

Simcenter system simulation solutions 17

Boost system simulation efficiency

09.10.2018

Dear user,

It's my honor to introduce version 17 of the Simcenter™ system simulation solutions.

For this version, we started using an agile software development methodology that will give you faster access to new enhancements. At the same time, we keep focusing on technical excellence of our products through continuous testing.

We remain committed to helping you increase system simulation efficiency through a seamless process integration, maximum modeling accuracy and easy access to digital twins for closed-loop performance engineering.

I am proud to present this non-exhaustive list that highlights the main new capabilities:

Simcenter Amesim™ 17

Electrification

- Import of electric motor characteristics from Simcenter™ SPEED software
- Expansion of air conditioning system capabilities for battery cooling
- Battery thermal run-away modeling
- Battery pre-sizing tool
- Hybrid and electric vehicle model templates

Controls engineering

- Upgraded signal bus capability and statechart management
- Cooling system functional components
- Real-time compatible components in the fluid component design libraries
- Tunable parameters for FMI 2.0 export

Vehicle systems and components performance engineering

- Exhaust calibration tool including optimization features
- Engine manifold design study through full coupling with Simcenter STAR-CCM+™ software
- Kinematics and Compliance generator
- Cam profile definition from the valve lift
- Hypoid gear component
- Extended modeling capabilities for vane and gerotor pumps



Tonny Vanmunster
Vice President R&D
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Aircraft systems performance engineering

- Intuitive and detailed jet engine performance analysis
- Fuel systems and flight dynamics coupling
- Fuel tank mapping from CAD
- Model templates for landing gear and flap systems
- Streamlined process for the virtual integrated aircraft (VIA) approach

Interoperability

- Embedded Simcenter STAR-CCM+ technology for enhanced cabin air flow modeling
- Ego vehicle modeling for ADAS/AD validation with Simcenter Prescan™ software
- Simcenter Amesim - Simcenter Flomaster™ co-simulation
- Model-based system testing through interoperability with Simcenter Testlab™ Neo software
- Direct access to Teamcenter® workflows in Simcenter Amesim

Move to the cloud

- Web-based access to tailored Simcenter Amesim models with Simcenter Webapp Server
- Simcenter Amesim as a service, in a web browser

Simcenter Sysdm 17

- Reinforced data security by using RMI SSL for connection between server and client
- Enhanced file management with a new Apache™ Subversion® version
- Improved performance by upgrading to 64 bit

Simcenter Embedded Software Designer 17

- Template generation in form of C-shell or Simulink® models
- Seamless integration of legacy code
- Enhanced change management

The Release Notes manual will enable you to rapidly adopt the new capabilities of our products. In line with our ISO 9001-2000 certified quality approach, we continue to deliver high-quality solutions, by increasing the number and complexity of industrial scenarios and automated validation tests, executed during the quality control stage.

We thank you for your loyalty and confidence in our products.

Best regards,

Tonny Vanmunster

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On behalf of the Simcenter system simulation team