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Excellence in Mechatronics

Brose and Vayyar collaborate on sensor technology for new door and interior functions

Coburg, Tel Aviv/Israel (15. January 2019) In the future, when autopilot takes control, the steering wheel will disappear into the instrument panel and the vehicle user can decide how he or she wants to enjoy the ride. The vehicle interior is flexible: seats, screens and consoles slide and adapt to the desired use, e.g. for work or relaxation. Sensors recognize occupancy in the interior at all times to ensure the necessary level of safety in the interaction of mechanical and electronic systems. These sensors will also make it possible for side doors to open and close automatically and if other vehicles or obstacles are in the way, the movement ends before the door comes into contact with any object. Automotive supplier Brose is now working together with sensor specialist Vayyar on the realization of this vision by integrating innovative sensor systems in power adjustment systems and drives in interior and exterior applications.
Electronics play a key role in this endeavor. Brose is a world market leader in mechatronic systems for doors and liftgates as well as a leading supplier of power seat structures. The company also has more than 30 years of experience in the field of electronics where it has around 600 employees and supplies over 75 million electronic systems and sensors annually.

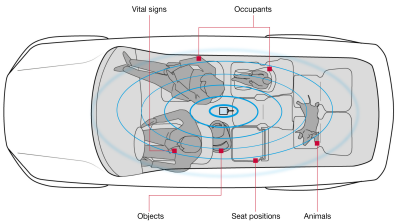
“We are combining our expertise with Vayyar’s leading position in radar sensors,” explains Sandro Scharlibbe, Executive Vice President Seat at Brose. “The integration of sensors into the overall system allows us to offer customers new functions that greatly enhance the driving experience – especially with power side doors and flexible interiors, which will become commonplace in autonomous driving applications. Thanks to our unique expertise in the field of mechatronics, we are able to design and produce all components in-house – from hardware and software for electronics to electrics and mechanics. This is also true across systems, for example when side bolsters on the seat that fold down automatically as the door opens to facilitate getting in and out of the vehicle.”

Brose door systems, equipped with Vayyar’s sensors, enable a full protection of the door without compromising design and at a minimal footprint in a single location. Accurate interior monitoring in 3D adds functions such as anti-theft protection, gesture control and recognition of vital signs such as breathing rates. Additionally, the precise sensing of occupancy and the position of seats makes it possible to eliminate previously required components.

Customers value this approach to doors and interior monitoring: there have been several development requests and the companies have already equipped the first test vehicles with prototypes.

“We are excited to announce the partnership between Brose and Vayyar in the integration of Vayyar's 3D radar image sensors for monitoring the immediate vicinity of the vehicle, doors and cabin,” says Ofer Familier, Director of Business Development at Vayyar. “Together with Brose we can offer the automotive industry a robust and precise sensor system that

prevents unnecessary damage to the vehicle and its surroundings and increases passenger safety while still cutting costs.”



The precise interior monitoring of the sensor systems from Brose and Vayyar provides reliable collision protection for automatic adjustment functions in the cabin and other applications such as airbag control or theft protection.

Picture: Brose