

Closing the Gap Between Physical and Virtual Fashion

Technology firm SEDDI is leveraging science to make more lifelike, trustworthy fashion simulations. So far, it has introduced fabric rendering software Textura and design platform Author, and that's just the beginning. "Our end goal at SEDDI is to put digital clothing on avatars of human bodies in a virtual try-on environment," said Alan Murray, co-founder and vice president of product, SEDDI. Here, Murray shares how the company is innovating virtual fashion.

Sourcing Journal: Why is realism so critical for virtual design, and why has this historically been more of a challenge in apparel than in other categories?

Alan Murray: Clothing is deeply personal. We wear it on our bodies, so we are more invested in how it looks and feels.

Much more information must be conveyed on an individual level when you're dealing with human bodies and garments. What you're measuring is not static. The interaction between soft bodies and fabrics is highly difficult to simulate mathematically. Hard goods categories have benefited from 3D design and simulation for far longer because they are much more predictable and easier to simulate. Until recently, the science and

computing power was not readily available and accessible for apparel.

How does Textura use artificial intelligence to translate flat fabric images into lifelike textile renderings?

A.M.: Over the last few years, the quality of digital materials increased rapidly. However, acquisition costs and the speed of creation have become the biggest barriers to scaling digital fabric libraries.

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Equipment is expensive and difficult to source, and preparing and shipping materials is slow and wasteful.

AI allows for affordable, scalable, immediate textile digitization that meets

brands', retailers' and manufacturers' digital design needs. Users can trust what they see on the screen because of the quality of SEDDI's data used to train our AI. We have incredibly high-quality firsthand data that we've captured from thousands of textiles, which have been measured both mechanically and physically with sophisticated proprietary technology. SEDDI Textura allows us to take images and metadata provided by users and apply that against the AI so we can predict how a specific fabric will perform.

Do you foresee a future in which 100 percent of sampling is virtual?

A.M.: We will never fully eliminate physical sampling. You simply cannot convey the hand of the cloth with today's technology, and we are ages away from having the haptics required to do so. There will always be a desire to touch and feel the fabric, but as the industry becomes more used to evaluating fabrics and garments digitally, trust and reliance on pure digital representations will increase. As technology advances and is more widely adopted, we will have new ways of exploring and interacting with fabric and garments that are impossible or impractical in the physical world today. Additionally, for certain use cases—such as familiar garments and fabrics that have been used before—there is a much greater ability to reduce physical sampling.

How can virtual design benefit all levels of the supply chain?

A.M.: Cloud-based virtual design can radically change how we design, manufacture and sell clothing. Collaboration in the cloud allows people to cooperate across geographies and time zones. Accurate simulation and simultaneous design and iteration among stakeholders speeds up the decision-making process and ensures everyone is looking at the same source of truth.

Real digital twins of garments are a gamechanger for merchandisers and marketers. Imagine getting real-time feedback from consumers about clothing before it is created. Renders can be leveraged for product pages and ads, ensuring products never miss their selling seasons. Ultimately, we can reach directly to consumers and allow them to start accurately visualizing themselves in clothing, thus reducing returns and making the shopping experience more enjoyable.

