

# Computerised braking system could lead to a major improvement in truck safety

June 3 2015

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Credit: Highways Agency

A computerised braking system in development at the Department of Engineering could lead to a major improvement in lorry safety.

Professor David Cebon and his team of researchers in the Applied Mechanics Group have been working on a system that improves on standard anti-lock braking systems (ABS) to reduce stopping distance and enhance driver control for heavy-goods vehicles (HGVs).

On roads with slick or icy conditions, the ability to [brake](#) can mean the difference between a safe stop and a traffic statistic. Reducing skidding is key. Road slipperiness, the lorry's velocity and several other factors are measured and analysed by a computer which then controls novel high-speed pneumatic valves developed by the researchers. Compared to ABS, the new slip-control system stops 20 per cent shorter, uses half the amount of compressed air and allows the driver to maintain directional control while stopping – even on an icy surface.

"By completely re-thinking the brake [control](#) hardware and software, we have been able to get the lorry to brake in almost the theoretically minimum stopping distance," Professor Cebon said.

The team works closely with a group of companies in the Cambridge Vehicle Dynamics Consortium, which includes Volvo Trucks and Haldex Brake Products. It is hoped that these companies will develop a commercial version of the [system](#) within the next few years.

Provided by University of Cambridge

Citation: Computerised braking system could lead to a major improvement in truck safety (2015, June 3) retrieved 17 July 2024 from

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