NavVis and NVIDIA collaborate for large-scale reality capture data streaming

A new collaboration between NavVis and NVIDIA Omniverse is aimed at enabling streaming large-scale reality-capture data for factories. This will allow not only physically accurate, computer-designed models, but also accurate 3D representations of the ever-changing real world to be used in Omniverse simulations. NavVis is a global leader in reality capture and digital factory solutions, while NVIDIA Omniverse is a platform for building and operating industrial metaverse applications.

This will be achieved by integrating the company's mobile mapping system, NavVis VLX, and spatial data platform, NavVis IVION, with NVIDIA Omniverse. The partnership will provide enhanced capabilities for industrial applications, paving the way for advanced, immersive digital twin experiences.

Streaming large-scale reality capture data

"We strongly believe in the promise of the industrial metaverse, especially when it focuses on addressing hard problems that real users are facing with advanced capabilities such as physics-based simulations and AI," said Dr Felix Reinshagen, CEO and co-founder of NavVis. "We see, however, that simulations cannot just rely on existing libraries of computer-generated models but need to be complemented with an accurate, large-scale, always up-to-date 3D representation of the real world to ensure actionable results. NVIDIA is a global leader in this new space of the industrial metaverse, and we're very excited about this collaboration."

"With NavVis connecting to Omniverse, users will be able to easily stream large-scale reality-capture data directly into their Omniverse simulations," stated Richard Kerris, vice president of the Omniverse developer ecosystem at NVIDIA. "Running photorealistic and accurate 3D models of buildings, factories and even entire cities has never been more accessible for teams worldwide, improving operations and infrastructure planning."

Immersive and interactive digital twin experiences

NavVis and NVIDIA are collaborating to integrate NavVis IVION's spatial data platform with NVIDIA Omniverse. This integration will enable users to stream large-scale reality-capture data for factories into their Omniverse simulations via the Universal Scene Description (USD) framework. With NavVis VLX and NavVis IVION, users can quickly generate and manage highly accurate, photorealistic 3D digital twins for a range of environments, from small office buildings to sprawling factories spanning millions of square metres. By combining NavVis's advanced technology with NVIDIA Omniverse, this collaboration provides users with a flexible and powerful toolset for creating immersive and interactive digital twin experiences.

This initiative aims to empower manufacturers who are undergoing costly transformations of their factory environments, including the transition to electric vehicles in the automotive industry. They can use NavVis IVION to simulate new processes or to optimize the maintenance of current environments. These digital twins can be used for collaboration, powered by the high-performance GPU-accelerated graphics and advanced simulation capabilities of Omniverse.

Global manufacturing companies such as Volkswagen, Siemens, and BMW are among NavVis's 400+ customers who use the company's technology to create detailed visualizations of their factories and production assets. These digital twin and industrial metaverse use cases enable professionals in supply chain, engineering and operations to make informed decisions with confidence, especially for factory planning, assembly planning and shopfloor operations.

As part of the collaboration, NavVis IVION will connect to NVIDIA Omniverse, allowing users to stream reality-capture data for factories into Omniverse simulations via the USD framework. (Image courtesy: NavVis)