



Directed Energy, located in Fort Collins, CO specializes in the development of high-speed, pulsed power solutions for laboratories and OEM manufacturers. For more than 20 years Directed Energy has provided customers with reliable, solid-state pulsed voltage and current instruments, as well as turnkey solutions for material testing, pulsed component characterization, laser diode burn-in and qualification requirements.

“ Complicated boards that would take 4-5 months to complete, are now being completed in 3-4 months. ”

Mike Barber, Research and Development Engineer, Directed Energy

Directed Energy had been a loyal P-CAD customer for years and used it to design and layout its in-house PCBs. In particular, Mike Barber a Research and Development Engineer at Directed had used P-CAD for five years and was very familiar with the tool. It wasn't until he saw Altium Designer's Multi-Channel design capabilities that he decided to make the switch.

“One of the challenges with P-CAD was all that manual work copying and pasting net rules for multi-channel designs,” Mike comments. “It was the main reason I moved to Altium Designer.

“The final straw came when I was working on a complicated multi-channel design that had controlled impedance, differential pairs and complex routing throughout. It was then I had the choice: complete each section ten times over or learn how to use Altium Designer and its multi-channel design capabilities. I decided it was time to invest in Altium Designer.”

Raising the level of abstraction

According to Mike, the biggest benefit to Altium Designer is that he “can spend more time designing, and less time fighting the tool”. This is because he can use Altium Designer's multi-channel and hierarchical design to raise the level of abstraction and reuse elements of the design.

Altium Designer's hierarchical design means that schematic detail can be abstracted vertically to allow for tighter containment of critical circuitry. It also supports multi-channels, letting engineers like Mike create a ‘master circuit’ that can be repeated and modified several times within the design.

Mike comments: “I don't like having to do manual work over and over again, so being able to copy room formats is huge. And with Hierarchical Design, it gives you the opportunity to leverage your work in your next design. That's a big deal; it literally saves hours during PCB layout.”

Altium Designer - one design, one design application

Mike likes that Altium Designer's unified design environment can take an electronics design from concept to manufacturing, mentioning that it gives him the freedom to make changes without having to change tools or deal with low level detail. With Altium Designer, its one change, one tool and one simple process.

“It's inevitable that changes will occur in an electronics design. So I like that I can go into the design, make changes and know that it's not going to cause me two hours more work. It gives me the freedom to change whatever I want and not have to move from one tool to the next.”

This new freedom has also resulted in a reduction in the electronics design cycle. Mike estimates he is 20% more efficient. “Complicated boards that would take 4-5 months to complete, are now being completed in 3-4 months.”

CUSTOMER SUCCESS STORY



Getting the support you need

Mike concedes that moving to a new electronics design tool is a hard decision and that he would have been more reluctant had it not been for the technical support provided by Altium. During his switch to Altium Designer, Mike took full advantage of Altium's training videos, Wiki, Knowledge Center and User Forums, saying that Altium's comprehensive support system made the transition much easier for him.

"Whenever there has been something about the tool I don't understand or if there has been a problem with the software, I've had really good responsiveness from the Altium team. Sometimes it feels like the developers have dropped everything to work on a fix and get it going again," says Mike.

"I've had excellent support from Altium, which I think is important because I wouldn't change tools unless it had the support I needed. And from my experience, Altium's online and phone help has been excellent."

ABOUT ALTIUM

Altium Limited (ASX:ALU) creates electronics design software. Altium's unified electronics design environment links all aspects of electronics product design in a single application that is priced as affordable as possible. This enables electronics designers to innovate, harness the latest devices and technologies, manage their projects across broad design 'ecosystems', and create connected, intelligent designs.

Founded in 1985, Altium has offices in San Diego, Sydney, Karlsruhe, Shanghai, Tokyo, Kiev, with value added resellers worldwide. For more information, visit www.altium.com. You can also follow and engage with Altium via [Facebook](#), [Twitter](#) and [YouTube](#).