MAN Bus Reduces Response Time From Days to Hours Thanks to Collaborative Engineering Reviews with Virtual Reality

Story

Fast-moving trends and challenges within the automotive industry require quick responses to ensure products are launched at the right time. The MAN Bus plant specializes in the production of city buses and needed to speed up their prototype development cycle by accelerating the process of updating new sessions with new data, while reducing the risk of inefficiencies and decreasing the number of engineering change orders as well as any risk of delaying the start of production.

MAN engineers typically faced challenges in dealing with complex geometries or projects, as they would need to upload all the data into their system and then spend hours, or even days, creating a virtual build session. Then, their review teams would identify potential integration issues that needed correcting before release, which in turn, required a follow-up review to validate any design changes. Engineers would fix the issues, create new Computer-Aided-Design (CAD) geometry, and feed that new data into Product Lifecycle Management (PLM) systems. They would then have to create a new session from scratch, build it with the revised product data, and have previous simulated behaviors reapplied.

This meant continuously changing product data and sessions. Time lost building sessions with every new geometry was reducing opportunities to identify any additional risks in the product or process. These inefficiencies prevented the teams from focusing on the main goal of reviewing the assembly and disassembly of the bus's climate control systems.

The MAN factory in Starachowie has been using ESI IC.IDO for the last three years, and recently implemented its Change Management capabilities to help with this specific problem. With that solution in hand, MAN developers are now able to update existing Virtual Reality sessions based on detailed data changes, both before and after revisions, making it easier to see the modifications. The added benefit of an automatic update mode guides engineers through the workflow update process.

The implementation of this solution within the virtual prototype development cycle has reduced response time from days to hours, allowing them to work 3 times faster than before. More specifically, it has allowed MAN to move one full-time person from inspecting geometry for changes and recreating duplicate virtual reality sessions to strictly working on strictly working on engineering evaluation. Naturally, all of this leads to reduced costs and the ability to stay on target with getting their products to market as planned.

"Simply speaking, one can say that with help of ESI IC.IDO Change Management the overall response time is shortened from days to hours when preparing product data for planned and ad-hoc virtual reviews, which means that MAN specialists are able to spend more time upfront to define more complete virtual experiences and environments, so that product behavior can be the base for a successful job execution.

This results in a higher return on investment as product data constantly evolves over time and virtual reality sessions can be reused any time".

Łukasz Wiatr
Specialist of Production Preparation
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About MAN Bus & Truck

MAN Truck & Bus, with headquarters in Munich, is one of the leading international suppliers of commercial vehicles and transport solutions in Europe, with production plants in three European countries as well as in Russia, South Africa, and Turkey. The MAN production site in Starachowice is part of MAN Truck & Bus Group (within the Volkswagen Group) and a center of excellence in bus manufacturing – and where MAN city buses are built.

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www.bus.man.eu/de/en/index.html