

TERRA VISTA

Enhanced MMB

Redesigned from the ground-up, this feature maximizes 64-bit and scalable multi-machine capabilities in order to handle large and dense visual, sensor, and computer generated forces (CGF) terrain databases. The Enhanced MMB also includes independent processing agents.

TV Builder

By using Terra Vista Builder, you can equip additional machines with cost-effective applications that help manage, allocate, and validate the building process. Additional functionalities include:

- \\ Jobs distribution independent from client so you can easily connect and disconnect build nodes.
- \\ Simultaneous projects building
- \\ More dynamic building management
- \\ Parallelizable finalize/ merge process (CDB, CTDB, OTF)
- \\ A modern distributed build architecture toward cloud computing
- \\ Web interface for build monitoring

FBX Output Enhancements

Creator has bolstered the FBX output functionality by adding the following features and options:

- \\ Multiple texture layer support
- \\ Output file options : switch states for maximum flexibility in Unity
- \\ Light sources

Airport Sign Wizard

Whether from scratch, or using templates, you can now create airport signs quickly and easily.

Enhanced Roads Improvements

- \\ Improved road generation
- \\ Crosswalk/Stop line options
- \\ OGC CDB improved support
- \\ Road flattening improvements

Geolocalized OpenFlight Importer

Users can more easily import OpenFlight format runways and taxiways into Terra Vista and output them in their databases.

Building Front Option

Users can determine the front of a building based on road and construction resulting in a more natural-looking database.

Split Linears Tool

This tool will automatically split linears at intersection points so road vectors can be processed properly.

OGC CDB Import Enhancement

Convert GeoTiff to THM

Visual Studio 2015 (VC 14) Support

CREATOR

Scripts

When using OpenFlight or Creator Script in Creator, users now have access to more:

- \\ Python built-in capability
- \\ More Tools to automate more of their modeling tasks.
- \\ Importers and Exporters

Construct Along Path

Allows you to create or place geometry/models along a "path". This is ideal for creating common geometry typically found around airports (taxiways, lights, etc.) or roadways (power lines, lampposts, etc.).

Sign Wizard

This enhancement allows Creator users to more easily modify signs created using the Sign Wizard.

FBX Import/Export

Creator imports and exports FBX files. This gives you access to millions of readily available 3D assets from the gaming world.

Fillet

Creates a set of triangles forming the shape of a fan. This can be useful to make inner or outer corners for roads and/or taxiways.

Join Edges

Enhanced Texture UV Unwrapping

OpenFlight API Enhancements

Plugin developers can now use a more recent version of Microsoft Visual Studio tools.

VEGA PRIME

3D Clouds

Create accurate, volumetric 3D clouds to achieve ultra-realistic visuals for any time of day. Choose from preconfigured cloud types, or create your own using a cloud creator interface complete with storm cells, ephemeris model, and wind direction.

SpeedTree & SpeedGrass

Made possible by boundless terrain and grass engines, users can now create vast areas of very high-quality dense forests and grass covered vistas with improved rendering, and a seamless LOD system that yields seamless transitions without popping.

Additional Improvements

- \\ Marine: Support for smooth sea state transitions vpSim: Added user control of DIS/HLA entity appearance
- \\ Added user control to allow changing of environment colors
- \\ Support for multi-channel, multi-sample rendering OGC CDB caching support expanded

HELISIM / FLIGHTSIM

System Enhancements

- \\ New functionality to request ADC module to calculate specific IAS from TAS
- \\ Opened access to engine performance curves
- \\ Simulation frequency is now included and saved in aircraft model
- \\ Increased number of engines from 4 to 8 (FlightSIM only)
- \\ Opened access to each Control Law
- \\ Improved system functionality in Engine Panel to create a specific link between pilot input and the engine (HeliSIM only)
- \\ Improvements to the Bell 412 and Quad helicopters (HeliSIM only)

Validation Enhancements

- \\ Added run-time access for pilot input
- \\ Increased number of user tables to provide more control during validation and integration
- \\ Provide detailed information (deflection, aerodynamics, etc.) for each element of each blade (HeliSIM only)

Integration Enhancements

- \\ Exporting segmentation to have better control of what data is being exported.
- \\ Opened access to the repositioning API
- \\ Increased number of control surfaces exported via the instrument system

ONDULUS RADAR

New Radar Modes:

- \\ On/Off/Standby (passive)
- \\ **STT**: Single Target Track
- \\ **DBS**: Doppler Beam Sharpening
- \\ **TWS**: Track While Scan
- \\ **GMTI**: Ground Moving Target Indication (supported in RBGM and SAR)

API Enhancements:

Give users more access to transmitter and emission properties.

Can make changes to configuration parameters the radar in run-time

Visual Studio 2015 (VC 14) Support

API developers can now use a more recent version of Microsoft Visual Studio tools.



ONDULUS IR

Two Detectors. One Simulator.

Ondulus IR refined its sensor into two distinct detectors:

- \\ Photon for long wavelength IR and lower operating temperatures
- \\ Thermal for very long wavelength spectral range

This was done to accommodate the different types of noise and dependencies encountered at different wavelengths and temperatures.

Use Datasheets or Specs

Because Ondulus IR is built on a modular architecture, each detector can be specifically configured using datasheet information, or actual product specifications.

Subsystem Control

Ondulus IR users have full control of a sensors subsystems including:

- \\ Lens
- \\ Detector
- \\ Electronics
- \\ Displays

Fully Configurable

Both the photon and thermal sensors can simulate and configure the following attributes:

- \\ Blurring, noise, NEP (photon), NETD (thermal)
- \\ Dark current (photon)
- \\ Adjust temperature range
- \\ Non-uniformity effects
- \\ Cooled and uncooled detectors (thermal)

Visual Studio 2015 (VC 14) Support

ONDULUS NVG

The Newest Member of the Ondulus Family

Ondulus NVG gives the ability to add realistic physics-based night-vision sensor simulation to your research, training or mission planning environments. In addition, complex composite and layered materials are supported.

Ondulus NVG supports both passive (ambient) and active illumination sources with a user-defined power. Furthermore, active illumination can be sourced from any (external) location, i.e.: helicopter-mounted.

Simulating both out-of-the-window (OTW) and night-vision-goggles (NVG) views, Ondulus NVG uses physics-based rendering, and boasts realistic, immersive effects:

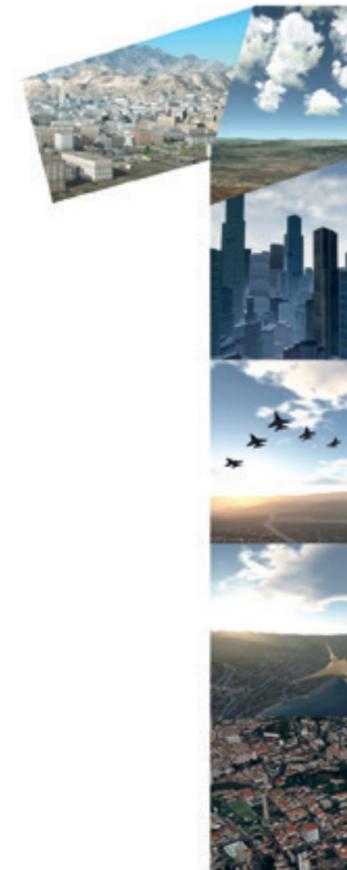
- \\ Noise
- \\ Light Blooming
- \\ Vignetting
- \\ Black Spots

Giving users a high-degree of control, Ondulus NVG is equipped with many configurable parameters, including:

- \\ Light Amplification
- \\ NVG Color
- \\ Digital Zoom



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Preview of New Features for the Upcoming M&S Suite 17

