Mantle™

Mantle™ streamlines and simplifies terrain generation at any scale. It's effective, proven, easy-to-use, cost-efficient, and constantly enhanced.

Terrain Challenges

Making terrain for high-fidelity simulation is complex and challenging. Searching out good source data, building correlated terrain for multiple runtimes, synchronizing data between different simulation clients, storing the vast amount of source data, utilizing classified and other restricted data, and editing data "on the fly". Historically, these challenges have resulted in separate specialist teams building terrain data disconnected from the point-of-need users, with high costs and long lead times to obtain the required finished terrain.

Mantle solves these challenges.

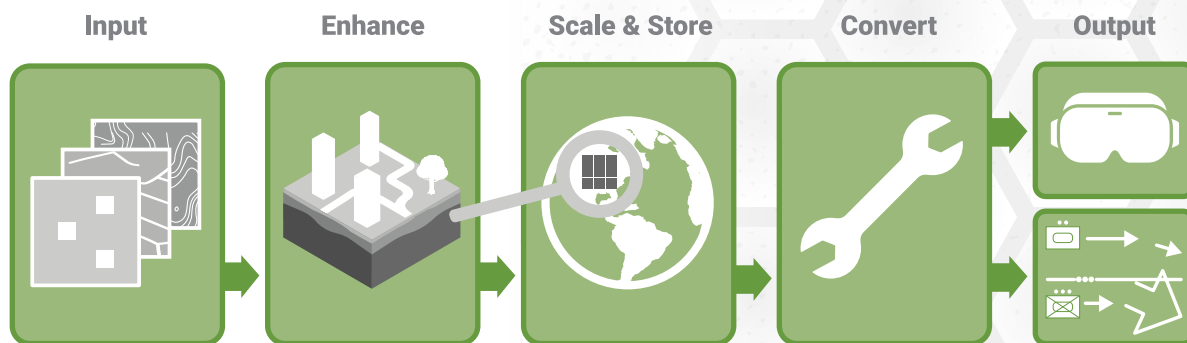## Streamlined Enterprise-Wide Terrain Generation

Mantle is a custom-built platform based on proven COTS components and expert design/development services for creating correlated terrain for training, mission rehearsal, visualization, and terrain analysis. A Mantle installation delivers a cloud-capable[1] custom terrain pipeline that works with your data, processes, servers, and runtimes, integrating with your existing terrain capabilities or providing a complete end-to-end solution from scratch.

High fidelity terrain generated by Mantle

Full support for complex urban terrains

Input	Enhance	Scale & Store	Convert	Output

[1] Cloud is not required, Mantle can also run on an internal network

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Key Benefits

Effective: Effective: Mantle simplifies enterprise-wide terrain handling for simulation and visualization by providing a cloud-capable terrain server that can be integrated with existing capabilities.

Proven: The Mantle platform is based on robust COTS components - TerraTools components (for terrain generation), BISim's Blue Data Pipeline technology (for procedural enhancement), and VBS World Server components (terrain storage and server capabilities).

Easy-to-use: Mantle is designed with accessibility in mind. With the VBS Geo editing tool, users can quickly learn to rapidly create and edit terrain on the fly, leveraging the 8,000+ 3D model content library. Edits can be stored and curated centrally.

Scalable: Mantle can be deployed on the cloud or a local network, supporting synchronization between servers.

Cost-Efficient: Mantle reduces the manpower needed to develop and deploy terrain by offering a high degree of automation at every stage.

Constantly Enhanced: Mantle components are regularly enhanced, driven by new customer requirements and significant internal investment, which drives feature improvements such as the curated global base data and extended support for new runtimes and streaming terrain formats.

TerraTools Platinum: A license of TerraTools Platinum, our industry-leading terrain generation and export tool, is included with Mantle at no additional cost.

Mantle with Luxcarta BrightEarth data
(for example)

Support for night lighting

MANTLE

Server - Recommended System Requirements	Server - Optimal System Requirements
CPU: Intel Core i7-12700K, Ryzen 9 7900X	**CPU:** Intel Core i9-12900k , Ryzen 9 7950X
RAM: 64 GB DDR4	**RAM:** 128 GB DDR4
GPU: Nvidia GeForce GTX 1080, DirectX 11	**GPU:** Nvidia GeForce RTX 4090, DirectX 11
Disk: 512 GB SSD for OS, 4 TB SSD for Mantle/VBS World Server/ IDF World Server and Global Data (optional)	**Disk:** 512 GB SSD for OS, 8 TB SSD for Mantle/VBS World Server/IDF World Server and Global Data (optional) and space for local processing.
Operating System: Windows 10 64-bit, or Windows 11, Windows Server 2016/2019	**Operating System:** Windows 10 or Windows 11 64-bit, Windows Server 2016/2019
Network: 1 Gbps	**Network:** 10 Gbps

Note: These specifications are for a typical classroom installation and can vary depending on the scale of the Mantle capabilities and installation

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