



Fookwah

Browzwear Case Study

THE COMPANY

Since 1963, Fookwah has been a swimwear and fitness apparel supply chain partner. The company's primary products include swimwear, activewear, yoga wear and compression clothing.

THE CHALLENGE

Tight fitting activewear, especially swimwear, interacts with the body in a unique way. High quality fit in such garments is a combination of special performance stretchable fabric with accurate patterns as well as the seams which play a large role in how closely the garments fit. The light, stretchy fabric is stretched while worn over the body, creating pressure over the seams and bindings;

special bindings and shapers are sometimes required to hold the silhouette tight. Force is applied through the material on those edges, seams and bindings, causing the garment to stretch and fit properly. With all of this stretching and pulling, the challenge of the designer is to create a beautiful, fitted garment that is comfortable and just tight enough.

The fabrics and seams in Fookwah's activewear and swimwear interact differently when seen on paper, or if draped on a mannequin, or when worn on a body. When there is such a discrepancy between what the designer sees during the design process, and what the physical product behaves like, that designers must constantly make adjustments, going back to the literal drawing board.

In addition, Fookwah's patterns must be extremely precise, because garments that are tight and close to the body, like underwear and swimwear, usually follow the body's curves, and are based on very accurate measurements of the body with little room for error.

As one of the largest factories for swimwear, the Fookwah team has long understood the power of 3D to communicate new designs with their brands, but relying on 3D means that the visualization must be true-to-life and show precise draping and fit before the garments are manufactured. To this end, Fookwah provides basic 3D design blocks as templates that their customers can use as a starting point for their own designs. The stretch and force relationship between the fabric and the edges must also be mimicked precisely in any 3D simulation, which requires an extreme level of accuracy.



THE SOLUTION

Browzwear worked closely with Fookwah and other activewear partners to understand the unique challenges of working with elastic fabrics and seams. With Browzwear's Lotta and VStitcher, designers can more accurately see in 3D how the seams will bunch and fit in the real garment.

By introducing a friction parameter for 3D avatars (like a digital mannequin), Browzwear accurately simulates the properties of a real mannequin. If the real mannequin is wrapped with cloth, then, it becomes essential that the 3D avatar also has the same 'skin' properties to ensure that the swimwear will sit, slide, or hold firm to surfaces of the digital twin exactly like it would have on the real physical mannequin. Browzwear's 3D avatars can be switched from plastic to human to cloth to ensure the most accurate response every time.

Working with Browzwear allows designers to pinch their digital garments exactly where they expect it to fit on a real body. In addition, Browzwear includes tools such as the Force Multiplier to enable Fookwah's team to accurately mimic the way elastics, bindings, and folded cloth edges affect the

stretch and cling of fabric on a mannequin. If the real mannequin is wrapped with cloth, then, it becomes essential that the 3D avatar also has the same 'skin' properties to ensure that the swimwear will sit, slide, or hold firm to surfaces of the digital twin exactly like it would have on the real physical mannequin. Browzwear's 3D avatars can be switched from plastic to human to cloth to ensure the most accurate response every time.

"For us, it's most important that the software provides realistic results. In fact, Browzwear provides accuracy that we just haven't seen anywhere else," said Michelle Chui, Head of Development and Planning at Fookwah. "Browzwear's edge simulation is so close to how elastic seams actually respond to the environment and we have been pleased with the more realistic visualizations of our digital swimwear."

With Browzwear, Fookwah designers can create garments, fit them on their avatars and know that the details are true-to-life. This ensures that the end product is exactly the same in its physical form.

THE BENEFITS

Browzwear has streamlined the design and production process, enabling Fookwah to send accurate 3D visualizations to their customers. Being able to make accurate adjustments virtually means that corrections are made on the spot before producing a sample, thus reducing the number of samples and time to market.

With Browzwear, Fookwah enjoys the following:

- Early prototyping, long before samples or fabrics are available
- Accurate, true-to-life 3D garments that look just like the manufactured product
- Digital avatars that are an exact duplicate of a physical mannequin
- Design visualization in every fabric, color & trim