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Autonomous driving: Rheinmetall and Paravan enter global cooperation agreement

The Rheinmetall technology group, represented by Rheinmetall Landsysteme GmbH, has joined forces with Paravan GmbH, a market leader in drive-by-wire technologies, to cooperate in the field of autonomous driving.

The partners plan to design and develop semi- and fully automatic platforms for military and dual-use applications as well as civilian emergency response vehicles for protecting, rescuing and keeping people safe in acute high-risk situations and disaster zones. This pioneering cooperation agreement lays the groundwork for the rapid development of remotely controlled, automated, and future autonomous systems. Representatives of the two companies have now signed a wide-ranging agreement covering cooperation both at home and abroad.

One of the foremost manufacturers in this forward-looking field, Paravan has been developing drive-by-wire control technologies for over 15 years. This technology is a crucial prerequisite for future autonomous driving at the highest level (level 5), where no driver is necessary. Patented, fail-safe and roadworthy, these systems feature an independent power supply.

In the last five years alone, Paravan has prepared and equipped over 200 test vehicles, pre-series vehicles and show cars for autonomous driving on behalf of renowned automobile manufacturers and auto parts makers around the world.

These modular, fail-safe systems consist of software, actuators, interface management and integrated sensors. As a result, these systems can be readily adapted to the needs of system manufacturers like Rheinmetall as well as major automotive companies and parts makers. Paravan's special expertise lies in the redundant digital control of steering, accelerating and braking as well as supplying interfaces for digitization, GPS, control computers, cameras, radar and sensors. Today Paravan drive-by-wire technology already meets the Europe-wide criteria contained in the regulations ECE-R 79, ECE-R 10 and ECE-R 13.

Besides autonomous driving, Paravan technology eliminates the need for a steering column, enabling a complete rethink when it comes to the design of vehicle interiors as well as creating scope for entirely new future vehicle concepts.

About the cooperation partners:

Rheinmetall Landsysteme GmbH is a subsidiary of the Rheinmetall Defence Group, responsible in the Vehicle Systems division for the development and production of tracked armoured vehicles and turret systems. All of its development, production and service activities are geared to providing the best-possible protection for troops deployed in harm's

way. Group-wide and for many years, Rheinmetall Landsysteme has been steadily investigating potential uses for new technologies for remotely controlled, automated and future autonomous systems. Already deployed, the company's remotely controlled vehicles, e.g. for detecting mines, and the development of the first-ever military tracked vehicle with a drive-by-wire capability to receive a roadworthiness certificate almost twenty years ago (the "Digital Wiesel"), bear this out.

Established in 2005, **Paravan GmbH** quickly emerged as the global market leader in drive-by-wire technologies for disabled and severely disabled persons. Around the world, vehicles equipped with Paravan's roadworthy drive-by-wire solutions have already logged on over 500 million kilometres. The globe-spanning Würth Group holds a 51% stake in the company. With around 170 employees, Paravan has customers in over thirty customers worldwide. In the civil sector, Paravan is currently expanding its operations in the automotive industry, focusing on driver assist systems, integration of sensors and automated/autonomous driving.

For more information, please contact:

Oliver Hoffmann
Head of Public Relations
Rheinmetall AG
Tel.: +49-(0)211473 4748
oliver.hoffmann@rheinmetall.com