Motion 3D - Overview

Motion 3D is a 3D flying logo tool that turns your computer screen into a synthetic, three-dimensional World. This 3D World has real properties - height, width, depth, and (in the sense of animation) time. Corel Motion 3D is not a complicated animation package. It offers a specific set of features that is streamlined for creating animated 3D flying logos and presentations.

Motion 3D gives you speedy and intuitive 3D. Motion 3D lets you create animations that would have required the use of a very expensive workstation only a few years ago.

Scene File

The 3D World document where you create your animations is called a "scene." By default, when you launch Motion 3D a brand-new scene will open. Each scene is an independent and unique 3D World where you can build, animate, and save models.

Stagehands - overview

StageHands make it easy for you to begin working in the 3D World. With them, you can create 3D animations without having to create the individual components yourself. StageHands, which include <u>Cameras</u>, <u>Lights</u>, and <u>Props</u>, have already been designed for you, complete with animation (when appropriate). All you have to do is select the elements you want, and Motion 3D will automatically put them into the 3D World for you.

Cameras

Think of the Camera as your eye in the 3D World. There are a number of pre-animated Cameras to choose from which offer several ways to view your 3D World. These Cameras are your tools for creating stunning flying logos! When you add a Camera StageHand, the existing Camera object will be replaced and the animation information will be updated in the Timelines window. There can be only one Camera in the World.

Lights

An important step in creating a quality animation or image is to add appropriate lighting. Lights in Motion 3D are moveable, editable objects that are actually visible in the World. Lights are manipulated like other objects: they can be repositioned with the Move tools, rotated with the Rotate tools, and scaled with the Scale tools. You can have as many light sources as you like, individually adjusting the position, orientation, and color of each. Having the ability to manipulate light objects directly allows great control and flexibility in setting up scenes and animations.

StageHands offer you several preset lights to provide a variety of illumination effects for your 3D production. While you have the freedom of using as many lights as you want, you should be aware that each light you add will increase rendering time. You are, therefore, encouraged to limit the number of lights in a scene and to delete any unnecessary lights.

Props

Props are pre-animated objects that you can place in your 3D World. Props have been provided so that you can start working in 3D without creating your own animated models. Of course, you can edit their shapes in the Workshop and change the way they animate with the Timelines. You may add as many Props as you wish to your scene. Props with many parts often have an invisible parent. This parent object lets you manipulate all of the parts of the prop (moving it, scaling it, etc.) at the same time.

Models - overview

Occasionally, there will be times when you need a specific object that is not available as a StageHand in your Motion 3D package. Motion 3D includes some basic modeling tools to help you make custom models. Creating your own objects adds flexibility to your Motion 3D work. There are three types of custom objects. The first, lathed objects, are objects which have a circular cross-section. For example, a silver goblet or a flying saucer could be made using the Lathe tool. Another type of custom object is called an extruded object. For example, you could create an industrial I-beam using the Extrude tool in Motion 3D. The third type of custom objects you can explore is Text, which is a special kind of extruded object.

Environments - overview

In the computer's default 3D World, there is nothing in the background or in the surrounding space to be reflected by your objects. With no background a scene may look empty. With nothing to reflect, even the shiniest sphere will look dull. To give your scenes life and reflective objects something to reflect, we've provided Environments. Environments, which include https://example.com/attended-nothing-to-reflect, we've provided Environments. Environments, which include https://example.com/attended-nothing-to-reflect, and <a href="https://example.com/attended-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-nothing-n

Atmosphere

Atmosphere provides the background color, ambient light, and fog settings for your 3D production.

Sky

Sky is the image that reflected by the objects in your scene.

Backdrop

Just as in a movie or a play, Backdrops provide a background in front of which you can create your 3D production. Backdrops can be either still images or two-dimensional animations. They are part of the background and remain unaffected by changes you make to other elements in the 3D World. For example, if you aim the Camera in a different direction, the Backdrop will not change. Adding a Backdrop to your scene will slow down the rendering process, since Backdrops take up a good deal of RAM. For this reason, you may want to add a Backdrop towards the end of your animation session.

Timelines - overview

Timelines provide a dynamic view of all the objects within the animation. An object's information can be accessed and manipulated from within the Timelines window.

Eventmarks

An eventmark is a graphic representation of an object at a particular moment in time. Whenever you move, scale, add a surface to, or otherwise change an object in the World, Motion 3D places an eventmark on that object's timeline at the current position of the World Time Marker. Eventmarks can be added, deleted, edited, duplicated, and moved along the object timelines. Animations are created simply by adding and manipulating eventmarks.

StageHands and Timelines

Each time you add a Prop, Camera, or Light to the 3D World, it appears in the object name list in the Timelines window. (Environment properties are not 3D objects, so they do not appear in the Timelines window.) Once they are in your scene, you can use the Timelines window to work with the animated objects.

Using the Timelines window to Preview Animations

You can use the Timelines window to preview animations. Props, Cameras, and Lights are generally pre-animated, so when you add them to your scene, you may wish to see your new StageHands move together. When you preview, you will see how the animated objects move in your 3D World. All the objects will appear as cubes (in bounding box mode) for faster playback. There are three ways to preview an animation:

- Click on the Preview button in the Timelines window.
- Select Preview from the Animate menu.
- Drag, or "scrub," the World Time Marker back and forth.

Using the Timelines window to Keep Track of Objects

The object name list appears on the left side of the Timelines window. This list contains the names of every object in your scene—even the invisible ones! Objects that have other "child" objects linked to them have plus signs (+) beside their name. Clicking on a + causes the names of that object's children to be either shown or hidden. For example, if you add a Prop that is composed of several objects, there will be a parent object that appears in the object name list. By clicking on the + beside its name, the parent's name list will open and you will be able to see the names of all of the objects that are linked to it.

Toolbox - overview

The Toolbox contains a group of tools that make it easy for you to work in your scene. The Toolbox appears on the far left side of the screen when you first launch Motion 3D. It's free-floating, so you can grab the Toolbox border to move it anywhere on the screen, and it will always be visible above the View windows.



The Manipulation tools help you manipulate your objects in the 3D World. For example, you can select an object, reposition it in the World, rotate it around its centerpoint, and change its size in different ways.

Move Tools

One of the most common things you'll be doing is dragging objects around in the 3D World. There are two Move tools:



the Vertical move tool and

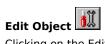


the Horizontal move tool.

Each tool allows you to move an object through the World along one particular plane of motion. The Vertical move tool can be used to move an object left, right, up, or down along an imaginary vertical plane. You can use the Horizontal move tool to move an object left, right, in, or out along a horizontal plane. Together, the two Move tools allow you to place an object anywhere in the World.

It is important to understand that the Move tools work in relation to how you see it on the screen. To move an object along a vertical plane in any View window, use the Vertical move tool. To move an object along a horizontal plane in any View window, use the Horizontal move tool.

When moving an object away from you with the Horizontal move tool in the Standard (Top, Front, or Right) View windows, you might expect the object to get smaller as it does in the camera view. However, the View windows are in orthographic mode, which means that there is no perspective. No matter how far away an object is, it will appear to be the same size. When you have many objects in a scene, you'll find that objects can start to get in the way of other objects. This can make it difficult to select or drag an object that is obscured. If this happens, you might want to try selecting the object from a different View window.



Clicking on the Edit Object button opens the Workshop and loads the currently selected object.

Constraining the Move Tools

As you're creating your scene, you may want to precisely position objects in the World. One way to do this is to restrict an object's movement to a single direction when using the Move tools. When you click on any object in the World, a six-sided box (called a "bounding box") blinks around the object to show you that the object is selected. If you hold down the Shift key while dragging the mouse on one of the six sides or "faces" of an object's bounding box, the object will be constrained to moving along only one axis of motion.

Rotate Tools

The three Rotate tools are used to rotate an object around an axis passing through the objects centerpoint. The Rotate tools, like the Move tools, work in relation to how you see it on the screen. For example, the Horizontal Rotate Tool will always rotate an object around the Y axis of the View window you are using it in.

The three Rotate tools are:



Vertical Rotate Tool



Horizontal Rotate Tool



Tilt Tool

Constraining the Rotate Tools

You may find it useful to rotate an object around one of its faces. To do that, create an object and select any one of the three Rotate tools. Now click once on the object. (The object's bounding box will blink to show that it is selected.) While pressing the Shift key, click on any one of the six faces of the bounding box. When you rotate the object, notice that the object rotates around an axis perpendicular to the face of the bounding box that you selected. Rotational constraints work the same way in each View window.

Uniform Scale Tool

While working in Motion 3D, you might want to change an object's size. You can change an object's dimensions along all three axes at once with the Uniform Scale tool.

The Uniform Scale tool will expand or contract the dimensions of any object.

Squash and Stretch Tool

Use the Squash and Stretch tool to scale an object along one dimension at a time. Squashing and stretching is particularly useful when creating certain animation sequences. For example, a ball bouncing on a table will squash slightly upon impact.

Object Creation Tools

The Object Creation tools are used to place objects into the 3D World.

The Text Tool places 3D text into the World.

The Extrusion Tool places a default extruded object (a cube) into the World.

The Lathe Tool tool places a default lathed object (a sphere) into the World.

Sticky Tools

You may find it useful to have Motion 3D keep a tool selected in the Toolbox after you use it. This feature is called Sticky Tools. You can turn Sticky Tools on or off in the Options dialog box, available under the Special menu. With Sticky Tools enabled, it is easier to do such things as adding or scaling many objects.

If Sticky Tools is on, you can hold down the Space bar to temporarily select the Vertical move tool. When you let go of the Space bar, the previous tool will still be selected.

Camera View Window

Each scene file has a Camera View window. With the Camera View, you can look at the World from any position and orientation because it is connected to an actual 3D Camera object that exists in the World. When the Camera object is moved in the World, the Camera View window updates accordingly. You can have only one Camera object in a scene at all times. The Camera View window can be resized.

Note that when re-sizing or zooming the Camera View, the relative scale of the objects in the scene stays the same. Making the Camera Window larger does not bring more of an object into view, but simply makes the scene you are looking at appear larger on the screen. Keeping the Camera View window small will help to conserve memory.

Standard View Windows

There are three different Standard View windows in each Motion 3D scene file: Top, Front, and Right. They each offer a different perspective of the 3D World. These views are always fixed to a plane. Looking through the three Standard View windows is like looking through the top, front, and right sides of a fish tank.

Standard Views never swivel or rotate, and thus provide a helpful reference when navigating through the World. Because their primary purpose is for alignment, the Standard Views do not show objects in perspective.

Workshop - overview

Lathed and extruded objects are edited in a special part of the program called the Workshop. Using the Workshop, it is easy to create a wide variety of three-dimensional objects. While the editing tools and the way you enter the Workshop are the same for both lathes and extrusions, certain aspects of the Workshop space will be different. There are two ways to enter the Workshop:

- Using the Vertical move tool, double-click on the object.
- While the object is selected, click Edit, Object.

World Coordinate System

Because Motion 3D is a 3D program, its 3D World has the three dimensions of width, depth, and height. These correspond to the three coordinate axes of motion. So, left & right (width) is X, in & out (depth) is Y, and up & down (height) is Z. The World coordinate system lets you specify any object's position in the 3D World using X, Y, and Z coordinates. While using the Front View window, moving an object left and right in the World is moving it along the World's X axis. In-and-out motion is along the Y axis, and up-and-down motion is along the Z axis. All the View windows start out "looking" at the center of the World. The idea is that your objects are in a 3D World and their positions are expressed by their X, Y, and Z coordinates relative to the center of the World. In the Front View, for example, as you move along the X axis, the X value increases or decreases.

Active Windows

Clicking anywhere on any View window makes it the active window. You can work in only one window at a time. However, all View windows will update when an object in any one window is manipulated.

Rendering button group

The Rendering button group lets you control the shading options in the Camera View window. There is a rule in 3D graphics that "the nicer it looks, the longer it takes." Motion 3D has several shading modes so that you can always make a good tradeoff with rendering quality and time.

Bounding Box

The simplest and fastest of all the shading modes. Each object is represented by a six-sided box. Most useful for rough placement and animation previews.

Wireframe

Another very fast mode. Wireframe displays the lines that frame each object's facets, or polygons. Ideal for most work in Motion 3D, it gives quick feedback and shows you your object's exact shape.

Shade Faster

This mode shows one color per polygon, or face. It does a good job of quickly showing the effects of lighting and basic color information. Environment Maps will affect reflective objects rendered in Fast mode. This is Motion 3D's default shading method.

Shade Better

The highest level of shading in Motion 3D, Better shading smoothes colors across faces, producing a beautifully shaded result. An object shaded in Better mode will take full advantage of Environment Maps.

Ray Trace

Combines the highest level of shading, reflection and transparency.

Anti-aliasing

Anti-aliasing smoothes the jagged edges that sometimes result when shading contrasting colors in Fast or Better mode. Turning anti-aliasing on with the check box in the Shading panel will significantly add to your rendering time, but will yeild a much more beautiful result.

Navigating in the Camera View

In the Camera view window you can navigate by Zooming in and out or by using the Camera Rotation Roll-up. You can rotate the Camera around its centerpoint or around other objects, or zoom the Camera's lens.

Using the Camera Navigation Roll-up

Click View, Camera Navigation. This will bring up the Camera Rotation Roll-up.

The Rotate Left button
The Rotate Right button
The Rotate Up button
The Rotate Down button
The Rotate Down button
The Rotate Down button
The Rotate Down button
The Rotate Left button
Rotates the Camera to the left around its vertical axis.
Rotates the Camera up around its horizontal axis.
Rotates the Camera down around its horizontal axis.

The Tilt Left button Rotates the Camera left around an imaginary axis running into and out of the

screen.

The Tilt Right button Rotates the Camera right around an imaginary axis running into and out of the

screen.

Zooming the Camera Lens

The Camera in Motion 3D is equipped with its own adjustable zoom lens. Press F2 to zoom in and F3 to zoom out. Adjusting the zoom lens of the Camera in Motion 3D affects perspective, just like a camera in reality. Remember that when zooming in or out, you are only adjusting the Camera lens. Both the Camera and the objects visible through it remain stationary.

Showing the Axes in the World

Each of the three View windows can have a little box in the lower left- hand corner representing the axes in relation to the View. You can use these little guides to help you figure out which is the positive direction along an axis. By default, Motion 3D starts up with these boxes showing.

Views Properties Dialog Box

Motion 3D allows you to force any view window to draw invisible objects and to draw all objects with a visible wireframe, regardless of the object's surface properties. These options are accessed with the Special, Views command which opens the Views Properties dialog box. The Camera View window also has a Preset position property that can be applied.

Scene Setup

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Interactive Updates

As you experiment with Motion 3D, you will notice that all open View windows continually update their contents to reflect changes you've made in other open View windows. Motion 3D has been highly optimized to give you maximum (and often immediate) visual feedback. This feedback allows you to see your models interactively as you manipulate them. By default, Motion 3D interactively updates all open View windows as you move objects around in one of them. If you find this accurate drag mode somewhat sluggish at times, you can select the "Quick object drag" option. With "Quick object drag," Motion 3D will update only the window you are working in until you release the mouse. To change the setting temporarily, hold down the COMMAND key while moving objects around in a window.

The Lathe and Extrusion Workshops

Lathed and extruded objects are edited in a special part of the program called the Workshop. Using the Workshop, it is easy to create a wide variety of three-dimensional objects. While the editing tools and the way you enter the Workshop are the same for both lathes and extrusions, certain aspects of the Workshop space will be different. There are two ways to enter the Workshop:

- Using the Vertical move tool, double-click on the object.
- While the object is selected, click Edit, Object.

The Workshop Toolbox

The Workshop has its own Toolbox. The Workshop is a place where two-dimensional outlines become three-dimensional, so these tools are used for drawing two-dimensional lines, called "outlines." These tools may be similiar to the outline tools in CorelDRAW.

Vertical move tool {bcm pick.bmp}

Use this tool to move or scale an outline in the Outline View Window. To move an outline, simply click anywhere inside the outline and drag it to the desired location. To scale the outline, click on any of the eight "handles" on the outline and drag. The Arrow tool is also used to reshape the outline by manipulating individual or multiple points. There are two ways to do this:

- Click on an outline, and select Reshape Outline from the Points menu.
- Double-click on the outline. You can then select individual points to reshape the outline, or, by holding down the SHIFT key, select multiple points. You can drag a marquee to select groups of points in one action by clicking and holding down the mouse while dragging over a region of points. Motion 3D indicates that the mouse pointer is over a point by putting a point next to the mouse cursor on the screen. You can add points to the outline by holding down the COMMAND key while clicking on an existing outline. After a point (or group of points) is selected, they can be moved by clicking on and dragging any of the selected points. Double-clicking on an outline toggles it back to Manipulate Outline mode.

Shape tool {bcm shape.bmp}

The Shape tool is used to edit the points of outlines. The mode for the shape tool is set using the Node Edit dialog box, which is displayed whenever the tool is active. The default Shape tool mode is reshape which allows you to select one or more points and move them.

The other modes for the Shape tool are Add points and Erase points. Points can also be removed by selecting one or

more and pressing the DELETE key.

Pan tool

Click and drag with the Pan tool to move outlines around in the window. The pan tool moves the workspace in the window—not the outline itself. This allows you to move the window to create more space to draw or modify outlines. Double-clicking on the Pan tool in the Toolbox will center the Outline Window you are currently working on.

Open Polygon tool

Use this tool to draw complex polygonal shapes in the Outline Window. This tool is often the easiest way to draw simple shapes. Using the Open Polygon tool is like tacking a long rubber band to a piece of cardboard. First, you tack down the band at the starting point (by clicking the mouse); then, pull the band to the second point of your desired shape and tack it down (by clicking the mouse again). Continue in this manner until you have completed your shape, at which point cut the band by double-clicking the mouse.

Closed Polygon tool

Use this tool to draw complex shapes in the Outline Window. This tool works just like the Open Polygon tool, with the following exception: when you double-click to complete the shape, the first and last points in the shape will connect, "closing" the outline.

Rectangle tool

Use the Rectangle tool to create rectangular outlines in the Outline Window. Clicking and dragging with the mouse draws a rectangle, centered at the point where you first clicked, whose size is determined by the location of the mouse when the button is released. You can draw rectangles that begin from the corner instead by changing the "Draw Polygons From" option in the Workshop Preferences dialog. Holding down the CONTROL key will draw a rectangle from the exact center of the Workshop space to the point where you click. To create a square, hold down the SHIFT key while dragging the mouse.

Ellipse tool

Use the Ellipse tool to draw circular or ellipse-shaped outlines in the Outline Window. The ellipse tool is similar in operation to the Rectangle tool, except that this tool draws ellipses. To draw circles, hold down the SHIFT key while dragging the mouse.

Magnifying Glass tool

Use the Magnifying Glass tool to zoom in and out of the Outline Window. Select the Magnifying Glass tool and click on the Outline Window to zoom in. This allows you to make very small changes when creating your models. To zoom out of a window, hold down the OPTION key while the Magnifying Glass tool is selected. (The "+" sign on the cursor will change to a "-" sign.) This is a good way to see all of a large outline. Double-clicking on the Magnifying Glass tool in the Toolbox will center the Outline Window and set it back to its default zoom setting.

Details About The Lathe Workshop

When you enter the Lathe Workshop by double-clicking on a lathed object, a window labeled "Lathe" will appear. The vertical line in the center of the window represents the axis around which your outline will be lathed. Any outline you draw on the left side of the vertical line will be lathed around this line, called the "axis of rotation." To make an object with a wider lathe, drag the entire outline farther away from the vertical line, using the Arrow tool. The default shape for the lathed object in the World is a sphere. When you enter the Lathe Workshop, the outline of a half- circle will already be visible in the Lathe window. To draw an outline in the Lathe window, simply select the tool you wish to use from the floating Toolbox and start drawing in the window. To construct a wine glass, for example, you would select the Open Polygon tool from the palette and then draw an outline of half a wine glass. Drawing an outline that crosses the vertical axis will cause parts of the object to be drawn inside itself, which is usually undesirable!

Meridians

The Meridians menu item brings up the Meridians dialog box. Meridians are used only in the Lathe Workshop. Here you can set the number of divisions in the circle around which the lathe outline is revolved. The more meridians you have, the smoother an object will be rendered when shaded. When using Better mode, increase the number of meridians for smoother results.

Centerpoints

Every object in Motion 3D has a centerpoint. This centerpoint is adjustable, and allows you to control an object in specific ways. There are two different classes of centerpoint. In the World, every object has a centerpoint that is used for rotation purposes. These centerpoints can make objects easier to control during an animation. The second type of centerpoint is the location of a lathed or extruded object's centerpoint, as defined in the Workshop. This centerpoint is most useful when designing objects, as well as when controlling squash and stretch effects for animation.

Types of Light Sources

There are three types of light sources in Motion 3D: point lights, spotlights, and ambient light. Point lights and spotlights are both represented by light objects. They are placed into the World and manipulated just like other objects.

Point lights cast light evenly in all directions; spotlights are directional. Both types of light object can cast light of any color. Ambient light exists evenly throughout the World. Ambient light is sourceless (it does not emanate from a light object). You can change the ambient light in the Atmosphere dialog.

Working With Animation

In addition to the pre-animated StageHands, Motion 3D allows you to create your own animation paths. We will now discuss some of the basic animation features of Motion 3D. Motion 3D's animation approach is time-based, or "event-driven." An "event" is said to occur each time you change the position, orientation, scale, shape, or surface characteristics of an object. Motion 3D individually tracks every event that has happened to every object in your animation. Events are plotted in time along "object timelines." Every object in Motion 3D's World has its own timeline; each timeline shows a complete history of every event that has occurred to that object. Whenever an event occurs to an object, Motion 3D places an "eventmark" on that object's timeline at the precise moment that the event happened. Using the Timelines window, eventmarks can be added, deleted, copied, and rearranged.

Surfaces

Creating an object and then applying a surface to it is similar to the way a potter sculpts a bowl and then applies a glaze. The surface, like the glaze, determines what the finished object will look like. An object's surface is what gives the object its character. Motion 3D provides flexibility and control in creating and editing surfaces.

Surfaces in Motion 3D are selected from a library of pre-defined surface types. As new surfaces are created, they are added to the surface list. A collection of pre-defined surfaces is included with Motion 3D. Surfaces are created and edited independently of objects. Motion 3D treats surfaces and objects as separate entities. Applying a new surface to an object will not affect that object's shape or size. When you edit a surface, the edited surface will replace the previous surface globally, on every object to which you have applied that surface. The surface list is accessed from the Special, Surfaces dialog box or the View, Surface Roll-up.

Fog

To help create realistic atmospheric effects, you can use the Fog option. This option will create the effect of fog, and thus give your images a better sense of depth. To create Fog, simply select a fog depth from the Visibility pop-up list in the Environment Properties dialog box. The depth of the fog determines how far you can see into the fog. Beyond the visibility point, objects will be lost in the fog. The fog color is determined by the Background color. In real life, you can only see a certain distance into a foggy atmosphere, beyond which all you see is the color of the fog. In the case of rendering a 3D scene, this would be equivalent to the background color.

Rendering

Shading is a technique that allows you to quickly visualize solid models. There are four types of shading that offer differing degrees of quality. The higher the quality of shading you select, the longer it will take Motion 3D to draw the image. You can save time by using the lower quality (yet faster) shading methods while building your model, and only using higher quality (slower) shading methods when you want to test Atmosphere or Environment effects, or to generate a final image or animation.

Interrupting a Rendering in Progress

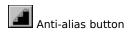
To interrupt a rendering in progress, type ESC If you interrupt an animation in progress, Motion 3D will stop at that frame and not save that frame to disk. However, all previously-rendered frames will have been saved. When you interrupt a shaded rendering, the scene will stop shading and will be set to Wireframe mode. This is useful when rendering a complex scene.

Anti-aliasing

Anti-aliasing is a feature that smoothes the edges of images, removing the jagged appearance of diagonal lines. Although anti-aliasing can be a time-consuming process, it can produce an image of superior quality. To use anti-aliasing, click the <u>anti-aliasing button</u>. When your scene is shaded in either Fast or Better mode, anti-aliasing will take effect. You may choose to turn it off for faster rendering.

Dithering

Dithering is a method used to trick the eye into seeing a greater range of colors than are actually present in an image. For images represented by fewer than 24 bits of color per pixel, dithering can improve image quality dramatically. This can be activated for the Camera View window by clicking on the Dither checkbox in the Options dialog box under the Special menu.



Frames

You can choose to render all the frames in an animation, or you can choose a starting point and an ending point. If you choose to render specific frames, you can choose the starting or ending point by typing in the frame numbers in the two boxes located to the right of the From radio button. By clicking on the pop-up menus next to each text field, you can also choose the Punch-in and Punch-out or the first event and last event options.

Frames Per Second (FPS)

This option allows you to specify the number of frames per second at which the animation will be rendered. For instance, if you are rendering a 3-second animation at 30 frames per second, you will get 90 frames in the animation. If you rendered the same animation at 20 frames a second, the resulting number of frames rendered would be 60.

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<u>Provi</u>des the following information about this version of Corel MOTION 3D:



Copyrights



Version and revision numbers



Name and serial number for registration purposes.



System Info, including Free Disk Space and Free Memory

Closes the About Corel MOTION 3D dialog

Apply these predesigned elements to your scene to instantly create an animation. Stagehands include Cameras. Lights and Props.

Cameras provide animated effects to the scene by manipulating the camera through 3D space. There may be only one camera per scene, so the current camera will be replaced when a stagehand Camera is applied.

Lights generate assorted effects by setting color, intensity and motion of the light sources. You may add as many lights to a given scene as you wish. Keep in mind that too many lights may wash out the surfaces. Additional lights also increase rendering time. especially when using Ray Trace mode.

Props are preanimated objects that can be added to the 3D space to easily assemble an animated scene. Once in the scene, you may edit any of the attributes of the props to suit your needs.

associated properties for each type.		

The Stagehands are comprised of three types - Cameras, Lights and Props. Click on the tab to bring forward the

Save objects from the current scene into one of the Stagehand folders. You can save a Light effect, Camera motion or Object animation as a prop.

When saving you should enter a name for the item being saved in the text box entitled "Save as". You may also generate a preview of the item from the "Save Mode" drop down list, by selecting Single Frame, Whole Scene or the default No Preview mode.

To save a group of objects as a Prop, you must ensure that all the objects are contained in a single hierarchy. When saving the Prop, select the parent object, and all the related children will be saved as well.

Closes the Stagehands Dialog

Displays the Scale, Rotation, Position and Centerpoint of the currently selected object. These parameters may be edited in order to provide a more precise method of manipulating objects in 3D space. All parameters are provided with respect to X, Y and Z coordinates. Enabling the LOCK switch fixes the value at its current value, until the lock is disabled.

Selecting a tab, brings forward the controls for the transformation type indicated.



Scale changes the size of the object, either uniformly in all directions, or independently along the specified



Rotation changes the angle of rotation of the object.

Position sets the position of an object within 3D space. Changing the values in this moves the centerpoint of the object to the specified coordinates.

Centerpoint adjust the virtual center of the object relative to its physical centerpoint. Modifying this setting has direct implications on the remaining transform options, since Position and Scale are relative to the centerpoint. For example, this allows you to rotate an object about a point outside of its own physical shape. When you manipulate an object, you will see a small "+" symbol indicating its centerpoint. If the centerpoint is set apart from the physical center of the object, an additional line will be displayed to indicate its offset from physical center.

Closes the Transform dialog and applies the current settings for all parameters to the selected object.

Closes the Transform dialog without applying any changes to the current settings.

Applies the current settings for all parameters to the selected object without closing the Transform dialog..

Selecting the Node edit tool provides a means of modifying the outline of the current object. Outlines may be moved, scaled or be edited manipulating the nodes that make up the object outline.

Adding nodes to an outline by clicking with the cursor on the point in the outline where the new node is desired. Note that the cursor will display a small "+" sign when you are in this mode.

Removes nodes from an outline by clicking on the nowhen you are in this mode.	ode with the cursor. N	lote that the cursor will	display a "-" sign

Joins selected nodes. Nodes may be selected using Shift-select or marquee select methods.

Breaks a single node into two separate nodes.

Sets the node type to Smooth. This provides a more rounded, less angular object surface.

Sets the node type to Cusp. This provides a sharper, more angular object surface.

Displays the TIME controls for all objects in the current scene. All objects are listed by name on the left side of the dialog, and the corresponding timeline for each object is displayed to the right of the object name.

Makes a movie from the current scene. generation.	The Scene Setup dialo	ng determines the setting	s that will be used for movie

Previews the current animation. The animation will run from the beginning to end, with all objects shown in bounding box mode. The preview provides a quick method of determining how all the elements of the scene will work together in the animation.

Stops the current animation.

Displays the current time. Any manipulation of objects will create an eventmark for that object at the current time. The World Time marker will be positioned at the current time.			

Clicking this button zooms in the time scale. Less time will be visible in the timebar, and eventmarks will appear further apart. This permits you to work at finer increments of time.			

Clicking this button zooms out the time scale. More time will be visible on the timebar, and eventmarks will appe closer together. This permits you to view a larger slice of time in the Timeline.	ar

Moves the World Time Marker ahead to the next keyframe. The increment of the keyframe can be set in the Animation Tab of the Scene Setup dialog. This provides a method of creating eventmarks at evenly distributed increments along the timeline of the animation.

Changes the size of the object, either uniformly in all directions, or independently along the specified axis.

Scales the currently selected object along its \boldsymbol{X} axis by percentage specified.

Locks the X dimension of the current object, so that it cannot be scaled.

Scales the currently selected object along its Y axis by percentage specified.

Locks the Y dimension of the current object, so that it cannot be scaled.

Scales the currently selected object along its Z axis by percentage specified

Locks the Z dimension of the current object, so that it cannot be scaled.

Scales the current object equally along the three axes, by the percentage specified.

Resets all entries to their last applied value.

H_IDC_UNIFORMEDIT_IDD_SCALEDLG

Changes the angle of rotation of the selected object.

Activate this button to apply all values in absolute terms. All rotation values will be applied based on an angle within the 3D world. In this way all objects can be rotated to the same angle, regardless of their current settings.

Activate this button to apply all values in relative terms. All rotation values will be applied relative to the current position of the selected object.

Rotates the X axis of currently selected object by the number of degrees specified.

Locks the X angle of the current object, so that it cannot be rotated

Rotates the Y axis of currently selected object by the number of degrees specified.

Locks the Y angle of the current object, so that it cannot be rotated

Rotates the Z axis of currently selected object by the number of degrees specified.

Locks the Z angle of the current object, so that it cannot be rotated

Resets all entries to their last applied value.

H_IDC_TITLE_IDD_ROTATEDLG

H_IDC_YEDIT_IDD_ROTATEDLG

H_IDC_CENTERPT_IDD_CENTER

H_IDC_PHYSICAL_IDD_CENTER

Sets the position of an object within 3D space. Changing the values in this tab, moves the centerpoint of the object to the specified coordinates

Positions the centerpoint of the selected object to the coordinates specified.

Locks the X value of the coordinates

Positions the centerpoint of the selected object to the coordinates specified

Locks the Y value of the coordinates

Positions the centerpoint of the selected object to the coordinates specified

Locks the Z value of the coordinates

Resets all entries to their last applied value.

H_IDC_XEDIT_IDD_POSITIONDLG

H_IDC_YEDIT_IDD_POSITIONDLG

H_IDC_ZEDIT_IDD_POSITIONDLG

Sets the options for drawing objects.

Drawing objects with this option enabled, forces objects to be drawn uniformly from the center out. Rectangles and Ellipses are drawn so that the initial click of the mouse indicates the center of the object. Drag the mouse and release to terminate drawing and define the size of the object.

Drawing objects with this option enabled, creates the object from corner to corner. Rectangles and Ellipses are drawn so that the initial click of the mouse indicates the one corner of the bounding area of the object. Drag the mouse and release to terminate drawing and define the diagonally opposed corner of the bounding area. .

Drawing points on lines with either the Line Tools or the Polygon Tools are defined as smooth when this option	is set.

Drawing points on lines with eithe	er the Line Tools or the	· Polygon Tools are defin	ed as sharp when this opti	on is set.

Create an Ellipse with the specified number of sides. For example, setting the number of sides to 3 will create a triangle. The default number of 24 sides creates a smooth circle. Note that increasing the number of sides adds to the complexity of the object. Do not set this parameter too high unnecessarily.

Setting the Number of Meridians, defines the number of divisions in a circle around which a lathe outline is revolved. The more meridians the smoother the object will appear when rendered.

Displays the Grid in the Object Editor

nave one axis lock	ked since they are fixe	ed to a specific pl	ane.	. ,	and Right View, always

Turns the rulers on in the Object Editor

H_IDC_POLYGONSIDESEDIT_IDD_OBJPREF

H_IDC_MERIDIANS2_IDD_OBJPREF

Sets the coordinates from which the specified view is taken.

Activating this option displays wireframe objects based on background color. Otherwise, the wireframe displays in a color based on the currently applied surface.

Forces all invisible objects to be displayed in the view.

Sets the X coordinates for the view.

Sets the angle of orientation of the \boldsymbol{X} axis for the Camera View.

Sets the Y coordinates for the view.

Sets the angle of orientation of the Y axis for the Camera View.

Sets the Z coordinates for the view.

Sets the angle of orientation of the $\ensuremath{\mathsf{Z}}$ axis for the Camera View.

Applies a preset Point of View to the Camera View. These presets can be thought of as tripods are positioned within the 3D space, and the Camera may be moved to one of these named tripods at any time. You may also create and save your own presets for future use.

Add a new preset to the list.



First, highlight the current name, and enter a new name.



Click on the ADD button.



A new preset will be added

Deletes the current preset from the list

Applies the current settings immediately after each change is made. Otherwise, there must be an explicit APPLY made or the settings will be applied when OK is selected.

H_IDC_STATICX_IDD_POINTOFVIEW

H_IDC_STATICY_IDD_POINTOFVIEW

H_IDC_STATICZ_IDD_POINTOFVIEW

 ${\sf H_IDC_OrientationStatic_IDD_POINTOFVIEW}$

H_IDC_XPOSNUMEDIT_IDD_POINTOFVIEW

H_IDC_ZPOSROTEDIT_IDD_POINTOFVIEW

H_IDC_XPOSROTEDIT_IDD_POINTOFVIEW

H_IDC_ZPOSNUMEDIt_IDD_POINTOFVIEW

H_IDC_YPOSROTEDIT_IDD_POINTOFVIEW

H_IDC_YPOSNUMEDIT_IDD_POINTOFVIEW

Provides predesigned Camera effects that may be loaded into a scene to quickly create animations. You may only have ONE camera per scene, therefore camera effects loaded into a scene will replace the current camera.

Loads the selected Camera Stagehand into the scene. Since there may be only one camera per scene, this stagehand effect will replace any camera events that were present before it was applied.	

Permits the user to browse their computer for a folder containing Camera stagehands.

Displays a preview of the hthe play button to run the	nighlighted Camera ef complete scene.	fect. The preview may	/ be a single frame, or a	complete scene. Press

Enables the Preview window for t selected camera effect.	he Camera Stagehands.	Click on the Run button to	see an animated preview of the

Provides a set of user definable options

Sets the number of levels of Undo.

Sets the number of units, along the X axis, that a duplicate object will be offset from the original.

Sets the number of units, along the Y axis, that a duplicate object will be offset from the original.

Sets the number of units, along the Z axis, that a duplicate object will be offset from the original.

Keeps a tool selected until another tool is selected.

Saves the position of floating dialogs (i.e. Timelines) upon exit of MOTION 3D, for the next session.

Allows colors to be dithered when activated.

Permits the Titlebar within each view to be turned on or off. Having them ON allows for easy identification o orientation for each view.	f the

Permits the Axes indicator in the bottom-left corner of the views to be turned on or off. Having them ON allows for easy orientation of objects in the views.	

H_IDC_UNDOEDIT_IDD_GENPREF

Displays a list of Light Effects that may be applied to a scene. You may add as many lights as you wish. Remember that adding lights will increase rendering time. As well, too many lights may "wash out" the scene.

Loads the selected Light Stagehand into the current scene. You may add as many lights as you wish. Remember that adding lights will increase rendering time. As well, too many lights may "wash out" the scene.

Permits the user to browse their computer for a folder containing Lights Stagehands.

Displays a preview of the highlighted Lighting effect. The preview may be a single frame, or a complete scene. Press the play button to run the complete scene.	

Enables the Preview wind selected lighting effect.	low for the Ligl	hts Stagehands.	Click on the	Run button to s	ee an animated p	review of the

Loading Props into the scene provides pre-animated objects that can easily be modified or used as is, to quickly create an animation.

Loads the selected Prop into the current scene. You may add several props into the scene if you wish. You may also modify the props, by editing the shapes, surfaces or changing the timing of eventmarks in the Timelines.

Permits the user to browse their computer for a folder containing Props Stagehands

Displays a preview of the highlighted Prop. The preview may be a single frame, or a complete scene. Press the play button to run the complete scene.

nables the Preview window for the Props Stagehands. Click on the Run button to see an animated previe elected Prop.	ew of the

Controls the Ambient Light color , Background color and Visibility. Visibility refers to 4 levels of "fog" - from Clear to Heavy - which give the scene additional visual cues that provide a sense of depth to the 3D space. As objects are moved deeper into the scene they appear to merge into the background color. The heavier the fog, the more pronounced is the effect.

Displays the current color of the ambien may be selected.	t light. Clicking o	n the button provide	es a color picker, s	so that an other color

Displays the current color for the scene color may be selected	background. Cl	icking on the but	ton provides a colo	r picker, so that an	other

Provides a preview of the effects that Background Color and Ambient Color will have on the scene.

Displays a list of Backdrop images that can be applied to the background of the current scene. A preview of images in the current folder may be enabled. While Corel MOTION 3D comes with a selection of Backdrops, you may use any BMP file as a backdrop. Note - Please be aware that you may need to adjust the size of the backdrop to correspond to your Scene size, as indicated in the Scene Setup.

Permits the user to browse their computer for a folder containing Backdrop images.

Provides a preview of the image before it is loaded into the scene as a Backdrop.

Displays a Preview of the available backdrop images in the current folder.

Applyies an image as a SKY - a bitmap that envelopes the 3D space. The Sky is not directly visible in the scene, however it affects the scene by reflecting light sources, including ambient light.

H_IDC_PATH2_IDD_ENCSURFACE

Permits the user to browse their computer for a folder containing images that may be loaded as SKY.

Displays a Preview of the image that are available.

H_IDC_PREVIEW_IDD_ENCSURFACE

H_IDC_PATH_IDD_ENCSURFACE

Provides environmental controls to the 3D space. In Corel MOTION 3D, the environment is comprised of the <u>following</u> properties:

Atmosphere - controls the Ambient Light color , Background color and Visibility

Visibility refers to 4 levels of "fog" - from Clear to Heavy - which give the scene additional visual cues that provide a sense of depth to the 3D space. As objects are moved deeper into the scene they appear to merge into the background color. The heavier the fog, the more pronounced is the effect.

Backdrop - allows bitmaps to be used as background images to the animation. These bitmaps are static, in that they always remain fixed in the center of the Camera View.

Sky - a bitmap that envelopes the 3D space. Using light sources, including ambient light, to reflect the image pattern onto object surfaces. The effect is most apparent in Ray Trace rendering mode.

associated properties forward.	

The Environment is comprised of three elements - Atmosphere, Backdrop and Sky. Click on a tab to bring the

Closes the Environment dialog and applies ${\bf ALL}\;$ changes to the scene.

Closes the Environment dialog without applying any changes to the scene.

Applies the selected Environment Properties without closing the dialog.

<u>Provi</u>des access to the General Properties of the selected object. These properties include:



Name - a default name is provided. You may edit the object name here.

Object Type - Lathe, Extrude. or Text

<u>Provi</u>des access to the General Properties of the selected object. These properties include:



Name - a default name is provided. You may edit the object name here.

Object Type - Lathe, Extrude. or Text

Displays the object type. The basic object types in Motion 3D are Lathe, Extrude and Text.

Displays the name of the parent object, if the object is a child within a hierarchy.

Makes the object invisible. This is useful when objects, like lights, need to be placed within the scene, but you don't want them to be rendered in the animation.

Forces the back portion of objects to be drawn. Normally, it is faster to leave the back portions of objects undrawn, since they are not seen in the animation. However, if you have a case where the camera is navigated through an object, you may want to see that portion of the object.

H_IDC_FASTTREECHK_IDD_GENERALPROPERTIES

H_IDC_NO_SHADOWS_IDD_GENERALPROPERTIES

Applies a bevel effect to extrude objects including text. There are 3 bevel types:



Straight



Double



Convex

Defines the size of the bevel. Size refers to the distance the bevel extends from the sides of the original object. In effect, a bevel is added to the object.				

Defines the depth of the bevel. Depth refers to how far down the bevel cuts into the side of the object. The maximum depth of 1.00 will create a bevel that cuts half way down the object.

Applies the bevel settings to the back of the extrude object. This provides a symmetrical effect on the object.

Displays a preview of the bevel effect. 'position.	You can click on the displa	y of the bevel outline and	drag it to the desired

H_IDC_SIZEEDIT_IDD_OBJECTINFO

H_IDC_DEPTHEDIT_IDD_OBJECTINFO

Saves a light from the current scene as a Light Stagehand. When saving you should provide a name for the light, as well as select a mode for the preview,

Saves the selected light under the name provided, and generates a preview (if selected).

Closes the dialog without saving the light as a Stagehand.

Enter a text string that will be added to the scene as an extruded text object.

H_IDC_POINTNUM_IDD_TEXT

Clicking on the Format text button brings up the FONT dialog where Font Type and Font Style may be selected.

H_IDC_POINTEDIT_IDD_TEXT

Saves an object in the scene as a Prop. The key to saving multiple objects as a prop is to create a hierarchy, and saving the parent object will include all the child objects as well.					

Saves the selected object as a Prop under the name provided, and generates a preview (if selected).

Closes the dialog without saving the object(s) as a Prop Stagehand.

Displays the properties for the views. The four view - Camera, Front, Right and Top can be adjusted in terms of the coordinates from which the views are taken. The three non-camera views are restricted to specific planes, so only two-coordinates are adjustable for each of them.



Top View - X-Y



Front View -X-Z



Right View - Y-Z

Displays the properties for the views. The four view - Camera, Front, Right and Top can be adjusted in terms of the coordinates from which the views are taken. The three non-camera views are restricted to specific planes, so only two coordinates are adjustable for each of them.

Applies all changes to the view and closes the dialog.

Closes the dialog without applying any changes to the view.

Applies the settings without closing the dialog.

H_IDOK_IDD_SAVE_BEFORE_DIALOG

H_IDCANCEL_IDD_SAVE_BEFORE_DIALOG

Sets the distance of the centerpoint, based on the physical center of the object.

Determines the distance from physical center, along the X axis, to place the centerpoint.

Determines the distance from physical center, along the Y axis, to place the centerpoint.

Determines the distance from physical center, along the Z axis, to place the centerpoint.

Resets all coordinates to last applied values.

H_IDC_YEDIT_IDD_CENTERPT

<u>Provi</u>des a method of pointing cameras and lights at specific objects in the scene.



Choose the camera or light you want to direct from the dropdown listbox



If a camera of light is currently selected in the scene , it will be the default choice.



Choose the object you want to point it at, and click OK

Provides a list of all the available lights and the camera, which can be directed at a specific ob	ject in the scene.

H_IDC_POINT_STATIC_IDD_OBJECTSSEL

Closes the dialog, and points the camera or light at the object specified.

Closes the dialog without applying the Point At function.

H_IDCANCEL_IDD_PROGRESS

Provides a means of exiting the Object Editor and returning to the main views. You can exit the Object Editor in one of three ways:

₩

Done - applies any changes to the object at the current time only.

Done with "Apply Changes to All Eventmarks" selected - Applies any changes globally across the entire timeline for the selected object.



Cancel - exits without applying any changes.

Activating this switch will apply any changes, when the DONE button is selected, to the currently selected object across the entire timeline. If disabled, the changes made to the object will apply only at the current time.

Applies any changes that were made to the currently selected object. Changes will be applied at the current time only, if the "Apply Changes to All Eventmarks" is not active. Otherwise the changes will apply across the entire timeline.

Exits the Object Editor without applying the changes that were made.

H_IDC_MERIDIANSNUM_IDD_SHOPBAR

Sets the attributes that will be applied when an animation is rendered. $% \label{eq:controlled}$

H_IDC_ANTI_ALIASING_IDD_RENDER

Renders objects that were previously defined as being invisible.

H_IDC_CONFORM_IDD_RENDER

H_IDC_CREATEALPHA_IDD_RENDER

H_IDC_FORCEWIREFRAME_IDD_RENDER

H_IDC_FROMRADIO_IDD_RENDER

Provides optional settings for objects that are imported as DXF files.

Allows Motion 3D to determine which form of smoothing should be applied.

Forces the filter to smooth all faces of the imported object as much as possible.

Disables any smoothing, which forces the object to be as faceted as possible

Enables the entry of a user defined smoothing angle.

User defined smoothing angle may be entered here if $\,$ the Smoothing Angle button has been selected.

H_IDC_DEGSTATIC_IDD_DXF_OPTIONS

Centers the imported DXF object within the camera view, and scales it to fit within the view.

Creates one object in Motion 3D for each layer in the DXF file. This can reduce the complexity of the hierarchy.

Allows all objects in a DXF file to come into Motion 3D as a linked hierarchy.

Imports the DXF file with the selected options taking effect.

Cancels the DXF import. No options are applied.

H_IDC_ANGLE_EDIT_IDD_DXF_OPTIONS

Provides a set of user definable settings that may be adjusted according to user preference.

Provides a set of user definable settings that may be adjusted according to user preference.

Closes the Options dialog and applies all the current settings.

Closes the Options dialog without applying any changes to the settings.

Provides the settings that will be applied to the animation when a movie is made. Settings include:



Rendering mode - Bounding Box, Wireframe, Shade Fast, Shade Better or Ray Trace.



Anti-Aliasing



Color Depth



Size of Animation in pixels

Applies an anti-Aliasing process to the rendered image. This process smoothes out the edges of objects which might otherwise look jagged. Anti-Aliasing **will** slow down the rendering process, so it is recommended that it be applied when creating the final version of the animation.

Renders objects that may have previous been defined as invisible.

H_IDC_FORCE_VISIBLE_IDD_RNDRPREF

Applies only to Ray Trace rendering mo surfaces. The higher the number, the l	ode. Reflection depth limits the nun onger the rendering will take.	nber of times a ray will trace between two

H_IDC_STATICDEPTH_IDD_RNDRPREF

H_IDC_LOW_DEPTH_IDD_RNDRPREF

H_IDC_HIGH_DEPTH_IDD_RNDRPREF

Applies only to Ray Trace rendering mode. Transparency Depth sets a limit to the number of transparent surfaces that a ray will travel through The higher the setting, the longer the rendering process will take. If you have more transparent surfaces in a path, than the depth level is set for, those surfaces will not appear as transparent.

H_IDC_STATICDEPTH2_IDD_RNDRPREF

H_IDC_LOW_DEPTH2_IDD_RNDRPREF

H_IDC_DEPTH2_IDD_RNDRPREF

H_IDC_HIGH_DEPTH2_IDD_RNDRPREF

H_IDC_SHADOWS_IDD_RNDRPREF

Contains the value for the Width of the image that will be created when the animation is created (Make Movie)	

Contains the value for the Height of the image that will be created when the animation is created (Make Movie)	

Constrains the Width and Height of the Window Size, so that they will always increase proportionally. Therefore, if you increase the width by 50%, the Height will automatically increase by 50%.	

H_IDC_DEPTH_T_IDD_RNDRPREF

H_IDC_WIDTHEDIT_IDD_RNDRPREF

H_IDC_HEIGHTEDIT_IDD_RNDRPREF

Provides the properties for Eventmarks, which are markers placed on the timeline that represent the manipulation of an object at that point in time. Manipulation refers to any changes applied to the object, such as scaling, moving, rotating, or change its surface. These markers may be moved to other points along the timeline, they may also be deleted, duplicated or edited.

H_IDC_STATIC1_IDD_EVENTMARK

Displays the object name which owns the selected eventmark.

H_IDC_STATIC2_IDD_EVENTMARK

Displays the object type.

H_IDC_STATIC3_IDD_EVENTMARK

Indicates the Current Time for the selected eventmark.

Apply a Linear Motion path to provide straight, angular motion to the movement of the current object.

Apply a Spline Motion path to provide a smooth, rounded motion to movement of the current object. is indicated in the timeline wavy line in the bar between events.	A spline path

Ease In acts as inertial dampening effect. Rather than have an object move at a constant speed throughout the entire path, it will build up to speed gradually. Note that the total dampening effect between Ease-In and Ease-Out can never exceed 100%.

Ease Out acts as inertial dampening effect. Rather than have an object move at a constant speed throughout the entire path, it will slow down gradually. Note that the total dampening effect between Ease-In and Ease-Out can never exceed 100%.

Contains the properties for the currently selected object. for any other object in the scene.	Using the drop-down listbox	, you may change to properties

Provides a set of Tabs that define the properties of the currently selected object. Depending on the object type selected, different tab controls will be made available.

Applies the settings in the Properties dialog to the current object, and closes the dialog.

Closes the Object Properties dialog without applying any changes.

Applies changes in the Object Properties dialog to the current object, without closing the dialog.

Allows the user to edit existing surfaces, create new surfaces or remove surfaces from a library. Each surface is made up of a combination of the following attributes :



Specular highlight - controls the brightness of the small, round white spot that is reflected at a point on the object that is closest to the lightsource.

. Metallicity - adjusts the color of the specular highlight to match the surface color, giving a more metallic appearance.



Reflectiveness - controls how much of the adjacent objects will reflect in the object surface.



Shininess - controls how shiny the object appears by adjusting the size of the specular highlight



Glow - makes an object appear as if it has a light inside of it, although it will not cast light onto adjacent



. Diffuse Shading - adjusts the degree to which light is uniformly scattered over the surface of the object. The lower the value, the less illuminated the object appears.

Transparency - determines the degree to which you can see through an object.

Creates a New Library to which surfaces can be copied, or created.

Removes the library from the list of available libraries. The library file is deleted.

Creates a new surface in the current library. The default name of "surface" is provided, but you can rename the surface.

Removes the highlighted surface from the library

Duplicates the selected surface. The name of the duplicated surface is provided as the current with a "1" suffix, for example "Red Plastic 1". This provides an easy way to create new surfaces based on the properties of currently existing surfaces within the library.

Copies the current surface to another library.

Provides a preview of the surface properties as they are adjusted in the dialog.

Allows environmental elements (i.e. sky) to be factored into the preview image.

H_IDC_STATIC1_IDD_EDIT_SURFACES

H_IDC_STATIC2_IDD_EDIT_SURFACES

H_IDC_COLOR2_IDD_EDIT_SURFACES

H_IDC_STATIC3_IDD_EDIT_SURFACES

Controls the brightness of the small, round white spot that is reflected at a point on the object that is closet to the lightsource.

H_IDC_SPECULAR_T_IDD_EDIT_SURFACES

H_IDC_STATIC9_IDD_EDIT_SURFACES

H_IDC_STATIC4_IDD_EDIT_SURFACES

Adjusts the color of the specular highlight to match the surface color, giving a more metallic appearance

H_IDC_METAL_T_IDD_EDIT_SURFACES

H_IDC_STATIC10_IDD_EDIT_SURFACES

H_IDC_STATIC5_IDD_EDIT_SURFACES

Controls how much of the adjacent objects will reflect in the object surface.

H_IDC_REFLECT_T_IDD_EDIT_SURFACES

H_IDC_STATIC11_IDD_EDIT_SURFACES

H_IDC_STATIC6_IDD_EDIT_SURFACES

Controls how shiny the object appears by adjusting the size of the specular highlight

H_IDC_SHINE_T_IDD_EDIT_SURFACES

H_IDC_STATIC12_IDD_EDIT_SURFACES

H_IDC_STATIC7_IDD_EDIT_SURFACES

Makes an object appear as if it has a light inside of it, although it will not cast light onto adjacent objects

H_IDC_GLOW_T_IDD_EDIT_SURFACES

H_IDC_STATIC13_IDD_EDIT_SURFACES

H_IDC_STATIC8_IDD_EDIT_SURFACES

Adjusts the degree to which light is uniformly scattered over the surface of the object. The lower the value, the less illuminated the object appears					

H_IDC_DIFFUSE_T_IDD_EDIT_SURFACES

H_IDC_STATIC14_IDD_EDIT_SURFACES

H_IDC_STATIC15_IDD_EDIT_SURFACES

Determines the degree to which you can see through an object.

H_IDC_TRANS_T_IDD_EDIT_SURFACES

H_IDC_STATIC16_IDD_EDIT_SURFACES

Updates the current surface with the property settings. T made.	he dialog remains open, so that additional edits may be

Reverts all settings to the values from the last update.

Applies the current surface with the property settings, and closes the dialog.

H_IDI_HELP_IDD_EDIT_SURFACES

Provides a library of surfaces which can be applied to the currently selected object.

Displays a preview of the current surface.

Allows environmental elements (i.e. sky) to be factored into the preview image

Brings up the Surface Editor, so that the current surface library may be edited.

H_IDD_NEW_SURFACE_LIBRARY

H_IDOK_IDD_NEW_SURFACE_LIBRARY

H_IDCANCEL_IDD_NEW_SURFACE_LIBRARY

Provides a rollup of all the available surfaces that may be applied to the scene.

Applies the selected surface to the current object.

Brings up the Edit Surfaces dialog.

H_IDC_PREVIEWTEXT_IDD_SAVEAS1

<u>Provi</u>des the following properties for the lights.



Color - lights may be any color.



Intensity - adjustable from 100% to 0%



Light Type - Point light or Spotlight



Spotlight Settings - Angle and focus for lights that are spotlight type.

H_IDC_COLORSTATIC_IDD_LIGHTPAGE

Displays the current color of the light object. Clicking on the button provides a Color Picker from which other colors may be chosen.

H_IDC_COLORSTATIC2_IDD_LIGHTPAGE

Adjusts the strength of the light being emitted.

Sets the selected light object to the Point type, which cast light evenly in all directions.

Sets the selected light object to the Spotlight type, which are d angles and focus	irectional light sources. Spotlights have adjustable

Adjusts the angle of a Spotlight between 90 (wide) and 0 (narrow)degrees.

Adjusts the angle of a Spotlight between 90 (wide) and 0 (narrow)degrees

H_IDC_WIDE_IDD_LIGHTPAGE

Controls how rapidly the Spotlight beam drops off around the edges. Diffused has the most gradual fade, whereas Sharp clearly more focused to the center of the beam.					

Sets the spotlight beam to the sharpest focus.

Controls how rapidly the Spotlight beam drops off around the edges. Diffused has the most gradual fade, whereas Sharp clearly more focused to the center of the beam.					

Sets the spotlight beam to the lowest focus, most diffused positon. \\

H_IDC_ANGLET_IDD_LIGHTPAGE

H_IDC_FOCUST_IDD_LIGHTPAGE

H_IDC_FOCUS_S2_IDD_LIGHTPAGE

H_IDC_NARROW_IDD_LIGHTPAGE

H_IDC_INTENSITYEDIT_IDD_LIGHTPAGE

Allows the user to search (browse) the system for other folders and files.

Changes the selected folder to be current.

Cancels the Browse operation without changing the current folder.

H_psh15_IDD_DIRBROWSEDIALOG

H_55_IDD_DIRBROWSEDIALOG

H_48_IDD_DIRBROWSEDIALOG

H_psh14_IDD_DIRBROWSEDIALOG

Displays a progress meter to provide visual feedback on the rendering time of the animation.

Stops the current rendering process.

H_IDC_FRAMESREACHED_IDD_DURINGRENDERING

Displays the current time frame that is being rendered.

Displays the total time of the animation that is in the process of being rendered.

<u>Provi</u>des the following adjustable options for the animation:

₩

Frames per second - defines the number of frames that will be created for each second of animation time.

#

Frames to render - allows the user to render all frames of the current scene or a portion thereof.

Keyframe Increment - sets the time increment that the Worldtime Marker will advance when the Keyframe button is activated.

Defines the number of frames that will be created for each second of animation time. Larger values will create larger files and increase rendering time. Smaller values may not provide a smooth animation.					

Renders all the frames in the current scene file.

Renders only the frames that fall between the P portions of scenes to be rendered as separate a	nimations.	ie minemes dialog. This chables

Allows the user to specify which frame interval should be rendered.

Allows the user to specify which frame interval should be rendered.

H_IDC_FRAMESTO_IDD_ANIMATIONPREF

H_IDC_FRAMESEDIT_IDD_ANIMATIONPREF

H_IDC_FROMEDIT_IDD_ANIMATIONPREF

H_IDC_TOEDIT_IDD_ANIMATIONPREF

Saves the camera from the current scene as a Camera Stagehand. When saving you should provide a name for Camera, as well as select a mode for the preview,	the

Saves the camera from the current scene as a Camera Stagehand with the specified name and preview mode.

Closes the dialog without saving the Camera.

Navigates the Camera through 3D space.

Rotates the Camera to the right around its vertical axis.

Rotates the Camera to the left around its vertical axis.

Rotates the Camera down around its horizontal axis.

Rotates the Camera up around its horizontal axis.

Tilts the Camera to the right.

Tilts the Camera to the left.

H_IDC_RTDNBTN_IDD_NAVIGATION

H_IDC_LFTDNBTN_IDD_NAVIGATION

H_IDC_CENTERBTN_IDD_NAVIGATION

Contains all the following properties and attributes that can be defined for the scene when it is rendered (Make Movie):



Rendering - includes rendering mode, color depth and window size.



Animation - includes Frames per Second, frames to be rendered, and Keyframe Increment.



Save - includes Preview type and Preview Compression options

Provides a set of 3 tab controls in the dialog.	· Rendering, A	nimation and Sav	ve. Click on a tab	to bring the related	controls forward

Closes the Scene Setup dialog and accepts all changes.

Closes the Scene Setup dialog without accepting any changes.

Contains the properties for eventmarks.

Applies the eventmark properties to the selected eventmark, and closes the dialog.

Closes the Eventmark Properties dialog without applying any changes.

Sets the Preview type and it's Compression Options for the animation.

Accesses the available compression types for the Preview.

Enables the user to avoid re-rendering the Preview each time the scene is saved. Since the rendering of a wholescene preview can take considerable time, this dialog allows the user to chose from the following options:



Use the previously saved preview - save the scene information without updating the preview



Generate no preview - save the scene data with no preview information.



Re-Render the preview - recreates the preview for the scene.

Save the scene information without updating the preview

Save the scene data with no preview information.

Recreates the preview for the scene, using the options set in the Scene Setup dialog..

Accepts the selected option and continues with the Save process.

Displays this dialog while Motion 3D is importing a DXF file.

Cancels the Import process for the DXF file.

To open a scene

- 1. Click File, Open.
- 2. In the Look in list box, choose the drive where the file is stored.
- 3. Double-click the folder where the file is stored.
- 4. Double-click the scene's filename.

Note

You can use wild cards (* and ?) if you're not sure of the name of the file you want to open. For example, typing test*.m3d in the File Name box and clicking OK lists all M3D files in the selected folder beginning with test. "Typing test?".m3d in the File Name box and clicking OK lists all M3D files in the selected folder that begin with test and are followed by one character (test1.m3d).

To open a scene using drag and drop

- 1. Locate the M3D file.
- 2. Click and hold down the mouse pointer on the M3D file and drag it onto the Corel MOTION 3D program icon in either the programs folder or on the desktop.
- 3. Release the mouse button.

Note



If Corel MOTION 3D is already running, you can open a M3D file by dragging and dropping it into any view.

To open a surface library

- 1. Click View, Surfaces. The Surfaces Roll-up opens.
- 2. Click the Surfaces Library dropdown list.
- 3. Click the name of the Surface library you wish to open.

To save a new scene

- 1. Click File, Save.
- 2. In the Save in list box, choose a drive and folder where you want to save your drawing.
- 3. Type a name in the File name box.
- 4. Select the desired preview type.
- 5. Click Save.

To save an object as a prop

- 1. Select the object
- 2. Click Special, Stagehands.
- 3. Click the Props tab.
- 4. Click Save
- 5. Type a name in the Save as name box
- 6. Click OK.
- 7. .Click Close.

To save a camera animation

- 1. Select the camera
- 2. Click Special, Stagehands.
- 3. Click the Camera tab.
- 4. Click Save
- 5. Type a name in the Save as name box
- 6. Click OK.
- 7. .Click Close.

To save a light animation

- 1. Select the camera
- 2. Click Special, Stagehands.
- 3. Click the Lights tab.
- 4. Click Save
- 5. Type a name in the Save as name box
- 6. Click OK.
- 7. .Click Close.

To create a new scene

1. Click File, New.

To create a prop

- 1. Select an object or group of objects linked to a parent object
- 2. Click Special, Stagehands.
- 3. Click the Props tab.
- 4. Click Save
- 5. Type a name in the Save as name box
- 6. Click OK.
- 7. .Click Close.

To create a movie

- 1. Open or create a Corel MOTION 3D animation.
- 2. Click Animation, Make Movie.
- 3. In the Save in list box, choose a drive and folder where you want to save your movie.
- 4. In the Save as type list box, choose a movie file format.
- 5. Type a name in the File name box.
- 6. Click Save.

Note



The compression methods for movies are enabled through the File, Scene Setup dialog box.

To create a new surface

- 1. Click Special, Surfaces. The Edit Surfaces dialog box opens.
- 2. In the Surfaces group do one of the following:



click New.



Click an existing surface and click Duplicate

- A new Surface appears in the Surfaces list box.

 Type a descriptive name for the new su Type a descriptive name for the new surface in the Surface Properties name box. Adjust the Surface Properties to the desired settings.
- 4.
- 5. Click Close.

To create a new surface library

- 1. Click Special, Surfaces. The Edit Surfaces dialog box opens.
- 2. In the Library group, click New.
- 3. Type a name in the Library name box.
- 4. Click OK.

To copy a surface to another surface library

- 1. Click Special, Surfaces. The Edit Surfaces dialog box opens.
- 2. Click a surface in the Surfaces group.
- 3. Click Copy To.
- 4. Click a surface library in the Library name list box.
- 5. Click OK.

To modify the environment

- 1. Click Special, Environment.
- 2. Click and edit the appropriate environment properties.
- 3. Click OK.

To edit eventmark properties

- 1. Click View, Timelines.
- 2. Click the right mouse button on the eventmark.
- 3. Click Properties.

To edit an object

- 1. Click the Vertical move tool.
- 2. Double click the object. The appropriate object editor or dialog box opens.

To edit a shape globally

- 1. Click the Vertical move tool.
- 2. Double click the shape. The Workshop opens.
- 3. Click "Apply changes to all eventmarks" to enable this feature.
- 4. Edit the shape.
- 5. Click Done

To edit a surface

To edit the surface of an object

- 1. Click the Vertical move tool.
- 2. Click the object with right mouse button and click Properties. The Object Properties dialog box opens.
- 3. Click the Surface tab.
- 4. Click Edit.

To open the Edit Surface dialog box

1. Click Special, Surfaces.

To morph an object

Using the Workshop while creating animations allows you to make an object morph from one shape to another. You can morph between any two lathe objects or any two extruded objects. A point-to-point correspondence between the two objects is not necessary. You cannot, however, morph from a lathed to an extruded object.

To morph a custom object

- 1. Create a lathed or extruded object.
- 2. Modify the object with the Workshop and return to the World.
- 3. Move the World Time Marker later in time in the Timelines window.
- 4. Reshape your object in the Workshop, and return to the World.

To morph text

Text morphing is an exciting feature of Motion 3D that lets you animate between text shapes. One word can morph to another. Text objects can be morphed without regard to the number of letters in the starting and ending words. For instance, you could go from the word "egg" to the word "baseball" without having to worry about constructing the five extra letters—Motion 3D will automatically add them. However, metamorphosis looks best when going between words of equal length.

To animate Text objects morphing from one set of letters to another

- 1. Click the Text tool and click inside the camera window. The Object Properties dialog box opens.
- 2. Type your name in the text field and, if desired, select an extrusion depth and font.
- 3. Click OK. The text should now appear in the World.
- 4. Click View, Timelines.
- 5. Move the World Time Marker forward in time in the Timelines window.
- 6. Click the Vertical move tool and double-click on the text object you just created. This will bring you back to the Object Properties dialog box.
- 7. Click the Text tab and type in a new set of letters or words (you can also select a new font, extrusion depth, and bevel)
- 8. Click OK.

Note

When you return to the Text tab of the Object Properties dialog for a given Text object, the Text field and Font pop-up menu do not necessarily reflect the settings of the text when originally created. This is because Motion 3D cannot make assumptions about text when animated, and there is no way to represent the shapes of letters that are midway between different words and different fonts.

To morph a surface

With Motion 3D you can morph between any two surfaces. This allows you to create animated sequences showing one surface changing into another surface. Surface morphs are created in the same manner as all other animation sequences.

To morph between surface types

- 1. Apply a surface to an object.
- 2. Move the World Time Marker later in time.
- 3. Apply a new surface to the object.

To print a view

- 1. Activate the view you wish to print by clicking it with the Vertical move tool.
- 2. Click File, Print Image.

Note



The Top, Front, and Right View can only print wireframe images.

To export a view

- 1. Activate the view you wish to export by clicking it with the Vertical move tool.
- 2. Click File, Export Image.

Note



The Top, Front, and Right View can only export wireframe images.

To undo an operation

1. Click Edit, Undo.

To repeat an action

1. Click Edit, Redo.

To add a camera

- 1. Click Special, Stagehands.
- 2. Click the Camera tab.
- 3. Find and click a camera in the File names list box.
- 4. Click Load.
- 5. Click OK.

Note: Only one camera can exist in a scene.

To point a camera

- 1. Click the right mouse button on the camera.
- 2. Click Point At.
- 3. Click an object in the Object to point at list.
- 4. Click OK.

To transform a camera

- 1. Click the right mouse button on the camera.
- 2. Click Transform.
- 3. Enter the transformations.
- 4. Click OK.

To edit camera properties

- 1. Click the right mouse button on the camera.
- 2. Click Properties.
- 3. Modify the camera properties.
- 4. Click OK.

To add a light

- 1. Click the Light tool.
- 2. Click in any window.

To aim a light at an object

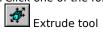
- 1. Click the Light with the right mouse button and click Point At.
- 2. Click an object to point at.
- 3. Click OK.

To edit light properties

- 1. Click the right mouse button on the light.
- 2. Click Properties.
- 3. Modify the light properties.
- 4. Click OK.

To create an object

1. Click one of the following:





Lathe tool



Text tool Click in any window.

To move an object

- 1. Click one of the $\underline{\text{Move tools}}$.
- 2. Click anywhere inside the objects outline and drag it to the desired location.

To rotate an object

- 1. Click one of the $\underline{\text{Rotate tools}}$.
- 2. Click anywhere inside the objects outline and drag it to the desired rotation.

Note: Linked objects will rotate as one object around the counterpoint of the parent object.

To import a DXF object

- 1. Click File, Import DXF.
- 2. In the Look in list box, choose the drive where the file is stored.
- 3. Double-click the folder where the file is stored.
- 4. Double-click the DXF's filename.

To link objects

- 1. Click View, Timelines.
- 2. Click the object that you wish to link and drag it to the parent object.

Note: More than one child object can be linked to a parent object and a child object can be the parent to other objects.

To unlink objects

- 1. Click View, Timelines.
- 2. Click the child object you wish to unlink.
- 3. Drag the name of the child object you wish to free to a space between object names, above the parent's name (so that no other object names are highlighted).
- 4. Release the mouse.

To apply a surface

- 1. Click the right mouse button on the object and click Properties.
- 2. .Click the Surface tab
- 3. Click the desired surface.
- 4. Click OK.

To open the timelines window

1. Click View, Timelines.

To preview animations

1. Click Animation, Preview.

To view child objects

- 1. Click View, Timelines.
- 2. Click the plus sign (+) next to the parent object.

Under Construction

Please click the Contents button.