

SpaceClaim Accelerates and Improves Processes for Southern Star Engineering Group

Steven Taraglia is the founder of Southern Star Engineering Group, and serves as Vice President, Engineering Support Services. He is the Company's primary customer contact and works closely with his team of engineers on validating customer designs for specialized manufacturing processes. He is particularly focused on avoiding costly manufacturing errors. Leveraging his experience with state-of-the-art software tools, Steven identifies the robustness and suitability of customer designs, optimizes them for manufacturing, and investigates latent cost and potential design defects.

Steven regularly receives CAD files from customers in many different formats – his team can handle 43 different file types. To read the files and prep them for Finite Element Analysis (FEA), he has to rely on CAD translators, a process which has been both time consuming and difficult. He also uses Autodesk MoldFlow to simulate and optimize the manufacturing process.

"The connections between CAD, CAE, and CAM are often disjointed, affecting design validation and production validation. Our services provide the link between CAD, CAE, and CAM for our customers to drive final designs for seamless manufacturing." Steven Taraglia, Founder, Southern Star Engineering Group

ABOUT SOUTHERN STAR ENGINEERING GROUP

Southern Star Engineering Group was founded in 2006 to provide design validation and sourcing services for diverse companies in the automotive, optical, optics, and medical devices industries. The Company's specialty is in simulating and proofing injection molding metal and plastic parts. Markets served include automotive, medical device, and telecommunications.



TACKLING CHALLENGES IN VALIDATING INJECTION MOLDING DESIGNS

Manufacturing plastic and metal parts demands that mold designs be carefully and thoroughly validated. This is a complex and challenging process that requires significant expertise in the manufacturing process. Key factors in the process include time, temperature, and pressure, as well as a wide range of plastics and metal materials from which to choose. Steven's customers design their parts to optimize function; sometimes however, they do not possess the required in-house manufacturing expertise. Southern Star's value is in eliminating any issues downstream in the manufacturing process and working with customers to make their designs functional and cost-efficient.

Steven and his team would often spend days taking a customer's CAD file, cleaning

it up in a CAD translator, conducting simulation, preparing a report, and reviewing the results with the customer. He would then wait for the customer to make the required changes, and repeat the processes over again. Each iteration would cause a considerable delay in time-to-market.

"We were bogged down in the process with the tools available and often had to guess which aspects of the design were going to have issues during the manufacturing process." Steven Taraglia

THE RIGHT TOOLS ACCELERATES AN IMPROVED PROCESS

After a brief demonstration of SpaceClaim, Steven immediately knew he had found a solution to overcoming the bottlenecks he had been experiencing when proofing customer designs. SpaceClaim enables him to easily open the designs and prepare the models for meshing in MoldFlow.

"Often, I am working with a plastics geometry that needs to fill a mold correctly. With SpaceClaim, I can now move the geometry into MoldFlow easily, find the mold filling issues, and, within minutes, correct the geometry in SpaceClaim." Steven Taraglia

SpaceClaim also provides Steven and his team with the breakthrough ability to explore different options when examining design tradeoffs, without requiring the customer to make changes in CAD. Once they fully understand a failure condition – typically particular part geometry – they are able to instantly adjust the geometries in SpaceClaim.

"SpaceClaim creates peace and harmony with our customers. Its visual capabilities instantly show them how their ideas may or may not work and the tradeoffs involved." Steven Taraglia.

Steven must carefully balance optimizing designs for injection mold manufacturing

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with setting customer expectations, while also avoiding miscommunications. With SpaceClaim, he has found that issues he previously experienced are eliminated, and he uses SpaceClaim in the quoting process for digital prototyping, as well as in his communications with customers throughout the design proofing process.

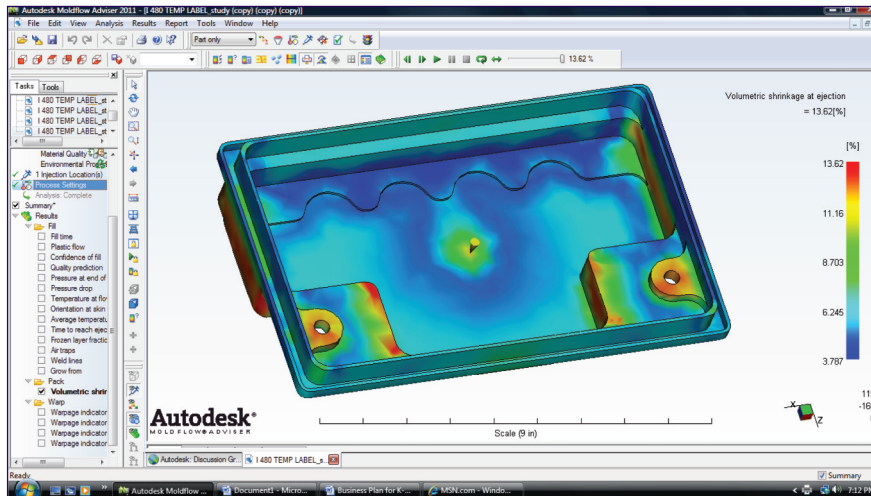
Leveraging MoldFlow and SpaceClaim's compatibility, Steven can now explore different options in SpaceClaim within a matter of hours – a process that once took up to five days for every iteration when customers made changes in CAD. The flexibility afforded by SpaceClaim to work

with CAD geometry substantially mitigates miscommunication and reduces time-to-market. Additionally, SpaceClaim improves the accuracy of the process with the ability to accept virtually any CAD file and produce quality STEP files for manufacturing.

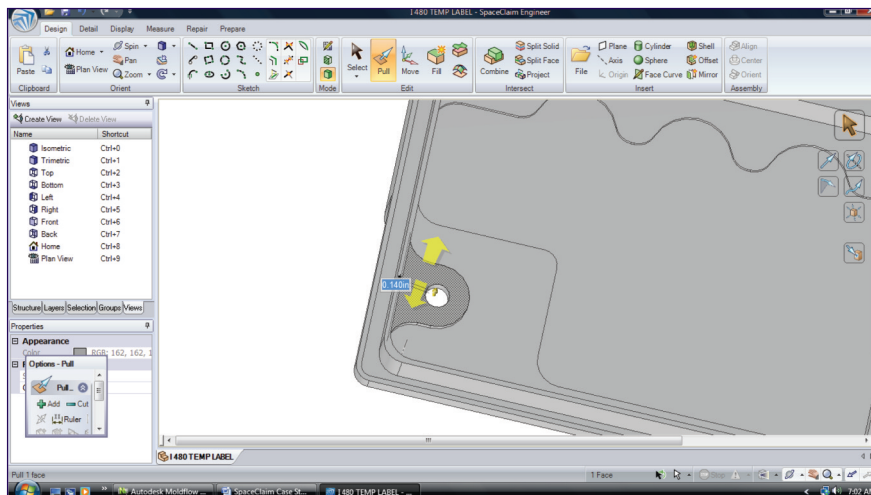
"Southern Star Engineering Group is built for speed – we like to keep projects moving quickly and customers happy. SpaceClaim complements the way I work perfectly. It is a strong enabling mechanism and hands down the best software value we have." Steven Taraglia

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Steven Taraglia
Founder
Southern Star Engineering Group



Initial simulation results indicate that shrinkage is too high.



SpaceClaim's Pull tool directly edits the part, enabling fast design iterations.



150 Baker Ave. Ext., Concord, MA 01742 USA
Tel: +1 978.482.2100 Fax: +1 978.369.5864