
OCL CONSTRAINTS

Carlos Sáenz-Adán^{1*}, Beatriz Pérez¹, Francisco J. García-Izquierdo¹, Luc Moreau²

¹*Dept. of Mathematics and Computer Science, Univ. of La Rioja, La Rioja, Spain,*

{carlos.saenz,beatriz.perez,francisco.garcia}@unirioja.es

²*Dept. of Informatics, King's College London, London, UK,*

luc.moreau@kcl.ac.uk

These constraints (from OCL1 to OCL5) mainly impose interconnections among (OCL1 and OCL2) senders/receivers in SqD and objects modelled by SMD, (OCL3 and OCL4) incoming/outgoing messages in SqD with events/actions in SMD, and (OCL5) incoming messages in SqD with methods in objects modelled by SMD.

(OCL1-2) Each sender of a message in an interaction of a SqD must be an object modelled by a SMD. The same constraint is defined for a receiver, changing sender by receiver.

```
context: Interaction
inv: self.message.sender.base.behavior &#x27;> notEmpty ()
```

(OCL3) Incoming messages to an object within a SqD are events in a SMD.

```
context: Message
inv: self.receiver.base.behavior.region.transition.trigger->exists(e|e.name=self.name)
```

(OCL4) Outgoing messages of an object within a SqD are actions in a SMD.

```
context: Message
inv: self.sender.base.behavior.region.transition.effect->exists(e|e.name=self.name)
```

(OCL5) Incoming messages of an object (receiver) within SqD must be object's methods.

```
context: Message
inv: let rec:ClassifiedRole = self.receiver in
      let ops:Operation = rec.base.ownedOperation in
      ops -> exists(oper| oper.name = self.name)
```