

## 3D Scanning Entertainment Product VIZ Reverse Engineering

Capturing design intent.

Brooks Sports, Inc  
ScanMatter Studios, Inc



Brooks Sports contacted ScanMatter Studios, Inc to explore the option of moving their physical-based shoe samples to the digital realm. Every color or material change on a physical shoe sample had to be ordered from the manufacturer which was not only costly, but had a long lead time to see the results. Creating a digital sample would allow the designers to see their changes in near real-time at a fraction of the cost. Now the question came, how do we create a digital sample that looks identical to the physical product? The Solution: 3D scanning. This would only require Brooks Sports to make one physical sample of each model in the season line up. Using 3D3 Solutions' HDI Advance 3D Scanning System, we were able to capture the rich details needed to convey the design intent in a digital format. FlexScan3D, the 3D capture software included with the scanner, made it quick and easy to align and process the data. Photogrammetry data alignment, along with the turntable and high resolution color texture capture option, made the HDI Advance our preferred scanning system for product viz projects. Below shows a brief process on how we arrived at the final digital products.



scan data from HDI Advance



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Re-topology created from scan data



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Once the data was exported from FlexScan3D, we started the Re-topology process. Re-topology is important step in the pipeline not only to lower the polygon count, but it also makes the creation of UV maps more streamlined for texturing.

We finished it off with texturing, animation, and rendering. In the end, our client was impressed with the time and cost savings as a result of the new process.



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