



Optimization Wins the Race Against Time at Polestar: getting ready for the 2013 TTA Season

The Official Volvo Racing Team, first prize winner in 2012, leveraged modeFRONTIER platform to improve weight, aero-dynamics and brake distribution, achieving a lap time reduction from 0.19 to 0.50 seconds

Trieste (Italy), 9th April 2013 – Polestar Racing, the official **Volvo racing team** and first prize winner in the 2012 Touring Car Team Association (TTA) championship in Sweden, is getting ready for the 2013 season. Polestar engineers are using modeFRONTIER to quickly pinpoint the car configuration which grants the **best performance for different circuits** and operating conditions. The **optimization platform** brought improvements in weight, aero-dynamics and brake distribution, leading to a **lap time reduction ranging from 0.19 to 0.50 seconds**.

At Polestar, modeFRONTIER has been used in **different steps** of the development of the ‘Polestar Performance’ concept. The software is leveraged both as a tool for driving the aerodynamics, multi-body and structural analysis process, and to improve the **real lap time simulation**. The platform developed by ESTECO turned essential in the 2012 season of the Racing Elite League run by TTA, when **new rules** were introduced leaving little room for engineering design changes. modeFRONTIER helped the team taking up the challenge by identifying **the best combination of the Front-to-Rear weight, aerodynamics and brake distribution** in less time.

With the new rules limiting track testing to three days, design simulation acquired an even greater importance as **the best combination of the Front-to-Rear weight, aerodynamics and brake distribution** in less time became the new target. “Considering the limited amount of time we have had for testing in this championship – says **Per Blomberg, Manager of Chassis Development** – this kind of interrelated parameters study would not have been possible without the capability of modeFRONTIER to extend the simulation analysis”. By integrating with Polestar various CAE tools, **in only a few hours of simulation time** modeFRONTIER piloted the evaluation of parameter combinations that might have never been tested, leading to enhanced configurations.

These improvements have contributed to **Polestar Racing winning the first prize in the Drivers, Teams and Manufacturers** categories in the 2012 Touring Car Team Association (TTA) championship. **And the 2013 season is about to begin**: the new optimized setup is undergoing testing on track this month, gearing up for the first race in Knutstorp on 3rd and 4th May 2013.

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About ESTECO SpA

ESTECO is a pioneer in numerical optimization solutions, specialized in research and development of engineering software for all stages of the simulation-driven design process. Perfecting engineering and reducing complexity in the design process is our vision. Founded in 1999, the company is headquartered in Area Science Park in Trieste (Italy) and currently employs 40 professionals and serves more than 250 international clients including BMW, Daimler, Ferrari, FIAT, Ford Motor Company, Honda, Mazda, Toyota, reaching a revenue of more than 4 million euros in 2011. www.esteco.com

About modeFRONTIER

modeFRONTIER is an integration platform for multi-objective optimization, automation of design simulation processes and analytic decision making. The software provides seamless coupling with engineering tools within different disciplines and its powerful workflow allows for the execution of complex chains of design optimization. Through innovative algorithms and advanced data visualization tools, modeFRONTIER helps companies identify the set of best possible solutions, while eliminating guesswork and introducing rigor and automation.

About Polestar Racing

Polestar was founded in 1996 in collaboration with Volvo in order to drive forward Volvo's investment in racing. Since then, Polestar has competed with the 850, S40, S60 and now the C30 Volvo models. The company's core business is focused on development and competition in racing. In addition to racing, the company's activities are organized into two further business areas, Performance and Services. For more information visit: www.polestar.se

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