



DriveCam Keeps Watchful Eye on Risky Driving Behavior

In the commercial transportation and freight industry, traffic accidents and traffic-code violations not only endanger lives but can hurt a company's revenue and reputation. Such incidents are also a major concern for parents—and insurers—of teenage drivers who are still learning how to behave behind the wheel.

DriveCam, Inc., based in San Diego, Calif., has created a unique set of Web-based software and hardware tools that capture, transmit, analyze and report the key details of driving incidents that may be tied to risky behavior. Built on the Microsoft® .NET Framework and delivered as a hosted service, the DriveCam Driver Risk Management system is designed to provide companies and families with objective information they can use for coaching to improve driver skills and prevent costly accidents.

"Unsafe driving behaviors are by far the most common cause of motor vehicle crashes," says Tom Fisher, DriveCam's chief information officer. According to an April 2006 research report by the National Highway Traffic Safety Administration (NHTSA) and the Virginia Tech Transportation Institute, nearly 80 percent of crashes and 65 percent of near-crashes involve some form of driver inattention—ranging from drowsiness to distracting activities such as talking on a cell phone or reaching for an object.

"DriveCam's technology enables our clients to clearly identify and address the specific behaviors that put their drivers at risk, which is one of the keys to predicting and preventing collisions," Fisher says.

More than 1,500 commercial enterprises and government agencies in North America, Europe and Asia have deployed DriveCam technology in over 70,000 vehicles. Also, through the Teen Safe Driver Program created by DriveCam and American Family Insurance, more than 1,000 auto insurance policyholders in 18 U.S. states are using this technology in their vehicles.

A palm-sized video and audio recording device mounted behind the rearview mirror captures what is happening inside and outside the vehicle. Unusual forces such as hard braking, swerving or a collision trigger the device to save the audiovisual footage from a few seconds before and after the incident. A blinking light alerts the driver so he or she can take note of what caused that event and aim to avoid repeating that behavior.

Fast Facts

Company Name: DriveCam, Inc.

Headquarters: San Diego, CA

Web Site: www.drivecam.com

Profile: DriveCam's technology platform for driver risk management comprises an in-vehicle video recorder, playback software, program management, reporting and expert analysis to help clients identify and eliminate behaviors that are known to increase the likelihood of a motor vehicle collision.

Benefits:

- On average, costs associated with property damages, workers' compensation and personal injury claims are cut in half
- Objective tracking, analysis and reporting of risky driving behaviors that increase the risk of a crash
- Audio and video documentation that helps facilitate opportunities for coaching to reinforce safe driving habits
- Web-based access to event footage and reports
- All enabling technology maintained and hosted by DriveCam on behalf of clients



“Using DriveCam technology combined with our other behavior-based driver training programs, we have dramatically improved the overall safety culture of our organization. Also, when there’s a collision or other incident, we can review the video clip to determine the true cause within seconds, and manage the liability accordingly.”

—Drew Jones, vice president of safety and security, Veolia Transportation North America. Since installing DriveCam on nearly 6,000 of its public-transit buses in the United States, Veolia has reduced its overall insurance claims costs by more than 10 percent annually over the past three years.

Saved event files are transmitted to DriveCam’s analysis center via a Wi-Fi or cellular connection and stored on Microsoft Windows Server® 2003 servers. Analysts review the footage, assign a score based on the type and severity of risk involved, and compile the information in daily reports for each client. DriveCam manages these steps using Microsoft SQL Server™ 2005 relational database software and SQL Server 2005 Analysis Services.

Clients log in to the DriveCam Hindsight 20/20 software application to view their event footage and associated reports online using Microsoft SQL Server Reporting Services. In this software-as-a-service (SaaS) model, DriveCam hosts and manages all of the underlying technology on a Microsoft .NET infrastructure. Clients also can consult with DriveCam’s Safety Services Team on how to more consistently and effectively coach their drivers using the event data.

DriveCam’s commercial and governmental clients have reduced their overall costs from property damage, workers’ compensation filings and personal-injury claims by 30 to 90 percent, says Fisher. Also, the audio-visual evidence captured

by DriveCam has helped many clients avoid being held liable for motor vehicle accidents in which their driver was not at fault—saving millions of dollars in potential litigation costs.

In choosing a development platform and delivery framework for the DriveCam software, company leaders put scalability, reliability and ease of use at the top of their list. After evaluating several commercial and open-source technology options, including Java, they concluded that Microsoft offered the strongest SaaS platform across all three of those areas. DriveCam handles an average of 15,000 audio-video clips daily—and as many as 50,000 on a peak day—with 50 to 75 analysts simultaneously creating reports in SQL Server 2005. At the same time, thousands of DriveCam clients also are accessing their footage and reports in the .NET-based Web interface.

“Our commercial clients need assurance that we can handle rapidly increasing volumes of data coming from their vehicles as the companies grow,” says Fisher. “Even with such heavy demands on our systems, the reliability of Windows Server and SQL Server has taken those concerns out of the equation.”

DriveCam’s development teams use Microsoft Visual Studio® 2005 Team Foundation Server and the Microsoft ASP.NET Web application framework to support rapid coding and related processes. “Team Foundation Server helps make everyday tasks, from bug tracking to software version control to team collaboration, much easier for our developers,” says Fisher.

DriveCam Estimator, an application used by the company’s sales force to help create proposals for prospective clients,

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incorporates Microsoft Office Access™ 2007 data reporting capabilities. Among the benefits of using Access is that it enables DriveCam to lock various fields within a document against unauthorized changes—such as alterations to the cost per vehicle for the DriveCam service.

“We like the direction that Microsoft is moving with its data analytics and Web services capabilities,” Fisher says. “That, plus the excellent technical support that we get from Microsoft, has kept us committed to building on the Windows platform.”

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Microsoft Technologies

- Microsoft .NET Framework
- Microsoft SQL Server 2005
- Microsoft Windows Server 2003
- Microsoft Office Access
- Microsoft Visual Studio 2005 Team Foundation Server
- Microsoft ASP.NET