**Traceability Model Specifications**

-- Classes

abstract class TraceElement

attributes

uri: String

end

class TraceabilityRoot

attributes

name : String

end

class Constraint

attributes

type : String

value : String

language: String

end

class Characterization

attributes

type : String

domain :String

granularity : String

end

class Version

attributes

owner: String

modifiedBy: String

modifiedOn: String

time: String

baseline: String

end

class Trace < TraceElement

end

class Artifact < TraceElement

end

class TraceLink < TraceElement

end

**-- Associations**

composition traceElement between

TraceabilityRoot [1]

TraceElement[1..\*]

end

aggregation orderedElements between

Trace[0..1]

TraceElement[0..\*]

End

aggregation constraint between

TraceabilityRoot[0..1]

Constraint [0..\*]

end

composition version between

TraceElement[1..\*]

Version [0..\*]

end

association target between

TraceLink[0..\*] role linkEnd

Artifact [1..\*] role target

end

association source between

Artifact [1..\*] role source

TraceLink[0..\*] role linkStart

end

composition description between

TraceElement[1..\*]

Characterization [0..\*]

end

constraints

context TraceLink

inv test:

self.source <> self.target

constraints

context Trace inv:

if self.orderedElements->forAll(e|e.oclIsKindOf(Artifact)) then

Sequence{1..self.orderedElements->size()-1}->iterate(i : Integer; b : Boolean = true | b and self.orderedElements->at(i).oclAsType(Artifact).

sourceTraceLinks.targetArtifacts->includes(self.orderedElements->at(i+1)))

else if self.orderedElements->forAll(e|e.oclIsKindOf(TraceLink)) then

Sequence{1..self.orderedElements->size()-1}->iterate(i : Integer; b : Boolean = true | b and self.orderedElements->at(i).oclAsType(TraceLink).targetArtifacts->intersection(

self.orderedElements-> at(i+1).oclAsType(TraceLink).sourceArtifacts)->notEmpty())

endif

endif

**Read Me –Traceability Model**

In order to visualize the Traceability model in USE tool, follow the following steps:

1. Install the USE on your computer. For Installation and tutorial of USE, follow this Link: https://sourceforge.net/projects/useocl/
2. Create new file in in Word Pad.
3. Copy and paste the specifications of the Traceability model to the newly created file.
4. Save the file in a computer directory.
5. Open the USE tool (the .exe file is inside the bin directory of the tool folder)
6. From the *File* menu in the Menu bar click on *Open specification* and choose the file that you created.
7. To view the Class diagram from the *View* menu bar click on Create *View and choose Class* Diagram