Vehicle Dynamics International awards DiM (Driver in Motion) as "Development Tool of the Year 2014"

New motion platform wins prestigious award assigned every year to break-through development technologies by leading automotive magazine

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 Driver-in-Motion (DiM), the new motion platform developed by VI-grade and Saginomiya, has been awarded "Development Tool of the Year 2014" by the Vehicle Dynamics International magazine. The prestigious award has been assigned to DiM out of a short list of five finalists through a voting process undergone by an international and independent judging panel composed by 27 automotive professionals from 19 countries.

"Better feedback from the driving simulators, achieved through minimum lag or response time and better dynamics translates on real feel which can lead to a more accurate development of a vehicle architecture, reduced footprint is a plus"

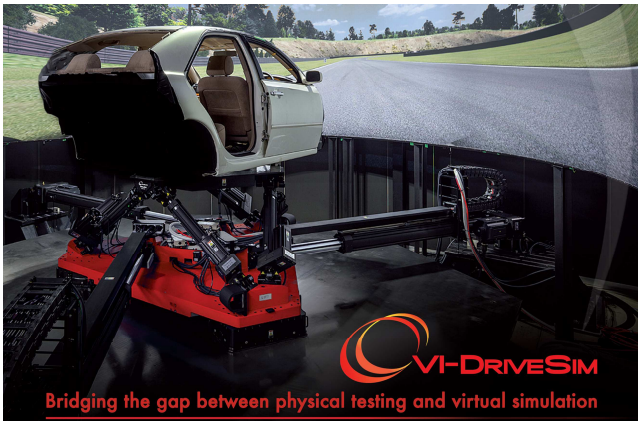
The 9 degrees-of-freedom, newly developed DiM platform has been designed in order to take full advantage of VI-MotionCueing, a very innovative motion cueing strategy developed by VI-grade in collaboration with the University of Padua, Italy and consists of a small-size hexapod mounted on top of a planar frame moving on a very smooth sliding surface by means of an efficient and innovative system based on air pads. The hexapod has been designed to produce consistent pitch and roll rotations and Z translations, as well as small X and Y translations and Yaw rotation. The consistent X, Y and Yaw movements required to generate the 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, and VI-GraphSim, VI-grade's high-quality graphic environment for a realistic driving experience. The vehicle model is used to calculate the real-time response to the driver's input that is provided to VI-MotionCueing, that in turn produces the inputs to the inverse kinematic program which controls the actuators.

"Motion platforms architectures for driving simulators have been undergoing a very creative development phase in the recent years" said Diego Minen, Technical Director, VI-grade. "Our new conceptual idea, which resulted in the final platform design provided by Saginomiya, provides an ideal solution for low/high motion frequencies separation. DiM is an extremely efficient tool for implementing our new motion cueing strategy, which has been fine-tuned with the help of professional drivers in our and other simulation centers over the past two years. The combination of DiM mechanical architecture and performance as well as VI-CarRealTime and VI-MotionCueing characteristics is certainly unique to obtain the best driver motion perception".

These are some selected quotes from some of the components of the judging panel:

"A more efficient, more compact and less expensive simulator architecture: In perfect tune with the times" said Marc Lachapelle, Le Guide de l'auto/MSN Autos US, Canada.

"Being adopted by both small-volume prestige carmakers as well as more mainstream companies, this technology is proving to be reliable and cost-efficient as companies see the needs for just such technologies increase" added Carl Cunanan, C! magazine, Philippines.



"Simulation is not the future, it is the present. But I'm afraid that right now, the degree of perfection, although rather good, is not good enough to make the fine adjustments needed to give a chassis a unique personality. And being that real world testing is so expensive, chassis feeling is becoming worryingly more and more 'generic'. I hope that this kind of innovation contributes to keeping the magic alive" said Alvaro Sauras, Car&Tecno, Spain.

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.

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