

Press Release: Ferrarisuccessfully completes the installation of DiM (Driver in Motion)

High-performance cars manufacturer to utilize revolutionary driving simulation technology from VI-grade and Saginomiya as a key tool in the design phase of its GT cars

Marburg, Dec 16th, 2013 – VI-grade, the leading provider of best-in-class software products and services for advanced applications in the field of system-level simulation, today announced that Ferrari completed the installation of the revolutionary motion platform named DiM (Driver in Motion) designedby VI-grade and engineered and manufactured bySaginomiya. In detail, the new dynamic platform for the driving simulator has been successfully installedat the FerrariGestioneIndustrialesite inMaranello, Italy and will from now on be used for developing, testing and optimizing new vehicle models, according to the new trend in the automotive industry, allowed by the accuracy and efficiency of eal Time simulation solutions provided by VI-grade.

"The installation of DiM has been successfully completed in full respect of our original plans. The system completely meets our specifications and expectations and represents the perfect complement to our existing engineering process", said Marco Fainello, Head of the Car Performance Simulation at Ferrari. "Leveraging the experience developed with Formula 1, we will be using from now on the driving simulator for road car development to optimize traditional passive performance with including active system electronics, with the purpose to anticipatedriver comments much before the real prototype is built".



"We are extremely happy to report the completion of this very important activity at Ferrari with our VI-DriveSimDynamic solution", said Guido Bairati, Sales Director, VI-grade. "We are looking forward to a continuous and successful usage of DiMat Ferrari, helping the company to improve their excellent cars even further and in shorter time, while providing us with precious feedback to further improve our driving simulation solution."

The 9 degrees-of-freedom, newly developed DiM platform has been designed in order to take full advantage of VI-MotionCueing, a very innovative motion cueing strategy developed by VI-grade in collaboration with the University of Padua, Italy. It consists of a small-size hexapod mounted on



top of a planar frame moving on a very smooth sliding surface by means of an efficient and innovative system based on air pads and magnetic pads. The hexapod has been designed to produce consistent pitch/roll rotations and Z translations, as well as small X/Y translations and Yaw rotation. The consistent X, Y and Yaw movements required to generatethe feeling of vehicle accelerations on the driver are instead generated by the base tripod. VI-MotionCueing harmonizes the system motion extending the motion envelope and separating low and high frequency contributions, which makes this type of motion platform suitable for both vehicle dynamics and ride studies.

The driving simulator is based on the usage of VI-CarRealTime, VI-grade's flagship solution for real-time vehicle dynamics simulation. The vehicle model is used to calculate the real-time response to the driver's inputs; the vehicle motions are processed and transformed into feasible platform motions by VI-MotionCueing; actuator movement is eventually calculated on the fly by platform controller.

About VI-DriveSim

VI-DriveSim is an innovative Integrated Hybrid Driving Simulator characterized by a revolutionary software and hardware design and targets both racing and commercial vehicle applications. The computing core is a Linux-based real-time computer, which enables owners to add any ECU or software program communicating with the digital vehicle model as in reality. VI-grade's flagship solution VI-CarRealTime powers the system with a real-time validated vehicle model - the same one used for off-line simulations. Graphics are based on a high-quality rendering visualization program. The Motion Cueing strategy relies on complex mechanical and physiological optimization logic and the Moving Platform is based on an innovative mechanical design. For further information, please visit http://www.vi-grade.com/index.php?pagid=drivesim.

About Saginomiya

Saginomiya is the leading provider of automatic controls and test systems in Japan as and is very highly reputed throughout the world for the quality of its products. Saginomiya started developing, manufacturing and selling test systems in 1964, expanding in several business fields such as civil engineering and construction, industrial machinery, railway services, power generation, aviation and automotive. Saginomiya's "Dynamic Servo" has been developed as the ideal test systems utilizing state-of-the-art core technologies such as electric and hydraulic hybrids as well as a next-generation simulator. Saginomiyais are highly committed to serve the needs of the most technically advanced customers in the global market. For further information, please visit http://www.saginomiya.co.ip/eng.

About VI-grade

VI-grade is the leading provider of best-in-class software products and services for advanced applications in the field of system level simulation. VI-grade, established in 2005, delivers innovative solutions to streamline the development process from concept to sign-off in the transportation industry, mainly automotive, aerospace, motorcycle, motorsports and railways. With office locations in Germany, Italy, UK, Japan, China, and the USA, and a worldwide channel network of 20 trusted partners, VI-grade is a dynamic and growing company with a highly skilled technical team. For further information about VI-grade please visit: www.vi-grade.com.

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