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Pushing the physical arts deeper into real-time rendering

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The primary motivation behind our research is to push the physical arts deeper into the CG pipeline for rendering virtual environments. Using photogrammetry and 3D printing technologies, our process enables sculptors and painters to see their physical artworks move beyond the constraints of preproduction. Deviating from the traditional video game production pipeline, we print our low-resolution collision models as physical objects that are then sculpted upon and later scanned for reintegration. In addition to this process, we will also discuss calibration methods that strengthen our ability to iterate quickly, as well as maximizing texture resolution in order to maintain the integrity of the original artwork. By interjecting new technologies into established production models, we have created a unique pipeline for studios and new opportunities for artists.

Biography

Scott Swearingen is an Artist, Developer, and Educator who creates interactive multimedia spaces that blur the boundaries between the virtual and practical. He has been working at the intersection of art and technology for nearly 20 years specializing in the categories of digital imaging, kinetic sculpture, video games, and virtual environments. His work has been widely published and has garnered recognition from the Academy of Interactive Arts and Sciences as well as the Game Developers Choice Awards. He has collaborated on several award-winning franchises including Medal of Honor, The Simpsons, Dead Space and The Sims.

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