



## Design Exploration Using ANSYS SpaceClaim Direct Modeler

Do you wish to design multiple concepts from scratch and evaluate them in shorter time compared to using traditional CAD modeling systems?

Do you wish to easily change or edit your designs without starting over or restructuring whole features?

Have you needed to simplify and prepare models quickly prior to mesh and analysis but couldn't because of constraints and regeneration failures?

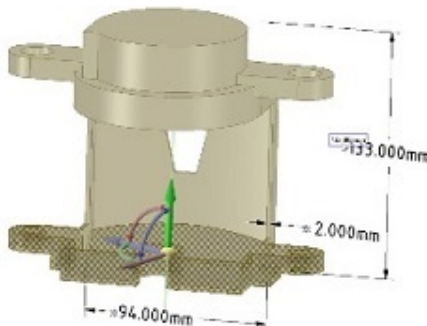
Do you wish to import complex native CAD models and modify them with ease using the automatically added parametric intelligence to them?

Do you wish to explore multiple iterations of your design parameters for the best values against specific analysis targets such as maximum mechanical, thermal stresses?

Do you wish to easily communicate your design intent in a perfect 3D environment using a number of tools like 3D PDF?

If the answer is **YES**, then do not miss this opportunity to attend this hands-on workshop to see and learn how direct modeling complements your current workflow for importing and modeling geometry. ANSYS SpaceClaim Direct Modeler uniquely delivers direct modeling to analysts who work in a 3-D world but do not wish to become experts in traditional, feature-based CAD systems. The model becomes completely dynamic, allowing the user to move, stretch, add and remove with mouse movements. All changes to the CAD model occur in real time on the screen, providing instant feedback on a design.

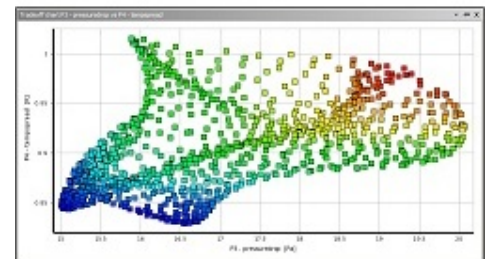
Taking this one step further from direct modeling, we can leverage on design optimization to increase innovation, fine tune performance and quality of products or processes. Users are able to explore various design geometries to obtain an optimal design. This provides you with greater insight and better solutions than manual design iterations alone.



Building dimensional intelligence into dumb models for parametric studies within ANSYS



SpaceClaim automatically finds and fixes problematic areas, creating clean geometry for meshing and analysis



Trade-off plots: visualization of product performance and design candidates

### Benefits

- We demonstrate how SpaceClaim direct modeling can significantly help you save days or weeks by removing CAD bottlenecks in the CAE workflow.
- Learn how to quickly prepare geometry for simulation using defeaturing, geometry cleanup, volume extraction, beam and shell

extraction, parameterization, name selection tools, and more.

- Learn how to change materials, design approaches, and manufacturing processes without starting from scratch.
- Reuse existing parts and designs as a starting point for new ones, applying knowledge as you discover it in CAE.

## Who Should Attend

- CAD designers seeking new ways to improve their existing part design process
- Engineers preparing 3D models for manufacturing and tooling
- Engineers performing CFD/Structural/Moldflow analysis or any simulation analysis involving 3D models

## What customers say about SpaceClaim

"I especially appreciate the intuitive nature of SpaceClaim. The tool figures out what I want to do before I tell it - SpaceClaim almost reads my mind. I've saved at least 50 percent of my time on the geometry part of my job with SpaceClaim and I highly recommend it to my engineering colleagues."

**Bill Wangard, Ph.D., Founder Engrana**

"We've been using SpaceClaim for about 17 months and have more than recouped our investment in time saved, error reduction, and faster time-to-market. SpaceClaim is extremely easy to learn. Even our interns, without training, can be productive in just two weeks. You just can't beat that."

**Michael Lieblich, FAA Designated Engineering Representative, AeroNautique**

"Before SpaceClaim, it took four or five hours to completely clean up and prepare a model. Now we can do this job in five minutes."

**Alexander Häse, Director of Engineering, Salzgitter Mannesmann Forschung**

"From the conceptual side, SpaceClaim is a must-have tool. My clients' jaws drop when I make edits in real time, online, or in person. Bottom Line: Having SpaceClaim in your toolbox pretty much is a force multiplier."

**Dan Falvey, CEO and Founder, Tools4Design**

"Often, SpaceClaim's ability to recognize geometry immediately in the neutralized CAD data - for example in STEP or IGES exchange format - and to allow these geometries to be modified quickly, is a big help and time-saver for us."

**Ernst-Otto Voigtländer, Designer, ibo**

## Speaker profile



Singaram Ravi is currently working as an Assistant Business Manager (PLM) in CADEM Technology Center Pte Ltd, a subsidiary of CAD-IT. He is in charge of providing pre- and post-sales technical support for Catia, Enovia, Valor and Moldflow PLM solutions. He obtained his M.Sc. (Computer integrated Manufacturing) degree from Nanyang Technological University (NTU), Singapore, a Post-Graduate Diploma in Tool Design from the Central Institute Of Tool Design (India) following his Mechanical Engineering Degree.

Ravi has more than 20 years of industrial experience - as a designer in jigs & fixtures, a CAM programmer in Plastics Injection Molding manufacturing, an Applications Engineer supporting Pro-Engineer products and a Support Manager for Dassault Systemes Catia / SmarTeam PLM products.

## Workshop Information

**Venue** : CAD-IT Consultants (Asia) Pte Ltd  
159 Sin Ming Road, #03-05 Amtech Building, Singapore 575625 ([view map](#))

**Dates**

7th November 2014  
(Friday)

9:00am – 12:00noon

[Register NOW](#)

12th December 2014  
(Friday)

2:00pm – 5:00pm

[Register NOW](#)

- Register online for this FREE workshop.

- Seats are limited and allocated on a first-come-first-serve basis. So please book your place early to avoid disappointment.
- CAD-IT Consultants reserves the right to cancel or postpone the event due to unforeseen circumstances.

**For enquiries, please call 6508-7575 or email at [caditevents@cadit.com.sg](mailto:caditevents@cadit.com.sg).**

#### About CAD-IT Consultants

Founded in 1991, CAD-IT is a leading global ISO 9001:2008 certified Product Life Cycle Management (PLM), manufacturing and education provider. CAD-IT's mission is to provide world-class solutions and services that enable companies and their supply chains to achieve greater product innovation, quality and productivity with drastically reduced time-to-market and costs.

CAD-IT is honored to have received over 80 international and national awards since its inception for marketing and service excellence. Among its most recent accolades are the Singapore Enterprise 50 Award (2013, 2012), Singapore SME 1000 (2014, 2013, 2012, 2011), Asia Pacific Entrepreneur Award (APEA) - Outstanding Entrepreneur Award (2012, 2010, 2009), the Singapore Prestige Brand Award SPBA - Established Brand Award (2012, 2011, 2010, 2009), SPBA - Regional Brand Award 2012 and SPBA - Hall of Fame 2012.

CAD-IT Consultants' suite of PLM solutions include ANSYS (System-level, Multiphysics Simulation), Goldfire Innovator (Innovation Process Management), Moldflow (Plastics CAE), Stampack (Sheet Metal Forming), Deform (Bulk Metal Forming CAE), SpaceClaim (3D Direct Modeler), Mentor Graphics Valor DFM (Design For Manufacturing), Valor MSS (Complete Manufacturing Execution Suite) and Cortona3D (3D Technical Documentation).

Since February 2010, CAD-IT has partnered the Singapore Workforce Development Agency (WDA) to offer Advanced Certificate courses in PLM and Engineering Simulation, under the Workforce Skills Qualifications (WSQ) framework, with the charter to upgrade the technological capabilities of organizations in Singapore so as to enable them to undertake high value-add design, engineering, manufacturing and R&D activities.



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