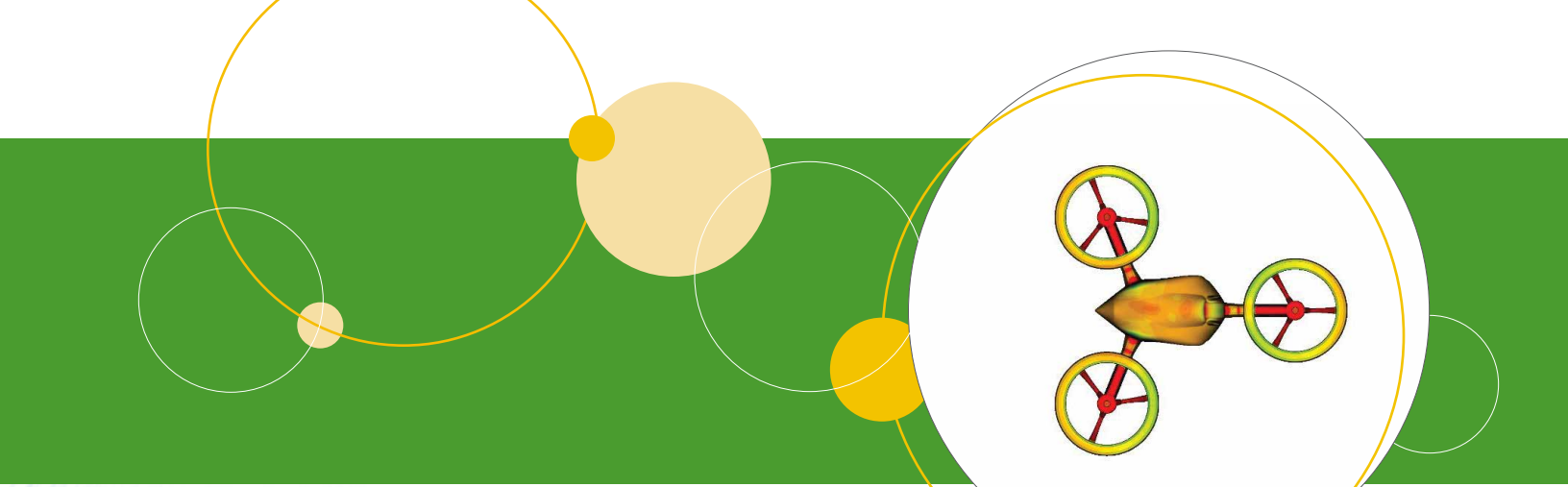


Drone Transportation

TotalSIM, OSC team up to provide inventors with app

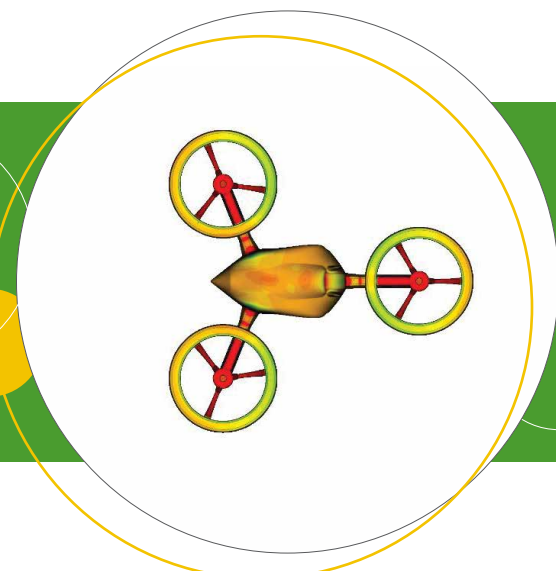




While widely used for aerial photography and video, the next frontier for drones could be human transportation. The GoFly challenge, sponsored by Boeing, is culling the brainpower of the world's most creative innovators and engineers to create personal flying devices. With \$2 million of prize money on the line over the course of two years, teams of inventors, engineers and dreamers are reaching outside their comfort zones to make human flight a reality.

To do this, many must reach for unfamiliar technology and tools to model and design a device capable of carrying a person. That's where TotalSim US and the Ohio Supercomputer Center enter the picture. GoFly approached Ray Leto, president of TotalSim, about providing contestants with computational fluid dynamics (CFD) insights. TotalSim's TS Aero app, built on OSC's AweSim industrial platform, offers an intuitive interface for users to upload their aerospace vehicle designs and test digital prototypes against various forces. In partnership with OSC, TotalSim created a portal based on OnDemand and a specific app for GoFly, based on TS Aero, specialized for devices that use vertical takeoff.

"What we offer that other people don't is an app-based workflow specifically made for



these types of vehicles that doesn't require expert knowledge to run," Leto said. "Many of the people using it have never done CFD before, many of them are not aerodynamicists, they're innovators, inventors, and now we're enabling them to do that."

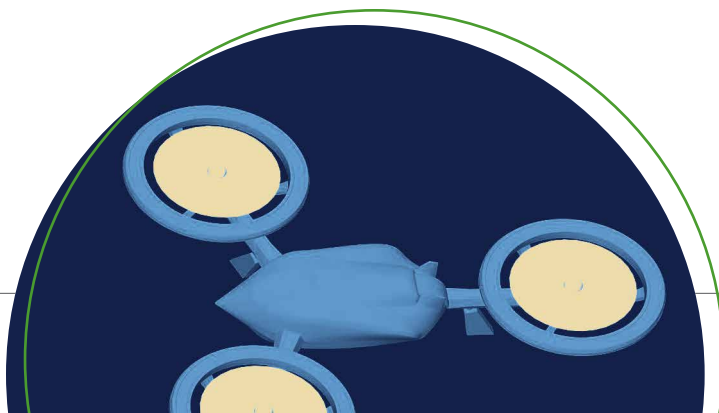
TotalSim allows all GoFly contestants to use its app at no cost, so they can log in and run simulations on their drone designs. Each team can run 10 or more simulations, approximately a \$5,000 value.

"OSC was really accommodating in having us do the account setups," Leto said. "We've got a streamlined account creation process with OSC where we create the account and share the application. And we've got a website full of documentation, training information and videos. We launched all that, and we've had pretty good success in getting people up and running."

GoFly users have challenged TotalSim since the contest's launch, allowing the company to refine its aerospace application, which it offers to commercial customers as well.

"It's been a good advanced beta testing process for us in some ways, both from the CFD and aerodynamics side of it, and maybe more importantly from the software and the infrastructure side of it with OSC involved," Leto said. •

PROJECT LEAD // Ray Leto, President, TotalSim **RESEARCH TITLE** // TotalSim's TS Aero App helps GoFly teams outperform the competition **FUNDING SOURCE** // TotalSim, Boeing **WEBSITE** // totalsim.us/gofly



VISUALIZATION BOTTOM // A 3D rendering of drone created using TotalSim software for GoFly.