

Valeo, NTT DATA and Embotech collaborate to showcase Automated Valet Parking at IAA

Munich, August 24, 2021 – Valeo, [NTT DATA](#), and [Embotech](#) are presenting their joint solution for Automated Valet Parking (AVP) as part of a showcase under the umbrella of the VDA (German Association of the Automotive Industry) at this year's IAA (International Automobile Exhibition). A central control system will take over vehicles at the entrance to the parking garage and park them automatically. This was announced by NTT DATA today.

The showcase will take place in conjunction with the IAA MOBILITY 2021 in Munich from September 7 to 12, 2021. It is organised by a consortium of five vehicle manufacturers as well as four AVP technology providers from the supplier industry and the start-up community. The goal is to illustrate the interoperability of vehicle models and AVP technologies.

To demonstrate the solution by Valeo, NTT DATA and Embotech, 22 cameras were installed in the parking garage and interconnected. Valeo provides the camera sensors as well as the software used to detect the vehicles, while NTT DATA ensures the communication between the individual components, i.e. from sensors to the AVP system and from the AVP system to vehicles. For the communication from the AVP system to the vehicles, NTT DATA uses 5G mobile technology and also integrates the entire system into the parking garage's existing IT system. Embotech supplies the motion planning, trajectory generation and tracking algorithms that the system uses to compute the manoeuvres and drive the vehicle in real time, as well as software tools for visualization. The AVP system manoeuvres the vehicles intelligently, safely, smoothly and efficiently.

Interoperability plays a crucial role in the large-scale introduction of AVP. It is achieved by standardising interfaces and protocols, making valet parking available to the largest possible number of car models from different manufacturers and their users – regardless of which AVP solution the parking operators use.

This way, the option of simply dropping off the car at the parking garage can go from being an expensive premium service to a commonplace offering at airports, trade fairs, shopping centres, or cultural and sports venues. Further application scenarios include car manufacturers' facilities, vehicle transfer stations at ports, vehicle logistics centres, and general parking lot operators both in the public and private sector.

Automated Valet Parking eliminates time-consuming searches for a free parking space as well as the need to look for the vehicle later on, for it is ready and waiting at the vehicle collection point at the appointed time. And in the meantime, car park operators can use their valuable parking spaces much more efficiently: Since no one enters or exits the parking areas, the vehicles can be parked much closer together. The operation of maintenance-intensive passenger lifts can be kept to a minimum for service personnel.

One important advantage of the AVP solution proposed by Valeo, NTT DATA and Embotech over other approaches is Valeo's cost-effective and proven sensor technology. This includes, for example, fisheye cameras, which are already used in many cars today and are produced in vast quantities. This means that the solution amortises more quickly.

Additionally, the use of 5G as a communication medium, enabled by NTT DATA, has the capability to reach short latency times in the range of less than 10 ms. This allows cars to be moved faster and yet more securely than would be possible with a Wi-Fi solution. In addition, the availability of 5G networking is significantly higher, at more than 99 percent. The AVP solution shown at the IAA runs on the virtualised NTT DATA 5G network and offers the

advantage of allowing integration into an existing data centre, with potential cost savings of around 40 percent. The next expansion step is the wireless connection of the camera sensors via 5G.

A further important advantage comes through Embotechs highly capable software for the efficient and safe control of the vehicles with its optimization and model-based algorithms that enable the AVP's control unit to make a multitude of decisions in real time – without prior training or pre-computing.

"Automated Valet Parking will impact mobility in a very sustainable way, as parking can be achieved in a time, energy and cost efficient manner. Car users and parking areas operators will have a direct benefit. Our 5G connectivity integrated solution shows how NTT DATA deploys its strength as use-case oriented system integrator for Automotive by leveraging the telecommunication heritage of our mother group," says Ralf Malter, COO and Managing Director at NTT DATA DACH.

"Valeo, the world leader in ADAS, inventor and world leader in automatic parking systems with more than 33 million systems sold to date, naturally wanted to bring its expertise to this experiment, which will take the development of automatic parking systems even further", says Marc Vrecko, Director of Valeo's Comfort and Driving Assistance Business Group.

"The Valeo-NTT DATA-Embotech consortium brings together best-in-class solutions for camera sensors and perception software (Valeo), communications based on 5G (NTT DATA) and driving software (Embotech) to offer a compelling solution for Automated Valet Parking to the mobility market. We are thoroughly excited about the potential of this collaboration", says Andreas Kyratos, CEO of Embotech.

About IAA Mobility

For the first time, the mobility and technology industry will gather for the IAA in Munich, from September 7 to 12, 2021. New location, new concept: The IAA 2021 will serve as an exhibition, a future-oriented mobility platform, and a dialog forum all at once.

Showcase:

7th – 12th September 9.00am - 06:30pm
Parkhaus West - Level 0
Messe München
Paul-Henri-Spaak-Str. 6
81829 München

About Valeo

Valeo is an automotive supplier, partner to all automakers worldwide. As a technology company, Valeo proposes innovative products and systems that contribute to the reduction of CO2 emissions and to the development of intuitive driving. At June 30, 2021, Valeo had 184 plants, 20 research centers, 42 development centers and 15 distribution platforms, and employed 104,000 people in 33 countries worldwide. Valeo is listed on the Paris Stock Exchange.

About NTT DATA

NTT DATA – a part of NTT Group – is a trusted global innovator of IT and business services headquartered in Tokyo. We help clients transform through consulting, industry solutions, business process services, digital & IT modernization and managed services. NTT DATA

enables them, as well as society, to move confidently into the digital future. We are committed to our clients' long-term success and combine global reach with local client attention to serve them in over 50 countries around the globe. Visit us at nttdata.com.

About Embotech

Embotech is a leading developer of cutting-edge decision-making software. Our embeddable software empowers autonomous systems to make decisions by solving complex optimization problems in milliseconds, bringing significant improvements in safety, productivity and energy efficiency. Current applications include Automated Driving on parking facilities, factory grounds, logistics hubs, ports and mining. Find out more at www.embotech.com

Presscontact for Germany, Austria and Switzerland:

NTT DATA DACH
Cornelia Spitzer, BA
Press Manager DACH
Tel.: +43 664 8847 8903
E-Mail: cornelia.spitzer@nttdata.com

Storymaker Agentur für Public Relations GmbH
Gabriela Ölschläger
Senior Consultant
Tel.: +49 7071 93872 217
E-Mail: g.oelschlaeger@storymaker.de