

COMPANY  
**ESS**

LOCATION  
Steyr, Austria

SOFTWARE  
alsim MERGE

SOFTWARE DEVELOPMENT KITS  
HOOPS Exchange

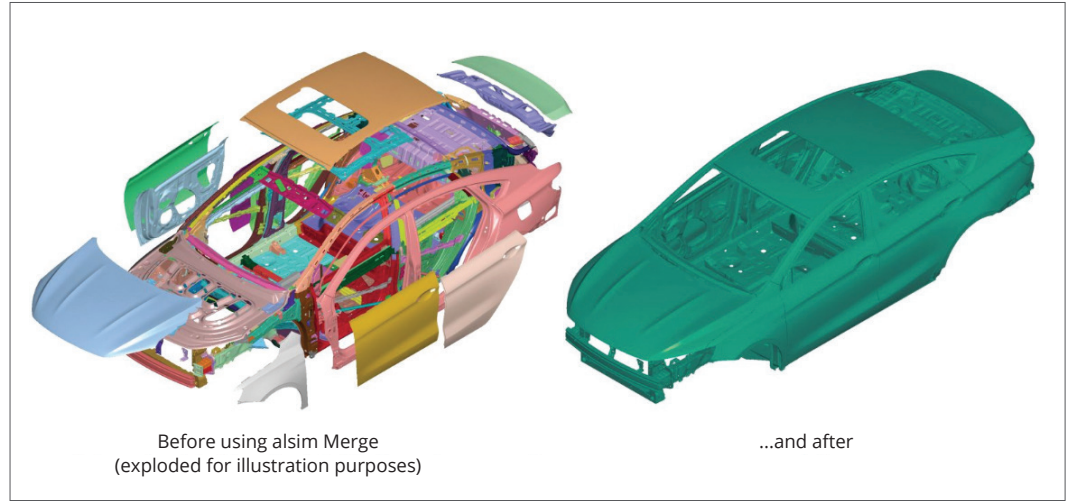
COMPANY WEBSITE  
[essteyr.com/alsim-merge](http://essteyr.com/alsim-merge)

# Tech Soft 3D Case Study: ESS

## ESS Focuses On Innovation Rather Than Data Translation, with HOOPS Exchange

“By using HOOPS Exchange, we’ve essentially cut the time spent on in-house development of CAD input-output code libraries down to zero.”

— Vishal Nair, CTO, ESS



### The Challenge

Engineering Software Steyr GmbH (ESS) – an Austrian software company named after the city that houses its global headquarters – is dedicated to solving complex industrial problems for its customers, who span the automotive, oil & gas, energy & environment, and processing industries.

“Our main focus is simulation” said Vishal Nair, CTO of ESS. “We are a producer of cutting-edge hybrid computational fluid dynamics (CFD) and computational structural dynamics (CSD) software, and a specialist in automating the pre-processing step of meshing.”

Amongst its solution suite, alsim MERGE is the product that handles this pre-processing step, preparing CAD models for further simulation.

“MERGE is the starting point for all of our simulations, in fact a perfect fit for a majority of CFD use cases,” explained Nair. “And the starting point for MERGE – the input – is a CAD model. Historically, we developed input-output code ourselves, in-house, to bring in those CAD models – but we only supported STL and a handful of other formats.”

Nair continued, “When you go to a customer, of course, you will find them using all kinds of different CAD software, and not just three or four packages. If we ask customers to convert models to STL and then import in MERGE, it’s additional work for them, and the chances of making mistakes are quite high. We wanted to make their life easier.”

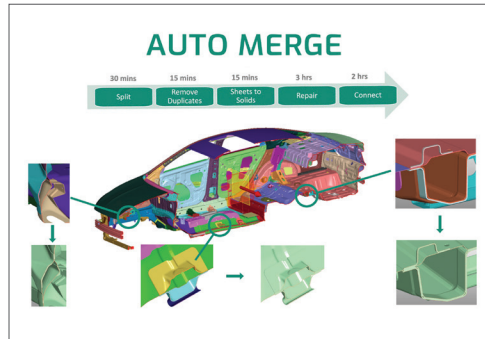
## A Technical Evaluation Leads to a New Approach

Partnering with Tech Soft 3D and utilizing HOOPS Exchange – the leading CAD translation software development kit – has helped ESS significantly expand the input-output capabilities of alsim MERGE.

“We reached out to Tech Soft 3D and conducted a technical evaluation upfront to see whether their technology would be a good fit with our development plans,” said Nair. “We quickly discovered several things. First, the number of CAD formats that HOOPS Exchange could support was very comprehensive. Second, and just as important, the Tech Soft 3D development team was very prompt in upgrading their kits to the latest versions of a given CAD format. And third, the level of support provided by Tech Soft 3D’s people throughout the entire evaluation process was very high – noticeably so. All of these factors made our decision to partner with Tech Soft 3D much easier.”

HOOPS Exchange is now playing a foundational role in alsim MERGE, freeing up time that ESS would otherwise have to devote to data translation. “By using HOOPS Exchange, we’ve essentially cut the time spent on in-house development of CAD input-output code libraries down to zero,” said Nair.

This extra bandwidth has allowed ESS to focus its resources on making MERGE

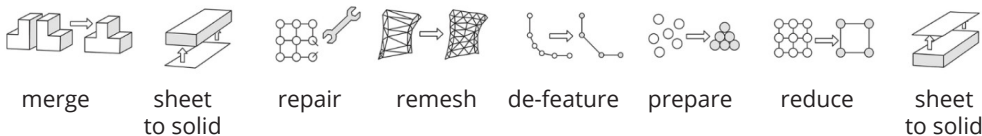


and other products more feature-rich, addressing complex industrial problems, rather than building out CAD interfaces.

“There are a lot of traditional products available in our market that follow very conventional methods,” said Nair. “What’s unique about MERGE is how automated the pre-processing is. MERGE can take a full model with thousands of parts, and with the click of a button, turn it into a model that is ready for CFD simulation in about 10 minutes. If you tried to do that same task manually, it would take days.”

Nair concluded, “Our goal is to solve engineering problems in an innovative way. Partnering with Tech Soft 3D and taking advantage of toolkits like HOOPS Exchange is one of the ways that we, as an organization, can stay aligned to our strengths and on track towards achieving that aim and coming up with innovative solution for the challenges our customers face.”

### Product functionalities:



### Industry:

- Manufacturing

### Challenge:

- Simulation pre-processing software could only support a handful of CAD formats
- In-house development of input-output code libraries was time consuming
- Needed to effectively meet needs of industrial customers working in multi-CAD environments, without creating extra work for them around data translation

### Solution:

- HOOPS Exchange software development kit delivers access to over 30 CAD file formats through a single interface

### Results:

- Accommodate dozens of commonly used CAD formats, including CATIA, NX, SolidWorks, and others
- Eliminate the need for customers to take intermediary data translation steps that take up time, and thus mitigate errors in the process
- Virtually eliminate the need for internal development of CAD input-output code, allowing resources to be deployed on other development areas
- Maintain competitive position in market as a provider of innovative engineering solutions

Contact Tech Soft 3D to learn more about how the HOOPS software development kits can benefit your organization.

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Engineering Software Steyr GmbH

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