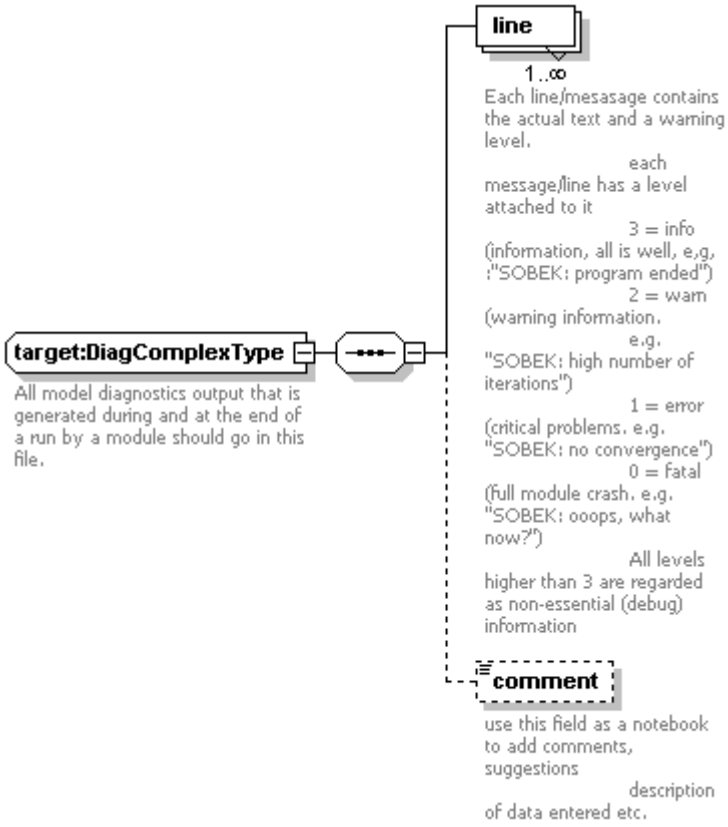
Name	Type	Use	Default	Fixed

source

```
<element name="Diag" type="fews:DiagComplexType">
  <annotation>
    <documentation>All model diagnostics output that is generated during and at the end of a run by a module should go in this file.</documentation>
  </annotation>
</element>
```

complexType **fews:DiagComplexType**

diagram



namespace http://www.wldelft.nl/fews/PI

children **line** **comment**

used by element **fews:Diag**

attributes

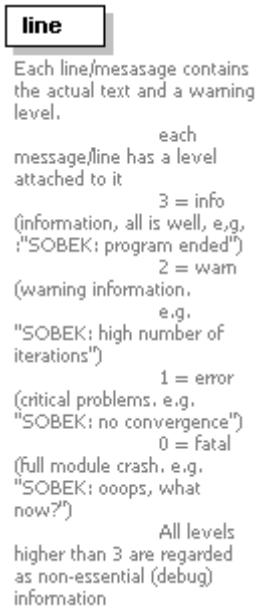
Name	Type	Use	Default	Fixed

source

```
<complexType name="DiagComplexType">
 <annotation>
  <documentation>All model diagnostics output that is generated during and at the end of a run by a module should go in this file.</documentation>
 </annotation>
 <sequence>
  <element name="line" type="fews:LineComplexType" maxOccurs="unbounded">
   <annotation>
    <documentation>Each line/mesasage contains the actual text and a warning level.
                   each message/line has a level attached to it
                   3 = info (information, all is well, e,g, :"SOBEK: program ended")
                   2 = warn (warning information.
                   e.g. "SOBEK: high number of iterations")
                   1 = error (critical problems. e.g. "SOBEK: no convergence")
                   0 = fatal (full module crash. e.g. "SOBEK: ooops, what now?")
                   All levels higher than 3 are regarded as non-essential (debug) information</documentation>
   </annotation>
  </element>
  <element name="comment" type="fews:commentString" minOccurs="0">
   <annotation>
    <documentation>use this field as a notebook to add comments, suggestions
                   description of data entered etc.</documentation>
   </annotation>
  </element>
 </sequence>
 <attribute name="version" type="double" use="required" fixed="1.2"/>
</complexType>
```

element **fews:DiagComplexType/line**

diagram



namespace http://www.wldelft.nl/fews/PI

type **fews:LineComplexType**

attributes

Name	Type	Use	Default	Fixed
level	byte	required		

source

```
<element name="line" type="fews:LineComplexType" maxOccurs="unbounded">
 <annotation>
  <documentation>Each line/mesasage contains the actual text and a warning level.
                 each message/line has a level attached to it
                 3 = info (information, all is well, e,g, :"SOBEK: program ended")
                 2 = warn (warning information.
                 e.g. "SOBEK: high number of iterations")
                 1 = error (critical problems. e.g. "SOBEK: no convergence")
                 0 = fatal (full module crash. e.g. "SOBEK: ooops, what now?")
                 All levels higher than 3 are regarded as non-essential (debug) information</documentation>
 </annotation>
</element>
```

element **fews:DiagComplexType/comment**

diagram

namespace http://www.wldelft.nl/fews/PI

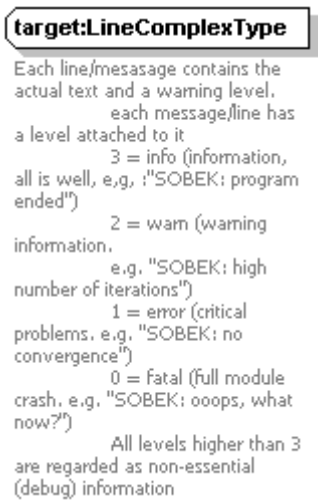
type **fews:commentString**

source

```
<element name="comment" type="fews:commentString" minOccurs="0">
 <annotation>
  <documentation>use this field as a notebook to add comments, suggestions
                 description of data entered etc.</documentation>
 </annotation>
</element>
```

complexType **fews:LineComplexType**

diagram



namespace http://www.wldelft.nl/fews/PI

used by element **fews:DiagComplexType/line**

attributes

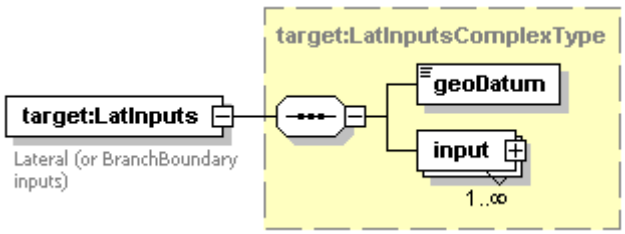
Name	Type	Use	Default	Fixed
level	byte	required		

source

```
<complexType name="LineComplexType">
 <annotation>
  <documentation>Each line/mesasage contains the actual text and a warning level.
        each message/line has a level attached to it
        3 = info (information, all is well, e,g, :"SOBEK: program ended")
        2 = warn (warning information.
        e.g. "SOBEK: high number of iterations")
        1 = error (critical problems. e.g. "SOBEK: no convergence")
        0 = fatal (full module crash. e.g. "SOBEK: ooops, what now?")
        All levels higher than 3 are regarded as non-essential (debug) information</documentation>
 </annotation>
 <attribute name="level" type="byte" use="required">
  <annotation>
   <documentation/>
  </annotation>
 </attribute>
 <attribute name="description" type="string" use="required"/>
</complexType>
```

element fews:LatInputs

diagram



namespace http://www.wldelft.nl/fews/PI

type **fews:LatInputsComplexType**

children **geoDatum** **input**

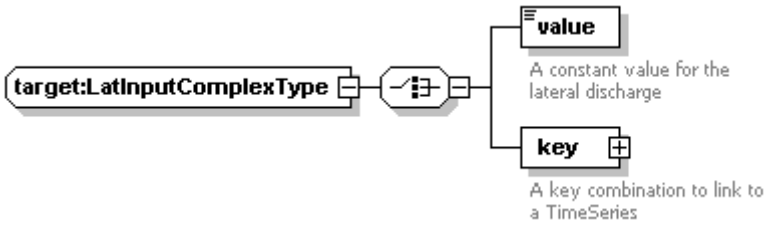
attributes

Name	Type	Use	Default	Fixed

source
```
<element name="LatInputs" type="fews:LatInputsComplexType">
 <annotation>
  <documentation>Lateral (or BranchBoundary inputs)</documentation>
 </annotation>
</element>
```

complexType **fews:LatInputComplexType**

diagram



namespace http://www.wldelft.nl/fews/PI

children **value** **key**

used by
element **fews:LatInputsComplexType/input**

attributes

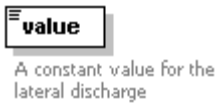
Name	Type	Use	Default	Fixed
latId	fews:idString	required		
x	double	required		
y	double	required		
branchId	string	required		

source
```
<complexType name="LatInputComplexType">
 <choice>
  <element name="value" type="double">
   <annotation>
    <documentation>A constant value for the lateral discharge</documentation>
   </annotation>
  </element>
  <element name="key">
   <annotation>
    <documentation>A key combination to link to a TimeSeries</documentation>
   </annotation>
   <complexType>
    <sequence>
     <element name="locationId" type="fews:LocationIdSimpleType"/>
     <element name="parameter" type="fews:ParameterSimpleType"/>
    </sequence>
   </complexType>
  </element>
 </choice>
 <attribute name="latId" type="fews:idString" use="required">
  <annotation>
   <documentation>ID of this lateral input</documentation>
  </annotation>
 </attribute>
 <attribute name="x" type="double" use="required">
  <annotation>
   <documentation>Geographical co-ordinate (Easting)</documentation>
  </annotation>
 </attribute>
 <attribute name="y" type="double" use="required">
  <annotation>
   <documentation>Geographical co-ordinate (Northing)</documentation>
  </annotation>
 </attribute>
 <attribute name="branchId" type="string" use="required">
  <annotation>
   <documentation>ID of the branch this lateral input
            is located on</documentation>
  </annotation>
 </attribute>
 <attribute name="chainage" type="string" use="required">
  <annotation>
   <documentation>The chainage of the lateral discharge</documentation>
```

```
    </annotation>
  </attribute>
</complexType>
```

element **fews:LatInputComplexType/value**

diagram



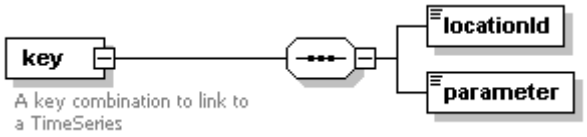
namespace http://www.wldelft.nl/fews/PI

type **double**

source
```
<element name="value" type="double">
  <annotation>
    <documentation>A constant value for the lateral discharge</documentation>
  </annotation>
</element>
```

element **fews:LatInputComplexType/key**

diagram



namespace http://www.wldelft.nl/fews/PI

children **locationId parameter**

source
```
<element name="key">
  <annotation>
    <documentation>A key combination to link to a TimeSeries</documentation>
  </annotation>
  <complexType>
    <sequence>
      <element name="locationId" type="fews:LocationIdSimpleType"/>
      <element name="parameter" type="fews:ParameterSimpleType"/>
    </sequence>
  </complexType>
</element>
```

element **fews:LatInputComplexType/key/locationId**

diagram

namespace http://www.wldelft.nl/fews/PI

type **fews:LocationIdSimpleType**

source
```
<element name="locationId" type="fews:LocationIdSimpleType"/>
```

element **fews:LatInputComplexType/key/parameter**

diagram

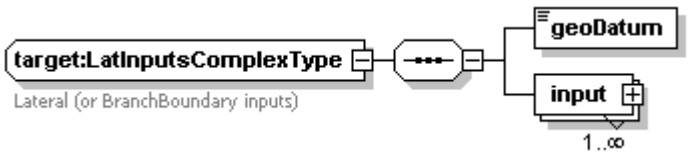
namespace http://www.wldelft.nl/fews/PI

type **fews:ParameterSimpleType**

source
```
<element name="parameter" type="fews:ParameterSimpleType"/>
```

complexType **fews:LatInputsComplexType**

diagram



namespace http://www.wldelft.nl/fews/PI

children **geoDatum** **input**

used by element **fews:LatInputs**

attributes

Name	Type	Use	Default	Fixed

source

```
<complexType name="LatInputsComplexType">
 <annotation>
  <documentation>Lateral (or BranchBoundary inputs)</documentation>
 </annotation>
 <sequence>
  <element name="geoDatum" type="fews:GeoDatumEnumStringType" default="LOCAL"/>
  <element name="input" type="fews:LatInputComplexType" maxOccurs="unbounded"/>
 </sequence>
 <attribute name="version" type="fews:versionString" use="required" fixed="1.2"/>
</complexType>
```

element **fews:LatInputsComplexType/geoDatum**

diagram

namespace http://www.wldelft.nl/fews/PI

type **fews:GeoDatumEnumStringType**

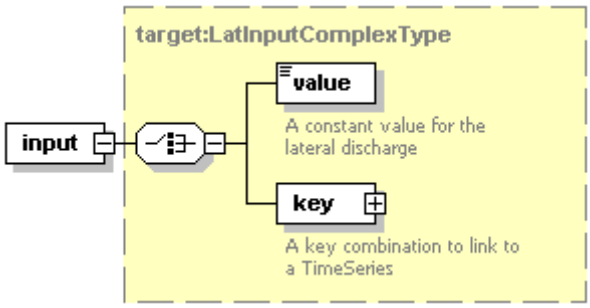
facets
enumeration WGS-1984
enumeration Ordnance Survey Great Britain 1936

source

```
<element name="geoDatum" type="fews:GeoDatumEnumStringType" default="LOCAL"/>
```

element **fews:LatInputsComplexType/input**

diagram



namespace http://www.wldelft.nl/fews/PI

type **fews:LatInputComplexType**

children **value** **key**

attributes

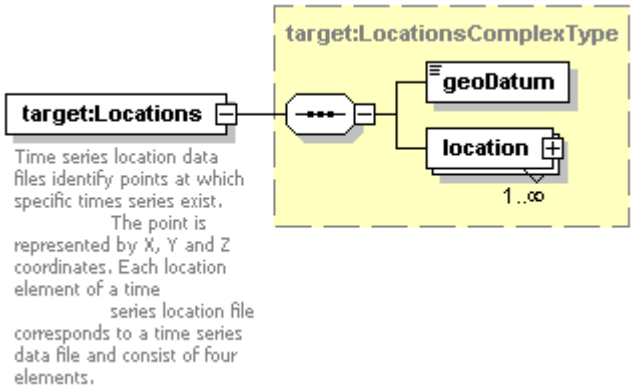
Name	Type	Use	Default	Fixed
latId	fews:idString	required		
x	double	required		
y	double	required		
branchId	string	required		

source

```
<element name="input" type="fews:LatInputComplexType" maxOccurs="unbounded"/>
```

element fews:Locations

diagram



namespace http://www.wldelft.nl/fews/PI

type **fews:LocationsComplexType**

children **geoDatum** **location**

attributes

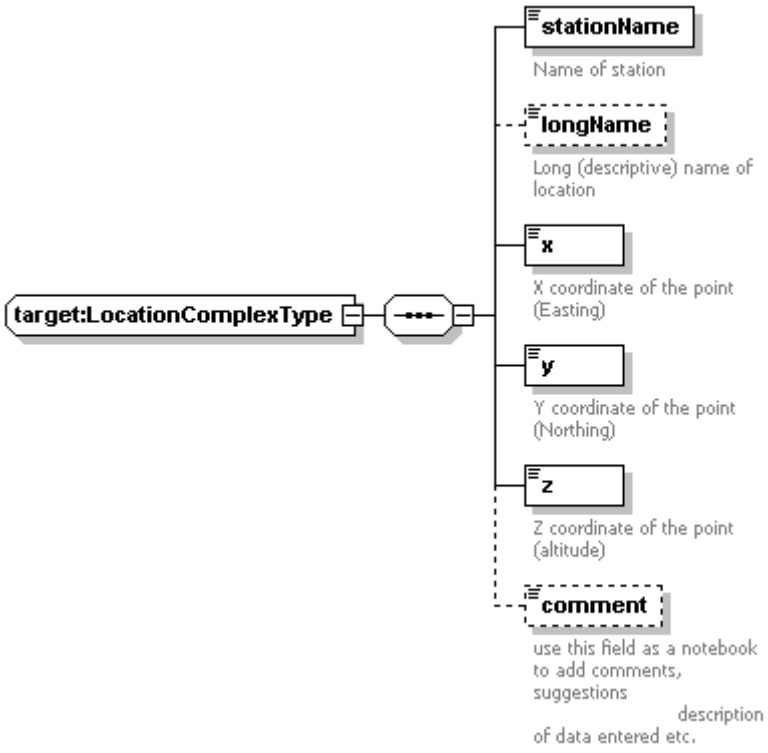
Name	Type	Use	Default	Fixed

source

```
<element name="Locations" type="fews:LocationsComplexType">
 <annotation>
  <documentation>Time series location data files identify points at which specific times series exist.
        The point is represented by X, Y and Z coordinates. Each location element of a time
        series location file corresponds to a time series data file and consist of four elements.</documentation>
 </annotation>
</element>
```

complexType **fews:LocationComplexType**

diagram



namespace http://www.wldelft.nl/fews/PI

children **stationName longName x y z comment**

used by element **fews:LocationsComplexType/location**

source
```
<complexType name="LocationComplexType">
 <sequence>
  <element name="stationName" type="fews:nameString">
   <annotation>
    <documentation>Name of station</documentation>
   </annotation>
  </element>
  <element name="longName" type="string" minOccurs="0">
   <annotation>
    <documentation>Long (descriptive) name of location</documentation>
   </annotation>
  </element>
  <element name="x" type="double">
   <annotation>
    <documentation>X coordinate of the point (Easting)</documentation>
   </annotation>
  </element>
  <element name="y" type="double">
   <annotation>
    <documentation>Y coordinate of the point (Northing)</documentation>
   </annotation>
  </element>
  <element name="z" type="double">
   <annotation>
    <documentation>Z coordinate of the point (altitude)</documentation>
   </annotation>
  </element>
  <element name="comment" type="fews:commentString" minOccurs="0">
   <annotation>
    <documentation>use this field as a notebook to add comments, suggestions
                description of data entered etc.</documentation>
   </annotation>
  </element>
 </sequence>
</complexType>
```

element **fews:LocationComplexType/stationName**

diagram

namespace http://www.wldelft.nl/fews/PI

type **fews:nameString**

source
```
<element name="stationName" type="fews:nameString">
 <annotation>
  <documentation>Name of station</documentation>
 </annotation>
</element>
```

element **fews:LocationComplexType/longName**

diagram

namespace http://www.wldelft.nl/fews/PI

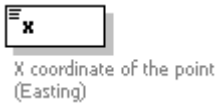
type **string**

source
```
<element name="longName" type="string" minOccurs="0">
 <annotation>
  <documentation>Long (descriptive) name of location</documentation>
```

```
  </annotation>
</element>
```

element **fews:LocationComplexType/x**

diagram



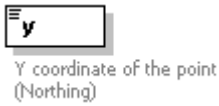
namespace http://www.wldelft.nl/fews/PI

type **double**

source
```
<element name="x" type="double">
  <annotation>
    <documentation>X coordinate of the point (Easting)</documentation>
  </annotation>
</element>
```

element **fews:LocationComplexType/y**

diagram



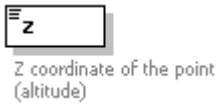
namespace http://www.wldelft.nl/fews/PI

type **double**

source
```
<element name="y" type="double">
  <annotation>
    <documentation>Y coordinate of the point (Northing)</documentation>
  </annotation>
</element>
```

element **fews:LocationComplexType/z**

diagram



namespace http://www.wldelft.nl/fews/PI

type **double**

source
```
<element name="z" type="double">
  <annotation>
    <documentation>Z coordinate of the point (altitude)</documentation>
  </annotation>
</element>
```

element **fews:LocationComplexType/comment**

diagram

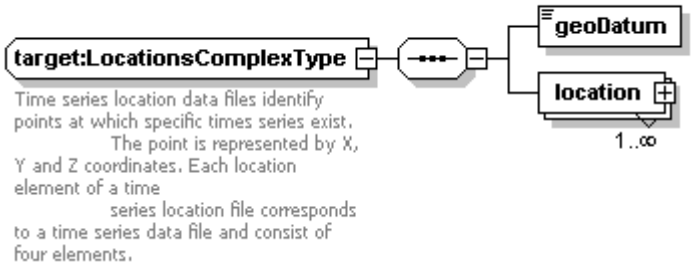
namespace http://www.wldelft.nl/fews/PI

type **fews:commentString**

source
```
<element name="comment" type="fews:commentString" minOccurs="0">
 <annotation>
  <documentation>use this field as a notebook to add comments, suggestions
                 description of data entered etc.</documentation>
 </annotation>
</element>
```

complexType **fews:LocationsComplexType**

diagram



namespace http://www.wldelft.nl/fews/PI

children **geoDatum** **location**

used by element **fews:Locations**

attributes

Name	Type	Use	Default	Fixed

source
```
<complexType name="LocationsComplexType">
 <annotation>
  <documentation>Time series location data files identify points at which specific times series exist.
          The point is represented by X, Y and Z coordinates. Each location element of a time
          series location file corresponds to a time series data file and consist of four elements.</documentation>
 </annotation>
 <sequence>
  <element name="geoDatum" type="fews:GeoDatumEnumStringType" default="LOCAL"/>
  <element name="location" maxOccurs="unbounded">
   <complexType>
    <complexContent>
     <extension base="fews:LocationComplexType">
      <attribute name="locationId" type="fews:idString" use="required">
       <annotation>
        <documentation>A unique location ID</documentation>
       </annotation>
      </attribute>
     </extension>
    </complexContent>
   </complexType>
  </element>
 </sequence>
 <attribute name="version" type="fews:versionString" use="required" fixed="1.2"/>
</complexType>
```

element **fews:LocationsComplexType/geoDatum**

diagram

namespace http://www.wldelft.nl/fews/PI

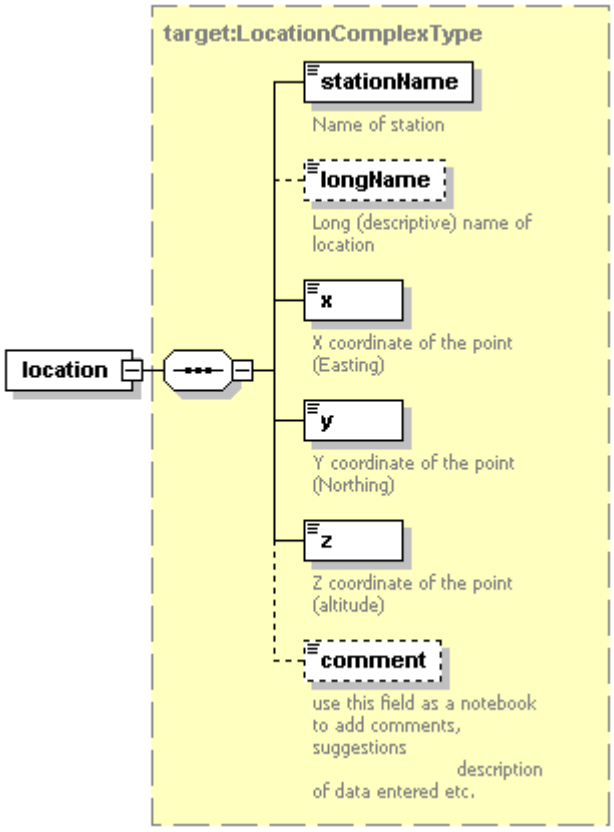
type **fews:GeoDatumEnumStringType**

facets
enumeration WGS-1984
enumeration Ordnance Survey Great Britain 1936

source
```
<element name="geoDatum" type="fews:GeoDatumEnumStringType" default="LOCAL"/>
```

element **fews:LocationsComplexType/location**

diagram



namespace http://www.wldelft.nl/fews/PI

type extension of **fews:LocationComplexType**

children **stationName longName x y z comment**

attributes

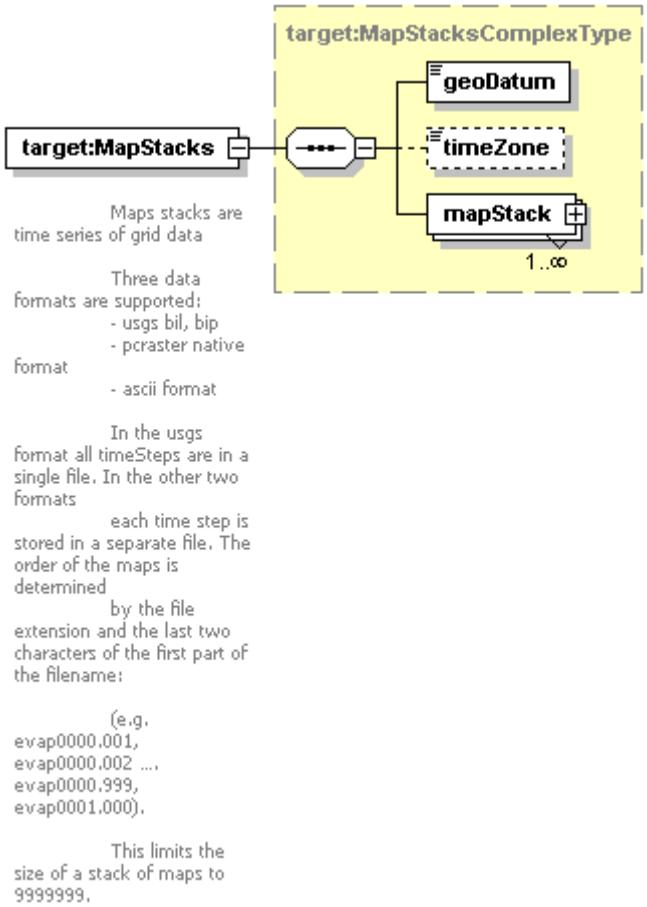
Name	Type	Use	Default	Fixed

source

```
<element name="location" maxOccurs="unbounded">
 <complexType>
  <complexContent>
   <extension base="fews:LocationComplexType">
    <attribute name="locationId" type="fews:idString" use="required">
     <annotation>
      <documentation>A unique location ID</documentation>
     </annotation>
    </attribute>
   </extension>
  </complexContent>
 </complexType>
</element>
```

element fews:MapStacks

diagram



namespace http://www.wldelft.nl/fews/PI

type **fews:MapStacksComplexType**

children **geoDatum** **timeZone** **mapStack**

attributes

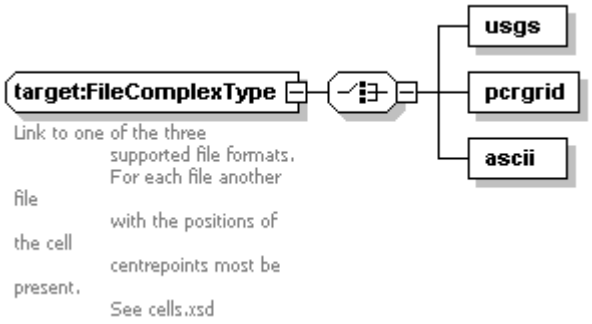
Name	Type	Use	Default	Fixed

source

```
<element name="MapStacks" type="fews:MapStacksComplexType">
 <annotation>
  <documentation>
        Maps stacks are time series of grid data

        Three data formats are supported:
        - usgs bil, bip
        - pcraster native format
        - ascii format

        In the usgs format all timeSteps are in a single file. In the other two formats
        each time step is stored in a separate file. The order of the maps is determined
        by the file extension and the last two characters of the first part of the filename:

        (e.g. evap0000.001, evap0000.002 .... evap0000.999, evap0001.000).

        This limits the size of a stack of maps to 9999999.
      </documentation>
 </annotation>
</element>
```

complexType **fews:FileComplexType**

diagram



namespace http://www.wldelft.nl/fews/PI

children **usgs** **pcrgrid** **ascii**

used by element **fews:MapStackComplexType/file**

attributes

Name	Type	Use	Default	Fixed

source

```
<complexType name="FileComplexType">
 <annotation>
  <documentation>Link to one of the three
            supported file formats.
            For each file another file
            with the positions of the cell
            centrepoints most be present.
            See cells.xsd</documentation>
 </annotation>
 <choice>
  <element name="usgs">
   <complexType>
    <attribute name="file" type="anyURI" use="required"/>
    <attribute name="header" type="anyURI" use="required"/>
   </complexType>
  </element>
  <element name="pcrgrid">
   <complexType>
    <attribute name="file" type="anyURI" use="required">
     <annotation>
      <documentation>eg:
                  temp????.???
                  See mapstack description</documentation>
     </annotation>
    </attribute>
   </complexType>
  </element>
  <element name="ascii">
   <annotation>
    <documentation> </documentation>
   </annotation>
   <complexType>
    <attribute name="file" type="anyURI" use="required">
     <annotation>
      <documentation>eg:
                  temp????.???
                  See mapstack description</documentation>
     </annotation>
    </attribute>
   </complexType>
  </element>
 </choice>
 <attribute name="locations" type="anyURI" use="optional">
  <annotation>
   <documentation>Required file with xyz co-ordinates(lat-long) for each centre-point
             of the grid. the format of the file is described
             in cells.xsd</documentation>
  </annotation>
```

```
  </attribute>
 </complexType>
```

element **fews:FileComplexType/usgs**

diagram

namespace http://www.wldelft.nl/fews/PI

attributes

Name	Type	Use	Default	Fixed
file	anyURI	required		

source

```
<element name="usgs">
 <complexType>
  <attribute name="file" type="anyURI" use="required"/>
  <attribute name="header" type="anyURI" use="required"/>
 </complexType>
</element>
```

element **fews:FileComplexType/pcrgrid**

diagram

namespace http://www.wldelft.nl/fews/PI

attributes

Name	Type	Use	Default	Fixed

source

```
<element name="pcrgrid">
 <complexType>
  <attribute name="file" type="anyURI" use="required">
   <annotation>
    <documentation>eg:
                   temp????.???
                   See mapstack description</documentation>
   </annotation>
  </attribute>
 </complexType>
</element>
```

element **fews:FileComplexType/ascii**

diagram

namespace http://www.wldelft.nl/fews/PI

attributes

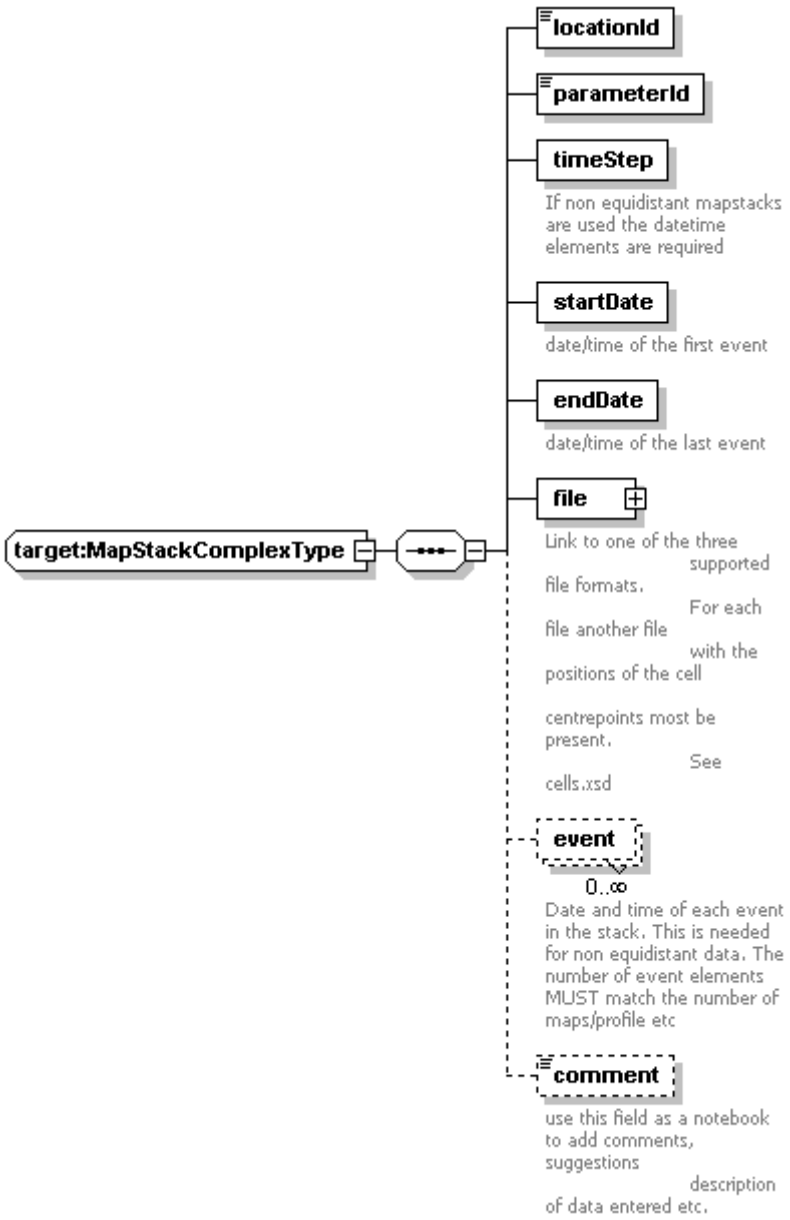
Name	Type	Use	Default	Fixed

source

```
<element name="ascii">
 <annotation>
  <documentation> </documentation>
 </annotation>
 <complexType>
  <attribute name="file" type="anyURI" use="required">
   <annotation>
    <documentation>eg:
                   temp????.???
                   See mapstack description</documentation>
   </annotation>
  </attribute>
 </complexType>
</element>
```

complexType **fews:MapStackComplexType**

diagram



namespace http://www.wldelft.nl/fews/PI

children **locationId** **parameterId** **timeStep** **startDate** **endDate** **file** **event** **comment**

used by element **fews:MapStacksComplexType/mapStack**

source

```
<complexType name="MapStackComplexType">
 <sequence>
  <element name="locationId" type="fews:LocationIdSimpleType"/>
  <element name="parameterId" type="fews:ParameterSimpleType"/>
  <element name="timeStep" type="fews:TimeStepComplexType">
   <annotation>
    <documentation>If non equidistant mapstacks are used the datetime elements are required</documentation>
   </annotation>
  </element>
  <element name="startDate" type="fews:DateTimeComplexType">
   <annotation>
    <documentation>date/time of the first event</documentation>
   </annotation>
  </element>
  <element name="endDate" type="fews:DateTimeComplexType">
```

```
    <annotation>
      <documentation>date/time of the last event</documentation>
    </annotation>
   </element>
   <element name="file" type="fews:FileComplexType">
    <annotation>
      <documentation>Link to one of the three
                supported file formats.
                For each file another file
                with the positions of the cell
                centrepoints most be present.
                See cells.xsd</documentation>
    </annotation>
   </element>
   <element name="event" type="fews:DateTimeComplexType" minOccurs="0" maxOccurs="unbounded">
    <annotation>
      <documentation>Date and time of each event in the stack. This is needed for non equidistant data. The number of
event elements MUST match the number of maps/profile etc</documentation>
    </annotation>
   </element>
   <element name="comment" type="fews:commentString" minOccurs="0">
    <annotation>
      <documentation>use this field as a notebook to add comments, suggestions
                description of data entered etc.</documentation>
    </annotation>
   </element>
  </sequence>
</complexType>
```

element **fews:MapStackComplexType/locationId**

diagram

namespace http://www.wldelft.nl/fews/PI

type **fews:LocationIdSimpleType**

source
```
<element name="locationId" type="fews:LocationIdSimpleType"/>
```

element **fews:MapStackComplexType/parameterId**

diagram

namespace http://www.wldelft.nl/fews/PI

type **fews:ParameterSimpleType**

source
```
<element name="parameterId" type="fews:ParameterSimpleType"/>
```

element **fews:MapStackComplexType/timeStep**

diagram

namespace http://www.wldelft.nl/fews/PI

type **fews:TimeStepComplexType**

attributes

Name	Type	Use	Default	Fixed
unit	fews:timeStepUnitEnumStringType	required		
divider	int	optional	1	

source
```
<element name="timeStep" type="fews:TimeStepComplexType">
 <annotation>
  <documentation>If non equidistant mapstacks are used the datetime elements are required</documentation>
```

```
  </annotation>
</element>
```

element **fews:MapStackComplexType/startDate**

diagram

namespace http://www.wldelft.nl/fews/PI

type **fews:DateTimeComplexType**

attributes

Name	Type	Use	Default	Fixed
date	date	required		

source

```
<element name="startDate" type="fews:DateTimeComplexType">
  <annotation>
    <documentation>date/time of the first event</documentation>
  </annotation>
</element>
```

element **fews:MapStackComplexType/endDate**

diagram

namespace http://www.wldelft.nl/fews/PI

type **fews:DateTimeComplexType**

attributes

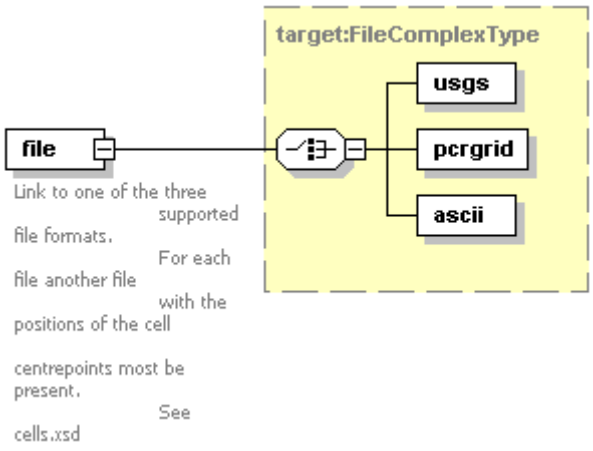
Name	Type	Use	Default	Fixed
date	date	required		

source

```
<element name="endDate" type="fews:DateTimeComplexType">
  <annotation>
    <documentation>date/time of the last event</documentation>
  </annotation>
</element>
```

element **fews:MapStackComplexType/file**

diagram



namespace http://www.wldelft.nl/fews/PI

type **fews:FileComplexType**

children **usgs pcrgrid ascii**

attributes

Name	Type	Use	Default	Fixed

source
```
<element name="file" type="fews:FileComplexType">
 <annotation>
  <documentation>Link to one of the three
                 supported file formats.
                 For each file another file
                 with the positions of the cell
                 centrepoints most be present.
                 See cells.xsd</documentation>
 </annotation>
</element>
```

element **fews:MapStackComplexType/event**

diagram

namespace http://www.wldelft.nl/fews/PI

type **fews:DateTimeComplexType**

attributes

Name	Type	Use	Default	Fixed
date	date	required		

source
```
<element name="event" type="fews:DateTimeComplexType" minOccurs="0" maxOccurs="unbounded">
 <annotation>
  <documentation>Date and time of each event in the stack. This is needed for non equidistant data. The number of
event elements MUST match the number of maps/profile etc</documentation>
 </annotation>
</element>
```

element **fews:MapStackComplexType/comment**

diagram

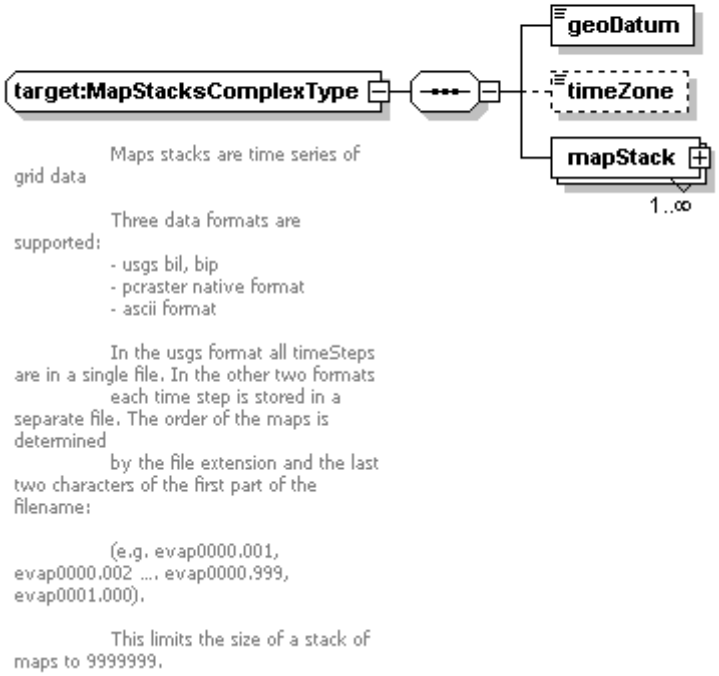
namespace http://www.wldelft.nl/fews/PI

type **fews:commentString**

source
```
<element name="comment" type="fews:commentString" minOccurs="0">
 <annotation>
  <documentation>use this field as a notebook to add comments, suggestions
                 description of data entered etc.</documentation>
 </annotation>
</element>
```

complexType **fews:MapStacksComplexType**

diagram



namespace http://www.wldelft.nl/fews/PI

children **geoDatum** **timeZone** **mapStack**

used by element **fews:MapStacks**

attributes

Name	Type	Use	Default	Fixed

source

```
<complexType name="MapStacksComplexType">
 <annotation>
  <documentation>
        Maps stacks are time series of grid data

        Three data formats are supported:
        - usgs bil, bip
        - pcraster native format
        - ascii format

        In the usgs format all timeSteps are in a single file. In the other two formats
        each time step is stored in a separate file. The order of the maps is determined
        by the file extension and the last two characters of the first part of the filename:

        (e.g. evap0000.001, evap0000.002 .... evap0000.999, evap0001.000).

        This limits the size of a stack of maps to 9999999.
      </documentation>
 </annotation>
 <sequence>
  <element name="geoDatum" type="fews:GeoDatumEnumStringType" default="LOCAL"/>
  <element name="timeZone" type="fews:TimeZoneSimpleType" default="0.0" minOccurs="0"/>
  <element name="mapStack" type="fews:MapStackComplexType" maxOccurs="unbounded"/>
 </sequence>
 <attribute name="version" type="fews:versionString" use="required" fixed="1.2"/>
```

```
</complexType>
```

element **fews:MapStacksComplexType/geoDatum**

diagram 

namespace http://www.wldelft.nl/fews/PI

type **fews:GeoDatumEnumStringType**

facets
enumeration WGS-1984
enumeration Ordnance Survey Great Britain 1936

source
```
<element name="geoDatum" type="fews:GeoDatumEnumStringType" default="LOCAL"/>
```

element **fews:MapStacksComplexType/timeZone**

diagram 

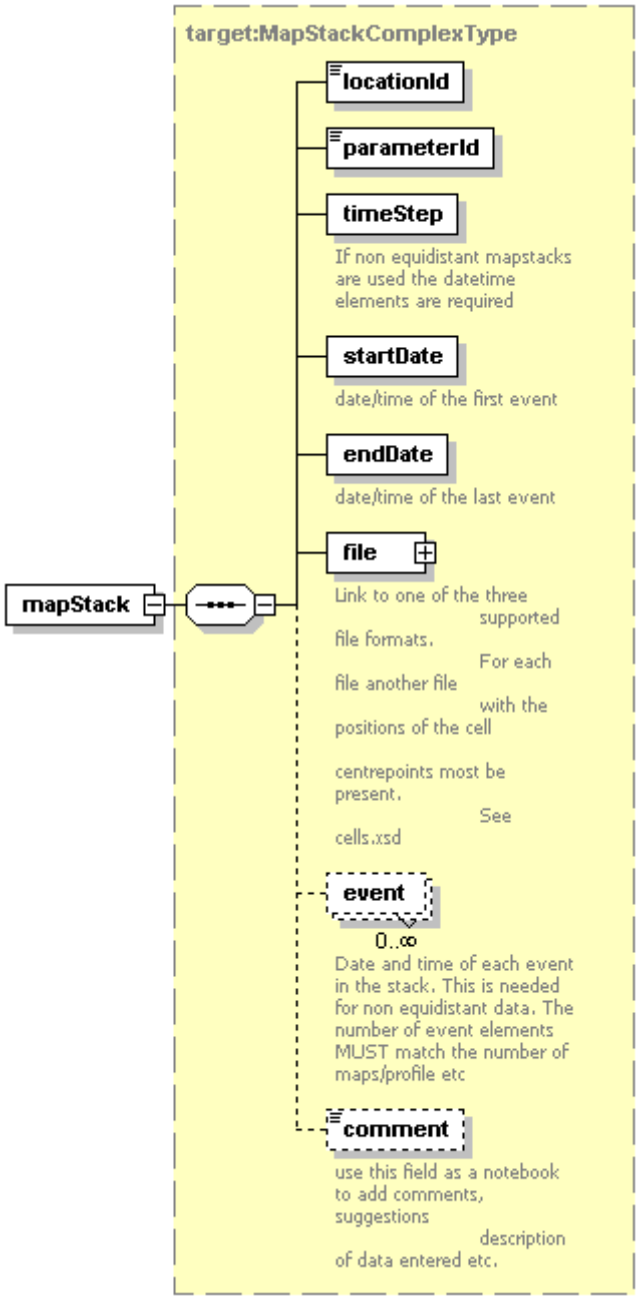
namespace http://www.wldelft.nl/fews/PI

type **fews:TimeZoneSimpleType**

source
```
<element name="timeZone" type="fews:TimeZoneSimpleType" default="0.0" minOccurs="0"/>
```

element **fews:MapStacksComplexType/mapStack**

diagram



namespace http://www.wldelft.nl/fews/PI

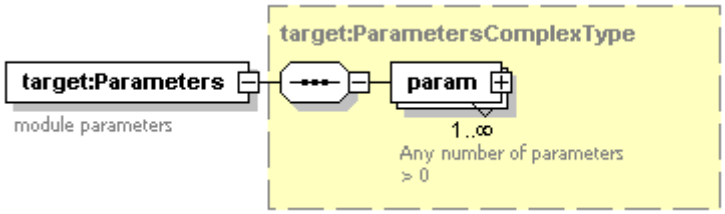
type **fews:MapStackComplexType**

children **locationId parameterId timeStep startDate endDate file event comment**

source <element name="mapStack" type="fews:MapStackComplexType" maxOccurs="unbounded"/>

element fews:Parameters

diagram



namespace http://www.wldelft.nl/fews/PI

type **fews:ParametersComplexType**

children **param**

attributes

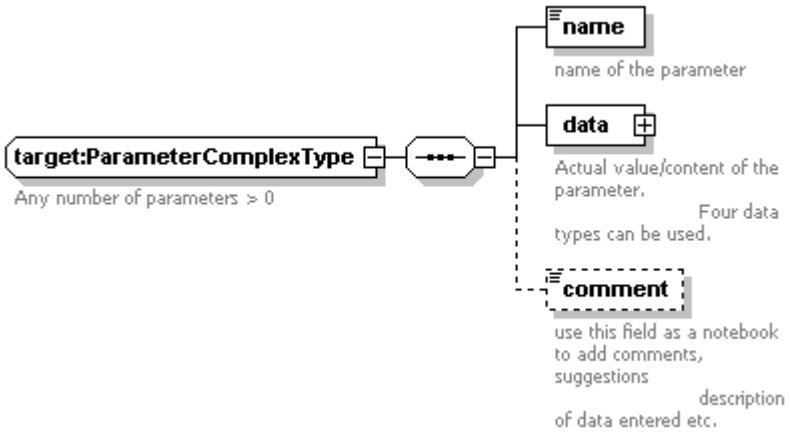
Name	Type	Use	Default	Fixed

source

```
<element name="Parameters" type="fews:ParametersComplexType">
 <annotation>
  <documentation>module parameters</documentation>
 </annotation>
</element>
```

complexType **fews:ParameterComplexType**

diagram



namespace http://www.wldelft.nl/fews/PI

children **name** **data** **comment**

used by

element	**fews:ParametersComplexType/param**

source

```
<complexType name="ParameterComplexType">
 <annotation>
  <documentation>Any number of parameters > 0</documentation>
 </annotation>
 <sequence>
  <element name="name" type="fews:nameString">
   <annotation>
    <documentation>name of the parameter</documentation>
   </annotation>
  </element>
  <element name="data" type="fews:ParameterDataComplexType">
   <annotation>
    <documentation>Actual value/content of the parameter.
                Four data types can be used.</documentation>
   </annotation>
  </element>
  <element name="comment" type="fews:commentString" minOccurs="0">
```

```
    <annotation>
     <documentation>use this field as a notebook to add comments, suggestions
                    description of data entered etc.</documentation>
    </annotation>
   </element>
  </sequence>
</complexType>
```

element **fews:ParameterComplexType/name**

diagram

namespace http://www.wldelft.nl/fews/PI

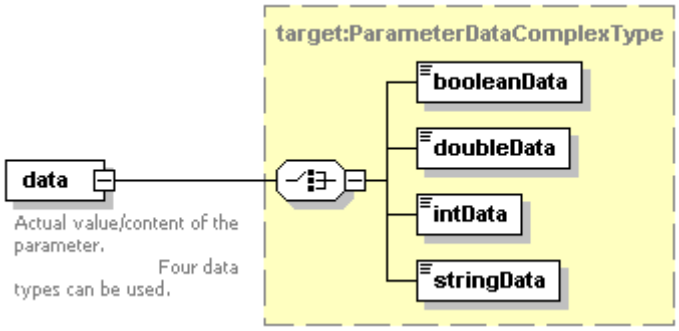
type **fews:nameString**

source

```
<element name="name" type="fews:nameString">
 <annotation>
  <documentation>name of the parameter</documentation>
 </annotation>
</element>
```

element **fews:ParameterComplexType/data**

diagram



namespace http://www.wldelft.nl/fews/PI

type **fews:ParameterDataComplexType**

children **booleanData** **doubleData** **intData** **stringData**

source

```
<element name="data" type="fews:ParameterDataComplexType">
 <annotation>
  <documentation>Actual value/content of the parameter.
                 Four data types can be used.</documentation>
 </annotation>
</element>
```

element **fews:ParameterComplexType/comment**

diagram

namespace http://www.wldelft.nl/fews/PI

type **fews:commentString**

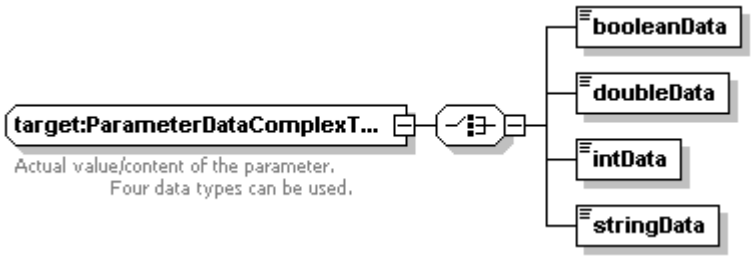
source

```
<element name="comment" type="fews:commentString" minOccurs="0">
 <annotation>
  <documentation>use this field as a notebook to add comments, suggestions
```

```
                description of data entered etc.</documentation>
  </annotation>
</element>
```

complexType **fews:ParameterDataComplexType**

diagram



namespace http://www.wldelft.nl/fews/PI

children **booleanData** **doubleData** **intData** **stringData**

used by element **fews:ParameterComplexType/data**

source

```
<complexType name="ParameterDataComplexType">
 <annotation>
  <documentation>Actual value/content of the parameter.
        Four data types can be used.</documentation>
 </annotation>
 <choice>
  <element name="booleanData">
   <complexType>
    <simpleContent>
     <extension base="boolean">
      <attribute name="allowAdjust" type="boolean" use="optional" default="0">
       <annotation>
        <documentation>if this is set to true the NFFS is allowed to adjust
                this parameter.</documentation>
       </annotation>
      </attribute>
     </extension>
    </simpleContent>
   </complexType>
  </element>
  <element name="doubleData">
   <complexType>
    <simpleContent>
     <extension base="double">
      <attribute name="maxVal" type="double" use="required">
       <annotation>
        <documentation>maximum value allowed for this parameter</documentation>
       </annotation>
      </attribute>
      <attribute name="minVal" type="double" use="required">
       <annotation>
        <documentation>minimum value allowed for this parameter</documentation>
       </annotation>
      </attribute>
      <attribute name="allowAdjust" type="boolean" use="optional" default="0">
       <annotation>
        <documentation>if this is set to true the NFFS is allowed to adjust
                this parameter.</documentation>
       </annotation>
      </attribute>
      <attribute name="stepSize" type="double" use="optional">
       <annotation>
        <documentation>Optional stepsize hint for model calibration.
                Only used if alowadjust = 1</documentation>
       </annotation>
      </attribute>
     </extension>
    </simpleContent>
   </complexType>
  </element>
  <element name="intData">
```

```
      <complexType>
       <simpleContent>
        <extension base="int">
         <attribute name="maxVal" type="int" use="required">
          <annotation>
           <documentation>maximum value allowed for this parameter</documentation>
          </annotation>
         </attribute>
         <attribute name="minVal" type="int" use="required">
          <annotation>
           <documentation>minimum value allowed for this parameter</documentation>
          </annotation>
         </attribute>
         <attribute name="allowAdjust" type="boolean" use="optional" default="0">
          <annotation>
           <documentation>if this is set to true the NFFS is allowed to adjust
                          this parameter.</documentation>
          </annotation>
         </attribute>
         <attribute name="stepSize" type="int" use="optional">
          <annotation>
           <documentation>Optional stepsize hint for model calibration.
                          Only used if alowadjust = 1</documentation>
          </annotation>
         </attribute>
        </extension>
       </simpleContent>
      </complexType>
     </element>
     <element name="stringData" type="string"/>
    </choice>
   </complexType>
```

element **fews:ParameterDataComplexType/booleanData**

diagram 

namespace http://www.wldelft.nl/fews/PI

type extension of **boolean**

attributes

Name	Type	Use	Default	Fixed

source

```
<element name="booleanData">
 <complexType>
  <simpleContent>
   <extension base="boolean">
    <attribute name="allowAdjust" type="boolean" use="optional" default="0">
     <annotation>
      <documentation>if this is set to true the NFFS is allowed to adjust
                     this parameter.</documentation>
     </annotation>
    </attribute>
   </extension>
  </simpleContent>
 </complexType>
</element>
```

element **fews:ParameterDataComplexType/doubleData**

diagram 

namespace http://www.wldelft.nl/fews/PI

type extension of **double**

attributes

Name	Type	Use	Default	Fixed
maxVal	double	required		
minVal	double	required		
allowAdjust	boolean	optional	0	

source

```
<element name="doubleData">
 <complexType>
  <simpleContent>
   <extension base="double">
    <attribute name="maxVal" type="double" use="required">
     <annotation>
      <documentation>maximum value allowed for this parameter</documentation>
     </annotation>
    </attribute>
    <attribute name="minVal" type="double" use="required">
     <annotation>
      <documentation>minimum value allowed for this parameter</documentation>
     </annotation>
    </attribute>
    <attribute name="allowAdjust" type="boolean" use="optional" default="0">
     <annotation>
      <documentation>if this is set to true the NFFS is allowed to adjust
                     this parameter.</documentation>
     </annotation>
    </attribute>
    <attribute name="stepSize" type="double" use="optional">
     <annotation>
      <documentation>Optional stepsize hint for model calibration.
                     Only used if alowadjust = 1</documentation>
     </annotation>
    </attribute>
   </extension>
  </simpleContent>
 </complexType>
</element>
```

element **fews:ParameterDataComplexType/intData**

diagram

namespace http://www.wldelft.nl/fews/PI

type extension of **int**

attributes

Name	Type	Use	Default	Fixed
maxVal	int	required		
minVal	int	required		
allowAdjust	boolean	optional	0	

source

```
<element name="intData">
 <complexType>
  <simpleContent>
   <extension base="int">
    <attribute name="maxVal" type="int" use="required">
     <annotation>
      <documentation>maximum value allowed for this parameter</documentation>
     </annotation>
    </attribute>
    <attribute name="minVal" type="int" use="required">
     <annotation>
      <documentation>minimum value allowed for this parameter</documentation>
     </annotation>
    </attribute>
    <attribute name="allowAdjust" type="boolean" use="optional" default="0">
     <annotation>
      <documentation>if this is set to true the NFFS is allowed to adjust
                     this parameter.</documentation>
     </annotation>
    </attribute>
    <attribute name="stepSize" type="int" use="optional">
     <annotation>
      <documentation>Optional stepsize hint for model calibration.
                     Only used if alowadjust = 1</documentation>
     </annotation>
    </attribute>
   </extension>
  </simpleContent>
```

```
  </complexType>
</element>
```

element **fews:ParameterDataComplexType/stringData**

diagram

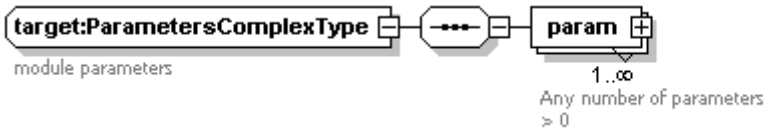
namespace http://www.wldelft.nl/fews/PI

type **string**

source
```
<element name="stringData" type="string"/>
```

complexType **fews:ParametersComplexType**

diagram



namespace http://www.wldelft.nl/fews/PI

children **param**

used by element **fews:Parameters**

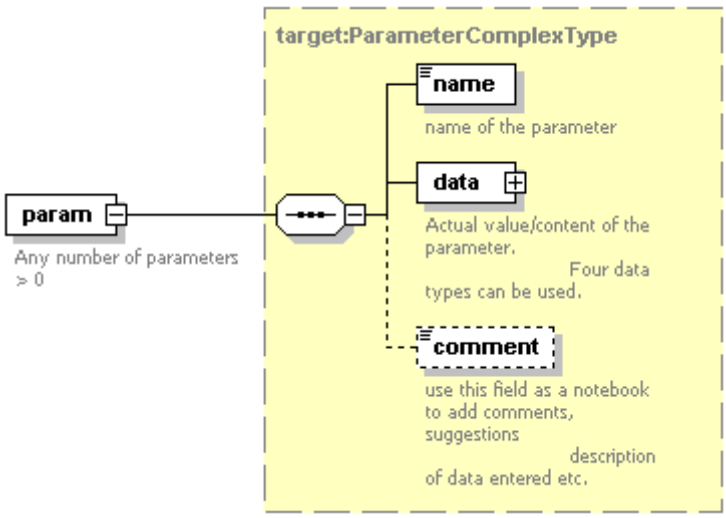
attributes

Name	Type	Use	Default	Fixed

source
```
<complexType name="ParametersComplexType">
 <annotation>
  <documentation>module parameters</documentation>
 </annotation>
 <sequence>
  <element name="param" type="fews:ParameterComplexType" maxOccurs="unbounded">
   <annotation>
    <documentation>Any number of parameters > 0</documentation>
   </annotation>
  </element>
 </sequence>
 <attribute name="version" type="fews:versionString" use="required" fixed="1.2"/>
</complexType>
```

element **fews:ParametersComplexType/param**

diagram



namespace http://www.wldelft.nl/fews/PI

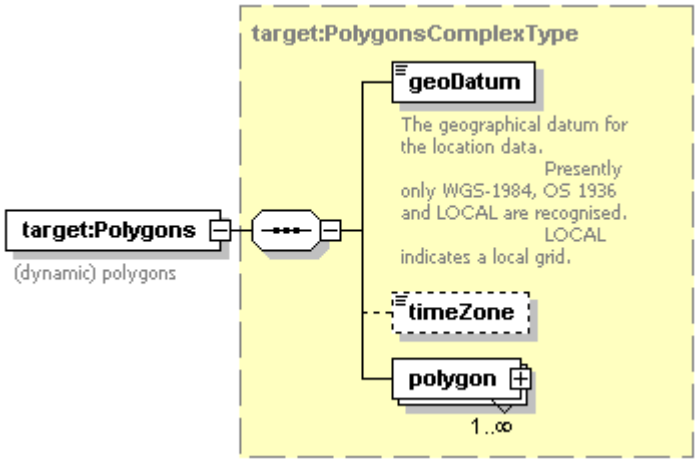
type **fews:ParameterComplexType**

children **name** **data** **comment**

source
```
<element name="param" type="fews:ParameterComplexType" maxOccurs="unbounded">
  <annotation>
    <documentation>Any number of parameters > 0</documentation>
  </annotation>
</element>
```

element fews:Polygons

diagram



namespace http://www.wldelft.nl/fews/PI

type **fews:PolygonsComplexType**

children **geoDatum** **timeZone** **polygon**

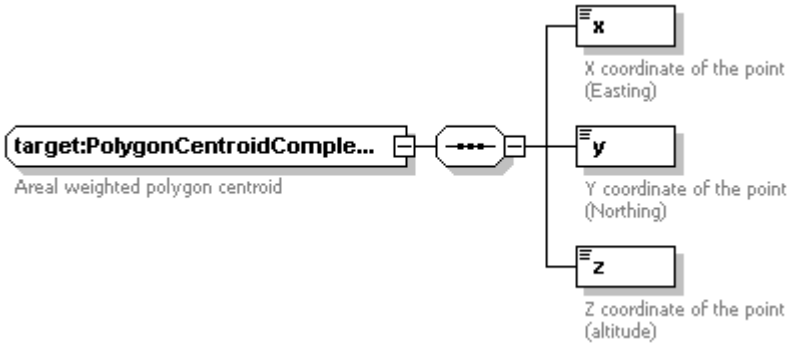
attributes

Name	Type	Use	Default	Fixed

source
```
<element name="Polygons" type="fews:PolygonsComplexType">
  <annotation>
    <documentation>(dynamic) polygons</documentation>
  </annotation>
</element>
```

complexType **fews:PolygonCentroidComplexType**

diagram



namespace http://www.wldelft.nl/fews/PI

children **x** **y** **z**

used by

element	**fews:PolygonComplexType/event/centroid**

source
```
<complexType name="PolygonCentroidComplexType">
  <annotation>
```

```
    <documentation>Areal weighted polygon centroid</documentation>
   </annotation>
   <sequence>
    <element name="x" type="double">
     <annotation>
      <documentation>X coordinate of the point (Easting)</documentation>
     </annotation>
    </element>
    <element name="y" type="double">
     <annotation>
      <documentation>Y coordinate of the point (Northing)</documentation>
     </annotation>
    </element>
    <element name="z" type="double">
     <annotation>
      <documentation>Z coordinate of the point (altitude)</documentation>
     </annotation>
    </element>
   </sequence>
  </complexType>
```

element **fews:PolygonCentroidComplexType/x**

diagram

namespace http://www.wldelft.nl/fews/PI

type **double**

source
```
<element name="x" type="double">
 <annotation>
  <documentation>X coordinate of the point (Easting)</documentation>
 </annotation>
</element>
```

element **fews:PolygonCentroidComplexType/y**

diagram

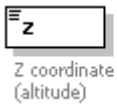
namespace http://www.wldelft.nl/fews/PI

type **double**

source
```
<element name="y" type="double">
 <annotation>
  <documentation>Y coordinate of the point (Northing)</documentation>
 </annotation>
</element>
```

element **fews:PolygonCentroidComplexType/z**

diagram



namespace http://www.wldelft.nl/fews/PI

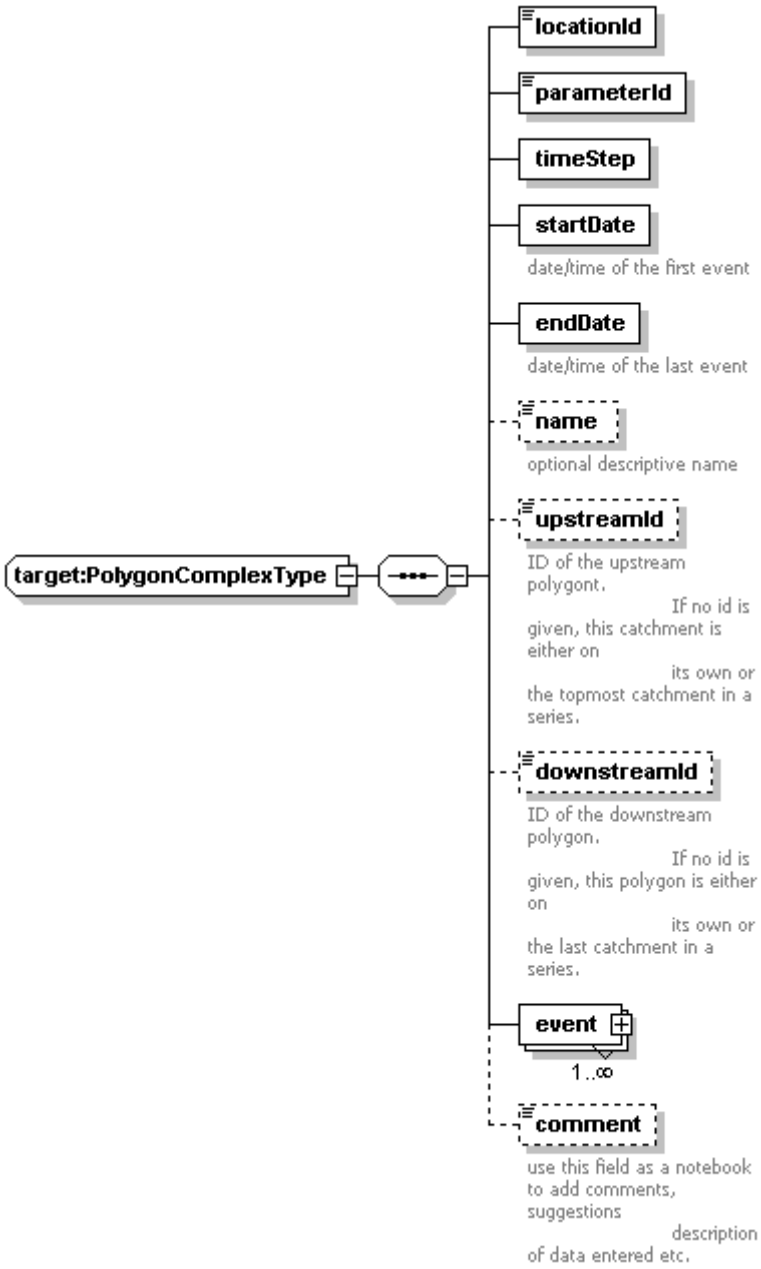
type **double**

source
```
<element name="z" type="double">
 <annotation>
  <documentation>Z coordinate of the point (altitude)</documentation>
 </annotation>
```

```
</element>
```

complexType **fews:PolygonComplexType**

diagram



namespace http://www.wldelft.nl/fews/PI

children **locationId** **parameterId** **timeStep** **startDate** **endDate** **name** **upstreamId** **downstreamId** **event** **comment**

used by element **fews:PolygonsComplexType/polygon**

source

```
<complexType name="PolygonComplexType">
 <sequence>
  <element name="locationId" type="fews:LocationIdSimpleType"/>
  <element name="parameterId" type="fews:ParameterSimpleType"/>
  <element name="timeStep" type="fews:TimeStepComplexType"/>
  <element name="startDate" type="fews:DateTimeComplexType">
   <annotation>
    <documentation>date/time of the first event</documentation>
   </annotation>
  </element>
  <element name="endDate" type="fews:DateTimeComplexType">
```

```
      <annotation>
        <documentation>date/time of the last event</documentation>
      </annotation>
    </element>
    <element name="name" type="fews:nameString" minOccurs="0">
      <annotation>
        <documentation>optional descriptive name</documentation>
      </annotation>
    </element>
    <element name="upstreamId" type="fews:idString" minOccurs="0">
      <annotation>
        <documentation>ID of the upstream polygont.
                    If no id is given, this catchment is either on
                    its own or the topmost catchment in a series.</documentation>
      </annotation>
    </element>
    <element name="downstreamId" type="fews:idString" minOccurs="0">
      <annotation>
        <documentation>ID of the downstream polygon.
                    If no id is given, this polygon is either on
                    its own or the last catchment in a series.</documentation>
      </annotation>
    </element>
    <element name="event" maxOccurs="unbounded">
      <complexType>
        <sequence>
          <element name="centroid" type="fews:PolygonCentroidComplexType" minOccurs="0">
            <annotation>
              <documentation>Areal weighted polygon centroid</documentation>
            </annotation>
          </element>
          <element name="value" type="double" minOccurs="0">
            <annotation>
              <documentation>Optional uniform value for the area covered by this polygon for this event</documentation>
            </annotation>
          </element>
          <element name="area" type="double" minOccurs="0">
            <annotation>
              <documentation>optional polygon area</documentation>
            </annotation>
          </element>
          <element name="pt" type="fews:PolygonPtComplexType" maxOccurs="unbounded"/>
        </sequence>
        <attribute name="date" type="date" use="required"/>
        <attribute name="time" type="time" use="required"/>
      </complexType>
    </element>
    <element name="comment" type="fews:commentString" minOccurs="0">
      <annotation>
        <documentation>use this field as a notebook to add comments, suggestions
                    description of data entered etc.</documentation>
      </annotation>
    </element>
  </sequence>
</complexType>
```

element **fews:PolygonComplexType/locationId**

diagram

namespace http://www.wldelft.nl/fews/PI

type **fews:LocationIdSimpleType**

source
```
<element name="locationId" type="fews:LocationIdSimpleType"/>
```

element **fews:PolygonComplexType/parameterId**

diagram

namespace http://www.wldelft.nl/fews/PI

type **fews:ParameterSimpleType**

source
```
<element name="parameterId" type="fews:ParameterSimpleType"/>
```

element **fews:PolygonComplexType/timeStep**

diagram

namespace http://www.wldelft.nl/fews/PI

type **fews:TimeStepComplexType**

attributes

Name	Type	Use	Default	Fixed
unit	fews:timeStepUnitEnumStringType	required		
divider	int	optional	1	

source
```
<element name="timeStep" type="fews:TimeStepComplexType"/>
```

element **fews:PolygonComplexType/startDate**

diagram

namespace http://www.wldelft.nl/fews/PI

type **fews:DateTimeComplexType**

attributes

Name	Type	Use	Default	Fixed
date	date	required		

source
```
<element name="startDate" type="fews:DateTimeComplexType">
 <annotation>
  <documentation>date/time of the first event</documentation>
 </annotation>
</element>
```

element **fews:PolygonComplexType/endDate**

diagram

namespace http://www.wldelft.nl/fews/PI

type **fews:DateTimeComplexType**

attributes

Name	Type	Use	Default	Fixed
date	date	required		

source
```
<element name="endDate" type="fews:DateTimeComplexType">
 <annotation>
  <documentation>date/time of the last event</documentation>
 </annotation>
</element>
```

element **fews:PolygonComplexType/name**

diagram

namespace http://www.wldelft.nl/fews/PI

type **fews:nameString**

source
```
<element name="name" type="fews:nameString" minOccurs="0">
 <annotation>
  <documentation>optional descriptive name</documentation>
 </annotation>
</element>
```

element **fews:PolygonComplexType/upstreamId**

diagram

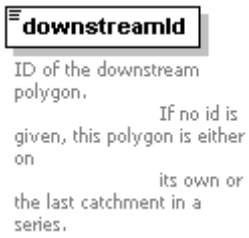
namespace http://www.wldelft.nl/fews/PI

type **fews:idString**

source
```
<element name="upstreamId" type="fews:idString" minOccurs="0">
 <annotation>
  <documentation>ID of the upstream polygont.
                 If no id is given, this catchment is either on
                 its own or the topmost catchment in a series.</documentation>
 </annotation>
</element>
```

element **fews:PolygonComplexType/downstreamId**

diagram



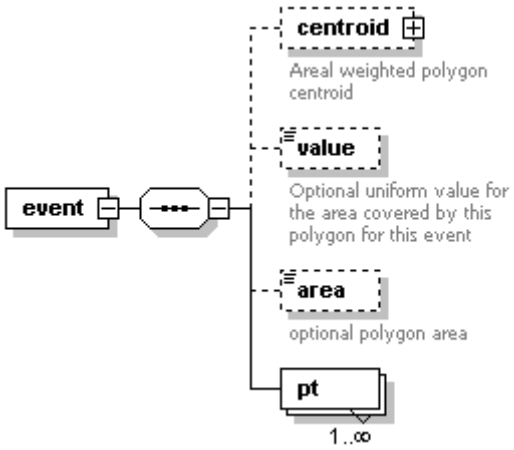
namespace http://www.wldelft.nl/fews/PI

type **fews:idString**

source
```
<element name="downstreamId" type="fews:idString" minOccurs="0">
 <annotation>
  <documentation>ID of the downstream polygon.
                 If no id is given, this polygon is either on
                 its own or the last catchment in a series.</documentation>
 </annotation>
</element>
```

element **fews:PolygonComplexType/event**

diagram



namespace http://www.wldelft.nl/fews/PI

children **centroid value area pt**

attributes

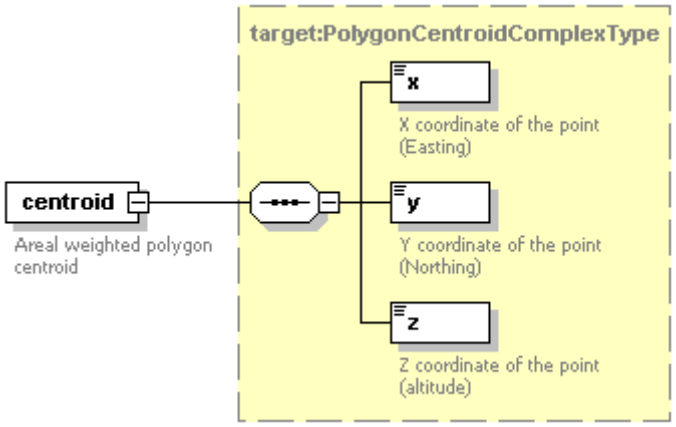
Name	Type	Use	Default	Fixed
date	date	required		

source

```
<element name="event" maxOccurs="unbounded">
 <complexType>
  <sequence>
   <element name="centroid" type="fews:PolygonCentroidComplexType" minOccurs="0">
    <annotation>
     <documentation>Areal weighted polygon centroid</documentation>
    </annotation>
   </element>
   <element name="value" type="double" minOccurs="0">
    <annotation>
     <documentation>Optional uniform value for the area covered by this polygon for this event</documentation>
    </annotation>
   </element>
   <element name="area" type="double" minOccurs="0">
    <annotation>
     <documentation>optional polygon area</documentation>
    </annotation>
   </element>
   <element name="pt" type="fews:PolygonPtComplexType" maxOccurs="unbounded"/>
  </sequence>
  <attribute name="date" type="date" use="required"/>
  <attribute name="time" type="time" use="required"/>
 </complexType>
</element>
```

element **fews:PolygonComplexType/event/centroid**

diagram



namespace http://www.wldelft.nl/fews/PI

type **fews:PolygonCentroidComplexType**

children **x y z**

source
```
<element name="centroid" type="fews:PolygonCentroidComplexType" minOccurs="0">
  <annotation>
    <documentation>Areal weighted polygon centroid</documentation>
  </annotation>
</element>
```

element **fews:PolygonComplexType/event/value**

diagram

namespace http://www.wldelft.nl/fews/PI

type **double**

source
```
<element name="value" type="double" minOccurs="0">
  <annotation>
    <documentation>Optional uniform value for the area covered by this polygon for this event</documentation>
  </annotation>
</element>
```

element **fews:PolygonComplexType/event/area**

diagram

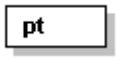
namespace http://www.wldelft.nl/fews/PI

type **double**

source
```
<element name="area" type="double" minOccurs="0">
  <annotation>
    <documentation>optional polygon area</documentation>
  </annotation>
</element>
```

element **fews:PolygonComplexType/event/pt**

diagram



namespace http://www.wldelft.nl/fews/PI

type **fews:PolygonPtComplexType**

attributes

Name	Type	Use	Default	Fixed
x	double	required		
y	double	required		
z	double	optional		

source

```
<element name="pt" type="fews:PolygonPtComplexType" maxOccurs="unbounded"/>
```

element **fews:PolygonComplexType/comment**

diagram

namespace http://www.wldelft.nl/fews/PI

type **fews:commentString**

source

```
<element name="comment" type="fews:commentString" minOccurs="0">
 <annotation>
  <documentation>use this field as a notebook to add comments, suggestions
                 description of data entered etc.</documentation>
 </annotation>
</element>
```

complexType **fews:PolygonPtComplexType**

diagram

namespace http://www.wldelft.nl/fews/PI

used by element **fews:PolygonComplexType/event/pt**

attributes

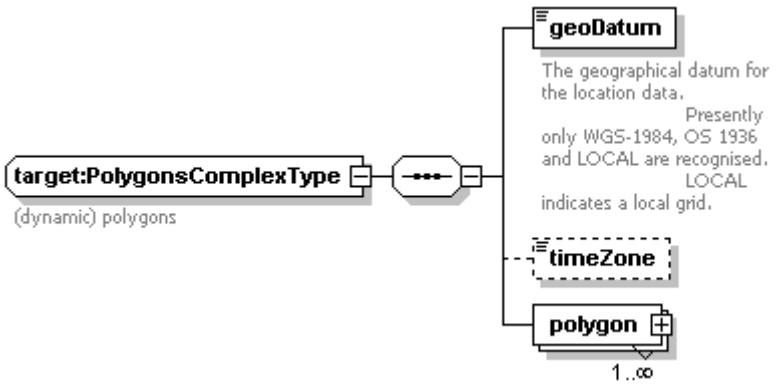
Name	Type	Use	Default	Fixed
x	double	required		
y	double	required		
z	double	optional		

source

```
<complexType name="PolygonPtComplexType">
 <attribute name="x" type="double" use="required"/>
 <attribute name="y" type="double" use="required"/>
 <attribute name="z" type="double" use="optional"/>
 <attribute name="mark" type="int" use="optional">
  <annotation>
   <documentation>Optional mark identifying special points(i.e.):
                  1 = catchment outlet
                  2 = saddle
                  3 = high-point</documentation>
  </annotation>
 </attribute>
</complexType>
```

complexType **fews:PolygonsComplexType**

diagram



namespace http://www.wldelft.nl/fews/PI

children **geoDatum** **timeZone** **polygon**

used by element **fews:Polygons**

attributes

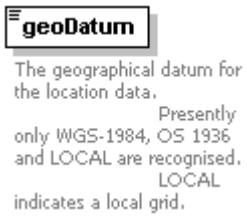
Name	Type	Use	Default	Fixed

source

```
<complexType name="PolygonsComplexType">
 <annotation>
  <documentation>(dynamic) polygons</documentation>
 </annotation>
 <sequence>
  <element name="geoDatum" type="fews:GeoDatumEnumStringType" default="LOCAL">
   <annotation>
    <documentation>The geographical datum for the location data.
                Presently only WGS-1984, OS 1936 and LOCAL are recognised.
                LOCAL indicates a local grid.</documentation>
   </annotation>
  </element>
  <element name="timeZone" type="fews:TimeZoneSimpleType" minOccurs="0"/>
  <element name="polygon" type="fews:PolygonComplexType" maxOccurs="unbounded"/>
 </sequence>
 <attribute name="version" type="fews:versionString" use="required" fixed="1.2"/>
</complexType>
```

element **fews:PolygonsComplexType/geoDatum**

diagram



namespace http://www.wldelft.nl/fews/PI

type **fews:GeoDatumEnumStringType**

facets

enumeration	WGS-1984
enumeration	Ordnance Survey Great Britain 1936

source

```
<element name="geoDatum" type="fews:GeoDatumEnumStringType" default="LOCAL">
 <annotation>
  <documentation>The geographical datum for the location data.
                Presently only WGS-1984, OS 1936 and LOCAL are recognised.
                LOCAL indicates a local grid.</documentation>
 </annotation>
</element>
```

element **fews:PolygonsComplexType/timeZone**

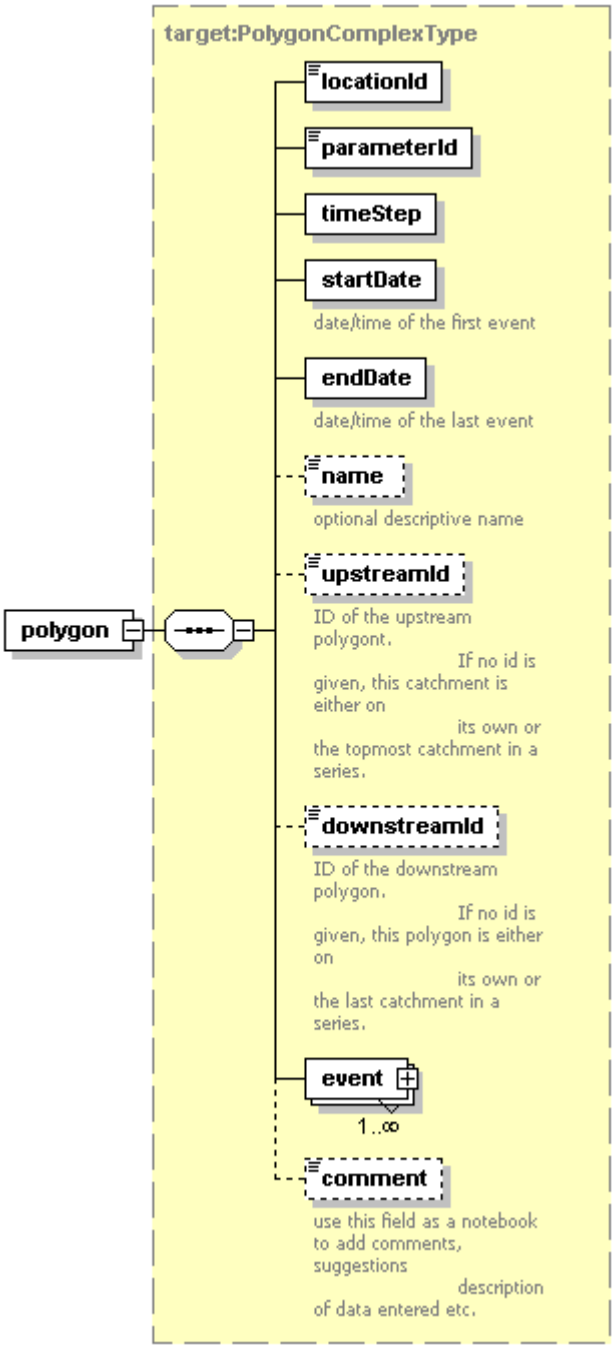
diagram 

namespace http://www.wldelft.nl/fews/PI

type **fews:TimeZoneSimpleType**

source
```
<element name="timeZone" type="fews:TimeZoneSimpleType" minOccurs="0"/>
```

element **fews:PolygonsComplexType/polygon**

diagram 

namespace http://www.wldelft.nl/fews/PI

type **fews:PolygonComplexType**

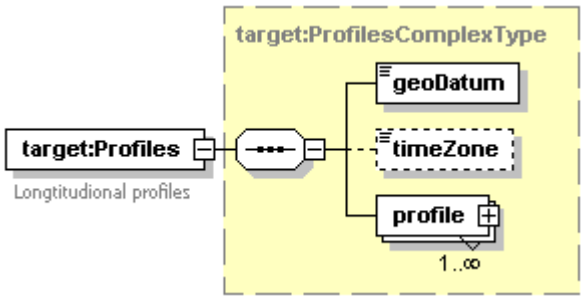
children **locationId** **parameterId** **timeStep** **startDate** **endDate** **name** **upstreamId** **downstreamId** **event** **comment**

source

```
<element name="polygon" type="fews:PolygonComplexType" maxOccurs="unbounded"/>
```

element fews:Profiles

diagram



namespace http://www.wldelft.nl/fews/PI

type **fews:ProfilesComplexType**

children **geoDatum** **timeZone** **profile**

attributes

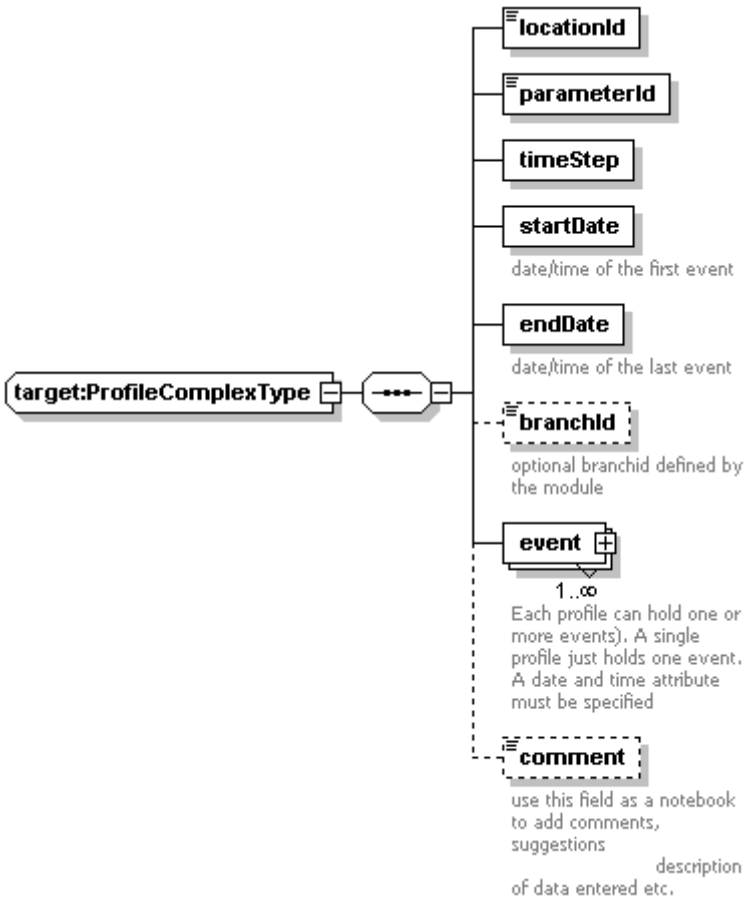
Name	Type	Use	Default	Fixed

source

```
<element name="Profiles" type="fews:ProfilesComplexType">
 <annotation>
  <documentation>Longtitudional profiles</documentation>
 </annotation>
</element>
```

complexType **fews:ProfileComplexType**

diagram



namespace http://www.wldelft.nl/fews/PI

children **locationId parameterId timeStep startDate endDate branchId event comment**

used by element **fews:ProfilesComplexType/profile**

source

```
<complexType name="ProfileComplexType">
 <sequence>
  <element name="locationId" type="fews:LocationIdSimpleType"/>
  <element name="parameterId" type="fews:ParameterSimpleType"/>
  <element name="timeStep" type="fews:TimeStepComplexType"/>
  <element name="startDate" type="fews:DateTimeComplexType">
   <annotation>
    <documentation>date/time of the first event</documentation>
   </annotation>
  </element>
  <element name="endDate" type="fews:DateTimeComplexType">
   <annotation>
    <documentation>date/time of the last event</documentation>
   </annotation>
  </element>
  <element name="branchId" type="fews:idString" minOccurs="0">
   <annotation>
    <documentation>optional branchid defined by the module</documentation>
   </annotation>
  </element>
  <element name="event" maxOccurs="unbounded">
   <annotation>
    <documentation>Each profile can hold one or more events). A single profile just holds one event. A date and time
attribute must be specified</documentation>
   </annotation>
   <complexType>
    <sequence>
     <element name="xdata" type="fews:ProfileXdataComplexType" maxOccurs="unbounded">
```

```
        <annotation>
          <documentation>Each profile can hold an (unlimited) umber of
                        X, Y, and Z points representing the surveyed location and elevation</documentation>
        </annotation>
      </element>
    </sequence>
    <attribute name="date" type="date" use="required"/>
    <attribute name="time" type="time" use="required"/>
  </complexType>
 </element>
 <element name="comment" type="fews:commentString" minOccurs="0">
  <annotation>
   <documentation>use this field as a notebook to add comments, suggestions
          description of data entered etc.</documentation>
  </annotation>
 </element>
</sequence>
</complexType>
```

element **fews:ProfileComplexType/locationId**

diagram 

namespace http://www.wldelft.nl/fews/PI

type **fews:LocationIdSimpleType**

source
```
<element name="locationId" type="fews:LocationIdSimpleType"/>
```

element **fews:ProfileComplexType/parameterId**

diagram 

namespace http://www.wldelft.nl/fews/PI

type **fews:ParameterSimpleType**

source
```
<element name="parameterId" type="fews:ParameterSimpleType"/>
```

element **fews:ProfileComplexType/timeStep**

diagram 

namespace http://www.wldelft.nl/fews/PI

type **fews:TimeStepComplexType**

attributes

Name	Type	Use	Default	Fixed
unit	fews:timeStepUnitEnumStringType	required		
divider	int	optional	1	

source
```
<element name="timeStep" type="fews:TimeStepComplexType"/>
```

element **fews:ProfileComplexType/startDate**

diagram 

namespace http://www.wldelft.nl/fews/PI

type **fews:DateTimeComplexType**

attributes

Name	Type	Use	Default	Fixed

time	time	required	

source
```
<element name="startDate" type="fews:DateTimeComplexType">
 <annotation>
  <documentation>date/time of the first event</documentation>
 </annotation>
</element>
```

element **fews:ProfileComplexType/endDate**

diagram

namespace http://www.wldelft.nl/fews/PI

type **fews:DateTimeComplexType**

attributes

Name	Type	Use	Default	Fixed
date	date	required		

source
```
<element name="endDate" type="fews:DateTimeComplexType">
 <annotation>
  <documentation>date/time of the last event</documentation>
 </annotation>
</element>
```

element **fews:ProfileComplexType/branchId**

diagram

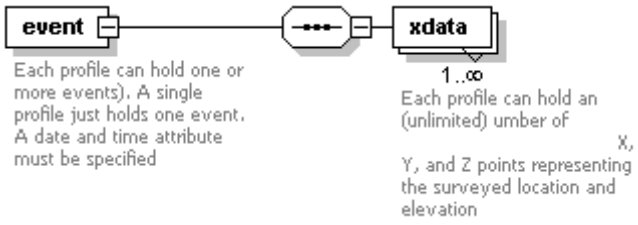
namespace http://www.wldelft.nl/fews/PI

type **fews:idString**

source
```
<element name="branchId" type="fews:idString" minOccurs="0">
 <annotation>
  <documentation>optional branchid defined by the module</documentation>
 </annotation>
</element>
```

element **fews:ProfileComplexType/event**

diagram



namespace http://www.wldelft.nl/fews/PI

children **xdata**

attributes

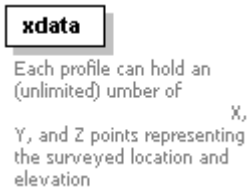
Name	Type	Use	Default	Fixed
date	date	required		

source
```
<element name="event" maxOccurs="unbounded">
 <annotation>
  <documentation>Each profile can hold one or more events). A single profile just holds one event. A date and time
attribute must be specified</documentation>
 </annotation>
 <complexType>
  <sequence>
   <element name="xdata" type="fews:ProfileXdataComplexType" maxOccurs="unbounded">
```

```
      <annotation>
       <documentation>Each profile can hold an (unlimited) umber of
                      X, Y, and Z points representing the surveyed location and elevation</documentation>
      </annotation>
     </element>
    </sequence>
    <attribute name="date" type="date" use="required"/>
    <attribute name="time" type="time" use="required"/>
   </complexType>
  </element>
```

element **fews:ProfileComplexType/event/xdata**

diagram



namespace http://www.wldelft.nl/fews/PI

type **fews:ProfileXdataComplexType**

attributes

Name	Type	Use	Default	Fixed
x	double	required		
y	double	required		
z	double	required		
chainage	double	required		

source

```
<element name="xdata" type="fews:ProfileXdataComplexType" maxOccurs="unbounded">
 <annotation>
  <documentation>Each profile can hold an (unlimited) umber of
                 X, Y, and Z points representing the surveyed location and elevation</documentation>
 </annotation>
</element>
```

element **fews:ProfileComplexType/comment**

diagram

namespace http://www.wldelft.nl/fews/PI

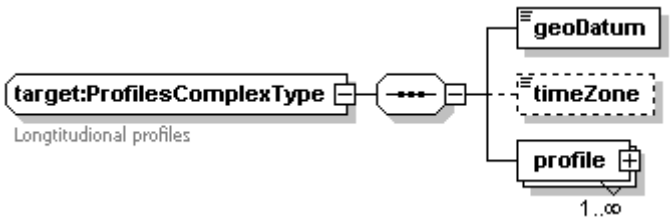
type **fews:commentString**

source

```
<element name="comment" type="fews:commentString" minOccurs="0">
 <annotation>
  <documentation>use this field as a notebook to add comments, suggestions
                 description of data entered etc.</documentation>
 </annotation>
</element>
```

complexType **fews:ProfilesComplexType**

diagram



namespace http://www.wldelft.nl/fews/PI

children **geoDatum** **timeZone** **profile**

used by element **fews:Profiles**

attributes

Name	Type	Use	Default	Fixed

source

```
<complexType name="ProfilesComplexType">
 <annotation>
  <documentation>Longtitudional profiles</documentation>
 </annotation>
 <sequence>
  <element name="geoDatum" type="fews:GeoDatumEnumStringType" default="LOCAL"/>
  <element name="timeZone" type="fews:TimeZoneSimpleType" default="0.0" minOccurs="0"/>
  <element name="profile" type="fews:ProfileComplexType" maxOccurs="unbounded"/>
 </sequence>
 <attribute name="version" type="fews:versionString" use="required" fixed="1.2"/>
</complexType>
```

element **fews:ProfilesComplexType/geoDatum**

diagram

namespace http://www.wldelft.nl/fews/PI

type **fews:GeoDatumEnumStringType**

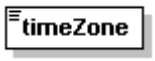
facets
enumeration WGS-1984
enumeration Ordnance Survey Great Britain 1936

source

```
<element name="geoDatum" type="fews:GeoDatumEnumStringType" default="LOCAL"/>
```

element **fews:ProfilesComplexType/timeZone**

diagram



namespace http://www.wldelft.nl/fews/PI

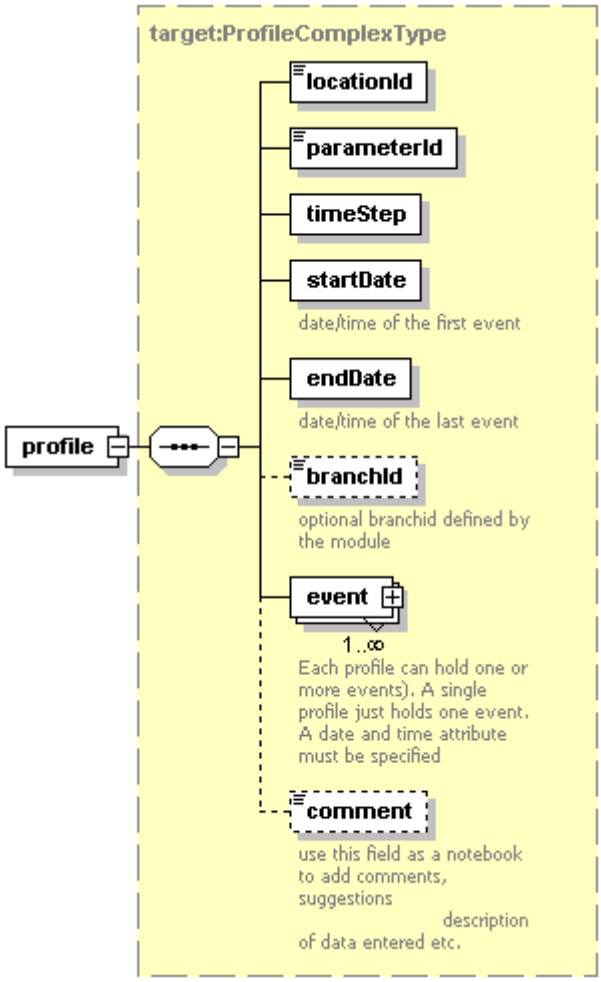
type **fews:TimeZoneSimpleType**

source

```
<element name="timeZone" type="fews:TimeZoneSimpleType" default="0.0" minOccurs="0"/>
```

element **fews:ProfilesComplexType/profile**

diagram



namespace http://www.wldelft.nl/fews/PI

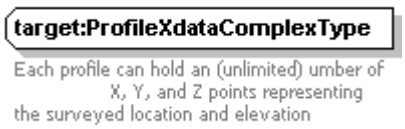
type **fews:ProfileComplexType**

children **locationId parameterId timeStep startDate endDate branchId event comment**

source
```
<element name="profile" type="fews:ProfileComplexType" maxOccurs="unbounded"/>
```

complexType **fews:ProfileXdataComplexType**

diagram



namespace http://www.wldelft.nl/fews/PI

used by element **fews:ProfileComplexType/event/xdata**

attributes

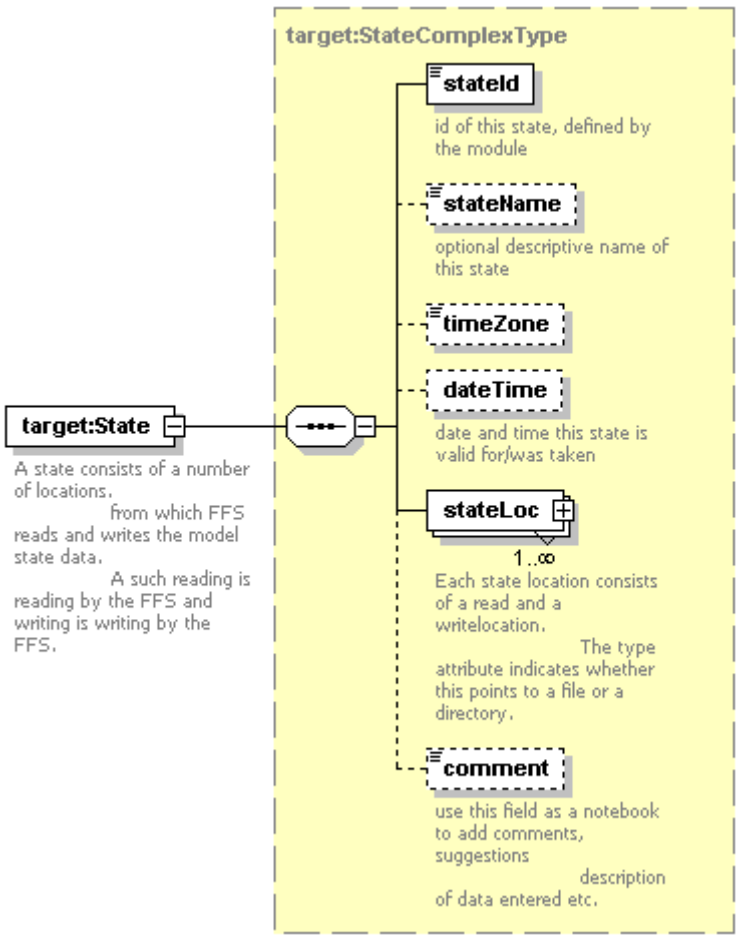
Name	Type	Use	Default	Fixed
x	double	required		
y	double	required		
z	double	required		
chainage	double	required		

source
```
<complexType name="ProfileXdataComplexType">
 <annotation>
  <documentation>Each profile can hold an (unlimited) umber of
```

```
            X, Y, and Z points representing the surveyed location and elevation</documentation>
  </annotation>
  <attribute name="x" type="double" use="required">
    <annotation>
      <documentation>z coordinate</documentation>
    </annotation>
  </attribute>
  <attribute name="y" type="double" use="required">
    <annotation>
      <documentation>y coordinate</documentation>
    </annotation>
  </attribute>
  <attribute name="z" type="double" use="required">
    <annotation>
      <documentation>Altitude of profile base (z)</documentation>
    </annotation>
  </attribute>
  <attribute name="chainage" type="double" use="required">
    <annotation>
      <documentation>chainage along the branch</documentation>
    </annotation>
  </attribute>
  <attribute name="value" type="double" use="required"/>
</complexType>
```

element fews:State

diagram



namespace http://www.wldelft.nl/fews/PI

type **fews:StateComplexType**

children **stateId stateName timeZone dateTime stateLoc comment**

attributes

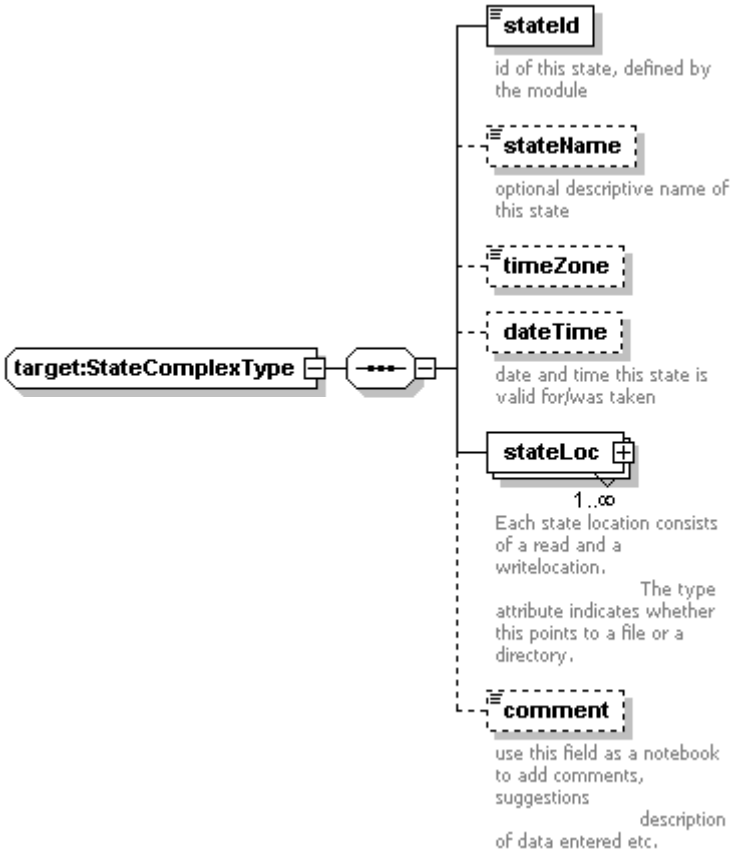
Name	Type	Use	Default	Fixed
version	fews:versionString	required		1.2

source

```
<element name="State" type="fews:StateComplexType">
 <annotation>
  <documentation>A state consists of a number of locations.
        from which FFS reads and writes the model state data.
        reading is reading by the module adapter  and writing is writing by the module adapter. </documentation>
 </annotation>
</element>
```

complexType **fews:StateComplexType**

diagram



namespace http://www.wldelft.nl/fews/PI

children **stateId** **stateName** **timeZone** **dateTime** **stateLoc** **comment**

used by element **fews:State**

attributes

Name	Type	Use	Default	Fixed

source

```
<complexType name="StateComplexType">
 <annotation>
  <documentation>A state consists of a number of locations.
        from which FFS reads and writes the model state data.
        A such reading is reading by the FFS and writing is writing by the FFS. </documentation>
 </annotation>
 <sequence>
  <element name="stateId" type="fews:idString">
   <annotation>
    <documentation>id of this state, defined by the module</documentation>
   </annotation>
  </element>
  <element name="stateName" type="fews:nameString" minOccurs="0">
   <annotation>
    <documentation>optional descriptive name of this state</documentation>
   </annotation>
  </element>
  <element name="timeZone" type="fews:TimeZoneSimpleType" default="0.0" minOccurs="0"/>
```

```
    <element name="dateTime" type="fews:DateTimeComplexType" minOccurs="0">
     <annotation>
      <documentation>date and time this state is valid for/was taken</documentation>
     </annotation>
    </element>
    <element name="stateLoc" type="fews:StateReadWriteDirectoryComplexType" maxOccurs="unbounded">
     <annotation>
      <documentation>Each state location consists of a read and a writelocation.
                The type attribute indicates whether this points to a file or a directory.</documentation>
     </annotation>
    </element>
    <element name="comment" type="fews:commentString" minOccurs="0">
     <annotation>
      <documentation>use this field as a notebook to add comments, suggestions
                description of data entered etc.</documentation>
     </annotation>
    </element>
   </sequence>
   <attribute name="version" type="fews:versionString" use="required" fixed="1.2"/>
  </complexType>
```

element **fews:StateComplexType/stateId**

diagram

namespace http://www.wldelft.nl/fews/PI

type **fews:idString**

source

```
<element name="stateId" type="fews:idString">
 <annotation>
  <documentation>id of this state, defined by the module</documentation>
 </annotation>
</element>
```

element **fews:StateComplexType/stateName**

diagram

namespace http://www.wldelft.nl/fews/PI

type **fews:nameString**

source

```
<element name="stateName" type="fews:nameString" minOccurs="0">
 <annotation>
  <documentation>optional descriptive name of this state</documentation>
 </annotation>
</element>
```

element **fews:StateComplexType/timeZone**

diagram

namespace http://www.wldelft.nl/fews/PI

type **fews:TimeZoneSimpleType**

source

```
<element name="timeZone" type="fews:TimeZoneSimpleType" default="0.0" minOccurs="0"/>
```

element **fews:StateComplexType/dateTime**

diagram

namespace http://www.wldelft.nl/fews/PI

type **fews:DateTimeComplexType**

attributes

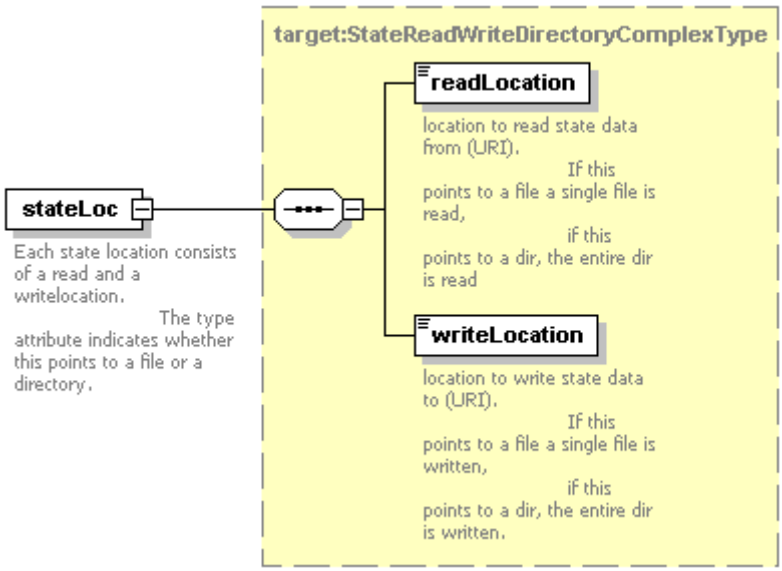
Name	Type	Use	Default	Fixed
date	date	required		

source

```
<element name="dateTime" type="fews:DateTimeComplexType" minOccurs="0">
 <annotation>
  <documentation>date and time this state is valid for/was taken</documentation>
 </annotation>
</element>
```

element **fews:StateComplexType/stateLoc**

diagram



namespace http://www.wldelft.nl/fews/PI

type **fews:StateReadWriteDirectoryComplexType**

children **readLocation** **writeLocation**

attributes

Name	Type	Use	Default	Fixed

source

```
<element name="stateLoc" type="fews:StateReadWriteDirectoryComplexType" maxOccurs="unbounded">
 <annotation>
  <documentation>Each state location consists of a read and a writelocation.
                 The type attribute indicates whether this points to a file or a directory.</documentation>
 </annotation>
</element>
```

element **fews:StateComplexType/comment**

diagram

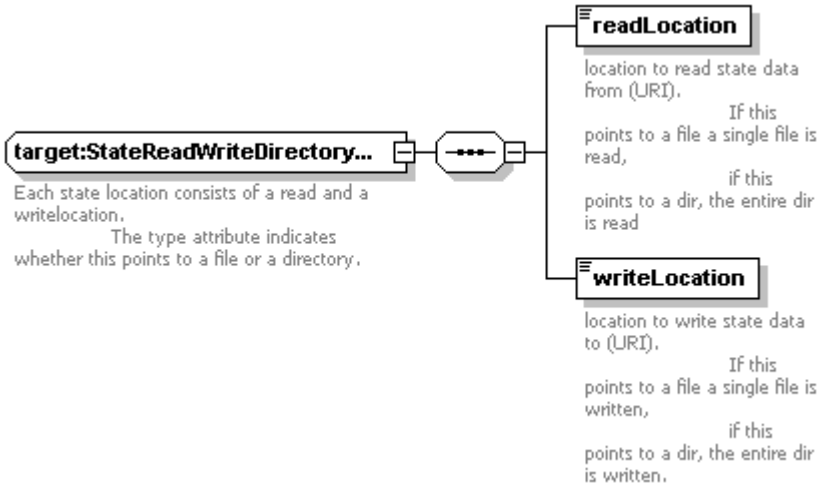
namespace http://www.wldelft.nl/fews/PI

type **fews:commentString**

source
```
<element name="comment" type="fews:commentString" minOccurs="0">
 <annotation>
  <documentation>use this field as a notebook to add comments, suggestions
                 description of data entered etc.</documentation>
 </annotation>
</element>
```

complexType **fews:StateReadWriteDirectoryComplexType**

diagram



namespace http://www.wldelft.nl/fews/PI

children **readLocation** **writeLocation**

used by element **fews:StateComplexType/stateLoc**

attributes

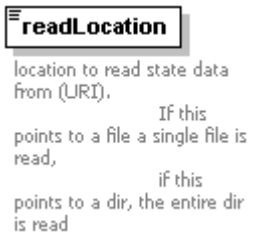
Name	Type	Use	Default	Fixed

source
```
<complexType name="StateReadWriteDirectoryComplexType">
 <annotation>
  <documentation>Each state location consists of a read and a writelocation.
          The type attribute indicates whether this points to a file or a directory.</documentation>
 </annotation>
 <sequence>
  <element name="readLocation" type="anyURI">
   <annotation>
    <documentation>location to read state data from (URI).
                   If this points to a file a single file is read,
                   if this points to a dir, the entire dir is read</documentation>
   </annotation>
  </element>
  <element name="writeLocation" type="anyURI">
   <annotation>
    <documentation>location to write state data to (URI).
                   If this points to a file a single file is written,
                   if this points to a dir, the entire dir is written.</documentation>
   </annotation>
  </element>
```

```
  </sequence>
  <attribute name="type" use="required">
   <annotation>
    <documentation>type: either file or directory</documentation>
   </annotation>
   <simpleType>
    <restriction base="string">
     <enumeration value="file"/>
     <enumeration value="directory"/>
    </restriction>
   </simpleType>
  </attribute>
 </complexType>
```

element **fews:StateReadWriteDirectoryComplexType/readLocation**

diagram



namespace http://www.wldelft.nl/fews/PI

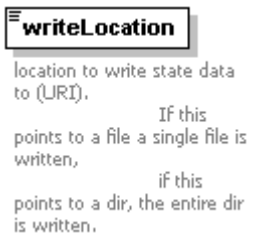
type **anyURI**

source

```
<element name="readLocation" type="anyURI">
 <annotation>
  <documentation>location to read state data from (URI).
                 If this points to a file a single file is read,
                 if this points to a dir, the entire dir is read</documentation>
 </annotation>
</element>
```

element **fews:StateReadWriteDirectoryComplexType/writeLocation**

diagram



namespace http://www.wldelft.nl/fews/PI

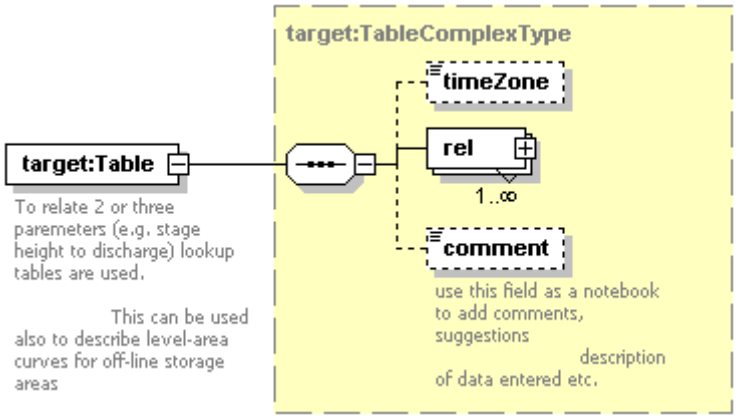
type **anyURI**

source

```
<element name="writeLocation" type="anyURI">
 <annotation>
  <documentation>location to write state data to (URI).
                 If this points to a file a single file is written,
                 if this points to a dir, the entire dir is written.</documentation>
 </annotation>
</element>
```

element fews:Table

diagram



namespace http://www.wldelft.nl/fews/PI

type **fews:TableComplexType**

children **timeZone** **rel** **comment**

attributes

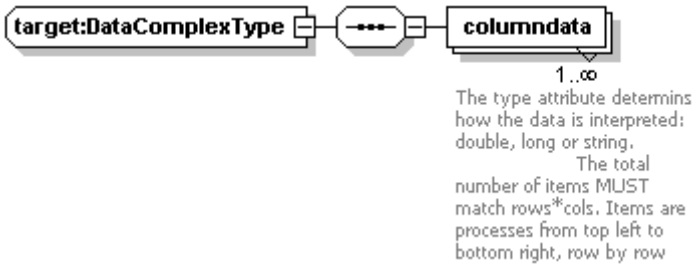
Name	Type	Use	Default	Fixed

source

```
<element name="Table" type="fews:TableComplexType">
 <annotation>
  <documentation>To relate 2 or three paremeters (e.g. stage height to discharge) lookup tables are used.

        This can be used also to describe level-area curves for off-line storage areas</documentation>
 </annotation>
</element>
```

complexType **fews:DataComplexType**

diagram



namespace http://www.wldelft.nl/fews/PI

children **columndata**

used by element **fews:RelationComplexType/rowdata**

attributes

Name	Type	Use	Default	Fixed

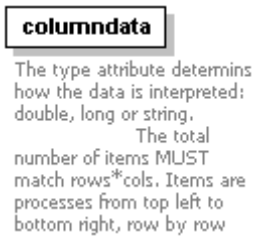
source

```
<complexType name="DataComplexType">
 <sequence>
  <element name="columndata" maxOccurs="unbounded">
   <annotation>
    <documentation>The type attribute determins how the data is interpreted: double, long or string.
          The total number of items MUST match rows*cols. Items are processes from top left to bottom right, row by
row</documentation>
   </annotation>
   <complexType>
    <attribute name="columnnumber" type="int" use="optional"/>
    <attribute name="type" use="required">
     <simpleType>
```

```
          <restriction base="string">
            <enumeration value="double"/>
            <enumeration value="int"/>
            <enumeration value="string"/>
          </restriction>
        </simpleType>
      </attribute>
      <attribute name="value" type="string" use="required"/>
    </complexType>
  </element>
 </sequence>
 <attribute name="rownumber" type="int" use="optional"/>
</complexType>
```

element **fews:DataComplexType/columndata**

diagram



namespace http://www.wldelft.nl/fews/PI

attributes

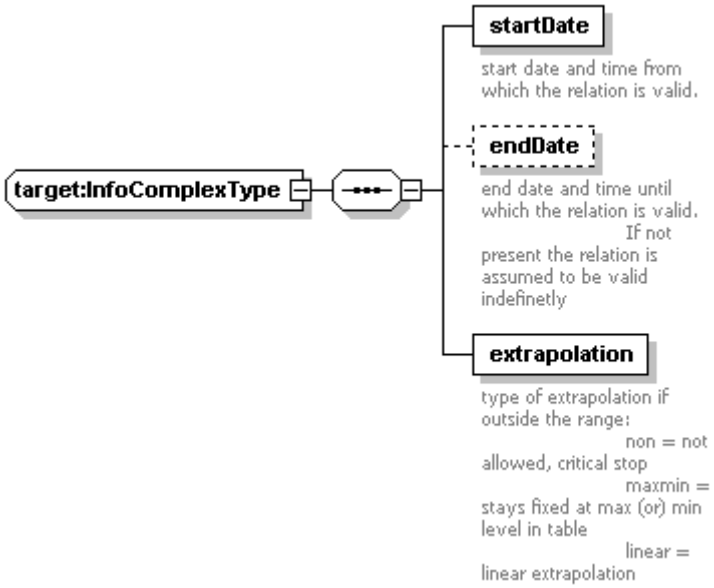
Name	Type	Use	Default	Fixed
columnnumber	int	optional		
type	string	required		

source

```
<element name="columndata" maxOccurs="unbounded">
 <annotation>
  <documentation>The type attribute determins how the data is interpreted: double, long or string.
            The total number of items MUST match rows*cols. Items are processes from top left to bottom right, row by
row</documentation>
 </annotation>
 <complexType>
  <attribute name="columnnumber" type="int" use="optional"/>
  <attribute name="type" use="required">
   <simpleType>
    <restriction base="string">
     <enumeration value="double"/>
     <enumeration value="int"/>
     <enumeration value="string"/>
    </restriction>
   </simpleType>
  </attribute>
  <attribute name="value" type="string" use="required"/>
 </complexType>
</element>
```

complexType **fews:InfoComplexType**

diagram



namespace http://www.wldelft.nl/fews/PI

children **startDate** **endDate** **extrapolation**

used by element **fews:RelationComplexType/info**

source

```
<complexType name="InfoComplexType">
 <sequence>
  <element name="startDate" type="fews:DateTimeComplexType">
   <annotation>
    <documentation>start date and time from which the relation is valid.</documentation>
   </annotation>
  </element>
  <element name="endDate" type="fews:DateTimeComplexType" minOccurs="0">
   <annotation>
    <documentation>end date and time until which the relation is valid.
                If not present the relation is assumed to be valid indefinetly</documentation>
   </annotation>
  </element>
  <element name="extrapolation">
   <annotation>
    <documentation>type of extrapolation if outside the range:
                non = not allowed, critical stop
                maxmin = stays fixed at max (or) min level in table
                linear = linear extrapolation</documentation>
   </annotation>
   <complexType>
    <attribute name="type" use="required">
     <annotation>
      <documentation/>
     </annotation>
     <simpleType>
      <restriction base="string">
       <enumeration value="non"/>
       <enumeration value="maxmin"/>
       <enumeration value="linear"/>
      </restriction>
     </simpleType>
    </attribute>
   </complexType>
  </element>
 </sequence>
</complexType>
```

element **fews:InfoComplexType/startDate**

diagram

namespace http://www.wldelft.nl/fews/PI

type **fews:DateTimeComplexType**

attributes

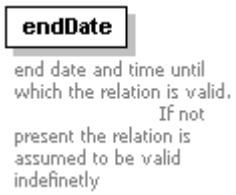
Name	Type	Use	Default	Fixed
date	date	required		

source

```
<element name="startDate" type="fews:DateTimeComplexType">
 <annotation>
  <documentation>start date and time from which the relation is valid.</documentation>
 </annotation>
</element>
```

element **fews:InfoComplexType/endDate**

diagram



namespace http://www.wldelft.nl/fews/PI

type **fews:DateTimeComplexType**

attributes

Name	Type	Use	Default	Fixed
date	date	required		

source

```
<element name="endDate" type="fews:DateTimeComplexType" minOccurs="0">
 <annotation>
  <documentation>end date and time until which the relation is valid.
                 If not present the relation is assumed to be valid indefinetly</documentation>
 </annotation>
</element>
```

element **fews:InfoComplexType/extrapolation**

diagram

namespace http://www.wldelft.nl/fews/PI

attributes

Name	Type	Use	Default	Fixed

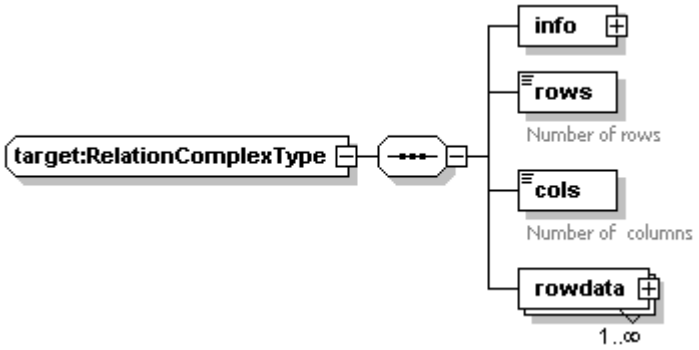
source

```
<element name="extrapolation">
 <annotation>
  <documentation>type of extrapolation if outside the range:
                 non = not allowed, critical stop
                 maxmin = stays fixed at max (or) min level in table
                 linear = linear extrapolation</documentation>
 </annotation>
```

```
  <complexType>
   <attribute name="type" use="required">
    <annotation>
     <documentation/>
    </annotation>
    <simpleType>
     <restriction base="string">
      <enumeration value="non"/>
      <enumeration value="maxmin"/>
      <enumeration value="linear"/>
     </restriction>
    </simpleType>
   </attribute>
  </complexType>
</element>
```

complexType **fews:RelationComplexType**

diagram



namespace http://www.wldelft.nl/fews/PI

children **info** **rows** **cols** **rowdata**

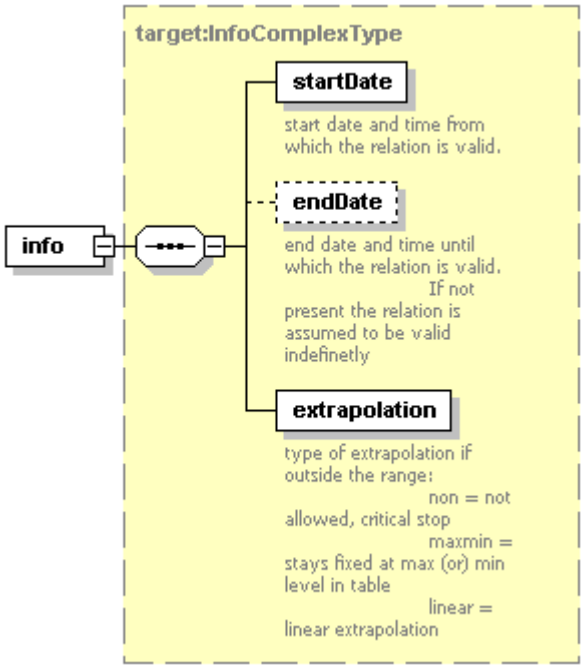
used by element **fews:TableComplexType/rel**

source

```
<complexType name="RelationComplexType">
 <sequence>
  <element name="info" type="fews:InfoComplexType"/>
  <element name="rows" type="int">
   <annotation>
    <documentation>Number of rows</documentation>
   </annotation>
  </element>
  <element name="cols" type="int">
   <annotation>
    <documentation>Number of  columns</documentation>
   </annotation>
  </element>
  <element name="rowdata" type="fews:DataComplexType" maxOccurs="unbounded"/>
 </sequence>
</complexType>
```

element **fews:RelationComplexType/info**

diagram



namespace http://www.wldelft.nl/fews/PI

type **fews:InfoComplexType**

children **startDate** **endDate** **extrapolation**

source
```
<element name="info" type="fews:InfoComplexType"/>
```

element **fews:RelationComplexType/rows**

diagram

namespace http://www.wldelft.nl/fews/PI

type **int**

source
```
<element name="rows" type="int">
  <annotation>
    <documentation>Number of rows</documentation>
  </annotation>
</element>
```

element **fews:RelationComplexType/cols**

diagram

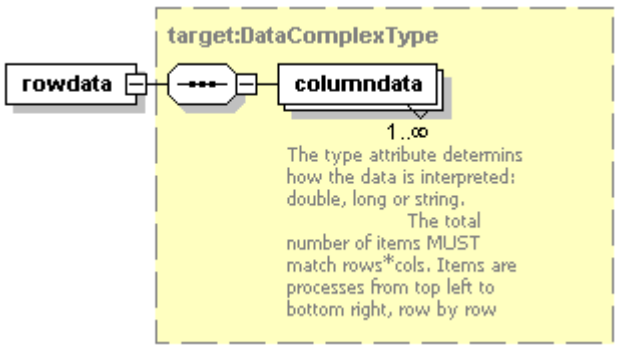
namespace http://www.wldelft.nl/fews/PI

type **int**

source
```
<element name="cols" type="int">
  <annotation>
    <documentation>Number of columns</documentation>
  </annotation>
</element>
```

element **fews:RelationComplexType/rowdata**

diagram



namespace http://www.wldelft.nl/fews/PI

type **fews:DataComplexType**

children **columndata**

attributes

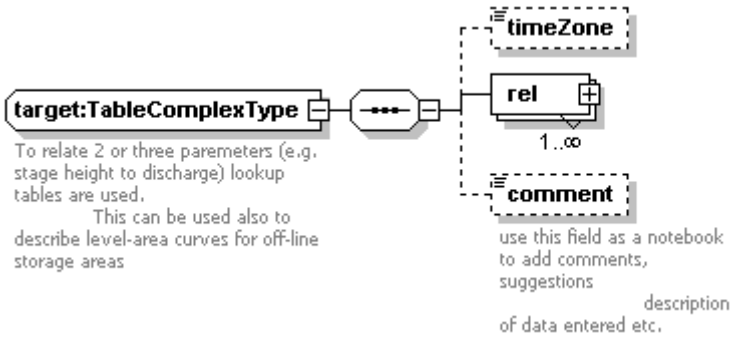
Name	Type	Use	Default	Fixed

source

```
<element name="rowdata" type="fews:DataComplexType" maxOccurs="unbounded"/>
```

complexType **fews:TableComplexType**

diagram



namespace http://www.wldelft.nl/fews/PI

children **timeZone** **rel** **comment**

used by element **fews:Table**

attributes

Name	Type	Use	Default	Fixed

source

```
<complexType name="TableComplexType">
 <annotation>
  <documentation>To relate 2 or three paremeters (e.g. stage height to discharge) lookup tables are used.
        This can be used also to describe level-area curves for off-line storage areas</documentation>
 </annotation>
 <sequence>
  <element name="timeZone" type="fews:TimeZoneSimpleType" default="0.0" minOccurs="0"/>
  <element name="rel" type="fews:RelationComplexType" maxOccurs="unbounded"/>
  <element name="comment" type="fews:commentString" minOccurs="0">
   <annotation>
    <documentation>use this field as a notebook to add comments, suggestions
                description of data entered etc.</documentation>
   </annotation>
  </element>
 </sequence>
 <attribute name="version" type="fews:versionString" use="required" fixed="1.2"/>
</complexType>
```

element **fews:TableComplexType/timeZone**

diagram

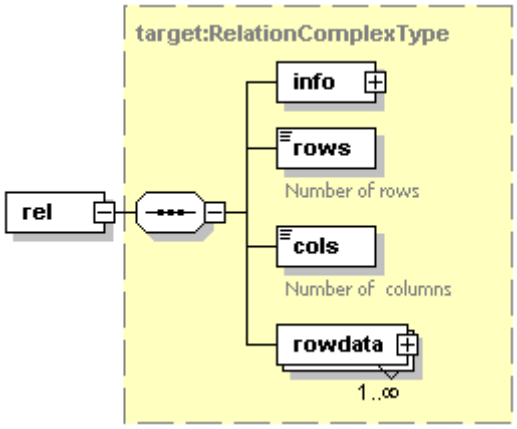
namespace http://www.wldelft.nl/fews/PI

type **fews:TimeZoneSimpleType**

source
```
<element name="timeZone" type="fews:TimeZoneSimpleType" default="0.0" minOccurs="0"/>
```

element **fews:TableComplexType/rel**

diagram



namespace http://www.wldelft.nl/fews/PI

type **fews:RelationComplexType**

children **info rows cols rowdata**

source
```
<element name="rel" type="fews:RelationComplexType" maxOccurs="unbounded"/>
```

element **fews:TableComplexType/comment**

diagram

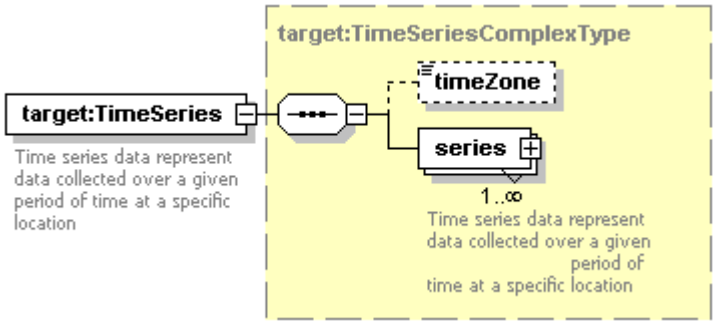
namespace http://www.wldelft.nl/fews/PI

type **fews:commentString**

source
```
<element name="comment" type="fews:commentString" minOccurs="0">
 <annotation>
  <documentation>use this field as a notebook to add comments, suggestions
                 description of data entered etc.</documentation>
 </annotation>
</element>
```

element fews:TimeSeries

diagram



namespace http://www.wldelft.nl/fews/PI

type **fews:TimeSeriesComplexType**

children **timeZone series**

attributes

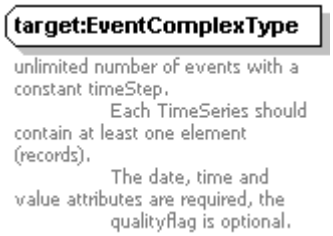
Name	Type	Use	Default	Fixed

source

```
<element name="TimeSeries" type="fews:TimeSeriesComplexType">
 <annotation>
  <documentation>Time series data represent data collected over a given period of time at a specific
location</documentation>
 </annotation>
</element>
```

complexType **fews:EventComplexType**

diagram



namespace http://www.wldelft.nl/fews/PI

used by element **fews:TimeSerieComplexType/event**

attributes

Name	Type	Use	Default	Fixed
date	date	required		
time	time	required		
value	double	required		

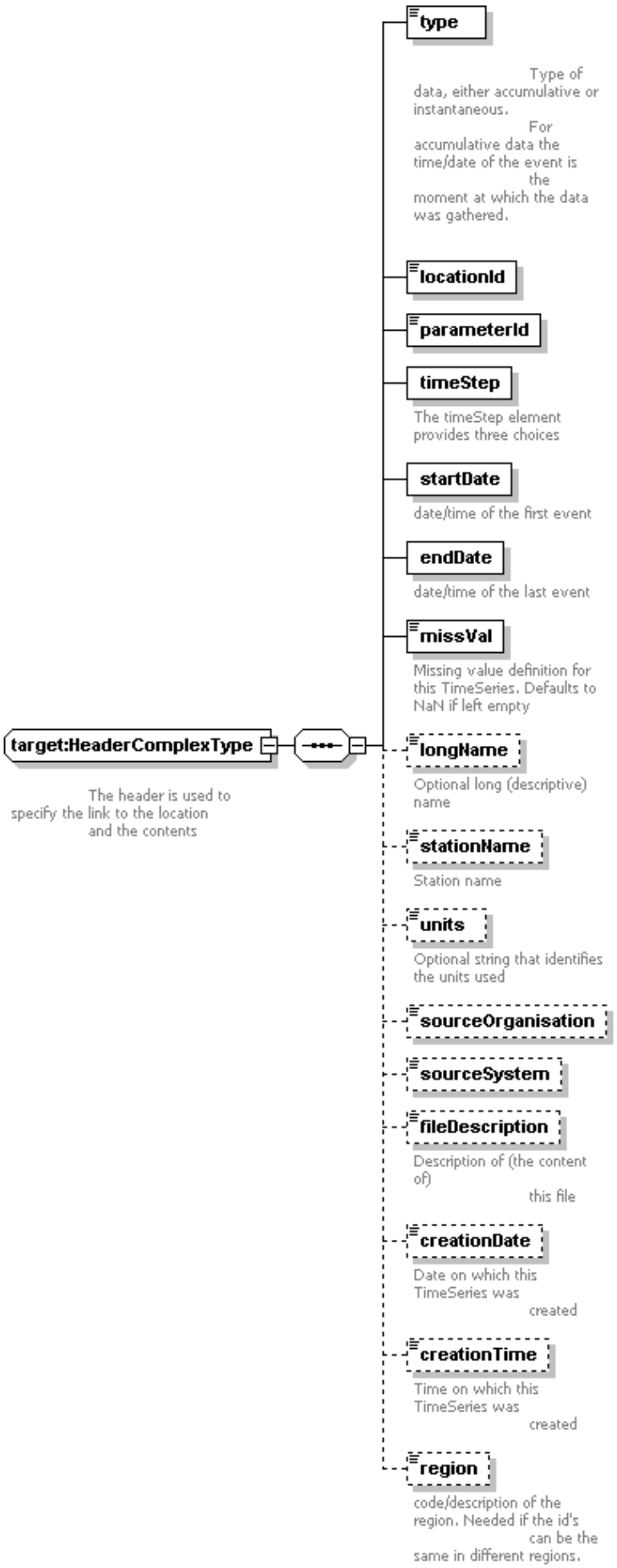
source

```
<complexType name="EventComplexType">
 <annotation>
  <documentation>unlimited number of events with a constant timeStep.
        Each TimeSeries should contain at least one element (records).
        The date, time and value attributes are required, the
        qualityflag is optional. </documentation>
 </annotation>
 <attribute name="date" type="date" use="required">
  <annotation>
   <documentation>ISO 8601 (yyyy-mm-dd)</documentation>
  </annotation>
 </attribute>
 <attribute name="time" type="time" use="required">
  <annotation>
   <documentation>ISO 8601 (hh:mm:ss.dsec  e.g. 16:30:0.001)</documentation>
  </annotation>
 </attribute>
```

```
  <attribute name="value" type="double" use="required"/>
  <attribute name="flag" type="int" use="optional"/>
</complexType>
```

complexType **fews:HeaderComplexType**

diagram


target:HeaderComplexType
The header is used to specify the link to the location and the contents
type
Type of data, either accumulative or instantaneous. For accumulative data the time/date of the event is the moment at which the data was gathered.
locationId
parameterId
timeStep
The timeStep element provides three choices
startDate
date/time of the first event
endDate
date/time of the last event
missVal
Missing value definition for this TimeSeries. Defaults to NaN if left empty
longName
Optional long (descriptive) name
stationName
Station name
units
Optional string that identifies the units used
sourceOrganisation
sourceSystem
fileDescription
Description of (the content of) this file
creationDate
Date on which this TimeSeries was created
creationTime
Time on which this TimeSeries was created
region
code/description of the region. Needed if the id's can be the same in different regions.

namespace http://www.wldelft.nl/fews/PI

children **type** **locationId** **parameterId** **timeStep** **startDate** **endDate** **missVal** **longName** **stationName** **units** **sourceOrganisation** **sourceSystem** **fileDescription** **creationDate** **creationTime** **region**

used by element **fews:TimeSerieComplexType/header**

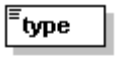
source

```
<complexType name="HeaderComplexType">
 <annotation>
  <documentation>
          The header is used to specify the link to the location
          and the contents</documentation>
 </annotation>
 <sequence>
  <element name="type">
   <annotation>
    <documentation>
              Type of data, either accumulative or instantaneous.
              For accumulative data the time/date of the event is
              the moment at which the data was gathered.
            </documentation>
   </annotation>
   <simpleType>
    <restriction base="string">
     <enumeration value="accumulative"/>
     <enumeration value="instantaneous"/>
    </restriction>
   </simpleType>
  </element>
  <element name="locationId" type="fews:LocationIdSimpleType"/>
  <element name="parameterId" type="fews:ParameterSimpleType"/>
  <element name="timeStep" type="fews:TimeStepComplexType">
   <annotation>
    <documentation>The timeStep element provides three choices</documentation>
   </annotation>
  </element>
  <element name="startDate" type="fews:DateTimeComplexType">
   <annotation>
    <documentation>date/time of the first event</documentation>
   </annotation>
  </element>
  <element name="endDate" type="fews:DateTimeComplexType">
   <annotation>
    <documentation>date/time of the last event</documentation>
   </annotation>
  </element>
  <element name="missVal" type="double" default="NaN">
   <annotation>
    <documentation>Missing value definition for this TimeSeries. Defaults to NaN if left empty</documentation>
   </annotation>
  </element>
  <element name="longName" type="string" minOccurs="0">
   <annotation>
    <documentation>Optional long (descriptive) name</documentation>
   </annotation>
  </element>
  <element name="stationName" type="fews:nameString" minOccurs="0">
   <annotation>
    <documentation>Station name</documentation>
   </annotation>
  </element>
  <element name="units" type="string" minOccurs="0">
   <annotation>
    <documentation>Optional string that identifies the units used</documentation>
   </annotation>
  </element>
  <element name="sourceOrganisation" type="string" minOccurs="0"/>
  <element name="sourceSystem" type="string" minOccurs="0"/>
  <element name="fileDescription" type="string" minOccurs="0">
   <annotation>
    <documentation>Description of (the content of)
              this file</documentation>
   </annotation>
  </element>
  <element name="creationDate" type="date" minOccurs="0">
```

```
    <annotation>
     <documentation>Date on which this TimeSeries was
          created</documentation>
    </annotation>
   </element>
   <element name="creationTime" type="time" minOccurs="0">
    <annotation>
     <documentation>Time on which this TimeSeries was
          created</documentation>
    </annotation>
   </element>
   <element name="region" type="string" minOccurs="0">
    <annotation>
     <documentation>code/description of the region. Needed if the id's
          can be the same in different regions.</documentation>
    </annotation>
   </element>
  </sequence>
</complexType>
```

element **fews:HeaderComplexType/type**

diagram



Type of data, either accumulative or instantaneous. For accumulative data the time/date of the event is the moment at which the data was gathered.

namespace http://www.wldelft.nl/fews/PI

type restriction of **string**

facets
- enumeration accumulative
- enumeration instantaneous

source

```
<element name="type">
 <annotation>
  <documentation>
          Type of data, either accumulative or instantaneous.
          For accumulative data the time/date of the event is
          the moment at which the data was gathered.
        </documentation>
 </annotation>
 <simpleType>
  <restriction base="string">
   <enumeration value="accumulative"/>
   <enumeration value="instantaneous"/>
  </restriction>
 </simpleType>
</element>
```

element **fews:HeaderComplexType/locationId**

diagram

namespace http://www.wldelft.nl/fews/PI

type **fews:LocationIdSimpleType**

source

```
<element name="locationId" type="fews:LocationIdSimpleType"/>
```

element **fews:HeaderComplexType/parameterId**

diagram

namespace http://www.wldelft.nl/fews/PI

type **fews:ParameterSimpleType**

source
```
<element name="parameterId" type="fews:ParameterSimpleType"/>
```

element **fews:HeaderComplexType/timeStep**

diagram

namespace http://www.wldelft.nl/fews/PI

type **fews:TimeStepComplexType**

attributes

Name	Type	Use	Default	Fixed
unit	fews:timeStepUnitEnumStringType	required		
divider	int	optional	1	
multiplier	int	optional	1	

source
```
<element name="timeStep" type="fews:TimeStepComplexType">
 <annotation>
  <documentation>The timeStep element provides three choices</documentation>
 </annotation>
</element>
```

element **fews:HeaderComplexType/startDate**

diagram

namespace http://www.wldelft.nl/fews/PI

type **fews:DateTimeComplexType**

attributes

Name	Type	Use	Default	Fixed
date	date	required		
time	time	required		

source
```
<element name="startDate" type="fews:DateTimeComplexType">
 <annotation>
  <documentation>date/time of the first event</documentation>
 </annotation>
</element>
```

element **fews:HeaderComplexType/endDate**

diagram

namespace http://www.wldelft.nl/fews/PI

type **fews:DateTimeComplexType**

attributes

Name	Type	Use	Default	Fixed
date	date	required		
time	time	required		

source
```
<element name="endDate" type="fews:DateTimeComplexType">
 <annotation>
  <documentation>date/time of the last event</documentation>
```

```
  </annotation>
</element>
```

element **fews:HeaderComplexType/missVal**

diagram

namespace http://www.wldelft.nl/fews/PI

type **double**

source
```
<element name="missVal" type="double" default="NaN">
  <annotation>
    <documentation>Missing value definition for this TimeSeries. Defaults to NaN if left empty</documentation>
  </annotation>
</element>
```

element **fews:HeaderComplexType/longName**

diagram

namespace http://www.wldelft.nl/fews/PI

type **string**

source
```
<element name="longName" type="string" minOccurs="0">
  <annotation>
    <documentation>Optional long (descriptive) name</documentation>
  </annotation>
</element>
```

element **fews:HeaderComplexType/stationName**

diagram

namespace http://www.wldelft.nl/fews/PI

type **fews:nameString**

source
```
<element name="stationName" type="fews:nameString" minOccurs="0">
  <annotation>
    <documentation>Station name</documentation>
  </annotation>
</element>
```

element **fews:HeaderComplexType/units**

diagram

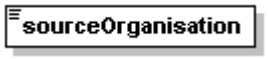
namespace http://www.wldelft.nl/fews/PI

type **string**

source
```
<element name="units" type="string" minOccurs="0">
  <annotation>
    <documentation>Optional string that identifies the units used</documentation>
```

```
  </annotation>
</element>
```

element **fews:HeaderComplexType/sourceOrganisation**

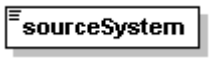
diagram 

namespace http://www.wldelft.nl/fews/PI

type **string**

source
```
<element name="sourceOrganisation" type="string" minOccurs="0"/>
```

element **fews:HeaderComplexType/sourceSystem**

diagram 

namespace http://www.wldelft.nl/fews/PI

type **string**

source
```
<element name="sourceSystem" type="string" minOccurs="0"/>
```

element **fews:HeaderComplexType/fileDescription**

diagram 

namespace http://www.wldelft.nl/fews/PI

type **string**

source
```
<element name="fileDescription" type="string" minOccurs="0">
  <annotation>
    <documentation>Description of (the content of)
                   this file</documentation>
  </annotation>
</element>
```

element **fews:HeaderComplexType/creationDate**

diagram 

namespace http://www.wldelft.nl/fews/PI

type **date**

source
```
<element name="creationDate" type="date" minOccurs="0">
  <annotation>
    <documentation>Date on which this TimeSeries was
                   created</documentation>
  </annotation>
</element>
```

element **fews:HeaderComplexType/creationTime**

diagram

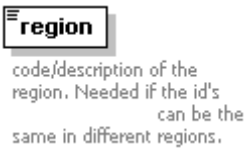
namespace http://www.wldelft.nl/fews/PI

type **time**

source
```
<element name="creationTime" type="time" minOccurs="0">
 <annotation>
  <documentation>Time on which this TimeSeries was
                 created</documentation>
 </annotation>
</element>
```

element **fews:HeaderComplexType/region**

diagram



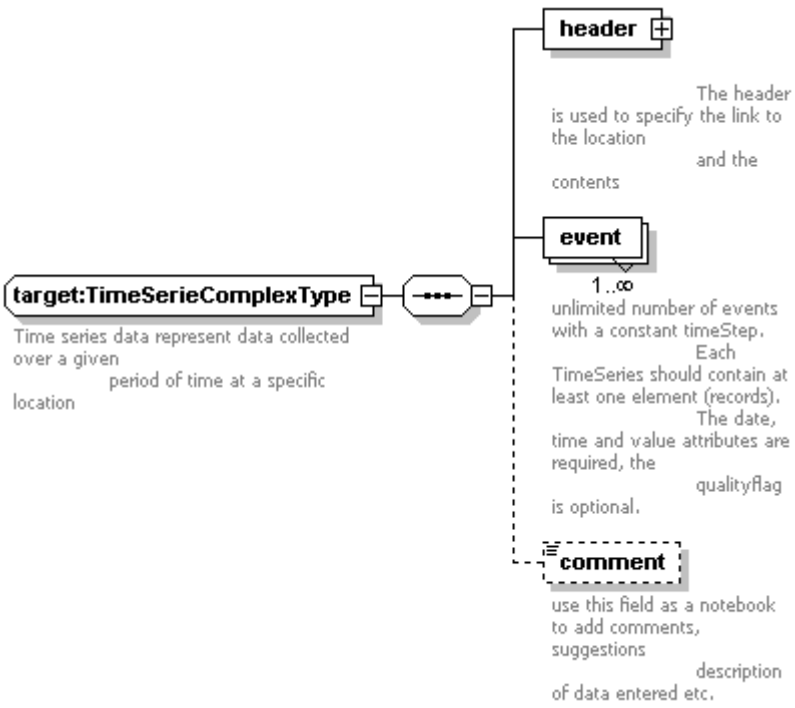
namespace http://www.wldelft.nl/fews/PI

type **string**

source
```
<element name="region" type="string" minOccurs="0">
 <annotation>
  <documentation>code/description of the region. Needed if the id's
                 can be the same in different regions.</documentation>
 </annotation>
</element>
```

complexType **fews:TimeSerieComplexType**

diagram



namespace http://www.wldelft.nl/fews/PI

children **header** **event** **comment**

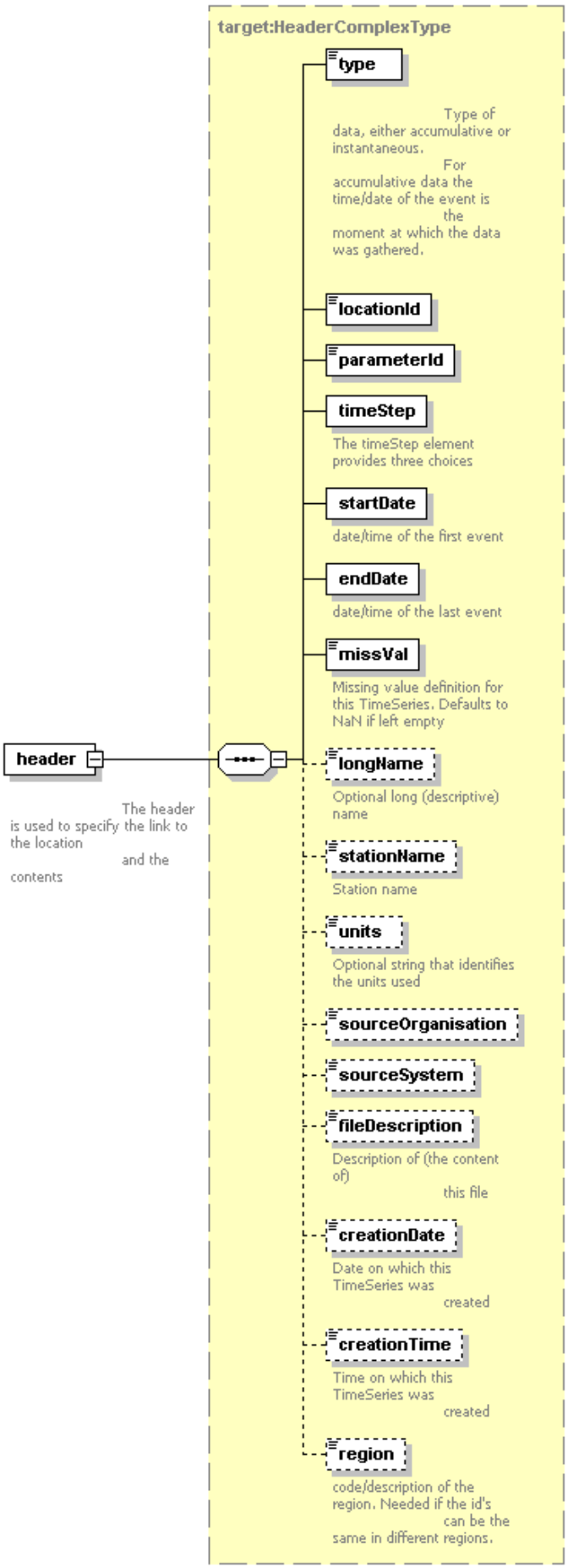
used by element **fews:TimeSeriesComplexType/series**

source

```
<complexType name="TimeSerieComplexType">
 <annotation>
  <documentation>Time series data represent data collected over a given
        period of time at a specific location</documentation>
 </annotation>
 <sequence>
  <element name="header" type="fews:HeaderComplexType">
   <annotation>
    <documentation>
        The header is used to specify the link to the location
        and the contents</documentation>
   </annotation>
  </element>
  <element name="event" type="fews:EventComplexType" maxOccurs="unbounded">
   <annotation>
    <documentation>unlimited number of events with a constant timeStep.
        Each TimeSeries should contain at least one element (records).
        The date, time and value attributes are required, the
        qualityflag is optional. </documentation>
   </annotation>
  </element>
  <element name="comment" type="fews:commentString" minOccurs="0">
   <annotation>
    <documentation>use this field as a notebook to add comments, suggestions
        description of data entered etc.</documentation>
   </annotation>
  </element>
 </sequence>
</complexType>
```

element **fews:TimeSerieComplexType/header**

diagram


target:HeaderComplexType
type
Type of data, either accumulative or instantaneous. For accumulative data the time/date of the event is the moment at which the data was gathered.
locationId
parameterId
timeStep
The timeStep element provides three choices
startDate
date/time of the first event
endDate
date/time of the last event
missVal
Missing value definition for this TimeSeries. Defaults to NaN if left empty
header
The header is used to specify the link to the location and the contents
longName
Optional long (descriptive) name
stationName
Station name
units
Optional string that identifies the units used
sourceOrganisation
sourceSystem
fileDescription
Description of (the content of) this file
creationDate
Date on which this TimeSeries was created
creationTime
Time on which this TimeSeries was created
region
code/description of the region. Needed if the id's can be the same in different regions.

namespace http://www.wldelft.nl/fews/PI

type **fews:HeaderComplexType**

children **type locationId parameterId timeStep startDate endDate missVal longName stationName units sourceOrganisation sourceSystem fileDescription creationDate creationTime region**

source
```
<element name="header" type="fews:HeaderComplexType">
 <annotation>
  <documentation>
                The header is used to specify the link to the location
                and the contents</documentation>
 </annotation>
</element>
```

element **fews:TimeSerieComplexType/event**

diagram

namespace http://www.wldelft.nl/fews/PI

type **fews:EventComplexType**

attributes

Name	Type	Use	Default	Fixed
date	date	required		
time	time	required		
value	double	required		
flag	int	optional		

source
```
<element name="event" type="fews:EventComplexType" maxOccurs="unbounded">
 <annotation>
  <documentation>unlimited number of events with a constant timeStep.
                Each TimeSeries should contain at least one element (records).
                The date, time and value attributes are required, the
                qualityflag is optional. </documentation>
 </annotation>
</element>
```

element **fews:TimeSerieComplexType/comment**

diagram

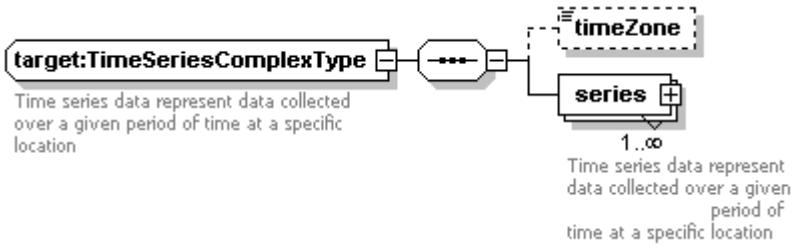
namespace http://www.wldelft.nl/fews/PI

type **fews:commentString**

source
```
<element name="comment" type="fews:commentString" minOccurs="0">
 <annotation>
  <documentation>use this field as a notebook to add comments, suggestions
                description of data entered etc.</documentation>
 </annotation>
</element>
```

complexType **fews:TimeSeriesComplexType**

diagram



namespace http://www.wldelft.nl/fews/PI

children **timeZone** **series**

used by element **fews:TimeSeries**

attributes

Name	Type	Use	Default	Fixed
version	fews:versionString	required		1.2

source

```
<complexType name="TimeSeriesComplexType">
 <annotation>
  <documentation>Time series data represent data collected over a given period of time at a specific
location</documentation>
 </annotation>
 <sequence>
  <element name="timeZone" type="fews:TimeZoneSimpleType" default="0.0" minOccurs="0"/>
  <element name="series" type="fews:TimeSerieComplexType" maxOccurs="unbounded">
   <annotation>
    <documentation>Time series data represent data collected over a given
                period of time at a specific location</documentation>
   </annotation>
  </element>
 </sequence>
 <attribute name="version" type="fews:versionString" use="required" fixed="1.2">
  <annotation>
   <documentation>The version attribute is required.
            This is the version of this specific file.
            The version number of the entire interface is
            embedded  in the namespace.</documentation>
  </annotation>
 </attribute>
</complexType>
```

element **fews:TimeSeriesComplexType/timeZone**

diagram

namespace http://www.wldelft.nl/fews/PI

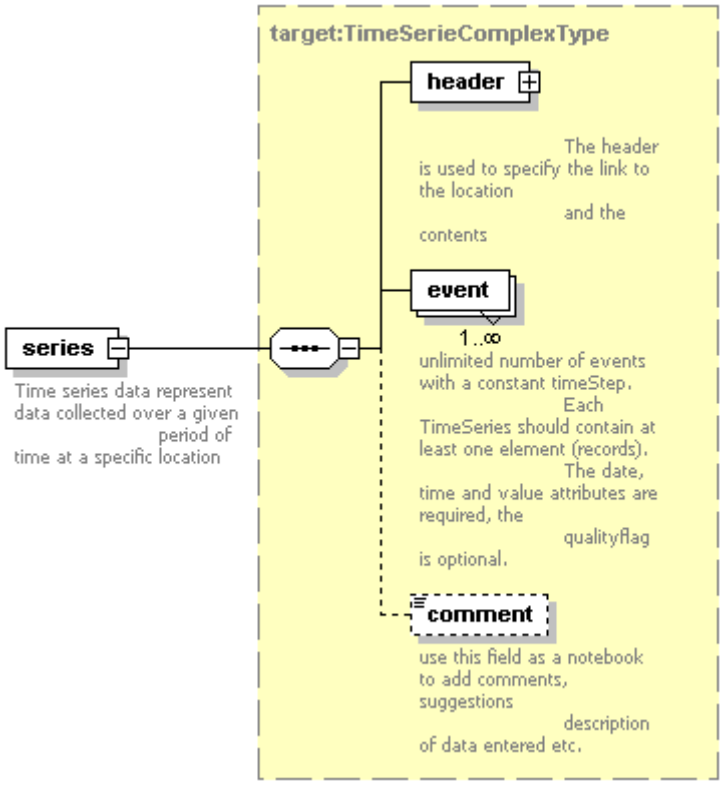
type **fews:TimeZoneSimpleType**

source

```
<element name="timeZone" type="fews:TimeZoneSimpleType" default="0.0" minOccurs="0"/>
```

element **fews:TimeSeriesComplexType/series**

diagram



namespace http://www.wldelft.nl/fews/PI

type **fews:TimeSerieComplexType**

children **header** **event** **comment**

source
```
<element name="series" type="fews:TimeSerieComplexType" maxOccurs="unbounded">
  <annotation>
    <documentation>Time series data represent data collected over a given
                   period of time at a specific location</documentation>
  </annotation>
</element>
```

complexType **fews:DateTimeComplexType**

diagram

namespace http://www.wldelft.nl/fews/PI

used by elements **fews:StateComplexType/dateTime** **fews:MapStackComplexType/endDate** **fews:PolygonComplexType/endDate** **fews:ProfileComplexType/endDate** **fews:InfoComplexType/endDate** **fews:HeaderComplexType/endDate** **fews:MapStackComplexType/event** **fews:MapStackComplexType/startDate** **fews:PolygonComplexType/startDate** **fews:ProfileComplexType/startDate** **fews:InfoComplexType/startDate** **fews:HeaderComplexType/startDate**

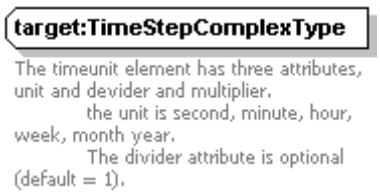
attributes

Name	Type	Use	Default	Fixed
date	date	required		
time	time	required		

source
```
<complexType name="DateTimeComplexType">
  <attribute name="date" type="date" use="required"/>
  <attribute name="time" type="time" use="required"/>
</complexType>
```

complexType **fews:TimeStepComplexType**

diagram



namespace http://www.wldelft.nl/fews/PI

used by
elements **fews:MapStackComplexType/timeStep** **fews:PolygonComplexType/timeStep** **fews:ProfileComplexType/timeStep** **fews:HeaderComplexType/timeStep**

attributes

Name	Type	Use	Default	Fixed
unit	fews:timeStepUnitEnumStringType	required		
divider	int	optional	1	
multiplier	int	optional	1	

source

```
<complexType name="TimeStepComplexType">
 <annotation>
  <documentation>The timeunit element has three attributes, unit and devider and multiplier.
       the unit is second, minute, hour, week, month year.
       The divider attribute is optional (default = 1).</documentation>
 </annotation>
 <attribute name="unit" type="fews:timeStepUnitEnumStringType" use="required"/>
 <attribute name="divider" type="int" use="optional" default="1"/>
 <attribute name="multiplier" type="int" use="optional" default="1"/>
</complexType>
```

simpleType **fews:commentString**

namespace http://www.wldelft.nl/fews/PI

type **string**

used by
elements **fews:BranchComplexType/comment** **fews:CellsComplexType/comment** **fews:CrossSectionComplexType/comment** **fews:DiagComplexType/comment** **fews:LocationComplexType/comment** **fews:MapStackComplexType/comment** **fews:ParameterComplexType/comment** **fews:PolygonComplexType/comment** **fews:ProfileComplexType/comment** **fews:StateComplexType/comment** **fews:TableComplexType/comment** **fews:TimeSerieComplexType/comment**

source

```
<simpleType name="commentString">
 <restriction base="string"/>
</simpleType>
```

simpleType **fews:GeoDatumEnumStringType**

namespace http://www.wldelft.nl/fews/PI

type restriction of **string**

used by
elements **fews:BranchesComplexType/geoDatum** **fews:CellsComplexType/geoDatum** **fews:CrossSectionsComplexType/geoDatum** **fews:LatInputsComplexType/geoDatum** **fews:LocationsComplexType/geoDatum** **fews:MapStacksComplexType/geoDatum** **fews:PolygonsComplexType/geoDatum** **fews:ProfilesComplexType/geoDatum**

facets
enumeration WGS-1984
enumeration Ordnance Survey Great Britain 1936
enumeration LOCAL

source

```
<simpleType name="GeoDatumEnumStringType">
 <annotation>
  <documentation>The geographical datum for the location data.
       Presently only WGS-1984, OS 1936 and LOCAL are recognised.
       LOCAL indicates a local grid.</documentation>
 </annotation>
 <restriction base="string">
```

```
    <enumeration value="WGS-1984"/>
    <enumeration value="Ordnance Survey Great Britain 1936"/>
    <enumeration value="LOCAL"/>
  </restriction>
</simpleType>
```

simpleType **fews:idString**

namespace http://www.wldelft.nl/fews/PI

type **string**

used by
- elements: fews:CrossSectionComplexType/branchId, fews:ProfileComplexType/branchId, fews:PolygonComplexType/downstreamId, fews:StateComplexType/stateId, fews:PolygonComplexType/upstreamId
- attributes: fews:BranchesComplexType/branch/@branchId, fews:LatInputComplexType/@latId, fews:LocationsComplexType/location/@locationId, fews:CrossSectionsComplexType/crossSection/@xSectionId

source

```
<simpleType name="idString">
  <restriction base="string"/>
</simpleType>
```

simpleType **fews:LocationIdSimpleType**

namespace http://www.wldelft.nl/fews/PI

type **string**

used by
- elements: fews:CellsComplexType/locationId, fews:LatInputComplexType/key/locationId, fews:MapStackComplexType/locationId, fews:PolygonComplexType/locationId, fews:ProfileComplexType/locationId, fews:HeaderComplexType/locationId

source

```
<simpleType name="LocationIdSimpleType">
  <annotation>
    <documentation>Location ID, defined by the model </documentation>
  </annotation>
  <restriction base="string"/>
</simpleType>
```

simpleType **fews:nameString**

namespace http://www.wldelft.nl/fews/PI

type **string**

used by
- elements: fews:BranchComplexType/branchName, fews:ParameterComplexType/name, fews:PolygonComplexType/name, fews:StateComplexType/stateName, fews:LocationComplexType/stationName, fews:HeaderComplexType/stationName, fews:CrossSectionComplexType/xSectionName

source

```
<simpleType name="nameString">
  <restriction base="string"/>
</simpleType>
```

simpleType **fews:ParameterSimpleType**

namespace http://www.wldelft.nl/fews/PI

type **string**

used by
- elements: fews:LatInputComplexType/key/parameter, fews:MapStackComplexType/parameterId, fews:PolygonComplexType/parameterId, fews:ProfileComplexType/parameterId, fews:HeaderComplexType/parameterId

source

```
<simpleType name="ParameterSimpleType">
  <annotation>
    <documentation>Content of the data (Discharge, Precipitation, VPD); defined by the model</documentation>
  </annotation>
  <restriction base="string"/>
</simpleType>
```

simpleType **fews:timeStepUnitEnumStringType**

namespace http://www.wldelft.nl/fews/PI

type restriction of **string**

used by
attribute **fews:TimeStepComplexType/@unit**

facets
enumeration second
enumeration minute
enumeration hour
enumeration day
enumeration week
enumeration month
enumeration year
enumeration nonequidistant

source
```
<simpleType name="timeStepUnitEnumStringType">
 <restriction base="string">
  <enumeration value="second"/>
  <enumeration value="minute"/>
  <enumeration value="hour"/>
  <enumeration value="day"/>
  <enumeration value="week"/>
  <enumeration value="month"/>
  <enumeration value="year"/>
  <enumeration value="nonequidistant"/>
 </restriction>
</simpleType>
```

simpleType **fews:TimeZoneSimpleType**

namespace http://www.wldelft.nl/fews/PI

type **double**

used by
elements **fews:MapStacksComplexType/timeZone** **fews:PolygonsComplexType/timeZone** **fews:ProfilesComplexType/timeZone** **fews:StateComplexType/timeZone** **fews:TableComplexType/timeZone** **fews:TimeSeriesComplexType/timeZone**

source
```
<simpleType name="TimeZoneSimpleType">
 <annotation>
  <documentation>The timeZone (in decimal hours shift from GMT)
      e.g. -1.0 or 3.5. If not present GMT is assumed</documentation>
 </annotation>
 <restriction base="double"/>
</simpleType>
```

simpleType **fews:versionString**

namespace http://www.wldelft.nl/fews/PI

type **string**

used by
attributes **fews:BranchesComplexType/@version** **fews:CellsComplexType/@version** **fews:CrossSectionsComplexType/@version** **fews:LatInputsComplexType/@version** **fews:LocationsComplexType/@version** **fews:MapStacksComplexType/@version** **fews:ParametersComplexType/@version** **fews:PolygonsComplexType/@version** **fews:ProfilesComplexType/@version** **fews:StateComplexType/@version** **fews:TableComplexType/@version** **fews:TimeSeriesComplexType/@version**

source
```
<simpleType name="versionString">
 <restriction base="string"/>
</simpleType>
```