

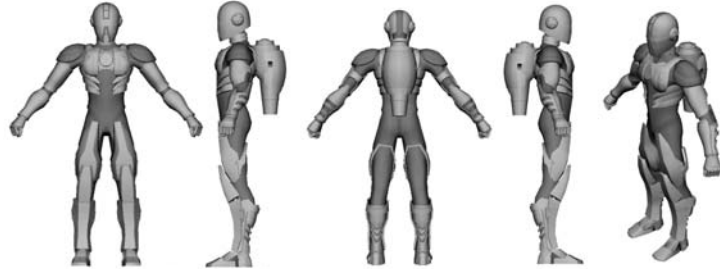
A Character Building Exercise

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Creating components for any application can be difficult, especially when you need to go through the prototyping process, but it's even more interesting when you're creating a character.



The final hero stands ready for his next assignment whether that is going to a tradeshow or producing an advertisement.



Taking their business seriously is something that Solid Concepts (Valencia, CA) has always done. But that doesn't mean that you can't have fun at the same time. In fact, when they decided to commit to a new business extension, they wanted to do something interesting to extend the company's typically creative approach. So, they went with a super hero themed website — ZoomRP.com.

Other companies have created characters to represent their products or services before, but none have gone as far as to 'make' their character. Not only that, but Solid Concepts decided to make the character itself, and in such a way as to prove and uphold their promise and commitment to their customers. How's that work?

"For this project, we went through the entire design process, just as we've imagined our customers go through. It was a great learning experience — and a lot of fun." — Chuck Alexander, Solid Concepts' Sr. Production Manager

Like any project that one of their customers might have, the creation of the ZoomRP.com character started in the drawing room with a sketch, with several sketches actually. The design concept is what they considered it, just like the design concept of an aerospace company interested in producing a unique dashboard, or a business machine manufacturer that wants an ergonomically pleasing printer housing. Chuck Alexander, Sr. Production Manager at Solid Concepts said, "We are a production house. So, much of the time we are on the tail end of the design cycle. We see the CAD files. For this project, we went through the entire design process, just as we've imagined our customers go through. It was a great learning experience — and a lot of fun."

The first thing the company did was outsource the initial sketches for the ZoomRP.com hero to James Kim, at Vivid Candi (Malibu, CA). James produced several fine pencil sketches. "The company had a general idea what they were looking for. All I did was take that idea and try to put it on paper. Several sketches later, we keyed in on the perfect look for a super hero," James said.

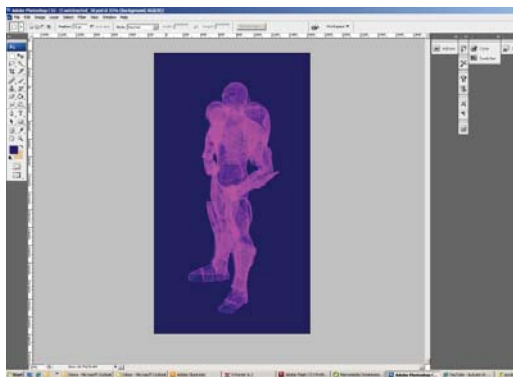
This is where Solid Concepts veered off the standard concept-to-part trail. The next thing the company did was to send the sketches to Gentle Giant Studios in

Hollywood, CA, for development. According to Paulie Schrier, Director of Creative Services at Gentle Giant, they were able to take the sketches and produce several rounds of 2D drawings. Like any other design process, once the sketch meets the needs of the customer, it goes onto the computer. Paulie's group scanned in the drawing as a template for 3D modeling using Autodesk Maya software, a powerful, integrated 3D modeling, animation, effects, and rendering package.

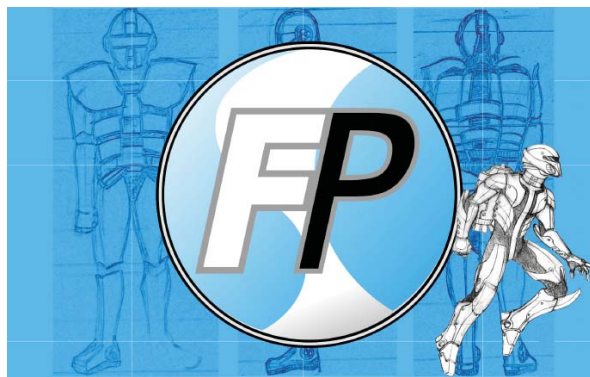
The 3D rendering was created in separate entities within the model. Even though the first products that are to be produced are complete models, each entity can be separated out and produced individually – at any size. Essentially, this means that the costume can be created in such a way that an adult could wear it. The 3D files were then converted to STL, which is needed in order to import them to the PolyJet machine.

“We’re promising customers that an STL file received by 5:00 p.m. Eastern can deliver a part by FedEx Priority mail the next day,” Scott McGowan, Marketing Director for Solid Concepts and ZoomRP.com says. “Since we have machines in-house, each part can be produced within hours. But we don’t deliver just any ordinary part.”

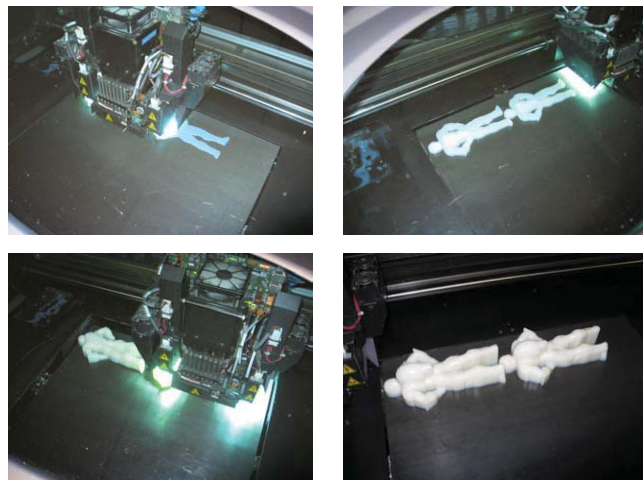
The parts produced by the PolyJet process are fully useable out of the machine. In fact, more and more companies are producing what are called rapid manufacturing components that mount directly onto an end product. The rapid manufacturing process is not only speeding time to market but reducing specialized steps along the way. For example, by using



The 3D rendering shows the ZoomRP.com hero as one complete piece, yet each entity is an individual component in the master model.



These sketches show the original concept for the ZoomRP.com hero.



The ZoomRP.com hero as he comes out of the SLA machine ready for hand-painting and his big photo shoot.

the right materials, a control panel can be delivered ready to go, no sanding, no painting, and no other post-manufacturing operations are required.

“With our hero, we were able to maintain very tight tolerances, creating a smoothness that was ready to go,” Scott said. The final part had to be perfect for taking high-resolution photographs from a variety of angles, because the final hero was going to be used for advertising and promotion, as well as for use at trade shows and conferences.

“We wanted the entire process, from start to finish, to prove our commitment to our customers by first proving it to ourselves,” Scott said. As for the timing involved, it took a few months to get the concept drawings finished, a matter of days to produce the CAD files, and, as promised and thanks to ZoomRP.com, less than a few hours to produce the final model. “All in all, we are happy with the process and the final product. We call that a success.”