

# BOOST SALES AND BUILD STRONGER RELATIONSHIPS WITH THE DEPLOYMENT OF SIMULATION APPS

Multiphysics simulation experts at GrafTech are enhancing the sales process by deploying multiphysics apps throughout the organization and beyond.

by **NATALIA SWITALA**

While salespeople do not often think of simulation specialists as a resource to their sales cycle, a lot can be accomplished when we bring people from different departments together. Rick Beyerle is a senior scientist in the Innovation and Technology group at the Advanced Energy Technologies (AET) subsidiary of GrafTech. He has been collaborating with the sales teams to introduce simulation apps in the sales process of their carbon and graphite products.

## ⇒ BUILDING TRUST TO WIN CUSTOMERS

Rick and his associates use multiphysics simulation to examine the electrical, structural, and thermal performance of carbon and graphite, as well as for design and process optimization for several industrial applications. In collaborating with the sales team, it was evident that building trust with prospective customers was one of the most important factors in the sales cycle. "Oftentimes, providing sales leads with a 'proof of concept' serves as the building blocks for establishing trust between the two parties," explains Rick.

Before the availability of customized simulation apps, this 'proof of concept' required Rick and his team to divert their R&D resources to modify and run validated models for each customer's specific configuration. The sales team was not trained in numerical modeling and the application engineers had been

instructed to prioritize live tests over time-consuming simulations. "Some models feature hundreds of parameters and boundary conditions that do not appear significant to an untrained eye, but significantly impact the simulation results," says Rick.

## ⇒ SIMULATION APPS PROVIDE A ROADMAP FOR COLLABORATION

Rick is a visionary who is committed to using simulation in a new way that benefits the entire organization. With the Application Builder available in the COMSOL Multiphysics® software, Rick and a team of application engineers built a user-friendly interface based on their standard multiphysics model. The result was 'SpreaderCalc', an app that allows the sales engineers and field specialists to predict the performance of a range of virtual prototypes before testing a costly physical prototype (see Figure 1).

Achieving great technological and sales results is a company-wide effort. This is why Rick wanted to provide his colleagues in the sales departments with the software tools to collaborate and offer prospective customers real-time answers. "Frequently, a sales lead asks us to recommend thermal management options, not only to meet the safety or reliability requirement but more to maximize their user's experience by removing limitations due to temperatures, especially when under

specific space and geometry constraints" commented Pierre Hatte, sales director. "The new tool that our colleagues in the Innovation and Technology group developed is helping my team to get a second meeting with a large sales opportunity. And if you work in sales, you know that securing that second meeting is where the real opportunities are uncovered."

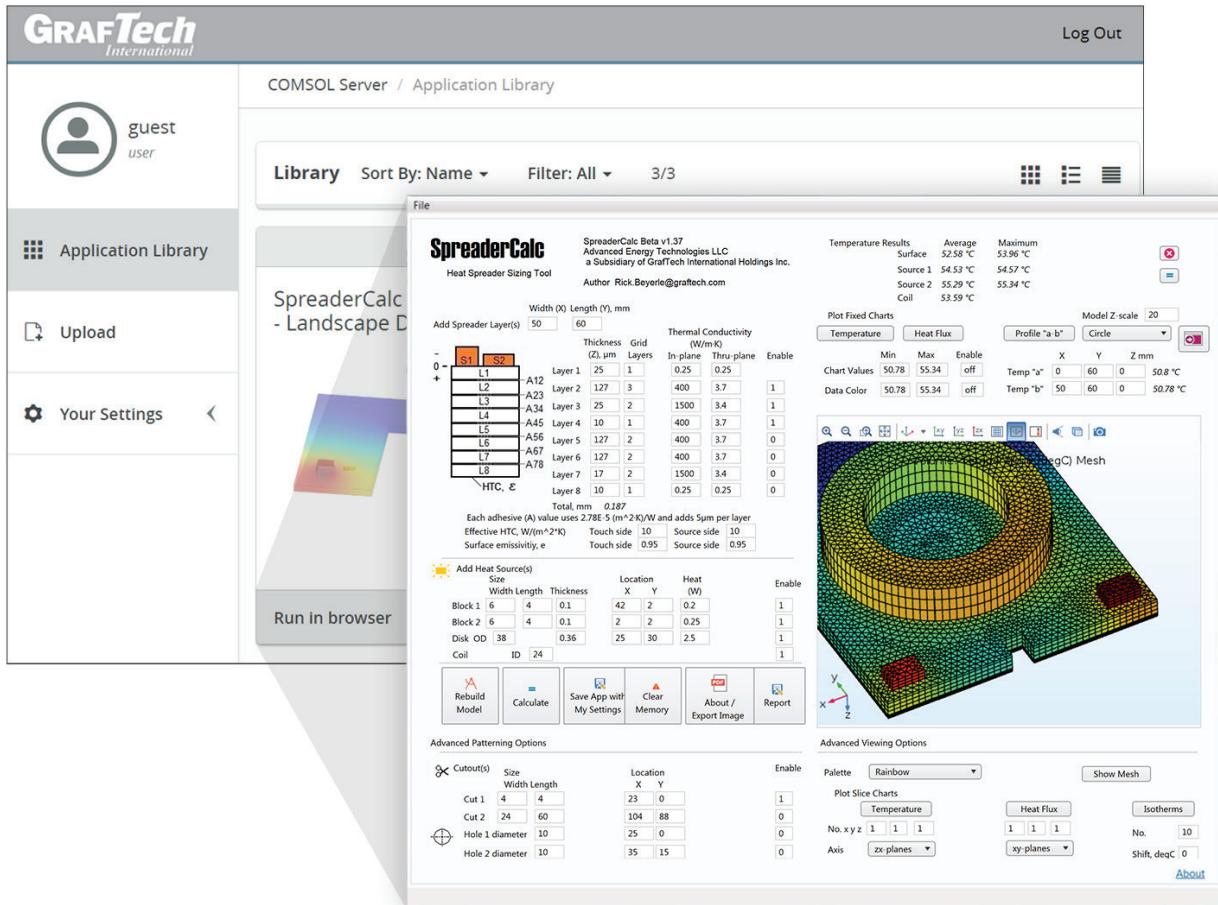
## ⇒ PUTTING APPS IN THE HANDS OF CUSTOMERS

Once simulation apps are ready for salespeople, they can be deployed with COMSOL Server™ product, which hosts them centrally and makes them accessible through a secure web connection. "With simulation apps, you do not have to be an expert in order to access high-fidelity multiphysics simulation results," Rick comments. "With the adoption of simulation apps the workflow is more streamlined and inclusive."

**"Showing a prospective customer how the app compares heat transfer among different configurations is like letting them try the suit on before they buy it. They are confident that the results are tailored to fit their needs."**

— PIERRE HATTE, SALES DIRECTOR, GRAFTECH

Once the sales force is fully equipped with apps and has tested the various scenarios that come up during the sales cycle, the company puts apps into customers' hands with the use of the COMSOL Server. "Until now, one customer-oriented model per year was provided; the policy was that simulations were too expensive to provide for most customers," he continues. "Now, they cost one hour of an application engineer's time to run a DoE (design of experiments) of models, instead of running a battery of tests in a week." "The apps provide our customers with



**FIGURE 1.** Using a local installation of the COMSOL Server™ product, GrafTech AET gives colleagues worldwide access to apps over the company's intranet. The SpreaderCalc app compares heat transfer among the graphite foils that dissipate heat in consumer electronics.

a sense of trust behind our products," says Pierre. "They are intuitive and easy to use, yet powerful because they are based on a multiphysics model built by our specialists. Showing a prospective customer how the app compares heat transfer among different configurations is like letting them try the suit on before they buy it. They are confident that the results are tailored to fit their needs."

"We envision that apps will empower customers to make more informed decisions prior to placing orders. Some purchasing departments are compelled to shave costs and occasionally disregard the engineering specifications. Without technical assistance, they are stressed to justify a high performance material when the only metric is price," said Rick.

"The simulation of graphite is challenging because of its highly orthotropic ratios. Even a 'bad' analysis

was impossible. Now, the engineers can get a 'good' estimate without leaving their desks. To me, this is the key – the COMSOL software enables something specific that could not otherwise be accomplished."

Simulation apps also foster collaboration and transparency. For example, apps will allow customers to more effortlessly present their buying choices to their organizations. With COMSOL Server, all a customer needs is login information to run the app and download its results. This way everybody will be more comfortable in approving a purchase order. Based on the success of SpreaderCalc, and expanding upon its infrastructure of software, GrafTech AET is already creating variants to assist with niche markets such as thermal interface materials, EMI/RFI shielding, and rapid heating processes. ❖

## LEARN MORE

If you are interested in knowing more about industrial applications of carbon and graphite for thermal management, please see the article published on page 3 of Multiphysics Simulation 2016 [www.comsol.com/offers/mpsim16].



Left: Pierre Hatte, sales director, GrafTech. Right: Rick Beyerle, senior scientist, GrafTech.