

bestat Begins Integration of 3D.Core with NVIDIA Omniverse

Simplifying 3D asset generation and accelerating the use of digital twins by enabling high-frequency loops of virtual space validation and real-world implementation

bestat Inc. (Headquarters: Bunkyo-ku, Tokyo; CEO: Naoko Matsuda; hereinafter “bestat”) has started integration of 3D.Core with NVIDIA Omniverse™ to simplify the construction of [digital twins](#) and promote their adoption by enterprises. This integration enables seamless connection and deployment of 3D data—previously an obstacle in digital twin development—into NVIDIA Omniverse, making 3D data creation easier.

This allows simulations and analyses that are difficult to perform in the real world to be conducted in a virtual space, with the results reflected in real-world improvements and validations at a higher frequency.



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■ Integration of 3D.Core and NVIDIA Omniverse Enables High-Frequency Synchronization and Accelerates Digital Twin Development

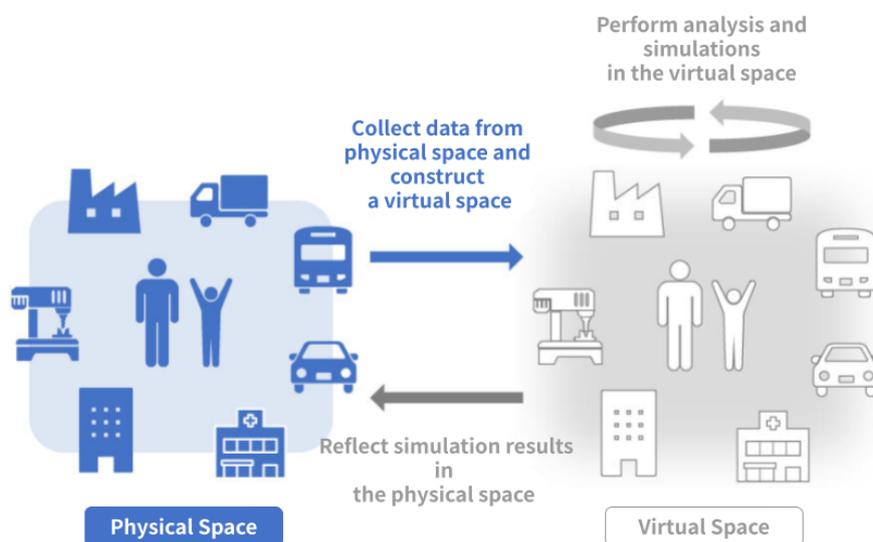
NVIDIA Omniverse is a platform of APIs, SDKs, and services that enable developers to integrate [OpenUSD](#), [NVIDIA RTX](#) rendering technologies, and generative [physical AI](#) into existing software tools and simulation workflows for [industrial and robotic use cases](#).

By incorporating various data owned by users (IoT, AI, 3D, AR/VR, Robotics), it enables the

creation of a virtual representation of physical real-world spaces. Through analysis and simulation in this virtual environment, potential future changes can be predicted, and the resulting insights can be applied to the real world to improve products and services. Ideally, the virtual space should closely mirror the real world and synchronize with it frequently. However, this requires the rapid generation of vast, detailed 3D data for the virtual environment.

3D.Core is a service that effortlessly and quickly generates such intricate and voluminous 3D data. By utilizing 3D data automatically processed by 3D.Core in simulation applications developed with NVIDIA Omniverse, the real world can be recreated more accurately and swiftly, unlocking greater value as a digital twin.

This collaboration aims to enable companies to build ideal digital twins more smoothly. By allowing 3D.Core-generated data to be accessed and deployed directly within applications developed with NVIDIA Omniverse, real-world replication can be achieved in less time and with greater ease, enhancing the precision of simulations and analyses aligned with reality.



<Image of a Digital Twin>

■ Use Case: Macnica’s FoodAgriTech Incubation Base

As the first example of integration between 3D.Core and NVIDIA Omniverse, this technology was applied to the cultivation of “Mazuma Wasabi” at Macnica’s Food Agri Tech Incubation Base.

In order to optimize growth conditions through environmental control within the plant factory, highly detailed 3D data of the facility’s equipment and Mazuma Wasabi plants was generated using bestat’s AI-powered 3D modeling technology. Macnica then integrated this data into NVIDIA Omniverse, successfully achieving rapid and high-precision 3D representations of 40-foot containers, hydroponic cultivation racks, and Mazuma Wasabi rhizomes and leaves of various sizes.



■ Benefits of bestat’s “3D.Core”

Digital twins have recently gained attention across industries like manufacturing and construction, but building a 3D environment to replicate real-world spaces has traditionally required immense time and effort, posing challenges for many companies. bestat’s “3D.Core” addresses these issues and offers the following advantages:

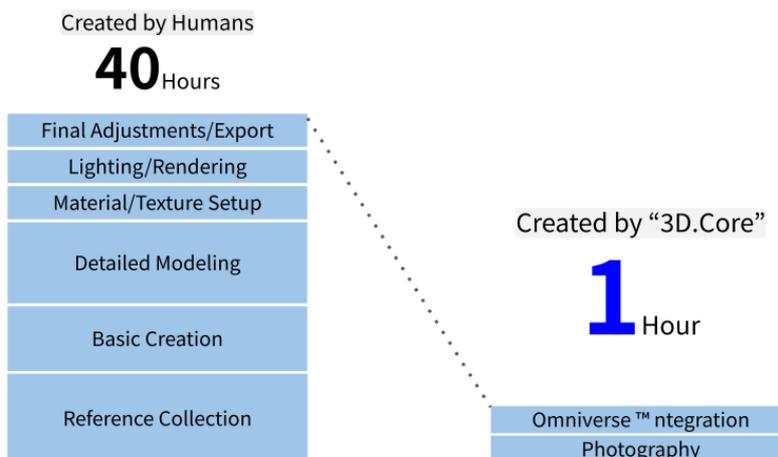
Automated, Cost-Effective, Detailed 3D Data Generation

Using a proprietary AI algorithm, 3D.Core automates the generation of 3D data, which previously demanded significant time and labor. Compared to other algorithms, it minimizes issues like “tearing,” “distortion,” or “inaccurate surface irregularities,” achieving precision of up to approximately 99%. This enables rapid production of high-quality 3D data, balancing accuracy with reduced workload.

<Comparison of 3D.Core and an output by a conventional method>



<Comparison of Generation Time: Humans vs. 3D.Core (Example)>



Times vary depending on the target object.

In some cases, human fine-tuning of modeling and texture adjustments may complement 3D.Core usage.

3D Environment Construction from Data Captured by Various Devices

Beyond just iPhones, users can select optimal devices—such as 360-degree cameras, 3D scanners, or drones—based on their purpose and upload captured data (images, videos, point clouds, etc.). This allows anyone to easily generate 3D mesh data optimized (e.g., lightweight) for their rendering environment. By supporting diverse capture devices, 3D.Core enables efficient and timely 3D environment construction tailored to user needs.

USD Data Output for Seamless NVIDIA Omniverse™ Integration

It integrates with various user-owned data (IoT, AI, 3D, AR/VR, Robotics), further promoting digital twin utilization.

<https://youtu.be/mgHomN3cRAAs>

■ Comments from Stakeholders

NVIDIA



Takashi Umezawa, Simulation Technology/ Omniverse Strategic Alliance Manager

“Omniverse is helping transform industrial digitalization, from design and manufacturing to operations, for the world’s largest industries. By integrating 3D. Core into NVIDIA Omniverse, bestat is enabling customers to eliminate the time-consuming process of generating 3D data and provides a jumpstart to tackle detailed simulations more quickly and accurately. We anticipate

this will accelerate the use of digital twins in various fields, such as manufacturing in Japan.”

Macnica, Inc.



Yusuke Nomoto, General Manager, Technology Department 4, Technology Division 1, CLAVIS Company

“We at Macnica are convinced that the possibilities for building a digital twin will be dramatically improved by working with bestat's “3D.Core”. In our project to cultivate “Masazuma Wasabi” at FoodAgriTech Incubation Base, we have confirmed that the data provided by 3D.Core enables us to quickly create a digital twin in the plant factory. In the future, Macnica will accelerate the use of 3D.Core for digital twin business in various industries, not only in the agricultural field, and aim to create new value.

Looking ahead, we aim to accelerate the adoption of digital twin technologies not only in the agricultural sector but also across various industries, contributing to the creation of new value.”

bestat Inc.



Naoko Matsuda, CEO, bestat Inc.

“A digital twin involves running simulations in a virtual space and applying the resulting data to the real world. The higher the ‘reproducibility’—the accuracy with which the virtual space mirrors reality—the more precise the results. An ideal digital twin features a detailed virtual space that can sync with the real world with minimal time lag. Conversely, if reproducibility is low and the virtual space diverges from reality, the accuracy of results suffers. Since the real world is constantly changing, delays in constructing the virtual space can lead to discrepancies, potentially disrupting simulations. Through this integration with NVIDIA Omniverse™, we aim to support companies in building more ideal digital twins.”

About bestat Inc.

PRESS RELEASE

April 17th,2025
bestat Inc.

Company Name: bestat Inc.

CEO: Dr. Naoko Matsuda

Established: 2018

Location: 6-25-14 Hongo, Bunkyo-ku, Tokyo 113-0033, Japan

Business Activities:

- Provision of “3D.Core,” a cloud service for automated 3D data generation, management, and utilization
- 3D data processing API provision
- Digital twin construction

URL: <https://bestat-data.com/>

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