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New Lighting Technologies Can Potentially Reduce 2,300 Pedestrian Fatalities

WASHINGTON, D.C. – November 22, 2005 – Each year approximately 5,000 pedestrians (including bicyclists) are killed along U.S. roads – 2,300 of them occurring at night -- and another 70,000 pedestrians are injured in traffic crashes, according to a 2003 NHTSA report. On average, a pedestrian is killed in a traffic crash every 111 minutes.

New automotive lighting technologies, including Xenon and Adaptive Front Lighting Systems, can help improve nighttime pedestrian safety, according to the Motor Vehicle Lighting Council (MVLIC).

According to researcher Michael Flannagan of the University of Michigan's Transportation Research Institute, drivers "over-drive" the headlights on many of today's vehicles.

"The critical safety need in low-beam lighting is seeing distance," Flannagan said. "Everyday experience as well as our formal analyses of crash data reveal that today's drivers routinely 'over-drive' their headlight beam pattern at night. The maximum safe speed with today's average low beams is only about 45 m.p.h. Our studies indicate there is a major safety problem that headlights could address."

One possible solution is Xenon headlights, also known as High Intensity Discharge or HID. Based on a gas discharge process, Xenon uses an arc instead of a filament as a light source. The result is enhanced roadway vision by increasing the light output to the sides of the road.

Flannagan said that a 2004 UMTRI test revealed that Xenon headlamps provided 45 percent more light for seeing critical objects on the road, while producing 25 percent less glare. The wider beam coverage also provides better lighting on road shoulders where pedestrians and bicyclists are commonly found.

Nearly 120 vehicle models equipped with Xenon headlights were sold in North America in the 2005 model year – up 21 percent from 2004. In a survey conducted by Harris Interactive, Xenon headlights ranked No. 2 on a list of top 10 automotive technologies consumers would like to purchase for their next vehicle.

Another emerging headlight technology is AFS or Adaptive Front Lighting Systems, which provides optimal illumination in various driving conditions by automatically modifying the beam pattern of the headlights in response to various speed, weather conditions and road situations. The headlamps automatically move as the



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steering wheel is turned to the right or left. This helps illuminate the road at an earlier stage, allowing the driver more time to adjust and steer or brake as needed.

Another variable is the age of the driver; as the eye ages, it also changes. Many people will experience reduced visual activity due to cataract or other aging-related changes. Philip Hessburg, MD, president of the Detroit Institute of Ophthalmology, said global data on visual impairment indicates almost all adults will eventually have cataract.

"I believe vehicle-related deaths will be greatly reduced with more effective headlamps, better roadway illumination and by cataract surgery when needed," he said.

For more information on the MVLC, go to www.mvlc.info.

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