Partner Spotlight: ChassisSim

Danny Nowlan, the Owner and Director of ChassisSim Technologies, discusses his MBD software, ChassisSim, which specializes is high performance racing vehicles.

APA: Why or how was ChassisSim Technologies founded? What opportunities were there in the market?

ChassisSim: ChassisSim started its life as my Aerospace Engineering masters in the mid 90's. It evolved as I worked as a data and race engineer in Europe and Australia. However, by 2006 it was clear that ChassisSim was very unique in what it did, so the company ChassisSim Technologies was formed.

APA: What are some of the benefits of using ChassisSim for MDB analysis?

ChassisSim: What MBD and ChassisSim, in particular, brings to the table is it is simply the best way you are going to be able to predict what you do before you get to the track. Other simulation approaches don't come close.

APA: Which applications is ChassisSim intended for? Are there any unique applications that ChassisSim work for that your competition cannot?

ChassisSim: ChassisSim is designed for motorsport or high performance automotive where you need to predict maximum vehicle performance. What makes ChassisSim unique is it combines transient multi body simulation, the ability to reverse engineer vehicle parameters from race data and the ability to export data to data analysis package. It is this combination that makes ChassisSim unique amongst its contemporaries.

APA: How is ChassisSim changing the way engineers simulate vehicle behavior?

ChassisSim: The way that ChassisSim has changed the way engineers simulate vehicle behavior is that it has really rammed home the importance of simulation and using it as an integral cog of their race engineering tools. This is particular apparent when they have no data.

APA: What are the major (essential) inputs required from the user?

ChassisSim: All the major setup parameters such as springs, dampers, ride heights, suspension geometry points, engine curve, gear ratios, and a good start point for the downforce are required.

APA: What other (optional) inputs are required from the user?

ChassisSim: Structural flexibility and compliances, test tire data and an aeromap to start from (the last two are usually hard to come by, but that's not a problem. It's what the toolboxes are for.

APA: How much time is required to learn and start using ChassisSim?

ChassisSim: If you work through the ChassisSim tutorial and the quick start guides in the help folder you'll be up and running in 1 – 2 weeks achieving good simulations.

APA: What's next for ChassisSim…what can we look forward to?

ChassisSim: There is a lot going on with ChassisSim right now. Firstly we are running a boot camp in Cologne Germany on Wednesday the 12th of November 2014. We are also exhibiting at PRI in Indianapolis, IN USA Dec 11- 13 2014. We will also be running our Lap Time Simulation 101 Seminar on the Thursday and Friday of PRI as well. In terms of product development, an Electric Vehicle propulsion module is about to be added to ChassisSim and ChassisSim driver in the loop is just around the corner.