

# Interactions

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## 1 Introduction

This document is only a sequel of notes and remarks on the way Interactions are implemented in Siconos.

It has to be completed, reviewed, reorganized etc etc for a future Developers' Guide.  
See also documentation in Doc/User/Interaction.

## 2 Class Diagram

## 3 Description

### 3.1 Redaction note F. PERIGNON

review of interactions (for EventDriven implementation) 17th May 2006.

- variable *nInter* renamed in *interactionSize*: represents the size of  $y$  and  $\lambda$ . NOT the number of relations !!
- add a variable *nsLawSize* that depends on the non-smooth law type.  
Examples:
  - NewtonImpact -> *nsLawSize* = 1
  - Friction 2D -> *nsLawSize* = 2
  - Friction 3D -> *nsLawSize* = 3
  - ...
  - *nsLawSize* = n with n dim of matrix D in :  $y = Cx + D\lambda$ , D supposed to be a full-ranked matrix.  
Warning: this case is represented by only one relation of size n.
- *numberOfRelations*: number of relations in the interaction,  $numberOfRelations = \frac{interactionSize}{nsLawSize}$ .