AchiMate-05-Relationships

Structural Relationships

Composition 组成

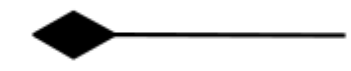
Represents that an element consists of one or more other concepts

The composition relationship has been inspired by the composition relationship in UML class diagrams.

Composition is a whole/part relationship that expresses an existence dependency: if a composite is deleted, its parts are (normally) deleted as well.

A composition relationship is always allowed between tow instances of the same element type.

In addition, the metamodel explicitly defines other source and target elements that may be connected by a composition relationship



Composition Notation

The intepretation of a composition relationship is that the whole or part of the source element is composed of the whole of the target element.

The entity at the end with the diamond is the parent of the entity on the other end (the child)

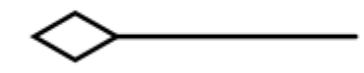
In contrast to the aggregation relationship, the composite concept can be part of only one composition

Aggregation 聚合

Represents that an element combines one or more other concepts

The aggregation relationship have been inspired by the aggregation relationship in UML class diagrams.

Unlike composition, aggregation does not imply an existence dependency



Aggregation Notation

The entity at the end with a blank diamond is considered to be the parent of the entity at the end without a diamond

In contrast to the composition relationship,

Assignment 分配

Expresses the allocation of responsibility, performance of behavior, or execution

It always points from active structure to behavior, and from behavior to passive structure

Realization 实现

Indicates that an entity plays a critical role in the creation, achievement, sustenance, or operation of a more abstract entity

Indicates that more abstract entities ("what" or "logical") are realized by means of more tangible entities (e.g., "how", or "physical", respectively.

The entity at the end without the arrow head realizes the entity at the end with an arrow head

Dependency Relationships

Influence 影响

Models that an element affects the implementation or achievement of some motivation element

This is the weakest type of dependency, and is used to model how motivation elements are influenced by other elements

Access 访问

Models the ability or behavior and active structure elements to observe or act upon passive structure elements

Represents a data dependency, denoted by a dashed line

Serving 服务

Models that an element provides its functionality to another element

Represents a control dependency, denoted by a solid line

The serving relationship describers how the services or interfaces offered by a behavior or active structure element serve entities in their environment. This relationship is applied for both the behavior and active structure aspects.

The entity at the end without the arrow head serves the entity at the end with the arrow head.

The Serving Relationship replaces the Used By Relationship

Dynamic Relationships

Triggering 触发

Describes a temporal or causal relationship between elements in a process

The usual interpretation of a triggering relationship is that the source element should be completed before the target element can start, although weaker interpretations are also premitted.

Flow 流程

Transfer from one element to another

Used to model the flow of, e.g., information, goods, or money between behavior elements

A flow relationship does not imply a causal relationship

Ohter Relationships

Specialization 细分

Specialization relationship has been inspired by the generalization relationship in UML class diagrams, but it applicable to specialize a wider range of concepts.

The specialization relationship can relate any instance of a concept with another instance of the same concept

Association 组合

The association relationship can be used when drawing a first high-level model where relationships are initially denoted in a generic way, and later refined to show more specific relationship types