What's New in KeyShot® 3

KeyShot 3 includes the largest amount of customer enhancements and feature requests introducing an all new animation system, over 1,700 new materials and 20 new lighting environments. This release of KeyShot focuses on four main areas:

- All new animation system without relying on keyframes bringing a new level of 3D visualization to the product design workflow.
- Enhancing user experience with a completely updated user interface and smoother workflow options.
- New tools extending the capabilities of KeyShot to be used throughout the entire product development process.
- Increasing the options available to users for importing and interacting with the most file formats on PC and Mac.

The top enhancements for KeyShot 3 incorporate new capabilities across every area of the KeyShot experience, from the the user interface and animation system to improved model and material interaction.

All new animation system (optional add-on for KeyShot 3)

Rather than relying on keyframes, we have developed a new, patent-pending animation system that simplifies the creation and editing of animations for 3D data.

- **Animation transform offsets (patent pending):** Rather than relying on keyframes, KeyShot relies on individual object and camera transform offsets that can be combined, copied and linked to deliver a fully featured animation.
- **Single application and environment**: The animation capabilities have been built directly into KeyShot.
- **Animation in a realtime raytraced environment**: Setup, edit, and playback inside realtime raytraced environment, just like when setting up a scene in realtime for still image creation.
- **Realtime Interaction**: Full interaction with camera, lighting and materials during animation playback
- **Animation wizard**: Step by step guide for first time users
- **Copy and paste:** Animations can be copied from one object to another and linked
- **Helper objects**: Select any part or assembly as rotation center
- **Camera animation types**: Orbit, Incline, Zoom, Translate
- **Part and object animation types**: Turntable, Rotation, Translation
- **Fast preview output**: AVI, MPEG
- **High quality render output**: AVI, MPEG, Flash, individual frames including Alpha channel

UI improvements

- **Main tool bar cleanup:** The main toolbar has been cleaned up to be more representative of the 6 steps: Import, Library, Animation, Project, Screenshot, Rendering
- **Dockable toolbar**: The main toolbar is now dockable - side, bottom, floating. The icons can be displayed large or small, with or without text.
- **Bip file preview**: All scenes saved in KeyShot 3 will have a preview saved with the scene, allowing for easier browsing
- **Dialog clean-up**: All dialog boxes n the project window (formerly known as Options dialog) have been cleaned up to be more logical and therefore user friendly.
- **Consolidation of environment and backplate tab**: The environment and backplate tab have been combined into a single tab. In addition, the interaction between environment, color background and backplate has been largely improved by allowing to toggle between the three modes.

- **Overwrite protection of content with visual feedback**: When adding content to the existing resource folders, KeyShot will prompt the user with a visual comparison of old and new file should a file with the same name already exist.

New camera concept

In order to be able to animate cameras, a new concept for cameras was introduced. KeyShot 2 had a single camera, and saved views. KeyShot 3 has actual cameras:

- **Free camera**: The free camera is, as the name says, the default camera that always moves. It can't be saved, nor animated.
- **Saved camera**: A saved camera is a certain saved view of an object.. The saved view also serves as the starting point for a camera animation. It can be edited in the camera tab or in the scene tree. This will ensure that a camera animation will always play back as intended when set up.
- **Orientation**: Orientations are saved views of your object (front, back, left, right, top, bottom)

Gamma adjustment of startup environment

In order to help users to create images with less contrast, the default gamma has been set to 2.0. All materials, textures, and environments that are being shipped with KeyShot 3 have been adjusted accordingly so they look correct.

Existing scenes are not affected by this. When importing new textures, KeyShot will automatically make the necessary adjustments to ensure that the textures look correct under the new default Gamma setting.

All new asset library structure

The library containing materials, textures, environments, back plates and renderings as been completely redesigned to allow for better organization of content.

- **Folder structure**: All assets can now be organized in folders and subfolders.
- **Large interactive preview**: Not only can the thumbnails representing the content be resized, but also large preview of the asset is provided when moving the mouse over the thumbnail
- **Drag and drop operations for reorganizing content**: Content can be moved from one folder to another by simply dragging and dropping it.

- **Add content by via drag and drop**: Content can be added to the library by simply dragging and dropping the corresponding file from any location directly into the library.
- **Import and export of materials simplified**: Single or multiple materials can now be exported into a single material package file which contains the material itself and all of its associated textures and labels.

Importers

For KeyShot 3, we have significantly expanded our import pipeline to include even more native file formats. All formats are now supported on PC and Mac. This makes KeyShot the first application to support file formats of leading CAD applications on both PC and Mac. New importers are:

- **NX 8**: Support for NX 8 and prior with the ability to control tessellation.
- **Parasolid**: Support for native Parasolid files including tessellation quality.
- **SolidWorks 2012**: Support for SolidWorks 2012 and prior 32/64bit. The tessellation can now controlled upon import.
- **Autodesk Inventor 2012**: Support for Autodesk Inventor 2012 and prior
- **SolidEdge**: Support for SolidEdge ST4 and prior with the ability to control the tessellation upon import.
- **FBX**: The FBX importer now supports part animation that can be imported and played back

Interaction with objects in the scene

Interacting with objects inside the scene has been greatly improved.

- **Move individual parts**: You can now move parts or entire subassemblies individually without having to import them separately into KeyShot
- **Move parts in local or global space**: Parts can now be moved in global space or in their own local space base on their location in the assembly. With a simple toggle you can switch between the 2 coordinate systems.
- **Move multiple parts at once**: You have the ability to select multiple parts in the realtime window (CTRL + click / CMD + click) or scene tree and move them all at once
- **Rename parts / layers / assemblies**: All object in the scene tree can now be renamed.

Camera movement

In order to make the camera interaction more in line with modeling applications, we have added the ability to change the distance of the camera (dolly) with only the mouse wheel. Yu can now control your camera by only using the mouse without having to press any buttons on the Keyboard.

Mac users can control the camera using the track pad.

Controls are as follows:

Mouse

- Tumble: Left click
- Dolly (camera distance): Scroll wheel. The old ALT + Right Click option still works
- Pan: Middle click.
- Zoom (focal length): ALT + scroll wheel.
- Twist: CTRL + ALT + scroll wheel. Replace CTRL for CMD on Mac.

Track pad

- Tumble: One finger click

- Dolly (camera distance): Two finger swipe up and down
- Pan: SHIFT + OPTION + CTRL + one finger click
- Zoom (focal length): OPTION + two finger swipe up and down
- Twist: OPTION + CMD + two finger swipe up and down

All new material editing and interaction

The material editor has be completely redesigned to make editing and creation of new materials simpler. The interaction with materials when applied to parts has also changed in order to ensure that part with the same material will keep this material if intended.

- **In-project material library**: The in-project material library shows you all the materials that are currently being used in the scene.
- **Material linking**: When applying a material from the in-project material library, all objects carrying this material will change automatically as soon as the material on any part is edited, or a new material is applied. The link can be broken via a simple right-click operation.
- **Interactive preview of material in editor**: Not only can materials now being viewed in realtime on the model under the given lighting conditions, but also in the material editor.
- **Clean up of parameters**: Advanced parameters are always available but hidden
- **Renaming of parameters**: Parameters have been renamed to more common terms.
- **Texture mapping and editing**: Clean up of texture mapping dialog to support more texture types and make texture mapping more intuitive.

Texture mapping and labeling

Texture mapping and labeling has been greatly enhanced in KeyShot 3 to not only provide more flexibility, but to also make applying textures and labels more interactive.

- **Specular Maps**: Most materials have the ability to use an image to control the reflectivity of a surface
- **Opacity maps**: With the help of simple black and white image or images with transparency any material can now used to achieve certain geometric effects without the need to model the detail (e.g. meshes, grids, slots et al.)
- **Color blending for texture and specular maps**: Textures can be further affected blending the underlying color with both the color as well as specular texture.
- **Interactive mapping tool**: Textures and labels can now be more easily and interactively placed using an widget.
- **Drag and drop textures with interactive feedback**: Any image can be applied as a different texture type or label by dragging it either from the library or any other location directly onto the model. An interactive dialog box show the effect of the image on the surface based on what texture type is chosen.
- **Reload textures and labels**: Textures and labels that have changed after they have been applied can now be simply reloaded, and are automatically reapplied to the surface

Material Library improvements

We added some new functionality to the Material Library which improves the interaction with materials significantly.

- **Move materials from one group to another**: You can now easily move materials from one group to another.

- **Export materials**: In order to make sharing of materials easier, you can now export material groups to share with your team. This functionality will receive further enhancements in future updates.
- **Import materials**: You can now easily add materials from a material file that has been sent to you to any of your existing material groups.

Performance improvements when rendering model sets

We made some significant improvements to our render engine allowing you to render images faster when dealing with multiple model sets in the scene. When you hide models, the realtime and offline rendering performance will significantly increase.

Tweaks and bug fixes

We have included a number of tweaks and bug fixes in this update based on our findings and interaction with our customers.

Backwards and forward compatibility

KeyShot 2 and 3 are compatible as follows:

- KeyShot 2 scenes: KeyShot 2 scenes can be opened in KeyShot 3 and be animated.
- KeyShot 2 materials: KeyShot 2 materials can be imported into the KeyShot 3 library per group (.mtl file).
- KeyShot 3 scenes: KeyShot 3 scenes can not be opened in KeyShot 2.

New Materials

KeyShot 3 provides a significant amount of new materials.

- **New materials:** 400 new materials categorized by type, finish and color
- **More new materials**: 1,000+ materials available for download
- All KeyShot 2 materials will work in KeyShot 3

New Lighting Environments

We included new lighting environments that will help to better light products independent of shape, material and finishes.

- 20 studio lighting environments, tuned for best lighting results for any type of product
- New office lighting environment including matching backplates and matched camera scene.

All new manual

We have reworked the manual from the ground up. The new manual is now html based, and as such has a very small footprint. It contains many explanation and examples, and as such becomes an invaluable resource as you are trying to dig a bit deeper into KeyShot.

Language support

KeyShot 3 is or will be shortly available in the following languages (UI only):

- Chinese
- Czech
- English
- French
- German
- Italian
- Japanese
- Korean
- Polish

Automatic updates

KeyShot will now search for updates automatically once a week. You can disable this function in the Preferences menu. Alternatively, you can always check for updates manually directly from inside KeyShot.

Licensing improvements

We reworked our licensing to make it more robust. The licenses will be now tied to several places in your computer, resulting in a more stable licensing system.