INTERACTIVE FITTING FOR SOLIDWORKS™
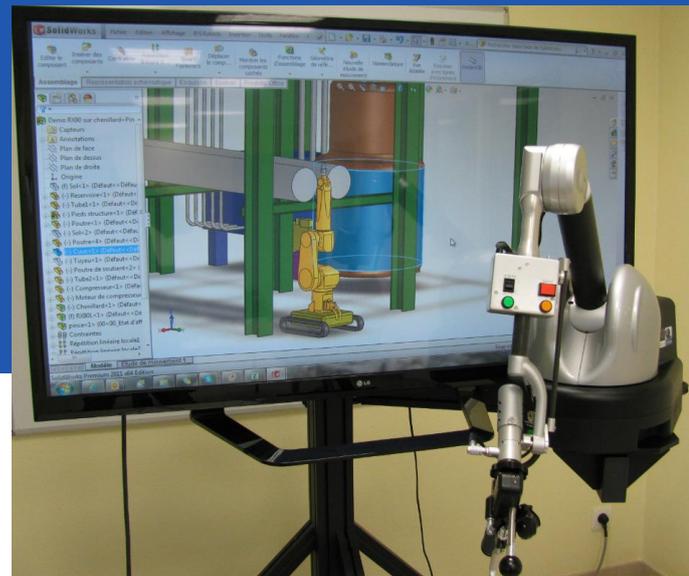
haption

ƷS SOLIDWORKS

IFS Core and Robotics are a software add-on for Dassault Systemes Solidworks™. It enables interactive real-time simulation and robotics capabilities inside a digital mockup, while maintaining all basic functions.
The user can simulate : Assembly simulation, Workplace simulation, Collaboration work, Accessibility testing, Operator training with force feedback

#Digital Mockup   **#Robotics**   **#Solidworks**

3D REAL-TIME INTERACTION AND SIMULATION
- ✔ IFS Core: realtime animation of part with collision detection
  - ✔ Geometry conversion: IFS Robotic sends tessellated data to the IPSI Server, which is used for collision detection between objects. The visual tessellation is used, so that any kind of model visible inside the SolidWorks window can be activated in the physics.
  - ✔ Simulation set-up: Easy control start, stop, resume
  - ✔ Realtime Animation of part with physics:
    - ✔ Create physics
    - ✔ Animate and visualize clash in realtime
    - ✔ Support for haptic interface
    - ✔ Support weight
    - ✔ Create container
    - ✔ Manage the tolerance
- ✔ IFC Robotics: Realtime animation of a robot
  - ✔ Geometry conversion: The robot kinematic should be describe in a XML file
  - ✔ Manipulate robots: attach and detach to Cartesian interaction devices, manipulate joint by joint, activate/deactivate collision detection
  - ✔ Connect a Tool to the effectors of the robots.
  - ✔ Manipulate Tools: joint by joint, attach and detach to the trigger of the interaction devices, freeze the effector
  - ✔ Visualize collision points on the screen
  - ✔ Record the joints movement of the robot
  - ✔ Record Cartesian crossing point
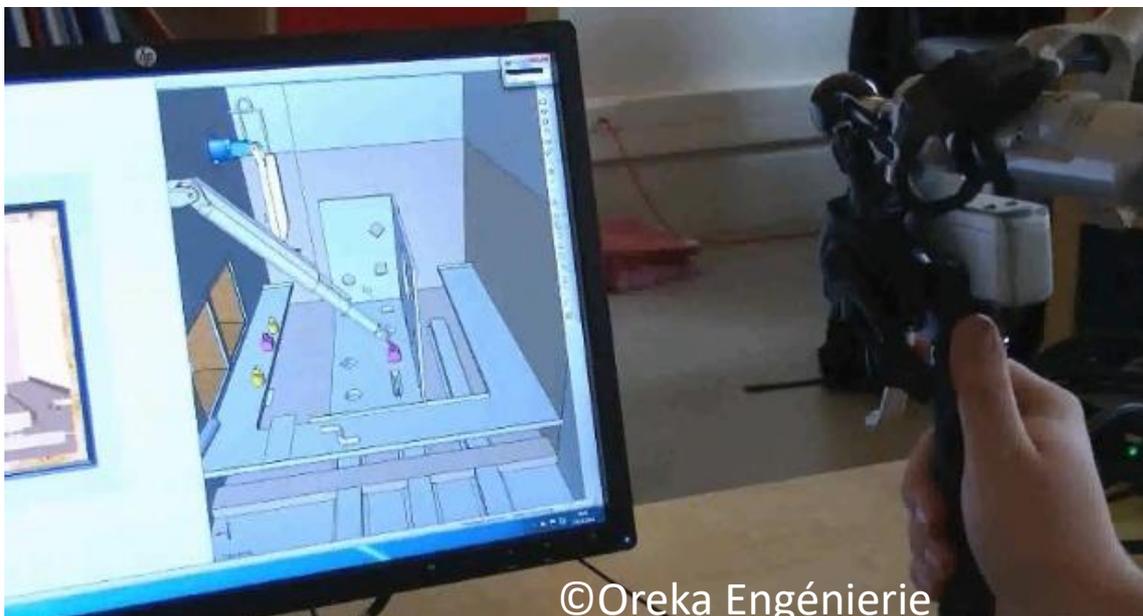 - ✔ Apply manipulation constraints (hinge, prismatic, plane, ball-and-socket)

- ✔ Supported devices:
  - ✔ Force feedback: Haption's product Virtuose, Able, Inca6D
  - ✔ IFS Robotics is compatible with the TREH griper from the Virtuose 6D TAO
  - ✔ 3d mouse: 3Dconnexion

TECHNICAL SPECIFICATION

PC Configuration	Dassault Systemes supported configuration, with minimum 32 G of RAM, quad-core, and dedicated Ethernet for the realtime input device

PREREQUISITE

Haption	1 license of IPSI Server
Dassault Systèmes	License SolidWorks from 2017 to 2021

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