

CASE STUDY: Millbrook Group Transforms CAD Workflow Efficiency with CADfix, Cutting Model Repair Time from Days to Minutes

CADfix

CADfix removes barriers preventing the reuse of solid models. By providing an extensive set of geometry manipulation tools for importing, repairing and exporting data, CADfix maximizes the reuse of CAD data in downstream applications.

By detecting and repairing a range of CAD geometry issues, the user-friendly CADfix Wizard interface ensures that the model is correctly defined and suitably flavored for the downstream application.

CADfix also offers model de-featuring utilities, which are popular with CAE analysis users who require automated de-featuring operations.

CADfix is packaged as a desktop or server solution, with extensible modular functionality dependent upon the end user's source and target systems. The application may be integrated into PLM or workflow automation tools. CADfix also serves as a geometry pre-processor within proprietary CAE-centric OEM applications.

"Before CADfix, our team was spending valuable time translating and repairing customer models. With CADfix we've eliminated expensive model rework. Now we can focus on better servicing our customer needs and project deliverables."

- Ryan Holden, Design Office Supervisor, Millbrook

Overview

The Millbrook Group provides vehicle test, validation and engineering services to customers in the automotive, transport, tire, petrochemical, defense and security industries.

It has a range of test facilities for full vehicles, tires and components located in the UK, the USA and Northern Finland. These include varied outdoor and indoor test tracks in the UK (5G-enabled Millbrook Proving Ground) and Northern Finland (Test World) and test laboratories covering everything from battery safety to full vehicle durability.

From February 2021, Millbrook is merging with the French automotive testing group UTAC CERAM to create a market-leading group in vehicle testing, homologation and emerging technologies for autonomous, connected and electric vehicles.

Challenges

The nature of their business requires Millbrook to work with CAD files from multiple sources and in multiple formats. When files are received, they are not always optimised or in a format that Millbrook can swiftly import and work with in their native CAD format. As a result, Millbrook engineers found themselves spending days working to repair models. To obtain optimal efficiency and cost effectiveness, Millbrook also demand a high level of support and responsiveness from their interoperability provider.

Solution

Millbrook managers contacted ITI after attending a tradeshow, and arranged for a demonstration. CADfix successfully repaired a set of test models in a matter of minutes, saving days of effort. CADfix demonstrated a complete interoperability solution. A short CADfix evaluation was followed rapidly by a product purchase, implementation and training.

Result

In order for Millbrook engineers to deliver on their customer requirements, they need to be both nimble and accurate. CADfix enables both. Millbrook receives large models of vehicle bodies from a variety of sources in a variety of CAD packages. These need to be converted into the Millbrook CAD system of choice for any given project. CADfix provides them the capabilities to convert the models and to efficiently repair any faults they find within the models.

Because CADfix has the ability to exchange multiple geometry formats, repair poor quality geometry, as well as de-feature and simplify complex models, Millbrook can turn projects around more quickly, helping the company achieve better bottom line results. CADfix also gives Millbrook confidence that model geometry is accurate, which is critical to the success of their business.

