



NEWS RELEASE

Unity Launches Next Level Simulation Technology With Unity Simulation Pro And Unity SystemGraph

2021-11-10

Two new products deliver significant performance gains along with time savings and cost reductions for powerful simulations

SAN FRANCISCO--(BUSINESS WIRE)-- **Unity** (NYSE: U), the world's leading platform for creating and operating real-time 3D (RT3D) content, today announced the launch of Unity Simulation Pro and Unity SystemGraph, two new products that advance simulation performance and capabilities forward to make it simpler, faster and more cost-effective to run powerful simulations.

Unity Simulation Pro allows developers to unlock the true power of scalable simulations. It is the only product built from the ground up to deliver distributed rendering, enabling multiple graphics processing units (GPUs) to render the same project simultaneously, either locally or in the private cloud. This produces faster than real time simulation speeds and empowers developers to iterate and test more, accelerating their time to insights at a fraction of current operating costs. Unity Simulation Pro also offers headless rendering which eliminates the need to project each image to a screen, resulting in significantly reduced overhead costs and increased simulation efficiency by up to 50%. Additionally, Unity Simulation Pro is backed by a dedicated product team focused on driving ongoing product optimization to achieve further performance gains.

The **Allen Institute of AI** and **Carnegie Mellon University** have been using Unity Simulation Pro as part of a special trial program to tackle an Embodied AI problem where they are testing and training robots to perform navigation and manipulation tasks. With Unity Simulation Pro, the training process was accelerated from 200 frames per second (fps) using one GPU to more than 5000 fps using 32 GPUs.

“**AI2-THOR** is a pioneering simulation environment with the most diverse repository of indoor scenes and while it provides highly realistic simulations, this high fidelity is computationally intensive,” said Abhinav Gupta, Associate Professor, Carnegie Mellon University. “The headless version of AI2-THOR, which is built on Unity Simulation Pro, enables us to train our models in large clusters. The experiments that used to take weeks to finish, can now finish in just a few days.”

“As the need for autonomous systems becomes more prevalent in our daily lives, we need the ability to mimic the intricacies of the real world but that’s often challenging because these simulations are very cutting edge, requiring large environments, a myriad of sensors and multiple avatars and agents,” said Danny Lange, Senior Vice President of Artificial Intelligence, Unity. “Unity Simulation Pro is purpose built for those building cutting edge simulation applications. With this product we are enabling a future where we’ll see more developers create and evolve autonomous systems, across different industries, at a quicker, safer and more cost-effective rate.”

While Unity Simulation Pro is optimized for running scalable simulations, Unity SystemGraph is a flexible and easy-to-use node-based editor designed to simulate intricate mechatronic systems. It has the ability to emulate any type of robotics system and photosensors, such as lidar sensors and cameras. Additionally, through working closely with **Velodyne** and **Ouster**, it provides validated, ready-to-use lidar models right out of the box. With an intuitive and straightforward framework, Unity SystemGraph makes it easier to scale from small systems into complex ones. Specifically, roboticists and engineers can now prototype systems, test and analyze their behavior, and make optimal design decisions without requiring access to the actual hardware.

Volvo Cars has been using Unity SystemGraph in beta to perform high fidelity sensor modeling for their autonomous driving perception software testing.

“At Volvo Cars, we have been using cutting-edge technologies from Unity in many areas of our work,” said Joachim de Verdier, Head of Safe Vehicle Automation, Volvo Cars. “Unity SystemGraph is a flexible and convenient development tool that fits well into our simulation work and boosts our software testing.”

“The industry-leading capabilities of Unity Simulation Pro and Unity SystemGraph advances our commitment to enable organizations to create, deploy and unlock the value of AI,” said Dave Rhodes, General Manager, Digital Twins, Unity. “With Unity SystemGraph, engineers can much more easily mimic sensors, cameras and even physical robots in a complex system. Then they can test and train these systems at faster than real time rates with Unity Simulation Pro, achieving optimized performance levels at tremendous cost and time savings. With both these products we are equipping creators with the best solutions to tighten their feedback loop, to get to insights faster and cheaper, and to ultimately drive more innovation in the world.”

Unity Simulation Pro and Unity SystemGraph will both be showcased through in-depth sessions at the Unity AI Summit on November 18, 2021. Registration for the event can be found by visiting <https://unityaisummit2021.splashthat.com/>.

For more information on Unity Simulation Pro visit <https://unity.com/products/unity-simulation-pro>, or view the **demo**. For more information on Unity SystemGraph visit <https://unity.com/unity-systemgraph>, or view the **demo**.

About Unity

Unity (NYSE: U) is the world's leading platform for creating and operating real-time 3D (RT3D) content. Creators, ranging from game developers to artists, architects, automotive designers, filmmakers, and others, use Unity to make their imaginations come to life. Unity's platform provides a comprehensive set of software solutions to create, run and monetize interactive, real-time 2D and 3D content for mobile phones, tablets, PCs, consoles, and augmented and virtual reality devices. The company's 1,800+ person research and development team keeps Unity at the forefront of development by working alongside partners to ensure optimized support for the latest releases and platforms. Apps developed by Unity creators were downloaded more than five billion times per month in 2020. For more information, please visit www.unity.com.

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