

PRESS RELEASE



Ricardo plc
Shoreham Technical Centre,
Old Shoreham Road,
Shoreham-by-Sea,
West Sussex,
BN43 5FG, UK

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Ricardo Software launches full vehicle system modelling and simulation application

IGNITE™ program features design and optimization tools and comprehensive powertrain library built on Ricardo's engineering expertise – helps automakers, truck and off-highway equipment builders optimize new vehicle designs for performance and fuel economy

Ricardo Software announced that it has launched a complete vehicle system modeling and simulation application called IGNITE™. The product features embedded design and optimization tools – a first for its type of application – and a comprehensive powertrain library for simulation, built on the deep engineering expertise of Ricardo.

“IGNITE was designed from the ground up to address unique challenges vehicle simulation engineers face,” said David Higbie, global director of Ricardo Software. “Based on feedback from our global software client base, along with Ricardo's own vehicle simulation experts, we've built unique features in IGNITE that address two main requests: consolidating simulation and optimization toolsets; and embedding the users' own intellectual property.”

With a world-class library of vehicle component 'building blocks,' IGNITE allows users to quickly and accurately conduct systems-level modelling of a wide array of vehicle platforms, including conventional, hybrid-electric, full-electric and even novel vehicle architectures. Users can build complex vehicle models, one object at a time, using flexible components and multiple configuration options. Modelling and simulation is

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supported from concept phase through detailed powertrain integration with quick turnaround of vehicle performance, fuel economy and emissions prediction.

The hallmark of IGNITE is the Design/Optimization toolbox, seamlessly integrated within the software, which does not require use of add-on applications to experiment in the trade space. Users have the ability to not just analyse data, but make decisions and adjustments throughout the simulation process. This flexibility saves critical time in identifying positive and negative trade-offs when selecting from a vast array of variables.

With faster than real-time execution speed, native design and optimized tools, IGNITE has the ability to conduct:

- Complete vehicle systems modelling
- Drive cycle simulation
- Vehicle performance prediction
- Fuel consumption prediction
- Emissions prediction
- Fuel-to-road energy flow analysis
- Hybrid system design and analysis
- Component selection and sizing
- Powertrain integration analysis

The breadth and flexibility of IGNITE's powertrain library gives users unmatched capability for comprehensive modelling of the entire vehicle with systems-level engine, transmission, driveline, vehicle, tire, hybrid-electric, controller and powertrain accessory modelling objects. As such, IGNITE is expected to be a key tool as automakers strive to improve fuel economy and efficiency in order to achieve the upcoming 2025 CAFE requirements.

IGNITE supports the Modelica standard modelling language, providing users the flexibility and extensibility to embed their own intellectual property. For example, a supplier could develop and implement proprietary models representing a new technology, such as an e-machine, into IGNITE to analyse the resulting impact on vehicle behaviour. This feature should allow for faster research and development from both suppliers and automakers.



The new IGNITE product joins a full-suite of powertrain development and vehicle integration software products offered by Ricardo Software. Native co-simulation between Ricardo Software products provides a level of vehicle/powertrain modelling fidelity and flexibility that is unique throughout the industry.

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NOTES TO EDITORS:

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West Sussex,
BN43 5FG, UK

Media contact:

Anthony Smith
Ricardo Media Office
Tel: +44 (0)1273 382710
E-mail: media@ricardo.com