E-commerce Marketplace

Nimbis develops access strategies to promote modeling, simulation

Nimbis Services Inc., a charter partner of the AweSim industrial engagement initiative led by the Ohio Supercomputer Center (OSC), has been delving into access complexities and producing, through innovative e-commerce solutions, an easy approach to modeling and simulation resources for small and medium-sized businesses.

"Nimbis is providing, essentially, the e-commerce infrastructure that allows suppliers and OEMs to connect together in a collaborative form, where they can do joint product development or share tools, applications, libraries, licenses, etc.," said Bob Graybill, Nimbis president and CEO. "AweSim represents a big, giant step forward in that direction."

The AweSim program, and its predecessor program Blue Collar Computing, have identified several obstacles that

▶ A screenshot shows only a few of the many apps that have been made available through the AweSim e-commerce marketplace that Nimbis developed in collaboration with the Ohio Supercomputer Center and the AweSim industrial engagement program there.
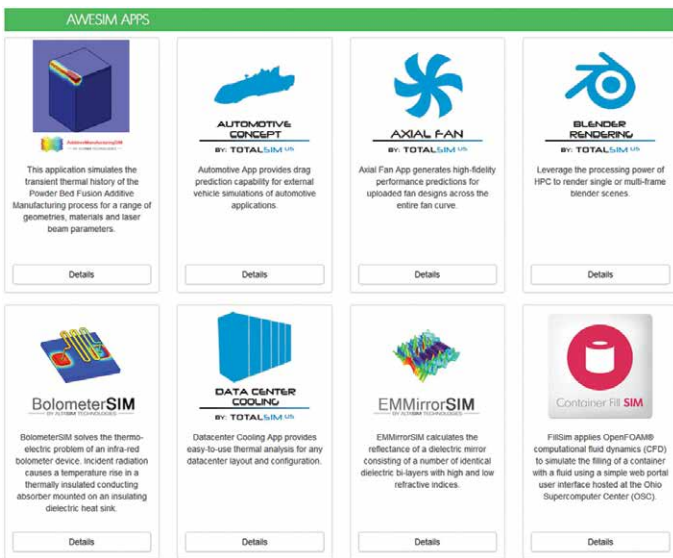
impede widespread adoption of modeling and simulation powered by high performance computing: expensive hardware, complex software and extensive training. In response, the public/private partnership is developing and promoting use of customized applications (apps) linked to OSC's powerful supercomputer systems. These apps mask many of the inherent intricacies behind web portals created with partnering engineering service providers (ESPs).

"We have successfully created an e-commerce marketplace that is both intuitive and user-friendly," Graybill explained. "However, users must be willing to use it. Unfortunately, a lot of small and medium-sized manufacturers are not ready, or they simply don't feel comfortable with engineering e-commerce sites. Sometimes they need the confidence and wisdom that comes from an ESP standing with them to actually get started using modeling and simulation."

From a technical perspective, e-commerce sites have been around for a while. In the mid-1980s, Compuserve offered one of the first examples of e-commerce as we know it today—the Electronic Mall; a service where users could purchase items directly from 100+ online merchants. Amazon and eBay transformed e-commerce in the mid-1990s, and online sales in the United States are expected to reach $335 billion in 2016.

"There's a major difference between what we have done and what's 'generically' available out there," said Graybill. "Ours is not static. It has to interface with OSC's dynamic computing resources on the backend, monitor resources consumed, manage licenses, provide secure connect connections, and we make it all as transparent as possible for the end-user."

Nimbis is already pushing ahead on their next challenge— developing cloud-based collaborative communities of interest with embedded marketplaces targeting manufacturing supply chains, DoD trusted microelectronics and collaborative research institutes initiatives. •