

A 2D Multi-Block Decomposition & Virtual Topology Engine For Quasi-Structured Mesh Generation

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Motivation

- For certain structural mechanics applications, pro-structured or predominantly structured quad meshes are much preferred over unstructured tri/quad alternatives as the accuracy, robustness, and solver convergence rate is significantly improved.
- Generating such a mesh is a highly skilled, manual process, requiring hundreds of man hours per vehicle.
- The Multi-Block decomposition approach described here automatically generates a high-quality structured quadrilateral mesh removing the need for expensive, manual pre-processing.

Overview

