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Episode 3

ERTMS Trackbot at InnoTrans

#3 ERTMS Trackbot at InnoTrans

At InnoTrans, we are proud to showcase the ERTMS Trackbot (by TRACKBOT), a collaborative project by Strukton Rail, No Man Trackwork, and AMT RailRoad. This innovation was developed under the #ASAP-ERTMS initiative and the #IAM4Rail project, part of Europe's Rail framework #EU_Rail.

In the line-up of the InnoTrans we publish a series of posts about the background of this interesting development. Today the episode #3 about technical challenges.



ERTMS Trackbot in brief

The ERTMS Trackbot (by TRACKBOT) is a rail vehicle designed for the automated installation of balises and axle counters. It operates by loading a file that provides precise instructions on the placement of each component. See episode #1 for more background.

Technical challenges

The robot's development initially aimed to replicate the traditional method for placing bases, which involved manual labour, conventional tools, and standard documentation for quality control. However, duplicating this manual process would have added unnecessary complexity and likely resulted in an economically unviable solution. Instead, we recognized the need to optimize the workflow to harness the full potential of modern robotic tools, which required both procedural and technical improvements.

This approach led to several technical advancements. For example, in collaboration with Hilti, we introduced a faster installation method that fits well with the robotised installation of balises on railway constructions. The Hilti anchor mounted by the robot secures solid attachment of the balise. Lesson learned: Focus on achieving the desired end result, not replicating the traditional method.

The development of the Trackbot is supported by the innovation programme Europe's Rail Joint Undertaking #EU-Rail.