Schema documentation for xbel.xsd

may 13, 2011

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Namespace: "http://www.belscript.org/schema/xbel"

Schema(s)

Main schema xbel.xsd

Namespace	http://www.belscript.org/schema/xbel
Properties	attribute form default: qualified
	element form default: qualified

Included schema xbel-annotations.xsd

Namespace	http://www.belscript.org/schema/xbel
Properties	attribute form default: qualified
	element form default: qualified

Element(s)

Element bel:comment

Namespace	http://www.belscript.org/schema/xbel
Annotations	A comment optionally used with statements.
Diagram	Comment Type xs:string xs:string
Туре	xs:string
Properties	content: simple
Used by	Elements bel:statement, bel:statementGroup
Source	<pre><xs:element name="comment" type="xs:string"> <xs:annotation> <xs:documentation>A comment optionally used with statements.</xs:documentation> </xs:annotation> </xs:element></pre>

Element bel:copyright

Namespace	http://www.belscript.org/schema/xbel
Annotations	Document copyright information.
Diagram	Copyright Type xs:string xs:string
Туре	xs:string
Properties	content: simple
Used by	Element bel:header
Source	<pre><xs:element name="copyright" type="xs:string"> <xs:annotation> <xs:documentation>Document copyright information.</xs:documentation> </xs:annotation> </xs:element></pre>

Element bel:name

Namespace	http://www.belscript.org/schema/xbel
Annotations	Document name.

Diagram	name Type xs:string
Туре	xs:string
Properties	content: simple
Used by	Elements bel:header, bel:statementGroup
Source	<pre><xs:element name="name" type="xs:string"> <xs:annotation></xs:annotation></xs:element></pre>

Element bel:version

Namespace	http://www.belscript.org/schema/xbel
Annotations	Document version information.
Diagram	version Type xs:string xs:string
Туре	xs:string
Properties	content: simple
Used by	Element bel:header
Source	<pre><xs:element name="version" type="xs:string"> <xs:annotation> <xs:documentation>Document version information.</xs:documentation> </xs:annotation> </xs:element></pre>

Element bel:contactInfo

Namespace	http://www.belscript.org/schema/xbel
Annotations	Document contact information.
Diagram	Contactinfo Type xs:string
Туре	xs:string
Properties	content: simple
Used by	Element bel:header
Source	<pre><xs:element name="contactInfo" type="xs:string"> <xs:annotation></xs:annotation></xs:element></pre>

Element bel:author

Namespace	http://www.belscript.org/schema/xbel
Annotations	Document author.
Diagram	author Type xs:string xs:string
Туре	xs:string
Properties	content: simple
Used by	Element bel:authorGroup
Source	<pre><xs:element name="author" type="xs:string"> <xs:annotation> <xs:documentation>Document author.</xs:documentation> </xs:annotation> </xs:element></pre>

Element bel:license

Namespace	http://www.belscript.org/schema/xbel
Annotations	Document license.
Diagram	license Type xs:string xs:string
Туре	xs:string
Properties	content: simple
Used by	Element bel:licenseGroup
Source	<pre><xs:element name="license" type="xs:string"> <xs:annotation> <xs:documentation>Document license.</xs:documentation> </xs:annotation> </xs:element></pre>

Element bel:disclaimer

Namespace	http://www.belscript.org/schema/xbel
Annotations	Document disclaimer.
Diagram	disclaimer Type xs:string xs:string
Туре	xs:string
Properties	content: simple
Used by	Element bel:header
Source	<pre><xs:element name="disclaimer" type="xs:string"> <xs:annotation> <xs:documentation>Document disclaimer.</xs:documentation> </xs:annotation> </xs:element></pre>

Element bel:patternAnnotation

Namespace	http://www.belscript.org/schema/xbel
Annotations	Contains a pattern-based value.
Diagram	patternAnnotation Type xs:string
Туре	xs:string
Properties	content: simple
Used by	Element bel:annotationDefinition
Source	<pre><xs:element name="patternAnnotation" type="xs:string"> <xs:annotation></xs:annotation></xs:element></pre>

Element bel:listValue

Namespace	http://www.belscript.org/schema/xbel
Annotations	Contains a list-based value.
Diagram	listValue Type xs:string xs:string
Туре	xs:string
Properties	content: simple
Used by	Element bel:listAnnotation

Element bel:uriAnnotation

Namespace	http://www.belscript.org/schema/xbel
Annotations	Value specifed by a URI resource.
Diagram	UriAnnotation Type xs:anyURI
Туре	xs:anyURI
Properties	content: simple
Used by	Element bel:annotationDefinition
Source	<pre><xs:element name="uriAnnotation" type="xs:anyURI"> <xs:annotation> <xs:documentation>Value specifed by a URI resource.</xs:documentation> </xs:annotation> </xs:element></pre>

Element bel:usage

Namespace	http://www.belscript.org/schema/xbel
Annotations	Annotation usage explaining how to filter on annotation values.
Diagram	Usage Type xs:string
Туре	xs:string
Properties	content: simple
Used by	Element bel:annotationDefinition
Source	<pre><xs:element name="usage" type="xs:string"> <xs:annotation> <xs:documentation>Annotation usage explaining how to filter on annotation values.<!-- xs:documentation--> </xs:documentation></xs:annotation> </xs:element></pre>

Element bel:description

Namespace	http://www.belscript.org/schema/xbel
Annotations	General element description.
Diagram	description Type xs:string
Туре	xs:string
Properties	content: simple
Used by	Elements bel:annotationDefinition, bel:header
Source	<pre><xs:element name="description" type="xs:string"> <xs:annotation> <xs:documentation>General element description.</xs:documentation> </xs:annotation> </xs:element></pre>

Element bel:listAnnotation

Namespace	http://www.belscript.org/schema/xbel
Annotations	Contains a list of values.

Diagram	listAnnotation ○ 1∞ bel:listValue Type xs:string
Properties	content: complex
Used by	Element bel:annotationDefinition
Model	bel:listValue+
Children	bel:listValue
Instance	<pre><bel:listannotation> <bel:listvalue>{1,unbounded}</bel:listvalue> </bel:listannotation></pre>
Source	<pre><xs:element name="listAnnotation"></xs:element></pre>

Element bel:header

Namespace	http://www.belscript.org/schema/xbel
Annotations	Provides ownership and legal context for the document.
Diagram	bel: description Type xs: string bel:version Type xs: string bel:copyright Type xs: string bel:disclaimer Type xs: string bel:disclaimer Type xs: string bel:contactinfo Type xs: string bel:contactinfo Type xs: string bel:contactinfo Type xs: string bel:authorGroup bel:licenseGroup
Properties	content: complex
Used by	Element bel:document
Model	$ALL (bel:name\ bel:description\{0,1\}\ bel:version\{0,1\}\ bel:copyright\{0,1\}\ bel:disclaimer\{0,1\}\ bel:contactInfo\{0,1\}\ bel:authorGroup\{0,1\}\ bel:licenseGroup\{0,1\})$
Children	bel:authorGroup, bel:contactInfo, bel:copyright, bel:description, bel:disclaimer, bel:licenseGroup, bel:name, bel:version
Instance	<pre></pre>
Source	<pre><xs:element name="header"> <xs:annotation></xs:annotation></xs:element></pre>

Element bel:authorGroup

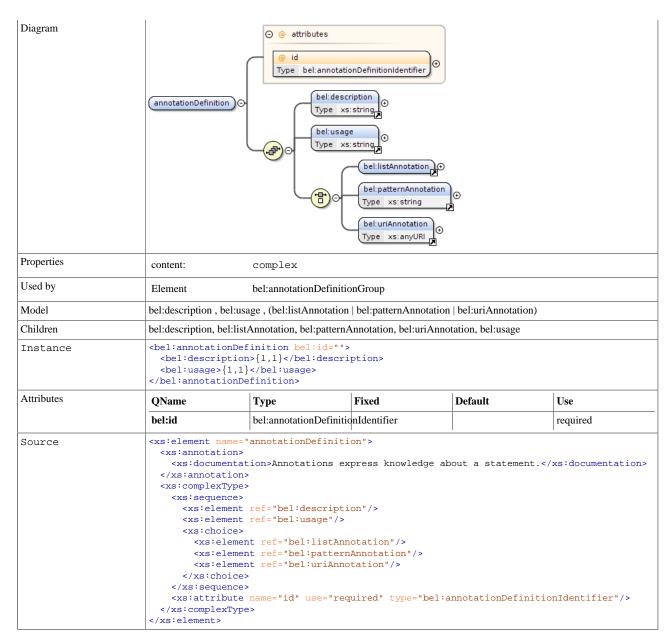
Namespace	http://www.belscript.org/schema/xbel
Annotations	Contains one or more document authors.
Diagram	authorGroup ⊙ 1∞ bel:author Type xs:string
Properties	content: complex
Used by	Element bel:header
Model	bel:author+
Children	bel:author
Instance	<pre></pre>
Source	<pre><xs:element name="authorGroup"></xs:element></pre>

Element bel:licenseGroup

Namespace	http://www.belscript.org/schema/xbel
Annotations	Contains one or more document licenses.
Diagram	licenseGroup ⊙ 1∞ bel:license Type xs:string
Properties	content: complex
Used by	Element bel:header
Model	bel:license+
Children	bel:license
Instance	<pre></pre>
Source	<pre><xs:element name="licenseGroup"></xs:element></pre>

Element bel:annotationDefinition

Namespace	http://www.belscript.org/schema/xbel
Annotations	Annotations express knowledge about a statement.



Element bel:annotation

Namespace	http://www.belsc	http://www.belscript.org/schema/xbel			
Annotations		An annotation applied to a BEL statement, referencing an annotation definition.			
Diagram	annotation Type extension of	f 'xs:string'	attributes refiD e xs:string		
Туре	extension of xs:st	ring			
Properties	content:	complex			
Used by	Element	bel:annotationGr	oup		
Attributes	QName	Туре	Fixed	Default	Use
	bel:refID	xs:string			optional
Source	<pre><xs:element <xs:annotat;<="" na="" pre=""></xs:element></pre>	ame="annotation"> ion>			

Element bel:annotationGroup

Namespace	http://www.belscript.org/schema/xbel		
Annotations	A grouping of annotations, evidences, and citations.		
Diagram	annotationGroup ○ 1∞ bel: annotation Type extension of 'xs: string' bel: evidence bel: citation bel: citation		
Properties	content: complex		
Used by	Elements bel:statement, bel:statementGroup		
Model	$(bel:annotation + \mid bel:evidence\{0,1\} \mid bel:citation\{0,1\})$		
Children	bel:annotation, bel:citation, bel:evidence		
Instance	<pre><bel:annotationgroup> <bel:annotation bel:refid="">{1,unbounded}</bel:annotation> <bel:evidence>{0,1}</bel:evidence> <bel:citation bel:type="">{0,1}</bel:citation> </bel:annotationgroup></pre>		
Source	<pre> <xs:element name="annotationGroup"></xs:element></pre>		

Element bel:evidence

Namespace	http://www.belscri	pt.org/schema/xbel
Diagram	evidence 🗇 —	restricts: xs:string
Туре	restriction of xs:str	ing
Properties	content:	simple
Facets	maxLength	4000
Used by	Element	bel:annotationGroup
Source	I	pe> ction base="xs:string"> cngth value="4000"/> iction>

Element bel:citation

Namespace	http://www.belscript.org/schema/xbel
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Annotations	Specifies info	rmation about the kno	owledge source	on which a	
Diagram	citation (O	© attributes © type ⊕ reference ⊕ name ⊕ comment ⊕ date ⊕ authorGroup ⊕			
Properties	content:	complex			
Used by	Element	bel:annotationGroup			
Model	bel:reference{0,1}	, bel:name , bel:comment{	0,1}, bel:date{0,1	1 } , bel:authorGroup{0,1	.}
Children	bel:authorGroup, b	pel:comment, bel:date, bel:	name, bel:referenc	e	
Instance	<bel:name>{1 <bel:comment <bel:date="">{0</bel:comment></bel:name>	<pre>ce>{0,1} >{0,1} ,1} roup>{0,1}</pre>			
Attributes	QName	Туре	Fixed	Default	Use
	bel:type	bel:citationType			optional
Source	<pre>cxs:element name="citation"></pre>				

Element bel:citation / bel:reference

Namespace	http://www.belscript.org/schema/xbel
Diagram	reference 🔾 xs:string
Туре	xs:string
Properties	content: simple
	minOccurs: 0

	maxOccurs: 1
Source	<pre><xs:element maxoccurs="1" minoccurs="0" name="reference" type="xs:string"></xs:element></pre>

Element bel:citation / bel:name

Namespace	http://www.belscript.org/schema/xbel	
Diagram	name	
Туре	xs:string	
Properties	content: simple	
	minOccurs: 1	
	maxOccurs: 1	
Source	<pre><xs:element maxoccurs="1" minoccurs="1" name="name" type="xs:string"></xs:element></pre>	

Element bel:citation / bel:comment

Namespace	http://www.belscript.org/schema/xbel		
Diagram	comment 🔾 xs:string		
Type	xs:string		
Properties	content: simple		
	minOccurs: 0		
	maxOccurs: 1		
Source	<pre><xs:element maxoccurs="1" minoccurs="0" name="comment" type="xs:string"></xs:element></pre>		

Element bel:citation / bel:date

Namespace	http://www.belscript.org/schema/xbel	
Diagram	date 🔾 xs:date	
Туре	xs:date	
Properties	content: simple	
	minOccurs: 0	
	maxOccurs: 1	
Source	<pre><xs:element max0ccurs="1" min0ccurs="0" name="date" type="xs:date"></xs:element></pre>	

Element bel:citation / bel:authorGroup

Namespace	http://www.belscript.org/schema/xbel
Annotations	Contains one or more citation authors.
Diagram	authorGroup ⊝ 1∞ (author) ⊕
Properties	content: complex
	minOccurs: 0
	maxOccurs: 1
Model	bel:author+
Children	bel:author
Instance	<pre></pre>
Source	<pre><xs:element maxoccurs="1" minoccurs="0" name="authorGroup"></xs:element></pre>

Element bel:citation / bel:authorGroup / bel:author

Namespace	http://www.belscript.org/schema/xbel
Diagram	author 🔾 xs:string
Туре	xs:string
Properties	content: simple
	maxOccurs: unbounded
Source	<pre><xs:element maxoccurs="unbounded" name="author" type="xs:string"></xs:element></pre>

Element bel:annotationDefinitionGroup

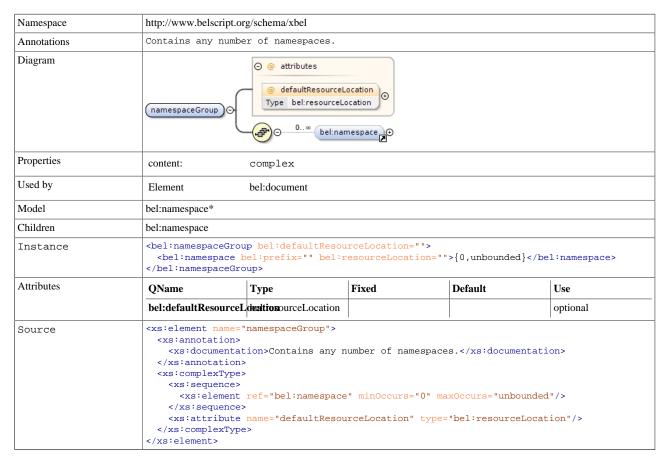
Namespace	http://www.belscript.org/schema/xbel		
Annotations	Contains one or more annotation definitions.		
Diagram	annotationDefinitionGroup ⊙ 1∞ bel: annotationDefinition ⊙		
Properties	content: complex		
Used by	Element bel:document		
Model	bel:annotationDefinition+		
Children	bel:annotationDefinition		
Instance	<pre><bel:annotationdefinitiongroup></bel:annotationdefinitiongroup></pre>		
Source	<pre><xs:element name="annotationDefinitionGroup"> <xs:annotation></xs:annotation></xs:element></pre>		

Element bel:namespace

Namespace	http://www.belsci	http://www.belscript.org/schema/xbel					
Annotations	Specifies a na statements.	Specifies a namespace whose values may be used in statements.					
Diagram	(namespace) ⊙—	namespace O e attributes O e prefix Type bel:prefix					
Properties	content:	content: complex					
Used by	Element	Element bel:namespaceGroup					
Attributes	QName	QName Type Fixed Default Use					
	bel:prefix	bel:prefix bel:prefix required					

	QName	Type	Fixed	Default	Use
	bel:resourceLocation	bel:resourceLocation			required
Source	xs:documentation> <xs:complextype> <xs:attribute< td=""><td>ion>Specifies a na name="prefix" use= name="resourceLoca</td><th>mespace whose valu "required" type="b tion" use="require</th><td>el:prefix"/></td><td></td></xs:attribute<></xs:complextype>	ion>Specifies a na name="prefix" use= name="resourceLoca	mespace whose valu "required" type="b tion" use="require	el:prefix"/>	

Element bel:namespaceGroup

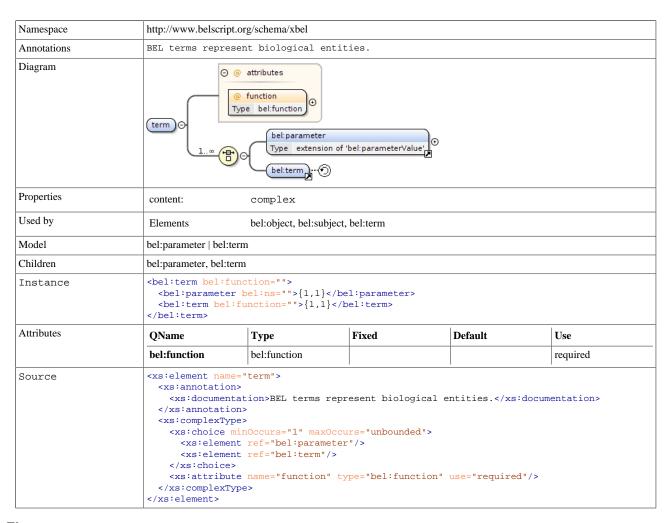


Element bel:parameter

Namespace	http://www.belscript.org/schema/xbel		
Annotations	BEL term and function parameter.		
Diagram	parameter Type extension of 'bel:par	bel:parameterValue) ① output output	
Туре	extension of bel:parameterValue		
Type hierarchy	• xs:string • bel:parameterValue		
Properties	content:	complex	
Used by	Element b	pel:term	

Attributes	QName	Type	Fixed	Default	Use
	bel:ns	xs:string			optional
Source	<pre> <xs:complextype> <xs:simplecont< td=""><th><pre>ion>BEL term and f ent> n base="bel:parame ute name="ns" type on> tent></pre></th><td></td><td><td>></td></td></xs:simplecont<></xs:complextype></pre>	<pre>ion>BEL term and f ent> n base="bel:parame ute name="ns" type on> tent></pre>		<td>></td>	>

Element bel:term



Element bel:subject

Namespace	http://www.belscript.org/schema/xbel
Annotations	Defines the subject of a statement.
Diagram	subject ⊙——bel:term ⊙
Properties	content: complex
Used by	Element bel:statement
Model	bel:term
Children	bel:term

Element bel:object

Namespace	http://www.belscript.org/schema/xbel		
Annotations	Defines the object of a statement.		
Diagram	object O bel:term O bel:statement O		
Properties	content: complex		
Used by	Element bel:statement		
Model	bel:term bel:statement		
Children	bel:statement, bel:term		
Instance	<pre><bel:object> <bel:term bel:function="">{1,1}</bel:term> <bel:statement bel:relationship="">{1,1}</bel:statement> </bel:object></pre>		
Source	<pre> <xs:element name="object"></xs:element></pre>		

Element bel:statement

Namespace	http://www.belscript.org/schema/xbel
Annotations	A statement is a specific assertion of a fact in some context: it is implicitly based on some source of knowledge, implicitly true in at least one specific situation.
Diagram	statement o bel: comment Type bel: comment Type xs: string bel: annotationGroup bel: subject bel: object comment comment
Properties	content: complex
Used by	Elements bel:object, bel:statementGroup
Model	$bel: comment \{0,1\} \ , bel: annotation Group \{0,1\} \ , bel: subject \ , bel: object \{0,1\}$
Children	bel:annotationGroup, bel:comment, bel:object, bel:subject

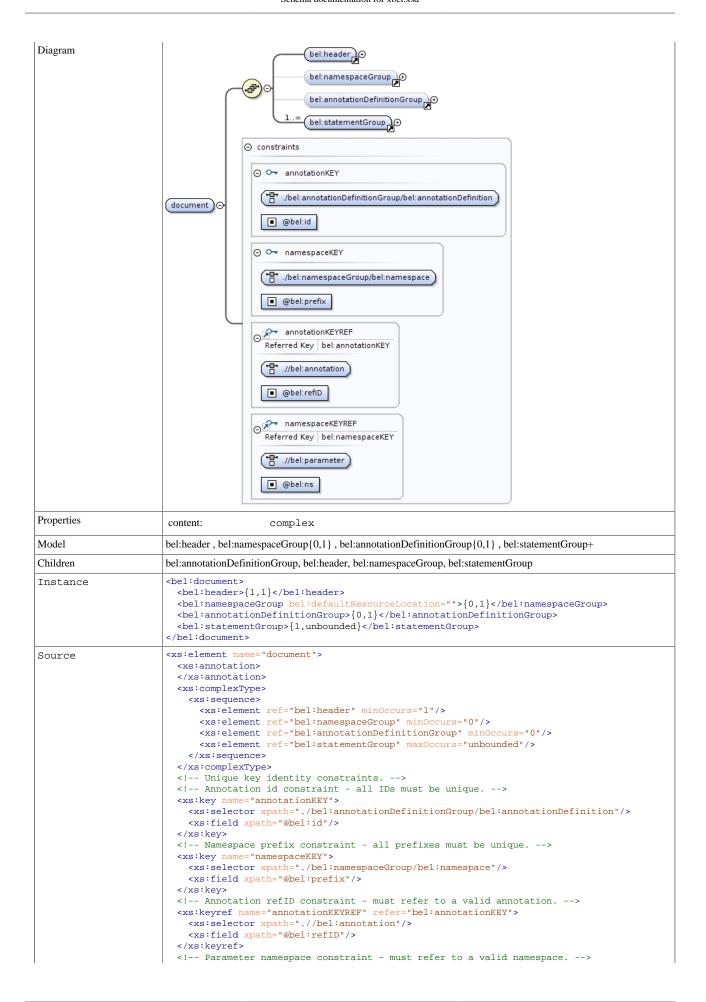
```
Instance
                        <bel:statement bel:relationship="">
                          <br/><bel:comment>\{0,1\}</bel:comment>
                          <bel:annotationGroup>\{0,1\}</pel:annotationGroup>
                          <bel:subject>{1,1}</bel:subject>
                          <bel:object>{0,1}</bel:object>
                        </bel:statement>
Attributes
                                                               Fixed
                                                                                   Default
                                                                                                      Use
                        QName
                                            Type
                        bel:relationship
                                            bel:relationship
                                                                                                      optional
Source
                        <xs:element name="statement">
                          <xs:annotation>
                            <xs:documentation>A statement is a specific assertion of a fact in some context: it is
                         implicitly based on some source of knowledge, implicitly true in at least one specific
                         situation.</xs:documentation>
                          </xs:annotation>
                          <xs:complexType>
                            <xs:sequence>
                              <xs:element ref="bel:comment" minOccurs="0"/>
                              <xs:element ref="bel:annotationGroup" minOccurs="0"/>
<xs:element ref="bel:subject"/>
                              <xs:element ref="bel:object" minOccurs="0"/>
                            </xs:sequence>
                            <xs:attribute name="relationship" type="bel:relationship"/>
                          </xs:complexType>
                        </xs:element>
```

Element bel:statementGroup

Namespace	http://www.belscript.org/schema/xbel			
Annotations	A group of BEL statements.			
Diagram	bel:name Type xs:string bel:comment Type xs:string bel:annotationGroup 0 bel:statementGroup 0 bel:statementGroup			
Properties	content: complex			
Used by	Elements bel:document, bel:statementGroup			
Model	$bel: name \{0,1\} \ , \ bel: comment \{0,1\} \ , \ bel: annotation Group \{0,1\} \ , \ bel: statement * \ , \ bel: statement Group * \)$			
Children	bel:annotationGroup, bel:comment, bel:name, bel:statement, bel:statementGroup			
Instance	<pre><bel:statementgroup></bel:statementgroup></pre>			
Source	<pre> <xs:element name="statementGroup"></xs:element></pre>			

Element bel:document

Namespace	http://www.belscript.org/schema/xbel
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Simple Type(s)

Simple Type bel:relationship

Namespace	http://www.belscript.org/schema/xbel			
Annotations	The intrinsic set of relationship types allowed in statements.			
Diagram	relationship			
Туре	restriction of xs:string			
Facets	enumeration increases			
	enumeration decreases			
	enumeration directlyIncreases			
	enumeration directlyDecreases			
	enumeration causesNoChange			
	enumeration positiveCorrelation			
	enumeration negativeCorrelation			
	enumeration translatedTo			
	enumeration transcribedTo			
	enumeration isA			
	enumeration subProcessOf			
	enumeration rateLimitingStepOf			
	enumeration bindsGene			
	enumeration biomarkerFor			
	enumeration prognosticBiomarkerFor			
	enumeration orthologous			
	enumeration analogous			
	enumeration association			
	enumeration hasMembers			
	enumeration hasComponents			
	enumeration hasMember			
	enumeration hasComponent			
Used by	Attribute bel:statement/@bel:relationship			
Source	<pre><xs:simpletype name="relationship"></xs:simpletype></pre>			

Simple Type bel:function

Namespace	http://www.belscri	http://www.belscript.org/schema/xbel			
Annotations	The intrinsic s	The intrinsic set of functions allowed in BEL term expressions.			
Diagram	function 🗇	function 🔾 xs:string			
Туре	restriction of xs:str	restriction of xs:string			
Facets	enumeration	proteinAbundance	The protein abundance BEL function.		
	enumeration	proteinModification	The protein modification BEL function for a protein abundance.		
	enumeration	substitution	The substitution BEL function for a protein abundance.		
	enumeration	truncation	The truncation BEL function for a protein abundance.		
	enumeration	rnaAbundance	The rna abundance BEL function.		
	enumeration	biologicalAbundance	The biological abundance BEL function.		
	enumeration	microRNAAbundance	The micro rna abundance BEL function.		
	enumeration	geneAbundance	The gene abundance BEL function.		
	enumeration	moleculeAbundance	The molecule abundance BEL function.		
	enumeration	biologicalProcess	The biological process BEL function.		
	enumeration	pathology	The pathology BEL function.		
	enumeration	complexAbundance	The complex abundance BEL function.		
	enumeration	translocation	The translocation BEL function.		
	enumeration	cellSecretion	The cell secretion BEL function.		
	enumeration	cellSurfaceExpression	The cell surface expression BEL function.		
	enumeration	reaction	The reaction BEL function.		
	enumeration	compositeAbundance	The composite abundance BEL function.		
	enumeration	fusionProteinAbundance	The fusion protein abundance BEL function.		
	enumeration	reactants	The reactants BEL function.		
	enumeration	products	The products BEL function.		
	enumeration	degradation	The degradation BEL function.		
	enumeration	molecularActivity	The molecular activity BEL function.		
	enumeration	catalyticActivity	The catalytic activity BEL function.		
	enumeration	kinaseActivity	The kinase activity BEL function.		
	enumeration	phosphataseActivity	The phosphatase activity BEL function.		
	enumeration	oxidoreductaseActivity	The oxidoreductase activity BEL function.		
	enumeration	peptidaseActivity	The peptidase activity BEL function.		
	enumeration	ribosylationActivity	The ribosylation activity BEL function.		
	enumeration	transcriptionalActivity	y The transcriptional activity BEL function.		
	enumeration	transportActivity	The transport activity BEL function.		
	enumeration	gtpBoundActivity	The gtp-bound activity BEL function.		
	enumeration	chaperoneActivity	The chaperone activity BEL function.		
	enumeration	list	The list BEL function.		
Used by	Attributes	@bel:function, bel:term/@bel:fur	nction		
Source	<pre><xs:annotatio< td=""><td colspan="3"><pre><xs:simpletype name="function"> <xs:annotation> <xs:documentation>The intrinsic set of functions allowed in BEL term expressions.<!-- xs:documentation--> </xs:documentation></xs:annotation></xs:simpletype></pre></td></xs:annotatio<></pre>	<pre><xs:simpletype name="function"> <xs:annotation> <xs:documentation>The intrinsic set of functions allowed in BEL term expressions.<!-- xs:documentation--> </xs:documentation></xs:annotation></xs:simpletype></pre>			

```
<xs:restriction base="xs:string">
    <xs:enumeration value="proteinAbundance">
     <xs:annotation>
        <xs:documentation>The protein abundance BEL function.</xs:documentation>
     </xs:annotation>
    <xs:enumeration value="proteinModification">
     <xs:annotation>
        <xs:documentation>The protein modification BEL function for a protein abundance.
xs:documentation>
      </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="substitution">
     <xs:annotation>
        <xs:documentation>The substitution BEL function for a protein abundance.
xs:documentation>
      </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="truncation">
     <xs:annotation>
        <xs:documentation>The truncation BEL function for a protein abundance.
xs:documentation>
      </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="rnaAbundance">
     <xs:annotation>
        <xs:documentation>The rna abundance BEL function.</xs:documentation>
   </xs:enumeration>
    <xs:enumeration value="biologicalAbundance">
     <xs:annotation>
        <xs:documentation>The biological abundance BEL function.</xs:documentation>
     </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="microRNAAbundance">
      <xs:annotation>
        <xs:documentation>The micro rna abundance BEL function.</xs:documentation>
      </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="geneAbundance">
      <xs:annotation>
       <xs:documentation>The gene abundance BEL function.</xs:documentation>
     </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="moleculeAbundance">
      <xs:annotation>
        <xs:documentation>The molecule abundance BEL function.</xs:documentation>
     </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="biologicalProcess">
      <xs:annotation>
        <xs:documentation>The biological process BEL function.</xs:documentation>
     </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="pathology">
     <xs:annotation>
        <xs:documentation>The pathology BEL function.</xs:documentation>
     </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="complexAbundance">
      <xs:annotation>
       <xs:documentation>The complex abundance BEL function.
     </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="translocation">
     <xs:annotation>
        <xs:documentation>The translocation BEL function./xs:documentation>
     </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="cellSecretion">
     <xs:annotation>
        <xs:documentation>The cell secretion BEL function.
     </xs:annotation>
    </xs:enumeration>
    <xs:enumeration value="cellSurfaceExpression">
     <xs:annotation>
        <xs:documentation>The cell surface expression BEL function.
     </xs:annotation>
    </r></r></r></r>
    <xs:enumeration value="reaction">
      <xs:annotation>
       <xs:documentation>The reaction BEL function.</xs:documentation>
      </xs:annotation>
```

```
</xs:enumeration>
<xs:enumeration value="compositeAbundance">
 <xs:annotation>
    <xs:documentation>The composite abundance BEL function.</xs:documentation>
 </xs:annotation>
<xs:enumeration value="fusionProteinAbundance">
 <xs:annotation>
   <xs:documentation>The fusion protein abundance BEL function.</xs:documentation>
 </xs:annotation>
</xs:enumeration>
<xs:enumeration value="reactants">
 <xs:annotation>
    <xs:documentation>The reactants BEL function.</xs:documentation>
 </xs:annotation>
</xs:enumeration>
<xs:enumeration value="products">
 <xs:annotation>
   <xs:documentation>The products BEL function.</xs:documentation>
</xs:enumeration>
<xs:enumeration value="degradation">
 <xs:annotation>
    <xs:documentation>The degradation BEL function.</xs:documentation>
 </xs:annotation>
</xs:enumeration>
<xs:enumeration value="molecularActivity">
 <xs:annotation>
   <xs:documentation>The molecular activity BEL function.</xs:documentation>
  </xs:annotation>
</xs:enumeration>
<xs:enumeration value="catalyticActivity">
 <xs:annotation>
   <xs:documentation>The catalytic activity BEL function.</xs:documentation>
 </xs:annotation>
</xs:enumeration>
<xs:enumeration value="kinaseActivity">
 <xs:annotation>
   <xs:documentation>The kinase activity BEL function.</xs:documentation>
 </xs:annotation>
</xs:enumeration>
<xs:enumeration value="phosphataseActivity">
 <xs:annotation>
   <xs:documentation>The phosphatase activity BEL function.</xs:documentation>
 </xs:annotation>
</xs:enumeration>
<xs:enumeration value="oxidoreductaseActivity">
 <xs:annotation>
   <xs:documentation>The oxidoreductase activity BEL function.</xs:documentation>
 </xs:annotation>
</xs:enumeration>
<xs:enumeration value="peptidaseActivity">
 <xs:annotation>
   <xs:documentation>The peptidase activity BEL function.</xs:documentation>
 </xs:annotation>
</xs:enumeration>
<xs:enumeration value="ribosylationActivity">
 <xs:annotation>
   <xs:documentation>The ribosylation activity BEL function.</xs:documentation>
 </xs:annotation>
</xs:enumeration>
<xs:enumeration value="transcriptionalActivity">
 <xs:annotation>
   <xs:documentation>The transcriptional activity BEL function.</xs:documentation>
 </xs:annotation>
</r></r></r></r></r>
<xs:enumeration value="transportActivity">
 <xs:annotation>
   <xs:documentation>The transport activity BEL function.</xs:documentation>
 </r></r></r></r>
</xs:enumeration>
<xs:enumeration value="gtpBoundActivity">
 <xs:annotation>
   </xs:annotation>
</xs:enumeration>
<xs:enumeration value="chaperoneActivity">
 <xs:annotation>
   <xs:documentation>The chaperone activity BEL function.</xs:documentation>
 </xs:annotation>
</xs:enumeration>
<xs:enumeration value="list">
 <xs:annotation>
```

Simple Type bel:annotationDefinitionIdentifier

Namespace	http://www.belscript.org/schema/xbel		
Annotations	A unique identifier referencing an annotation definition.		
Diagram	annotationDefinitionIdentifier)		
Туре	xs:NCName		
Used by	Attribute bel:annotationDefinition/@bel:id		
Source	<pre><xs:simpletype name="annotationDefinitionIdentifier"></xs:simpletype></pre>		

Simple Type bel:resourceLocation

Namespace	http://www.belscript.org/schema/xbel		
Annotations	the URI of the resource defining a namespace.		
Diagram	resourceLocation		
Туре	xs:anyURI		
Used by	Attributes @bel:namespace, bel:namespace/@bel:resourceLocation, bel:namespaceGroup/ @bel:defaultResourceLocation		
Source	<pre><xs:simpletype name="resourceLocation"> <xs:annotation> <xs:documentation>the URI of the resource defining a namespace.</xs:documentation> </xs:annotation> <xs:restriction base="xs:anyURI"></xs:restriction> </xs:simpletype></pre>		

Simple Type bel:prefix

Namespace	http://www.belscript.org/schema/xbel		
Annotations	Prefix uniquely identifying a namespace within the document.		
Diagram	prefix 🗇 — 🗸 xs:NCName		
Type	xs:NCName		
Used by	Attribute bel:namespace/@bel:prefix		
Source	<pre><xs:simpletype name="prefix"></xs:simpletype></pre>		

Simple Type bel:parameterValue

Namespace	http://www.belscript.org/schema/xbel		
Annotations	amespace values.		
Diagram	parameterValue) — xs:string		
Туре	restriction of xs:string		
Facets	minLength 1		

Used by	Element bel:parameter
Source	<pre><xs:simpletype name="parameterValue"> <xs:annotation></xs:annotation></xs:simpletype></pre>

Simple Type bel:citationType

Namespace	http://www.belscript.org/schema/xbel		
Annotations	Citation type (e.g., book, journal, online resource, other, pubmed)		
Diagram	citationType		
Туре	restriction of xs:string		
Facets	enumeration	Book	
	enumeration	Journal	
	enumeration	Online Resource	
	enumeration	Other	
	enumeration	PubMed	
Used by	Attribute	bel:citation/@bel:type	
Source	Attribute bel:citation/@bel:type <pre> <xs:simpletype name="citationType"></xs:simpletype></pre>		

Attribute(s)

Attribute @bel:function

Namespace	http://www.belscript.org/schema/xbel			
Annotations	Defines a functi	Defines a function used within a BEL term expression.		
Туре	bel:function			
Properties	content:	simple		
Facets	enumeration	proteinAbundance	The protein abundance BEL function.	
	enumeration	proteinModification	The protein modification BEL function for a protein abundance.	
	enumeration	substitution	The substitution BEL function for a protein abundance.	
	enumeration	truncation	The truncation BEL function for a protein abundance.	
	enumeration	rnaAbundance	The rna abundance BEL function.	
	enumeration	biologicalAbundance	The biological abundance BEL function.	
	enumeration	microRNAAbundance	The micro rna abundance BEL function.	
	enumeration	geneAbundance	The gene abundance BEL function.	
	enumeration	moleculeAbundance	The molecule abundance BEL function.	
	enumeration	biologicalProcess	The biological process BEL function.	
	enumeration	pathology	The pathology BEL function.	
	enumeration	complexAbundance	The complex abundance BEL function.	

	enumeration	translocation	The translocation BEL function.
	enumeration	cellSecretion	The cell secretion BEL function.
	enumeration	cellSurfaceExpression	The cell surface expression BEL function.
	enumeration	reaction	The reaction BEL function.
	enumeration	compositeAbundance	The composite abundance BEL function.
	enumeration	fusionProteinAbundance	The fusion protein abundance BEL function.
	enumeration	reactants	The reactants BEL function.
	enumeration	products	The products BEL function.
	enumeration	degradation	The degradation BEL function.
	enumeration	molecularActivity	The molecular activity BEL function.
	enumeration	catalyticActivity	The catalytic activity BEL function.
	enumeration	kinaseActivity	The kinase activity BEL function.
	enumeration	phosphataseActivity	The phosphatase activity BEL function.
	enumeration	oxidoreductaseActivity	The oxidoreductase activity BEL function.
	enumeration	peptidaseActivity	The peptidase activity BEL function.
	enumeration	ribosylationActivity	The ribosylation activity BEL function.
	enumeration	transcriptionalActivity	The transcriptional activity BEL function.
	enumeration	transportActivity	The transport activity BEL function.
	enumeration	gtpBoundActivity	The gtp-bound activity BEL function.
	enumeration	chaperoneActivity	The chaperone activity BEL function.
	enumeration	list	The list BEL function.
Source	<pre><xs:attribute name="function" type="bel:function"> <xs:annotation> <xs:documentation>Defines a function used within a BEL term expression.<!-- xs:documentation--> </xs:documentation></xs:annotation> </xs:attribute></pre>		

Attribute @bel:defaultResourceLocation

Namespace	http://www.belscript.org/schema/xbel		
Annotations	Resource location of the default namespace used by the document.		
Туре	xs:anyURI		
Properties	content: simple		
Source	<pre><xs:attribute name="defaultResourceLocation" type="xs:anyURI"></xs:attribute></pre>		

Attribute @bel:namespace

Namespace	http://www.belscript.org/schema/xbel		
Annotations	Associated namespace.		
Туре	bel:resourceLocation		
Properties	content: simple		
Source	<pre><xs:attribute name="namespace" type="bel:resourceLocation"></xs:attribute></pre>		

Attribute bel:annotationDefinition / @bel:id

Namespace	http://www.belscript.org/schema/xbel	
Type	bel:annotationDefinitionIdentifier	

Properties	use:	required
Used by	Element	bel:annotationDefinition
Source	<pre><xs:attribute name="id" type="bel:annotationDefinitionIdentifier" use="required"></xs:attribute></pre>	

Attribute bel:annotation / @bel:refID

Namespace	http://www.belscript.org/schema/xbel	
Туре	xs:string	
Properties	content:	simple
Used by	Element	bel:annotation
Source	<pre><xs:attribute name="refID" type="xs:string"></xs:attribute></pre>	

Attribute bel:citation / @bel:type

Namespace	http://www.belscript.org/schema/xbel	
Туре	bel:citationType	
Properties	content: simple	
Facets	enumeration	Book
	enumeration	Journal
	enumeration	Online Resource
	enumeration	Other
	enumeration	PubMed
Used by	Element	bel:citation
Source	<pre><xs:attribute name="type" type="bel:citationType"></xs:attribute></pre>	

Attribute bel:namespace / @bel:prefix

Namespace	http://www.belscript.org/schema/xbel	
Туре	bel:prefix	
Properties	use:	required
Used by	Element	bel:namespace
Source	<pre><xs:attribute name="prefix" type="bel:prefix" use="required"></xs:attribute></pre>	

Attribute bel:namespace / @bel:resourceLocation

Namespace	http://www.belscript.org/schema/xbel	
Туре	bel:resourceLocation	
Properties	use:	required
Used by	Element	bel:namespace
Source	<pre><xs:attribute name="resourceLocation" type="bel:resourceLocation" use="required"></xs:attribute></pre>	

Attribute bel:namespaceGroup / @bel:defaultResourceLocation

Namespace	http://www.belscript.org/schema/xbel	
Туре	bel:resourceLocation	
Properties	content:	simple
Used by	Element	bel:namespaceGroup
Source	<pre><xs:attribute name="defaultResourceLocation" type="bel:resourceLocation"></xs:attribute></pre>	

Attribute bel:parameter / @bel:ns

Namespace	http://www.belscript.org/schema/xbel	
Type	xs:string	

Properties	content:	simple
Used by	Element	bel:parameter
Source	<pre><xs:attribute name="ns" type="xs:string"></xs:attribute></pre>	

Attribute bel:term / @bel:function

Namespace	http://www.belscript.or	g/schema/xbel	
Туре	bel:function		
Properties	use:	required	
Facets	enumeration	proteinAbundance	The protein abundance BEL function.
	enumeration	proteinModification	The protein modification BEL function for a protein abundance.
	enumeration	substitution	The substitution BEL function for a protein abundance.
	enumeration	truncation	The truncation BEL function for a protein abundance.
	enumeration	rnaAbundance	The rna abundance BEL function.
	enumeration	biologicalAbundance	The biological abundance BEL function.
	enumeration	microRNAAbundance	The micro rna abundance BEL function.
	enumeration	geneAbundance	The gene abundance BEL function.
	enumeration	moleculeAbundance	The molecule abundance BEL function.
	enumeration	biologicalProcess	The biological process BEL function.
	enumeration	pathology	The pathology BEL function.
	enumeration	complexAbundance	The complex abundance BEL function.
	enumeration	translocation	The translocation BEL function.
	enumeration	cellSecretion	The cell secretion BEL function.
	enumeration	cellSurfaceExpression	The cell surface expression BEL function.
	enumeration	reaction	The reaction BEL function.
	enumeration	compositeAbundance	The composite abundance BEL function.
	enumeration	fusionProteinAbundance	The fusion protein abundance BEL function.
	enumeration	reactants	The reactants BEL function.
	enumeration	products	The products BEL function.
	enumeration	degradation	The degradation BEL function.
	enumeration	molecularActivity	The molecular activity BEL function.
	enumeration	catalyticActivity	The catalytic activity BEL function.
	enumeration	kinaseActivity	The kinase activity BEL function.
	enumeration	phosphataseActivity	The phosphatase activity BEL function.
	enumeration	oxidoreductaseActivity	The oxidoreductase activity BEL function.
	enumeration	peptidaseActivity	The peptidase activity BEL function.
	enumeration	ribosylationActivity	The ribosylation activity BEL function.
	enumeration	transcriptionalActivity	The transcriptional activity BEL function.
	enumeration	transportActivity	The transport activity BEL function.
	enumeration	gtpBoundActivity	The gtp-bound activity BEL function.
	enumeration	chaperoneActivity	The chaperone activity BEL function.
	enumeration	list	The list BEL function.
Used by	Element	bel:term	
Source	<xs:attribute name<="" td=""><td>e="function" type="bel:funct</td><td>ion" use="required"/></td></xs:attribute>	e="function" type="bel:funct	ion" use="required"/>

Attribute bel:statement / @bel:relationship

Namespace	http://www.belscript.org/schema/xbel
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Type	bel:relationship	
Properties	content:	simple
Facets	enumeration	increases
	enumeration	decreases
	enumeration	directlyIncreases
	enumeration	directlyDecreases
	enumeration	causesNoChange
	enumeration	positiveCorrelation
	enumeration	negativeCorrelation
	enumeration	translatedTo
	enumeration	transcribedTo
	enumeration	isA
	enumeration	subProcessOf
	enumeration	rateLimitingStepOf
	enumeration	bindsGene
	enumeration	biomarkerFor
	enumeration	prognosticBiomarkerFor
	enumeration	orthologous
	enumeration	analogous
	enumeration	association
	enumeration	hasMembers
	enumeration	hasComponents
	enumeration	hasMember
	enumeration	hasComponent
Used by	Element	bel:statement
Source	<xs:attribute r<="" td=""><td>name="relationship" type="bel:relationship"/></td></xs:attribute>	name="relationship" type="bel:relationship"/>