

Maturity Assessment Background

June 2014

CIMdata's Simulation & Analysis Knowledge Council Workshop

General Electric Learning Center, Cincinnati, Ohio
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Solution Provider Discussion Panel

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The Panelists

Name	Company
David Conover	ANSYS
Paul Caito	Siemens PLM
Mahesh Turaga	Dassault Simulia
Malcolm Panthaki	Comet Solutions
Jon Quigley	Altair
Michael Bloor	ESI

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David Conover

David, I just mentioned the cloud as an issue for technical computing. How do you see this playing out for CAE and simulation? The idea of remote resources for high-end computing goes back 30 years to service bureaus like Boeing Computer Services in the 1980s and the NSF Supercomputer Centers in the 1990s. Some say, “this time, it’s different”. Really? Can you elaborate on how you think the cloud will play out for CAE, and what the real issues are?



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Paul Caito

Paul, we have seen the rise of integrated suites for CAE, what I used to call “frameworks”, but many now call “platforms”. End users are now possibly relieved of much of the burden of integrating “best of breed” applications in their own environments. When we spoke, you said that these platforms and their associated tools for data management, scripting and workflow are “enablers to develop holistic, company and industry specific workflows”. Can you please elaborate?



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Maresh Turaga

Maresh, it's now more than a decade since Simulation Data Management was touted as the next big thing. But, adoption has been slow. It's a difficult issue, as we all can see from today's presentations by American Axle, Cummins, and Honda. Yet, you told me that DS is having success with deploying what you call SLM (Simulation Lifecycle Management) for a diverse range of end user issues. Can you elaborate on how collaborative data management serves to democratize the use of simulation for a wider audience, and whether this should be a top-down management mandate, or a grass-roots user initiative?



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Malcolm Panthaki

Malcolm, the (perhaps your) idea of the abstract model has been out there for a decade or more. And yet, as we see in the AAM presentation by Ravi Desai, it is still, may I say, an "unusual" concept. Can you talk about how an abstraction, a higher level view, enables a reusable and collaborative process definition for product development? This is the norm for electronics and control systems, but still a foreign concept for mechanical design?



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Jon Quigley

Jon, we talked about how simulation can be an analog of end of design validation testing, and most companies know how to do that. But, when we try to drive simulation early in the development process, ahead of detailed CAD for manufacturing, we find that it's a very different issue. Complex multi-discipline and multi-domain decisions need to be made, while the product definition is not very precise. Can you comment on this, how will we realize the vision where product requirements, through simulation and optimization, drive the physical realization of a product design? Also, I think a Systems Engineering mindset is necessary to do this. Do you agree?



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Michael Bloor

Michael, ESI promotes an holistic, comprehensive “virtual prototyping” approach to the product definition process that extends to the “as built” rather than the “as designed” product. ESI’s analysis and decision support tools are well known, but we also now have CyDesign for up-front system simulation, and IC.IDO for immersive rendering and manufacturing ergonomics. Can you comment on this very broad view of the reach of (what used to be) mechanical simulation?



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Open Discussion



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