



National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

Date: June 13, 2003

In reply refer to: H-03-11

Ms. Peggy Colon
President and Chief Executive Officer
The Advertising Council, Inc.
261 Madison Avenue, 11th Floor
New York, New York 10016

The National Transportation Safety Board is an independent Federal agency charged by Congress with investigating transportation accidents, determining their probable cause, and making recommendations to prevent similar accidents from occurring. We are providing the following information to urge your organization to take action on the safety recommendation in this letter. The Safety Board is vitally interested in this recommendation because it is designed to prevent accidents and save lives.

This recommendation addresses the need for a media campaign stressing the dangers associated with distracted driving, particularly the cognitive demands of interactive wireless communication device use. The recommendation is derived from the Safety Board's investigation of the February 1, 2002, Ford Explorer Sport collision with a Ford Windstar minivan and a Jeep Grand Cherokee on Interstate 95/495 near Largo, Maryland,¹ and is consistent with the evidence we found and the analysis we performed. As a result of this investigation, the Safety Board has issued nine safety recommendations, one of which is addressed to The Advertising Council, Inc. Information supporting this recommendation is discussed below. The Safety Board would appreciate a response from you within 90 days addressing the actions you have taken or intend to take to implement our recommendation.

On February 1, 2002, about 8:00 p.m., on the outer lanes of Interstate 95/495 near Largo, Maryland, a 1998 two-door Ford Explorer Sport, traveling northbound at an estimated speed of 70 to 75 mph, veered off the left side of the roadway, crossed over the median, climbed up a guardrail, flipped over, and landed on top of a southbound 2001 four-door Ford Windstar minivan. Subsequently, a 1998 four-door Jeep Grand Cherokee ran into the minivan. Of the eight people involved in the accident, five adults were fatally injured, one adult sustained minor injuries, and two children were uninjured.

The National Transportation Safety Board determined that the probable cause of the February 1, 2002, collision of the Ford Explorer Sport with the Ford Windstar minivan and Jeep

¹ For additional information, read National Transportation Safety Board, *Ford Explorer Sport Collision With Ford Windstar Minivan and Jeep Grand Cherokee on Interstate 94/495 Near Largo, Maryland, on February 1, 2002*, Highway Accident Report NTSB/HAR-03/02 (Washington, DC: NTSB, 2003).

Grand Cherokee was the Explorer driver's failure to maintain directional control of her high-profile, short-wheelbase vehicle in the windy conditions due to a combination of inexperience, unfamiliarity with the vehicle, speed, and distraction caused by use of a handheld wireless telephone. Contributing to the severity of the accident was the lack of an effective median barrier at the accident site.

Shortly before the accident, the accident driver made a wireless telephone call to a friend whom she had been following and was talking on the telephone when the accident occurred. Since no hands-free devices were found with the telephone, the driver was probably holding the telephone in one hand and steering with the other hand at the time of the accident. Given the content of the telephone conversation as reported by the friend, the accident driver was probably scanning the roadway ahead and searching for his vehicle, which was somewhere on the highway ahead of her. The cognitive effect of this conversation may have been greater than that of a casual conversation. Not only did the cognitive process of the conversation probably distract her, but her attention was likely to have been redirected from the driving task to a searching task. As a result, the accident driver was most likely not attending to the driving task, was instead focused on the conversation and a searching task, and was further hampered by physically holding the wireless telephone, which left only one hand for driving.

Research has shown that the cognitive effects of conducting a conversation on a wireless telephone can decrease situational awareness and that wireless telephone use can increase reaction time. In their 2001 study,² Parkes and Hooijmeijer reported that drivers engaged in wireless telephone conversations were unaware of traffic movements around them. Safety Board accident investigations³ in several transportation modes have documented the relationship between poor situational awareness and poor performance. These investigations found that when airline pilots, railroad engineers, and ship crews lose situational awareness, they sometimes make operational errors that lead to accidents. In the case of the Largo accident driver, the potential decrease in situational awareness is likely to have delayed her awareness of the effects of the wind on her vehicle. This delayed recognition of and reaction to the effects of wind probably precipitated her steering overreaction. Therefore, the Safety Board concludes that the accident driver's distraction due to the wireless telephone conversation with her friend contributed to her loss of control of the vehicle.

² A.M Parkes and V. Hooijmeijer, "Driver Situation Awareness and Carphone Use," First Human-Centered Transportation Simulation Conference, 2001, University of Iowa, Iowa City, Iowa, November 4-7, 2001.

³ (a) National Transportation Safety Board, *Derailment of Amtrak Train No. 2 on the CSXT Big Bayou Canot Bridge Near Mobile, Alabama, September 22, 1993*, Railroad-Marine Accident Report NTSB/RAR-94/01 (Washington, DC: NTSB, 1994). (b) National Transportation Safety Board, *Aircraft Accident in Guantanamo Bay, Cuba, August 18, 1993*, Aviation Accident Report NTSB/AAR-94/04 (Washington, DC: NTSB, 1994). (c) National Transportation Safety Board, *Controlled Flight Into Terrain, Korean Air Flight 801, Boeing 747-300, HL7468, Nimitz Hill, Guam, August 6, 1997*, Aviation Accident Report NTSB/AAR-00/01 (Washington, DC: NTSB, 2000). (d) Aeronautica Civil of the Government of Colombia, *Controlled Flight Into Terrain, American Airlines Flight 965, Boeing 757-223, N651AA, Near Cali, Colombia, December 20, 1995*, Aircraft Accident Report. (e) National Transportation Safety Board, *Ramming of the Spanish Bulk Carrier URDULIZ by the USS DWIGHT D. EISENHOWER (CVN 69), Hampton Roads, Virginia, August 29, 1988*, Marine Accident Report NTSB/MAR-90/01 (Washington, DC: NTSB, 1990). (f) National Transportation Safety Board, *Grounding of the U.S. Tank Ship STAR CONNECTICUT, Pacific Ocean, Near Barbers Point, Hawaii, November 6, 1990*, Marine Accident Report NTSB/MAR-92/01 (Washington, DC: NTSB, 1992). (g) National Transportation Safety Board, *Grounding of the Panamanian Passenger Ship ROYAL MAJESTY on Rose and Crown Shoal Near Nantucket, Massachusetts, June 10, 1995*, Marine Accident Report NTSB/MAR-97/01 (Washington, DC: NTSB, 1992). (h) National Transportation Safety Board, *Head-on Collision of Two Burlington Northern Santa Fe Freight Trains Near Clarendon, Texas, on May 28, 2002*, Railroad Accident Report NTSB/RAR-03/01 (Washington, DC: NTSB, 2003).

The Safety Board could not determine the exact extent of the role of distraction due to wireless telephone use in the Largo accident. However, use of a wireless telephone while driving is inherently dangerous, as is any distraction that diverts one's attention from the driving task. Young, inexperienced drivers are particularly vulnerable to accidents, are easily distracted, and are known to engage in risk-taking behavior. In 2002, the Safety Board investigated two accidents, Largo, Maryland, and Korona, Florida,⁴ in which young drivers were following another vehicle, lost control, and ran off the road. The Largo and Korona accident drivers were 20 and 16 years old, respectively; both were unbelted and engaged in wireless telephone conversations when they lost control of their vehicles. Young drivers continue to be overrepresented in traffic crashes and deaths. In 2001, according to the National Highway Traffic Safety Administration, drivers under age 20 constituted only 6.8 percent of the driving population but were involved in 14.3 percent of fatal accidents. While the Board recognizes that having access to communication in one's vehicle can be valuable, drivers in this age group, in particular, should attend only to the task of driving.

The use of wireless communication devices is becoming increasingly prevalent. In May 2003, according to the Cellular Telecommunications & Internet Association, the number of U.S. wireless telephone subscribers was approximately 145 million. The 2003 Gallup Organization study⁵ and the 2002 North Carolina study,⁶ which indicated that 25 percent and 58 percent of drivers interviewed, respectively, had used a wireless telephone while driving, suggest that the public may not be aware of the dangers associated with using a wireless telephone while driving. Considering the widespread use of wireless communication devices in vehicles today and the associated risks of an accident, the Safety Board concludes that all drivers should be educated about the risks of distracted driving, including the cognitive demands associated with use of interactive communication devices. This instruction can be accomplished through media campaigns and driver education courses. The National Highway Traffic Safety Administration is already developing a public information campaign. The Advertising Council, Inc., represents the media in public service advertising and has worked with the National Highway Traffic Safety Administration before in disseminating public safety messages, particularly regarding drunk driving and seat belt use. The Safety Board believes that they should jointly develop a media campaign stressing the dangers associated with distracted driving, particularly the cognitive demands of interactive wireless communication device use.

Therefore, the National Transportation Safety Board recommends that The Advertising Council, Inc.:

Develop, in conjunction with the National Highway Traffic Safety Administration, a media campaign stressing the dangers associated with distracted driving. (H-03-11)

⁴ Docket Number HWY-02-IH-016.

⁵ Dawn Royal, *National Survey of Distracted and Drowsy Driving Attitudes and Behaviors: 2002*, Volume 1-Findings Report, The Gallup Organization, DOT NHTSA 809566, March 2003.

⁶ Jane C. Stutts, Herman F. Huang, and William W. Hunter, "Cell Phone Use While Driving in North Carolina: 2002 Update Report," University of North Carolina, Highway Safety Research Center, December 2002.

The Safety Board also issued safety recommendations to the National Highway Traffic Safety Administration, 49 States (exclusion—New Jersey), and the American Driver and Traffic Safety Education Association. In addition, the Board reiterated safety recommendations to the Federal Highway Administration and the American Association of State Highway and Transportation Officials. In your response to the recommendation in this letter, please refer to H-03-11. If you need additional information, you may call (202) 314-6177.

Chairman ENGLEMAN, Vice Chairman ROSENKER, and Members GOGLIA, CARMODY, and HEALING concurred in this recommendation.

By: Ellen G. Engleman
Chairman