Online CAD Solutions Improve Engineering Productivity, Reduce Errors

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As engineers and their supplier partners are challenged to work faster and to reduce mistakes, it's no wonder that the market for CAD software is booming, topping $5 billion*. Manufacturers of electronic components, and the engineers who work with them, are using this software to change the way they share CAD drawings over the Internet, increasing efficiency in the process. For instance, it used to be that an engineer might talk with a supplier about his need for a surface mount connector—from what he would use it for to the exact dimensions that he required. The supplier would then provide a drawing by fax or email, and 30 minutes or more of conversations would follow, along with additional drawings until both sides agreed on the "perfect fit."

Today's and tomorrow's newer technological capabilities enable engineers to find and "build" the part they need online, download a 2-D or 3-D drawing, insert it into their design, and immediately assess its fit. The direct insert also reduces risks of "$10,000 mistakes," which can easily occur when one wrong spec gets picked up by an individual engineer, who copies it into several colleagues' systems.

Thomas Industrial Network, for instance, has developed WebCAD Publishing technology to make the collaboration between engineers and their suppliers more efficient. The technology is CAD software agnostic; it will work with any brand, including SolidWorks, AutoCAD, Inventor, and many others. It also includes a CAD viewer, plus the ability to configure drawings to create customized parts – literally, millions of design variations are possible.

Engineers use the technology in just a few steps. For example, if your design calls for an AC inverter, you can quickly:

1. Search manufacturers for the parts you need. Those companies that offer these CAD drawings through their websites are all searchable on ThomasNet.com, a free destination for engineers, purchasing professionals and others looking for suppliers.
2. Once you have identified suppliers that offer CAD drawings, you can conduct a parametric search to narrow down results by your detailed specifications.
3. Then you can compare parts side by side, and download the closest matches. You

can also search the sites of those suppliers of interest for related information (pricing, related products, certifications, etc.) to help with decision making.

Once you specify a part, you select the CAD system you're working in and hit a "GO" button to automatically download and insert the desired part directly into your design. Engineers can choose a variety of views—front or back, top or bottom, or right or left side.

The technology also generates and delivers the bill of materials for the part inserted, including the manufacturer's name, the specific part number and all of the detailed specifications. This makes it easy for everyone involved in the buying process and virtually eliminates the possibility for error during specifying and purchasing.

Online CAD solutions have transformed the industrial buying process and offer a precise way to easily do business today. For design engineers working with suppliers, online CAD solutions are all about exchanging information and tools needed to specify and buy. Online CAD solutions save time, encourage productivity and generate greater ROI (return on investment) for everyone.

Peter Mooney is Product Director – Enterprise Solutions at Thomas Industrial Network (www.ThomasNet.com [1]), which is devoted to the success of the industrial/manufacturing sector. The WebCAD Publishing technology is part of Thomas Industrial Network's Navigator Platform. For more information, please contact him at PMooney@ThomasNet.com [2].

*Estimate from Jon Peddie Research

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