Creating immersive experiences with AMD Ryzen™ and Radeon™ PRO

Connecting people with powerful audio-visual experiences.

AMD
RYZEN | RADEON

SYNTHESTRUCT

INDUSTRY
Media and Entertainment

CHALLENGES
Growing graphics workloads resulting in productivity and multitasking bottlenecks.

SOLUTION
Custom built workstation platform to maximize performance and speed up creative work.

RESULTS
Platform optimized for high performance (CPU and graphics, memory capacity, and multitasking capability).

SOFTWARE APPLICATIONS
TouchDesigner
Notch
Ableton Live
ZBrush
Blender
Adobe Creative Cloud

AMD TECHNOLOGY AT A GLANCE
Ryzen 9 3900 X processor
Radeon PRO W5700 graphics card
Radeon PRO for Enterprise graphics driver

Long the domain of film, television, radio and print, technology has enabled the media and entertainment space to expand into many new directions.

Ginger Leigh of Orlando, Florida is at the bleeding edge of a new generation of artists that are pushing the boundaries of media and entertainment. She creates all her work under her artist name Synthestruct and has earned a reputation for connecting people with immersive audio visual experiences. In doing so, Synthestruct harnesses the power of real-time graphical engines.

Synthestruct has fused a diverse set of skills, traits and interests into a career that combines math, science and technology. This included several years of DJing and running a monthly electronic music event.

Working with a range of creative technologies and sensors, combined with sculptural elements, sound design, and real-time generated graphics has allowed Synthestruct to create a deeper connection between audiences, the artwork and even the venue itself. All that was missing were the powerful development, design and creation tools to bring it all together.

Initially, Synthestruct relied on a gaming laptop for all her content creation needs. She soon found that rendering multimedia projects- especially CG animations - required significant hardware resources and that processing

"My main workflow is doing everything in real-time"

Ginger Leigh/Synthestruct

power was lagging. On top of Synthestruct's system hardware foundation was a robust suite of creator application software including TouchDesigner and Notch (visual programming environments for real-time interactive media content), Ableton Live (music production, creation and performance), ZBrush (digital sculpting tool), Blender (3D digital content creation) and Adobe Creative Cloud. Synthestruct's laptop was being taxed by doing more than ever which created productivity and multitasking bottlenecks.

Mission Critical Tech

The sheer processing power necessary to drive these multiple software applications and to generate real-time content was fast becoming mission critical. To ensure that project creation and delivery would continue to happen smoothly, Synthestruct needed the right technology partner with whom she could collaborate to deliver for herself and her audiences. That search led to AMD where we contributed our deep experience in driving innovation in high performance computing, graphics, and visualization technologies - long the building blocks for immersive platforms. Synthestruct's solution was a customized workstation with the latest in processing and professional graphics solutions from AMD. To accelerate her creative work, Synthestruct powered her workflows with the Ryzen 9 3900X – a well-rounded AMD processor with great performance in creator applications.

Rounding out the workstation was the AMD Radeon PRO W5700 graphics card which allowed a dual-monitor setup for content creation while simultaneously driving multiple projections systems that emulated the venue experience. AMD's solutions increased productivity and accelerated time to project delivery for Synthestruct who said "my main workflow is doing everything in real-time". Smart adoption of the right AMD products offered Synthestruct the edge needed to power her creative workflows and to create experiences that audiences would love.

Powering Graphics Workflows

Tying together the new technology solution was AMD's enterprise graphics driver. This software provides professional users with targeted tools including application-specific user profiles, GPU/CPU performance monitoring, screen recording and manual fan override controls for times when the GPU is being tasked at 100% for hours on end.
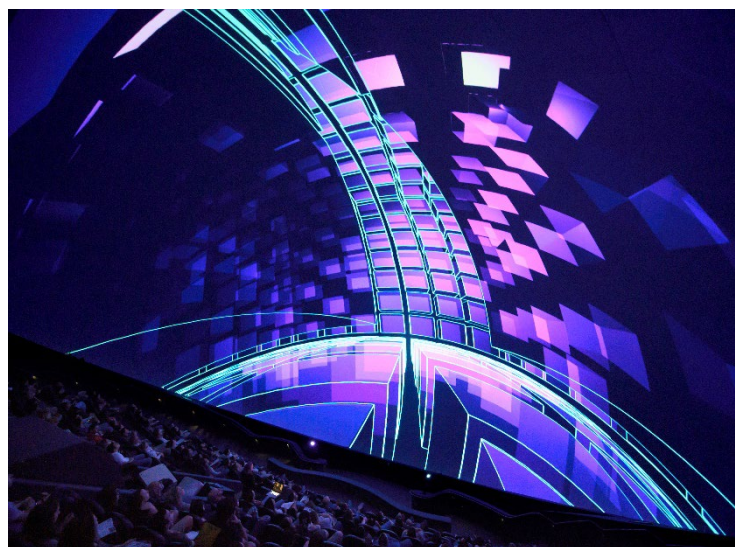
Synthestruct has reached new heights of creativity with her work which has been featured in full-dome and multi-projector environments around the world, and in experiences merging art, science, and technology. She incorporates various experimental control methods, including sensor-enabled gloves which allow her to use physical gestures to control the real-time audio and visual systems she creates.

As different technologies and possibilities come about, Synthestruct is sure to be at the forefront of creating new immersive experiences. Partnering with AMD and leveraging innovative computing and graphics solutions means that artists such as Synthestruct can stay focused on what matters most - the creative process.

WANT TO LEARN HOW AMD SOLUTIONS CAN WORK WITH YOUR MEDIA & ENTERTAINMENT WORKFLOWS?

For more information, please visit: AMD.com/ME

About Synthestruct
Ginger Leigh is an interactive and audiovisual experience designer who creates all her work under her artist name Synthestruct. She is known for exploring ways to connect the physical and digital worlds around us, using sensors and data to make these worlds experiential. Synthestruct works on all aspects of project development from concept to visual and audio design, and programming the interactive elements and real-time behaviors. Synthestruct's work has been featured at exhibition spaces around the world including: Artechouse (Washington, DC), Sonar Festival (Barcelona) and Montreal's Society for Arts and Technology (SAT) and Orlando Science Center. To learn more, visit Synthestruct.com

About AMD
For more than 50 years AMD has driven innovation in high performance computing, graphics, and visualization technologies— the building blocks for gaming, immersive platforms, and the datacenter. Hundreds of millions of consumers, leading Fortune 500 businesses, and cutting-edge scientific research facilities around the world rely on AMD technology daily to improve how they live, work, and play. AMD employees around the world are focused on building great products that push the boundaries of what is possible. For more information about how AMD is enabling today and inspiring tomorrow, visit www.amd.com