

How Under Armour Uses 3-D Fit to Ace Product Development

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Pattern rooms are taking a turn for the modern, whether the patternmakers of yesteryear like it or not. And the modernization of that link in the supply chain has both upgraded product development and shortened the cycle.

Speaking at a Texprocess Americas panel Wednesday, Shannon Moulden, a technical designer for women's at Under Armour, said 3-D has helped the company in three major ways: by reducing the number of redesigns, cutting the risk of missed deadlines and dropped styles, and greatly improving first samples.

Under Armour has been using Optitex 3-D technology for roughly 18 months, and already, according to Moulden, the shift in efficiency has been palpable.



The company started out with a 3-D block library, creating standard fits across the board for men's, women's, boys and girls product so that once they get a new sketch from a designer, they simply refer to those blocks, pick the one that makes the most sense to start from, and make adjustments according to the design.

Now, instead of immediately requesting a physical sample—which costs time and money—the product development team can “stitch” a virtual sample, place it on a 3-D fit model and review it with the designer so see how it looks. Together, they can make on-the-spot changes to the virtual sample, and only when they're fully satisfied with it, order a real life version.

“We can use the software to build more prototypes. We can adjust from design's multiple options to create virtual prototypes to see how the design looks in 3-D. We can add color blocking and prints and it helps the designer send their design to the product team,” Moulden said. Under Armour can even get an early read on color direction, showing buyers various true-to-life virtual samples, before ever committing to fabric.

With the dwindling set of skilled patternmakers in the market, Moulden said Under Armour is also using the 3-D tool to teach pattern skills to their more junior teammates to help them better learn and understand the product.

The options for fit assessment with the software are nearly endless. At a quick glance, a technical designer can see whether an armhole is too high, then switch to a mesh view to see exactly where on the body the armhole is hitting, or to see the rise shape and hem, and make the necessary adjustments in a matter of minutes.

Under Armour is also using the tool for graphics and prints. For placed sublimation, where the art is designed to a particular shape of a pattern piece, Moulden said it can take weeks or even months to get a sample from the factory. But by placing the graphic on the 3-D rendering, they are able to show the designers the reality of what the product will look like, and adjustments to scale and print can be made right away—before those weeks or months are wasted.

The 3-D technology has helped Under Armour with customization, too.

When designing garments for star tennis player Sloane Stephens, a team of technical designers were having to visit the athlete wherever she was in the world, pull her from her training, and spend hours fitting various garments on her until they were just right. It didn't take long before Stephens' people told Under Armour they were taking up too much of her time.

So Under Armour took a 3-D body scan of Stephens and used it to draft patterns and drape them on her avatar to see how things would look.

"And the body scan is so amazing, we can even show this to Sloane and say 'Hey, what do you think of this new dress that we're designing for you?'"

For football players it works with, Under Armour has body scans of the athletes wearing all of their pads so they're able to see how the pattern works over the equipment.

"I feel like we're just scratching the surface of what 3-D can mean for Under Armour," Moulden said. "We are on a relentless pursuit to make this better, and the best part is, we're just getting started."