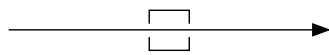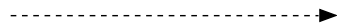**Figure C9.5 - Concrete Syntax for defeated AssertedEvidence**

A asCited AssertedEvidence indicates that the inference cites another AssertedEvidence and is hence supported by the cited AssertedEvidence. The concrete syntax of an asCited AssertedEvidence is defined in Figure C9.6 (note: the change is applied to the +target reference edge of an AssertedEvidence).

Figure C9.6 - Concrete Syntax for asCited AssertedEvidence

An abstract AssertedEvidence indicates that the inference is part of a pattern or template. The concrete syntax of an abstract AssertedEvidence is defined in Figure C9.7 (note: the change is applied to the +target reference edge of an AssertedEvidence).

Figure C9.7 - Concrete Syntax for abstract asserted AssertedEvidence

For other types of AssertedEvidence, they should be rendered in dash lines, should their +isAbstract attribute is true.

An isCounter AssertedEvidence indicates that the inference counters its declared purposes. The concrete syntax of an isCounter AssertedEvidence is defined in Figure C9.8 (note: the change is applied to the +target reference edge of an AssertedEvidence).

Figure C9.8 - Concrete Syntax for counter asserted AssertedEvidence

C.10 AssertedContext

The concrete syntax of AssertedContext is defined in Figure C10.1, where the dot represents the AssertedContext instance, the edge without an arrow represents the +source reference of the AssertedContext, and the edge with an arrow represents the +target reference of the AssertedContext.

Figure C10.1 - Concrete Syntax for asserted AssertedContext

An assumed AssertedContext indicates that the inference is assumed without any supporting evidence or argumentation. The concrete syntax of an assumed AssertedContext is defined in Figure C10.2 (note: the change is applied to the +target reference edge of an AssertedContext).

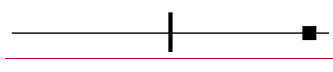**Figure C10.2 - Concrete Syntax for assumed AssertedContext**

A needsSupport AssertedContext indicates that the inference is declared as requiring further evidence or argumentation. The concrete syntax of a needsSupport AssertedContext is defined in Figure C10.3 (note: the change is applied to the +target reference edge of an AssertedContext).


Figure C10.3 - Concrete Syntax for needsSupport AssertedContext

An axiomatic AssertedContext indicates that the inference is declared to be axiomatically true. The concrete syntax of an axiomatic AssertedContext is defined in Figure C10.4 (note: the change is applied to the +target reference edge of an AssertedContext).

Figure C10.4 - Concrete Syntax for axiomatic AssertedContext
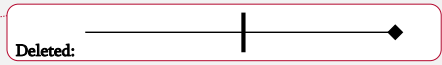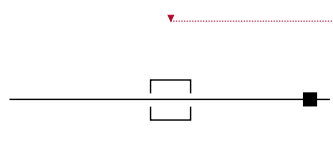
A defeated AssertedContext indicates that the inference is defeated by counter-evidence. The concrete syntax of a defeated AssertedContext is defined in Figure C10.5 (note: the change is applied to the +target reference edge of an AssertedContext).
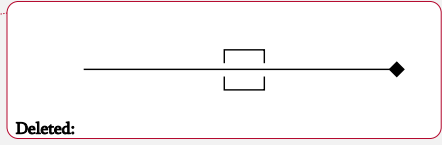

Figure C10.5 - Concrete Syntax for defeated AssertedContext

A asCited AssertedContext indicates that the inference cites another AssertedContext and is hence supported by the cited AssertedContext. The concrete syntax of a defeated AssertedInference is defined in Figure C10.6 (note: the change is applied to the +target reference edge of an AssertedContext).

Figure C10.6 - Concrete Syntax for asCited AssertedContext

An abstract AssertedContext indicates that the inference is part of a pattern or template. The concrete syntax of a defeated AssertedContext is defined in Figure C10.7 (note: the change is applied to the +target reference edge of an AssertedContext).

Figure C10.7 - Concrete Syntax for abstract asserted AssertedContext

For other types of AssertedContext, they should be rendered in dash lines, should their +isAbstract attribute is true.

An isCounter AssertedContext indicates that the inference counters its declared purposes. The concrete syntax of an isCounter AssertedContext is defined in Figure C10.8 (note: the change is applied to the +target reference edge of an AssertedContext).

Figure C10.8 - Concrete Syntax for counter asserted AssertedContext

C.11 AssertedArtifactSupport

The concrete syntax of AssertedArtifactSupport is defined in Figure C11.1, where the dot represents the AssertedArtifactSupport instance, the edge without an arrow represents the +source reference of the AssertedArtifactSupport, and the edge with an arrow represents the +target reference of the AssertedArtifactSupport.

Figure C11.1 - Concrete Syntax for asserted AssertedArtifactSupport

An assumed AssertedArtifactSupport indicates that the inference is assumed without any supporting evidence or argumentation. The concrete syntax of an assumed AssertedArtifactSupport is defined in Figure C11.2 (note: the change is applied to the +target reference edge of an AssertedArtifactSupport).

Figure C11.2 - Concrete Syntax for assumed AssertedArtifactSupport

A needsSupport AssertedArtifactSupport indicates that the inference is declared as requiring further evidence or argumentation. The concrete syntax of a needsSupport AssertedArtifactSupport is defined in Figure C11.3 (note: the change is applied to the +target reference edge of an AssertedArtifactSupport).

Figure C11.3 - Concrete Syntax for needsSupport AssertedArtifactSupport

An axiomatic AssertedArtifactSupport indicates that the inference is declared to be axiomatically true. The concrete syntax of an axiomatic AssertedArtifactSupport is defined in Figure C11.4 (note: the change is applied to the +target reference edge of an AssertedArtifactSupport).
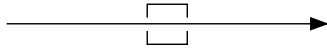
Figure C11.4 - Concrete Syntax for axiomatic AssertedArtifactSupport

A defeated AssertedArtifactSupport indicates that the inference is defeated by counter-evidence. The concrete syntax of a defeated AssertedArtifactSupport is defined in Figure C11.5 (note: the change is applied to the +target reference edge of an AssertedArtifactSupport).
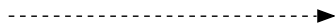
Figure C11.5 - Concrete Syntax for defeated AssertedArtifactSupport

A asCited AssertedArtifactSupport indicates that the inference cites another AssertedArtifactSupport and is hence supported by the cited AssertedArtifactSupport. The concrete syntax of a defeated AssertedInference is defined in Figure C11.6 (note: the change is applied to the +target reference edge of an AssertedArtifactSupport).

Figure C11.6 - Concrete Syntax for asCited AssertedArtifactSupport

An abstract AssertedArtifactSupport indicates that the inference is part of a pattern or template. The concrete syntax of a defeated AssertedArtifactSupport is defined in Figure C11.7 (note: the change is applied to the +target reference edge of an AssertedArtifactSupport).

Figure C11.7 - Concrete Syntax for abstract asserted AssertedArtifactSupport

For other types of AssertedArtifactSupport, they should be rendered in dash lines, should their +isAbstract attribute is true.

An isCounter AssertedArtifactSupport indicates that the inference counters its declared purposes. The concrete syntax of an isCounter AssertedArtifactSupport is defined in Figure C11.8 (note: the change is applied to the +target reference edge of an AssertedArtifactSupport).

Figure C11.8 - Concrete Syntax for counter asserted AssertedArtifactSupport

Note: although the graphical notation of AssertedArtifactSupport is similar to AssertedInference/AssertedEvidence, they are distinguishable through the types of elements that the +source and +target references connect to.

C.12 AssertedArtifactContext

The concrete syntax of AssertedArtifactContext is defined in Figure C12.1, where the dot represents the AssertedArtifactContext instance, the edge without an arrow represents the +source reference of the AssertedArtifactContext, and the edge with an arrow represents the +target reference of the AssertedArtifactContext.

Figure C12.1 - Concrete Syntax for asserted AssertedArtifactContext

An assumed AssertedArtifactContext indicates that the inference is assumed without any supporting evidence or argumentation. The concrete syntax of an assumed AssertedArtifactContext is defined in Figure C12.2 (note: the change is applied to the +target reference edge of an AssertedArtifactContext).

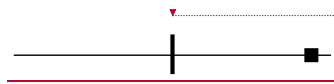
Figure C12.2 - Concrete Syntax for assumed AssertedArtifactContext

A needsSupport AssertedArtifactContext indicates that the inference is declared as requiring further evidence or argumentation. The concrete syntax of a needsSupport AssertedArtifactContext is defined in Figure C12.3 (note: the change is applied to the +target reference edge of an AssertedArtifactContext).

Figure C12.3 - Concrete Syntax for needsSupport AssertedArtifactContext

An axiomatic AssertedArtifactContext indicates that the inference is declared to be axiomatically true. The concrete syntax of an axiomatic AssertedArtifactContext is defined C12.4 (note: the change is applied to the +target reference edge of an AssertedArtifactContext).
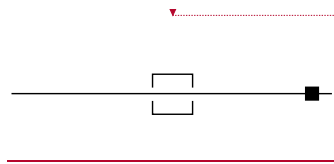

Figure C12.4 - Concrete Syntax for axiomatic AssertedArtifactContext

A defeated AssertedArtifactContext indicates that the inference is defeated by counter-evidence. The concrete syntax of a defeated AssertedArtifactContext is defined as below (note: the change is applied to the +target reference edge of an AssertedArtifactContext).

Figure C12.5 - Concrete Syntax for defeated AssertedArtifactContext

A asCited AssertedArtifactContext indicates that the inference cites another AssertedArtifactContext and is hence supported by the cited AssertedArtifactContext. The concrete syntax of a defeated AssertedInference is defined as below (note: the change is applied to the +target reference edge of an AssertedArtifactContext).

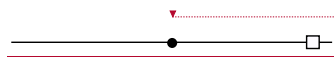**Figure C12.6 - Concrete Syntax for asCited AssertedArtifactContext**

An abstract AssertedArtifactContext indicates that the inference is part of a pattern or template. The concrete syntax of a defeated AssertedArtifactContext is defined as below (note: the change is applied to the +target reference edge of an AssertedArtifactContext).

**Figure C12.7 - Concrete Syntax for abstract asserted AssertedArtifactContext**

For other types of AssertedArtifactContext, they should be rendered in dash lines, should their +isAbstract attribute is true.

An isCounter AssertedArtifactContext indicates that the inference counters its declared purposes. The concrete syntax of an isCounter AssertedArtifactContext is defined in Figure C12.8 (note: the change is applied to the +target reference edge of an AssertedArtifactContext).

**Figure C12.8 - Concrete Syntax for counter asserted AssertedArtifactContext**

Note: although the graphical notation of AssertedArtifactContext is similar to AssertedContext, they are distinguishable through the types of elements that the +source and +target references connect to.
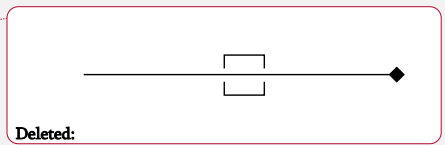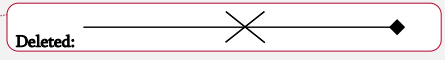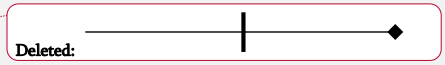
For example, Claim G4 is supported by Evidence E1 (cited by ArtifactReference), connected via AssertedEvidence relationship.
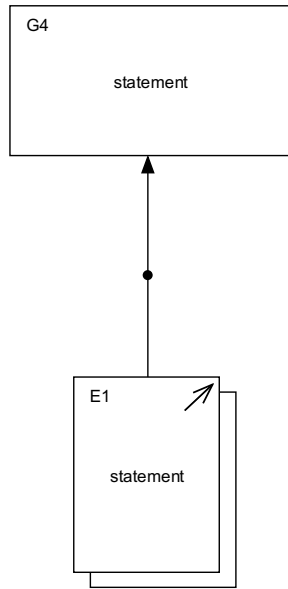
Figure D9 – Example of ArtifactReference Citation via AssertedEvidence

In another case, ArtifactReference as evidence can be used to support another ArtifactReference, for example ArtifactReference as context, to provides evidential information. In this case, ArtifactReference as evidence E2 is declared to support ArtifactReference as context C1. The ArtifactReference as evidence E2 is located below ArtifactReference C1. The relationship between them is declared using the AssertedArtifactSupport.
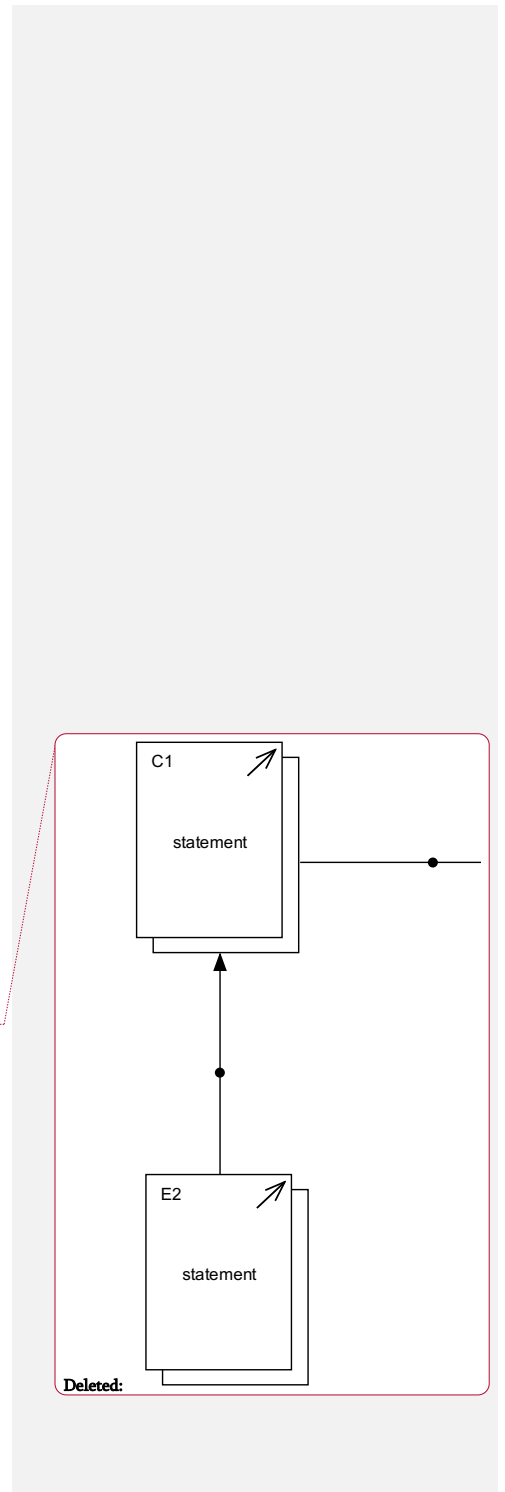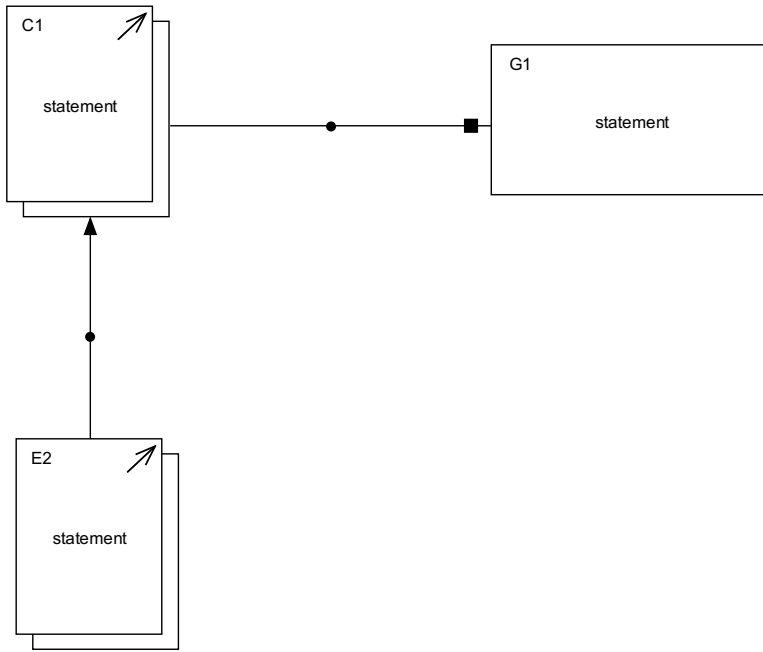
Figure D10 – Example of ArtifactReference Support of Another ArtifactReference

D.5 AssertedContext

AssertedContext can be used to declare that the artifact (cited by an ArtifactReference) provides the context for the interpretation and scoping of a Claim. When used in a diagram, the source element of the AssertedContext must be an ArtifactRefence element, and the targeted element can be the Assertion type element (e.g. Claim). The location of the ArtifactReference as a context must be located on the left and right side of the targeted element.

For example, ArtifactReference C1 as a context provides contextual information to the Claim G1 that is connected using AssertedContext relationship.
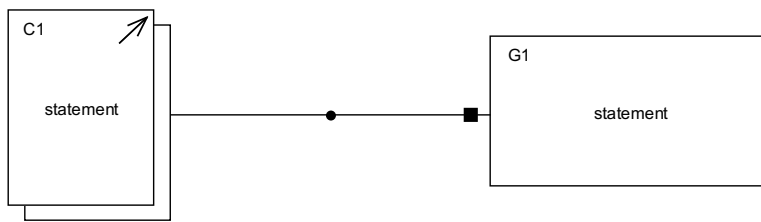

Figure D11 – Example of AssertedContext

In another case, ArtifactReference as context can be used to provides contextual information to another ArtifactReference (as evidence). In this case, ArtifactReference as context C2 is located on the right side of the ArtifactReference as evidence E1. The relationship between them is declared using the AssertedArtifactContext relationship.
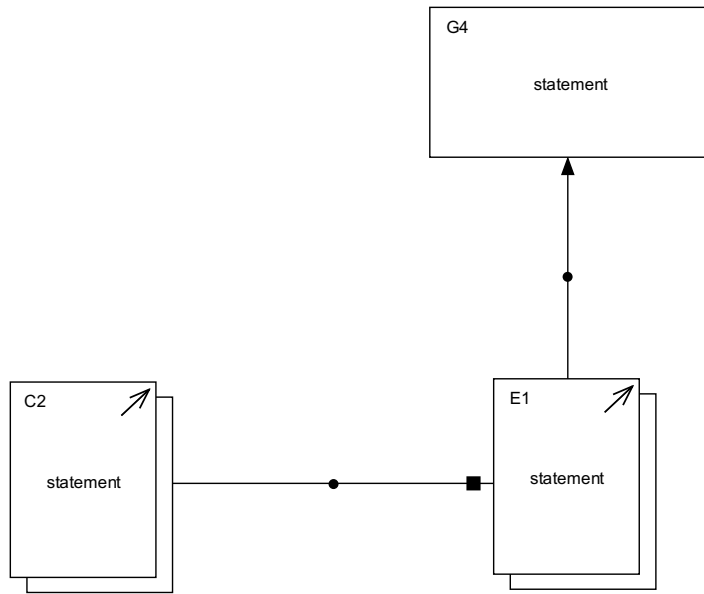

Figure D12 – Example of AssertedContext