

Improving Safety Through Simulation-Based Driver Training

Andre Luongo, is Vice President of Operations for Virtual Driver Interactive (VDI), a driver training company that uses simulation technology in its training methods. In this interview, Luongo provides background on VDI and its course offerings and explains the benefits of simulation-based driver training.

Please provide a brief history of your company and a description of your role and responsibilities as Vice President of Operations for Virtual Driver Interactive (VDI).

VDI was the brainchild of Bob Davis, our current President and CEO. Bob's own experiences and a recent near-miss on a California highway led him to think, "How do you train individuals to prepare for and survive hazardous driving situations without actually putting them in danger?" Simulation was the answer.

A partnership with Raydon Corporation, a Florida-based simulation company with over 20 years' experience working with military simulators, eventually led to Raydon's purchase of VDI.

I was there during VDI's formation, and now as Vice President of Operations, I manage marketing, product development and other company operations.

What safety and health or industry issues, needs or events led to VDI's development? Does your company strategy target a particular business sector?

Although the original plan was to train novice drivers, even before VDI was founded, Bob and I recognized the financial impact automobile crashes have on corporations and government agencies. The costs of these crashes are staggering according to the National Highway Traffic Safety Administration (NHTSA):

- Average cost is \$24,500 per crash
- Average cost is \$128,00 per injury
- Average cost is \$3,810,000 per fatality

These statistics include only on-the-job crashes, and in most cases, off-the-job-crashes have an even deeper cost.

What training courses does VDI offer? Do you partner with any other company or trade associations? What are the cost and learning benefits of simulator training versus more traditional behind-the-wheel driver training?

Andre Luongo

As Vice President of Operations for VDI, Andre Luongo manages all aspects of operations, sales and marketing. An engineering graduate of the Georgia Institute of Technology, Luongo has experience in sales, engineering and marketing.

His goals and efforts are directed toward correcting what he sees as a major gap in driver safety: effective, real-world training.



VDI offers two primary courses, a novice course developed in conjunction with the American Driver and Traffic Safety Education Association (ADTSEA) and a defensive driving course co-developed with the National Safety Council (NSC). For less than \$100 per person, a student or employee can receive over five hours of driver training. But more importantly is the impact, relevance and efficiency that can only be achieved by simulation. In a simulated environment, a driver can train in those areas most important to that driver or organization. We can also train that individual in dangerous situations—situations you could not or would not want to do in traditional behind-the-wheel training.

VDI's parent company, Raydon Corporation, has developed and delivered simulation-based training for the military for over 16 years. How has this partnership helped improve and streamline each company's courses, technology and product line?

Since 1988, Raydon has provided industry-leading technology to address our military's training needs. Raydon prides itself in its commitment to research and development and has the financial backing to continue to stay ahead of the technology curve. VDI directly benefits from Raydon's technology, engineering resources and instructional design team, which allows VDI to take the same technology designed for the military and to apply it to commercial applications.

Which areas of the transportation industry are making the most use of simulator training and why? How do you plan to improve on your clients' and other companies' current use of simulation?

The transportation industry has long used large-truck simulators to address the training needs of long-haul trucking. However, this training tends to be expensive and

therefore is available only to a select number of employees. The best course in the world is of little use if no one can afford to take it. Many in the transportation industry have employees who drive much smaller trucks and cars. VDI has addressed this need by offering a more affordable and mobile solution that allows all drivers access to the latest training technology.

In what ways can simulator training positively impact fleet safety and fleet companies' return on investment (ROI)? For example, would it be more cost-effective to train 500 drivers at VDI or at a behind-the-wheel training vendor? Have you quantified this, and do you use it in your marketing efforts?

The enormous financial impact of automobile crashes includes vehicle repair, health benefits, workers' compensation, loss of work, insurance premiums and other fringe benefits. And yet seldom do organizations "budget" for these costs directly related to crashes. Would it not prove beneficial to an organization and its employees to allot a small percentage of that budget for driver training? With the average cost per accident exceeding \$24,000 and the cost of training less than \$100, ROI is not difficult to measure.

How training is administered also affects cost. The beauty of the VDI trainer is that it is fully contained and readily available, which means employees can take only the topics they need and when they are available, ideally during off-times. This is in contrast to classroom and behind-the-wheel training, which often requires an organization to pull large groups of employees from their duties for an entire day.

How does VDI evaluate which driver skills require improvement, and how do you track progress? How does VDI stay abreast of its customers' driver safety training requirements and state regulations?

Simulation lends itself very well to the quality process via flexible training. We find that most organizations are aware of their organization's trouble spots. With the flexibility of VDI courseware, an organization can address their top three issues, be it intersections, parking lots or tailgating, and train their employees on only those relevant topics. VDI's training program provides complete and detailed reports on each student's performance and progress. After training is completed, the organization can reassess the top issues for the following year and then adapt the training to address those issues, offering a continuous process improvement program.

VDI also continuously improves and updates its programs to address new regulations and driver training techniques.

How does VDI develop the graphics used in its simulation training? Is the available technology based on passenger vehicles only or does it also include vans and light trucks?

VDI uses a combination of the latest graphics technology with a proprietary development environment. The simulation engine allows VDI to accurately create vehicle dynamics for all size vehicles. Currently, the product offers a passenger vehicle and a 10,000-lb package truck option.

Have VDI clients proposed any new or unexplored simulation training topics based on their own on-the-road experiences? Do the available scenarios include international situations (e.g., UK "right-side" consoles, etc.)?

We have learned much from our customers about the top driving issues they face. It is surprising how consistent these issues are. Industries that tend to have a less mature workforce inherit the fact that driver training is virtually nonexistent in public education. Clients also have unique environments, like airports, off-road or violent weather conditions. VDI's international clients span from Canada to the Middle East, and at times, we have adjusted the simulation program specifically for a particular region.

What are VDI's plans to introduce additional enhancements to its current technology and other programs for this year and beyond?

VDI is currently working on enhancements to all software titles that will debut this year. We are also redesigning both the full-cab and desktop trainers. Those should debut in the fourth quarter of 2008 or in early 2009. Without revealing too much, expect an even more realistic driving experience and additional functionality that will allow us to test and train a wider range of driving functions.

Does VDI address the unique training needs of both younger drivers (<25 years old) and older drivers (>60 years old)? Both of these demographics represent an increasing percentage of the U.S. workforce.

VDI offers two primary courses, a novice course developed in conjunction with ADTSEA and a defensive driving course co-developed with NSC. The novice driving course teaches the basics of driving and is used often by organizations that have a younger workforce with no formal driver training. The defensive driving course is the next step that benefits drivers of all ages, as it addresses more complex and often dangerous situations and instructs them on techniques that help mitigate the risks we all face when driving. ■