

GRUPE RENAULT AND SANEF ANNOUNCE THEIR COOPERATION IN THE DEVELOPMENT OF ADVANCED SOLUTIONS FOR AUTONOMOUS VEHICLES

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- **By connecting an autonomous car to the infrastructure (V2X), Groupe Renault and Sanef move closer towards the zero fatality objective and give time back to travellers.**
- **Experiments are currently being carried out to study the pass-through of toll barriers and work zones by autonomous vehicles.**

Boulogne-Billancourt, July 10 2017 – Groupe Renault and Sanef, a world-leading motorway operator, belonging to Abertis group, today announced cooperation to further develop communications between autonomous vehicles and road infrastructure, and testing on toll barrier crossing and work zone approach. The partnership contributes to the main objectives for autonomous vehicles to increase road safety and to reach zero fatality, and with the “eyes off/hands off” experience to give time back to travellers.

“Maximizing safety for drivers, passengers and others with autonomous cars requires several stakeholders in both government and the private sector working together, each bringing unique expertise.” said Mathieu Lips, leading that innovation program. *“Our goal is to work with Sanef to develop advances in safety and the right solutions to bring as soon as possible to customers the most comfortable travel in autonomous drive without interruption.”*

As part of an open ecosystem approach to innovation, the development of autonomous drive vehicles is led by Groupe Renault in collaboration with the best expertise. The companies are working together to shape the car of tomorrow by integrating the infrastructures, using the connectivity from car to car and to infrastructure (V2X) developed in the framework of the European SCOOP project. This experimentation, taking place in France, with Renault Autonomous prototypes represents a first step, with the aim to extend cooperation to other countries.

“We are convinced that autonomous vehicles need premium infrastructures to be developed. That’s the reason why Groupe Renault and Sanef Group are working together on this worldwide innovation. Our goals in terms of road safety and road tech are converging”, said Edouard Fischer, chief technology officer at Sanef Group.

An operation as simple as crossing a toll barrier or a road works zone, represents a major challenge for autonomous cars to provide continuous travel in eyes-off/hands-off mode. A challenge that Groupe Renault and Sanef are well on their way to solving in order to build a comfortable and easy driving experience.

How the pilot project on toll barrier crossings works:

Groupe Renault and Sanef launched a specific pilot project in June 2016, in Normandy along the A13 motorway using the connected infrastructure (V2X) developed by Sanef, to study the approach and crossing of toll barriers and work zones by autonomous drive Renault vehicles. The experimentation in Normandy will continue until mid-2018.

For the toll barrier crossing:

1. The vehicle receives information about 1 km before the barrier of the toll lanes that are available and compatible with autonomous vehicle driving. Before approaching the zone, the vehicle will anticipate its position in the lane and adapt its speed by gradually slowing down according to the speed signs. Approaching such an area is a critical step in the absence of ground marking. To ensure its guidance, the autonomous Renault vehicles use virtual lines derived from a high definition map of the site. Access to the dedicated lane is performed at a speed of less than 30 km/h, while the sensors maintain the car in the center of the lane.
2. During the acceleration phase, the virtual lines system is used. Of course, the car is also able to detect the surrounding vehicles and adapt its behavior and its trajectory accordingly. Once the marking on the ground is restored, the autonomous Renault vehicles can continue their route normally.

The SCOOP project at a glance

As central players in the European SCOOP project, Groupe Renault and Sanef are already collaborating with other industry partners to conduct large-scale tests on equipment that enables road infrastructure to communicate with cars, and vehicles to communicate with one another – using short range wifi (ITS G5) allowing communication over (several hundred meters) long distances. These tests take place on different sites in France. Communication units are installed on the road side that exchange information with the equipment on board the car.

About Groupe Renault

Groupe Renault has been making cars since 1898. Today it is an international multi-brand group, selling close to 3.2 million vehicles in 127 countries in 2016, with 36 manufacturing sites, 12,700 points of sales and employing more than 120,000 people. To meet the major technological challenges of the future and continue its strategy of profitable growth, the Group is harnessing its international growth and the complementary fit of its five brands, Renault, Dacia and Renault Samsung Motors, Alpine and LADA, together with electric vehicles and the unique Alliance with Nissan. With a new team in Formula 1 and a strong commitment to Formula E, Renault sees motorsport as a vector of innovation and brand awareness.

About Sanef

Sanef is a motorway concessionaire, the only «pure player» in France and main subsidiary of Abertis, a Spanish-based company, world leader in motorway concessions. Sanef group is recognized by its customers for its capacity to innovate based on a strong culture which encourage the spirit of initiative and the open innovation. The Group has developed solutions for mobility such as electronic tolling or fast charging solutions for electric vehicles. Sanef operates 2 063 km of motorways, mainly in Normandy and in the Northern and Eastern part of France. 2,700 people are working for the Sanef group which had a €1,658m turnover in 2016.

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