

## **JAGUAR LAND ROVER DEVELOPS CONTACTLESS TOUCHSCREEN TO HELP FIGHT BACTERIA AND VIRUSES**

- **Patented technology offers dual benefit of keeping drivers' eyes on the road and reducing spread of bacteria and viruses in post COVID-19 world**
- **'Predictive touch' uses artificial intelligence and sensors to control infotainment systems without needing to touch the screen**
- **Lab-tests and on-road trials reveal time and effort needed to use a touchscreen can be reduced by up to 50%**
- **Research is driving Jaguar Land Rover closer to its Destination Zero vision by making vehicles safer and the environment cleaner**

**Thursday 23 July 2020, Whitley, UK** – New contactless touchscreen technology developed by Jaguar Land Rover and the University of Cambridge will help keep drivers' eyes on the road and reduce the spread of bacteria and viruses in a post COVID-19 world.

The patented technology, known as 'predictive touch', uses artificial intelligence and sensors to predict a user's intended target on the touchscreen – whether that's satellite navigation, temperature controls or entertainment settings – without touching a button.

The pioneering system, developed with engineers at the University of Cambridge, is part of Jaguar Land Rover's Destination Zero vision – a desire to make its vehicles safer and the environment cleaner and healthier.

In the 'new normal' once lockdowns around the world are lifted, a greater emphasis will be placed on safe, clean mobility where personal space and hygiene will carry premiums. Jaguar Land Rover vehicles are already designed to help improve passenger wellbeing, with innovations including a Driver Condition Monitor, engine noise cancellation and cabin air ionisation with PM2.5 filtration to capture ultrafine particles and allergens. New technology like predictive touch is another step forward as we address the wider landscape of mobility, from how customers connect with mobility services, to the infrastructure required to enable fully integrated, autonomous vehicles in our cities, like [Project Vector](#).

Lab-tests and on-road trials showed the predictive touch technology could reduce a driver's touchscreen interaction effort and time by up to 50%, as well as limiting the spread of bacteria and viruses.



Uneven or poor road surfaces can often cause vibrations that make it difficult to select the correct button on a touchscreen. This means drivers must take their attention away from the road, increasing the risk of an accident.

The technology uses artificial intelligence to determine the item the user intends to select on the screen early in the pointing task, speeding up the interaction. A gesture tracker uses vision-based or radio frequency-based sensors, which are increasingly common in consumer electronics, to combine contextual information such as user profile, interface design and environmental conditions with data available from other sensors, such as an eye-gaze tracker, to infer the user's intent in real time.

Lee Skrypchuk, Human Machine Interface Technical Specialist, at Jaguar Land Rover, said: "As countries around the world exit lockdown, we notice how many everyday consumer transactions are conducted using touchscreens: railway or cinema tickets, ATMs, airport check-ins and supermarket self-service checkouts, as well as many industrial and manufacturing applications. Predictive touch technology eliminates the need to touch an interactive display and could therefore reduce the risk of spreading bacteria or viruses on surfaces.

"The technology also offers us the chance to make vehicles safer by reducing the cognitive load on drivers and increasing the amount of time they can spend focused on the road ahead. This is a key part of our Destination Zero journey."

This software-based solution for contactless interactions has reached high technology readiness levels and can be seamlessly integrated into existing touchscreens and interactive displays, so long as the correct sensory data is available to support the machine learning algorithm.

Professor Simon Godsill from Cambridge University's Department of Engineering led the project. He said: "Touchscreens and other interactive displays are something most people use m

ultiple times per day, but they can be difficult to use while in motion, whether that's driving a car or changing the music on your phone while you're running. We also know that certain pathogens can be transmitted via surfaces, so this technology could help reduce the risk for that type of transmission."

**ENDS**

**Editors' notes:**



The predictive touch technology was also a finalist in the annual Jaguar Land Rover Innovista Awards which champions innovative ideas from across the business.

For more information about Destination Zero please visit <https://www.jaguarlandrover.com/2019/strategy>

## **About Jaguar Land Rover**

Jaguar Land Rover is the UK's largest automotive manufacturer, built around two iconic British car brands. Land Rover is the world's leading manufacturer of premium all-wheel-drive vehicles. Jaguar is one of the world's premier luxury marques, as well as being the first ever brand to offer a premium all-electric performance SUV, the Jaguar I-PACE.

At Jaguar Land Rover we are driven by a desire to deliver class-leading vehicles, providing experiences people love, for life. Our products are in demand around the globe and in 2019 we sold 557,706 vehicles in 127 countries.

At heart we are a British company, with two major design and engineering sites, three vehicle manufacturing facilities, an Engine Manufacturing Centre and soon to be opened Battery Assembly Centre. We also have vehicle plants in China, Brazil, India, Austria and Slovakia. Three of our seven technology hubs are in the UK – Manchester, Warwick (NAIC) and London – with additional sites in Shannon, Ireland, Portland, USA, Budapest, Hungary and Changshu, China.

We have a growing portfolio of electrified products across our model range, embracing fully electric, plug-in hybrid and mild-hybrid vehicles, as well as continuing to offer the latest diesel and petrol engines, giving our customers even more choice.

We are confident that our comprehensive strategy, exciting pipeline of market-leading vehicles and innovative approach to technology and mobility will see us continue to progress towards Destination Zero, our mission to shape future mobility with zero emissions, zero accidents and zero congestion.

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