



Insight3D

What is Insight3D?

The Insight3D Visualization Library is a set of .NET or Java interfaces around AGI's 3D engine. Developers can use C#, VB.NET or Java (Windows only) to construct lightweight yet powerful 3D applications built for performance and visualization accuracy. By coupling STK's time-tested rendering engine with the Dynamic Geometry Library and other libraries within the STK Components development kit, developers can extend their current visualization capabilities.

Why use Insight3D?

With the Insight3D Visualization Library, users can control:

- Smooth animation
- Camera manipulation
- Static and dynamic primitives
- Object picking
- Globe inlays
- And more

In addition to building new applications with Insight3D, developers can add the Insight3D control to an existing application—enhancing the application by rendering data in an interactive 3D environment.

This concept isn't new. Google Earth, Virtual Earth, World Wind ... these globes already exist to illustrate spatial data. How Insight3D differs is best attributed to four different categories: Time, Camera, Object and API.

Time

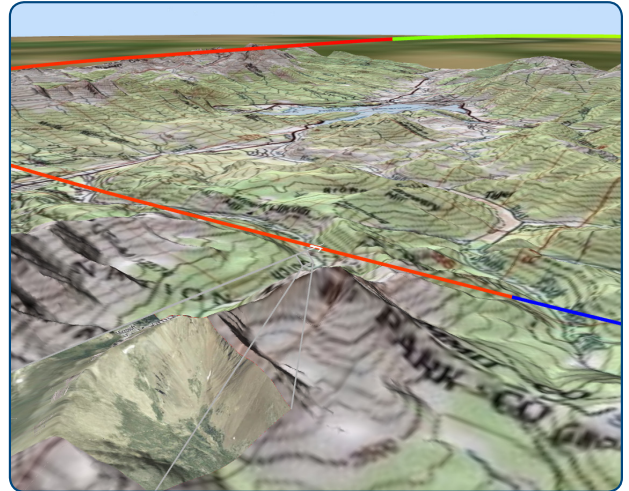
The management of time-dependent data, such as vehicle motion, is at the foundation of Insight3D. Using the Scene Manager, Insight3D renders objects (primitives) fluidly over time rather than as a series of discretized points by managing those objects and updating the scene as objects change.

Camera

The camera object fully controls the viewer's position and orientation. When the camera is initialized with point or vector objects, it automatically moves when the point or vector change. Camera settings include view parameters such as field of view, near plane distance and far plane distance.

How do you get Insight3D?

Visit the AGI Developer Network (ADN) at adn.agi.com to download the latest version of the free STK Components development kit, add the Insight3D reference to your project and list of controls and start developing. Be sure to check out the rest of ADN for code snippets and sample applications.



Object

One reason why Insight3D is excellent at managing time and the camera view is because it treats items rendered to the 3D scene as objects. Illustrating data over time is not about rendering different data at each time step, but rather rendering the same objects' new geometry as a function of time.

API

The Insight3D API is a set of managed .NET interfaces designed for building and deploying powerful 3D applications. Insight3D provides access to the rendering engine and camera providing developers full control over what and how primitives, images and overlays are rendered and viewed.