

APP ECO-STRUCTURE

TotalSim US developing tools to help companies fine-tune products

TotalSim US has taken great advantage of the Ohio Supercomputer Center’s mandate to support commercial research as an economic driver. And it’s paying off.

“We’ve had a long relationship with OSC,” said Ray Leto, president of TotalSim US. “It’s one of the reasons we’ve stayed in central Ohio and grown our business here.”

TotalSim was a founding partner of AweSim—OSC’s program to promote the benefits of modeling and simulation to small- and mid-sized manufacturers. The combination of developing web applications and using engineering service providers, such as TotalSim, is what has made AweSim a powerful program.

“The idea with this AweSim app eco-structure is to get modeling and simulation in the hands of people who couldn’t afford it or didn’t have the time to become an expert,” Leto said. “That’s part of the reason we got involved in AweSim, it’s where we see things going.”

The eco-structure has allowed TotalSim to develop applications that companies are able to use to fine-tune products. Some of those companies include:

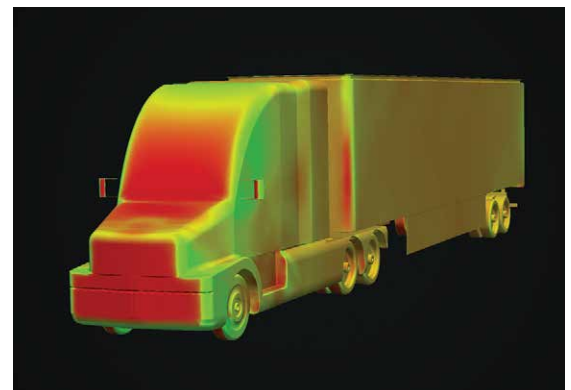
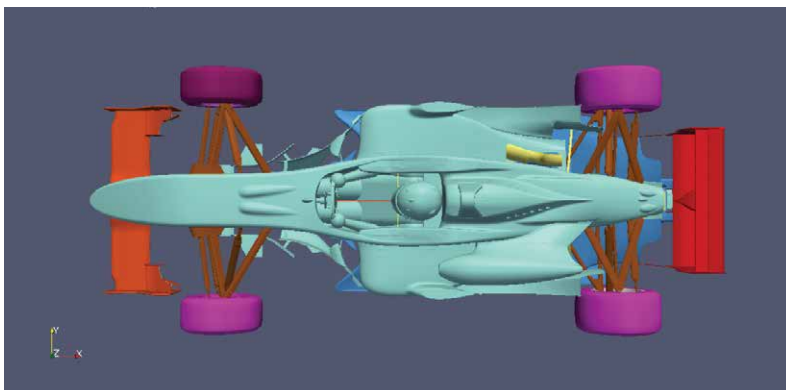
iRacing is the world’s premier motorsports racing simulation. iRacing’s portal puts members in the driver’s seat to experience today’s newest form of competitive motorsport: virtual racing. To

make its simulation portal as realistic as possible, iRacing uses TotalSim’s Automotive Aero App. The Automotive Aero App allows iRacing to perform aerodynamics simulations at OSC and get wind tunnel-like data to better characterize how race cars are run in their virtual environment.

Swift Engineering is a product development company that designs and builds high performance vehicles, specializing in unmanned systems, autonomy, robotics and advanced composites. Swift uses TotalSim’s Aero App for preliminary design studies on UAV-type aircraft. The engineers can run the aircraft at various speeds to assess performance and obtain surface pressure and force data that can be used in their details design work.

Rocketail, LLC is a trailer and trailer equipment business within the transportation sector. The company uses the Truck Add-On App for CFD modeling and simulation to test its range of tractor-trailer drag reduction devices. Through the app, the small firm can do virtual testing of its concepts and design prior to any expensive prototype builds or on-road testing.

“Through AweSim and the apps, we hope to lower the barriers for the smaller companies that, up to now, have done everything with physical testing or traditional design methods,” Leto said. ◀



TotalSim US and AweSim have developed modeling and simulation web applications that help companies, such as those in the auto racing and tractor-trailer industries, perform aerodynamics tests using computational fluid dynamics software.

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