

RENAULT AND CEA INNOVATE AT THE 2011 LAVAL VIRTUAL

- **At the Laval Virtual Reality International Conference, held on 6-8 April 2011, Renault is set to unveil a Renault-patented innovation, the industrial version of a mastic-removal training system using augmented reality, at the Haption stand.**
- **At the CEA stand, Renault and the LIST (Laboratory of applied research on software-intensive technologies) CEA Institute will be exhibiting two motion-capture demonstrators: a communications application for sales outlets and an engineering application.**
- **The teams from Renault and the LIST CEA Institute will be on-hand to speak to journalists and visitors on 6, 7 and 8 April at the CEA stand.**

At the Haption stand (one of CEA's startups), Renault will be presenting the industrial version of its mastic-removal training system using augmented reality. This success is the fruit of the Renault Information Systems Department's collaboration with the LIST CEA Institute for the R&D phase, and Haption and Diotasoft for the Industrialization phase.

Renault's initial objective was to reproduce mastic removal in augmented reality in order to create a training tool. The LIST CEA Institute has shown its feasibility via a demonstrative prototype and then transferred its technological know-how amongst its startups, Haption and Diotasoft, who designed and developed the industrial versions of the tool. Renault holds a patent for this innovation.

Meanwhile, at the CEA stand, Renault and the LIST CEA Institute will present two demonstrators using motion capture within the industrial field:

- **The combination of a 3D gesture-capture camera with a Renault communications tool used at sales outlets. Through gestures the user discovers the range of Renault vehicles on the market, and can modify the vehicle's configuration at their leisure (colour, model, version). They can also "enter" the vehicle and explore the passenger compartment.**
- **The combination of a 3D gesture-capture camera with XDE (eXtended Dynamic Engine), an interactive mechanical simulation software module developed by the LIST CEA institute. The user handles complex, CAD-derived industrial parts in virtual reality. The XDE engine precisely detects contacts between parts in real time and simulates the behaviour of rigid, articulated or indeed deformable parts (cables, for example).**

These innovations point to multiple applications: qualification of a workstation's ergonomics, validation of an assembly process, training aid and styling application, for example.

Thanks to this exemplary partnership between Renault and CEA, a new era is beginning for the industrial operation of 3D immersion.

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