



# **VigilVanguard**<sup>TM</sup>

## ***White Paper***

*Real World Training for  
Emergency Vehicle Operators*

**vigil**  
solutions

October 2010

## EXECUTIVE SUMMARY

As emergency responders it's essential for the team to arrive on location in a safe and timely fashion. With traffic and the unexpected actions of other drivers, getting there can sometimes be more dangerous than the emergency itself.

Since most driving accidents are caused by driver error; increasing a person's skill set will deliver the greatest impact on the frequency of accidents. The most effective means of learning and advancing a skill involves a process of identification, practice, evaluation and feedback.

This is the exact course promoted by Vigil technology. While using the equipment on public roads, VigilVanguard will provide a realistic, undisputable evaluation of driver performance along with a consistent, well-defined path for improvement.

Drivers are able to identify behaviors by watching themselves in action. Appropriate responses to the actions of other drivers and environmental hazards become second nature. Our training system enriches and amplifies the learning experience to effect a positive change in behavior.

It's not just a matter of reducing risk — it's about keeping your crew safe at all times.



Figure 1 - VigilVanguard Equipment Set Up



Figure 2 - VigilVanguard Assessment

## The VigilVanguard Process

The VigilVanguard On-road Training System works on an integrated method that starts with the identification of an unsafe act or skill deficiency. To correct this problem, the individual is guided through a learning, evaluation, and feedback process.

In this environment, engineers can develop the vision and skills needed to maneuver an emergency vehicle safely in traffic under stressful conditions.

The system is compact, portable, and adaptable to ambulances, engines, ladder trucks, and any other mode of mobile fire or rescue apparatus. This characteristic also allows you to bring training to the department - rather than making the driver come to you.

Having the ability to train on your vehicles driving the roads you travel is more effective while saving time and money.

## How It Works

The central component of the VigilVanguard system is a Tablet PC which is connected to four video cameras, a GPS and a dynamic motion sensor.

Quick-release hardware is used to mount the rugged cameras both inside and outside the vehicle. Once familiar with the equipment, an instructor can set up the system for training in less than 15 minutes.

With VigilVanguard's advanced technology (including GPS mapping and a dynamic motion sensor) acceleration, braking, cornering, and speed can accurately be measured during the evaluation.

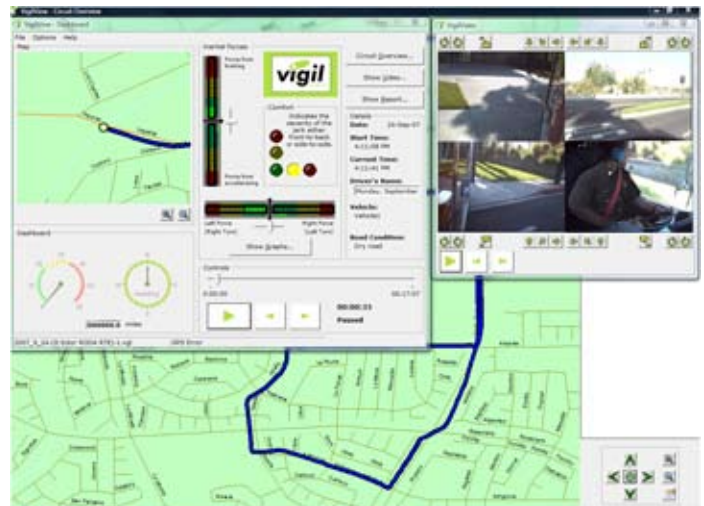


Figure 3 - Dashboard, Video, Circuit Overview

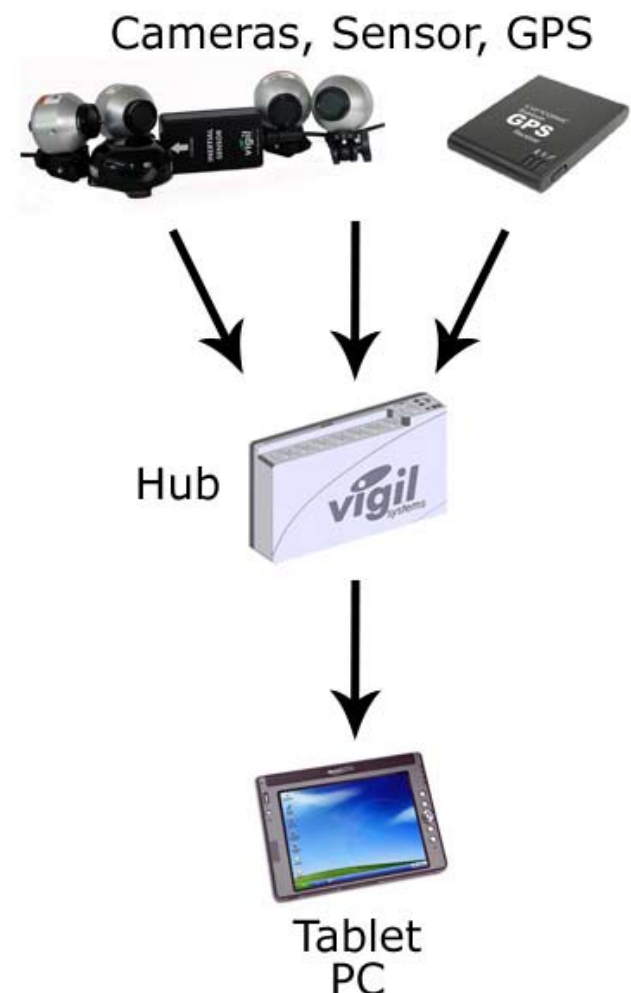


Figure 4 - VigilVanguard System Diagram

## Unique Technology

The sensor system incorporates four video cameras to monitor the vehicle, the driver, surrounding traffic, following distance, and other factors. All these dynamic inputs are integrated onto the tablet PC.

To begin the evaluation, the instructor taps on the **START** button triggering the PC to being recording. Video is captured from various perspectives depending on the camera angles.

Data generated by the GPS and sensor unit is also automatically recorded while customizable forms allow instructors to mark additional specific events based on their own expert observation. In addition, driving events can be bookmarked with a single tap on the computer screen.



Figure 5 - VigilVanguard Video Recording

## Time-Saving, Professional Reports

At the end of the evaluation, VigilVanguard generates a comprehensive report including video, motion data and instructor input via the forms. Sitting down with the student, an instructor reviews the ride drawing upon the actual data — including a visual picture to verify their behavior and actions.

The data then becomes a permanent record to help track both the individual, as well as the department's performance. Having a collective database assists in the benchmarking, budgeting and planning process.

VigilVanguard is unique in its portability and real-world training emphasis.



## Unique Technology - Proven Effectiveness



Figure 6 - VigilVanguard Report

## ADMINISTRATION FUNCTIONALITY

Instructors use VigilVanguard to capture and document the level of competency achieved on each vehicle or apparatus the trainee qualifies on, as well as driving habits and actions.

VigilVanguard provides an unlimited capability for review and playback of the evaluation. Significant areas of driver performance can be isolated and analyzed so that the root cause of errors can be addressed.

All training and performance evaluations conducted on the VigilVanguard become permanent digital records that can be quickly retrieved and easily analyzed. Since drivers can actually see themselves in action, individuals receive compelling, unbiased feedback on their performance.

Significant areas of driver performance can be isolated, reviewed and corrected, advancing the skill set of the individual and thereby increasing the safety of the department.

The system also improves productivity by automating the report and record-keeping process. When combined with VigilManager, these records become an infinite source of data for planning, performance benchmarking and instructional exhibits.

Automation of the paperwork also means instructors can spend more time doing what they do best: **training people.**

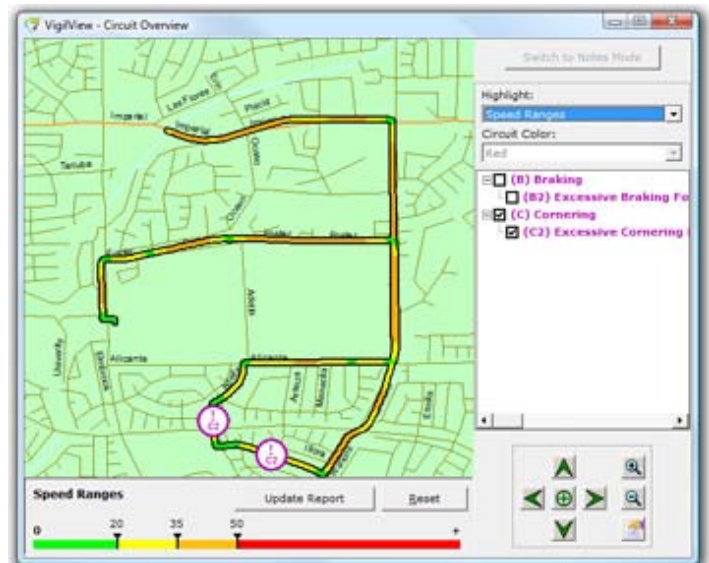


Figure 7 - VigilVanguard Circuit Overview

*For more information please  
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