

TOTALSIM^{US}

TSUS e-Brief March 2024 | Issue 3

Ansyes Fluent to STAR-CCM+:

Why Engineers Are Making The Switch

In the ever-evolving realm of Computational Fluid Dynamics (CFD) software, a new contender has emerged to challenge the long-standing dominance of Ansys Fluent. [Siemens STAR-CCM+](#) is stepping up, offering engineers a comprehensive solution with seamless multiphysics integration, efficient meshing algorithms and unparalleled solver technology.

Simcenter STAR-CCM+ workflow

Flexible and robust pipeline of mesh operations



Dive deep with us into the advantages and disadvantages of each option, and uncover why engineers are making the switch. From simulation capabilities to licensing models, explore how STAR-CCM+ is redefining the landscape of fluid flow simulations, backed by industry experts and leading-edge innovation. Check out [our full analysis](#) of the two softwares and see which one is best for you.

Hypersports Breaks World Record

TotalSim wants to wish a huge congratulations to our friends at Hypersports, the Baynes Brothers Racing Team and driver Chris Baynes who made history this month in International Snowmobile Racing, setting a new world record for top speed over 1000 feet. With a groundbreaking run of 202.33 mph aboard the custom-built "Speed Needle 2.0" sled, they've pushed the boundaries of snowmobile racing.

SPEED NEEDLE 2.0
202.33 MPH
1000FT WORLD RECORD 3/09/2024

660FT GPS SPEED 180.30 MPH

660FT ET 5.23 SEC
934FT GPS SPEED TRAP - ENTER 200.50 MPH
1000FT GPS SPEED 203.70 MPH
1000FT ET 6.48 SEC
1066FT GPS SPEED TRAP - EXIT 208.90 MPH
1066FT ET 6.70 SEC
TOP SPEED @ 1157FT 212.10 MPH
PEAK ACCELERATION 3.0g @ 81FT
ENGINE SPEED 11,050 RPM
BOOST 43.0 PSI
INLET AIR TEMP 164F
COOLANT TEMPERATURE 139F
OIL PRESSURE 125 PSI
AERO DRAG 317 LBS
AERO LIFT -396 LBS

TRACK DIRECTION
NE

RECORD RUN DATA

INTERNATIONAL FALLS
MINNESOTA

WIND 6 MPH NW
TEMP 28°

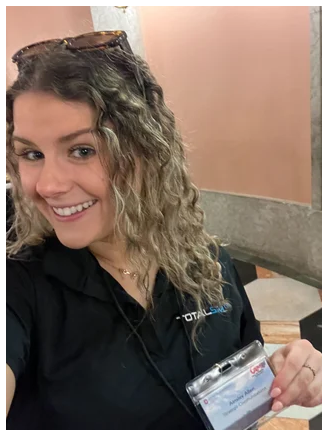
DRIVER *Chris Baynes*
OWNER BAYNES FAMILY
TUNER GLENN HALL
BUILDERS CRAIG CAMPTON
CHASE MILLER
DOUG OLSON
RICK KIPPLEY
MARK MATTHYS

PRECISION TURBO BOOSTED
LINK
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We are honored to have played a part in designing this sweet ride, using reverse engineering techniques to recreate Hypersport's snowmobile model from the previous season, incorporating the fairing mounts, chassis positioning and even a simulated driver for enhanced accuracy. [Through our analysis](#) we were able to reduce drag and make other changes that added to the increased speed of their sled.

It's one of the most rewarding parts of our work to see behind-the-scenes collaborations pay off, and this project was a definite favorite among our team. Congrats again to the team and we're excited to see what record you smash next!

Tradeshows for the Team



We were busy this March and in a quick stop by the Ohio Air Mobility Symposium, TotalSim got to see some familiar faces, including our fellow Midwesterners at Jobs Ohio. The symposium is student run and seeing the interest from young adults was so inspiring that we decided to send our youngest team member as representative! She was grateful not only for the chance to see the innovators in the [aerospace](#) industry, but also for the free dinner.

A few states over, Monica was walking the floor at WorkTruck Week in Indianapolis where she saw our friends at Bollinger Motors and Hendrickson International. It was great to learn what is up-and-coming in the [trucking](#) world and Monica can now say she has her first event as a TotalSim employee under her belt.



Upcoming Events

SAE World Congress // April 16 - 18 // Detroit, MI

AUVSI Xponential // April 22 - 25 // San Diego, CA

Realize Live // May 13 - 16 // Las Vegas, NV

Industries Where We Excel





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