

**AMC Report**  
**Pedestrian Safety Demonstration and Seminar**  
**CASR Impact Laboratory Adelaide**  
**May 7 2013**  
**Peter Mount**

This function was conducted by the Centre for Automotive Safety Research (CASR), the Australasian New Car Assessment Program (ANCAP) and the Australasian College of Road Safety (ACRS). The CASR Impact Laboratory is a purpose-built facility for testing vehicle impacts with pedestrians and supports the ANCAP vehicle crash testing regime.

This report supplements the accompanying press release issued by the above groups on the afternoon of May 7; it will therefore only contain extra detail as relevant and be necessarily brief.

Presenters were Associate Professor Robert Anderson, Deputy Director of CASR, Nicholas Clarke, CEO of ANCAP, Dr Paul Hutchinson, CASR Senior Research Fellow and Kirsten Potoczsky, Health Design and Social Planner, Renewal SA (an amalgamation of Housing SA and the Land Management Corporation).

The demonstration was an element of the UN Global Road Safety Week's focus on improving pedestrian safety. Similar demonstrations occurred around the world as a part of the Decade of Action for Road Safety 2011-2020, which aims to reduce road casualties by 30%.

Pedestrian deaths account for about 13% of the national annual road toll and 25% globally, with total casualties, including injury, amounting to around 1.3 million.

The cost to the Australian community is estimated at \$27b. By comparison, the Australian Defence budget is currently \$26b.

Mr Clarke said that if the same number of service personnel were killed in active service as that of pedestrians through road trauma there would be a public outcry, that the technology to prevent us killing ourselves and each other currently exists, and that we should therefore use it.

“The weakest link is the human driver, but there needs to be incentives to get people into modern vehicles with all their electronic gadgetry,” said Mr Clarke. “If all young drivers were in the safest cars their fatal and serious injury crashes would be reduced by 80%.” He suggested that in the future people would just jump into their “Googlecar” and tell it where they wanted to go.

The car involved in the demonstration used two cameras mounted behind the windscreen to provide a three-dimensional image of anything in the vehicle's path and either automatically apply the brakes or warn the driver of a potential impact, depending on speed and distance.

This system has been called “forward collision avoidance technology”, or FCAT. Assoc Prof Anderson said, “Between 20% and 40% of all fatal crashes and between 30% and 50% of all injury crashes might be prevented by FCAT systems, with the greatest estimated benefit achieved from a system that combines long and short range sensing.”

Such technology also has the capacity to “see” around corners and through traffic by wirelessly communicating with other vehicles (V2V) and road infrastructure (V2I) that has complementary componentry.

Dr Hutchinson identified the main causes of pedestrian trauma as visual obstruction by traffic, vehicle speed and turning trucks, and pedestrians being drunk or unseen at night. He said today’s vehicular technology could prevent many such incidents. “But we need a theory of pedestrian behaviour to enable a more definitive extrapolation of data,” he added.

At present, the technology applied in the demonstration could probably slow the car down if a motorcyclist were directly in front of it (as a pedestrian or another vehicle would be), but if the bike were coming from a different direction the car would be unlikely to avoid striking it due to the speed differential. However, the impact velocity would probably be considerably reduced, possibly preventing the rider’s death.

No trials of the technology have involved motorcycles to date, as neither ANCAP nor the CASR Impact Laboratory is set up for such testing.