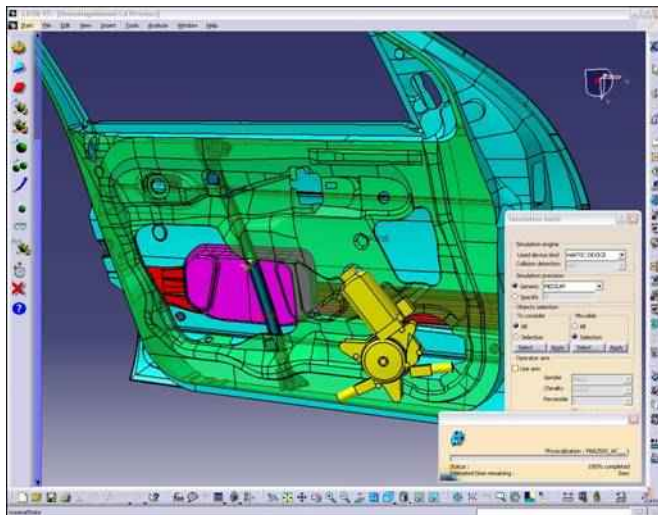


# h a p t i o n V I R T U A L T O U C H

## Product | Software

### IFC Core

### Interactive Fitting for Catia V5 R16



"IFC Core" Interactive Fitting for Catia is a software add-on to Catia V5™ R16 and Delmia DPM Assembly. It enables interactive real-time assembly simulation with force-feedback inside DMU Navigator™.

Using IFC Core, you reduce the time needed for :

- ⇒ **Assembly** process validation,
- ⇒ **Disassembly** testing,
- ⇒ **Ergonomic** study,
- ⇒ **Operator** Training.

Furthermore, you can benefit from the know-how of expert operators inside the digital mock-up.

#### Key Features

- ⇒ Easy to set up simulation with collisions, weight, constraints
- ⇒ Include IPSI Package

#### Technical Requirements

- ⇒ Catia V5 R16 SP02 DM2/3
- ⇒ Hardware: valid configuration certified by Dassault System. (\*)
- ⇒ IPSI Server

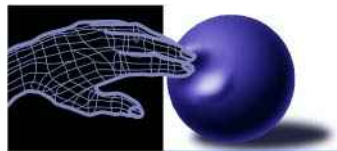
#### Reference customers

- ⇒ PSA Peugeot Citroën
- ⇒ RENAULT

#### 3D real-time interactive physics Experience

IFC Core lets you:

- Connect to the IPSI server
- Manage the simulation: start, stop, pause, resume
- Manage the type of device: with force-feedback Haption Virtuose and Inca and without force-feedback 6D USB mouse from 3D connexion and Optical Tracking from ART
- Manage the collision process: attach and detach 3D objects to the manipulation device. Also activate or deactivate the collision during a certain time.
- The dynamic engine is able to run in real-time the collisions detection and the contact simulation.
- The collision is visible by some red balls in superposition of visualization 3D.

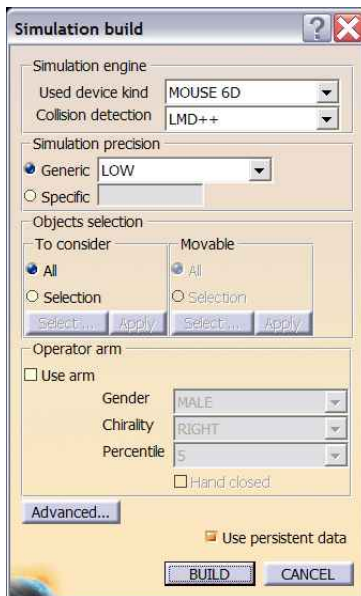


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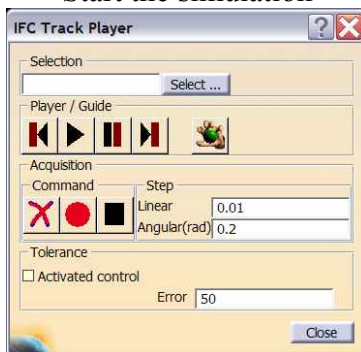
## Product | Software

⇒ DASSAULT AVIATION

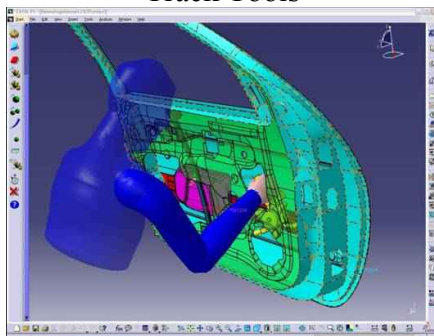
- Realtime motion using the 6 degrees of freedom input device (6D mouse, ART) and Realtime force feedback in 6 degrees of freedom (haptic device).
- Indexing all the 6 degrees-of-freedom.



Start the simulation



Track Tools



Manikin Simulation

### Load 3D objects

IFC integrates a compute program, which creates persistent data needed by the collision detection process. The data can be stored on files for fast reloading of the simulation experience.

This tools can physicalize any type of 3D loaded in the viewer of Catia V5 (included Catia V4, CGR, VRML, ...)

The user can specify the geometric resolution before load or create the physic data.

The user can add weight of moving part.

### Kinematics Constraint

IFC Core provides kinematic constraints (virtual mechanicals joints) between objects or between one object and the world: Prismatic, plane, translation, hinge, ball-and-socket, etc.

### Real-Time Recording Trajectory

IFC Core provides way to record track with the device, store as a DMU track, which can permit to replay. The user can use this track like a virtual guide.

### Insertion of a arm of Manikin in the Simulation

The user can load and manage a manikin coming from the human builder workbench. The manikin can be manipulated by the user. IFC Core manage in real-time the kinematic of the arm, the collisions between the manikin and the environment.

### Colocalisation in immersive mode (P3)

In immersive mode, the graphic representation of the manipulated object must be able to be superposed with the grip of the manipulation device (also called prop)

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