

Use Helix Toolkit to create 3-D Models in VC application.

Demo created with VC 4.1.2

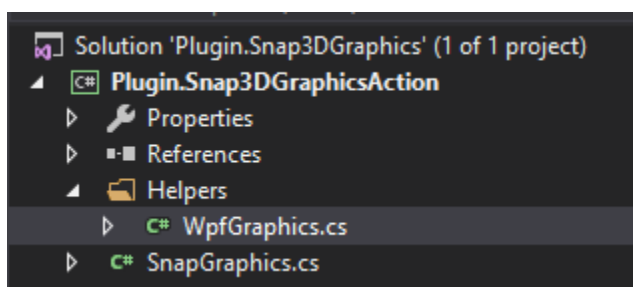
About Helix Toolkit and WPF 3-D

Helix Toolkit is an open source 3D library. The project demo shows how to use Helix toolkit to create basic 3-D models and then add them to a specified positions in VC' 3D world scene. Created 3-D models can be used for visualization in order to enhance user experience.

WPF 3-D system currently supports modeling geometries with [GeometryModel3D](#). Also, WPF 3-D system provides the [MeshGeometry3D](#) class, which allows you to specify any geometry. However, it does not currently support predefined 3-D primitives like spheres and cubic forms and this is the reason why you might need Helix Toolkit because it supports creation of 3-D primitives like spheres, box etc. Helix Toolkit is based on .NET and provides features that are not available on the standard WPF 3-D visual model. For additional information on Helix Toolkit, please visit <http://docs.helix-toolkit.org/en/latest/introduction/index.html>

A Brief Project Description

Included in the project is a couple of helper classes (WpfGraphics class and GeometryHolder class) that makes adding 3D models to VC' 3D world easier. These classes are in WpfGraphis.cs file as shown in the project solution below.

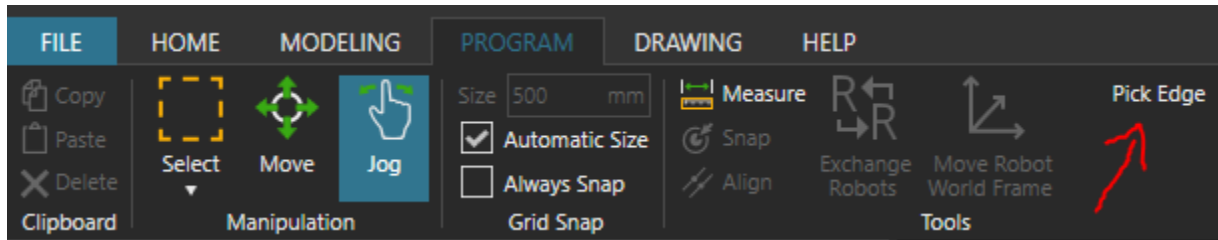


GeometryHolder class derives from ManipulatorBase class (located in VisualComponents.UX.Viewport) which derives from ModelVisual3D base class which then provides a [Visual3D](#) that renders [Model3D](#) objects. Model3D is the abstract base class that represents the a generic 3-D object.

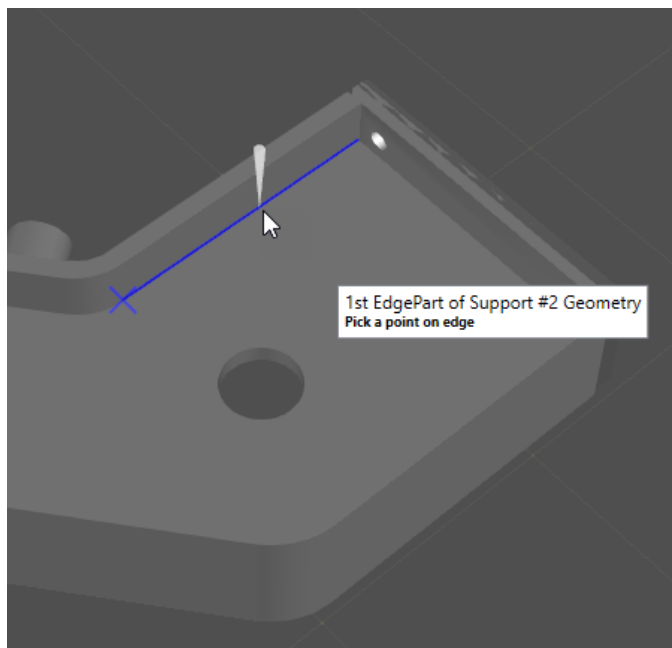
In this demo project, Helix Toolkit is used to draw 3D models and they are then transferred to the helper class. VC' SnapAction is used to read the topology of VC' 3-D models in VC' 3-D world scene. The 3-D models created with Helix Toolkit are then rendered at specified topology edge points on VC' 3-D models when a snap action is completed. The SnapAction is implemented in an Action Item class SnapGraphics.

How To Use

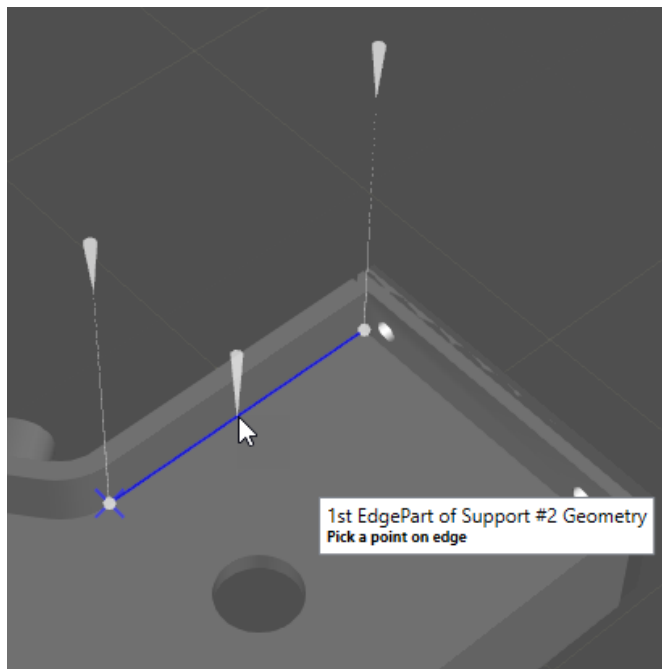
1. Start from Program Tab



2. Pick a point on edge



3. Left mouse button click on selected point on edge



4. Left mouse click 3-D world floor

