

Engineering Smart Change with CAE Simulation



By **Paolo Guglielmini, President and CEO, MSC Software**

Greetings Readers!

It is with great pleasure that I pen this, my first Editorial, for *Engineering Reality* magazine as CEO of MSC Software.

The first thing you will have noticed no doubt, is that we have renamed the magazine and given it a new tagline. We feel these changes show a natural evolution of what MSC has been saying and doing in the computer-aided engineering (CAE) market prior to its acquisition by Hexagon AB in April 2017, and where we are positioning ourselves going forward. This magazine used to be called *Simulating Reality* and this resonated with MSC's long term mission to 'Simulate Reality, Deliver Certainty' in the multiphysics CAE space with our best-in-class products like MSC Nastran, Adams, Actran, VTD, SimManager, MaterialCenter, Simufact and Digimat to name a few. With the acquisition of MSC by Hexagon, a 3.5 Bn Euro Swedish-listed (Nasdaq Stockholm: HEXA B) global positioning systems and metrology powerhouse, a unique simulation and testing/measurement solution offering to many markets and manufacturing industries is now possible.

We believe that our synergizing of CAD/CAM, CAE and Metrology offers something new to the product development process. Indeed, in Hexagon we talk about 'shaping smart change' through our unique approach to the market where a focus on quality measurement and quality production solutions has led to very significant productivity enhancements for our customers around the world and return on their capital investments. When this is added to MSC's history of quality predictive engineering simulation solutions, a new benchmark for manufacturing is possible.

In this edition of our magazine you will see where MSC's broad portfolio of engineering simulation software and co-simulation solutions is having an impact in the real world – what we like to call 'where simulation gets real'. Everything from Bluefin Tuna and Leatherback Turtles in the oceans (p32) to armored HMMVEE vehicles on difficult terrains (p22) is showcased by our customers in this edition. Our lead story is on Autonomous Vehicles because of the exciting work by our VIRES Virtual Test Drive (VTD) software at Volkswagen in Germany (p10). Acoustic predictions get real for our customers Renault in France

(p18) and Hyundai in S. Korea (p56), engine rotor dynamics for Pratt & Whitney in Canada (p36), downhole oil & gas extraction using Adams Drill at Pioneer in Texas (p48), and BoostHeat in France even claims to have designed and made the world's most efficient domestic boiler thanks to Cradle CFD software (p41).

If you are fascinated by the Industrie 4.0 'Smart Factory' concept, I would encourage you to read an article by my colleague Brian Shepherd (p15) explaining how Hexagon is leading the way in this area. If you want to know the latest on Autonomous Vehicle simulation and testing solutions, then do read the commentary by our Divisional Strategist, Dr. Luca Castignani (p6). And finally, Dr. Keith Hanna, our new VP of Marketing offers his insights into MSC's strong co-simulation multiphysics offerings that are unique in the CAE market (p73).

This edition of the magazine also has a very strong Indian flavor with an interesting background article on CAE within the fast emerging economy of India by my colleague Sridhar Dharmarajan. India has many hidden engineering gems like the Mahindra Group who are relatively unknown globally, yet a large conglomerate growing organically as well as by acquiring a number of automotive companies in the west, like Pinafarina from my native Italy. We have Indian automotive application stories from both Tata (p44) and Mahindra Tech (p61) in this edition to illustrate what's leading edge today in the subcontinent.

Finally, I would encourage you to google 'HxGN Live', our annual company-wide showcase in Las Vegas, if you want to understand our unique vision for all Hexagon's wide spectrum of products and services, and where our USA MSC User Conference will be held again next year. It will be a great way to expand your CAE mind and to see where Hexagon technology is leading the world. I hope to see you there.

Ciao