



A spin-off of CEA (French Nuclear Research Agency), HAPTION benefits from results and know-how developed in more than 30 years of research. 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 the interaction between 3D objects.



Force-feedback for the industry

Haptics is a new productivity tool for the industry, very much like CAD⁽¹⁾ and PLM⁽²⁾. Using force-feedback, it is possible to simulate on the digital mock-up all operations needed for the new product, as early as the design stage, and without physical prototypes. Assembly/disassembly tasks, maintenance, and all-day use can be tested and rehearsed on a virtual prototype:

**ERGONOMIC ANALYSIS
FUNCTIONAL TESTS
ASSEMBLY/DISASSEMBLY
WORKPLACE SIMULATION
OPERATOR TRAINING**

Professional force-feedback

HAPTION also manufactures generic products for a large range of applications and professional simulators:

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

(1) Computer Aided Design

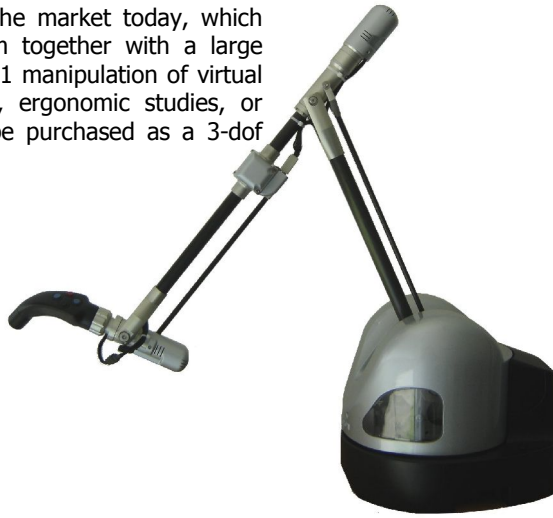
(2) Product Lifecycle Management

Haption presents → the virtuose™ family

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



Virtuose 3D15-25

The VIRTUOSE 3D15-25 is a 3D haptic interface (3-dof with force-feedback and 3-dof with position sensors). 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: 250 mm
- Maximum force: 15 N
- Continual force: 5 N
- Stiffness: ca 800 N/m

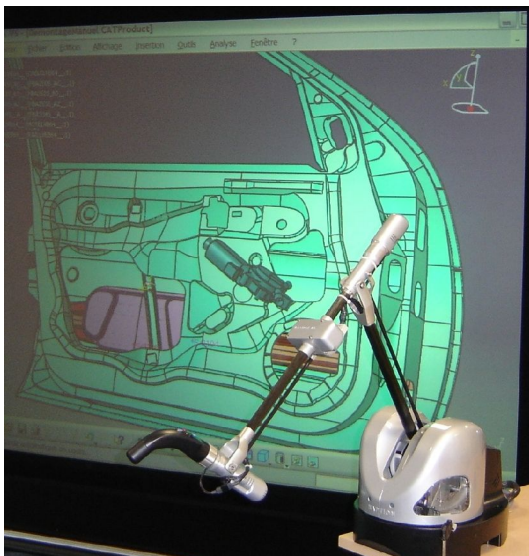


i-Fitting/VPS

"Interactive Fitting, VPS™-based" is a software add-on to Catia V5™. It enables interactive real-time assembly simulation with force-feedback inside DMU Navigator™. Using i-Fitting/VPS, 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
- Record tracks as Catia paths
- Control the precision down to sub-millimeter levels
- Use any kind of VIRTUOSE device

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



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 VIRTUOSE™ 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.

HAPTION S.A.

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