Optional reference to another the ArgumentPackage that provides the detailed structure of the argument being described by the ArgumentReasoning.

Semantics

The AssertedRelationship that relates one or more Claims (premises) to another Claim (conclusion), or evidence cited by an ArtifactElementCitation to a Claim, may not always be obvious. In such cases ArgumentReasoning can be used to provide further description of the reasoning involved.

11.2.12 AssertedRelationship ~~Class~~ (abstract)

~~The~~ AssertedRelationship ~~Class~~ is the abstract association class that enables the ArgumentAssets of any structured argument to be linked together. The linking together of ArgumentAssets allows a user to declare the relationship that they assert to hold between these elements.

Superclass

Assertion

Associations

source:ArgumentAsset~~[0..*]~~

~~Reference~~ to the ArgumentAsset(s) that are the source (~~start-point~~) of the relationship.

target:ArgumentAsset~~[0..*]~~

~~Reference~~ to the ArgumentAsset(s) that are the target (~~end-point~~) of the relationship.

reasoning:ArgumentReasoning~~[0..*]~~

~~Reference to the ArgumentReasoning being described by the ArgumentReasoning.~~

Attributes
isCounter:Boolean[1] = false – a flag indicating that the AssertedRelationship counters its declared purposes (e.g. setting +isCounter = true for an AssertedEvidence indicates that the relationship is a counter-evidence).

[1..*] - reference

starting point

ending point

[0..1] – an optional reference to the a description of the reasoning underlying the AssertedRelationship.

Semantics

In SACM, the structure of an argument is declared through the linking together of primitive ArgumentAssets. For example, a sufficient inference can be asserted to exist between two claims (“Claim A implies Claim B”) or sufficient evidence can be asserted to exist to support a claim (“Claim A is evidenced by Evidence B”). An inference asserted between two claims (A – the source – and B – the target) denotes that the truth of Claim A is said to infer the truth of Claim B.

11.2.13 AssertedInference Class

The AssertedInference association class records the inference that a user declares to exist between one or more Assertion (premises) and another Assertion (conclusion). It is important to note that such a declaration is itself an assertion on behalf of the user.

Superclass

AssertedRelationship

Semantics

The core structure of an argument is declared through the inferences that are asserted to exist between Assertions (e.g., Claims). For example, an AssertedInference can be said to exist between two claims (“Claim A implies Claim B”). An AssertedInference between two claims (A – the source – and B – the target) denotes that the truth of Claim A is said to infer the truth of Claim B.

Constraints

The source of AssertedInference relationships must be Claims, or ArgumentElementCitations that cite a Claim.

The target of AssertedInference relationships must be Assertions, or ArgumentElementCitations that cite an Assertion.

11.2.14 AssertedEvidence Class

The AssertedEvidence association class records the declaration that one or more artifacts of Evidence (cited by ArtifactElementCitations) provide information that helps establish the truth of a Claim. It is important to note that such a declaration is itself an assertion on behalf of the user. The artifact (cited by an ArtifactElementCitation) may provide evidence for more than one Claim.

Superclass

AssertedRelationship

Semantics

Where evidence (cited by ArtifactElementCitation) exists that helps to establish the truth of a Claim in the argument, this relationship between the Claim and the evidence can be asserted by an AssertedEvidence association. An AssertedEvidence association between an artifact cited by an ArtifactElementCitation and a Claim (A – the source evidence cited – and B – the target claim) denotes that the evidence cited by A is said to help establish the truth of Claim B.

Constraints

The source of AssertedEvidence relationships must be ArtifactElementCitation.

The target of AssertedEvidence relationships must be Assertions, or ArgumentElementCitations that cite an Assertion.

11.2.15 AssertedChallenge Class

The AssertedChallenge association class records the challenge (i.e. counter-argument) that a user declares to exist between one or more Claims and another Claim. It is important to note that such a declaration is itself an assertion on behalf of the user.

Superclass

AssertedRelationship

Semantics

An AssertedChallenge by Claim A (source) to Claim B (target) denotes that the truth of Claim A challenges the truth of Claim B (i.e., Claim A leads towards the conclusion that Claim B is false).

Constraints

The source of AssertedChallenge relationships must be Claims, or ArgumentElementCitations that cite a Claim.

The target of AssertedChallenge relationships must be Assertions, or ArgumentElementCitations that cite an Assertion.

11.2.16 AssertedCounterEvidence Class

AssertedCounterEvidence can be used to associate evidence (cited by ArtifactElementCitations) to a Claim, where this evidence is being asserted to infer that the Claim is false. It is important to note that such a declaration is itself an assertion on behalf of the user.

Superclass

AssertedRelationship

Semantics

An AssertedCounterEvidence association between some evidence cited by an InformationNode and a Claim (A – the source evidence cited – and B – the target claim) denotes that the evidence cited by A is counter-evidence to the truth of Claim B (i.e., Evidence A suggests the conclusion that Claim B is false).

Constraints

The source of AssertedCounterEvidence relationships must be ArtifactElementCitation.

The target of AssertedCounterEvidence relationships must be Assertions, or ArgumentElementCitations that cite an Assertion.

11.2.17 AssertedContext Class

The AssertedContext association class can be used to declare that the artifact cited by an ArtifactElementCitation(s) provides the context for the interpretation and scoping of a Claim or ArgumentReasoning element. In addition, the AssertedContext association class can be used to declare a Claim asserted as necessary context (i.e. a precondition) for another Assertion or ArgumentReasoning.

Superclass

AssertedRelationship

Semantics

Contextual information often needs to be cited in order to make clear the interpretation and scope of a Claim or ArgumentReasoning description. For example, a Claim can be said to be valid only in a defined context (“Claim A is asserted to be true only in a context as defined by the information cited by Artifact B” or conversely “InformationItem B is the asserted context for Claim A”). A declaration (AssertedContext) of context (ArtifactElementCitation B) for a ReasoningElement A records that B is asserted to be contextual information required for the interpretation and scoping of A (i.e., B defines the context where the reasoning presented by A is asserted as true).