



NEWS

Road dangers, digital billboards linked



BY **PAUL FELDMAN** POSTED 03.30.2016

Digital billboards clearly catch the eye of passing motorists. But what is also increasingly clear is that such distractions can heighten safety risks in heavy traffic and other complex driving conditions, a long-time roadway researcher says.

That conclusion by Berkeley-based Jerry Wachtel, a traffic safety consultant and one-time Federal Highway Administration staffer, came from his [recent review of billboard distraction studies](#) conducted everywhere from Denmark to South Dakota.

The latest research, Wachtel says, provides persuasive evidence that billboards – particularly digital billboards – take drivers’ eyes off the road for dangerously long gazes. That’s a problem especially when the bright electronic displays change messages, which typically happens every six to eight seconds.

As Wachtel put it, “The more that commercial digital signs succeed in attracting the attention of motorists that render them a worthwhile investment for owners and advertisers, the more they represent a threat to safety along our busiest streets and highways.”

For his new assessment of the safety hazards raised by billboards, Wachtel evaluated nine academic, industry and government studies published in five countries since 2013. Among them was [a Massachusetts study](#) published this year that found that motorists, particularly older ones, seemed prone to glancing at digital billboards as they changed messages. All told, the study said, when people drive by digital displays, they spend “an increased percentage of time glancing off road.”

Separate, [government-funded research](#) last year on the impact of 18 digital billboards along high-speed roadways in Alabama and Florida found crash rates 25 percent to 29 percent higher near the signs than at control sites down the road. Many of the crashes near digital displays involved rear-end collisions or sideswipes that, according to Wachtel, are “typical of driver distraction.”

Spread of Digital Billboards

Some recent studies have focused on distractions caused by the brightness or the swift, relentless cycling of the digital ads — and on how such factors may have a stronger impact on new drivers and older drivers.

The Outdoor Advertising Association of America estimates that there are 6,400 digital billboards nationwide, up from 6,100 last summer. Steady growth has occurred despite opposition from some community activists and legal efforts by cities such as [Los Angeles to limit or ban them](#).

This year’s Massachusetts study, which included participation by MIT, made a similar point. “It is likely that drivers find it nearly impossible to avoid a glance to digital billboards during switches between advertisements,” the report stated. “Perhaps the fact that humans are neurophysiologically predisposed to orient to motion or sudden change in the periphery is a marketing advantage of digital billboards.” For the advertising industry, digital billboards are a compelling option. A study commissioned by the OAAA last year showed that more than half the travelers surveyed who noticed a digital sign were “highly engaged, recalling the message on the screen every time or most of the time.”

While that might be good news for advertisers, it also suggests that motorists were focused on something other than driving safely. Asked for comment on Wachtel’s findings, the OAAA cited a federal study released in 2013 that concluded that digital billboards were not distracting. “As FHWA prepared for in-the-field research,” the OAAA stated via email, “it indicated that more research would follow if the initial research identified problems. The agency says it does not plan further research.”

The FHWA did not respond to repeated requests for a comment for this story.

But as FairWarning has reported ([here](#) and [here](#)), the federal study was controversial. It was hung up for several years due to flaws in measuring drivers’ glances at billboards.

Even after the study was released, it puzzled Wachtel and other reviewers; somehow billboards that were on one side of the highway in a draft version of the report were depicted as being on the other side of the road in the final version.

Higher Crash Risks

Among other things, the federal assessment said the longest recorded glance at an electronic billboard was 1.34 seconds. That contrasted with [a 2013 Danish report](#) included in Wachtel's recent review.

The Danish study — which employed high-tech equipment, including a laser scanner and an eye-tracking system — reported glance durations of two seconds or longer in nearly 25 percent of cases. “Advertising signs do capture drivers’ attention to the extent that it impacts road safety,” the study’s authors concluded. According to Wachtel and other experts, glances of two seconds or longer make a crucial difference in safety in bad weather, heavy traffic and other circumstances.

What’s more, the Danish study included only conventional signs, and Wachtel says digital signs probably would draw even more long glances.

In the last three years, according to Wachtel’s new review, only the federal report and a Texas study prepared for the billboard industry failed to demonstrate links between digital signs and potential safety risks.

Wachtel’s concerns about digital billboards drew support from Mary Tracy, president of Scenic America, a non-profit organization that has long been critical of highway billboards on aesthetic grounds. She said the recent studies reviewed by Wachtel “prove pretty conclusively” that digital billboards distract drivers and that the federal government should take action to improve safety.

For Wachtel, president of The Veridian Group consulting firm, the new review is the third in a series of assessments he has produced since 2009. The reviews have been based on, overall, more than 60 research reports around the world on conventional and electronic billboards. Even after all of those studies, Wachtel said, “we can’t say statistically that the billboards cause accidents” unless further complicated and expensive research is carried out.

Still, he said, evidence is mounting that the risk of accidents increases in stressful driving conditions in places where digital signs “competed for the driver’s visual attention.” Factors that can have an impact, Wachtel said, include “demanding road, traffic and weather conditions, when travel speeds were higher, or when an unanticipated event or action occurred to which the driver had to respond quickly and correctly.”

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Ed’s Note: This story was provided by [FairWarning](#), a nonprofit news organization focused on public health, safety and environmental issues. The [original story can be seen here](#).