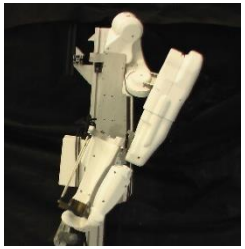
Hardware Products

Virtuose 6D Desktop

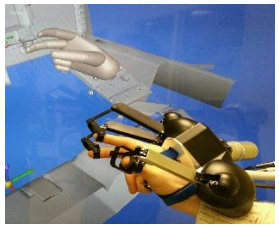
Virtuose 6D



Able

Inca 6D

Scale 1



HGlove

Software Products

IPSI: Module for simulation of interactive physics, supporting force-feedback and motion capture.

Native plugins: Dassault Systemes V5, V6 and Solidworks, Siemens PLM Classic Jack and Tecnomatix Process Simulate.

Other IPSI-ready applications, provided by our Partners: MiddleVR for Unity3D, WorldViz Vizard, and Techviz XL for Open-GL applications (e.g. Siemens NX, VizMockup, PTC Creo, etc).

Company profile

The company Haption was founded in 2001, as a spin-off of the French Atomic Energy Commission CEA. Resolutely product-oriented and independent, it provides hardware and software solutions based on haptics and force-feedback.

The main facility is located near Laval, France, and employs 15 people. In 2013, a sales office was opened in Aachen, Germany. Haption products are available worldwide through partners and resellers.

Reference customers: ADA (IN), ADD (KO), Airbus (F/UK/DE), Alstom (SP), AREVA (F), AVIC (PRC), Beihang University (PRC), Bentley (UK), Boeing (USA), BMW (DE), Cybernetix (F), Daihatsu (JP), Daimler (D), Embraer (BR), Hyundai (KO), INSERM (F), Iowa State University (USA), ITER-NL (NL), Jaguar Land-Rover (UK), KIT (D), Lockheed Martin (USA), NASA (USA), NIST (RU), NRCN (ISR), Politecnico di Milano (IT), PSA Peugeot Citroën (F), Renault (F), Saint Gobain (F), Sikorsky (USA), Tesla Motors (US), Thales (IT), Toyota (JP), Volkswagen (D)

CEA License

haption

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haption

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Why force-feedback?

Force-feedback, also called **"haptics"**, is a very efficient interaction technology. It enables a physical interaction with objects which are either virtual or remote.

In the **car industry**, force-feedback is used for simulating the operations necessary to manufacture the vehicles, long before the first prototypes are built. As a consequence, the car companies reduce the technical risks, improve the assembly processes, and in the end save time and money.

The **aircraft industry** also uses force-feedback for validating maintenance operations on future planes, in order to validate and optimize them. Because maintenance is a major factor of the operating costs of commercial planes, force-feedback contributes to the companies' competitiveness.

In the **medical sector**, force-feedback is finding increasing use for training students on virtual patients. Our technology is also well suited as comanipulative robots, to help surgeons perform surgeries or tele-surgeries.

Force-feedback is also an essential tool for **scientific research**. Research areas such as psychophysics, sports and health, ergonomics, human-machine interaction, Virtual Reality, micro- and nano-technologies, need ways to transfer forces and movements between humans and machines.

In the **nuclear industry**, force-feedback is used to control robots remotely, so that operators are not exposed to radiations.

Car Industry

David Defianas, Virtual Reality Expert at **PSA Peugeot Citroën**: "We're using Haption force-feedback devices at our sites of Velizy and Sochaux. We simulate with them roughly 130 assembly processes a year. The investment has long paid off." [Source: Interview @ Laval Virtual Conference, France, 2013]

Daimler uses Haption software to simulate and analyze human activities on the shop-floor, in order to improve safety and avoid repetitive strain injury. A person will simulate all the procedures in virtual to assess and validate the future operations. Digital manufacturing can go further than saving time and money.

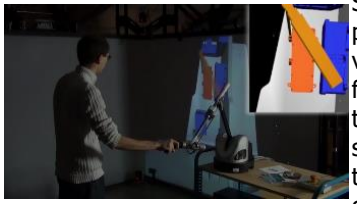
Nuclear Industry

AREVA uses robotic technologies in the nuclear fuel management plants. They chose our Virtuose 6D TAO product for operations like in-service maintenance, clean-up and dismantling of facilities, used in their daily operations.

HiT developed the Interactive Task Simulator (ITS) for maintenance analysis of (nuclear) installations before realisation. Integration of the Virtuose 6D results in faster analysis with better detail. HiT distributes ITS for Remote Handling simulation, VR prototypes, operator training and research.

Aerospace Industry

Valter BASSO, Head of the **Thales Alenia Space** Italia/ Engineering/ Collaborative System Engineering Centre "we use Virtuose6D product to simulate as design de-risking analysis, some critical manual assembly procedures which involves a specialist and a support tool (i.e. a dynamometric key) that interact with the Design baseline; Specialist could feel physical collisions and verify assembly feasibility. This allowed to anticipate and easily solve problems during the design phase that could have dramatic impact if discovered in the late project phases »



François GUILLAUME**,** AR/VR Project Manager at **Airbus Group Innovations**, said: "The Scale1 helps us to perform new operations in Virtual Reality. Totally integrated in our platforms SAMIRA and RHEA, we can simulate complex assembly operations with a really large workspace. While the team observes from a 3D stereoscopic screen, the user wears an HMD and the haptic system is totally transparent for him. He feels the collision in his hand, when the object touches or rubs against surrounding structures".