Autodesk Inventor Studio – Still a good Option for Rendering

The Autodesk Design Suites now offer several worthy options for creating Photo-Realistic renderings of your Autodesk Inventor designs. With Showcase as part of the Product Design Suite Standard and 3Ds Max Design included in the Premium and Ultimate Suites, the Inventor Studio functionality included with Inventor often gets overlooked when determining which tool is used to create Photo-Realistic Renderings. Inventor Studio is still a good option for creating high quality renderings and animation of your products.

In this article we’ll discuss the various tools and capabilities of Inventor Studio and Scene creation. Composing a Scene for rendering can be as easy as just rendering the Inventor model. Or, you can use the various Inventor Studio features to give your components a more realistic appearance, add props, lighting and camera positions that highlight the beneficial aspects of your designs. It’s up to you to determine the content and complexity of your Scene.

With Inventor Studio we can:
- Create still and animated renderings of parts and assemblies
- Compose a video using one or more cameras
- Create scenes with background geometry, lights and camera
- Reuse constraints or parameters between animations

Using Props

The use of props can add visual stimulus to your renderings to tell a brief story about your design. Props can also aid those viewing the renderings to better understand the scale of your design. They also help give the viewer a better perspective of your product.
Surface Styles
Components and props are enhanced by the use of Surface Styles. For each Surface Style, you control the color, reflectance, opacity and textured appearance of the Style and where it’s used in the model.

Lighting Styles
Scenes are illuminated through the use of Lighting Styles. A Lighting Style is a collection of one or more lights with parameters defined for brightness, color, position and so on, set in such a way as to illuminate the Scene with the desired results in mind.

Scene Styles
A Scene Style provides the background for your image or animation. Inventor Studio provides commands for positioning a ground plane and parameters for shadows and reflections. Additionally, Scene Styles can use a single color, gradient or an image for enhancing the rendered image or animation.
Cameras

Cameras are used to establish the viewing angle for any given scene. You can create and maintain as many cameras as you want in the Scene.

Rendering and Animation

Create still and animated renderings of parts and assemblies to visualize the appearance and motion of a design before it’s built. Videos can be composed using one or more cameras from one or more animations of the same part or assembly.

Animation Options

- **Animation Timeline**
  - Specifies the timing of all the actions in an animation
- **Animate Components**
  - For the components transformation and rotation
- **Animation Fade**
  - Controls the opacity of a component during a given timeframe
- **Animate Constraints**
  - Specifies the value for modifying a constraint
- **Animate Parameters**
  - Modifies the values of one or more parameter of the model
- **Animation Camera**
  - Specifies the camera animation parameters. Turntable or Path options to create fly-by visual effects
- **Animate Lights**
  - Creates specialized lighting conditions and animates them at specific times
- **Animate Positional Reps**
  - Animates Positional Representations from the Assembly Model
- **Video Producer**
  - Integrated multiple camera shots, stills and transition into one animation for the current document.
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