

Autoliv camera technology could be Bambi's best friend



Autoliv's new infrared technology brings more accurate detection of animals in a driver's path. (Robert Alexander/Getty)

Though once the province of secret-agent movies and elite military units, infrared vision is a real-world quantity now, and its clearest area of application is the passenger car.



Safety components supplier Autoliv has taken a step forward with a new infrared system engineered specifically to help avoid collisions with animals. It is available on new or coming versions of Germany's flagship sedans, the [Audi A8](#), BMW 7 Series and [Mercedes-Benz S-Class](#).

The system detects and relays enhanced images to the driver. (Autoliv)

Infrared night vision has been available since it debuted on the Cadillac DeVille in 2000, but until recently has struggled to fulfill its potential. There were issues like poor image resolution – particularly for fleet-moving objects such as animals – narrow field of view and jerky image relay to the driver.

The bigger missing link, however, was an approach for alerting the driver when something worth seeing appeared on the display; a driver's eyes are on the road, after all, not on a night vision pop-up or multimedia screen. Cameras and computers have improved to such a degree that the Autoliv system can warn drivers not only of pedestrians and bicyclists, but also of animals in or near the roadway.

The company cites 1m deer collisions every year in the US, and a half-million in Europe, producing a combined 500 fatalities and financial losses of \$3.5bn in the US and 1bn euros in Europe. Autoliv's latest infrared equipment system is optimised, managing director Stuart Klapper says, to sense animals' proximity using a far-infrared camera in tandem with a near-infrared camera, a solution that is not as prone to the distorting effects of temperature – a handicap of previous systems. Because the infrared beam is not so temperature-sensitive, a deer grazing near the roadside on a steamy night will not be invisible to detection.

In the US, the systems work by sounding an alert that draws the driver's attention to the night vision display, where the animal is highlighted in yellow or red depending on the seriousness of the potential for collision. In other countries, Autoliv's system aims a spotlight on the person or animal, highlighting it more directly for the driver.

Directed lighting is not legal under US government regulations, which specify how headlights may shine. Autoliv has met with government regulators who, according to Klapper, would consider updating the regulations provided carmakers presented evidence from countries that permit the spotlighting function that the technology is effective.

To avoid startling pedestrians – and deer for that matter – the spotlight aims low, tracing a path on the ground and illuminating their legs, without blinding them with a light in the eyes. In his time driving a prototype vehicle, Klapper said he has seen hundreds of people spotlighted and only one appear to glance towards the car in a manner that suggested she noticed the light.

Granted, such technology exists only on the rarified end of the automotive spectrum, but Klapper said that beginning in 2016 the features are expected to start appearing in more affordable models.