



PRESS RELEASE

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Title:

EUROGATE, Embotech, MAFI & ICT Group launch Autonomous Terminal Tractor (ATT) Proof-of-Concept at Wilhelmshaven Container Terminal

Wilhelmshaven, Germany - [17.12.2024] - EUROGATE, one of Europe's largest container terminal and logistics companies, Embotech, a premier provider of autonomous driving solutions, MAFI, a leading manufacturer of terminal tractors and ICT Group a leading European provider of industrial technology solutions, announce a proof-of-concept project that will showcase the next phase of autonomous operations in port environments. Early 2025 marks the start of a groundbreaking six-month project at EUROGATE's Wilhelmshaven Container Terminal. This project is designed to rigorously test the capabilities of autonomous terminal tractors in a complex, dual-environment setting - encompassing both landside and waterside container handling, with integration into existing quay crane workflows.

The project will deploy a MAFI's T series as a base vehicle, powered by Embotech's Level 4 AV-Kit and ICT Group's SmartECS will integrate the equipment with the Eurogate systems. This combination enables fully autonomous container transportation, optimizing both safety and efficiency in the terminal's operations.

"We look forward to collaborate with Embotech, MAFI and ICT Group on this important project," says Holger Bomm, CEO at the Container Terminal Wilhelmshaven and Head of Automation at EUROGATE. "The proof-of-concept represents a significant step forward in our journey toward automated operations that meet the highest standards of efficiency, safety, and sustainability."

With Embotech's Level 4 AV-Kit at their core, the ATTs are designed to optimize terminal operations with enhanced autonomy. Key benefits include the ability to navigate complex mixed-traffic environments, execute precise reverse driving with 5cm accuracy, and detect obstacles in any weather, ensuring smoother and safer operations. The system was tested successfully in landside operations in Rotterdam and will now expand into waterside operations, providing seamless integration with existing quay cranes.



"Introducing our technology to waterside operations opens new opportunities for efficient container handling. Unlike AGVs, our solution does not need segregated areas, enabling seamless container movement across the entire terminal" , states Andreas Kyrtatos, Embotech's CEO. "We're excited to be working with EUROGATE, MAFI and ICT Group to make this vision a reality."

"All relevant vehicle functions of the MAFI terminal tractor can be controlled externally via a specially developed drive-by-wire interface. They are therefore triggered independently of the driver," explains MAFI CEO Roland Hartwig. These functions include steering and braking, but also the operation of the fifth wheel coupling or the lighting. The control system is designed to guarantee complete control and safe operation under all conditions. MAFI developed this drive-by-wire interface together with Arnold NextG.

Another key aspect of the project is the testing of an IT integration between Embotech's Fleet Management System PROFLEET and ICT Group's Equipment Control System (SmartECS). This integration will allow seamless coordination between the autonomous tractor and existing terminal operations, providing real-time data exchange for efficient container handling.

"Designed with an agnostic principle, SmartECS offers the capability to connect with various types of equipment in the future with minimal effort. This setup also provides the freedom to integrate equipment from diverse suppliers," explains ICT Group Business Development Executive JP Broekgaarden. This proof-of-concept shows how SmartECS fosters innovation between equipment suppliers, like MAFI and Embotech, and terminal operators, by using the SmartECS which serves as a bridge between the equipment and the Terminal Operating System (TOS).

The proof-of-concept will rigorously test how well the autonomous system performs across critical areas, including container handling at (simulated) ASC stacks, quay cranes and the rail crane terminal. Once the project has been successfully completed, the results will make an important contribution to the future direction of automation at the EUROGATE terminals.



More information about the project partners...

About EUROGATE

EUROGATE - that is bundled port expertise: We operate container terminals in 5 countries. As a leading container handling company, our core competencies also include areas such as transportation, maintenance and packaging. Over the past decades, we have developed into a central hub in the continent's trade and logistics infrastructure. With state-of-the-art technology and many years of experience, we advance global supply chains and international trade: Moving the global economy.

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About Embotech

Embotech is an award-winning provider of cutting-edge autonomous driving solutions for logistics, with a focus on Automated Vehicle Marshalling (AVM) in passenger car factories and Autonomous Terminal Tractors (ATT) at port terminals and logistic centers. The company delivers safe and reliable autonomous transportation by leveraging the real-time optimization technology it has been developing since 2013.
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About MAFI and TREPEL

MAFI Transport-Systeme GmbH and TREPEL Airport Equipment GmbH are leading manufacturers of special vehicles for intralogistics. The products are used worldwide for loading in seaports, heavy industry and airport logistics. Both brands stand for premium products that are characterized by high quality and technical innovation. More than 500 employees work at the company headquarters in Tauberbischofsheim as well as in Wiesbaden and Bremerhaven.
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embotech*

MAFI
TREPPEL

ICT GROUP

About ICT Group

We are a leading European provider of industrial technology solutions. With a track record of over 45 years, ICT Group has both extensive multi-domain expertise and in-depth industry knowledge. We deliver proven technology solutions and are uniquely positioned to help our clients make their business processes more efficient, flexible, simple, secure and - as a result - more sustainable.

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