Stantec achieves faster multi-tasking AEC workflow with AMD Radeon PRO™ GPUs

AMD Radeon PRO graphics-powered Dell Precision workstation enables design work to continue while rendering complex scenes in Lumion.

AMD RADEON PRO

CUSTOMER

Stantec

INDUSTRY

Architectural and engineering services

CHALLENGES

Improve workflow and enhance productivity

SOLUTION

Deploy Dell Precision workstation with AMD Radeon PRO graphics

RESULTS

Multitasking including simultaneous design and rendering

AMD TECHNOLOGY AT A GLANCE

AMD Radeon PRO W5700 graphics
Dell Precision 5820 Tower workstation

SOFTWARE APPLICATIONS

Adobe® Creative Cloud®
Autodesk® 3ds Max®
Autodesk® AutoCAD®
Autodesk® Civil 3D®
Autodesk® Revit®
Chaos® V-Ray®
Epic Unreal® Engine
Lumion®
Pro Rhino®
SketchUp®

TECHNOLOGY PARTNER

DELLTechnologies

Stantec is a global design firm with a sixty-plus-year history and a reputation for huge public and commercial architectural projects, including theme parks. Presenting these projects to stakeholders and clients brings together many different skills and applications, but one feature in common is the need for great 3D accelerator performance. This led the company to try AMD Radeon PRO graphics.

"We have about 22,000 employees," says Robert Terry, Senior Designer at Stantec. "We specialize in everything from environmental services, energy, water, infrastructure, to buildings. The group I am in covers everything from architecture and civil engineering to interior design and landscape. I work with all the disciplines and create models and ways to visually communicate our design intent, both internally and to our clients. I do a lot of renderings, both stills and animations, live walk throughs, and VR simulations." When working from home, Dell gave Terry a Dell Precision 5820 Tower workstation powered by AMD Radeon PRO W5700 graphics and he was able to try these tasks using the new system. It delivered what Stantec needed to design and render projects with an efficient workflow.

Combining assets from many applications

"In our Orlando office, we specialize in hospitality and themed entertainment primarily," says Terry. Stantec's clients include all the biggest brands in the theme park business. "Because we're a multidisciplinary firm, our office utilizes lots of different specialties, not just architecture or landscape design or interior design. My job is to take all those things

"[AMD Radeon PRO] Viewport Boost is super beneficial, I couldn't be happier with it."

Robert Terry, Senior Designer at Stantec

and make a cohesive model. The large datasets pose one of the biggest problems, but we also get information from lots of different software tools in a variety of formats."

During his working day, Terry might receive assets from Rhino®, SketchUp™, and Autodesk® software titles including 3ds Max®, AutoCAD®, Civil 3D®, Revit® and many others. "We are pioneers of our own workflow. I don't necessarily work the same way somebody else would in a different firm. Our challenges are unique, and there are millions of tools out there. Autodesk Revit is the main tool for the architecture group. But the civil group uses Civil 3D, and we use a lot of other tools from the Autodesk suite. I use 3ds Max as a conduit because it can recognize most of those file formats, whether it's Revit or SketchUp, or AutoCAD. I bring these files into Max, and then I use Max as my main visualization tool."

Terry uses Autodesk 3ds Max to prepare visualizations for rendering in Lumion® Pro or Chaos® V-Ray®, or for generating real-time experiences in the Epic Unreal® Engine, bringing together varied assets to create a marketing video or presentation for clients and stakeholders. In the past, his office workstations primarily relied on graphics solutions from other vendors. For working from home, he now has the AMD Radeon PRO W5700 graphics-powered Dell Precision 5820 Tower workstation in addition to an existing Alienware laptop. "It's no secret how much AMD has been pushing things lately in a really positive direction, so I was excited to try one of their graphics cards," he says.

Designing and rendering – at the same time

"Initially it was the price that attracted me," explains Terry, "and the fact AMD is really coming out with products that are making other graphics card manufacturers up their game. In terms of price versus performance, the AMD cards in my experience have taken the cake." One incident has really showcased the benefit of switching to AMD graphics.

"We were presenting to the City Council and the Mayor of Clearwater, Florida, on a Monday," explains Terry. "I was creating a four-minute-long video flythrough of this whole project. I set the animation to render, but on the Saturday evening, we had a thunderstorm. I lost the work, so I had to restart the video, and I had to render all day Sunday, but I also had to do some other design work. This meant I had to have Lumion rendering in the background while I was modeling and editing and creating in Max."

Terry found this was entirely possible. "That's when that light bulb went on and I realized, wow, I can do this now, I can really multitask," he says. "Before I used to have to do my modelling during the day and then render overnight, it was one or the other."

"With the AMD graphics I can do more in less time because of the ability for me to not necessarily have to plan my day around either/or."

Robert Terry, Senior Designer at Stantec

Unique driver features enhance productivity

Terry compared the performance of his AMD graphics-powered Dell Precision workstation to his NVIDIA graphics-equipped gaming system. "I did some tests with Lumion running, rendering in the background, while I worked in 3ds Max," he says. "Instead of the 30-40 frames per second I got with the AMD graphics, with the NVIDIA cons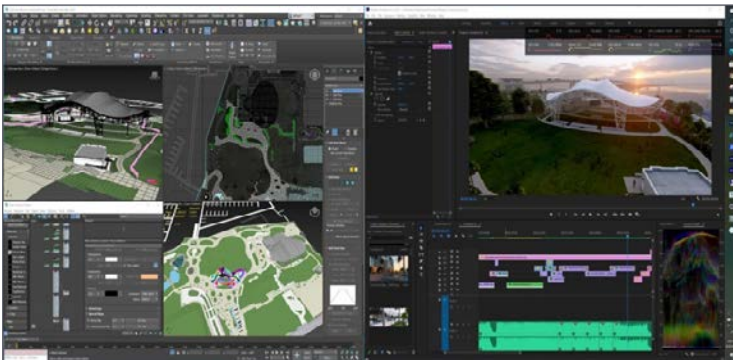umer graphics I was only getting a few frames per second in viewport navigation in Max while Lumion was rendering in the background, making it hard to do both modeling and rendering simultaneously. But with the AMD PRO graphics, now, I can have Photoshop open, and Premiere open, and Lumion running in the background, and I'm modeling in Max – all at the same time."

The additional productivity tools within the software driver for AMD Radeon PRO graphics have also proven beneficial. "Being able to screen record right inside the driver, that's really pretty cool," says Terry. "I wanted to show a new software feature to some colleagues. I just hit the screen record and did a 15-minute demo of how it worked." The recently released AMD Radeon PRO Viewport Boost is also providing additional efficiencies. "I was getting about 11 frames per second with a 13 million polygon model in Max. I turned that on, and I was getting an average of 17 frames per second instead. Visually, you can't even really notice the difference. Viewport Boost is super beneficial; I couldn't be happier with it."

All of this results in a more efficient workflow and dramatically improved productivity. "With my previous workstation, I was never able to actively model or render anything in Lumion and do anything other than check email or browse the Internet at the same time," concludes Terry. "The Dell Precision workstation with AMD graphics allows me to do more. With the Radeon PRO card, and the drivers and tools it gives me, I can work more efficiently, and that's all I could ask for. Between the efficiency and the cost, I would have no problem working with this as my daily machine."

About Stantec

Communities are fundamental. Whether around the corner or across the globe, they provide a foundation, a sense of place and of belonging. That's why at Stantec, we always design with community in mind. We care about the communities we serve—because they're our communities too. This allows us to assess what's needed and connect our expertise, to appreciate nuances and envision what's never been considered, to bring together diverse perspectives so we can collaborate toward a shared success. We're designers, engineers, scientists, and project managers, innovating together at the intersection of community, creativity, and client relationships. Balancing these priorities results in projects that advance the quality of life in communities across the globe. For more information visit stantec.com.

About Dell Technologies

Dell Technologies (NYSE:DELL) helps organizations and individuals build their digital future and transform how they work, live, and play. The company provides customers with the industry's broadest and most innovative technology and services portfolio for the data era.

About AMD

For over 50 years AMD has driven innovation in high-performance computing, graphics, and visualization technologies—the building blocks for gaming, immersive platforms, and the data center. 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 amd.com/RadeonPRO.

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