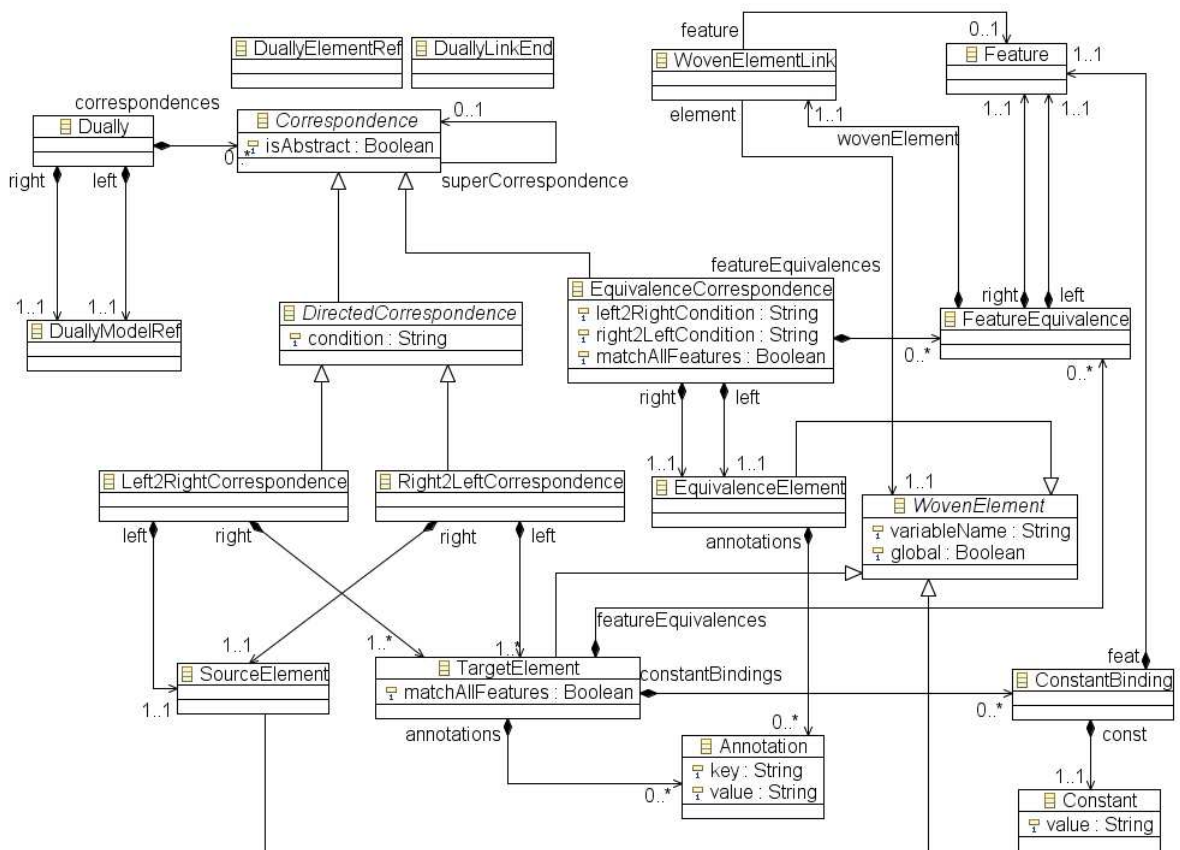


<p>DUALLy documentation</p> <p>DUALLy weaving meta-model semantics</p>	<p>Ivano Malavolta ivano.malavolta@univaq.it Department of Computer Science University of L'Aquila L'Aquila - Italy</p>
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DUALLy weaving meta-model semantics

This document explains the basic semantics of the **DUALLy** weaving meta-model. From an higher-level point of view, it describes the types of link that the meta-modeling expert can establish between the meta-models of two architectural notations. For further informations, please refer to the **DUALLy** official web-site¹ and to its “publications” section.



1 DUALLy weaving meta-model

¹ <http://dually.di.univaq.it>

Meta-element²	Description
Dually	the root element of each weaving model
<i>left</i>	reference to the left meta-model
<i>right</i>	reference to the right meta-model
<i>correspondences</i>	the semantic links contained into the DUALLY root element
DuallyElementRef	an instantiation of the WElementRef meta-class of the core AMW weaving meta-model
DuallyModelRef	an instantiation of the WModelRef meta-class of the core AMW weaving meta-model
DuallyLinkEnd	an instantiation of the WLinkEnd meta-class of the core AMW weaving meta-model
Correspondence	represents a generic mapping between elements of the woven meta-models
<i>superCorrespondence</i>	the correspondence specialized by the current correspondence (it inherits all the feature equivalences of its super correspondence)
<i>isAbstract</i>	it is <i>true</i> if the current correspondence is abstract (and should be implemented by some other correspondence), <i>false</i> otherwise
DirectedCorrespondence	represents a unidirectional correspondence
<i>condition</i>	specifies a condition that must hold in order to execute the corresponding rule of the model transformation; it is an OCL expression
Left2RightCorrespondence	a correspondence from an element of the left meta-model to one or many elements of the right meta-model
<i>left</i>	reference to the left meta-class
<i>right</i>	reference to the right meta-classes
Right2LeftCorrespondence	a correspondence from an element of the right meta-model to one or many elements of the left meta-model
<i>left</i>	reference to the left meta-classes
<i>right</i>	reference to the right meta-class
EquivalenceCorrespondence	a correspondence with bidirectional navigability
<i>left2RightCondition</i>	a condition that must hold in order to execute the corresponding rule of the <u>left2right</u> model transformation; it is an OCL expression
<i>right2LeftCondition</i>	a condition that must hold in order to execute the corresponding rule of the <u>right2left</u> model transformation; it is an OCL expression
<i>featureEquivalences</i>	reference to the nested feature equivalences
<i>matchAllFeatures</i>	if this attribute evaluates to true, then all the structural features with the same name are automatically (and implicitly) mapped
<i>left</i>	reference to the left meta-class
<i>right</i>	reference to the right meta-class

² Meta-classes are in **bold**, structural features (i.e. attributes and references) are in *italic*

WovenElement	the abstract element that indicates the extremity of a correspondence
<i>variableName</i>	represents the name of the variable assigned to the element in the generated transformation
<i>global</i>	it is true if the corresponding element is referenced by other correspondences within the weaving model
SourceElement	the source element of a directed correspondence
TargetElement	the target element of a directed correspondence
<i>featureEquivalences</i>	reference to the nested feature equivalences
<i>constantBindings</i>	reference to the nested constant bindings
<i>matchAllFeatures</i>	if this attribute evaluates to true, then all the structural features with the same name are automatically (and implicitly) mapped
<i>annotations</i>	reference to nested annotations
EquivalenceElement	represents an element of an equivalence correspondence
<i>annotations</i>	reference to nested annotations
FeatureEquivalence	defines a mapping between two structural features
<i>left</i>	reference to the left structural feature
<i>right</i>	reference to the right structural feature
<i>wovenElement</i>	reference to a nested WovenElementLink
Feature	represents a structural feature of a woven meta-class
ConstantBinding	represents a mapping between a structural feature and a specific, user-defined constant value
<i>feat</i>	reference to the structural feature
<i>const</i>	reference to the Constant element
Constant	a constant value
<i>value</i>	specifies the string representation of a constant value; it is automatically injected into the generated transformations
WovenElementLink	represents a link to a specific WovenElement of the weaving model
<i>element</i>	reference to a specific WovenElement of the weaving model
<i>feature</i>	is optional and references a specific structural feature of the corresponding woven element
Annotation	specifies that the target model of the generated transformation will be annotated
<i>key</i>	the label of the annotation to which the corresponding annotation value will be bound
<i>value</i>	what will be annotated into the model element