GeoTech Terrain Viewer Suite (GTVS)

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GeoTech Terrain Viewer Suite (GTVS) is a comprehensive package for the creation of the highly detailed photorealistic "GTVS Terrain" and the modules for utilizing this terrain, the GTVS modules are: real-time flight module, terrain generation module, flight path creator & flight video capture module, vector layer module, and object placement module. The robust terrain generation engine is capable of creating and displaying surfaces generated with hundreds of thousands of triangles and millions of pixels. For example the terrain below is a 15,000 x 14,000 pixel Quickbird image (553MB) covering a 150,000 triangle mesh created from the DEM. This terrain can be flown in real-time at a constant 75 frames per second on an off-the-shelf PC (Pentium 4, ATI Radeon graphics card). The generated terrain may be viewed in real-time either as a 3-D model, or it may be flown in a free-flight mode. With multiple speed control and elevation locking features, it is an excellent way to study or display a terrain. In addition to free navigation, a flight path may be displayed in a looping demo. Using high-resolutions, anti-aliasing and vertical synching, this mode offers a very smooth and crisp way of running demonstrations. Both operations can be rendered in a stereo 3-D format to be viewed with red/cyan glasses. The main features of the GTVS software are: Importing DEM and Terrain Images, generating photorealistic terrain, creating flight paths, recording flight videos, real-time looping demos of flight paths, placing 3-D objects, and placing vector layers. The Flight Path Creator provides an intuitive environment for creating flight paths to be used in video capture or real-time demos. Multiple screens are used with a flexible time control to craft flight paths with precision and ease. This presentation gets in depth regarding GTVS's various characteristics and capabilities.