



Virtual Touch

HAPTION designs, manufactures and sells haptic devices with professional quality, suited to the needs of its customers, both industrial and academic.

Our products provide force-feedback on all 6 degrees-of-freedom (translations and rotations). Without 6-dof, it is impossible to simulate complex interactions between 3D objects.

Professional force-feedback

Our haptic devices have their own computing resources, in order to reduce the CPU load of the workstation. Using our haptic library VIRTUOSE™ API, real-time constraints are managed by the haptic device itself, which communicates with your applications at their own pace, while guaranteeing the stability. Our products are modular, and we can adapt them to your specific needs. Using our partners network, we have the capacity to develop turn-key applications, in all domains where force-feedback can be relevant.

- VIRTUAL REALITY**
- COMPUTER-AIDED DESIGN**
- MEDICAL TRAINING**
- FUNCTIONAL REHABILITATION**
- TELE-OPERATION IN HOSTILE ENVIRONMENT**
- TELE-SURGERY**

Virtuose 6Ddesktop

The VIRTUOSE 6Ddesktop is a 6D haptic interface (6-dof with force-feedback). Based on the same software and the same API as our other products, it also offers 6-dof admittance control, 6-dof indexing, etc.

- Workspace: 120 mm
- Maximum force: 10 N
- Continual force: 3 N
- Maximum torque: 0,5 Nm
- Continuous torque: 0,14 Nm



Virtuose 6D35-45

The VIRTUOSE 6D35-45 is the only product on the market today, which offers force-feedback on all 6 degrees-of-freedom together with a large workspace. It is especially recommended for scale 1 manipulation of virtual objects such as assembly/disassembly simulation, ergonomic studies, or maintenance training. Modular in design, it can be purchased as a 3-dof device, and later upgraded to 6-dof.

- Workspace: 450 mm
- Maximum force: 35 N
- Continual force: 10 N
- Maximum torque: 3 Nm
- Continuous torque: 1 Nm



INCA 6D

The INCA 6D is a 6 degrees-of-freedom haptic device, specifically designed for work in Virtual Reality environments, and based on tensed cables. Thanks to its large workspace and its high forces, it enables a scale one interaction with digital models coming from CAD. Its main applications are feasibility studies, accessibility studies, assembly simulation, project review.

- Workspace: Up to 2.5 m (depends on configuration)
- Maximum force: 37,5 N
- Continual force: 12,5 N
- Maximum torque: 5 Nm
- Continuous torque: 1,5 Nm



Haption presents → Software family

Physical interaction for the industry

By adding real-time physics simulation to a CAD 3D visual environment, Haption software technologies achieve a natural interaction with the digital mock-up. For manufacturing and maintenance, the haptic-enabled virtual prototype effectively replaces the physical prototype, and support applications such as:

ASSEMBLY/DISASSEMBLY
ERGONOMIC ANALYSIS
FUNCTIONAL TESTS
WORKPLACE SIMULATION
OPERATOR TRAINING

CAAV5
BASED

IFC Core

"IFC Core" **Interactive Fitting for Catia** is a software add-on to Catia V5™ DMU Navigator™. Based on the world-renown collision detection library VPS™, it enables interactive real-time assembly simulation with force-feedback. Using IFC Core, you reduce the time needed for assembly process validation. Furthermore, you can benefit from the know-how of expert operators inside the digital mock-up.

- Work with any kind of Catia data: CATPart, CGR, ...
- Feel contact forces and gravity
- Add kinematics constraints with DMU Kinematics™
- Record trajectories as Catia tracks
- Control the precision down to sub-millimeter levels
- Use any kind of Virtuose and INCA 6D device, Optical Tracking, 6D USB mouse from 3DConnexion
- Check the accessibility for the worker's arm

Catia V5, Delmia, DMU and DPM are trademarks of Dassault Systemes
VPS is a trademark of The Boeing Company

IFC Human

Additional module to IFC Core, IFC Human is dedicated to the interactive simulation of virtual mannequins. It is an invaluable tool for ergonomic studies, workplace optimization, and plant design.

- Compliant with Human Builder
 - ✓ Import mannequin definition from Human Builder
 - ✓ Select active degrees-of-freedom
 - ✓ Update mannequin position in real-time
- Calibrate the body trackers automatically
- Use any kind of Virtuose and INCA 6D device, Optical Tracking, 6D USB mouse from 3D Connexion
- Grasp objects, either automatically or with Finger Tracking from ART
- Record trajectories and generate technical documentation

RTI Human

"RTI" **Real-Time Interaction for Delmia Human** is a special integration of the IFC Human functionalities into Delmia V5™, with added support of PPR and Human Task data structures. With RTI, you produce realistic animations of your Delmia manikins with small effort.

IPSI

IFC is based on a client/server sw. technology independent of the end-user application, called IPSI (for Interactive Physics Simulation Interface). IPSI-enabled applications today include Virtools, SolidWorks, and more to come soon...

How can a designer
or a production
planner validate
complex operations
in early phases of
product
development?

The Haption
software family IFC
Core/ IFC Human/
RTI Human enables
users of Catia and
Delmia to
save costs & time

in the design of
complex 3D objects:
minimize technical
risks, reduce time-
to-market, increase
product quality,
improve
manufacturing
processes.

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