

Altia provides major surgical device maker with turnkey design, saving time and resources



**"This is what
this product
always wanted
to look like!"**

For over 125 years, one of the world's largest medical device companies has been meeting the needs of surgical hospitals with innovative products. Today, assisted by the tools and services provided by [Altia](#), they continue to lead the profession in the design and manufacture of medical devices that guide surgeons and their teams through highly complex procedures.

A Search for Solutions

Recently, the manufacturer was designing an upgrade for one of their most successful camera-driven surgical visualization systems. Executing a new Graphic User Interface (GUI), however, was proving to be problematic due to the limitations of the design software recommended by a sister division. According to the senior principal software engineer on the project, the time crunch for development, combined with the difficulties using the recommended software, compelled him to try an alternative package – Altia GUI development software.

"We had licenses for [Altia Design](#) and [Altia DeepScreen](#) available to us through our company, so we gave it a

try. It quickly became clear that Altia was superior to the software given to us by our sister division," he said.

The device manufacturer was still constrained by engineering resources. "That's when Altia asked, 'How about if our services team steps in to help you meet your first design milestone?'"

As Jeff Stewart, Altia's Director of Field Application Engineering, recalled, there was a pause on the other end of the line.

"He said, 'Really? You could just build it for me turnkey?' I told him we could, and that's where things went."

Altia Earns Customer Trust

Stewart arranged a first meeting with Altia's [Professional Engineering Services Group](#). The customer explained that the existing monochrome GUI had been hand-coded internally and was becoming difficult to maintain. Any upgrade would have to run on the product's existing Linux platform. Together, the two companies began working on how the new interface would function.

"From the beginning we had a good relationship," noted Brett Stein, Vice President of Engineering Services. "The customer had their software lead, design lead and a senior software engineer on every call. We had our project and tech lead and probably several other engineers on each of those calls as well. When everyone collaborates on a regular basis, good things happen."

Once Altia met the first milestone, the customer recognized the value of collaborating with Altia's team on this project – time-savings, expertise, overall quality of the interface and more. They asked Altia's Professional Engineering Services Group to complete the rest of the project. Backed by this team of GUI experts, the customer realized they could deliver far beyond their initial plan. Therefore, they began to expand on what was initially intended to be only five screens to include fresh ideas and feature improvements not initially planned for the product.

"The final program involved nearly 50 screens in all," Stein stated. "It included draggable, scrollable lists and menus. The GUI is designed to look and feel like a smartphone interface while running on a very low power platform. Our team is well-versed in this kind of work. In fact, this is what our company is known for in a variety of industries. So, while it was a challenge, the project progressed well."

For any medical instrument, the user experience (UX) has to be right. "The position of buttons and controls has to be intuitive," continued Stein. "Operators — in this case, doctors, nurses and other operating room staff — can't afford to make a wrong choice, especially with gloved fingers. The visual layout must also communicate instantly, so technicians are making the right choice every time."

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The manufacturer's principal engineer recalled how Altia even advised on language support. "A member of Altia's services team speaks fluent Chinese. She told us, 'I believe some of your existing translations are wrong.' It turned out she was correct, so we fixed them." He continued, "That was really cool, as it's not the norm to have that level of collaboration when we do business with other vendors."

The trust and transparency Altia earned went a long way, in the engineer's mind. "I have a very junior associate, straight out of college, working with me on the software. Because of the comfort level I felt with Altia, I was able to let him be the liaison with Altia's services team. I would not have had that confidence if it were some other supplier I didn't trust."

On Budget, Ahead of Schedule

Despite the aggressive timeline, Altia was able to complete the revamp of the original monochrome GUI with an updated, full color and highly intuitive design. The end product was not only more advanced, but on budget and ahead of schedule. Furthermore, due to Altia's ability to generate code for the device's microprocessor target directly from the design using Altia DeepScreen, the GUI worked correctly the first time, without refinements.

"We showed how fast and efficient we could be. In the past the customer would outsource software and they would spend months reworking what they got back," said Stewart. "What they got from us was a functional product."

The customer noted that Altia allowed them to effectively extend their internal resources for this project. "Our engineering team has a lot on their plate. Altia gave us extra productivity without extra head count," the principal engineer stated. "We were able to concentrate on the business logic while gaining a polished user experience."

"I felt like I was working with a team just down the hallway," said the customer's principal engineer. "This is the kind of relationship we look for. Our users are thrilled."

Altia's Engineering Services Group enabled the customer to complete their GUI in half the time that their sister division was investing in a GUI for a similar product. Now, that sister division is interested in Altia as well.

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Contact Us

For more information about how Altia can help you get your next great GUI into production, visit www.altia.com or email info@altia.com.

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